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CEYLON: AN EXPORT ECONOMY IN TRANSITION

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Preliminary Draft

Economic Growth Center
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INTRODUCTION

It is hard to imagine a country which has never experienced economic growth. Most of the cases studied under the heading of "underdeveloped countries" are either instances of continuously insufficient economic growth or of growth which was once fast enough but has since become insufficient. National accounting and other statistical methods are used in attempts to derive numerical rates of growth but whether a growth rate is sufficient can only be defined politically, according to the hopes and expectations of a country's citizenry. A commonly cited minimal condition for sufficiency is that real per capita income must rise. But depending on the political conditions obtaining in a given country some low rates of growth in per capita income may or may not be deemed sufficient. As a host of writers have pointed out, expectations are rising.

The "export economy" falls into the category of countries which at some time in the past experienced rapid, more than sufficient growth. Characteristically, though, this growth was uneven in its relative impacts on various sectors of the economy. The commonly observed dual or plural economy is the result. Statistically, with export production growing rapidly and per capita income in the rest of the economy presumably about constant, real gross national product climbed at a fairly rapid rate. Even if this growth rate had been maintained up to the present it would in time have ceased to be politically sufficient as the masses of people living in the neglected sector gradually gained political consciousness. In fact, it lost its momentum in most of these countries with the depression of the thirties and has never fully regained it. With political awareness now reaching

a high state of development, the performance of most export economies has become increasingly insufficient on three grounds. (1) The actual growth of the export sector has slowed down. (2) The acceleration of population growth and the rise of income expectations have raised the politically sufficient growth rate sharply. (3) A new galaxy of sectoral growth rates is now demanded: even a very rapid growth of exports would not be enough today; other sectors must be built up and the structure of the economy transformed. It is the last point in particular which may doom the export economy to the history books: even a superbly performing export economy will not be politically acceptable in the future and if a country can break out of this pattern it will. Just what will replace the export economy is not clear, but the search for a new type of economic system goes on and the pressure of circumstances on the export economies lends urgency to the search.

Ceylon is a small country and thus of only limited interest to most non-Ceylonese. Aside from those who have visited the island and been won over by its charms, most foreigners are unlikely to possess much knowledge of it or interest in acquiring any. The big countries, like India, are of more inherent political and economic interest. Yet Ceylon is economically important as a clear-cut prototype of the kind of export economy just outlined. It was, in fact, an exemplary export economy in its colonial days, a wonderful place for Englishmen to make money growing tropical plantation crops in the late nineteenth and early twentieth centuries. Receiving its independence in 1948, it has since proven less successful economically as an independent nation than it did as a colony. Some people, notably many former British colonialists and middle-class Ceylonese, regard the period since 1948 as one of steady economic retrogression. It is clear that this popular conception is false. All the data show that Ceylon has been making definite, though hardly spectacular, economic progress and that aggregate and per capita income have been rising slowly. It is the social changes and the distributional aspects of growth

rather than the low growth rate per se which cause the white sahib and his brown counterpart to lament. For the ordinary man on the Colombo street or in the village it is likely that growth since 1948 has been noticeable but certainly not sufficient.

Despite occasional and half-hearted attempts to transform the structure of the economy, growth from 1948 through 1960 proceeded basically within the old pattern of the export economy. Mainly because of the effects of political and demographic changes in raising the demands made on it, the old pattern proved increasingly inadequate as time went on. Some sort of new system had to be evolved if popular expectations were not to be utterly frustrated. This meant building up non-export sectors of the economy, through the mobilization of savings and allocation of investment to other sectors and through other policies. As it happened, Ceylon's policy makers moved too slowly and eventually the virtual break-down of the old system forced their hand. From 1961 on, imports were restricted and import substitution encouraged. The development of food-producing peasant agriculture, which had proceeded with fair success during the fifties, was pushed further. Industry, always a timid actor in Ceylon's economic life, began to show its face. How successful the new adversity-born pattern of development would be was still an open question in 1964. The pessimists who see the entire economic history of Ceylon since independence as a downward movement may yet be proven right. Or the crisis of 1960-61 may turn out to be a needed challenge, which will succeed in shaking the island out of its lethargy. Time alone will tell. Even if a fair growth rate and healthy structural change are brought about the time will soon come when Ceylon will have to face up to the autarkic bias in this form of development and the difficulties autarky. poses for such a small country. In no case, then, is the future a bed of roses and under no circumstances will it bring a return to the past way of life, which is gone forever.

The main subject matter of this book is the economic development of Ceylon in the period 1946-60. This development would be incomprehensible, however, without

some understanding of the historical background of the island's economy. The economic history of Ceylon is still largely in the process of being written, but some of the parts of it which are most relevant to more recent events are presented in Chapter 1. Ceylon's economic experience indicates an intimate relationship between economic structure and growth. Chapter 2 attempts to define the nature of this relationship during the heyday of the export economy. Chapter 3 provides a bridge from the prewar classical export economy to the postwar period, showing how World War II, the phenomenal acceleration of population growth around 1946, and the granting of independence by Great Britain in 1948 combined to create the vastly changed economic environment of recent years. The 1948-60 period is seen as an age of transition from the classical export economy to something else, the precise shape of which is yet to be revealed by the passage of time. Chapter 4 sketches the main output trends, aggregate and sectoral, of the period, showing how a changed pattern of resource growth (labor increasing faster, capital and land more slowly) and other factors in the environment helped produce some unexpected sectoral growth records. Aside from environmental factors, the active intervention of public policy was the most important influence on relative growth rates and helped bring about what structural change there was during these years. Chapter 5 examines this influence, its direction and magnitude. In Chapter 6 the output growth reported in Chapter 4 is contrasted with the increase in aggregate demand, which, thanks mainly to widespread deficit finance by the central government late in the 1950's, managed to exceed the supply capacity of the economy by a considerable amount. In the export economy the effects of excess demand are felt mainly in the balance of payments and it is shown how this phenomenon finally brought about the sudden closing of the economy in 1961. Some characteristics of the new era which began in 1961 are outlined in Chapter 7 and a short excursion is made into the uncertain realm of speculation about the future.

It is the author's hope that the monograph will be of interest to a variety of readers. The book is intended mainly as a case study, an analysis of growth in a common type of underdeveloped country, the export economy, under a set of pressures which is all too common in our modern world. Also, though, even for those who know little about Ceylon, it is hoped that it will have some appeal as a story in itself.

Chapter 1. Historical Background: The Rise of the Estates

In this day of economic nationalism Ceylon has often been referred to as a prototype of the colonial economy. Yet the fact is that the island had been a European fief for three and a quarter centuries before it emerged with dramatic suddenness in the 1840's as a model of the export economy. Portugal and Holland had each enjoyed a century and a half of rule of the island, but their effective sovereignty had always been limited to a narrow coastal belt. Their economic interests had been similarly circumscribed, consisting mainly of trade in the native-grown cinnamon, pearls, ivory, and other exotic commodities for which Ceylon had been renowned, even in ancient times. The Portuguese had failed in efforts to subjugate the Kandyan Kingdom of the hinterlands and the Dutch formulated a policy of leaving the feudal political, social, and economic structure untouched to as great an extent as was consistent with their control of the prized cinnamon trade. The seizure of Holland's coastal forts by the British in 1796 had no immediate effect on this situation. The British valued the island for strategic reasons -- its proximity to India and the fine natural harbor at Trincomalee -- and apparently gave little thought at first to its potential economic worth.

COFFEE

The economic side of British interests in the early years centered on the cinnamon trade[1] and not even the extension of European rule to the whole island for the first time in 1815 had any profound effect on its economic structure. Although Ceylon

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1. See Colvin R. de Silva, Ceylon under the British Occupation, 1795-1833, v. 2, Colombo, 1962.

had throughout recorded time been a participant in international trade it was not until the revolutionary introduction of the coffee plantation in the 1840's that it became the classic example of the export economy. An export economy can be defined as one with not merely a high ratio of imports and exports to national income, but one in which all the important macroeconomic quantities -- government revenues and expenditures, private investment, imports, and national income itself -- possess a strong functional dependence upon the level of export receipts. This Ceylon very clearly became during the decade of the 1840's and remained, certainly throughout the remainder of the colonial era, and in some respects to the present day.

The effect of the coffee revolution on the economy was electric. In the words of its historian,

> Bringing with it new modes of economic behaviour and a host of concepts foreign to the prevailing economic system, it ate quickly into the f[illegible]ions of the existing structure. Capitalism had arrived, and it is with its advent that the Island's modern economic history takes its start. A virile commercial agriculture soon displaced in importance the old pursuits of the people and within the short space of a few years coffee had made itself responsible for almost a third of the Government's income. The stake was large enough to render it the State's most favoured child. In the years that followed the planters' problems came to be regarded as synonymous with those of the country, and in the quest to solve them, -- an undertaking to which the Government lent its energetic support -- much that was new was introduced with startling rapidlity. Thus, did Ceylon dance to the coffee-growers' tune for the greater part of the 19th century. In the process a new economic structure began slowly to evolve. The factors of production, - land, labour and capital, took on a new meaning; roads, railways and ports appeared where there had been none before, political affairs were invested with a novel significance, and class in the modern sense of the term began its slow growth. Along with these developments a money economy emerged, bringing with it a consciousness of prices, profit, wages, rent and credit...[1]

The sudden rise of the coffee industry in the 1840's is apparently attributable to the confluence at that time of a number of favorable influences. Britain had

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1. I. H. van den Driesen, The Economic History of Ceylon in the Nineteenth Century, vol. 1, Plantations, Land and Capital, unpublished English manuscript of Sinhalese book, 1961. Much of the material in this manuscript had previously appeared in the articles cited in the bibliography. As will become evident in the following pages the section on the coffee industry of this monograph depends heavily on van den Driesen's work.

developed a taste for coffee during the eighteenth century as consumption of wine dropped, but previous supplies had come first from the East Indies and later increasingly from the West Indian colonies. In Ceylon, on the other hand, the plant had long been grown by the peasants, but never as a cash crop. Sporadically, it had been Dutch policy to offer incentives to native producers and the British at first tried this, too, but in 1823 the first plantation was set up and in the following year Sir Edward Barnes, a man who had unbounded confidence in the future of coffee in Ceylon, became Governor. Incentives were given to estate production in the form of abolition of an export duty, exemption of coffee land from the land tax, repeal of import duties on agricultural and manufacturing equipment, and exemption from feudal labor dues of those employed in coffee growing.[1] Despite these powerful incentives, in an early demonstration of the fundamental principles of the export economy, production failed to respond much until a good foreign market opened up. By the 1830's all conditions were right: the early experimental plantations had begun to evolve a greatly improved technology, the discriminatory import duty in favor of West Indian coffee which Great Britain had previously maintained was equalized, and the West Indian slaves were freed, thus eliminating the cost advantage that New World coffee had enjoyed over that of Ceylon. Ceylon, which in 1827 had supplied 1.8 million lbs. of coffee to the British market (versus 29.4 from the West Indies), was supplying 19.5 million by 1847 (the West Indian contribution had fallen to 5.3 million lbs.).[2]

Export volume responded strongly to the favorable demand. From 1834 to 1842 it rose five-fold,[3] yet 1842 was only the threshold of the era when coffee was king. From that year up to 1849 a further rise to three times its former level was recorded

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1. Ibid., pp. 47-48.

2. Ibid., p. 55.

3. [illegible]

(see Table 1.1). In 1846 something happened which was unprecendented in the economic history of Ceylon up to that time: the island felt the effects of a world depression. Coffee prices fell from 41s. per hundredweight in 1845 to 28s. in 1848. With planting decisions long since made, total output of coffee continued to rise rapidly, but sales of government land to planters fell off precipitously. Van den Driesen estimates that perhaps ten per cent of the estates being farmed in 1847 had been abandoned by 1849[1] and official data show a decline in planted acreage of nearly 25 per cent (see Table 1.1).[2] Many planters were ruined and estates changed hands at prices representing a fraction of their value just two years earlier. Yet, as time proved, the frightening depression of 1847-49 was just the first of several such incidents in the history of Ceylon's export economy. Even for the coffee industry, which itself proved to be only a transient feature of the longer-lived economic structure, two extremely prosperous decades lay ahead.

The 1850's and 1860's were the years when King Coffee reigned supreme. Over that twenty-year span the area planted with the crop tripled and the quantity produced rose almost as much. Prices rose steadily during the fifties and then remained almost perfectly stable at favorable levels during the sixties. With the coming of the seventies, though, this golden era drew to a close. The fall of coffee, which began at that time, was even more dramatic than its rise; within fifteen years the industry went from peak prosperity to utter ruin. The cause of coffee's downfall made its first appearance in 1869: Hemileia Vastatrix, the coffee leaf disease. This fungus, which ultimately destroyed the Ceylon industry, also hit coffee in India and Java but spared Brazil, thus going far to determine the future pattern of supply to the

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1. Ibid., p. 79.

2. These acreage data were probably compiled on a "care and maintenance" basis. That is, acreage which had not been uprooted but had merely fallen into disuse was removed from the total. This explains why the recovery of acreage in the ensuing prosperity was so rapid.

world market. The spread of the disease coincided, as it happened, with a very rapid rise in world prices, in which the unit value of Ceylon's coffee exports more than doubled between 1872 and 1876. Attempts were made to combat the fungus: for instance, Liberian plants were substituted for the Arabian variety in some cases, but they proved even more susceptible to the ravages of the disease. Soaring prices, though, meant that for the time being the planting fraternity was much less concerned with the fungus than it might have been in a more normal market. The area planted, which had been rising at a relatively modest pace, began to increase more rapidly. New parts of the island were introduced to coffee cultivation. Meanwhile, the fungus caused year-to-year instability (the pattern of one good year, then a bad one, then another good one emerged) and a steady downward trend in per acre yield. In this race between rising prices and acreage on the one hand and falling yields on the other, the positive forces remained ahead throughout the seventies. In fact, 1879, with its record price of 119s. per hundredweight and its total export proceeds of nearly £ five million was in these respects one of the best in the industry's history. But per acre yields were slipping fast as the fungus spread. After 1879 the price fell (though not sharply), acreage planted dropped off rapidly, and yields fell more. By 1886 the industry was, for all practical purposes, dead.

Although remote in time from the main interests of this study, the history of the coffee industry is worth studying in some detail because it set the pattern for the later development of the plantations (the fact that it was tea, rubber, or coconut that was planted in later years did not fundamentally alter the nature of the system) and the plantations in turn monopolized the center of the stage throughout the colonial period. All the characteristics which remained basic to the plantation system in Ceylon, at least up to independence in 1948, made their first appearance in the nineteenth century coffee industry: British ownership and management of most estates, including almost all the largest ones; provision of finance by British

Table 1.1

The Ceylon Coffee Industry, 1834-1886

Year	Export Volume (thousand cwts.)	Export Unit Value[1] (sh./cwt.)	Area Planted[2] (th. acres)	Yield[3] (cwts./acre)
1834	26	30	..	..
1835	38	31	..	..
1836	61	49	..	..
1837	43	50	..	..
1838	52	45	10	5.0
1839	43	60	13	3.2
1840	67	64	13	5.3
1841	71	55	14	5.2
1842	120	45	15	8.1
1843	95	41	31	3.0
1844	134	40	44	3.0
1845	179	41	44	4.1
1846	174	38	57	3.1
1847	293	31	57	5.2
1848	280	28	52	5.4
1849	374	29	43	8.6
1850	323	41	60	5.4
1851	288	41	64	4.5
1852	373	37	58	6.4
1853	329	40	70	4.7
1854	408	42	71	5.8
1855	507	44	86	5.9
1856	441	45	138	3.2
1857	602	50	155	3.9
1858	545	49	155	3.5
1859	590	50	155	3.8
1860	620	51	157	3.9
1861	648	51	172	3.8
1862	605	51	233	2.6
1863	829	51	211	3.9
1864	671	52	223	3.0
1865	927	51	236	3.9
1866	887	51	242	3.7
1867	868	55	247	3.5
1868	1,007	51	247	4.1
1869	1,005	52	242	4.2
1870	1,054	52	248	4.3
1871	946	51	267	3.5
1872	723	51	280	2.6
1873	951	89	289	3.3
1874	731	88	298	2.5
1875	924	98	311	3.0
1876	666	113	317	2.1
1877	974	102	321	3.0

(continued)

Table 1.1 (cont.)

Year	Export Volume (thousand cwts.)	Export Unit Value[1] (sh./cwt.)	Area Planted[2] (th. acres)	Yield[3] (cwts./acre)
1878	632	108	315	2.0
1879	730	119	286	2.7
1880	657	102	286	2.3
1881	437	98	285	1.5
1882	465	77	247	1.9
1883	305	89	193	1.6
1884	299	79	164	1.8
1885	316	78	139	2.3
1886	179	89	110	1.6

Notes:

1. Export value in shillings divided by export volume in hundredweights; this is not to be interpreted literally as a measure of price, since a small part of the rise in the later years represents the displacement of lower-priced peasant coffee by estate coffee (see Table 1.3, p. 1.17). Also, there seems to have been a conventional aspect to these price data: e.g., in 1873 a sudden upward adjustment was made in the conventional price used in making customs estimates, to allow for the rise in the actual price which had been taking place over the previous several years. Source: Ceylon Blue Books.

2. See note 6 to Table A-32, below.

3. Exports in hundredweights divided by area planted; the measure is thus distorted by irregularities in shipment (e.g. when bad weather kept the coffee from reaching the port and delayed sailings) and by the inclusion of immature acreage in varying degrees at different times.

* * *

banks and "agency houses"; large-scale, factory-style operation of the estates using massive forces of Indian labor specially imported for the purpose; control of the import-export trade by the British; virtually complete reliance on imported supplies of capital equipment, estate supplies, and even food for the labor force; virtually complete reliance on foreign -- and especially British -- markets for the product. These key characteristics had important consequences for the working of the economy and its capacity for economic growth.

Land for plantation development was purchased from the Crown. With the conquest of the Kandyan Kingdom in 1815 all the land in the central part of the island which was not at that time occupied -- and this meant vast stretches of forest land -- was taken over by the Crown. As it happened, this was the land which later proved suitable for coffee cultivation and it was the sale of Kandyan land by the Crown to planters that furnished the starting point for the estate cultivation of coffee. This land, for which there was little alternative use (but see p. 1.15, below), was at first sold to British investors at a nominal price of five shillings per acre; the government even defrayed the cost of surveying the plot that the investor selected. Beginning in 1833, when only 146 acres of Crown land were sold, the demand for this land rose very rapidly and in 1840 an all-time record was set when 78,686 acres were sold.[1] In just four years, 1840-43, some 230,000 acres of land was sold by the government, mostly to developers of coffee estates.[2] Not all sales were made to Europeans and not all were for use in the coffee industry, but records show that between 1844 and 1860, while sales continued at a pace somewhat less hectic than that of the early forties, government land sales of all types totalled some 150,000 acres and of these over 105,000 acres represented land in the coffee producing areas sold to Europeans; of the remaining sales, to natives, most were also in the coffee country.[3] The average sale to a European between 1833 and 1860 was 97 acres; this can be taken as a first approximation of the size of the average coffee plantation.[4]

During the land rush of the early 1840's speculation ran wild as investors bought up government land at the five shilling price and resold it not long after

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1. Ibid., p. 59.
2. Ibid.
3. Ibid., pp. 122-23.
4. Ibid., p. 125.

at three or four times as much. The government lacked adequate personnel to do a good job of surveying land before selling it and the result was a wave of land litigation. In June 1844 the speculative bubble was pricked by an edict declaring that in the future no land would be sold before being surveyed and that the price would be raised to 20 sh. These measures immediately struck down speculation. Coffee acreage continued to grow despite a much lower rate of government land sales by means of cultivation of previously purchased but unplanted acres. The growth of the industry was thus not stifled but the era of virtually free land was over. This policy change, coupled with the effects of the 1847-49 depression, which weeded out the less efficient producers, meant that the days when almost anyone could make money in coffee were also ended.

From 1850 to 1857 the area under coffee tripled, rising at a much faster rate than can be explained by reference to government land sales. After about 1860 a new era of massive land sales began. The Surveyor-General's Departmen t had finally been organized in an efficient enough way to cope with requests to buy land as fast as they came in and the prosperity of the 1850's and 1860's created a brisk demand. During the sixties about 35,000 acres a year were sold, but it was not such good land as had been sold in earlier decades and prices were higher now. After Hemileia Vastatrix struck in the seventies, the volume of land sales remained sizeable but the makeup of the buyers changed; less and less land went into coffee and more was bought by the peasants.

During its formative years, then, the coffee industry enjoyed easy access to cheap land. Later, the cost of land rose but extension of the area cultivated continued. By the seventies, when world prices soared, high-cost areas upon which nothing had ever been grown before were being brought into production, despite the ravages of the leaf disease. Then, abruptly, the incursions of the fungus became so serious that per acre yields dropped to the point where production was no longer

profitable, even at a price of 100 shillings per bushel. When that happened, the Ceylon coffee industry melted away in the space of a very few years.

Labor was one of the first problems encountered by the pioneer planters. The indigenous inhabitants of the plantation area, the Kandyan Sinhalese, had been under European domination for only about 20 years when the coffee industry began and their acquaintance with the money economy was slight. In 1833 the government decreed the end of feudal labor service dues, which they had been insisting on up to then. As an attempt to create a large supply of wage labor, however, this policy was an utter failure. The Kandyans continued to prefer their traditional semi-feudal village existence to the regimented life and work of the estates. Whether they could have earned higher incomes working for the plantations one cannot say, but it is not probable that they thought of the question in that way, anyhow. Yet coffee, perhaps more than any other plantation crop, required a large, disciplined work force, especially at the annual three-month harvest season. An alternative source of labor supply had to be found if the industry was to grow.

"Indian immigration to Ceylon," says van den Driesen, "began in earnest in 1839."[1] Two factors distinguished the South India of this time from neighboring Ceylon. One was the much more severe poverty of the mainland, arising out of the pressure of population (by establishing peace among a previously warring people the British accentuated this problem) on natural resources generally inferior to those of Ceylon. The other was the greater experience of the South Indians with industrial routine (their extensive weaving industry had been ruined by British free trade). By 1839 word had spread among the Tamils of South India that relatively well-paid employment was available in Ceylon and the exodus began. The journey to the coffee country was a rigorous one, involving a sea voyage to Colombo or, more

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1. "The Need for Immigrant Labour," unpublished manuscript, 1963, p. 12.

often, Talaimannar, the port closest to the mainland, and then a walk of more than 150 miles to the planting region. The earliest immigrants came of their own initiative, in gangs of 25 to 100 headed by a "kangany," who negotiated for the gang and subsequently acted as their foreman. They came with the idea of staying only long enough to amass some modest savings but many never saw India again.

The trickle of 1839 soon became a flood. Arrivals swelled from about 3,000 in 1839 to 77,000 in 1844.[1] Throughout the 1840's and 1850's the inflow averaged over 50,000 a year, with the return flow to India standing at about half that amount (see Table 1.2, below). The new labor was cheap (its wages amounted to only 18s. per month[2]), but it had all the usual disadvantages of transient labor. At first (see table), the men rarely brought their wives and children and the resulting separation from normal family life provided a motive for a quick return to India; later, as a Tamil community began to form in the estate country, more families came. Despite a remarkable expansion of immigration in the 1840's, there continued to be a shortage of labour in Ceylon up to the end of the decade. Then, with the island's first depression setting in, immigration fell off precipitously and many of the workers who had taken up residence in Ceylon returned to their homeland. In 1848 arrivals totalled only 32,000.[3] Besides the depression, another factor in the reduced immigration was the extreme difficulty of the trip the immigrants had to make and the exploitation to which they were prey. In the early fifties the Ceylon government, in an attempt to increase the supply of labor to the estates, began to take some responsibility for immigrant labor. Medical services and amenities at ports and major planting centers were set up an' this, along with the revival of prosperity,

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1. Ibid., p. 17.

2. Ibid., p. 13.

3. Van den Driesen, The Economic History of Ceylon..., p. 18.

again swelled the tide of immigrants. Arrivals rose to 58,000 by 1858 and in the last years of the coffee era the figure was about 100,000 a year. By the 1880's the accumulation of Indian estate laborers and their families permanently settled in Ceylon amounted to about 200,000.[1]

Table 1.2

Migration of Indian Estate Laborers, 1839-72[1]
(annual averages)

	ARRIVALS			DEPARTURES[2]			NET INFLOW		
Period	Men	Women & Children	Total	Men	Women & Children	Total	Men	Women & Children	Total
1839-42	4,827	437	5,263	6,361	506	6,866	-1,534	-69	-1,623
1843-49	46,597	1,518	48,115	23,524	750	24,275	23,073	768	23,840
1850-59	48,568	7,544	56,112	36,335	2,686	39,021	12,233	4,858	17,091
1860-72	52,405	17,269	69,673	54,673	12,421	67,094	-2,268	4,848	2,579

1. Source: A.M.& J. Ferguson, The Ceylon Directory for 1874, Colombo, 1874, p. 244.

2. The official figures have been inflated by 25 per cent here, as a rough allowance for unregistered departures, which were put at 25 per cent of registered ones by a contemporary source.

* * *

Because of the economic and cultural differences between the estates and the villages, the Tamil immigrants lived almost completely apart from the Sinhalese natives of the island. They lived in barracks-like "lines" provided by the estates, had their own bazaars adjacent to the estate land, and followed Hinduism in a basically Buddhist country. To as great an extent as the British, they represented a foreign enclave in Ceylon.

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1. Ibid., p. 19. This contemporary estimate refers to the number who stayed from year to year, not the number in Ceylon at harvest time. The 1871 census gave 537,800 as the total Tamil population of Ceylon, of which Ferguson (op. cit., p. 414) estimated that only 115,000 were estate laborers and their families (the rest were "Ceylon Tamils," a group of considerably longer residence in Ceylon, centered in the Northern and Eastern Provinces).

Capital, once the industry was established on a prosperous footing, was self-generating. The first investors were those most familiar with Ceylon's potential, the civil and military officials stationed there. As coffee became a mania under the stimulus of cheap land, however, a wave of small investors poured in from outside. In 1844 the minimum cost of setting up a plantation was perhaps £3,000[1] and many of the small men obtained part of this sum in the form of advances on future crops. British-owned banks in Ceylon and "agency houses" (which supervised the operation of the estate and shared in its returns until the owner had paid off his debt) came to invest large sums in coffee mortgages. Because the banks and agency houses were in British hands and were extremely reluctant to extend credit to Ceylonese (and did so only at high rates of interest when they did) estate ownership was at this time almost entirely European. Native coffee production, which also enjoyed a considerable boom, was strictly on a smallholding basis.

Almost all of Ceylon's coffee output went into the British market. Between 1868 and 1872, for example, 3,654,200 hundredweights, 94.7 per cent of the total quantity exported, went to the U.K., mostly for consumption there (although a small proportion of this was re-exported).[2]

Estate development falls into two periods, with the 1847-49 depression as the dividing line between them. In the early days credit was freely extended and with its aid an immense number of Englishmen in all walks of life poured into the industry. The depression bankrupted many of the smaller men, sobered the banks and agency houses, and led to an era of calm rationality. During the post-depression period and right up to the disaster of the seventies, a well-managed coffee estate must have been at least a tolerably profitable enterprise. An informed contemporary

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1. Ibid., p. 27.

2. A. M. & J. Ferguson, The Ceylon Directory for 1874, p. 243.

estimate put profits at 25 per cent of sales. However, the same authority states that by the time the coffee era was over not more than one tenth of the estates had succeeded in making a fair return on their capital.[1] It is probable that the deviations between the most efficient estates and the least efficient were very great.

One characteristic feature of the later estate industries, corporate ownership and management of estates, did not become dominant during the coffee era. Even in the 1870's, when corporations had taken over some of the estates, over two-thirds of the estates in operation were still owned by individuals. Of these, about one-third lived on their own property and managed it, while the rest left the management in the hands of an agency house.[2]

When the coffee era ended there was remarkably little evidence of its former prosperity left. As Ferguson, a contemporary observor, laments,

> The accumulated profits made during the time of prosperity, which elsewhere, e.g., England, form a reserve fund of local wealth, to enable the sufferer from present adversity to benefit by past earnings, were so far as the planters were concerned, wanting in Ceylon. There was no reserve fund of past profits to fall back upon, no class of wealthy Europeans enriched by former times of prosperity...circulating the liquidated profits of former industry, when the period of adversity and depression arrived...Ceylon, in fact, in the best days, used to be a sort of incubator, to which capitalists sent their eggs to be hatched, and whence a good many of them received from time to time an abundant brood, leaving sometimes but the shells for our local portion.[3]

No doubt the benefits of the coffee era to the European commercial class (which Ferguson represented) -- and still more to the Ceylonese -- were transient. But time was to demonstrate that a valuable national capital had been built up.

During its era of supremacy, the plantation coffee industry completely dominated Ceylon's economy. It was at this time that the outlines of the plantation-centered

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1. Ferguson, quoted in van den Driesen, The Economic History of Ceylon..., p. 197.

2. Ibid., p. 189.

3. Quoted in ibid., p. 197.

economic structure came to be defined. Other segments of the economy were profoundly affected by the rise of the estates.

The traditional sector was influenced in two important ways. The estates sometimes took over lands to which the villagers felt they had traditional rights (even though the government designated them as "Crown lands"); at the same time, the peasants were offered a prospect of making a cash income through smallholder coffee production. The seriousness of estate incursions on the peasants' lands remains a major point of debate in Ceylonese economic history to this day. It is, on the one hand, certain that the lands taken by the planter were not those on which the Kandyan peasant depended most -- his precious paddy lands, which were located in the wet upcountry valleys and were not suited to coffee cultivation. On the other hand, the traditional agricultural system worked on a combination of these muddy lowlands with the highland, which performed important secondary functions acting as grazing land and also as an area in which the peasant planted fruits and vegetables and, on an occasional basis, supplementary food grains. In a few cases whole villages were moved to make room for estates, but on the whole such severe hardship seems to have been rare. Most probably the losses suffered by the villagers were more potential than actual -- their effects were to be felt only in the future, when the acceleration of rural population growth caused people to press much more heavily on land.

The good market for coffee offered by the spread of marketing facilities, on the other hand, offered the villager an attractive profit-making opportunity. Even before estate development gained momentum, in the second through the fourth decades of the century, smallholder coffee production expanded by nearly ten fold,[1] encouraged by peace and good administration and reflecting an increasingly commercial outlook on the part of the villager. Later, estate output eclipsed that of the smallholders,

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1. Ibid., p. 44.

whose product was markedly inferior in quality and commanded a much lower price on the London market (see Table 1.3, below). Still, throughout the 1850's and 1860's the smallholders managed to account for about a quarter of the total output (although because they earned a lower price for their product they received only a bit more than 20 per cent of the export proceeds).[1] In the seventies, though, peasant production was the least well equipped to withstand Hemileia Vastatrix. It dropped off sooner and more rapidly than estate output and its share in the total market fell to less than ten per cent. Thus, while coffee introduced the Ceylon peasant to the notion of producing for a cash market, it must have left an unpleasant taste in his mouth.

Other than the two impacts mentioned here, the effects of the coffee estates on the traditional village economy were remarkably few. There was little trading in either end products or factors of production between the estates and the villages. Estate coffee, of course, was almost exclusively for export. The modern equipment, fertilizer, etc. needed to run an estate were all imported. Even the food to feed the estate labor force, which might conceivably have been bought from the village, was all imported; Table 1.4 shows the rise in imports of the few simple items consumed by the coolies which resulted from the expansion of the coffee estates. In a fundamental sense the economic system of the village was left untransformed by the coffee experience. Some bitterness had been aroused over land rights, a few peasants had made some money growing coffee and a very few others working on estates, more had been indirectly affected through the opening up of their native districts to modern transportation and communications, but basically the impact was slight.

Aside from the setting up of the estates themselves, the coffee boom also marked the beginnings (or at least the marked expansion) of the commercial wing of Ceylon's economy. The British banks which opened branches in the island and the British commercial firms which were set up to service the estates have already been

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1. Ibid., p. 101.

Table 1.3

Estate and Smallholder Coffee Exports, 1849-86[1]

Year	Estate Volume (thousand cwts.)	Estate Unit Value (s.)	Smallholder Volume (thousand cwts.)	Smallholder Unit Value (s.)	Smallholder Volume Share (%)
1849	210	33	127	18	38
1850	219	44	104	34	32
1851	198	45	90	33	31
1852	255	42	153	28	37
1853	210	43	113	32	35
1854	304	44	130	36	30
1855	316	44	167	33	35
1856	325	46	113	39	26
1857	368	51	161	44	30
1858	384	54	172	40	31
1859	407	54	195	40	32
1860	469	54	166	40	26
1861	483	54	130	40	21
1862	477	54	124	40	21
1863	649	54	158	40	20
1864	574	54	82	40	13
1865	714	54	215	40	23
1866	676	54	210	40	24
1867	720	54	148	40	17
1868	789	54	219	40	22
1869	836	54	169	40	17
1870	922	54	133	40	13
1871	775	54	170	40	18
1872	582	54	141	40	19
1873	830	90	122	80	13
1874	634	90	97	75	13
1875	810	100	114	80	12
1876	586	106	80	80	12
1877	892	104	82	82	8
1878	586	110	46	76	7
1879	725	106	54	66	7
1880	612	104	45	68	7
1881	407	100	30	68	7
1882	429	80	35	46	8
1883	291	90	15	60	5
1884	288	80	12	50	4
1885	295	80	21	50	7
1886	169	90	10	70	6

1. Source: Ferguson, p. 242; van den Driesen, The Economic History..., p. 107 (for 1870-; his source was Ceylon Blue Books). The Ferguson figures refer to the twelve months ending on October 10 of each year. This fact, and differences between Ferguson and the Blue Books, explain the discrepancies which exist between this table and Table 1.1.

mentioned. The emergence of modern commerce can be closely identified with the growth of Colombo, which had gone from an insignificant town in pre-European days to a city of 120,000 by the end of the coffee era. The British commercial firms were heavily concentrated in the capital, yet functionally they were mere appendages of the estates.

Table 1.4

Selected Imports, 1837-72[1]
(annual averages)

Period	Cotton goods (thousand £s)	Rice cwts.	Rice thousand £s	Fish (thousand £s)
1837-39	162.5	798.2	166.9	6.6
1840-49	184.6	1,689.3	295.6	14.8
1850-59	313.8	2,727.8	323.1	42.1
1860-69	707.6	4,197.4	1,185.9	67.2
1870-72	883.7	4,793.9	1,558.0	31.5

1. There is no way of knowing what part of these imports were consumed by estate laborers. Other segments of the population also received higher incomes as a consequence of estate prosperity and their consumption of these things may also have risen. The goods are, however, those which would be consumed in overwhelming proportions by the lower income groups. They are in any case indicative of the growing link between the estate and commercial sectors, on the one hand, and the world economy, on the other.

Source: Ferguson, p. 243.

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To a considerable degree the government, too, came to be an appendage of the estates. In 1833 a Legislative Council was set up to govern the Colony and by the forties the planters were an important force on the Council, working for measures close to their own interests, particularly improved transportation to quicken and cheapen the process of moving estate supplies up to the planting areas and coffee down. At times transportation difficulties became intolerable as the inadequate roads disintegrated under the fury of the monsoons and a great urgency was imparted

to the planters' drive to gain a measure of political power. Roads were built as fast as government revenues permitted (although still more slowly than the planters demanded), even to the extent of allocating 15 per cent of government expenditures to road building. Not until the completion of the Colombo-Kandy railroad in 1867, though, was the central part of the island really opened up. The railroad reportedly cut transportation costs for the coffee estates by as much as 60 to 75 per cent.[1]

In one sense, the planters might justifiably argue that the government should devote a large portion of its budget to expenditures on their behalf, for it was they who were providing the bulk of its revenue. Prior to the coming of coffee the Colonial Office had dreamed of placing the Colony on a self-supporting basis, but the pearl fisheries and cinnamon crops they counted on to balance the budget often fell short of that goal. In 1843-45, however, the combination of export duties on coffee and land sales proceeds produced a surplus of £133,000.[2] When the depression hit immediately thereafter the government incurred large deficits and tried to make up the revenue losses by sharply increasing the tax burden of the peasant. A rural insurrection was the consequence. By trimming expenditures and waiting for the recovery, the government finally weathered the depression. Surpluses accrued throughout the fifties and sixties and were used to finance extra-budgetary public works expenditures. By the 1870's government revenues were running at about one and a half million pounds a year (over three times what they had been in the forties) and when coffee collapsed in the following decade they fell off by more than a third.[3] By that time, the foundations for the excellent road and railroad networks of the island had been laid; it was up to governments fed by revenues from later estate

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1. Van den Driesen, The Economic History of Ceylon..., p. 23.

2. Ibid., p. 85.

3. Ibid., p. 112.

crops to build upon the groundwork laid during the coffee era. In the two years 1871 and 1872, for instance, some £600,000 (26 per cent of total government expenditure) was spent for public works, mostly road and railroad construction and maintenance.[1]

TEA

When coffee fell with such a resounding crash in the 1880's the planters, with land lying idle and an organizational system embodying the accumulated knowledge of half a century at their disposal, quite naturally began casting about for an alternative crop to which these assets might be applied. Actually, some years before coffee collapsed its eventual demise had been foreseen by a few far-sighted planters and officials and the search for a substitute had begun. Cinchona (quinine) was the first one tried. From its beginnings in 1370 the cinchona industry expanded to an 1885 peak, at which 39,000 acres were cultivated and 12 million pounds were exported at a value of over Rs. four million (£ 387,000).[2] Although some estimates of the world market for the crop had been glowing, the London market was soon glutted with exports from Ceylon. The price of quinine per ounce fell from 12s. to 1s.5d. during the decade of the eighties, and the crop was abandoned as a plantation endeavor.[3]

Another crop tried as a substitute for coffee was cocoa. It had some past history in the island as a smallholder crop, but suitable land proved to be too limited in supply for it to be widely adopted on an estate basis. It did, however, serve as an important crop in some of the middle-country areas which were later to become the domain of rubber and it has continued to the present day as an item of subsidiary

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1. Ferguson, op. cit., p. 270. This excludes the regular expenditures of the government railroad, some of which went for maintenance.

2. S. Rajaratnam, "The Growth of Plantation Agriculture in Ceylon, 1886-1931," Ceylon Journal of Historical and Social Studies, January-June 1961, p. 3.

3. Ibid.

cultivation for both estate and peasant producers.

At first, then, tea was just one of several alternatives to coffee being considered by Ceylon's planters. Early experiments with the crop in the 1840's were not encouraging, but twenty years later varieties imported from Assam (where an expansion of estate production was already under way) were successfully cultivated on several estates in Ceylon. For the time being, though, coffee served as a complete distraction from serious efforts to grow tea commercially. The growth of the tea industry proceeded in close step with the decline of coffee (see Table 1.5).

Once the failure of coffee was a clear and indisputable fact and the imperfection of such crops as cinchona and cocoa as replacements for it was shown, interest came to center on tea. Early hindrances to the development of the industry were the generally bankrupt financial standing of the planters, their lack of technological information on tea, and the shortage of tea planting material in Ceylon. All of these were in time overcome and in 1886 the passing of an era was marked when for the first time acreage in tea exceeded acreage in coffee. Thereafter, the tea industry expanded rapidly. The area planted rose by some 20,000 acres a year for the remainder of the century and output underwent a ten-fold increase. Then, in the late 1890's, a decline in world prices set in as the expansion of demand, especially in the United Kingdom, was finally overtaken by the growth of world supply. Production costs had been running around 6d. a pound in the eighties (about Re. 0.35)[1] and as long as a pound of tea continued to fetch Re. 0.70 (1s.), as it did in the 1880's, or even Re. 0.50, as it did in the 1890's, the estates remained highly profitable. By the turn of the century Ceylon was producing about one-quarter of the world's tea,[2] a proportion which has remained remarkably stable ever since, but many estates were in

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1. Ibid., p. 8.

2. See V. D. Wickizer, Coffee, Tea, and Cocoa: An Economic and Political Analysis, Stanford, 1951, p. 157, for estimates of world exports at various times.

Table 1.5

The Ceylon Tea Industry, 1880-1939

Year	Estimated Output[1] (million lbs.)	Area Planted[2] (thousand acres)	Export Unit Value[3] (Rs./lb.)	Yield per Acre[4] (lbs.)
1880	(5)	9	0.93	18
1881	(5)	14	0.93	26
1882	1	15	0.85	46
1883	2	20	0.46	100
1884	2	58	0.76	35
1885	4	121	0.71	33
1886	8	165	0.64	49
1887	14	200	0.59	70
1888	24	232	0.53	103
1889	34	207	0.52	164
1890	46	236	0.50	195
1891	68	261	0.45	261
1892	72	270	0.45	267
1893	82	304	0.50	270
1894	85	332	0.54	256
1895	99	323	0.50	307
1896	110	369	0.38	298
1897	114	405	0.41	281
1898	122	425	0.38	298
1899	149	417	0.36	357
1900	149	406	0.36	367
1901	144	406	0.33	355
1902	152	434	0.36	350
1903	150	461	0.38	325
1904	159	419	0.36	379
1905	143	458	0.42	312
1906	172	434	0.36	396
1907	182	438	0.42	416
1908	181	553	0.41	327
1909	195	458	0.44	428
1910	186	581	0.46	320
1911	190	457	0.46	416
1912	195	458	0.44	428
1913	195	483	0.46	404
1914	197	487	0.46	405
1915	220	477	0.57	461
1916	207	498	0.52	416
1917	200	509	0.49	393
1918	186	506	0.46	368
1919	214	499	0.56	429
1920	190	..	0.44	..
1921	167	418	0.70	400
1922	178	..	0.84	..
1923	188	..	1.02	..
1924	211	..	1.05	..
1925	216	440	0.95	491

(continued on next page)

Table 1.5 (cont.)

Year	Estimated Output[1] (million lbs.)	Area Planted[2] (thousand acres)	Export Unit Value[3] (Rs./lb.)	Yield per Acre[4] (lbs.)
1926	224	442	0.98	507
1927	235	450	0.94	522
1928	245	457	0.82	536
1929	260	457	0.82	569
1930	252	..	0.75	..
1931	253	..	0.57	..
1932	263	..	0.43	..
1933	221	557	0.55	397
1934	225	559	0.66	403
1935	221	559	0.69	395
1936	226	559	0.70	404
1937	225	557	0.80	404
1938	247	557	0.73	443
1939	237	554	0.82	428

Notes

1. Exports plus estimated local consumption, the latter taken as zero through 1899, with a smooth growth from zero to three pounds per capita in 1953 (the latter figure is from Central Bank of Ceylon, Survey of Ceylon's Consumer Finances).

2. See note 2 to Table A-32 below.

3. Export value divided by export volume.

4. Estimated output divided by area planted; the measure should not be interpreted literally because export variations from year to year (which are greater than output variations) have not been removed; only its general trend should be noted. In the 1920's, it seems likely that an understatement of acreage had led to an overstatement of yields.

5. Less than 0.5 million pounds.

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trouble. Even after prices began to rise again in the first decade of the twentieth century, profits for many operators were slim and many planters changed over to rubber when it appeared on the scene.

In 1907 world demand began to rise after a period of stagnation as the threat of competition from Chinese green tea was finally quashed and British per capita consumption resumed its upward trend.[1] At the same time, Ceylon planters adopted

1. Between 1907 and 1914 it rose by nearly one pound. S. Rajaratnam, "The Ceylon Tea Industry, 1886-1931," Ceylon Journal of Historical and Social Studies, July-December 1961, p. 189.

the policy of plucking more finely than before, sacrificing the very rapid growth of output which they had tried for in an earlier, stronger world market and concentrating on producing a tea of higher quality. World War I brought developments which were almost identical to those experienced later during World War II: strong demand, rising shipping costs and shortages of shipping space, short supplies of artificial fertilizers (before the war these had come mostly from Germany), and eventually replacement of the free market by a system of bulk purchases at contracted prices by the British government. Over the protests of the planters, the price for the bulk purchases was set at the average level for the three prewar years; 90 per cent of Ceylon's output was purchased at this price at the height of the war.[1] With costs rising, the planters were totally unable to capitalize on the war.

After the war the industry was left with large stocks on hand in Ceylon. An output-restriction scheme was essayed by the planters' associations in both India and Ceylon and it, along with the recovery of demand, was responsible for the strong upward trend in prices which ensued in 1920-22. In the course of the decade, though, overproduction again developed (thanks in part to the emergence of the Netherlands East Indies upon the scene as a major producer) and prices slipped off. By this time Ceylon tea was enjoying a ten to 30 per cent premium over the prices of teas from other sources. The industry was thus able to remain profitable throughout the twenties (though its costs were also somewhat higher than those of producers in other countries).

Ceylon's favored position in the world market stood it in good stead when the depression of the 1930's struck. Ceylon tea fell less in price than any other tea in the world market[2] and export proceeds from tea were more nearly maintained than

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1. Ibid., p. 191.

2. Ibid., p. 195.

those earned by the island's other export crops (see Table A-47, below). In 1933 the International Tea Regulation Scheme, a model of its kind, went into effect and prices were restored to their predepression levels.

In terms of the organization of production, tea was -- and still is -- the classic example of the plantation crop. It followed quite closely the pattern of the estate system first set up in Ceylon to grow coffee, making only minor refinements in it. In many cases, the same land, capital, and labor were applied to tea as had been used in coffee. Most of the old coffee estates were in time converted to tea (although not always under the old ownership and management) and they formed the nucleus for the new industry. Even where new resources were drawn into the industry (and as early as 1894 the total acreage under tea surpassed the peak coffee acreage) a similar organizational system prevailed.

The Ceylon tea industry has always been one of large estates, European-run and European-owned in the main. One of the more substantial estates, with its hundreds of meticulously planted, carefully drained, and flawlessly maintained acres is a thing of beauty as well as an extremely valuable capital asset. To keep it beautiful and valuable, the constant attentions of a trained and dedicated supervisory staff and the exertions of a small army of workers are required. (Tea is not so labor intensive as coffee was, though: where coffee required two workers per acre, tea has traditionally used less than one.) A tea bush takes three or four years to come into bearing and, with all the facilities which must be provided, setting up a going estate may take six to ten years. Once planted, the bushes remain productive for a very long time (even today, with most bushes 50 years old or more, there has been little replanting), but only with constant attention. The basic reason why such continuous care is needed is that the tea "bush" is not naturally a bush at all, but a tree which must be continually pruned so as to induce it to grow out (and thus expose the greatest possible leaf area to the sun) and not up, as is its natural

inclination. This, along with the need to fertilize, drain, and so on, necessitates a large maintenance force. Plucking the bush remains a virtually unmechanized process, also requiring hordes of laborers, because of the high degree of selectivity required in plucking. The only leaf that should be plucked is the "flush," the young and tender leafs on the new shoots; the older, coarser leafs would be too strong and bitter to make a desirable beverage. This means that the pluckers, who are traditionally women, must go over the bushes with great frequency (it can be as often as every three days) to assure that the flush is plucked and not allowed to age.

All of these technical characteristics go together to explain the short-run constancy of tea output and its failure to respond strongly and rapidly to price stimuli. To maintain the value of an estate as a capital asset over the long run, a fairly steady rate of output is an absolute necessity. Thus the growth of the industry has been relatively slow and steady but irreversable. A price change produces an output response only if it is expected to be a permanent change, calling for a marked increase or diminution of output over a number of years. Otherwise, the long-term rationality of keeping production on an even keel outweighs the temptation to raise or lower production in the short run. It is this rationality of stable output which makes the tea industry one in which tradition counts and things are done in the same way from year to year.

The economies of scale in tea production are considerable. Wickizer puts the optimum estate size at 500 acres.[1] Besides the economies realized in the field, there are very considerable economies available to the large estate in the processing of the green leaf. While there has been little mechanization of the field work over the years, the factory work -- drying, grading, rolling, and packing the tea -- has long been a mechanized operation. This essentially industrial work is traditionally

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1. p. 180.

done on the estate and only a large estate can afford a factory. Small estates and peasant producers must sell their green leaf to estates possessing factories and, because of their weak market position, suffer considerably thereby.

Despite the residual supplies of land, labor, and capital remaining after the coffee era ended, the expansion of the tea industry soon created a need for more. After the old coffee lands had been planted with tea, new lands began to be opened up. This, fortunately, was easy to do because tea can be grown at a much wider range of altitudes than coffee (varying, in Ceylon, from near sea level to over 5,000 feet). A new boom in the sale of Crown Lands developed. To meet rising demands for labor, more Tamil labor was imported. Official statistics, which are undoubtedly overstated, show the net inflow of Indian estate laborers rising to 334,000 in the 1890's, after a relatively small inflow of 122,000 in the eighties, then continuing at a pace of 316,000 in the first decade of the present century and 430,000 in the second.[1] The 1921 census reported an Indian Tamil population of 602,700, perhaps three times as many Indian Tamils (who were almost all estate laborers) as there were in Ceylon at the height of the coffee days. Capital continued to come from British banks and agency houses, as well as from internally generated funds, which were often substantial. One spreading development was the increase in the degree of corporate control over tea acreage. Companies replaced individual proprietorships and, in time, merged into larger corporations having control over several estates. By the time the first official data were gathered in the 1950's, over 60 per cent of the total industry acreage and about 75 per cent of the estate acreage was hel' by corporations.[2]

Smallholders in tea held a position similar to that occupied by their predecessors in coffee. They developed in the wake of the more profitable estate industry,

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1. See Table A-10 , below.

2. See Table A-33 .

operating on small plots with less efficient methods, making relatively little use of hired labor. The fact that they had to rely on nearby estates to buy and process their green leaf put them in a disadvantageous market position and they thus had to settle for relatively low prices. Nevertheless, by 1935 there were nearly 70,000 tea smallholdings, accounting for some 11.8 per cent of the total area cultivated.[1] Many of these holdings were only intermittently cultivated, though, and it is safe to say that they accounted for less than ten per cent of the total output. They can thus be dismissed as a minor force in the industry. From the point of view of the opening of the traditional sector to the influences of the market, smallholder production of tea must similarly be regarded as a development of only secondary importance.

RUBBER

As with tea, rubber's beginnings as a plantation crop in Ceylon derived from the fact that the main crop of the time ran into difficulties. The weak prices for tea which prevailed in the early years of this century, up to 1907 (see Table 1.5, above), made some planters search for a more profitable crop. Rubber, which was just beginning to be demanded in large quantities in the industrial countries, was fetching attractive prices. From just 1,750 acres in 1900 the Ceylon acreage went to some 150,000 by 1907.

The Ceylon rubber boom though dramatic, was not so overwhelming as the contemporaneous upsurge in the Malayan rubber industry. Two factors -- the relative scarcity of good uncultivated rubber land (most suitable land was already under tea) and the revival of tea prices after 1907 -- limited the growth of Ceylon's industry. Nevertheless, growth was rapid. By 1913 rubber earned about three-fourths as much foreign exchange as tea. In 1917, with the industry enjoying war-inflated prices, it actually surpassed tea for the first time in value exported. Because of rubber's five to

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1. See Table A-34.

seven year gestation period, it was not until about 1917 that the full fruits of the first extensive plantings began to be realized. This would have corrected the general excess demand in the world market if the war had not intervened. Despite the difficulties of importing supplies and finding shipping space for the bulky export product, the volume of exports continued to grow during World War I. By the War's end, though, the world oversupply made itself felt and prices plummeted to less than half their 1919 level by 1921.

In 1922 the Stevenson Restriction Scheme came into effect and in the following year prices rallied. Despite the Scheme, Ceylon's acreage continued to rise (see Table 1.6). The limitation of the Stevenson Scheme to the British colonies (an effort to enlist the Netherlands East Indies was unsuccessful) doomed it to ultimate failure. For a time, though, the growth of the automobile industry in the United Kingdom and especially in the United States brought prosperity to the industry. Acreage, output, and exports all rose steadily throughout the decade of the twenties and by 1929 Ceylon claimed about a tenth of the world's acreage, ranking a poor third behind Malaya and the Netherlands East Indies. Prices, however, hit a peak in 1925 and then began to decline. This fall was indicative of the failure of the Stevenson Scheme to prevent oversupply, but soon the world depression set in and demand fell off catastrophically. The bottom fell out of the world market.

The sensitivity of the Ceylon rubber industry to the depression of the thirties was extreme.Prices sank. Ceylon's rubber proved to be in an especially poor competitive position: much of its rubber acreage was already getting old (40 per cent of it had been planted before 1911), some of it had been planted at altitudes which were too high and on ground which was too hilly, and in many cases cultivation techniques that were inappropriate to the industry had been transferred intact from tea cultivation (e.g., clean weeding, which resulted in extensive erosion in the

hilly rubber country).[1] Furthermore, legal minimum wages remained under the influence of the relatively prosperous tea industry and declined very little. There are references in official documents to considerable reductions of output in the early thirties: according to the Director of Agriculture some 40 per cent of the tappable area was left untapped in 1932 and about half of the Indian laborers who had been employed in 1929 were by then laid off.[2] Nevertheless, the quantity exported declined only modestly. Prices fell towards the vanishing point. In 1932, with prices at one quarter of their 1929 level, output was down only 39 per cent. By 1934 a new international output restriction scheme (this time including the Dutch and all other important producers) went into effect and prices began to recover. Soon after, a partial recovery of demand, based partly on German rearmament and partly on the subsequent limited revival of civilian demand and upsurge of military needs elsewhere, set in and the market improved further. By 1939 the rubber industry was back on the road to good health and in the following year it felt the beginnings of a new boom.

With the shift to rubber, the estate sector in Ceylon moved away from the classic model which had been initiated in coffee cultivation and later transferred virtually intact to tea. Like tea and coffee, rubber is a tree crop, but unlike them it requires very little maintenance to continue to thrive, nor is constant harvesting required. A rubber tree is easily planted, takes approximately five to seven years to come into full bearing, and may be tapped at varying rates thereafter for the 25-30 years of its productive life. Even if conscientiously maintained, it uses less than half as much labor per acre as tea. Moreover, if left untapped for a year or two its future productivity will actually be enhanced:

> Some bark removal is...inevitable [in tapping a rubber tree] and this naturally varies not only with the skill of the tapper but also with

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1. P. T. Bauer, The Rubber Industry, London, 1948, p. 51.

2. Ibid., p. 54.

Table 1.6

The Ceylon Rubber Industry, 1900-39

Year	Estimated Output[1] (million lbs.)	Area Planted[2] (thousand acres)	Export Unit value[3] (Rs./lb.)	Yield per Acre[4] (lbs.)
1900	..	2	..	..
1901	..	..	..	..
1902	..	4	..	..
1903	..	12	..	..
1904	..	13	..	..
1905	..	36	..	..
1906	..	50	..	..
1907	..	116	..	..
1908	..	132	..	..
1909	..	154	..	..
1910	..	187	..	..
1911	..	185	..	..
1912	..	223	..	..
1913	25	233	2.42	107
1914	34	168	1.67	202
1915	49	199	1.62	246
1916	55	222	1.90	248
1917	72	229	1.81	314
1918	46	260	1.34	177
1919	101	309	1.31	327
1920	88	..	1.02	..
1921	88	390	0.59	226
1922	105	..	0.54	..
1923	84	..	0.88	..
1924	83	..	0.77	..
1925	102	439	1.66	232
1926	130	475	1.29	274
1927	125	490	0.95	255
1928	128	534	0.58	240
1929	181	534	0.48	339
1930	171	..	0.28	..
1931	138	..	0.14	..
1932	111	..	0.12	..
1933	142	..	0.16	..
1934	179	606	0.32	295
1935	120	629	0.32	191
1936	112	605	0.42	185
1937	162	604	0.49	268
1938	112	604	0.39	185
1939	134	615	0.50	218

Notes:

1. Through 1936, equals exports; thereafter, actual output data from the Administration Report (henceforth abbreviated: A.R.) of the Rubber Controller have been used.

(continued on next page)

> the frequency of tapping and with the tapping system adopted. If a tree is left untapped bark reserve will be greater, with the possibility of higher yields later; where bark removal exceeds bark renewal it will eventually be necessary to suspend or slow down tapping, or else to tap on imperfectly renewed bark...[1]

This relationship between present and future output is diametrically opposed to the relationship in tea cultivation, where present plucking enhances future output. Rubber output is thus more variable than that of tea, the range of possibilities running all the way from letting a tree stand idle to "slaughter-tapping" it, that is, tapping so fast that proper bark renewal is impossible and the tree is permanently damaged. The level of current output depends on the level of prices. More precisely, it depends on the relationship of present prices to expected future prices; output forgone this year raises future output and if the level of expected prices relative to present ones justifies it, output will be foregone.

Rubber technology is inherently much simpler than that of tea. The "manufacturing" process which must be gone through after the latex is tapped consists simply of drying it out and rolling it into one of two popular forms, sheet or crepe. No mechanical power need be used: the water can be pressed from the latex using hands and feet and the final drying can be left for the sun to achieve but simple power machinery and a smoke house are more commonly employed.

It should be clear from this brief description that rubber is inherently much more of a smallholders' industry than tea. The economies of scale in the industry are evidently much smaller. Moreover, the location of good rubber land -- at the

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2. See note 3 to Table A-34 , below.

3. Export price divided by export volume.

4. Estimated output divided by area planted; to a greater degree even than with other crops, these figures vary with changes in the ratio of bearing acres to the total planted; they are thus not a sensitive measure of changes in intensity of cultivation or of technological progress.

1. Bauer, p. 1.

middle altitudes, closer to the bulk of the peasant population than tea -- made the crop appealing to smallholding peasants. So, from the early days of the industry in Ceylon, smallholders have played a significant role. In 1936, the first year of official data collection on the subject, smallholders were found to hold 21 per cent of the island's rubber acreage. This, though, is true only under the arbitrary definition that an estate is any holding ten acres or more in extent. About 40 per cent of Ceylon's rubber land in the 1930's was in holdings of less than 100 acres.[1] Rubber smallholders in Ceylon typically use the cultivation of the crop as a supplementary sideline, shifting their attentions from rubber to their other agricultural or nonagricultural interests when rubber prices decline and back to rubber when they rise. When they decide to tap they hire casual labor from the village and when they decide not to tap their trees stand almost completely unattended.

Aside from the greater importance of the smallholder segment of the industry, rubber also brought other changes in the familiar pattern of resource use in the estate sector. The less regular need for labor meant that local workers employed on a casual basis were heavily relied upon, even by the estates. Of the 540,000 Indian estate workers in Ceylon in 1929, perhaps no more than 100,000 were employed on rubber estates. Capital flowed into rubber cultivation from a wide variety of sources, ranging from large British corporations with holdings in various parts of Ceylon and often Malaya and India as well to peasants with just a few acres planted.

COCONUT

With coconut, the third of modern Ceylon's three great export crops, one moves still further away from the classic plantation system. The coconut palm goes back to ancient times and was the "Tree of Life" to the Ceylonese peasant (Kalpa Vriksha

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1. See Table A-34, below.

in Sanskrit) long before it became a plantation crop. One of many similar quotations suggests its vital role in the village economy:

> The leaves are used for roofing, mats, baskets, torches, fuel, manure, whilst the stem of the leaf is utilised for fences, pingoes and fishing rods. Pickles and preserves are made of the cabbage or cluster of unexpanded leaves. The sap forms toddy, from which arrack is distilled. By evaporation, jaggery (a form of sugar) is obtained. Acetic fermentation produces coconut vinegar. The unformed nuts are utilised in medicine. The milk of the young nut makes a refreshing drink. The meat itself is used to make curry and generally in cooking. The oil from the nut is useful in medicine, for anointing the hair, to make soap, candles and to provide light. Cattle are fed on the poonac or copra cake. From the shell of the nut, drinking cups, charcoal, tooth-powder, spoons, medicine, beads, receptacles and knife-handles are manufactured. The coir is used for matresses, cushions, ropes, cables, cordage, canvas, fishing nets, brushes, fuel and floor-mats. The trunk, sometimes called porcupine-wood, is used for rafters, lathes, sailing boats, troughs, furniture, buttons and firewood. The roots of the tree are used for medicinal purposes.[1]

The coconut industry is dominated by smallholders, to an even greater extent than rubber, with which it shares many technical characteristics. Even more than the rubber tree, the coconut palm can live without systematic human attention. Weeding, fertilizing, and pest control all enhance yields, of course, but they are not at all necessary. The tree will go on producing dozens of nuts per year without them. It is very long lived, although after 50 or 60 years senility sets in and the yield drops. The tree is easily grown in small plots and even in gardens attached to houses and in the Wet Zone low country, where soil and climatic conditions are favorable, one finds them everywhere.

Aside from its almost endless village uses, which have frequently absorbed half of Ceylon's total production, the coconut palm produces five products of commercial value which are traded internationally: copra (the shredded meat of the nut, intended for later pressing into coconut oil), oil, poonac (the residual cake left after the oil is pressed out of the copra), dessicated (dried and finely shredded)

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1. Report of the Coconut Commission, Sessional Paper (henceforth abbreviated: S.P.) 12 of 1949, pp. 11-12.

coconut, and coir (coconut fibre, derived from the husks). The copra is used as a raw material to obtain oil, the oil is used in food products (as a raw material in the manufacture of margarine and as a cooking oil) and in soap, the poonac serves as a cattle feed, the dessicated coconut goes mainly into the confectionery industry, and the coir fibre is used for a variety of purposes.

Information on the coconut industry, because of the dominance of the smallholders and also because coconuts never came under an international regulatory agreement as did tea and rubber, has always been sparse. Table 1.7, however, summarizes what is known or can be estimated about its development up to World War II. From 1870 -- when coconut was already a much more firmly established crop than tea was and rubber had not even been planted -- through the 1930's, coconut output and acreage grew at a fairly steady rate. During this growth process, mainly in the first decades of the twentieth century, the plantation began to take a place in the industry. Unlike the tea or rubber estate, though, the coconut plantation was almost entirely locally owned. As time went by it came to represent an important transitional step taken by the village landowner on the way to becoming a member of the urban elite. In later days, many of Ceylon's leading politicians were to be coconut landowners. According to the only census of coconut lands ever made,[1] in 1951, only 20 to 25 per cent of the island's coconut acreage was on estates. Of the estates, 84.9 per cent were in the hands of Ceylonese individuals, while only 7.7 per cent were evidently in foreign hands (owned by non-Ceylonese companies or individuals).[2] The foreign role in the industry is somewhat understated by these figures, however, in view of the fact that the processing of coconuts, unlike that of tea and rubber, is not usually done on the estate, but at a separately located and owned mill. The mill may be a very simple affair or it may be a modern factory. A small number

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1. Census of Agriculture 1952, v. 3; see Table A-34 below, and note 4 attached to it.

2. See Table A-33, below, and its note 6.

of modern British-owned mills process a high proportion of the coconuts grown in Ceylon.

Under the beneficent influence of attractive and steadily rising export prices, coconut acreage and production expanded steadily up to World War I. After the war, the growth of acreage appears to have slowed down (though it may be that the over-estimation of acreage in the earlier period is what creates this impression), while output continued to rise. In the world market for coconut products, and dessicated coconut in particular, Ceylon was a leading supplier in the 1920's. Her position was undercut, however, by the increased entry of the Philippines into the world market in the twenties; the American market for dessicated coconut, for instance, was lost to the Philippines, which enjoyed a preferential tariff. Then the effects of the depression were felt. Despite the popularity of the coconut as an article of domestic consumption (which might be expected to work for greater price elasticity of supply in the export market), exports in terms of nut equivalents were higher in the depressed thirties than they had been in the prosperous twenties. Prices fell by more than half.

PEASANT AGRICULTURE

Just what happened to peasant agriculture during a century of estate development between 1840 and 1939 is hard to say. Reliable data on output are totally lacking and the only available quantitative indications of levels of activity come from information on resource use in the sector. It would be a mistake to think of this sector, which provided a livelihood for the major part of the population during the period, as static. In fact, its population grew and the quantity of resources available to it underwent some changes. On the other hand, it is clear from an examination of income levels and other quantitative indicators of well-being and technology levels in 1939 that the estate revolution bestowed few immediate benefits on the peasant sector.

Table 1.7

The Ceylon Coconut Industry, 1870-1939

Annual Averages

Period	Estimated Output[1] (million nuts)	Area Planted[2] ('000 acres)	Yield per Acre[3] (nuts/acre)	Coconut Oil Volume[4] ('000 cwts)	Coconut Oil Unit Value[4] (Rs.)	Copra Volume[4] ('000 cwts)	Copra Unit Value[4] (Rs.)	Dessicated Coconut Volume[4] ('000 cwts)	Dessicated Coconut Unit Value[4] (Rs.)
1870-79	274	..	..	174	12.37	36	7.45	...	..
1880-89	433	582	739	311	12.45	127	9.25	...	..
1890-99	611	818	747	443	13.93	169	10.17	73.5	20.52
1900-09	831	920	936	554	12.20	545	11.43	137.	17.91
1910-19	1,091	972	1,122	493	23.53	1,122	15.37	326.	23.41
1920-29	1,507	1,076	1,401	610	27.17	1,789	16.70	775.	25.56
1930-39	1,674	1,076	1,556	1,111	11.58	1,399	7.25	653.	10.34

Notes:

1. Through 1936, estimated by taking nut equivalents of coconut-product exports (suggested in Census of Agriculture 1952, v. 3, p. 10) and adding an assumed 115 nuts per capita annually (from Central Bank of Ceylon, Survey of Ceylon's Consumer Finances, p. 29); from 1937 on there are official figures, similarly estimated (see Table A-27, below).

2. See note 4 to Table A-32, below.

3. Estimated output divided by area planted.

4. Source: Table A-47, below.

5. 1892-99.

The opportunities to earn higher incomes offered to the peasants by the estate revolution were relatively few. Once the pattern of immigrant labor and imported supplies was established (that is, ignoring the basically unanswerable question of whether the Sinhalese were given a fair chance to work on the estates or provide food for them) the number of economic transactions taking place between the estate and village economies was small. Estate inputs were almost all imported. In time, Sinhalese peasants came to supply a fair proportion of the labor services used by the estates (by the 1930's, some 100,000 Ceylonese were working on the estates, making up about 20 per cent of the labor force), but this remained a minor tie between the two worlds of the estate and the village. Smallholding was a second link, which in time involved a relatively small number of peasants in producing coconuts and rubber (and an even smaller number tea) for the market. The great majority of peasants, though, had no contact at all with the estates.

In most instances (especially in the case of up-country tea) the estates were not physically contiguous with the peasant areas, but even where they were (as was frequently the case with low-country tea, rubber, and coconuts) there were remarkably few economic relations between the sectors. The villager grew paddy (rice) to feed himself and his family, often enjoyed the easily-gained produce of a few coconut trees, and relied on a small plot of garden or "highland" to furnish fruits and vegetables to supplement his diet. His ideal was self-sufficiency and the ideal came close to being realized in practice. His technology was primitive -- even draft animals were considered a luxury, available only to the relatively well-to-do peasant -- and his per capita income was correspondingly low, much lower than that of the plantation sector (though the estate income was distributed so unevenly that the estate laborer was probably very little better off than his village counterpart). Fortunately for the Ceylon peasant, nature was generally kind -- especially in the rich "Wet Zone," which comprises the southwest corner of the island. In the

Wet Zone two rice crops were easily grown each year; in the remaining Dry Zone (which is dry only in comparison to the richly watered Wet Zone) two crops are possible but, in the absence of good irrigation, rather unlikely.

Technology in the peasant sector had been essentially unchanged for centuries. Peasant population grew at only about one per cent a year (see Table 1.8). A high incidence of infant deaths and periodic outbreaks of malaria were the main forces keeping the rate of natural increase down in the face of a high birth rate. In addition, there were gradual population losses to the cities and the estates. The supply of land to the peasants also expanded slowly but steadily, partly through the gradual restoration of the extensive ancient irrigation works which exist in many parts of the island, so only in the 1920's did the ratio of population to cultivated land in the peasant sector begin to rise. Despite frequent claims in Ceylon to the contrary, the estates seem to have cut very little into the supply of arable land available to the peasant. In other ways, though, the effects of the estates on resource availability in the peasant sector may have been more harmful. It is probably true that the growth of the estates did reduce the reservoir of land available for future expansion of traditional cultivation and thus bring about suffering among the peasants later, in the twentieth century, when their population began to rise rapidly. And what actual diversion of land formerly used by the peasants to the estates that there was did not involve paddy land, but rather the supplementary pasture and "chena" land (land used for the occasional slash-and-burn cultivation of secondary grains) of the Kandyan peasants. This can be interpreted as being the reason that the ratio of draft animals to rural population, after rising in the late nineteenth century, fell almost continuously during the twentieth (see Table 1.9).

Despite the lack of quantitative information on the history of the traditional sector, the broad outlines of the estates' influence on it are clear: the effects of estate development on the village were relatively minor in quantity and indirect

Table 1.8

Estimated Cultivated Land and Population in the Peasant Agricultural Sector, Census Years, 1871-1959

Year	Cultivated Peasant Land[1] (thousand acres)	Annual Growth Rate since Previous Year	Peasant Population[2] (thousands)	Annual Growth Rate since Previous Year	Peasant Population per Acre
1871	954		1,831		1.9
1881	1,092	1.4%	1,996	0.9%	1.8
1891	1,243	1.3	2,219	1.1	1.8
1901	1,370	1.0	2,541	1.1	1.9
1911	1.544	1.2	2,818	1.0	1.8
1921	1,676	0.8	3,051	0.8	1.8
1931	1,809	0.8	3,921	2.5	2.2
1946	2,076	0.9	4,941	1.6	2.4
1953	2,206	0.9	6,044	2.9	2.7
1959[3]	2,351	1.1	7,297	3.2	3.1

1. Source: Table A-31. "Peasant land" consists of paddy acreage, plus "other" crops, plus certain proportions of coffee, tea, rubber, and coconut cultivation: 20 per cent of coffee, ten per cent of tea, 20 per cent of rubber, and 60 per cent of coconut. Each of these embodies an estimate of the proportion of total acreage under the crop which consisted of holdings under ten acres. From 1946 on, actual percentages are used for tea and rubber (see Table A-34., below) and part of the rise in peasant land after 1931 consists of land bought from estates by smallholders.

2. Rural population from Table A-13, minus estate population; the latter is taken as equal to Indian estate population from 1931 on (see Statistical Abstract of Ceylon 1961, p. 185); before that the assumption is that the land-labor ratio in the estate sector during the 1920's applies in all periods. This formulation leaves Sinhalese estate workers in the peasant sector, which is probably desirable, since they tend to be peasants at heart and only casual estate workers.

3. 1959 was not a census year, so the origins of the data used are somewhat different from those of the other years (see Tables A-13, and A-31).

Table 1.9

Draft Animals and Population in the Peasant Agricultural Sector, Census Years, 1871-1959[1]

Year	Draft animals (thousands)			Draft animals per hundred of peasant population		
	Buffaloes	Cattle[2]	Total	Buffaloes	Cattle[2]	Total
1871	..	997	..	..	54	..
1881	281	1,056	1,337	14	53	67
1891	393	1,065	1,458	18	48	66
1901	521	1,477	1,998	21	58	79
1911	462	1,465	1,927	16	52	68
1921	419	1,386	1,805	14	45	59
1931	528	1,052	1,580	13	27	40
1946	522	1,080	1,602	11	22	32
1953	656	1,229	1,885	11	20	31
1959	781	1,486	2,267	11	20	31

1. Peasant population is the same total as was used in Table 1.8; data on draft animals are from Table A-35, below.

2. Cattle in Ceylon are used mostly as draft animals; there are few dairy cattle.

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in nature. The economic opportunities offered to the villager were relatively few. The negative impact of diverting land from the peasants was of consequence only with the passing of time, and even then the indignities suffered by the peasants might as logically be ascribed to the acceleration of their rate of population growth as to the effect of the estates in limiting the amount of land available for the expansion of peasant agriculture; that, after all, was ultimately limited by nature anyhow.

THE ESTATES AND ECONOMIC GROWTH

The first century of Ceylon's modern economic development -- from the coming of the coffee estate in the 1840's to World War II -- was utterly dominated by the emergence and subsequent growth of estate agriculture. Roughly, the century can be divided into a number of periods, distringuished on the basis of what was happening in the estate sector at the time: the rise of coffee and establishment of the

estate system, c.1845-70; coffee's decline, 1870-88; the rise of tea and rubber up to the first World War, 1888-1913; war and peace prosperity, 1913-29; and the depression of the thirties. Taking the present as a point from which to look back, the entire 1929-46 period can be viewed as a kind of "abnormal" era in which depression and war were the dominant influences on production, and the years since 1946 as an era dominated by the political fact of independence. Within the unchanging framework of an economy dominated by its estate sector, each of these periods has its own particular growth experience (see Table 1.10 and Figure 1.1). Total exports (and presumably national output, though there are no data) rose and fell with coffee in the early decades. The 1888-1913 period is the one in which tea propelled the economy forward; tea is mainly responsible for the fact that over-all export volume moved upward at a 4.7 per cent annual rate during these years. In 1913-29 the estate sector experienced its most rapid growth -- 7.6 per cent a year; in this period rubber, growing faster than tea ever did, provided the main impetus. Thus, up to 1929 coffee, tea, and rubber had each in turn served as a leading sector, an engine of growth for the economy. After 1929 no sector boomed. In the "abnormal" 1929-46 era, output stagnated. Since 1946 it has resumed its upward movement, but at a much slower rate than previously. Much more will be said about this later.

The growth of estate output was accompanied by substantial increases in the quantity of resources employed in the sector. Total land area devoted to the three major crops rose from about 0.9 million acres in 1890 to 2.3 million in 1960. Total employment rose from some 300,000 to over 800,000. Still, most of the increase in output can be attributed to steady rises in both labor and land productivity. In the tea industry from 1901 to 1960, for instance, output rose by 187 per cent but labor and land inputs increased by only 43 and 35 per cent respectively; output per man went up by 58 per cent, while per acre yields doubled. Comparable estimates for coconut show a 174 per cent output gain, 27 and 19 per cent increases in the

Fig. 5

Indexes of Plantation Sector Outputs, 1885-1960

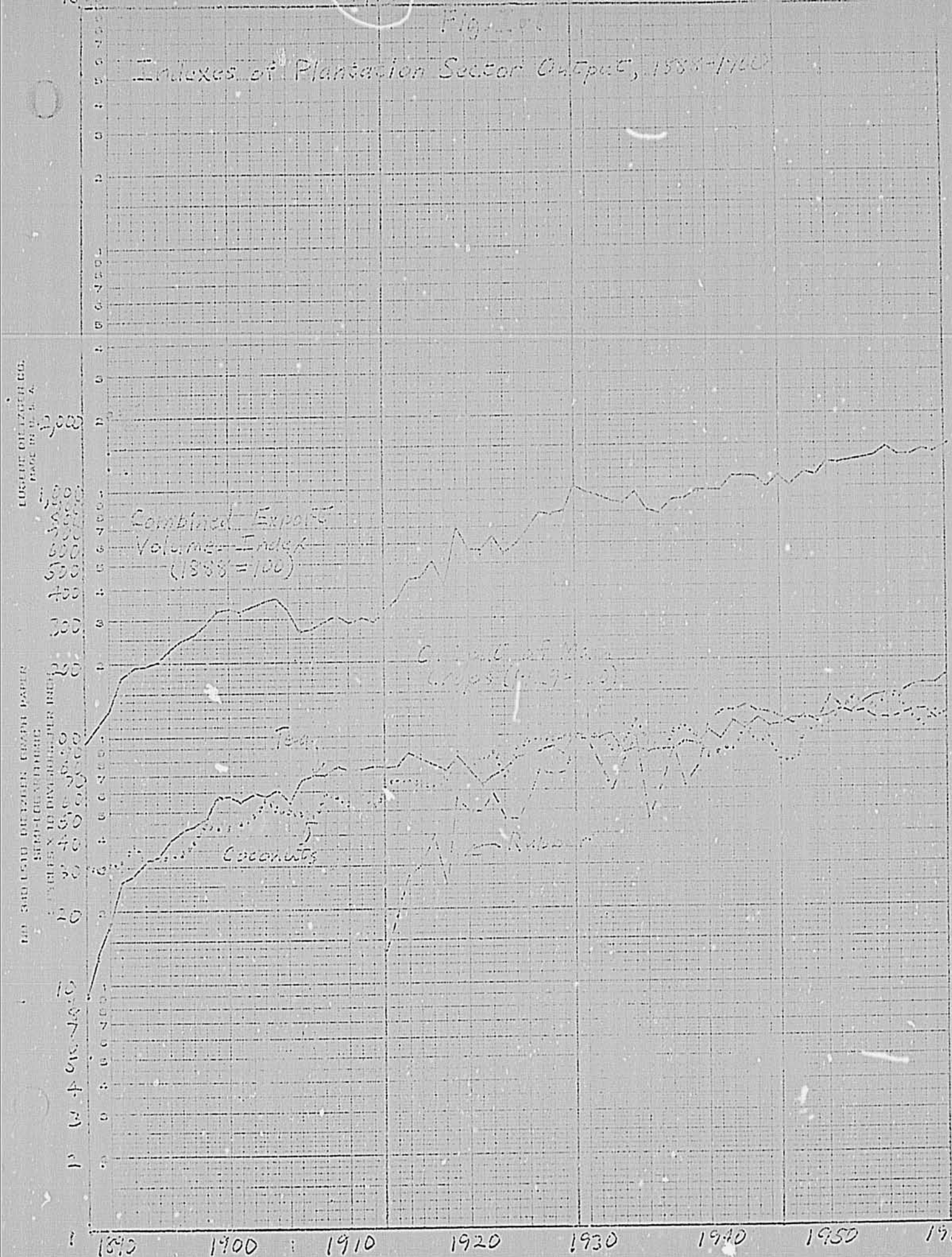

Table 1.10

Annual Rates of Increase in Output and Exports, 1845-1960

Period	Coffee Exports	Tea Output	Rubber Output	Coconut Output	Combined Export Volume Index[2]
1845-70	6.4%	-	-	..	..
1870-88	-12.7	∞	-	2.4%	..
1888-1913	- ∞	8.7%	∞	3.0	4.7%
1913-29	-	1.8	13.2%	2.8	7.6
1929-46	-	0.5	0.9	-1.1	0.5
1946-60	-	3.2	0.3	2.6	1.8
"Lifetime":					
1845-88	0				
1890-1960[(1)]		3.3			
1913-60			4.7		
1880-1960				2.0	
1888-1960					3.8

(1) "Lifetime" growth rates have been taken from about ten years after the establishment of the industry.

2. The index from which these growth rates are taken is plotted in Figure 1.1. Because of the frequent changes in the composition of Ceylon's estate output, computing such a long-term index poses a formidable index-number problem. Using either constant weights from any single year or period or current-year weights causes gross distortion; the former toward understatement and the latter toward exageration. A third alternative was thus elected; constant weights within each of the subperiods chosen, taken from the first year of the subperiod, and linkage of the subperiod indexes at the end years of the subperiods.

* * *

amounts of land and labor employed in the industry respectively, and striking 117 and 130 per cent increases in output per acre and per man respectively. In the rubber industry, output (taking 1921 as a base) rose 133 per cent by 1960; increases in inputs were also high, though -- 71 per cent for land and 70 per cent for labor -- and productivity gains were not so impressive as in tea and coconuts -- 36 per cent for labor productivity and 37 per cent for land productivity. The ageing of the

trees and widespread replanting with younger trees (which required several years to come into bearing) in the 1950's are largely responsible for the less striking productivity increases recorded in rubber.[1]

Each of the estate industries appears to have followed a life cycle in its development which, up to a point, differs remarkably little from crop to crop. The opening of the industry is dramatic. Acreage grows by leaps and bounds and output climbs almost as fast. Output per acre, measured using the gross acreage planted in the denominator, rises rapidly as more and more acres reach optimal bearing age. Soon a fairly clear extensive margin is reached, however, beyond which it is not profitable to extend acreage. Acreage ceases to rise and, after a lag of a few years, output also stagnates. Employment, which had been rising briskly in the early years, stops growing. A period of near stagnation is ushered in. Coffee, tea, and rubber all clearly demonstrate the pattern up to this point. Beyond this phase of the cycle, though, there is considerable room for variations among cases. Output, if it is to grow again, must rise mainly through increases in output per man and per acre; a variety of circumstances determine whether this is achieved.[2]

Table 1.11 shows these trends in tea, rubber, and coconut. Tea and rubber had similar early growth patterns up to the 1920's and similar stagnation thereafter. Coconut's initial period of rapid growth, if it had one (and it may not have), is lost in the mists of pre-statistical antiquity. The years since 1946 show a variety in the latest phase of estate development. The tea and coconut industries have been able to accelerate their rates of output growth through acceleration of productiv-

1. The data upon which these calculations are based all appear in the Appendix.

2. There is no inherent reason why output must stagnate after the intensive margin is reached. The upsurge in productivity could follow close on the heels of the exhaustion of suitable land supplies. It can be argued that with tea and rubber it was only the coincidental appearance of the depression soon after the margin was attained which produced the period of stagnation which is observable in the statistics.

ity rise, while rubber, hampered by less favorable markets and (in the short run) replanting, has not.

Table 1.11

Subperiod Trends in Tea, Rubber, and Coconut, 1888-1959
(average annual growth rates)

Subperiod	Output	Acreage	Employment	Output per Acre	Output per man
			Tea		
1888-1913	8.7%	3.0%	..	5.6%	..
1913-29	1.8	-0.3	(1.1%(1))	2.2	(0.1%(1))
1929-46	0.5	1.1	( )	0.6	( )
1946-59	3.0	0.4	0.4	2.6	2.5
			Rubber		
1913-29	13.2	5.3	(4.7(1))	7.5	(1.4(1))
1929-46	0.9	1.2	( )	-0.4	( )
1946-59	-0.2	0.1	-0.3	-0.3	0.2
			Coconut		
1888-1913	3.0	1.6	..	1.4	..
1913-29	2.8	0.8	(-1.1(1))	2.0	(2.2(1))
1929-46	-1.3	0.7	( )	0.3	( )
1946-59	3.4	0	2.0	3.4	1.3

(1) 1911-46

It is clear that the estate sector of Ceylon's economy has repeatedly demonstrated its capacity to grow, both by bringing new resources under its command and by improving the efficiency of its resource utilization. What are the implications of this capacity for the aggregate growth of the economy? As one would expect, similar long run data on the growth of the peasant and urban parts of the economy are lacking, so it is impossible to say just how fast Gross Domestic Product has grown historically. A rough estimate of over-all growth is possible, though. If the whole modern sector is taken, very roughly, to account for half of Ceylon's real GDP, if its annual growth rate is taken as 3.8 per cent, 1888-1960 (the growth rate of the combined export volume index in Table 1.10) and if constant output per head is assumed

in the rest of the economy, then the overall growth rate works out to 2.7 per cent a year.[1] Since population growth has averaged 1.7 per cent annually since 1888, this implies an annual growth rate of real GNP of one per cent. While not a spectacular rate of growth, this is a discernible one and is definitely significantly different from zero. There is thus evidence that over the last century the trend of Ceylon's domestic output has been distinctly upward and at a rate somewhat faster than population growth.

This growth record is rendered more impressive by the diversity of products which went into its compilation. Coffee, tea, and rubber were all bellwethers of the economy in their turn. Several times, a reverse in the world market for one good stimulated the development of another profitable one. The one consistent principle in the history of the estate sector has been the continual sifting through the array of possible export crops, discarding the infeasible and picking the most profitable. Of course, in world depressions the prices of all primary products drop and adaptability is to no avail. Ceylon was hit several times by depressions during the plantation era and the impact was often considerable. But in each case the estates rode out the depression and recovered with output levels higher than ever. Fluctuations were the price of the higher income levels afforded by the plantation system. Individual estate companies often went bankrupt but the system itself continued as virile as before.

One side of the historical record of the estate sector, then, is the not inconsiderable amount of economic growth it produced for Ceylon. There is another side, though: the failure of estate development to touch off any remarkable growth or transformation of the rest of the economy. Despite a century of estate development, the average income of Ceylon's 5,916,000 people was only about Rs. 140 in

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1. That is, real output is thought to have risen at a 3.8 per cent rate in the modern sector and 1.7 per cent in the traditional sector; 2.7 per cent is the mean of these two rates.

1939;[1] it had been higher -- about Rs. 190 in the late twenties -- but had suffered in the depression. Other quantitative indicators pointed to a very poor country. The birth rate was very high, 35.9 per thousand, and the death rate was also substantial (22.0); of every 1,000 live births, 166 infants died in their first year. The population was 86.8 per cent rural. Public health and education were fields in which some progress had been made but standards were still low: fewer than 40 per cent of the nation's school-age children were actually in school and infective and parasitic diseases, which medicine and public health could in time eradicate, accounted for 20 per cent of all deaths in the island. Most of Ceylon's population lived in the villages, relying heavily on the traditional cultivation of paddy; per acre yields in the crop were among the lowest in the world. The main reasons for the poverty of the traditional agricultural sector were the primitive technology and the small quantities of cooperative resources the peasants had to work with. The average paddy holding was just over one acre and, with supplemental holdings of other kinds, the typical peasant family had no more than perhaps three acres of land to work. Mechanical power use was sparse; electricity consumption amounted to some 25 kilowatt hours per capita a year and even this was almost entirely limited to the cities and the estates. Even draft animals were in short supply: there was only one buffalo for every eight rural persons and one cow or bull for every four. Low incomes were the inevitable consequence of such low levels of resource use.

The coexistence of so poor an economy in general and a peasant sector in particular with a prosperous estate sector raises several questions. Did the estates create the poverty? And even if they did not, why did they not eliminate it? The failure of the estates to transform Ceylon's economy must be considered in detail. The explanation for it lies in the basic structure and dynamics of the pre-World War II economic system.

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1. Warnacena Rasaputram, Influence of Foreign Trade on the Level and Growth of National Income of Ceylon, 1926-57, unpublished Ph.D. dissertation, University of Wisconsin, 1959, p. 133. Data supporting the other statements made in this paragraph appear in the Appendix.

Chapter 2. The Structure and Dynamics of the Classical Economy

Both the strengths and weaknesses of Ceylon's colonial economy grew out of its basic structure and dynamics. The economy was a veritable model of what might be called a dualistic export economy. There are two identifying features of this kind of economy: (1) close dependence of national income on foreign trade and (2) a split of the economy into two sectors, one modern in organizational structure and technology, producing for the world market, and the other traditional in both these regards, producing for the immediate village market. Dualism can be and has been defined in many different terms -- capitalistic versus subsistence, monetized versus nonmonetized, modern versus traditional, export versus domestic, and so on. In Ceylon, the various definitions were closely coincident and the two sectors, however defined, were clearly visible. The modern sector consisted of the estates, the financial and commercial establishments of Colombo and a few smaller cities, and the central government. The traditional sector was made up of the villages and depended preeminently on agriculture, with a sprinkling of native crafts and traditional service occupations. The classic purity of the Ceylonese case is illustrated by the clearness of this two-sector division and the near absence of any in-between or third case. Only later did a "third sector," comprising industrial and urban activities not directly related to plantation agriculture develop.

The dualism of the economy was nearly perfect. The estate and peasant economies touched at only a few points. There was little blurring of the sectoral lines. The coconut industry was a mixed form, but in tea and rubber smallholders produced no more than fifteen per cent of the crop. The rest of the economy did not count for much. There was a small plumbago (graphite) mining industry; an unimportant remnant of the old spice trade, which had been the principal commercial activity of Portuguese and Dutch times; and only the barest rudiments

of a manufacturing sector (almost no modern industry -- unless the simple "factories" attached to the largest tea and rubber estates are counted -- and cottage industries which compared most unfavorably with those of neighboring India). For even the simplest manufactured goods the reliance on imports was virtually complete.

Approximately 35 or 40 per cent of Ceylon's national output went into exports and a similar proportion of the national income was spent on imports.

INTERSECTORAL FLOWS

The economy of Ceylon before World War II, then, can be regarded as consisting of a modern and a traditional sector, both open to trade with each other and with the outside world. The overwhelming bulk of trade flows, though, ran from the modern sector to the outside and back again. Few goods and services flowed between the traditional sector and the modern sector or between the traditional sector and the outside. The government, an institution with a potential for changing the pattern of intersectoral flows, was small at the time and did little to alter this basic pattern. The pattern can be illustrated in a rough and incomplete way with respect to one fairly typical prewar year -- 1929.

In 1929 by far the largest number of Ceylon's people earned their living in the traditional sector (see Table 2.1). To the 72.7 per cent of the total population that lived in the rural areas but not on estates can be added the 4.4 per cent dwelling in towns smaller than 20,000. The estate population accounted for 14.1 per cent of the total and the further 5.4 per cent living in Colombo must also be added to the modern sector. The 3.4 per cent living in towns of 20,000 and up other than Colombo were a mixed lot, some of them working in the traditional sector and some in the modern. Thus, overall, nearly 80 per cent of the population was in the traditional sector and 20 per cent in the modern.

Table 2.2

Breakdown of Receipts from Domestic Exports between Modern and Traditional Sectors, 1929[1]
(Rs. millions)

	Modern Sector	Traditional Sector	Total
I. Food, drink, and tobacco	202.1	32.7	234.8
a. Tea[2]	188.4	16.8	205.2
b. Dessicated coconut[3]	4.9	7.0	11.9
c. Others[4]	8.9	8.9	17.7
II. Raw materials	96.2	45.0	141.2
a. Rubber[5]	73.4	13.2	86.6
b. Coconut oil[3]	7.4	10.6	18.0
c. Copra[3]	10.8	15.5	26.3
d. Minor unmanufactured coconut products	1.9	2.5	4.4
e. Plumbago (graphite)	2.7	--	2.7
f. Others[6]	--	3.2	3.2
III. Manufactured goods[6]	--	3.7	3.7
IV. Animals not for food	--	--	--
DOMESTIC EXPORTS	298.3	81.4	379.6
Per cent of Total	78.6	21.4	100.0

[1]As the following notes make clear, this is only a rough breakdown.

[2]Ten acres is the dividing line between smallholdings and estates; the acreage ratio was taken to be that of 1935 (88.2 per cent estate) and yields on smallholdings were assumed to be two-thirds of estate yields per acre.

[3]All coconut output is divided on the basis of the 1946 acreage ratio (31.9 per cent estate) and the assumption that smallholder yields are two-thirds of estate yields.

[4]Assumed 50-50: includes minor estate crops, spices, etc.

[5]Acreage ratio taken as in 1936 (78.7 per cent estate); smallholder yields assumed to be two-thirds of estate yields.

[6]Arbitrarily allocated entirely to traditional sector; actually contain small proportions of modern-sector output.

Sources: Tables A-34, A-47, and A-48, below.
Thirty Years Trade Statistics, v. 1.

Table 2.3 (below) breaks down 1929 imports among several categories: consumption goods, Western-style and traditional, intermediate goods, and investment goods. The Western-style consumption goods amounted to 16.8 per cent of total retained imports at this time. Since the European population was no more than seven or eight thousand, less than one per cent of the total, the figure is indicative of both the much higher income levels enjoyed by the few Europeans in Ceylon and the spread (which was later to become much wider) of Western modes of living to the Ceylonese population. The Ceylonese consumers of Western-type goods at this time may have numbered ten or twenty thousand, were largely limited to Colombo, and consisted of people with high-level positions in the estates, commerce, and the government, as well as a small but growing Ceylonese middle and upper class, consisting of landowners and professionals in law, medicine, and similar fields. Traditional consumption goods, which accounted for just over half the import bill in 1929, consisted mostly of staple foods (especially rice), with basic manufactured goods like cotton textiles, kerosene, and matches rounding out the total. No division of these goods between modern and traditional sector consumers (e.g. between villagers and estate workers) can be made, since the consumption patterns of the two groups were similar in many respects. One can speculate that most of these goods went to the estates and to urban consumers, though the villager, too, had by this time become dependent on foreign sources of such things as cloth, matches, and kerosene and used much of his meagre cash income to buy them. The intermediate and investment goods which made up the remaining 37 per cent of the import bill went almost exclusively to the modern sector -- the estates, commerce, and the government. Almost all the raw materials, tools, and construction materials employed by the traditional sector were of native origin.

Table 2.3

Breakdown of Retained Imports among Consumption Goods, Western-style and Traditional, Intermediate Goods, and Investment Goods, 1929[1]
(Rs. million)

Item	Consumption goods: Western-style	Consumption goods: Traditional	Intermediate goods	Investment goods	Total
Food, drink, & tobacco	27.5	147.1	3.8	--	178.4
Rice	--	99.5	--	--	99.5
Sugar	--	15.8	--	--	15.8
Fish	0.9	10.2	--	--	11.1
Curry stuffs	--	5.8	--	--	5.8
Other food	18.4	15.2	3.8	--	37.4
Drink	4.6	--	--	--	4.6
Tobacco	3.6	0.6	--	--	4.2
Raw materials	--	--	30.2	--	30.2
Fertilizers	--	--	15.2	--	15.2
Other	--	--	15.0	--	15.0
Manufactured goods	33.6	38.4	33.4	49.9	155.4
Cotton goods	--	25.7	--	--	25.7
Motor vehicles	5.5	--	--	9.5	15.0
Iron & steel & their products	--	--	--	14.7	14.7
Gasoline	4.8	--	8.3	--	13.1
Machinery	--	--	--	7.8	7.8
Kerosene	--	7.6	--	--	7.6
Other	23.3	5.1	25.1	17.9	71.4
Animals not for food	--	--	--	--	--
Total	61.1	185.5	67.4	49.9	364.0
Per cent of total	16.8	51.0	18.5	13.7	100.0

Source: Thirty Years Trade Statistics, v. 1.

[1]As in Table 2.2, there is some roughness inherent in the arbitrary assignment of items to one category or another; however, the existence of a finely detailed summary of imports in the source reduces errors arising from this difficulty considerably. Retained imports are taken as 1929 imports minus 1929 re-exports, with no adjustment for changes in stocks.

Like the outside world, the government of Ceylon in 1929 dealt mainly with the modern sector. The government was much smaller then than it was to become later (its consumption and investment expenditures together amounted to about 14 per cent of GNP, compared with the 19.4 per cent disposed of by the 1960 government)[1] and its later function as an instrument of intersectoral redistribution had hardly been used yet. The revenues of the government in 1929 came mainly from customs duties (49.0 per cent of total revenues), nontax receipts (32.1 per cent), and excise taxes (16.1) and only to a small extent from direct taxation.[2] By far the greater proportion of revenue was raised in the modern sector; the traditional sector was barely touched by the revenue system. Import duties, the largest single revenue source, were levied at an average rate of 9.5 per cent of the total c.i.f. value of imports. About a third of this duty was raised from imports of traditional food items (much of which was destined for consumption by estate laborers), but the rest fell on consumption, intermediate, and investment good imports of the modern sector and on items which were subsequently re-exported.[3] About 80 per cent of the revenues raised from export duties, of which the duty on tea provided by far the most revenue, fell on estate exports.[4] The average rate of export taxation was just 3.1 per cent of the value of domestic exports.[5] There was no income tax, either on companies or individuals.

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[1] Rasaputram's data put GNP in 1929 at about Rs. 775 million (p. 121); for 1960, see Appendix A, below.

[2] See Table A-60, below.

[3] Thirty Years Trade Statistics of Ceylon, v. 2; this is for 1930.

[4] Ibid.

[5] During the following year, with the onslaught of the depression, export taxation was temporarily abandoned.

The nontax revenues of the government were mostly payments for services performed for the modern sector -- land sale proceeds, surveying fees, tolls, electricity charges, port and warehouse dues, etc.

Similarly, the expenditures of the government were in large measure the costs of providing services to the modern sector. Table 2.4, which provides a rough functional breakdown of expenditures in the 1928/29 budget, shows this. Aside from the fairly heavy burden of administrative cost and light defense burden which it bore, the government confined its activities to providing services which were of direct or indirect benefit to the estates. It was the fact that some of the services which were provided approached the character of public goods and, once provided to the estates, were also consumed by the traditional sector that created a government contribution to the transformation of the traditional sector. Many of the services the government provided -- electricity, roads, railroads, and others -- were of this public-good type. The areas in which the colonial government had the profoundest impact, though, were education and health services. Both of these were provided to the Ceylonese largely because they increased the productivity of the population. Education in English was a requisite of an efficient civil service and the relatively early development of education in the country arose largely from this fact. The avoidance of epidemics among the great labor force of the estates was another necessity if the colonial economy was to operate smoothly and the result was a good public health service. Both educational and health services were usually best in Colombo, next best on the estates, and poorest in the villages, but nevertheless there was considerable benefit to the whole country.

DYNAMICS

The dynamics of Ceylon's classical export economy were extremely simple. Export earnings provided the exogenous stimulus and national income -- as well as almost every other economic magnitude -- adjusted accordingly. In the traditional sector the sensitivity to changes in foreign earnings was of course much less than in the modern sector, but for the economy as a whole both secular growth and short-term fluctuations originated principally in the world market. The only other influence on the welfare of the peasant was the immemorial natural cycle of weather and disease.

Table 2.4

Functional Breakdown of Central Government Expenditures, 1928/29[1]
(Rs. millions)

Administration	27.0
Defense	2.3
Economic services	35.0
Social services	21.9
Education	10.3
Health	11.5
Transfer payments	18.7
Interest on public debt	11.2
Pensions	7.5
Extraordinary expenditures[2]	21.0
TOTAL	125.9

[1]This breakdown, which is based on The Report of the Colonial Auditor for 1928/29, is necessarily rough; it is only approximately comparable with the data for later years presented in Table A-61, below.

[2]Nonrecurrent expenditures of the Irrigation, Public Works, Railway, and Electrical Departments; this figure serves as a rough measure of government investment.

(1) Labor supply to the modern sector can be viewed as perfectly elastic at customary wage rates. As has been seen, one of the reasons for the economy's dualism was that the Sinhalese peasant refused to become an estate laborer; he has clung to this preference to the present day and joined the labor force on

the estates only as a matter of dire economic necessity. The growth of the plantation system was predicated on the existence of a virtually unlimited supply of labor in South India, which was free of the scruples of the Sinhalese, lived relatively close at hand, and preferred estate labor to severe poverty and underemployment in their native villages. Wages were set by statute and labor ebbed and flowed from India according to the needs of the estates. To a much more limited extent, the same flow occurred between the estates and Ceylon's own peasant sector. Although there were still labor shortages at times,[1] labor was relatively plentiful and it must be said that the plantation system in Ceylon would have been an impossibility in the absence of Indian immigrant labor. In Ceylon's traditional sector (see Table 1.8, p. 1.40, above) the labor force grew slowly as population increased, but with the gradual loss of people to the cities and the estates, as well as the slow growth in the supplies of complementary resources available to the peasant producer, it did not swell so rapidly as to apply downward pressure to rural incomes.

Never at any time did the estates themselves employ more than a third of Ceylon's labor force.[2] All through the late nineteenth and early twentieth centuries at least as many people were employed in traditional agriculture as worked on estates (roughly 30-40 per cent). Of the remaining third or less of the work force which was employed in nonagricultural pursuits, about one third held manufacturing jobs and the remainder worked in the service sector, which

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[1] See pp. 1.10- 1.12, above.

[2] See Table A-21, below.

was therefore about 20 per cent of total employment. Prior to World War II, census data on the industrial attachment of the economically active population show no tendency for this pattern to change.[1] It is very hard to say, but it may be that by the early years of the twentieth century as many as half of the economically active population worked in the modern sector (adding together the 30 per cent of the total work force on the estates and another 20 per cent in the urban modern sector -- in trade and transport, government, manufacturing, mining, construction, public utilities, and the professions).

(2) Land was available to European planters in unlimited supply and at nominal cost early in the coffee period, but this golden age soon passed. By the last two decades of the nineteenth century the scarcity of land suitable for tea cultivation had become the main factor limiting the further expansion of production. Similar problems were encountered with coconuts, for which adequately watered land was the scarce factor, and later with rubber. After the 1920's, total estate acreage stagnated (see Table 2.5). Since increases in Ceylon's production would have little effect on world prices it was the exhaustion of the supply of land which could be planted profitably at prevailing prices (coupled in some cases with a decline in world price arising from world-wide overexpansion) which provided the initial check to further output growth in the case of each plantation crop. Coffee reached this point in the 1860's and only the soaring prices of the seventies induced the area planted to rise above 240,000 acres.[2] For tea

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[1] The relative rise in estate employment from the mid nineteenth century up through World War I does not in the main appear in the statistics, since estate employees can be distinguished from other agricultural workers in the census data only from 1901 on.

[2] See Table 1.1, pp. 1.6 - 1.7 above.

the limit was reached in the first decade of the twentieth century.[1] Rubber reached the extensive margin in the late 1920's, though a considerable amount

Table 2.5

Areas Cultivated by Estates and Peasants, Census Years, 1871-1959[1] (thousand acres)

Year	Estate Land				Total Cultivated Area	Annual Rate of Increase
	Coffee	Tea	Rubber	Coconuts	Total	
1871	214	--	--	200	413	1,367	
1881	228	12	--	210	450	1,542	1.2%
1891	45	235	--	304	584	1,826	1.7
1901	5	366	2	339	711	2,081	1.3
1911	--	412	148	412	971	2,516	1.9
1921	--	376	312	410	1,099	2,775	1.0
1931	--	456	451	430	1,337	3,146	1.3
1946	--	490	507	428	1,426	3,501	0.7
1953	--	505	482	428	1,415	3,620	0.5
1959	--	502	477	428	1,408	3,758	0.6

Peasant Land

Year	Export-crop Smallholdings					Non-export Crops			Total Peasant Area
	Coffee	Tea	Rubber	Coconuts	Total	Paddy	Others	Total	
1871	53	--	--	300	353	544	58	601	954
1881	57	1	--	315	373	549	169	718	1,092
1891	11	26	--	456	493	563	186	750	1,243
1901	1	41	--	508	550	670	150	820	1,370
1911	---	46	37	618	701	645	199	843	1,544
1921	--	42	78	615	735	727	215	941	1,676
1931	--	51	113	645	808	811	190	1,001	1,809
1946	--	63	152	643	858	913	305	1,218	2,076
1953	--	70	176	643	888	964	353	1,317	2,206
1959	--	78	191	643	911	1,124	315	1,440	2,351

[1]Source: Table A-31. The split of export crop acreage between estates and peasants prior to 1946 is based on an assumed constancy of their relative shares in total acreage. See Note 1 to Table 1.8, p. 1.40, above.

Of unprofitable planting continued to be done into the 1930's.[2] Coconut, which

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[1]See Table 1.5, pp. 1.22 - 1.23, above.

[2]See Table 1.6, p. 1.31.

never experienced the rapid inflow of European capital and enterprise that tea and rubber enjoyed, took longer to reach the margin: it could be said to have arrived there around World War I. The apparent stability of total coconut acreage since then has been quite remarkable.[1] Thus, in each of these industries there came a time when, barring spectacular increases in the world price, extension of the acreage planted became infeasible. It is irrefutable logic that from this time on output had to stagnate -- unless yields per acre could be raised. Until means could be found to raise yields, land was to be the limiting factor of production.

(3) Capital was generally less of a problem than land. In eras of prosperity it was generated in considerable amounts by the internal profitability of the estates. Once the estates were planted and the need for further capital expenditures was slight, they returned handsome dividends to their shareholders. Rippy found that 20 British plantation companies operating in Ceylon paid a median dividend of 19.0 per cent over the first half of the twentieth century, not counting stock dividends, which were substantial during the early years of the century. During their best five-year subperiod within this fifty-year span, these corporations paid a median dividend of 50.0 per cent! By the late 1940's their average dividend had not fallen, but was running at 19.1 per cent. An additional group of 42 companies had only slightly less impressive pay-out ratios. They had a median yield of 14.8 per cent between 1911 and 1950 and 36 of them were still paying at a rate of 13.3 per cent in the late forties (the other six had disappeared, through mergers or otherwise).[2] These companies,

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[1]This apparent stability is partly attributable to lack of information; see note 4 to Table A-32, below.

[2]J. Fred Rippy, "Trinidad and Ceylon: Two Profitable British Colonies," in Lyle W. Shannon, ed., Underdeveloped Areas, New York, 1957, pp. 247-52.

while no doubt an unrepresentative group, constitute a substantial fraction of the universe of British plantation companies operating in Ceylon (Rippy puts the total of companies registered in the United Kingdom to grow tea or rubber in Ceylon between 1880 and 1950 at 200).[1] Over the estate sector as a whole such rates were no doubt unusual but they give some indication of the power of the estates, at least the more efficient ones, to supply their own needs for capital. To the extent that external finance was needed, agency houses and British banks were willing to make short-term advances on the security of future crops. The estates seldom suffered for lack of capital.

Foreign demand, of nearly infinite elasticity with respect to price, provided the stimulus for estate production. Since labor was available in unlimited amounts at fixed wage rates and capital, too, was generally not too hard to come by, only the quantity of good land available limited the amount of expansion of the plantations which could take place at a given world price for the product. The peasant sector, by contrast, created its own demand, or, rather its subsistence production was relatively unresponsive to market stimuli. Peasant smallholders of crops which were also produced by the estates, on the other hand, were generally very responsive to market stimuli. In fact, they were often over-responsive, planting too much of whatever crop appeared attractive at any given moment on land that was not really suitable. Returns to smallholders were for this reason and because of their technical and market disadvantages much less per acre than estate returns from the same crops.

Tea, rubber, and coconut were all tree crops, as was coffee. In each case the production of the final output had to be preceded by several years by the planting of the tree and its tending while young. Tea, once it reaches maturity,

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[1] Ibid., p. 248.

must be plucked continuously or else its value as a producing asset is quickly diminished. Coconut trees bear automatically, year after year; such output fluctuations as occur are attributable to natural causes and are virtually outside the control of the owners of the trees. Only for rubber is output easily varied from year to year; in fact, with rubber a missed tapping season may even enhance the future productivity of the tree. Except for rubber, then, the output of Ceylon's estate sector was extremely price inelastic. It was export receipts which were the main exogenous force in the economy and it was world prices, not -- in the short run and in the period since the extensive margin has been reached in the industry -- physical domestic exports, that primarily determined export receipts. The real value of the export receipts was of course a matter determined by the relationship of these receipts in money terms to the prices of the imports which they basically went to purchase.

Demand originating within the economy of Ceylon played only a small part in this scheme. The peasants lived in a semi-subsistence world, buying very few goods which were not produced in their own immediate neighborhood. The estates (and their urban auxiliary) relied heavily on imports, both for inputs into their production processes and for consumption. Two further considerations also helped to restrict the growth of internal demand:

(1) Government finance played only a small role in the economy. As has already been seen, the colonial government took little interest in influencing economic trends via fiscal policy or the composition of its expenditures but generally reacted passively to demands to satisfy the most basic needs of the colony, especially those of the planters. According to the conventional doctrine, colonial governments were expected to live within their revenues; these, of course, depended on the tax base, which meant mainly the modern sector (see p. 2.7, above).

Had the government been willing to impose heavier taxes on the export sector, it could have done so. Because of the elasticity of world demand for Ceylon's exports and the low elasticity of supply, the incidence of additional taxation would have been on the export producers and, as has been seen, the after-tax profits existing in the sector were considerable and could have supported a heavier tax load. The government, however, had no such ambitions. It conceived of its role as maintaining law and order, providing transportation and other utility services to the estates, and improving health and educational levels. The colonial administrators, who were typically capable men, depended for the revenues needed to finance these services on the tax and nontax receipts generated by the modern sector. In prosperous times they often accomplished their limited assigned tasks quite successfully.

(2) Monetary developments, whether conscious policy or spontaneous event, were effectively prevented from having any important impact on the economy by the "currency board system" of note issue and the British commercial banking tradition. The currency board scheme, which was in effect from 1864 to 1949, provided for a 100 per cent backing of the government's note issue, first by either silver or British and other non-Ceylonese Commonwealth government securities and later only by the latter. These assets were purchased mostly out of export receipts, so their supply in Ceylon was closely related to the country's foreign trade fortunes. This system made currency supply yet another magnitude which was closely dependent upon export returns. The banking system was almost exclusively in British hands (prior to 1938 the only rivals to the British in the banking field were a few small Indian banks and one short-lived attempt to found a Ceylonese bank) and lent almost exclusively to the planters and the export-import trade. Naturally, the hallowed practice of making only self-liquidating short-term business loans was followed. The supply of credit was thus almost as closely

linked to exports as was the currency supply, except that in the case of credit it was anticipated export proceeds which gave rise to the creation of money (not, as with currency, actual realized export proceeds), so the over-extension of credit was possible and there were occasional panics.[1]

In sum, the structure and dynamics of Ceylon's classical export economy were such that the modern sector was capable of extensive growth and short-term fluctuations as severe as those of any advanced economy. The fluctuations were largely determined by world prices for Ceylon's exports, something which the country could not affect. Growth, too, was possible only with the all-important existence of favorable prices for tea, rubber, and coconut products in the world market. For the foundation of each plantation industry prices had to be high enough (and the expectation had to be that they would remain favorable long enough) to justify clearing and planting considerable land areas. Later, when the extensive margin had essentially been reached in an industry, output tended to stagnate and little further planting was done unless prices took a sharp upward turn. Once the extensive margin had been reached, further increases in output depended mainly on the ability of producers to increase per acre yields profitably. Although the standard of price "favorability" needed to produce at least constant output became lower once the trees were planted, still the future development of the industry depended strictly on the uncontrollable variable, world price trends. The economy itself generated only a negligible amount of demand for tea and rubber, although the existence of the coconut industry was partly based on home demand.

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[1] The most famous was in 1884, when the Oriental Bank failed; this was the largest bank in the colony at the time and its collapse gave rise to a government note issue and the currency board system. On this whole subject, see H.A. de S. Gunasekera, From Dependent Currency to Central Banking in Ceylon, London, 1962.

As for the peasant sector, it received little direct stimulus from the growth of the modern sector. Its traditional patterns of resource allocation, technology, and commercial structure were relatively little altered by the rise of the estates. In the context of what has happened since 1939, though, it is possible to see that the colonial system had some important indirect implications for the future of the peasant economy. The two most important of these derived from the role of the colonial government and have become important elements in the post-World War II picture. They are the development by the government of health services, which were instrumental in slashing the death rate and forever upsetting the old population balance in the colonial economy, and the development of education, which eventually produced as profound changes in the qualitative aspects of the labor force as the population explosion did in the quantitative.

Within the classical framework and in the absence of fortuitous rises in export prices, the only way that Ceylon's economy could grow was by increasing per acre yields in estate crops. As we have seen (see pp. 1.42 - 1.46, above), much of its past growth had resulted from just that. The nature of the world in 1939 was such, though, that this offered only a meagre chance of economic growth. The alternative was to break out of the classical model, change the structure of intersectoral flows, increase internal demand, and try to transform both the traditional and the modern sector, the former by technological modernization and the latter by diversification and industrialization. It is the emergence of these alternative growth opportunities and attempts to pursue them that are of most interest in the more recent period of Ceylonese development.

Chapter 3: New Forces: The 1940's and Beyond

Although Ceylon's economy in 1939 was vastly different from what it had been a century before it still conformed closely to the pattern of the export economy to which it had clung for so long. The depression had been a trying experience for the country, cutting export earnings at one point to only 38 per cent of their 1926 peak level. The expansion of the plantation sector and the roads, schools, hospitals, and other public facilities that went with it had abruptly ceased. To add to the trials of the thirties, a severe malaria epidemic had ravaged the country in 1935 and 1936. Yet the fruits of past economic growth within the export economy mold were visible in several aspects of Ceylonese life. Income per capita was high relative to what it had been in the past and compared quite favorably with the South Asian regional average. In 1938, according to the Department of Census and Statistics, GDP in current prices was Rs. 652 million; this amounted to Rs. 112 per capita or, using the import price index as a crude deflator (if anything, it deflates too much), Rs. 509 per capita in 1953 prices.[1] Literacy had advanced to a rate of about 60 per cent.[2] And the educational and health systems were strong and growing.

In 1939 over 800,000 students were enrolled in the nation's schools, representing some 40 per cent of the total population of school age.[3] Over

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[1] The GDP figure (actually, the total is "national income" as defined by the CSD, which also includes income earned abroad by Ceylonese nationals) is unpublished; for the import price index, see Table A-45, below.

[2] See Table A-18 below.

[3] See Table A-14. Since 1939 is not a census year, there are no data on population of school age; however, the total number of pupils in 1939 is a higher percentage of <u>total</u> population than is total number of pupils in 1946; since the 1946 population was, if anything, younger than the 1939 population and since 41.1 per cent of the school-age population was enrolled in the latter year, it can be deduced that at least 40 per cent of the population of school age was enrolled in 1939.

21,000 teachers were employed in this educational venture.[1] The students were about evenly divided between government schools and private government-assisted schools with a very small additional number attending unaided private institutions. The nation's school system was thus at this point nearly half-way down the road to universal education. As has been seen, the government had played a major role in this development, in establishing government schools (mostly in the villages) and aiding private schools on the estates and in the towns.

Health services, by Asian standards, were similarly advanced. Not counting private nursing homes, there were 120 hospitals in Ceylon in 1939, containing over 10,000 beds, roughly one for every 500 persons in the population.[2] More than 400 doctors worked in them, along with some 3,000 employees of other kinds.[3] Like Western education, Western medicine had a potent cultural effect as it spread through the countryside. It helped to lay the foundations for the period of change upon which the economy was about to embark.

A note should also be added here on developments in the political sphere. By the Donoughmore Constitution of 1931 the island had been granted adult sufferage and a considerable measure of internal self-government and during the thirties a nucleus of future political leaders began to form. A State Council, consisting of 50 elected members and eight appointees of the Crown, was set up to legislate on internal affairs and seven of its members also took on the duty of administering the seven ministries dealing with domestic matters: Home Affairs; Agriculture and Lands; Local Administration; Health; Labour, Industry, and Commerce; Education;

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[1] Ministry of Finance, Economic and Social Development of Ceylon (A Survey), 1926-54, Colombo, 1955, p. 90.

[2] Ibid., p. 99.

[3] Ibid.

and Communications and Works. D. S. Senanayake, later to become the first Prime Minister of independent Ceylon, took the portfolio of Agriculture and Lands.[1] One result of this constitutional change was that interest in diversification of the economy and possible industrialization came to the fore with the new leaders. The Report of the Ceylon Banking Commission, which appeared in 1934, reflected this new interest. It expressed support for the ideas that industry should be encouraged, that it had been impeded hitherto by the profitability (up to the depression) of the estates, and that the formation of an indigenous bank would aid its development.[2] An Indian advisor produced a list of 12 industries which he felt suitable to Ceylon's resource endowment and market conditions and was criticised for being too unambitious.[3] Then, in 1936 the Executive Committee on Labor, Industry, and Commerce came under the Chairmanship of G.C.S. Corea, a vigorous proponent of industrial progress via government pilot plants, research aid, and other assistance. The State Council in the late thirties was sympathetic to tariff protection for industry and two industries which had been founded, matches and soap, received assistance of this kind. The private but government-subsidized Bank of Ceylon was founded in 1938 over British opposition. Work on the hydroelectric scheme at Laxapana, which had been started in the 1920's by the British but abandoned when the depression hit, was resumed in 1937. Several pilot plants were put up and the industrialization program was just beginning to gather momentum when the outbreak of the world war brought it to an abrupt stop. Thus,

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[1]For a detailed account of Ceylon government in the Donoughmore period, see Sir Charles Jeffries, Ceylon - The Path to Independence, London, 1962, pp. 66-75.

[2]S.P. 22 of 1934.

[3]On this point and for a full treatment of thinking about industrialization, see Henry M. Oliver, "The Industrialisation of Ceylon: Opinions - Policies, 1916-1951," Ceylon Economist, November 1956, pp. 175-225.

little that was tangible was done in the 1930's, but considerable intellectual ferment had been stirred up. Another economic consequence of internal self-government was the development under D.S. Senanayake of plans for extensive resettlement of peasants in the Dry Zone but here, too, there was little time for action.

The forces of change which had begun to build up in the thirties came to full maturity in the forties. Three developments of that decade can be said to have brought the classical era of the export economy to an end and ushered in a period of transition to an uncertain future: the war, independence, and revolutionary changes in the island's pattern of population growth.

WORLD WAR II

Of the three great forces of change operating on Ceylon's economy in the 1940s, the war was perhaps the least important and permanent in its effects. In common with the depression of the thirties, it was in many ways a repetition of past experience. Like World War I before it, the Second World War called a halt to the usual pattern of development of the export economy, but in itself it provided no reason why the old economic order should not be reestablished soon after the cessation of hostilities.

As had nearly all other influences on the economy up to that time, the war first made itself felt in the foreign markets. Immediately after war broke out in Europe in 1939 Britain put into effect a scheme to assure unbroken supplies of her normal food and raw material imports from the colonies. Contracts were to be entered into for the purchase of most of the colonial produce at "fair" prices for bulk delivery to the U.K. By 1942 almost all of Ceylon's exports had come under such a contract: tea, rubber, copra, coconut oil, and plumbago, amounting to 97 per cent of total exports by value.[1] Prices were first set at

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[1] J.B. Kelegama, "The Ceylon Economy in the War and Post-War Years," Ceylon Economist, May 1957, pp. 318-70.

prewar levels[1] and later adjusted to compensate producers for increases in production costs; they were renegotiated annually. It is quite clear that the net effect of the bulk purchase contracts was to hold Ceylon's export prices substantially below the level they would have reached on a free world market. Export prices rose by about 80 per cent during the course of the war (see Table 3.1, below) while import prices more than tripled. Further, since production costs were reduced by certain measures, notably the food subsidies, designed to damp the rise in the cost of living, Ceylon taxpayers were actually subsidizing British tea drinkers in even greater measure than might be thought.

Meanwhile, prices of all kinds of imports -- food, other consumer goods, raw materials, and capital goods -- shot up. Many of these goods, in fact, became completely unavailable. On items that could still be obtained short supplies and enormously increased freight and insurance rates combined to push prices far above levels which had been imaginable even a short time before. The import shortage had both external and internal consequences. Externally, it meant that Ceylon's barter terms of trade deteriorated sharply, to the point where a unit of exports bought less than half as much in imports as it had in 1939. What imports did come in entered at extremely unfavorable terms. Partly by choice, then, and partly because there was simply nothing to buy, Ceylonese piled up external assets in unprecedented quantities. Between 1939 and 1945 approximately one billion rupees were amassed. Internally, the effect of the trade situation was to create the most attractive domestic market for Ceylon-produced goods in history and, at the same time, place considerable obstacles in the way of entrepreneurs seeking to satisfy that demand. In addition to normal sources of money

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[1]For instance, in the case of tea each estate had to sell at the average price its produce had realized in the period 1936-38.

Table 3.1

Prices, Output, and External Assets, 1939-50

Year	Export Prices[1]	Import Prices[1]	Terms of trade[2]	Export Volume[3]	Real Export Receipts[4]	Cost of Living[5]	National Income[6] Current Prices	National Income[6] 1939 Prices	External Assets[7]
	(1939 = 100)						(Rs. mlns.)		(Rs. mlns.)
1939	100	100	100	100	100	100	652[8]	652[8]	275
1940	110	118	93	101	100	103	..	..	324
1941	121	141	86	99	91	113	..	..	435
1942	138	209	66	111	78	150	..	..	521
1943	145	291	50	113	60	182	..	..	672
1944	169	345	49	108	60	184	..	..	960
1945	179	323	55	97	64	203	1,990	616	1,260
1946	193	332	58	108	70	211	2,268	683	1,210
1947	248	373	66	103	73	232	2,608	699	947
1948	248	400	62	117	75	239	2,879	720	998
1949	266	382	70	117	85	237	3,056	800	964
1950	359	391	92	128	110	250	3,868	989	1,133

[1]Source: Tables A-45 and A-46, below; these are the Census and Statistics Department indexes.

[2]Export price index divided by import price index.

[3]Source: CSD indexes in Tables A-43 and A-44.

[4]Index of export value (merchandise exports only, from Tables A-51 and A-52) divided by import price index, i.e., the "purchasing power of exports."

[5]From Table A-66 the index grossly understates increases in consumer prices over this period, even for low-income groups, because of its heavy weightage of rationed and price-controlled items and its omission of the black market.

[6]Unpublished CSD data; the constant-price figures have been deflated by the import price indexes and so are probably conservative. Dividing these figures by population suggests that not until 1950 was the 1938 level of real per capita income regained.

[7]Source: Table A-55.

[8]1938.

income, the war added to the income stream additional sums rising out of the large export surpluses which were run throughout the war,[1] the modest budget deficits incurred by the government,[2] and a considerable volume of military expenditure arising out of the fact that after 1944 Ceylon became the headquarters for the Allied operations in the Southeast Asian sector.[3] On the other hand, machinery, building supplies, and raw materials from foreign sources became virtually unobtainable. Despite the difficulties, there were war-induced increases in the production of manufactured goods. Meanwhile, the output of export products and (apparently) food stagnated.

Both the government and private businessmen responded to the drastically reduced supply of imported manufactures. On the government side, action was taken to get plants producing a wide variety of products into operation as rapidly as possible. In some cases, plants which had originally been intended to function as pilot projects were thrown into the production of far larger quantities than they had been intended to make; in other cases heroic efforts were made to take over vacant buildings, adapt second-hand machinery designed for some other purpose, hire and train a labor force, and begin production as soon as possible. On this basis government plants were soon opened to manufacture hats, coir products, and leather goods. These pioneers were followed in 1942 and 1943 by a plywood mill, an acetic acid plant, a quinine factory, a steel rolling mill based on the utilization of scrap, and glass, ceramics, and paper operations. Costs and prices were

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[1]Merchandise surpluses totalled more than Rs. 800 million over the course of the war. See Table A-51, below.

[2]Actually, the government ran deficits only at the height of the war, in 1941/42 and 1942/43. See Social and Economic Development..., p. 110.

[3]Kelegama estimates that by 1944 military expenditure in Ceylon exceeded Rs. 400 million annually, more than a quarter of national income at the time.

high, the quality of the end product was low, but in the sellers' market of the early forties no one objected. Through 1945, at least, most of the government factories made profits.[1] For the time being, they served their purpose. After the war ended and imported manufactures began to flow into the island again the government factories soon demonstrated their unsuitability as a base for peacetime industrial development. In an open economy it soon became clear (though not so soon and not so clear as to keep the government from losing millions of rupees in trying to keep the plants open) that the great majority were uneconomic, even after substantial overhauls. The government plants did have one effect that outlasted the war, then: they diverted the government's attention from other methods of encouraging industrial development for a period of several years.

Private manufactures, too, responded to the challenge of the sellers' market. Local handicrafts in particular enjoyed a golden era, as consumers who had never before used them turned to Ceylon-made brooms, rugs, textiles, and other goods which could be produced with the materials at hand. As with the government plants, though, the market abruptly crashed at the end of the war and the only lasting effect of the boom was the disillusionment with which it left those who suffered from its sudden end. Modern private industry, mainly because of its inability to find substitutes for imported materials and equipment which were no longer available, seems to have responded less impressively than government factory output and handicrafts. Nevertheless, Kelegama mentions that saw mills and factories producing moulded rubber goods, batteries, eau-de-cologne, packing chests, toilet goods, bricks and tiles, plywood, hosiery, lacquered goods, glass, ink, matches, soap, cigarettes, sealing wax, twine, paper, chocolate, and "many others" appeared during

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[1] A.R. of the Acting Director of Industries for the Years 1940 to 1947 (Part I: October, 1940, to September, 1947), Colombo, 1948, pp. 11-16.

the war and that a few of these plants survived the transition to peacetime.

Estate producers, facing compulsory deliveries of all or nearly all their output at prices which were adjusted to the rapidly rising level of production costs only with a lag, had little incentive to increase production. Tea exports rose only from an average of 221 million pounds in the late thirties to 254 million in the war years; its prices had risen by only 36.5 per cent. Rubber, which was essential to the British war effort and thus got more favorable price treatment (wartime prices averaged 171.0 per cent of the late-thirties prices) was slaughter-tapped and output jumped from 128 million pounds to 218 million. Coconut exports were channeled into the form of copra, whose volume rose from 1,198 thousand hundredweights to 2,208 thousand, largely at the cost of other coconut products, whose prices rose sharply as a result of this limitation in supply. In terms of nut equivilents, total exports of coconut products, actually fell, from 1,024 million nuts a year in the late 1930s to 880 million during the war; the percentage of output consumed domestically rose from 37.4 to 44.2. For the traditional export crops in general, then, output and export response was clearly related to the price incentives offered to the producers of the various crops.[1]

Producers of rice and other food crops for local consumption generally failed to respond to the increased demand for their products, mainly because they were given little incentive to do so. The food shortage worsened as the war went on. The government took direct action. In 1940 all food importers were required to purchase some fixed proportion of any foods they imported in the local market. Three years later estates of 35 acres or more in extent were required to devote some proportion of their land to domestic food production. Then, in 1942, a

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[1]In all these calculations, "late thirties" means 1935-39 and "war years" means 1940-45, both periods inclusive. Source: Table A-47, below.

standing offer was made to purchase any quantity of paddy at Rs. 2.50 a bushel. There were few purchases made at this price and by 1944 a levy of two to three bushels per acre was imposed. Then all production over a fixed allowance for own consumption became liable to compulsory purchase.[1] There are no adequate data on the response of food production to all of these blandishments but what evidence there is suggests that it was not impressive. At no time was a really attractive price incentive offered to producers and even if one had been offered the primitive nature of production and marketing for peasant crops at the time doubtless would have rendered the supply extremely inelastic. Rice imports, meanwhile, fell to about a quarter of their 1939 level. Consumption was cut back and other grains (notably Australian wheat) were substituted.

With imports falling, at low ebb (1942), to 60 per cent of their 1939 level[2] and local production utterly unable to satisfy the soaring level of demand, inflation ensued. The 103 per cent increase recorded by the official cost of living index between 1939 and 1945 greatly understates the actual rise in consumer prices, even of goods consumed by the common man. The import price index more than tripled (see Table 3.1) and had not rationing been introduced consumer prices would have gone up by this much, too. Rice rationing, combined with fixed retail prices for the basic ration, was introduced early in 1942. In time the majority of consumer goods were covered. As the prices of food imports rose, the government embarked upon a policy of maintaining the retail price of rationed foodstuffs and obsorbing the difference as a subsidy. Up to September 1947, some Rs. 97 million was spent on food subsidies. As subsequent events were to prove, this policy was one of the few events of the World War II period with major long-run

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[1]For a comprehensive discussion of policy towards food producers during the war, see Kelegama.

[2]See Table A-43, below.

implications.

With the war's end things changed rapidly. The prewar level of imports was restored by 1947. By the following year imports in all major categories were markedly higher than prewar.[1] Price controls and rationing were eased soon after the war ended and, amid rapidly rising prices, the flow of imports resumed. In this one instance of postwar disequilibrium prices paid for imports were for once largely determined in Ceylon, since supplies available in Ceylon were inadequate to meet the demand and the prices of what goods did arrive were bid up. Exports increased, too, but not so rapidly as imports. The late 1940's saw much reduced surpluses (and even, in 1947, a deficit) on merchandise account. During 1947 a quarter of Ceylon's wartime-amassed external assets went to meet the backlog of consumption demand[2] [illegible] but thereafter export proceeds increased, the blocking of part of the asset holdings by Britain limited the rate at which the assets could be run through, and their level was stabilized.

One of the most notable points about the war's economic effects is their utter transience. With the resumption of normal import flows the great majority of the war-induced manufacturing plants, both government and private, collapsed. Since the initial impulse of the policy makers was to return to the prewar structure of taxes, expenditures, and controls -- Ceylon did not achieve full independence until early in 1948 and even after independence colonial modes of thinking

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[1]See Table A-43, below.

[2]The volume of consumer goods imports in 1948 was 28 per cent above the prewar (1938) level, while intermediate goods were only three per cent higher than prewar and investment goods 11 per cent. Consumer durables were being imported at an especially high rate. See Table A-43.

retained a grip on the policy makers -- no concerted effort was made to bring into being an economy of a markedly different type from that of the thirties. Consequently, the late forties were a period of stagnation in agricultural output[1] and collapse in industrial output.[2] The legacies of the war era were surprisingly few: food subsidies, a set of direct controls which was seldom used in the next few years but was never completely abandoned, substantial foreign balances, a few plants to form the nucleus of a government industrial development drive, and an estate sector which had just emerged from a time of high production and considerable capital consumption.

INDEPENDENCE

After 17 years of internal self-rule, Ceylon gained full independence on February 4, 1948. The effects of this political transformation on economic structure and growth were to show themselves only through time, but they were ultimately to be revolutionary in their impact on the export economy. As time was to show, independence changed several of the key parameters of the classic model, contributing in large degree to the progressive infeasibility of the open economy in the 1950's. Much of what the government of independent Ceylon has done will be recounted in later portions of this monograph, but a summary here in terms of the parameters of the model specified in the preceding chapter will help to underline the ultimate impact of the independence achieved in the late forties.

Labor supply was the main factor of production affected by independence. The free ebb and flow of Indian estate labor to and from Ceylon began to be limited as

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[1] See Table A-27.

[2] There are no data to support this statement, only impressions gathered from contemporary accounts.

soon as an independent government was set up in Colombo. One law or regulation after another added to the constriction of the Indian labor supply. The flow of Indians out of Ceylon during the war had been strongly reversed in the late 1940's, but after 1950, under the influence of the new policy, the net flow was steadily outward again. In 1954 immigration virtually ceased. The estates were now cut off from the unlimited pool of labor on which they had relied for so long. The Ceylon nationalists had hoped to gain from this cessation of immigration an upsurge of estate employment for Ceylonese. Their hopes of repatriating the 770,000 Indians then living on the estates were frustrated, though, by the refusal of the Indian government to recognize their Indian nationality. Since Ceylon has granted citizenship to only a small fraction of these people, they remain stateless to this day. As a nationalistic device to expand job opportunities for Ceylonese, though, the policy has been a failure. The natural increase of the present Indian estate population has continued to provide accretions to the labor pool on the estates over a period in which total estate employment has grown only slowly, so relatively few openings for Ceylonese have been created.

The impact of independence on the other factors of production, land and capital, was more limited. The efforts of the colonial government to expand the total land area available for cultivation were continued and at times redoubled but the net effect was slight relative to the continuing population-induced rise in the demand for land among the peasantry. The supply of private foreign capital was largely shut off, but with the frequently unspectacular state of world markets for primary products during the years since independence it is unlikely that it would have poured into Ceylon in any great quantity even if the country had remained a British colony.

In the field of economic policy, independence made all the difference. The

new government bore no commitment to the colonial concepts of limited government and the use of automatic policy rules such as balanced budgets and 100 per cent reserves. Although the United National Party governments which ruled Ceylon up to 1956 were generally conservative, fiscally as in other ways, the unbalanced budget as a tool of development policy gradually gained a quasi-respectability. In almost any area of activity one might choose to look at, both the scope and the magnitude of government's responsibilities became greater. In the monetary area, the creation of the Central Bank of Ceylon in 1950 marked the introduction of the possibility that monetary policy might become an active influence on the path of economic development. The emergence of other new financial institutions contributed to this trend. The independent influence of the Central Bank has proved in practice to be small (especially in recent years has it become a passive handmaiden of the government, useful chiefly as a means of financing its budget deficits) but the potential is there.

Most important of all, independence greatly increased the sensitivity of all kinds of policy formation to popular desires. It is for this reason that a whole new economic role for the government evolved. Whereas the colonial government had been a service institution for the estate sector, the government of independent Ceylon increasingly became a device for the redistribution of income from the estate sector to the traditional sector and an instrument for restructuring the economy. The level of taxation on the estates was raised, deficits were run, and the proceeds were spent on transfer payments, social services, and investment projects designed to benefit the traditional sector and increase its productive capacity. In addition, the government entered increasingly into the direct planning of industrial projects intended to build up a modern sector. Government, which in colonial days had been a minor and passive economic force, now became the most important factor for good or ill in the country's economic development.

POPULATION GROWTH

The environment in which government and other actors on the economic scene had to perform, though, was profoundly altered by the dramatic population boom which started in 1946. It was this demographic phenomenon, so common in today's underdeveloped world but perhaps no where so spectacularly illustrated as in Ceylon, which so completely changed the underlying environment for economic development in the country as to guarantee an imminent end to the classical export economy.

As has been seen, Ceylon's classical export economy was a delicately balanced mechanism. The world prices for the country's export crops and the amount of suitable land available for each crop defined the parameters within which the system worked. Labor and capital flowed to the areas in which they were needed. The government budget was balanced and the traditional sector traded little with the modern sector or the world. Imports tended to equal exports. The acceleration of population increase affected this pattern in two ways. For one thing, it pushed the labor supply up until it was far out of line with labor demand; unemployment became rife. This created a need for economic diversification and the creation of jobs outside the estates. But as such jobs were created and as the traditional sector was increasingly brought into the cash nexus of the market, import demand rose rapidly. Soon import demand far exceeded the ability of the estate sector to create foreign exchange and something had to be done to correct the foreign balance. Action to increase export receipts was possible only to a limited degree because of the failure of world prices to rise and the difficulty of altering factor proportions in the plantation sector, so the main requirement came to be keeping imports from rising too fast. In the early stages, this could have been done by mild measures -- e.g., raising tariffs -- but when it was not done that way it eventually became necessary to close the open economy, suddenly and forcibly. There were other factors at work in the persistent balance of payments deficit of

the 1950's, notably the series of budget deficits run by the central government, but it is likely that even in the absence of these factors the population boom would eventually have necessitated the abandonment of the export economy.

In world experience, what happened to Ceylon's population in the latter part of the forties is really unparalleled. The spectacular fall in the death rate and the striking success of the public health campaign which was its main cause bear some similarity to what has happened elsewhere in recent years, but the magnitudes involved and the radical nature of the changes wrought make the case of Ceylon the most sensational example of the global trend.

The bare outline of what happened is best presented through the medium of the official vital statistics, which in this instance can be accepted as completely accurate (see Table 3.2). The immediate, dramatic change is easily stated. Between 1945 and 1947 the birth rate rose slightly (from 35.9 per thousand of population to 38.5), the death rate was cut by a third (from 21.5 to 14.0), and the rate of natural increase, as a result, leaped upward from 1.4 per cent to 2.5.

The fall in the death rate ranged widely over the various segments of population classified by locality, sex, "race" (in Ceylon this term is used to apply to the island's diverse ethnic groups), or age. Its biggest single cause was a large and spectacularly successful campaign to control malaria. In addition, other factors working for lower death rates, which had been in operation for several decades, continued to cut deaths further in the post-1946 period: rising living standards, improved public health facilities, "the development of a public health conscience" (to quote the Director of Medical and Sanitary Services at the time), free milk and midday meals for school children, etc. But such things work very gradually through time. For the sudden, dramatic reversal of trend that took place in the late forties, the conquest of malaria is largely to be credited.

Table 3.2

Rates of Births, Deaths, Natural Increase, Infant and Maternal Deaths, 1900-60

Period	Births per thousand of population	Deaths per thousand of population	Natural increase (per cent)	Infant deaths per thousand live births	Maternal deaths per thousand live births
1900-09	38.1	28.9	0.9	180	..
1910-19	37.8	30.1	0.8	195	..
1920-29	39.6	26.9	1.3	183	..
1930-39	36.7	23.5	1.3	174	..
1940	35.7	20.6	1.5	149	..
1941	35.6	18.3	1.7	129	15.3
1942	35.8	18.1	1.8	120	14.4
1943	39.5	20.8	1.9	132	13.3
1944	36.1	20.8	1.5	135	13.7
1945	35.9	21.5	1.4	140	16.5
1946	37.5	19.8	1.8	141	15.5
1947	38.5	14.0	2.5	101	10.6
1948	39.7	12.9	2.7	92	8.3
1949	39.1	12.3	2.7	87	6.5
1950	40.2	12.4	2.8	82	5.6
1951	39.8	12.7	2.7	82	5.8
1952	38.8	11.8	2.7	78	5.8
1953	38.7	10.7	2.8	71	4.9
1954	35.7	10.2	2.6	72	4.6
1955	37.3	10.8	2.7	71	4.1
1956	36.4	9.8	2.7	67	3.8
1957	36.5	10.1	2.6	68	3.7
1958	35.8	9.7	2.6	64	3.9
1959	37.0	9.1	2.8	58	3.4
1960	36.6	8.6	2.8	57	3.0

Source: Reports of the Registrar-General

In 1935 a terrible epidemic of malaria struck Ceylon. Before it died down, sometime during the following year, over 50,000 persons had lost their lives. For 1935, the vital statistics show more deaths registered than births. The infant death rate shot up from 173 per thousand live births in 1934 to 263 in 1935. During the peak year of 1935 alone, 5,454,781 cases of malaria were said to have been treated at government hospitals and dispensaries[1] -- this at a time

[1] A.R. of the Director of Medical and Sanitary Services for the Year 1935, p. 28.

when the estimated total population was 5,608,000. While there is some double-counting in the dispensary statistics, it is true to say that the great majority of Ceylonese suffered a case of malaria in 1935. And with 47,315 malaria deaths during the year, nearly everyone must have had a friend or relative die.[1]

The malaria epidemic of 1935-36 was one of the most telling and certainly the best documented of its type, but it was certainly not the only one in the history of Ceylon. Others had come at fairly frequent intervals and struck equally high proportions of the population, though the numbers infected and killed were not so great. But the effects of epidemic malaria on the country were probably not so important as those of endemic malaria.

Endemic malaria had played a key role in Ceylon's history. In many parts of the country, especially in the Dry Zone of its north and east, it was an ever-present menace to human existence. Many historians accord malaria a key role in the downfall of the ancient Sinhalese civilization, which was centered in the Dry Zone, and it is certainly true that it had been a major hindrance to efforts to resettle population in the Dry Zone over the preceding century and make greater use of its agricultural potential. The malarial season in the Dry Zone coincides with the period of greatest agricultural activity, making life there doubly hazardous. And the effects of the disease in sapping the energies of the labor force can best be suggested by the fact that from 1926 to 1946 malaria ca cases treated at government hospitals and dispensaries averaged 40.3 per cent of the population per year.[2] It is not surprising that malaria was thought of in much the same matter-of-fact way as residents of the Temperate Zone regard the common cold.

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[1] This and the other figures in this paragraph are from various issues of the Report of the Registrar-General on Vital Statistics.

[2] Based on figures given in the A.R. of the Director of Medical and Sanitary Services for 1935 (p. 28) and 1948 (p. 86).

For years prior to 1946 the government of Ceylon had been greatly concerned about malaria. In many respects Ceylon had a superb public health record: smallpox, yellow fever, cholera, plague, and other infectious diseases which were still scourges elsewhere in the tropics had been brought under control in Ceylon and were unlikely ever to be a major problem again.[1] Malaria thus came to command increasing attention. Year after year it was the leading cause of death and after the 1935-36 epidemic ravaged the island, a malaria control unit was set up in the Department of Medical and Sanitary Services. It oiled rivers and streams and took other steps to prevent the breeding of mosquitoes. The increased attention was not enough, though, to overcome the disease. Epidemics in 1939-40 and 1945-46 each succeeded in killing about 20,000 people in a two-year period. Something more was needed.

The "something more" was added in the late forties as the result of a sudden technological breakthrough. In November, 1945, a program of killing live mosquitoes by spraying houses in malarial areas with a DDT solution was inaugurated in the Anuradhapura District (in the heart of the Dry Zone and one of the worst regions for malaria). As the success of the new chemical became increasingly apparent the program was broadened and by 1946 some 200,000 houses were being sprayed once every six weeks. The following two years saw spraying spread to the entire island. The number of houses included in the spraying rounds rose to 1.8 million in 1947 and 3.4 million in 1948.[2] The success of the campaign, as revealed in Table 3.3 was stunning.

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[1] See Table A-19, below.

[2] A.R. of the Director of Medical and Sanitary Services for 1947 (p. 31) and 1948 (p. 83).

Table 3.3

Malaria Mortality and Morbidity, 1930-60

Period	Deaths	Cases	Rates per million of population: Deaths	Cases
1930-39 (annual average)	8,210	2,427,766	1,475	436,154
1940	9,169	3,413,618	1,535	571,604
1941	7,132	3,220,360	1,154	521,604
1942	5,143	3,225,477	832	522,006
1943	6,765	2,141,329	1,074	340,109
1944	5,609	1,672,478	871	259,621
1945	8,521	2,539,949	1,281	381,947
1946	12,578	2,768,385	1,835	403,908
1947	4,557	1,350,521	648	191,917
1948	3,349	775,276	462	107,023
1949	2,403	681,624	302	91,432
1950	1,903	610,784	248	79,550
1951	1,599	448,100	203	56,894
1952	1,049	269,024	130	33,320
1953	722	106,350	87	12,829
1954	447	37,464	52	4,397
1955	268	19,929	31	2,285
1956	144	43,158	16	4,823
1957	177	35,086	19	3,828
1958	105	61,711	11	6,573
1959	82	1,736	9	180
1960	61	460	6	46

Source: Reports of the Registrar-General on Vital Statistics

Almost as spectacular as the completeness of the victory over malaria was the low cost at which it was achieved. The total cost of the campaign in the crucial 1946-48 years was in the neighborhood of six million rupees.[1] And for this expenditure literally millions of lives were saved.

As Table 3.3 suggests, preventative measures are not to be given all the credit for the abatement of malaria deaths. In 1957-58 the first post-DDT epidemic broke out. Cases treated in government hospitals and at dispensaries rose sharply from their previous low of about 20,000 in 1955. But deaths, with the exception of a small temporary rise in 1957, continued to fall. For this fact,

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[1] Ibid.

improvements in curative medicine (e.g. the development of improved substitutes for quinine) must be credited. The 1957-58 revival of the disease led to a United States grant of $388,840 to expand the malaria control unit with a view to the utter eradication of the disease within five years.[1] No doubt the next few years will see this goal achieved and malaria will become as much of a rarity in Ceylon as cholera or plague.

If the birth and death rates of 1930-46 can be taken as a standard of comparison, there were nearly a million and a half more people alive in Ceylon at the end of 1960 than there would have been had not the demographic pattern changed. Yet, on a similar calculation only about 143,000 of these people were alive because they had been saved from a death by malaria. Only about a tenth of those whose lives were saved would have died of malaria itself. However, the effect of malaria eradication on the prevalence of other diseases dwarfs the direct impact of cutting malaria death. Peter Newman estimates that nearly a million of the million and a half people just mentioned owed their lives directly or indirectly to the anti-malaria campaign.[2] The indirect effects of malaria prevention have been felt more gradually through time. Along with the other more slow-moving influences on the death rate, they account for the further decline of the death rate until, at 8.6 for 1960, it is lower than the American rate. Also, by 1960 the infant death rate had sunk to little more than one-third its traditional level and the maternal death rate to only a fifth the rate per thousand live births of past decades.

Besides malaria eradication, what has caused these continuing declines in

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[1] A.R. of the Director of Health Services for 1960.

[2] Malaria Eradication and Population Growth, Ann Arbor, forthcoming, Summer 1964.

death rates? As suggested by the figures just quoted, the saving of lives among mothers and infants is one area of concentrated gains. For this, the spread of midwifery, prenatal and baby clinics, and maternal hospitalization must be credited. In part, this trend is associated with a broader one, which has had a deep-seated influence for better health: the tremendous rise in education which has swept postwar Ceylon. The other category of deaths which merits special attention is the general decline in importance of all kinds of infectious disease, especially (in addition to malaria) typhoid.[1] As a percentage of all deaths, deaths from infectious diseases fell from 21.1 in 1946 to 7.7 in 1949; since many of these diseases were already comparatively rare in Ceylon, the extent of recent improvement is especially striking. No other major causes of death show particularly noteworthy declines. Some, like cancer (because of the increased longevity of the population and perhaps because of improved diagnosis as well) and violent death of various kinds have actually become more prevalent. Aside from the outstanding examples of malaria and other infectious diseases and of afflictions of infancy and childbirth, the fall in the death rate has ranged widely across the spectrum of causes.

Several causes enter into this continuing and wide-ranging aspect of death rate decline. Certainly, the slow-working but important forces of education and rising living standards are important. Moreover, the fact that the composition of the population has been shifting markedly towards a lower average age should not be overlooked; this phenomenon, itself a result of the lowering of the infant death rate, has a strong depressing effect on deaths measured per thousand of population. It cannot be denied, though, that the availability of public health services has been greater in the postwar period than in the prewar and has improved

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[1]See Table A-19, below.

slowly since the late 1940s, despite the astronomical increase in the population. Table 3.4 shows that there has been improvement in the quantitative provision of health services relative to total population and it is also true that there has been a notable spread of these facilities geographically, bringing Western medicine to the villager for the first time in many areas.

Has Ceylon's birth rate, meanwhile, shown any notable trends? With the rate of natural increase now at 2.7 per cent, some observers are anxiously scanning the horizon for a sign of decline in the birth rate. And indeed, if one takes the era of the 1950's as an observation period, a slight fall is discernible. In part, this decline (from 40.2, an exceptionally high figure in the light of past experience, in 1950 to 36.6 in 1960) represents nothing more than the effect of a slight decrease in the proportion of the population that is female and of child-bearing age. The fall in births per woman of child-bearing age has been negligible so far, as Table 3.5 shows. Anyhow, the decade of the fifties shows no overall birth rate decline as against previous decades. And the basic sociological preconditions for a significant fall in the birth rate -- the thoroughgoing urbanization and industrialization of the society (is education, which has swept Ceylon in recent years, an additional or alternative precondition?) -- do not seem to have been satisfied yet in Ceylon, or at best have been only partially satisfied. On present evidence, then, it seems likely that experience elsewhere will be repeated in the case of Ceylon and that the fall in the birth rate, if it comes, will lag behind the fall in the death rate by some decades. An additional reason for believing that Ceylon can expect a continuation of roughly her present high rate of natural increase is that the government has not as yet even taken a stand on the question of a conscious effort to reduce the rate of population growth through birth control. Despite the fact that no strong religious

Table 3.4

Population Relative to Beds, Doctors, and Minor Employees in Government Hospitals, Selected Years, 1929-60[1]

Year	Persons per hospital bed	Persons per Doctor	Persons per Minor employee
1929	572	15,347	2,231
1938	567	15,918	1,999
1945	425	12,938	1,822
1946	408	12,261	..
1947	385	..	..
1948	381	10,334	..
1949	376	11,594	..
1950	385	11,392	1,328
1951	388	10,529	1,161
1952	388	10,486	1,103
1953	388	10,724	1,146
1954	368	10,467	1,057
1955	359	9,163	1,011
1956	351	9,074	1,023
1957	347	9,678	987
1958	341	8,345	883
1959	345	8,212	781
1960	340	8,105	796

[1]These figures exclude private nursing homes and doctors in private practice, but these are relatively unimportant, catering only to the wealthy. Source: Economic and Social Development, p. 6; Statistical Abstract 1962, p. 75.

taboos would be impinged upon, the government has, for reasons that are obscure, taken no action in this area. It does, though, permit private organizations like the Planned Parenthood League to operate in Ceylon.

Table 3.5

Female Population Age 15-45 and Births, 1946, 1953, and 1959

Year	Female Population, Age 15-45 Thousands[1]	% of total population	Births[2]	Births per thousand females of child-bearing age
1946	1,459.3	21.3	256,886	176
1953	1,703.4	20.5	321,217	189
1959	1,990.0	20.7	356,336	179

[1]Figures for 1946 and 1953 are census data, slightly adjusted to allow for growth from census day in March to midyear. The 1959 figure is based on a projection of the age-sex structure of the population made by the author (see Table A-11, below).

[2]Source: Report of the Registrar-General on Vital Statistics.

Migration trends since 1946, while not involving massive numbers of people, have also had some significant effects on the structure of the island's population. The early war years -- 1939-42 -- saw net emigration of 171,000, as Indians in particular returned home in time of trouble. The danger past, the late forties saw a reversal of this flight, and more. From 1944 through 1949 the official data show a net inflow of 305,000. Stricter legislation and the drive to "Ceylonize" employment changed all this. From 1950 on the net flow was consistently outward. After 1954 the legal immigration of Indian estate laborers was drastically cut and after 1957 it all but ceased. The result, over the 1950-60 period, was a net outflow of 24,000 Indian estate workers (these are official figures; the illicit flow cannot, of course, be measured, but it is rumored to be considerable and preponderantly in the direction of Ceylon). Ceylonese legislation has also been instrumental in the expulsion of 127,000 other Indians, including estate workers' families, over the period. In addition, there was net emigration of 3,000 "Europeans" (i.e. Caucasians) and 6,000 Ceylon citizens during the fifties.[1]

A sudden upswing in the rate of population growth such as Ceylon experienced in the last half of the forties could conceivably have any one of several economic effects. It could, in the manner envisioned by Malthus, put pressure on nonlabor factors of production, inducing diminishing returns to labor and lower per capita output and income. On the other hand, if accompanied by sufficient growth of other resources, increased division of labor, technological progress, or economies of large-scale production, it could provide a valuable resource to aid the growth of aggregate and even per capita income. This is the famous "hands" versus "mouths" race, the outcome of which was the bone of contention between the Malthusians and the anti-Malthusians, the former fearing that population growth

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[1]All figures are from Reports of the Registrar-General on Vital Statistics.

would lead to a fall in per capita income and the latter hoping for a rise. And even today one cannot state categorically which will win out in the general case, that is, what the effects of accelerated population growth on national income will be. It depends on exactly how the population increase comes about and on what "other things" occur in the economy at the same time. A similar analytical ambiguity applies to the effect of population growth on other economic aggregates. The balance of payments, to take an important example, can be shifted in either direction. Especially if supported by some degree of monetary expansion, the increase in the number of mouths to feed can apply pressure to the current account. Alternatively, if the hands win, increased production for export may bolster the balance of payments (but where there is heavy underemployment among even the existing labor force this is unlikely).

Though one cannot define the economic effects of population acceleration in the general case, it is possible to say on what the outcome depends and, in any given instance, what it is likely to be. Statistically, total population can increase in an infinite variety of ways -- involving falling death rates, rising birth rates, and net immigration in any one of innumerable combinations, as well as differential application of any of these to the diverse age, sex, and cultural (i.e., racial, religious, geographical, occupational) groups which make up a population. In any given case, the economic effect of population growth is likely to be largely a function of the structure of population increase. Since different kinds of people make different contributions to production, different permutations will have different impacts on the supply of labor to the economy. Since different groups affect consumption differently -- e.g., children less than adults -- the mouths effect will also depend on the composition of the newly added population. What characteristics of population growth in Ceylon since 1946 are economically important?

The trends in the broad aggregates have already been outlined: little or no fall in the birth rate, a net outflow by migration, and a dramatically plunging death rate, with the last of these being almost the sole cause of the population surge. As noted, the fall in the death rate has been sharp among infants and even more impressive among mothers; both of these tendencies have worked to minimize the impact of the mouths effect -- but, still more, the hands effect -- in the short run. Relatively few new workers had been added to the population by 1960 and the additional need for food and other consumption goods, while substantial, was not so great as it would have been had all the new additions been adults. In both cases, though, a tremendous potential was being built up for the future. The mothers saved from death in childbirth were, in most cases, saved to have more children. These children, added to the ones who survived because of the sharp drop in infant and childhood deaths, were to become a gradually increasing economic problem (and potential) for the country.

Other, more subtle demographic trends also had an economic effect. Of Ceylon's several ethnic groups, the two largest, the Sinhalese and the Ceylon Tamils[1], have had high rates of natural increase (see Table 3.6). Several smaller groups, the aboriginal Veddahs, the "Moors" (i.e. Muslims, usually of Indian origin) and the Malays, have had still higher rates, while the Indian Tamils (because of their special circumstances, living on estates, sometimes as single men without families) and the "Burghers" and Europeans (because of their urbanization and modern outlook) have had markedly lower birth rates and hence lower rates of natural increase. These trends, coupled with differential

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[1] A "Ceylon Tamil" usually belongs to a family which has been in Ceylon for a century or more, while an "Indian Tamil" is a more recent arrival, generally as an estate laborer.

migration, have produced the changes in the ethnic composition of the population shown in Table 3.6. While the changes have not been dramatic, nevertheless a tendency toward a Ceylonization (perhaps Sinhalization would be a better word) of the population to parallel a similar trend in employment is discernible. Each of the non-Ceylonese (or at least non-Sinhalese) groups whose relative numbers have declined played an important role in the colonial economy. The key contribution of the Indian estate laborers to the rise of the estates has already been mentioned, as has the entrepreneurial function of the Europeans. The Burghers, a product of Portuguese and Dutch intermarriage with the Sinhalese and Tamil population, formed an urban professional and administrative class. A variety of miscellaneous Indian groups (the "Others" of Table 3.6) performed business roles -- chiefly trading and money-lending -- which were as necessary as they were unpopular with the rest of the populace. In one way or another, each of these groups has been a victim of nationalistic policy in the days since independence and their progressive dwindling in numbers creates more jobs for Sinhalese but also results in the loss of valuable skills.

Another important influence on the economic impact of population growth -- as well as on its capacity to maintain itself -- is the rate of urbanization and the way it is coming about. In Ceylon, as in other countries, birth rates are higher in rural areas than in the city. In Ceylon, as not, perhaps, everywhere, death rates are also higher in the countryside. The rate of natural increase is, however, substantially higher outside the cities. In 1960, for example, Colombo residents had a birth rate of 31.2 per thousand, a death rate of 8.1 per thousand, and a resulting rate of natural increase of 2.3 per cent. Dwellers in towns and cities other than Colombo had rates of 31.9, 8.4 and 2.4 respectively. The all-island rates for the year were 36.6, 8.6, and 2.8, so it can be deduced

Table 3.6

Ethnic Composition of the Population, 1946 and 1960

Group	Population in 1946[1] Thousands	% of total	Annual Rate of Increase, 1946-60[2]	Population in 1960[3] Thousands	% of total
Sinhalese	4,621	69.4	3.0	6,993	70.7
Ceylon Tamils	734	11.0	2.9	1,088	11.0
Indian Tamils	781	11.7	2.1	1,052	10.6
Moors	409	6.1	3.2	633	6.4
Burghers	42	0.6	1.8	54	0.5
Malays	23	0.3	([4])	32	0.3
Europeans	5	0.1	(0.5 [4])	7	0.1
Others	43	0.7	( )	37	0.4
TOTAL	6,657	100.0	2.9	9,896	100.0

[1]Source: Census of Ceylon 1946.

[2]These rates include both natural increase and net migration.

[3]Source: estimates made by the Registrar-General's Department on the basis of birth and death registrations and net migration; see Report of the Registrar-General on Vital Statistics for 1960, p. 12.

[4]These groups are so small that if rates of increase were shown for each separately the errors in the original data would greatly distort them; hence, they are aggregated.

that the birth rate for the rural population was 37.6 per thousand, the death rate was 8.6 and the rate of natural increase was 2.9 per cent.[1] If the rural-urban differentials for 1960 can be accepted as typical then it can be concluded that there is a strong natural tendency for the proportion of the populace dwelling in rural areas to rise. Yet, in fact the percentage of the population resident in towns of 20,000 or more rose from 9.9 to 12.9 between 1946 and 1960.[2] Actually, urbanization in Ceylon has been more a movement of towns to people than

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[1]Source: Report of the Registrar-General on Vital Statistics for 1959 and 1960.

[2]Source: 1946 Census and ibid.

of people to towns; the number of towns claiming 20,000 population rose from ten to nineteen between 1946 and 1960 and this is the main reason for the higher degree of urbanization.

One more point about the anatomy of population growth in Ceylon should be made. That is the fact that the age-sex structure of 1960 is very different from that of 1946. The upswing in the rate of natural increase, abetted by the particularly sharp fall in the infant death rate, has raised the proportion of the population in the lower age brackets quite markedly. And the steep drop in the maternal death rate, together with the emigration of a disproportionate number of males who had been working in Ceylon on a temporary basis, has raised the ratio of females to males. Somewhat rough calculations suggest that the percentage of the population that is under 15 years old rose from 39.2 to 41.1 between 1946 and 1960 and the percentage that is female went from 46.6 to 47.8 (Ceylon has always had an unusually [illegible] male population).[1]

To summarize, the aspects of Ceylon's population experience which are of greatest economic significance are:

(1) The sharp fall in the death rate, of which mothers and infants have been the primary beneficiaries.

(2) The relative increase in the less well educated and less skilled ethnic groups, accompanied by the loss through emigration of a small but significant number of adults with highly developed skills or previous experience in the modern sector.

(3) Higher rates of natural increase in rural areas, along with a rapid growth of towns.

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[1] Based on the author's calculation of the age-sex structure of the population in 1960, which derived from the 1953 census, birth registrations, age-specific death registrations, and net migration.

(4) A rise in the proportions of women and children in the population.

Armed with this knowledge of the pattern of population growth, one can say something about its economic effects to date and -- because demographic trends are tolerably regular phenomena -- make predictions about expected future trends. Judgements on these matters will form part of the discussion of overall economic trends in the 1946-60 period which makes up the following chapters.

Chapter 4. The Growth of Output, 1946-60

Since independence, Ceylon's economy has continued to expand. As is appropriate to the changed environment in which it found itself, however, its growth has been of a rather different sort from the growth experienced in the past. The swelling population of the island has set in motion a Malthusian race between output and population. Through the end of the 1950's the economy was still running ahead of the relentlessly increasing demands of its population, though by a thin margin. How this race -- or rather its first lap -- was won is discussed in this chapter.

RESOURCE SUPPLIES: LABOR

The overriding influence on labor supply since 1946 has been the new phenomenon of extremely rapid population increase. With the link to the Indian labor market virtually severed and migration between Ceylon and other countries slight, the country's labor supply has for the first time become closely dependent upon the natural growth of the domestic population. Whereas in the past labor supply had grown in close step with demand, now the trend became steeply upward regardless of demand. The particular pattern by which Ceylon's rate of natural increase accelerated, however, tended to moderate population's impact on labor supply. The rise in the proportions of women and children in the population reduced the impact on labor supply, as did a trend not discussed up to now -- a swift rise in the number of students. As a result, labor force rose less quickly between 1946 and 1960 than did total population. It also rose less rapidly than it might have if the same aggregate population rise had been realized in some other manner.

Ceylon's labor force, as estimated for various years by the author, is given in Table 4.1.[1] The nature of the impress made by population growth clearly emerges

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[1]The methodology used to calculate labor force, employment, and unemployment is described in the Note to Chapter 4, pp. 4n.1 - 4n.15, below.

Table 4.1

Population and Labor Force, 1946-60[1]
(thousands)

Year	Population	Labor Force	Labor Force as a % of Population
1946	6,854	2,583	37.7
1947	7,037	2,630	37.4
1948	7,244	2,690	37.1
1949	7,455	2,758	37.0
1950	7,678	2,831	36.9
1951	7,876	2,886	36.6
1952	8,074	2,957	36.6
1953	8,290	3,012	36.3
1954	8,520	3,077	36.1
1955	8,723	3,162	35.8
1956	8,929	3,235	36.2
1957	9,165	3,268	35.7
1958	9,388	3,354	35.7
1959	9,625	3,415	35.5
1960	9,896	3,502	35.4

[1]Source: See the Note to Chapter 4, pp. 4n.1 - 4n.15, below.

from these calculations. While population grew at 2.7 per cent annually the labor force increased at only 2.2 per cent and thus fell as a percentage of the population, from 37.7 to 35.4. It is clear that the effect of the population upswing on the labor force has in large part been delayed by the very nature of population increase. While the population has swelled by more than three million, fewer than one million persons were added to the labor force. One might say that since the number of pairs of hands available to produce food for the burgeoning population has been slow to increase, Ceylon's pattern of population growth has been particularly disadvantageous. But in fact the island has had throughout this period a high level of unemployment and from that point of view it is clear that the additional unemployment problems have been minimized. Surely up to 1960 the pattern was a blessing. Looking into the future, though, it is easy to see that the blessing is a very temporary one. If roughly the present birth and death rates continue, as they are likely to do, the proportion of young people in the population will gradually begin

to decline again as some of the post-1946 swell moves into the upper age brackets. A fall in birth rates, if it were to emerge, would accelerate this process. In any case, the rise of school attendance among young people must eventually taper off -- though it is not likely to do so for some time yet -- and this will induce the labor force to stop falling relative to population. For these reasons, the rate of growth of the labor force can be expected to accelerate during the 1960's, possibly even to the point where the labor force begins to rise again as a percentage of population. When that happens, unemployment will soar -- unless something is done to accelerate the growth of employment opportunities.

Up to 1960, however, Ceylon's economy appears to have been successful in opening up job opportunities nearly as fast as the labor force rose. The author's estimates suggest that population growth added 919,000 persons to the labor force from 1946 to 1960. As nearly as can be discovered, some 803,000 of these people were able to find jobs, leaving the unemployment rate only a little higher in 1960 than it had been at the beginning of the period.[1] For this record to be achieved, it was necessary that a considerable restructuring of the employment pattern take place. The estate sector provided only 51,000 new jobs, so the brunt of labor absorption had to be taken up by other industries. Manufacturing, with 183,000 new jobs created, transport and communications (46,000), and construction (21,000) took up some of the slack and the rest of the newly employed went into areas where their productive contributions to society were perhaps less great: traditional agriculture (245,000); trade, commerce, and finance (80,000); services n.e.c. (89,000); and government n.e.c. (80,000). The changing employment pattern has led to a decline in the relative importance of primary employment, while industrial employment has undergone a rapid

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[1]This statement, however, rests on somewhat shaky evidence; see pp. 4n.14 - 4n.15, below.

Table 4.2

Estimated Employment by Industry, 1946-60[1]
(Mid-year averages)

thousands

Industry	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Agriculture, fishing, etc.	1,425	1,453	1,470	1,460	1,525	1,530	1,563	1,574	1,587	1,618	1,647	1,676	1,692	1,709	1,729
Agriculture	1,385	1,413	1,430	1,419	1,484	1,488	1,521	1,531	1,543	1,573	1,602	1,630	1,645	1,662	1,681
Estates	632	644	646	619	668	656	672	664	657	667	677	684	678	674	683
Tea & minor crops	499	509	517	501	535	516	530	526	531	539	547	555	555	551	560
Rubber	117	119	111	99	112	119	121	118	104	104	106	104	101	99	100
Coconut	16	16	17	19	21	20	21	20	22	24	24	25	22	24	23
Other	753	769	784	800	816	832	849	867	886	906	925	946	967	988	998
Fishing, hunting, forestry	40	40	40	41	41	42	42	43	44	45	45	46	47	47	48
Mining & Quarrying	8	9	9	10	11	12	12	13	12	11	11	10	9	8	7
Construction	46	47	48	46	50	49	51	51	52	55	58	60	62	64	67
Manufacturing	195	185	175	210	193	199	254	273	277	308	337	352	345	361	378
Electric, gas, water	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5
Trade, commerce, fishing	173	186	189	196	298	225	221	222	221	235	233	237	233	252	253
Transport and communications	87	89	89	90	92	94	94	94	93	108	105	111	103	129	133
Services nec	293	298	303	309	313	319	324	329	337	344	351	358	365	373	382
Government nec	68	77	83	90	97	103	110	116	106	108	106	102	122	142	148
Total	2,299	2,348	2,370	2,415	2,493	2,535	2,633	2,676	2,689	2,791	2,852	2,911	2,936	3,043	3,102

[1]See Sou notes, pp. 4n.1 - 4n.12.

relative and absolute rise and service employment a more gradual one (see Table 4.3).

Table 4.3

The Structure of Employment, 1946 and 1960, and Additions to Employment, 1946-60

	1946 Employment		Additions to employment, 1946-60			1960 Employment	
Sector	Thousands	% of total	Thousands	% of total	% increase	Thousands	% of total
Primary	1,425	62.0	304	37.9	21.3	1,729	55.7
Estate	632	27.5	51	6.4	8.1	683	22.0
Other	793	34.5	253	31.5	31.9	1,046	33.7
Industry	253	11.0	204	25.4	80.6	457	14.7
Services	621	27.0	295	36.7	47.5	916	29.5
Total	2,299	100.0	803	100.0	34.9	3,102	100.0

To some extent, these shifts in employment structure represent a transition towards a more "modern" economic structure. It is likely (although there is no evidence to support this speculation) that there has been little actual movement of laborers from one sector to another in Ceylon over this period. Instead, former workers have probably remained where they were and the new younger workers have found jobs in the rapidly expanding sectors. Thus, peasants have only rarely moved into industrial or white collar occupations but peasants' sons have made the move quite frequently. From this point of view it can be said that it is the increase in the labor force which has helped to raise aggregate and, to the extent that productivity is higherin the modern areas, per capita income, without any marked transfer of labor out of the traditional sector. The general impression created by the data is one of an economy which has been undergoing transition and a noticeable degree of industrialization but which still has a very substantial traditional sector, peasant agriculture alone using a third of the labor resources of the country.

RESOURCE SUPPLIES: CAPITAL

Independent Ceylon inherited as a legacy from the colonial government a considerable stock of private and public capital. Notable in the latter category were the school, hospital, road, railroad, harbor, and communications systems which had been built up to a very considerable level over the years. Among the various types of private capital, the estates themselves formed the most significant item, though in their case the value of the legacy was qualified by the fact that much of their ownership still resided in the hands of the British. In the late forties, the foreign-owned share of the tea industry was over 50 per cent and that of rubber over 40 (foreign-owned coconut acreage amounted to less than ten per cent of the total: see Table A-33, below). British firms also controlled substantial fractions of the modern industrial and service sectors. A further difficulty was that after a period of near neglect, fostered by the depression and the war, the value of both private and public assets had undergone some deterioration.

Efforts to expand the capital stock since the late forties have centered on attempts at least to maintain public social and economic overhead capital at a per capita level no worse than previous levels, on trying to maintain and modernize the estate sector, and on trying to diversify the economy, especially into industrial lines. Less is known about investment than about almost any other aspect of Ceylon's economy, but it appears that gross fixed investment totalled some Rs. 6.8 billion over the years 1950-60 inclusive.[1] Of this total just half, Rs. 3.4 billion, was spent by government. A further Rs. 1.5 billion represents private residential construction. Fixed capital formation by private enterprises lagged throughout most of the period; it totalled Rs. 1.9 billion for the 11 years together, but over Rs. 600 million of that

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[1] See Table A-7, below.

total came in the upsurge of private investment which started in 1959. On the average, gross fixed investment ran at about 12 per cent of GNP.[1] Beyond this, little can be said. Nothing precise is known about the industrial distribution of investment expenditures. The extent to which these gross expenditures represent net additions to the capital stock also remains a mystery. On the latter count, though, it can be surmised with reasonable safety that net private enterprise capital formation prior to 1959 was very low.

The role played by international capital flows can hardly be described as favorable. The net flow of private long-term direct investment throughout the period as a whole was out of the country, to the tune of Rs. 182 million, 1950-60 inclusive. Most of this represented purchases of foreign holdings in Ceylon -- estates and mercantile houses in the main -- by Ceylon nationals. The movement of private long-term portfolio investment was also adverse (Rs. 128 million). There was some net inflow of government long-term capital, but it only amounted to Rs. 208 million and thus did not offset the outflow of private long-term capital. In the net, then, Ceylon was a net capital exporter during this vital period of her development.[2]

RESOURCE SUPPLIES: LAND

Since 1871 the total land area under cultivation in Ceylon appears to have been rising at a rate of somewhat more than one per cent a year.[3] With the gradual exhaustion of the supply of good cultivable land and the rising costs of clearing,

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[1] 11.6 per cent of GNP in current prices and 12.2 per cent of real GNP, according to Tables A-2 and A-3, below.

[2] For all these figures, see Table A-52, below.

[3] See Table 2.5, p. 2.12, above.

irrigating (where necessary), and planting, though, it has become progressively more difficult to maintain the past growth rate. In the postwar period, with the rural population rising much more rapidly than in the past and the existing cultivated area thus coming under severe population pressure, efforts were made to accelerate the growth rate of the cultivated extent.

The main way by which acreage had been brought under cultivation in the past was by the sale or "alienation" of public or "Crown" land to agriculturalists. In earlier days alienation of Crown land had provided the estate owner with immense quantities of land, but in independent Ceylon almost all such sales have been made to the peasantry.[1] In fact, to supplement the rapidly diminishing quantity of Crown land suitable for any cultivation at all, there has been in operation in recent years a program under which the government buys up estate land for subsequent resale to the peasantry; this program, however, has not amounted to much in practice (see Table 4.4, below). The other prong in the government's traditional land policy, like the sale of Crown land, a holdover from colonial days, was the colonization of the Dry Zone through the building of new communities near newly built or renovated major irrigation schemes. This program, too, continued through the 1950's, but the pace was slow and the expense high. Through all the government programs together, about 50,000 acres a year were transfered to non-estate agriculture, but not all of this by any means went directly into cultivation.

Only minor new plantings of export crops were made during the period and since land-hungry smallholders bought out some of the previously existing estates the total estate acreage actually registered a slight decline. In all, only 257,000 acres were

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[1]There has also been a program of alienation to "middle-class Ceylonese," but the amount of land alienated under this scheme has been small and the actual development of the land alienated has lagged; see Table 4.4.

added to the cultivated extent between 1946 and 1959, although including purchases from the estates the peasant sector managed to increase its holdings by 275,000 acres.[1] The annual rate of increase in total cultivated area fell to 0.5 per cent, less than half of its historical rate, and in the peasant sector the population density rose from 2.4 to 3.1 persons per cultivated acres.[2]

Table 4.4

Land Alienation, 1950-60[1]
(acres)

Year	Alienated to Peasants Total	Of which acquired from estates	Alienated to middle-class Ceylonese	Colonization Schemes	Total: All Alienation
1950	39,485	..	1,942	16,253	57,680
1951	36,614	..	5,369	7,306	49,289
1952	32,573	..	1,959	9,304	43,836
1953	18,137	.. [2]	922	13,107	32,166
1954	24,359	2,216	12,210	12,753	49,232
1955	22,262	2,156	9,663	12,586	44,511
1956	31,884	499	14,048	13,910	59,842
1957	34,248	1,362	8,393	16,017	58,658
1958	26,183	2,290	5,460	22,505	54,148
1959	25,701	1,646	19,575	7,326	52,602
1960	15,270	1,534	6,414	8,234	29,918

[1]Totals are net of cancellation of allotments (for reasons of non-development of the land, non-residence, failure to pay annual dues, etc.).

[2]Prior to 1954 a total of 12,686 acres had been acquired and alienated.

Source: A.R.s of the Land Commissioner.

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[1]See Table 2.5, p. 2.12, above.

[2]See Table 1.8, p. 1.40.

NATIONAL OUTPUT

In looking at the growth of Ceylon's GNP over the post-World War II years, the researcher has the choice of three main series of data: the official estimates made by Ceylon's Department of Census and Statistics; the United Nations figures, which are reported by the Department of Census and Statistics on the basis of a general (but not complete) conformance with UN definitions; and the estimates of the present author, which can best be described as the UN data revised to fit the Center integrated accounts series as closely as possible.[1] These three series produce somewhat different totals for GNP but the estimates are usually no more than five per cent apart (see Table 4.5). Moreover, there is only a negligible discrepancy among the overall growth rates implied by the three sets of data.[2] All three suggest that GNP at current prices rose at an average of 4.5 per cent a year, 1950-60. Only one series, the official one, goes back before 1950. It indicates a 7.2 per cent growth rate for the entire 1946-60 period, buoyed up by a massive 11.3 per cent rate between 1946 and 1960. These figures of the late forties antedate some of the better sources of data underlying the national accounts estimates, though, so it is at least possible that they somewhat exagerate the growth rate of those years. And in any case what was going on then was not, strictly speaking, new growth but only recovery of the prewar level of per capita income.[3]

Price increases in the 1950's were extremely gradual. What inadequate deflator series there are suggest inflation at a rate of only 0.5 per cent a year,[4] leaving

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[1]The Appendix gives a detailed description and critique of all three series.

[2]This is true only for the period as a whole. Year by year there are significant differences among the three series in implied growth rates.

[3]See Note 6 to Table 3.1, p. 3.6, above.

[4]See p. A-22, below.

4.0 per cent as the annual increase in real Gross National Income. In the late forties price increases were more rapid. On the basis of a rough calculation, it seems likely that the GNP deflator rose by 31 per cent between 1946 and 1950. However, improvement in the terms of trade all but wiped out the effect of the internal price increases and the deflator of GNI rose by only four per cent.[1] Thus, it appears that between 1946 and 1960 price increases could not have amounted to more than one per cent a year. If the Census and Statistics Department figures for the late forties can be accepted, then the real growth rate, 1946-60, was 6.5 per cent.

Table 4.5

Gross National Product at Current Prices, 1946-60[1]
(Rs. millions)

Year	Official "GNP"	UN GNP	Center GNP
1946	2,268	..	..
1947	2,608	..	..
1948	2,879	..	..
1949	3,056	..	..
1950	3,868	4,046.7	4,170.5
1951	4,619	4,752.9	4,888.9
1952	4,507	4,492.9	4,606.2
1953	4,491	4,679.2	4,900.7
1954	4,748	4,950.7	5,050.9
1955	5,234	5,546.7	5,701.8
1956	5,096	5,087.8	5,146.9
1957	5,200	5,331.0	5,422.9
1958	5,493	5,622.0	5,783.1
1959	5,753	5,996.2	6,162.1
1960	6,033	6,301.2	6,476.3

Source: Appendix.

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[1] Rasaputram ("Gross National Product of Ceylon at Constant (1948) Prices," Central Bank Bulletin, January 1956, pp. 8-16) provides a deflator for the 1947-50 period which rises by 21 per cent and the fact that the Colombo cost of living index rose in 1947 by ten per cent and the import price index by 12 per cent suggests that the 1946-47 rise was about ten per cent. Here, as elsewhere in this volume, a distinction is made between real GNP and real GNI. The former is a measure of national output, with each type of good produced valued at the price paid for it. The latter measures the constant-price income (i.e. the purchasing power) earned by this production. The two differ in that changes in the terms of trade alter the real income arising from a given assortment of goods produced.

Real gross national income per capita (in 1953 prices) by the Center measure rose from Rs. 587 to Rs. 677 between 1950 and 1960, that is, at an annual rate of 1.4 per cent. By 1960 it had thus reached a level of $142 U.S. (1953 prices) at the official exchange rate (the unsatisfactory nature of comparisons of this sort is common knowledge, but no attempt will be made here to provide a more sophisticated estimate of Ceylon's real per capita income).

Table 4.6

Gross National Income, Total and per Capita, at Constant (1953) Prices, 1950-60

Year	Real GNI (Rs. mlns)	Real GNI per Capita (Rs.)
1950	4,510.2	587
1951	4,918.4	624
1952	4,627.8	573
1953	4,900.7	591
1954	5,267.5	618
1955	5,802.7	665
1956	5,217.1	584
1957	5,382.1	587
1958	5,847.1	623
1959	6,279.7	652
1960	6,698.6	677

Source: Tables A-3 and A-9, below.

Disaggregating into components of gross national expenditure, one notices several things: the constancy of private consumption's share, the steep climb in government consumption expenditure (from 8.2 per cent of GNE in 1950 to 13.5 in 1960), and the decline (possibly a cyclical fall) in the export ratio from its 1951 high of 40.2 per cent of GNE to 32.1 in 1960. Imports are seen to fluctuate cyclically but show no long-run tendency to move away from their average of 35 per cent of gross national expenditure. The gross domestic investment ratio does rise a bit in the late fifties, from about ten per cent to approximately 13. But in 1952, 1953, and every year from 1956 on, aggregate expenditures on private and public consumption and on domestic capital formation exceeded the income created by domestic production and spilled over

into an import surplus. Table 4.7 shows the relative importance of the various components of gross national expenditure in current prices; recalculating in constant 1953 prices (see Table A-3, below) yields only minor variations on the picture in Table 4.7: chiefly that consumption, both private and public, take on a slightly larger share and investment a somewhat smaller one.

Table 4.7

Expenditure Components as a Percentage of Gross National Expenditure in Current Prices, 1950-60

Year	Private Consumption Expenditure	Government Consumption Expenditure	Gross Domestic Fixed Capital Formation	Increase in Stocks	Exports	Imports	Net Factor Income from Abroad
1950	77.2	8.2	9.8	-0.5	38.8	32.2	-1.3
1951	77.5	8.2	10.7	0.2	40.2	35.5	-1.3
1952	84.5	9.6	13.4	-0.1	34.0	40.3	-1.0
1953	79.8	9.5	11.2	1.8	34.7	36.2	-0.8
1954	75.1	9.6	9.5	-0.7	37.9	30.5	-0.9
1955	73.8	9.3	10.3	0.4	36.3	29.1	-1.1
1956	78.0	11.0	11.8	0.5	35.9	36.1	-1.1
1957	80.9	11.8	12.4	0.7	33.1	37.9	-0.9
1958	76.3	12.9	11.8	1.3	33.1	34.6	-0.7
1959	76.5	13.5	13.5	-0.2	33.7	36.3	-0.6
1960	77.4	13.5	13.0	-0.9	32.1	34.4	-0.7

Source: Table A-2, below.

Looking at national output in terms of industrial structure, one sees a certain amount of structural change during the 1950's. What most quickly strikes the eye in Table 4.8 is the gradual but definite decline in the relative importance of agriculture and related activities, from 49.8 per cent of gross domestic product in 1950 to 44.7 in 1960. The fall in the relative importance of estate crops is especially abrupt: from 36.7 per cent in 1950 to 22.5 at the end of the period. This relative decline in agriculture's importance is not the result of any absolute drop in the value of primary output but only of a tendency for the latter to grow more slowly than output in the more rapidly expanding parts of the economy: manufacturing; administration and

lefense; electricity, gas, and water; and banking, insurance, and real estate. Of the other sectors, two -- transport and communications and wholesale and retail trade (in part because of their close ties to estate agriculture) -- have declined relatively. Mining and quarrying is now nearly moribund. Construction continues to boom. Ownership of dwellings remains a constant fraction of income. And miscellaneous services has risen a bit in relative importance. These changes can be summed up as a slow but distinct movement away from agriculture and production for foreign markets and towards domestically-oriented urban pursuits. The change, however, has been evolutionary rather than revolutionary.

Table 4.8

Industrial Origin of Gross Domestic Product
at Current Factor Cost Prices, 1950 and 1960

Industry	1950 Rs. mlns.	%	1960 Rs. mlns.	%	Percentage Increase, 1950-60
Agriculture, fishing, & forestry	1,963.7	49.8	2,716.7	44.7	38.3
Tea & minor estate crops	660.6	16.8	817.3	13.5	23.7
Rubber	387.3	9.8	210.2	3.5	- 45.7
Coconut	398.0	10.1	331.1	5.5	- 16.8
Other	517.8	13.1	1,358.1	22.4	162.3
Mining & quarrying	6.2	0.2	5.8	0.1	- 6.5
Manufacturing	154.6	3.9	314.2	5.2	103.2
Construction	278.8	7.1	571.7	9.4	105.1
Electricity, gas, & water	17.6	0.4	47.6	0.8	170.5
Transport & communications	294.1	7.5	347.3	5.7	18.1
Wholesale & retail trade	325.0	8.2	473.0	7.8	43.5
Banking, insurance, & real estate	14.0	0.4	52.5	0.9	275.0
Ownership of dwellings	281.7	7.1	406.5	6.7	44.3
Public administration & defense	199.6	5.1	482.8	8.0	141.9
Services n.e.c.	406.9	10.3	654.6	10.8	60.9
GDP at factor cost prices	3,942.2	100.0	6,072.7	100.0	54.0

Source: Table A-8, below.

If one views the industrial origin of GDP in terms of constant rather than current prices a somewhat different picture emerges, especially with regard to estate and peasant agriculture. Although the price and output data needed for a really

thorough deflation of the data in Tables 4.8 and A-8 are lacking, some notion of the broad trends of sectoral shares in real output can be gained by expressing agricultural output and total GDP in constant-price terms and letting real GDP originating in the secondary and tertiary spheres (where both price deflators and indexes of real output are scarce and imperfect) be determined as a residual. This is done in Table 4.9. Looking at that table, one sees that the declines in the primary and estate shares are genuine ones, applying to physical production as well as to output value. Part of the decline in the estate share, though, is clearly a result of price trends unfavorable to it. On the other hand, peasant agricultural output in real terms has not been so dynamic as Table 4.8 implies, since relative prices have been shifting in its favor. In real terms, the output of the peasant agricultural sector and the whole nonagricultural sector have been rising at about the same rate. Estate agriculture has grown more slowly and has fallen behind, in real terms and even more in value terms.

The results of the economic growth described by these figures can best be expressed in terms of what happened to the consumption levels of the average Ceylonese over the period. Private consumption per head (in prices of 1953) rose from Rs. 440 to Rs. 525, or by 19.3 per cent. Food consumption rose especially rapidly, by nearly 25 per cent, while expenditures on clothing, rent, and other goods rose less quickly. Since there was a higher proportion of children in the population in 1960 than in 1950 and children have lower caloric requirements than adults, it is safe to say that the population was substantially better fed in 1960. The rise in the consumption of "other" goods is a sure sign of the spread of the consumption of a wider variety of the goods which are used by a more modernized, more urbanized society; that food consumption rose more rapidly than consumption of these items is indicative of the countervailing influence on consumption patterns of a younger population, which needs a smaller variety of goods.

Table 4.9

Estimate of Gross Domestic Product by Industrial Origin
in Factor Cost Prices of 1953, 1950-60
(Rs. millions)

	Agriculture, Forestry, Fishing				All		As a % of GDP:	
Year	Tea & Minor Estate Crops[1]	Rubber[2]	Coconut[3]	Other[4]	Other Industries[5]	GDP[6]	Estate Crops	All Agriculture
1950	595	336	334	839	1,679	3,783	33.4	55.6
1951	633	310	379	889	1,998	4,209	31.4	52.5
1952	615	285	417	1,022	2,015	4,354	30.2	53.7
1953	666	292	396	921	2,320	4,595	29.5	49.5
1954	712	278	384	1,142	2,123	4,639	29.6	54.2
1955	738	278	442	1,263	2,355	5,076	28.7	53.6
1956	729	282	426	1,066	2,087	4,590	31.3	54.5
1957	773	289	350	1,179	2,423	5,014	28.4	51.7
1958	802	296	327	1,298	2,559	5,282	27.0	51.6
1959	802	271	373	1,291	2,809	5,546	26.1	49.4
1960	850	287	349	1,476	2,957	5,919	25.1	50.0
Percentage change, 1950-60:								
	42.9	-14.6	4.5	75.6	76.1	56.5.		

[1] Figure for 1953 from Table A-8 times the output index (1953 = 100) for tea implied in Table A-27.

[2] Ibid.

[3] Ibid.

[4] A residual: figure for agriculture, forestry, and fishing for 1953 from Table A-8 times the author's index of agricultural output (see Table A-26, below), minus the sum of the three preceding items.

[5] A residual: real GDP minus the sum of the four preceding items.

[6] GDP in current prices from Table A-8 divided by the implicit price deflator of GNP (see Table A-67).

CREASING PRODUCTIVITY

The reader might well ask at this point how it was possible for output to rise faster than population in a period when the labor force was rising relatively slowly, when land resources had been pushed to the point of diminishing returns, when foreign markets for export products were not especially favorable, and when capital stock was not being augmented at a particularly impressive rate. The answer to the question is -- and would logically have to be -- that the economy experienced sufficient growth in output per unit of labor employed to keep total production rising at least a short distance ahead of population growth in their all-important race. How great were these productivity increases and in which sectors of the economy did they occur?

Since estimates of income originating and employment by industry for the years 1950-60 have already been made (Tables A-8 and 4.2) it is now possible to divide the first by the second and derive estimates of value added per man employed. The relative levels of productivity in the various parts of the economy and, to the extent that the data permit, the comparative rates of productivity growth by industry, will thus be revealed.

Table 4.10 gives a view of productivity levels by industry. Although this table absorbs all the errors inherent in its two component tables, it does tell much about the structure of the economy in the fifties. In it, the highly-capitalized, "modern" industries are easily identified by their high levels of value added per worker. Outstanding among these, as might be expected, is the electricity, water, and gas industry, where a high degree of capitalization is a virtual necessity. (The even higher level implied for construction is overstated; its employment denominator is too low, since it includes only those who do construction work as a primary economic activity and excludes the thousand who are engaged in it on some kind of a

art-time basis.) Estate agriculture (especially rubber and coconuts, where the land-labor ratio is much higher than in tea) also appears in the table as a relatively productive industry. On the other hand, the mining and quarrying and manufacturing industries were still rather primitive affairs technologically in the fifties and had low value added per man (in the case of manufacturing, heavy reliance on imported raw materials is an additional possible explanation of the low productivity found). As in most countries, value added per worker is higher in industrial and service activities taken as a whole than in agriculture. But in Ceylon the ratio of productivity in agriculture to productivity in such industries is relatively low. Estate agriculture is obviously a "modern" industry and even "Other" agriculture and primary activities yield about 60 per cent as much value added per worker as the average for all nonagricultural activities together.

Table 4.10

Value Added per Worker: Average, 1950-60[1]
(Rupees)

Industry	Output per Worker
A. Agriculture, fishing, forestry	1,444
1. Tea & minor estate crops	1,364
2. Rubber	1,458
3. Coconut	3,999
4. Other	1,202
B. Mining & quarrying	536
C. Manufacturing	786
D. Construction	8,152[2]
E. Electricity, gas, & water	7,350
F. Transport & communications	2,648
G. Wholesale & retail trade	1,894
H. Banking, insurance, & real estate	
I. Ownership of dwellings	(3)
J. Public administration & defense	3,090
K. Services n.e.c.	1,518
All non-primary industries	1,992
1 industries	1,798

(notes on p. 4.19)

story. Some sort of a closer look at the most important industries seems to be required if one is to find out just what factors have determined the new pattern of development which the economy has experienced.

Table 4.11

Value Added per Worker in Constant (1953) Prices: 1950 and 1960[1]

Industry	1950	1960	% Increase, 1950-60
Agriculture, fishing, & forestry	1,380	1,713	24.1
Tea & minor estate crops	1,094	1,476	34.9
Rubber	1,750	1,495	-14.6
Coconut	3,884	4,106	5.7
Other	1,193	1,685	41.2
All non-primary industries[2]	1,735	2,154	24.2
All industries[2]	1,517	1,908	25.8

[1]Sources: Tables 4.2 and 4.9, above.

[2]Excludes income originating in ownership of dwellings.

EXPORT AGRICULTURE: TEA

As had been the case in the past, the growth of all of Ceylon's traditional export industries depended heavily on what happened to world demand. Foreign demand for each of these crops was viewed by the planters in terms of prices in the Colombo market.[1] Along with production costs and taxes, the level of the Colombo price for the commodity they produced determined the estates' profits. Profitability, in turn, determined their willingness to expand production. Although output was not easily varied in the short run regardless of price levels, steady long-run growth in output required that the general level of prices be satisfactory relative to costs

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Actually, much Ceylon produce is sold in other markets -- e.g. London for tea and Singapore for rubber -- but prices in these markets move very closely in line with Colombo prices.

and taxes; it was also desirable that it did not fluctuate too violently from year to year. To be sure, short-term price upswings did produce handsome profits, but if the price was expected to fall back to some (subjectively) normal level in the future, they afforded no incentive to expand output, aside from any limited increases which could be achieved immediately, in the few months over which prices might reasonably be expected to remain at boom levels.

It is often said that estate producers are at the mercy of world prices, a force which is completely beyond their control. This is true, but it is only part of the story: it is also correct to say that both the individual producer and the country which produces only a small share of the world's total supply of a commodity are offered great opportunities to benefit from their almost perfectly competitive position. If they can work on the cost side of the profit equation and lower their production costs they can benefit from the fact that this will have no effect on price and any gains they make will be theirs to keep, rents accruing to the relatively more efficient producers. This benefit accrues only to the individual producer or nation which succeeds in lowering costs relative to other producers, though; if all producers cut costs together and demand does not change, prices will fall and everyone will lose (assuming the usual inelastic world demand curve for primary products). But both individual estates and Ceylonese producers as a group can gain from relative cost reduction, regardless of the world price level. Their welfare and the amount which they can profitably produce thus depend not only on world prices, the force outside their control, but also on their ability to cut per unit costs and make an expansion of output profitable, something which is very much under their control.

Of the three main export crops, it was tea that experienced price movements which came closest to satisfying the criteria of a good environment for industry growth which have been outlined. With the freeing of the tea trade from its restrictive wartime shackles in the late forties, prices climbed to a level, in 1950, nearly

twice the controlled wartime price.[1] Being an article of final consumption and not an industrial raw material, tea did not share to any appreciable degree in the heady Korean boom enjoyed by rubber and coconut products. After a Rs. 2.11/lb. average price in 1950, three mediocre years ensued. With production costs inflated after Korea and taxes rising (see Table 4.12), profit margins sagged. However, output, adjusting with a lag to the 1950 price rise, continued to increase. As it turned out, this rising volume of output was a tremendous asset to the planters and the country, since in 1953 a strong upsurge of prices occurred and export proceeds swelled. The estates benefited through rising profits and the government through unprecedented tax collections. The good prices lasted, with only a little weakening, through mid-1956 and during this period tea virtually supported the economy. Thereafter prices fell from the prevailing average of Rs. 2.11 a pound to about Rs. 1.85, where they remained with remarkable steadiness for the rest of the decade. Production, meanwhile, continued to rise at an annual rate of about four per cent and export receipts increased accordingly.

Tables 4.12 and 4.13 represent an attempt to summarize the financial position of the industry over a fifteen-year period. Aside from the price trends which have just been outlined, the other determinants of the industry's welfare are the level of per-unit costs and government tax policies. On the former score, a considerable degree of success has been enjoyed in industry cost control. Quite rapid increases in cost per pound were recorded in the late 1940's, amounting to more than 50 per cent through the Korean period. Thereafter, though, it has proven to be possible to increase the productivity of the resources employed in the industry fast enough to prevent any significant rise in unit costs. The average hourly earnings of labor employed in the industry, which form the main element of cost in so labor-intensive an industry, rose from Rs. 0.18 in 1948 to Rs. 0.26 in 1951 by virtue of the prosperity of the late forties and early fifties. Since then they have been held firmly in

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[1] See Table A-68, below.

place through the government dominance of the wages boards system of wage determination and by 1960 they had risen only to Rs. 0.30.[1] Meanwhile, output per worker was rising (see Table 4.14) and average weekly hours were falling somewhat. What emerged was an approximately constant per-unit margin on a rising volume of production. This would have generated enormous profits had it not been for the readiness of the government to step in and appropriate large proportions of any increases in receipts, whether generated by price increases, volume increases, or cost reductions. Export duties were frequently adjusted to allow for price changes (the apparent goal of this policy was to maintain an approximately constant per unit profit margin) and the rate of company taxation went steadily and steeply upward, just doubling between 1946 and 1960. The government thus upped its share of before-tax profits to more than 80 per cent.[2] Profit rates on sales were forced downward and aggregate profits did not rise despite the ever-increasing volume of exports.

Despite the scant opportunities for profit which government tax policies left them, tea producers managed to write an impressive record of industry growth. Thanks largely to the gradual adoption of a series of technical improvements, output grew steadily, in the aggregate, per acre cultivated, and per worker employed. Table 4.14 summarizes these achievements. It shows output rising at an average annual rate of about three per cent and rising very steadily, almost regardless of price trends, the weather, or other factors which have a major influence on the output of most crops. The absence of sharp year-to-year fluctuations is largely attributable

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[1] See Table A-24, below.

[2] This figure (and all those in the last column of Table 4.13) depend on an assumption of infinitely elastic demand for Ceylon tea. Actually, of course, demand is less than perfectly elastic, so some of the tax is paid by the consumer and does not really come out of producer profits. To the extent that this is true, the percentage rate of taxation on producers is reduced.

Table 4.12

Export Tea: Per Unit Value, Cost, Taxes, and Profit[1]
(Rupees per pound)

Year	F.O.B. Unit Value[2]	Minus: Costs[3]	Before-tax Profits[4]	Export Duty[5]	Company Taxes[6]	After-tax Profits
1946	1.298	1.029	0.269	0.030	0.086	0.153
1947	2.007	1.188	0.819	0.327	0.197	0.295
1948	1.994	1.261	0.733	0.381	0.187	0.165
1949	2.121	1.306	0.815	0.369	0.179	0.267
1950	2.567	1.385	1.182	0.449	0.311	0.422
1951	2.555	1.575	0.980	0.525	0.216	0.239
1952	2.316	1.615	0.701	0.367	0.184	0.150
1953	2.437	1.467	0.970	0.410	0.350	0.210
1954	3.126	1.668	1.458	0.594	0.540	0.324
1955	3.309	1.711	1.598	0.832	0.479	0.287
1956	2.918	1.700	1.218	0.617	0.398	0.203
1957	2.879	1.683	1.196	0.675	0.357	0.164
1958	2.997	1.648	1.349	0.745	0.414	0.190
1959	2.646	1.684	0.962	0.500	0.316	0.146
1960	2.736	1.684[7]	1.052	0.347	0.508	0.197

[1]This table attempts to estimate the value of a pound of exported tea and what happens to the proceeds. Returns to the tea industry from the local sale of tea are not considered.

[2]Export proceeds (source: Thirty Years Foreign Trade Statistics; Statistical Abstracts) divided by export volume (source: A.R.s of the Tea Controller).

[3]Ex-factory costs per pound of tea, as estimated by the Department of Census and Statistics from sample survey data (source: Statistical Abstracts), plus a ten per cent additional allowance to cover transportation and handling costs from factory to ship and cesses levied for health programs, tea research, etc.

[4]Unit Value minus Costs.

[5]Source: Thirty Years Foreign Trade Statistics; Statistical Abstracts; equals export duty collections divided by quantity exported.

[6]Profits remaining after costs and export duties have been subtracted from total export proceeds, times the prevailing rate of company taxation (including income tax on companies, profits tax, and -- for early years -- excess profits duty). This assumes all producers to be companies, of course; individuals pay taxes at various rates and no attempt has been made to adjust for this.

[7]Provisional.

Table 4.13

Export Tea: Aggregate Receipts, Costs, Taxes, and Profits
(Rs. millions)

Year	Export Receipts[1]	Total Costs[2]	Before-tax Profits[3]	Export Duties[4]	Company Taxes[5]	After-tax Profits[6]	Profit Rate on Sales (%)[7] Before Taxes	After Taxes	Tax Rate on Profits (%)[8]
1946	379	300	79	9	25	45	20.8	11.8	43.1
1947	567	335	231	92	56	83	40.7	14.7	64.0
1948	590	373	217	113	55	49	36.8	8.3	77.4
1949	650	400	250	113	55	82	38.5	12.6	67.2
1950	752	406	346	131	91	124	46.0	16.4	63.3
1951	800	493	307	164	68	75	38.4	9.4	75 6
1952	723	504	219	115	57	47	30.3	6.5	78.7
1953	825	497	329	139	119	71	39.9	8.6	78.3
1954	1123	599	524	214	194	116	46.7	10.4	77.8
1955	1194	618	577	300	173	104	48.3	8.7	82.0
1956	1044	608	436	221	142	72	41.8	6.9	83.4
1957	1016	594	422	238	126	58	41.5	5.7	86.3
1958	1131	622	509	281	156	72	45.0	6.4	85.9
1959	1045	665	380	198	125	58	36.4	5.5	84.9
1960	1096	674	421	139	203	79	38.4	7.2	81.2

[1]Source: Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[2]Cost per pound (see Table 4.12) times pounds exported (source: A.R.s of the Tea Controller.

[3]Export Receipts minus Total Costs.

[4]Source: Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[5]The prevailing rate of company taxation (see note 6 to Table 4.12) times before tax profits.

[6]Before-tax profits minus export duties and company taxes.

[7]Profits, before and after taxes respectively, divided by export receipts.

[8]Total of export duties and company taxes, divided by before-tax profits.

to the technical qualities of tea cultivation which encourage long-run profit maximization and make any response to short-term stimuli difficult (see pp. 1.25 to 1.28, above). The fact that output grew at all is striking, though, especially in view of the fact that from 1946 to 1960 acreage increased by only 5.3 per cent and employment by a mere 7.5 per cent. Almost all the increase in output can thus be attributed to productivity increases, which are reflected in Table 4.14 by virtually equiproportional rises in output per acre and output per man. What explains these rises?

Ceylon's tea industry has remained basically an estate industry. There was in the early fifties a certain decline in the importance of the larger estates, which was arrested by the government in the interests of efficiency -- there are tremendous variations among tea holdings in yield per acre, with the larger, better managed estates achieving yields frequently twice as large as those on the smallholdings and the smaller "estates" of under 100 acres.[1] A considerable decline in the relative importance of European ownership also occurred -- the share of Sterling companies and non-Ceylonese in total acreage declined from well over half to about 40 per cent[2] -- but this appears not to have had any particular effect on efficiency. What accounts for the rising yields is the willingness of producers, within limits of profitability, to accept technical innovations and the fact that such innovations became available at a fairly impressive rate over the period in question.

Perhaps the most important yield-raising factor is the greatly increased use of fertilizer, especially as compared with the shortage years during and immediately after the war. Ceylon as a whole immensely increased its fertilizer consumption

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[1]The 1952 Census of Agriculture showed a yield of 642 lbs. of made tea per acre for the modern estates (defined as those which were 20 acres or more in extent, had ten or more resident laborers, and had its census schedule filled out in English), which implied an average of only 335 lbs./acre for the rest of the industry. See Census of Agriculture, 1952. Part I - Tea Plantations.

[2]See Table A-33, below.

Table 4.14

Production, Acreage, Employment, and Productivity in Tea, 1946-60

Year	Production[1] (thousand lbs.)	Acreage[2]	Lbs. per Acre	Employment[3] (thousands)	Lbs. per Employee
1946	282,911	551,370	531	536	528
1947	298,526	553,463	539	537	556
1948	298,791	554,578	539	538	555
1949	298,559	555,330	538	539	554
1950	306,215	558,304	548	544	563
1951	326,279	564,160	578	548	595
1952	316,842	569,648	556	520	609
1953	343,033	573,129	599	523	656
1954	366,738	574,877	638	545	673
1955	380,013	570,807	666	542	701
1956	375,578	567,785	661	547	687
1957	397,775	570,016	698	557	714
1958	413,155	571,640	723	559	739
1959	413,130	576,179	717	566	730
1960	434,709	580,736	749	576	755

[1]Source: A.R.s of the Tea Controller.

[2]Ibid.

[3]See Table 4n.4, p. 4n. 13, below.

between 1946 and 1960 (see Table 4.15, below) and while it is not possible to say just what proportion of the additional fertilizer went into tea, it is certain that the industry was in the vanguard of the new trend.[1] As Table 4.15 shows, fertilizer consumption increased most during periods of export boom (in 1951 and again in 1954-55), when it offered one of the few ways to get quick increases in estate output, but there is also a strong upward secular movement, indicating that even after each boom receded estate superintendents found it profitable to continue to use fertilizer in larger quantities than prior to the boom.

Aside from increased fertilizer use, the other important productivity-raising factor was the technical work done by the government's Tea Research Institute in

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[1]Data supplied the Tea Controller's Department suggest that perhaps half the total -- and probably more than half of the increment of recent years -- goes into tea.

Table 4.15

Imports of the Main Artificial Fertilizers, 1946-60[1]
(thousand cwts.)

Year	Sulphate of Ammonia	Superphosphates	Muriate of Potash
1946	591	24	135
1947	881	68	150
1948	946	2	111
1949	1,087	10	259
1950	996	14	371
1951	1,726	10	482
1952	1,027	18	242
1953	1,459	34	440
1954	1,792	47	588
1955	..	..	..
1956	1,951	69	918
1957	2,428	161	767
1958	1,953	26	702
1959	2,841	65	852
1960	2,577	19	781

[1]These are actually the most important fertilizer materials. None of them are produced in Ceylon, although the mixing of them into prepared fertilizer is done there. Sources: Thirty Years Foreign Trade Statistics of Ceylon, Part I; Statistical Abstracts.

developing new strains of tea, improved production methods, and preventative action to be taken against diseases and pests. Perhaps the most serious natural threat faced by the industry during this period was the outbreak of "Blister Blight," a fungus which was first noticed in Ceylon in 1946. Experiments carried out by the TRI suggested a copper solution as the best disease-preventing device and a vigorous campaign by planters and the government succeeded in bringing the menace under control by 1952. Despite the impressive level of estate technology which had been reached in the past, a number of modifications in planting technique suggested by the Institute also played an important role in the productivity increases of the 1950's.

It can be surmised that adoption of the various improved techniques had by 1960 not spread much beyond the circle of the largest and most up to date plantations. And in the case of the new strains of tea, which were potentially the most important contribution of the TRI, even these most advanced segments of the industry proved to be

hard to persuade. By 1956 the Institute had perfected strains which, when grown with generous quantities of fertilizer, could yield 2,000 pounds or more of made tea per acre -- this at a time when the industry's average yield was only 661 pounds.[1] In most cases, the estates were still tending their original tea bushes. Replanting was obviously called for, since tremendous gains were evidently realizable (although not all plots could achieve 2,000 lbs./acre, since this was possible only with near-ideal conditions). But the prospective cost was staggering. In materials and labor alone it amounted to something between Rs. 2,000 and Rs. 6,000 an acre.[2] And the cost in terms of the output which would have to be foregone during the replanting process was even greater. Two years of a soil-reconditioning grass crop normally had to intervene between the uprooting of the old tea and the planting of the new. Then, once the new tea was planted it would be a further three to five years before anything approaching full bearing was reached. Based on 1956 prices and per-acre yields, this might mean a revenue loss of from Rs. 6,000 to Rs. 10,000 per acre. On the other hand, the fall in productivity connected with the aging of the tea bush had proved to be very gradual and in fact, as has been seen, was being offset easily by increased fertilization and improved techniques. This lessened the incentive to replant still further and it is not surprising that the planters were reluctant to enter into so costly a process for gains which it would take so long to realize.

Very little replanting was done until the advent of the government's replanting and rehabilitation subsidy schemes. Only with the passage by Parliament of these new subsidy provisions in late 1958 did the refurbishing of the industry begin at all. The government offered estates a replanting subsidy of Rs. 2,500 an acre, to be paid

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[1] See A.R. of the Tea Controller for 1956, p. 8.

[2] Ibid.

in six installments at various stages of the uprooting, reconditioning, and replanting operations. Clearly, this by no means covered all the costs of replanting, but it did make a start (by 1958 prices were down but yields were up since 1956, leaving the value of output foregone in replanting perhaps a bit lower, say Rs. 5,000 to Rs. 9,000). The goal of the scheme was to replant a total of 30,000 acres with high-yielding clones during the first six years of its operation, but by the end of 1960 only 3,074 acres had been uprooted for replanting and a mere 1,129 had actually been replanted with the new varieties.[1] The Tea Controller, reporting on this disappointing performance, blamed the shortage of the new plants available for replanting and the general lack of experience of planters and officials with replanting (this was the first major tea replanting to be attempted anywhere in the world). The relatively modest amount of the subsidy, the fact that prices rose slightly between 1958 and 1960, the continuing climb of per-acre productivity, and the extreme reluctance of the European estates to trade present output for future output in what they considered a hazardous political environment were probably more important factors, though.

Much more seriously in need of rehabilitation than the estates were the smallholdings. Smallholders numbered about 87,000 in 1954 and controlled some 12 per cent of industry acreage, which they worked by methods vastly less efficient than those employed by the estates.[2] Some of the smallholders' problems -- lack of credit to buy fertilizers and get out of debt to the estate factory-owners who processed their tea, ignorance of proper drainage and terracing techniques, and so on -- were attacked initially through a scheme of cooperatives, which were to disseminate materials and information and operate processing factories. But by 1957 only 25 Tea Producers'

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[1] A.R. of the Tea Controller for 1960, p. 43.

[2] A.R. of the Tea Controller for 1957, p. 9.

›-operative Societies had been founded. With the advent of the Tea Replanting Subsidy Scheme, intended to enhance estate output, a new start was made with the smallholdings as well. Rather than replanting, what the smallholders needed was a general improvement in production practices, as well as an increase in the stand of tea bushes per acre. For them, the Tea Rehabilitation Subsidy Scheme was launched, offering subsidies of Rs. 300, 100, and 250 per acre respectively for increasing the stand, improving conservation methods, and buying fertilizer. The goal was to rehabilitate some 30,000 acres in six years. By the end of 1960 (that is, after two years of the scheme) some 9,000 acres had been supplied with additional plants and about 13,000 had received the subsidy for soil conservation.[1] Moreover, permits had been issued for thousands of additional acres and work under the scheme was accelerating rapidly. The drive to bring standards of operation on smallholdings closer to estate levels thus appeared to be going well.

It should be clear from what has been said here that the Replanting and Rehabilitation Subsidy Schemes will in time effect substantial increases in the productive capacity of Ceylon's tea industry. Yet it is equally obvious that through 1960 their net effect on output must have been nil, even negative. They could thus have made no contribution to the sizeable increases in output and productivity recorded between 1946 and 1960. As already noted, it was increased fertilizer use and technical improvements which must receive most of the credit here.

In relation to the substantial increases in output per worker which took place, employment trends in the industry are worth a bit of attention. Total employment in the industry, which is the island's leading employer, rose by only 40,000 or so at a time when 150,000,000 pounds of made tea were added to annual production. Part of the rise in output per employee is attributable to the fact that the structure of

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[1] A.R. of the Tea Controller for 1960, p. 45.

employment in the industry underwent a considerable shift. The proportion of work allotted to children fell sharply but the proportion done by women went up, leaving men with a reduced percentage of the industry's employment, though there were about 25,000 more male workers hired in 1960 than in 1950. The number of managerial, technical, clerical, and other non-laboring jobs in the industry underwent a substantial increase, but these remained only a small percentage of the total. As a provider of national income and foreign exchange tea thus did a far better job than as a provider of new employment. Technical improvement in the industry was neutral as regards the use of labor and land as productive inputs -- the labor-land ratio was substantially the same in 1960 as it had been in 1950.

Table 4.16

The Structure of Tea Employment, 1950-60[1]
(thousands)

Year	Managerial, technical, clerical, etc.	Workers: Men	Workers: Women	Workers: Children[2]	Total Employment
1950	8	231	234	59	532
1951	8	226	229	54	516
1952	8	232	240	49	530
1953	8	234	243	40	526
1954	8	240	246	37	531
1955	11	241	254	34	539
1956	11	244	259	32	547
1957	13	246	264	32	555
1958	13	248	266	28	555
1959	13	250	269	20	551
1960	13	256	275	16	560

[1]Refers to employment reported under the Wages Board Ordinance. These totals include some employment on cocoa, cardamom, and pepper estates, as well as rubber workers on estates which produce both tea and rubber; they are not comparable to the totals in Table 4.14.

[2]Defined as males below the age of 16 and females below 15.

Source: A.R.s of the Commissioner of Labour.

XPORT AGRICULTURE: RUBBER

If all three of the major estate industries had done as well as tea in the late forties and fifties the economic history of the period would have had to be written quite differently. But for rubber and coconut the situation was not so favorable. The wartime development of a synthetic rubber industry in the United States had demonstrated that the future of the world's natural rubber industry, especially in the debilitated form in which it emerged from the slaughter-tapping (in some parts of the world) or neglect (in others) of the war years, was dim. And in the more immediate future, the disappearance of the military component of world demand and the release of previously accumulated American stockpiles depressed prices. 1949 marked the nadir of the postwar slump; in that year the average Colombo price of RSS No. 1 sheet fell to Rs. 0.57 a pound, after a wartime peak of Rs. 0.98.[1] Output, too, was off -- about ten per cent below the wartime level. Then, out of the blue, came Korea. Colombo market prices soared to Rs. 1.55 per pound in 1950 and Rs. 2.15 in 1951. Production responded instantly, hitting a high of 254 million pounds in 1950, a figure which exceeded both the previous record and, incidentally, anything which has been achieved since. Output per acre and per man also rose sharply as trees which had been left idle since World War II were brought back into production. But for Ceylon the Korean episode was disappointingly short-lived. By 1952 the price was back down to Rs. 1.38/lb. and the trend since that year has been distinctly downward.

With demand from the Western industrial countries dropping off after Korea, Ceylon was rescued from the worst effects of the slump by the sudden appearance on the scene of a new large buyer. Communist China was in need of considerable quantities

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[1]See Table A-68.

f natural rubber from an assured supply and in December 1952 a bilateral trade agreement -- the first of many for Ceylon -- was signed. The agreement stipulated that Ceylon would sell China 50,000 metric tons of sheet rubber each year for the next five years. This quantity came to almost the entire sheet rubber production of the island and over half of its current production of all types of rubber. In return, Ceylon was to import 27,000 tons of rice a year from China. The prices set for Ceylon's rubber -- 32d. a pound for Grades 1, 2, and 3, 29d. for Grades 4 and 5 -- were favorable and became especially attractive when offered as a one-year guarantee in a falling market. The price which Ceylon agreed to pay for Chinese rice, £ 54 a metric ton, was also favorable. In December 1952 the Rubber Commissioner, acting as the purchasing agent of the government, began to buy sheet from producers at Rs. 1.35 a pound for shipment under the agreement.

During 1953 and 1954 prices continued their downward trend. In Ceylon, prices paid by the Rubber Commissioner to producers of sheet rubber remained constant while crepe prices, reflecting the world trend, fell. Crepe production fell relative to sheet. But in the second year of the agreement with China Ceylon was forced to agree to a reduced price scale -- 28d. for grades 1, 2, and 3 and 25d. for grades 4 and 5. Still, China was paying a premium over the world market price. In late 1954, with prices still depressed, a further cut of 1d. per pound was negotiated. Then, in mid 1954, world prices suddenly recovered. A Ceylon delegation left at once for Peking. The Chinese agreed to continue buying Ceylon rubber at above-market prices and a formula was worked out: China was to pay a premium of 5d., 4d., or 3d. above the price in the Singapore market, depending on the level of that price (that is, the higher the free market price, the smaller the premium paid by China). In the following year the formula was retained but the premia were cut (they now ranged between 1d. and 4 1/2 d.).

When a new five-year agreement was signed in 1957 the premium paid by China, which had been ebbing away slowly for five years, disappeared entirely. The new pact, which came into effect in January, 1958, called for a minimum annual exchange of Rs. 95 million worth of goods in each direction, including at least 30,000 metric tons of rubber bought by China and 200,000 metric tons of rice imported by Ceylon. Although the Ceylon delegation naturally pleaded for the continuation of some price premium, the Chinese steadfastly declined to grant one, using the argument that they could not afford to set a precedent which could be used as a talking point by other countries (notably Indonesia) with which they might enter into similar agreements.[1] In lieu of a premium, China entered into an aid program, which would give Ceylon Rs. 15 million a year for the five-year life of the agreement. On the basis of 30,000 metric tons a year, this aid was equivilent to a price premium of Rs. 0.23 (4d.) per pound.

The second agreement with China remained in effect through the end of the decade. Its adherence to world prices and the greatly reduced volume of rubber exported reduced the advantages of the agreement to Ceylon, but it still remained the saving grace of the market situation and China continued to be the leading purchaser of Ceylon rubber.

Meanwhile, in the free market, the familiar ups and downs had continued. Prices surged upward in 1955 and 1956, then plunged precipitously. 1958, with an average Colombo price for Grade 1 sheet of Rs. 0.93, was the worst year since 1949. Some recovery took place in the following year, but there was scant cause for optimism at the decade's end. A spectre haunted the world market for natural rubber -- synthetic production, which increased every year and was rapidly approaching the world total for natural rubber production. Ceylon's exports to the United States -- once her

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[1] See A.R. of the Rubber Controller for 1957, p. 11; these Administration Reports are the main source for this description of the workings of the China rice-rubber agreements.

leading customer but by now the world's greatest synthetic producer -- fell. More and more, sales had to be directed towards those countries which had rubber-using industries but little synthetic production so far; this meant largely the Communist bloc. By 1960 the world price for natural rubber was well on its way toward Rs. 1.00/lb., a crisis level for most growers. It was becoming increasingly apparent that unless

Table 4.17

Export Rubber: Per Unit Value, Cost, Taxes, and Profit[1]
(Rupees per pound)

Year	F.O.B. Unit Value[2]	Costs[3]	Before-tax Profits[4]	Export Duty[5]	Company Taxes[6]	After-tax Profits
1946	0.995	..	..	0.025	..	..
1947	0.748	..	..	0.001	..	..
1948	0.688	..	..	--	..	..
1949	0.629	..	..	--	..	..
1950	1.530	..	..	0.069	..	..
1951	2.534	..	..	0.332	..	..
1952	1.760	0.974	0.786	0.214	0.316	0.256
1953	1.544	0.993	0.551	0.154	0.248	0.149
1954	1.360	1.035	0.325	0.153	0.107	0.065
1955	1.578	1.068	0.510	0.166	0.214	0.130
1956	1.581	1.058	0.523	0.285	0.158	0.080
1957	1.453	0.963	0.490	0.291	0.136	0.063
1958	1.253	0.877	0.376	0.237	0.096	0.043
1959	1.455	0.886	0.569	0.221	0.234	0.114
1960	1.620	0.886[7]	0.734	0.224	0.367	0.143

[1]The table tries to estimate what happens to the proceeds from a pound of exported rubber. Latex exports and local sales of rubber, both minor items, are excluded.

[2]Export proceeds divided by export volume; source: Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[3]Note 3 to Table 4.12 applies here, too.

[4]Unit value minus costs.

[5]Source: Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[6]See note 6 to Table 4.12.

[7]Provisional.

costs could be cut substantially the industry was doomed.

The survival of the industry in the 1950's was largely attributable to successful

·ost control. What data there are (see Table 4.17, below) show a declining trend in cost per pound late in the decade. The decline was associated with a stabilized industry wage level,[1] and some slight rises in productivity, early returns on the dramatic reformation of the industry which was undertaken in the late fifties (of which more presently). Up to 1960, though, the industry remained unremunerative. After the Korean boom industry profit rates before taxes ran a bit lower than those in the tea industry. These before-tax earnings were taxed, through export duties and company taxation, at much the same rate as tea profits, so after-tax earnings were lower, too, running consistently less than ten per cent of sales after 1952. As with tea, variations in efficiency among producing units were wide (this was even more true in rubber, where smallholders formed an important part of the industry) and many small operations must have been running at a loss, just managing to cover their variable costs. Had it not been for the promised benefits of replanting, the industry would have been well down the road to ruin by 1960. Table 4.17 and 4.18 give the dismal financial results for the fifties.

Table 4.19 summarizes the physical performance of the industry through 1960. Output, employment, and total land input showed no secular trend at all over this 15-year span. Only in the decline of acres in bearing and the rise in yield per bearing acre does one sense the beginnings of the industry's rejuvenation. The 1960 yield of 418 pounds per bearing acre had been matched or exceeded in the past, but only when very attractive world prices induced intensive tapping; this latest high-yield figure, by contrast, reflected the beginning of production from newly planted high-yielding clones and foretold much better yields in the future.

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[1]Average hourly earnings in rubber rose more than tea wages through 1953, from Rs.).18 an hour to Rs. 0.34, but thereafter they ceased to go up. The 1960 figure was Rs. 0.33. See Table A-24, below.

Table 4.18

Export Rubber: Aggregate Receipts, Costs, Taxes, and Profits
(Rs. millions)

Year	Export Receipts[1]	Total Costs[2]	Before-tax Profits[3]	Export Duties[4]	Company Taxes[5]	After-tax Profits[6]	Profit Rate on Sales (%)[7] Before Taxes	After Taxes	Tax Rate on Profits[8] (%)
1946	226.7	..	..	5.8	..	..	..	..	..
1947	135.5	..	..	0.3	..	..	..	..	..
1948	141.6	..	..	--	..	..	..	..	..
1949	122.9	..	..	--	..	..	..	..	..
1950	401.1	..	..	18.2	..	..	..	..	..
1951	572.4	..	..	75.0	..	..	..	..	..
1952	363.1	200.8	162.4	44.1	65.1	53.2	44.7	14.7	67.2
1953	328.9	211.5	117.4	32.8	52.9	31.7	35.7	9.6	73.0
1954	276.0	210.0	66.0	31.1	21.8	13.1	23.9	4.7	80.2
1955	350.3	237.1	113.2	37.0	47.6	28.6	32.3	8.2	74.7
1956	292.6	195.8	96.8	52.8	29.2	14.8	33.1	5.1	84.7
1957	300.3	199.1	101.2	60.1	28.2	12.9	33.7	4.3	87.3
1958	258.1	180.6	77.5	48.8	19.7	9.0	30.0	3.5	88.4
1959	297.8	182.3	115.5	45.3	48.1	22.1	38.8	7.4	80.9
1960	378.4	206.9	171.5	52.4	85.8	33.3	45.3	8.8	80.6

[1]Source: Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[2]Cost per pound (see Table 4.17) times pounds exported (sources: Ibid.).

[3]Export receipts minus total costs.

[4]Source: Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[5]The prevailing rate of company taxation (see note 6 to Table 4.12) times before-tax profits.

[6]Before-tax profits minus export duties and company taxes.

[7]Profits, before and after taxes respectively, divided by export receipts.

[8]Total of export duties and company taxes, divided by before-tax profits.

Table 4.19

Rubber: Output, Acreage, Employment, and Yield, 1946-60

Year	Production[1] (thousand lbs.)	Acreage[2] Total	Acreage[2] Bearing	Lbs.per Acre Total	Lbs.per Acre Bearing	Employment[3] (thousands)	Lbs. per Employee
1946	210,560	635,251	610,578	331	345	194	1,085
1947	199,360	634,142	418,432	314	476	190	1,049
1948	212,800	633,215	624,765	336	341	190	1,120
1949	200,480	629,450	568,484	319	353	189	1,061
1950	254,240	655,225	617,225	388	412	192	1,324
1951	235,200	655,501	617,001	359	381	207	1,136
1952	216,160	656,879	615,583	329	351	202	1,070
1953	220,886	657,427	608,802	336	363	200	1,104
1954	210,414	659,209	604,175	319	348	187	1,125
1955	210,179	660,985	581,866	318	361	194	1,083
1956	209,191	659,247	568,970	317	368	204	1,025
1957	219,887	660,725	550,443	333	399	203	1,083
1958	224,439	664,836	541,219	338	415	195	1,151
1959	205,397	668,178	519,706	307	395	186	1,104
1960	217,898	668,948	521,832	326	418	192	1,135

Source:
[1] A.R.s of the Rubber Controller.

[2] Bearing acreage excludes areas which have been newly planted or replanted within the previous six years and areas which are left untapped. The figures for 1950 and later years are official estimates of the Rubber Controller, while those for the earlier period are made by the author on the basis of statistics on new-planted, replanted, and untapped extents (the latter data are a bit weak, so the estimates before 1950 are less reliable than those after). Source: A.R.s of the Rubber Controller.

[3] See Table 4n.4, below.

As far back as 1947 a committee appointed to investigate the situation had reported that some 175,000 acres of Ceylon rubber were uneconomic by reason of their being past their / most productive age.[1] In view of this, a replanting program was urged. But with prices depressed and long-term prospects hazy estate owners were not prepared to act on this recommendation. Nor did the government seem ready to offer sufficient inducement. Then, when prices rose sharply in 1950-51, producers continued to be uninterested in replanting, instead concentrating on very heavy tapping of their

[1] E.W. Whitelaw and S.F.H. Perera, Report on the Rubber Industry of Ceylon, S.P. 18 of 1947.

trees to maintain present output. As a consequence, more and more trees approached a state of exhaustion and in his 1951 report the Rubber Commissioner estimated that the uneconomic acreage had risen to some 200,000 acres.[1] Now, with prices falling, producers professed themselves interested in replanting but unable to afford it. In 1953 the government stepped in with the Rubber Replanting Subsidy Scheme.

Under the new scheme a subsidy was offered amounting to Rs. 700 per acre for large estates (100 acres or more), Rs. 900 for small estates (10-100 acres), and Rs. 1,000 for smallholders (less than ten acres) to replant with high-yielding varieties developed by the Rubber Research Institute. The subsidy was to be paid in installments, so as to insure proper execution of all the operations connected with replanting: clearing the land, new planting, and care of the young trees for the six years or so before they begin bearing. Each stage was to be inspected by the Rubber Controller's Department. The initial program was to run for five years and replant 65,000 acres. However, the response of producers was much more enthusiastic than had been anticipated and by the end of the fifth year (1957) over 90,000 acres had already been replanted under the subsidy scheme.[2]

A second five-year scheme was inaugurated. Its more ambitious goal was to replant a further 110,000 acres and thus virtually eliminate the island's uneconomic acreage. By the end of 1960, with two years still to go on the second five-year scheme, a total of 151,043 acres had been replanted.[3] In terms of extent replanted the scheme had been a huge success. This was seven years after the start of the first subsidy scheme and the first trees planted under it were just coming into bearing. As has been seen, though, the greatly improved yields which were made

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[1] P. 11.

[2] A.R. for 1959, p. 39.

[3] A.R. for 1961, p. 46.

technically possible by replanting had barely begun to show themselves. Still, a sound foundation had been laid for the industry's future and the advent of attractive prices could be expected to call forth record crops.

The first five-year scheme was paid for by the producers themselves, through an addition to the export duty on rubber. Towards the end of the first five year period, in late 1957, the precipitous fall in prices and the ensuing complaints of producers led to the suspension of this special levy. In any case, the Rs. 15 million of economic aid to be received from China during the 1958-62 period had already been earmarked for the financing of the second rubber replanting scheme. It was estimated that the cost of the second five years of replanting would be Rs. 20 million a year and that the government would make up the Rs. five million not covered by Chinese aid out of general revenues; the estimate turned out to be substantially correct.

Thus after some years of trying Ceylon achieved striking success in the late 1950's in inducing planters to replant their overage rubber with the new high-yielding strains. Actually, it was the severe productivity-reducing effects of senility which forced the planters to this step, leaving them only the choices of replanting or getting out of the industry. In view of the doubtful prospects of natural rubber, one might indeed ask whether the latter alternative might not have been preferable. Certainly it was in the national interests of China, still far away from self-sufficiency through synthetic rubber production and desirous of realigning Ceylon's foreign trade toward the Communist bloc, to subsidize this commitment. But was it in Ceylon's best interest? The complete returns are not yet in, but the technical experts are now saying that replanted natural rubber should be able to compete successfully with synthetic production and if this is so Ceylon was definitely right in moving to assure her share of the world output.

EXPORT AGRICULTURE: COCONUT

The postwar story for coconut products draws elements from the experience of both rubber and tea. Like tea prices, the prices of coconut products on the world market rose substantially in the late forties. Like rubber prices, they reached completely unprecedented heights during 1950 and 1951. But coconut production could not be adjusted to meet the unexpectedly high level of world demand so readily as rubber output. Consequently, the gains in export proceeds enjoyed by coconut growers during the Korean war boom were not so lavish as those of the rubber planters. In fact, coconut export volume peaked, not in 1950 or 1951, but only in 1952, after world prices were already sinking fast. The years since 1952 have seen this frustrating pattern repeated. World prices for coconut products have shared with rubber prices a tendency to vary sharply from year to year, though they have not shown the general downward trend taken by rubber prices. But the Ceylon industry was apparently too rigid in its organization to benefit by the occasional price surges. In 1953 prices for copra and coconut oil, which along with dessicated coconut form the principal export products of the Ceylon industry, rose swiftly. The output response, however, did not come until 1955, by which time prices had actually fallen below the level at which they had stood prior to the 1953 rise. Again in 1959 there was a price increase, but once again the output response was delayed and did not come until 1961. All in all, the pattern of price changes for coconut products was less favorable for the growth of the industry than that of tea prices, though it was considerably less dismal than that of rubber prices.

Despite the problem of supply inelasticity, coconut producers must have made handsome profits in some of the early postwar years: during the late forties and the Korean period and again in 1953.[1] Aggregate output is estimated to have risen

[1]Just how large these profits were one cannot say. Data problems are much greater for coconut than for tea and rubber and a financial analysis similar to that presented for the other two export industries cannot easily be done for coconuts. Table 4.20 contains such scraps of information on the subject as are readily available.

by over 70 per cent from 1946 to 1952 (see Table 4.21). Thereafter, though, the industry went into the doldrums. Profit margins sank. Prices, except for the 1959 flurry, remained low. Meanwhile, the coconut industry came increasingly under a shadow: the approaching semility of many of its trees. Attempts to forestall the problem were only partially successful (see below). Exports, in both volume and value terms, stopped rising and then, in the mid fifties, dipped below levels of previous years. Part of the reason for declining exports was the rapid growth of the local market (Ceylonese, whose numbers were of course increasing rapidly, consume some 110 coconuts a year per head), but total output, too, dropped off, far more than demand conditions justified. This fact reflected the mounting problems of the industry.

Table 4.20

Export Coconuts: Selected Financial Data, 1946-60

Year	Export Receipts[1] (Rs. mlns.)	Export Duties[2] (Rs. mlns.)	Ex-estate Costs[3] Rs. mlns.	Ex-estate Costs[3] Per thousand nuts (Rs.)	"Margin"[4] Rs. mlns.	"Margin"[4] % of export receipts
1946	56.4	--	29.1	47.27	27.3	48.4
1947	92.8	7.7	28.5	49.82	56.6	61.0
1948	151.5	30.4	44.1	45.50	77.0	50.8
1949	168.4	33.5	58.0	61.68	76.9	45.7
1950	248.0	35.7	59.2	57.43	153.1	61.7
1951	319.8	47.1	97.1	74.72	175.6	54.9
1952	231.6	27.9	103.7	71.31	100.0	43.2
1953	243.8	32.2	95.1	75.31	116.5	47.8
1954	211.9	34.9	75.3	64.29	101.7	48.0
1955	225.4	33.1	102.3	65.09	90.0	39.9
1956	213.0	28.0	92.3	65.02	92.7	43.5
1957	156.1	17.9	60.5	63.56	77.7	49.8
1958	163.6	16.3	57.9	64.93	89.4	54.6
1959	243.8	26.2	76.1	66.61	141.5	58.0
1960	151.6	24.0	53.6	66.61[5]	74.0	48.8

[1] Includes only the three leading coconut-products exports (coconut oil, copra, and dessicated coconut), which together account for some 90 per cent of total coconut-products exports by value. Source: Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[2] Source: Ibid.

Ex-estate costs; since processing is done away from the estates these figures are not to be compared with the similar ones for tea and rubber; aggregate cost is cost per thousand nuts times export volume, with coconut products exports expressed in terms of standard nut equivilents.

(notes continued on p. 4.44)

[4]Includes transportation cost from estate to factory, processing, transportation from factory to ship, company taxes, and profits. This measure should move roughly with industry profits (aggregate or as a rate on sales), except that the rising level of company taxation through the period would make actual profits tend downward more rapidly than "margin".

[5]Provisional.

Table 4.21

Coconuts: Output, Employment, and Productivity, 1946-60[1]

Year	Estimated Output[2] (million nuts)	Estimated Employment[3] (thousands)	Output per man (thousand nuts)
1946	1,361	67	20.3
1947	1,339	71	19.2
1948	1,765	76	23.2
1949	1,763	81	21.8
1950	1,877	86	21.8
1951	2,129	93	22.9
1952	2,344	97	24.2
1953	2,223	91	24.4
1954	2,159	93	23.2
1955	2,485	91	27.3
1956	2,391	92	26.0
1957	1,965	93	21.1
1958	1,836	83	22.1
1959	2,099	87	24.1
1960	1,964	85	23.1

[1]Data for coconuts are of a generally lower quality than those for tea or rubber. The last estimate of total acreage was made in 1946. An educated guess is that the area planted has changed little since that time, so output per acre must have followed a path much like that of estimated output.

[2]Reconstructed from exports and estimated domestic use. Source: Department of Census and Statistics.

[3]See Table 4n.4, below.

Why did output drop? Coconut production is much more of a smallholders' affair than tea or even rubber and this fact provides part of the answer. The agricultural nsus of 1952 revealed that only about 25 per cent of coconut acreage was located on estates and only 17.1 per cent on large estates, of 100 acres or more in extent.[1] Similarly, it indicated that only 20,000 acres out of a total slightly greater than

[1]See Table A-34, below.

a million were under corporate rather than individual ownership.[1] This is preeminently an industry composed of villagers' smallholdings and the even tinier town and village gardens which surround most low-country houses. Yet the census of agriculture suggested that while large estates did enjoy a measurable advantage in yield per acre over small estates it was a relatively unimportant one; moreover, the industry as a whole appeared to have achieved per-acre yields in 1951 that were somewhere in between these two groups -- above yields on the small estates but below those on the large ones.[2]

The structure of the industry must bear some responsibility, though, for getting coconut production into the state in which it found itself in the 1950's. Coconut producers had paid scant attention to fertilizing and other methods of raising yields and in particular had never made a practice of regularly replacing worn-out trees with new ones. By the 1950's more than half the island's trees had passed the age of 50 and were well beyond their period of maximum productivity.[3] In 1956 the government launched an attempt to arrest the deterioration of the industry through the subsidized distribution of fertilizer and seedlings. Although the problems of the two industries were similar, it is clear that the incentives given to coconut producers to rehabilitate their land were much milder than those received by the rubber planters. The subsidies offset only a minute fraction of the costs of replanting, especially when the implicit

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[1] See Table A-33, below.

[2] The census indicated an average per acre yield of 2,117 nuts for estates of 100 or more acres, contrasted with only 1,850 on the smaller estates. But, on the basis of 1951 estimated output and 1946 acreage, the yield for the whole industry was 1,990; estimated smallholders' yields as a residual work out to an average of 2,028 nuts to the acre. Of course, if any marked expansion of acreage occurred between 1946 and 1951 the smallholders' yields may be somewhat overestimated. Still, it is certain that coconut cultivation does not exhibit the wide productivity gap between estates and smallholdings that is evident in tea and rubber. See Census of Agriculture 1952, Part 3. Coconut Plantations, p. 14.

[3] Ibid., p. 11.

cost of foregoing output for several years while the newly planted seedlings are maturing is taken into account. Just how much progress had been made by 1960 in terms of acres replanted is not certain, but in the late fifties enough seedlings were being distributed at subsidized prices to replant about 22,000 acres a year.[1] Thus not more than ten per cent of the island's coconut acreage had been replanted by the end of the decade. The future of the industry, with poor practices continuing relatively unchallenged and the march of senility perhaps checked but certainly not reversed, was not bright.

DOMESTIC PEASANT AGRICULTURE[2]

It is an intriguing deviation from simple stages-of-economic growth notions that one of Ceylon's most dynamic sectors in the 1950's -- in terms of output and productivity and certainly in employment growth -- should have been the "primitive" peasant agricultural sector. Yet consider the facts. The gross output of its primary crop, paddy, considerably more than doubled from 1946 to 1960 (though the gross output of its other products rose somewhat more slowly).[3] The value of its contribution to real GDP rose by 75 per cent during the 1950's.[4] Value added per worker (in constant prices) went up by roughly 40 per cent over the same period.[5] It employed, at this much higher level of productivity, some 245,000 more persons in 1960 than it had in 1946; it thus accounted for about 30 per cent of the total increase in employment over the period.[6]

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[1] About 1.3 million seedlings were distributed in both 1959 and 1960. See Ceylon Year Book, 1960 (p. 66) and 1961 (pp. 66-67).

[2] This sector is defined here so as to exclude all tea, rubber, and coconut production. Tea and rubber are consumed in only minute quantities domestically and produced mainly on estates, but coconut is a real borderline case. Since splitting output, income, etc. between estates and smallholdings, exports and domestic consumption, and so on can be difficult and arbitrary it is often convenient to assign an entire industry to one or the other group. Even though it has been treated as an export industry and is not covered in the present section, coconut production has many of the characteristics of domestic peasant agriculture.

[3] See Table A-26, below.

[4] See Table 4.9, above.

[5] See Table 4.11, above.

[6] See Table 4.2, above.

All the data point to a dynamic sector, discovered in a most unlikely place. With the ancient cultural roots of paddy farming and the failure of the British to bring the forces of the market to bear upon it, one would expect it to be a backward, stagnant sector. And at the end of World War II that is exactly what it was. This fact makes its rapid transformation in the pastwar period all the more striking.

Several factors played a part in turning this ancient but long neglected part of the economy into a growth point, but basically the astonishing growth of peasant agriculture is a tribute to the sheer strength of market incentives. Fundamentally, paddy output grew so fast because producers were rewarded for their production by guaranteed purchase at prices which were not only unprecedented in past experience but represented a subsidy of approximately 50 per cent over world market prices. Before a detailed account of how the subsidy scheme achieved its effect is presented, some background information on the Ceylon peasant's traditional crop should be sketched.

The question of paddy output is a complicated one, involving as it does millions of small peasant cultivators and an intertangled web of social and economic problems: technology, knowledge, ancient custom, economic incentive, cooperative action, tenure relationships, law, and government administration. Starting with people, the great majority of the nearly one million people employed in peasant agriculture during the fifties spent at least part of their time cultivating paddy; the total number dependent in some way on paddy production -- as dependents of paddy cultivators or as transporters, millers, etc. of paddy or as <u>their</u> dependents -- must have numbered four or five million.

In mode of production, paddy is strictly and undeniably a peasant crop. Despite a few unsuccessful experiments in the past, there is no large scale production of crop in Ceylon today. Plots are, almost without exception, very small. According

:o a survey carried out by a visiting FAO expert, based on the Maha crop[1] of 1953-54, over 80 per cent of the parcels which form the actual working units were less than 1 1/2 acres in area; a further ten per cent centered around two acres and fewer than one per cent were greater than ten acres in extent.[2] A corroborative view of the size distribution of plots was given by the 1946 census. Working with holdings rather than parcels (i.e. with the total extent worked by one man, tenant or owner, whether in a single geographically contigous parcel or not) it obtained findings similar to those of the later study.[3] More than 60 per cent of the holdings (which, however, represented only 22.8 per cent of total paddy land) were of an acre or less. A third of the holdings and almost half the land were in the one to five acre class and the 1.1 per cent of the holdings that the census found to be over ten acres in extent accounted for 16.3 per cent of the land. There are no comparable estimates for different years so it is impossible to substantiate one's suspicion that the average size of plot is slowly declining. The average holding was 1.2 acres in 1946 and the average parcel was 1.0 acre per parcel in 1953-54. This may be indicative of falling plot size, but basically what it shows is that the working units are smaller than the holdings as a result of the latter's fragmentation into noncontiguous plots.

Of the 771,908 paddy holdings enumerated in the census of 1946, 60.8 per cent (representing 55.1 per cent of the land) were owner-cultivated.[4] Various tenancy arrangements regulated the cultivation of the remainder, but by far the most common was the "ande" system, a share-cropping arrangement, often based on a nominal equal sharing of the crop by landlord and tenant ("nominal" because the tenant was commonly in debt to the landlord and thus ended up giving him more than half the output all

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[1] See pp. 4.49-4.50.

[2] See Table A-34, below.

[3] Ibid.

[4] See Table A-33, below.

ld). In 1946 ande tenancy applied to about one-quarter of the holdings and land in paddy. Roughly half the remaining holdings, 6.8 per cent of the total, were held on a "thatamaru" basis -- a system by which co-owners of a plot rotate its cultivation among themselves, the cultivator in any particular season receiving all the output. Other arrangements -- lease for cash, cultivation by a hired worker, etc. -- were less common. The economic significance of the tenancy contract lies in the extent to which it inhibits production, either in the current season or -- by discouraging land improvements -- in future seasons. All in all, the inhibitions placed on the cultivator in Ceylon at this time were perhaps not so great as those often found in peasant cultivation elsewhere. The main favorable factor was the high degree of owner cultivation. But where ande tenancy existed its effects were severely deleterious to efforts to obtain output above the minimum needed to sustain the cultivator's family; the need to share increments of production so generously with the landlord inhibited effort and also discouraged capital formation by the tenant, who often had no security of tenure. Nor was thatamaru much better: it gave no disincentive to greater production efforts in one's own year of cultivation, but the difficulty of deciding who should expend time and money to improve the plot must have been a sharply limiting factor on capital formation. The kind of tenancy which most encourages productive effort and land improvement -- a fixed rent in money or kind, accompanied by a fairly long lease -- was very rare.

Traditionally, paddy cultivation occupies a central position in village culture. It is the basic economic activity, around which a large part of the social and religious life of the villagers revolves. Thus, it is natural that the techniques of rice production should themselves have become highly traditionalized over the centuries. Paddy is grown throughout Ceylon. The pattern of cultivation varies somewhat, especially between the Wet and Dry Zones, but something like the following can be taken as the traditional procedure. Two crops are grown each year: the Maha (great) season,

dependent on the northeast monsoon, which is sown some time between July and November and harvested five or six months later, and the Yala (lesser) season, which relies on the southwest monsoon, is usually sown between February and June, and is harvested in about four months (quicker-, and therefore lower-yielding varieties are generally sown in Yala). In much of the Dry Zone there is little Yala cultivation, owing to the absence of the southwest monsoon. Paddy cultivation takes place on "asweddumized" paddy land, that is, land which has been ridged in preparation for flooding. First, though, the land is broken up; this is usually done with a crude wooden plow pulled by one or two bulls or buffaloes, but where the land is marshy or the cultivator very poor a man wielding the traditional mamotty (a large, heavy hoe) does the job. A measured amount of water, either from irrigation works or directly from the sky, is then allowed to flow into the paddy field and stand for several days; at this time buffaloes may be driven through the field to break up the clods and muddy the water, the ideal being a uniform soupy texture. Seed paddy, which has been saved from the previous crop, is allowed to germinate for about three days and then sown broadcast. After the young shoots rise to a height of six inches or so, water is allowed to flood the field, though care is taken to avoid drowning the plants. Within a month the paddy has reached a point where no more care need be given to it until the crop is ready to harvest. For three to five months there is hardly any work to be done, but when the time for harvest is reached all the labor available is needed to get the crop in quickly. The cultivator's whole family is enlisted and additional laborors may be hired on a cash or cooperative basis. The next step, threshing, typically takes place on a mat-covered hard dirt floor made in the middle of the field and is done by driving bullocks around and around a central post, letting their hooves separate the grain from the stalk (sometimes, when small amounts of paddy are involves, the threshing is done by human feet). Winnowing, the separation of the husk from the kernel, is accomplished simply by tossing the grain in the air, allowing

the jusk to blow away and the kernel to fall again to the floor. After that all that remains to be done is to measure the harvest and (where the plot has been tenant-cultivated) divide it between the cultivator and the owner, who is sure to be present, either himself or in the person of a representative.[1]

One more production-inhibiting circumstance surrounding traditional paddy cultivation deserves mention. The village economy has always been riddled with debt. The average cultivator is continually -- and in some cases continuously -- indebted to the village boutique-keeper and often to his landlord as well. These worthies provide him with both consumption and production loans -- at a traditionally usurious rate of interest -- in the season preceding harvest, take a substantial part of the harvest in the form of loan repayment when the time comes, and frequently renew their profitable lending business soon thereafter. When the inevitable happens and the presence of too little water -- or too much; both are common occurrances in Ceylon -- ruins the crop, peasant indebtedness rises by leaps and bounds. Thus, the cultivator is unable ever to build up a surplus to use for land development and, indeed, may not even be able to obtain the tools and materials needed for the full exploitation of his land in the short run.

It can be seen that traditional paddy cultivation in Ceylon follows very closely the classical pattern of peasant cultivation everywhere. All the common characteristics are there: small holdings, fragmentation of even these small holdings into still smaller working units, a technology which has come down virtually unchanged from the dawn of known time and is hallowed by traditional usage,[2] tenancy arrangements which give the cultivator scant incentive to make lasting improvements in the land and little

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[1] Of the many accounts of traditional paddy culture that are available, the main source used here is a description of a small Wet Zone village by Bryce Ryan and associates, Sinhalese Village, pp. 15-22.

[2] And even religion; religious rites accompany several of the steps in traditional paddy cultivation just described.

enough to strive for increased output in any given season, and an enmeshing web of indebtedness which keeps the cultivator from accumulating any sort of surplus and holds him perpetually in the power of his creditors, the village shopkeeper and the landlord.

Yet it is in this context that the remarkable output and productivity gains outlined in Table 4.22 were scored. How were these achievements made? For one thing, paddy cultivation in Ceylon was backward relative to paddy cultivation elsewhere in the world and this opened up the possibility of quick gains through the adoption of foreign techniques. The smallness of the country and the relatively high standard of literacy were other favorable factors. But all of these were merely permissive; the positive, dynamic force behind the output growth was a successful, multi-fronted government campaign.

Table 4.22

Paddy Output, Acreage, and Yield, 1946-60

Year	Output[1] (million bushels)	Area Sown[2] (thousand acres)	Yield[3] (bushels per acre sown)
1946	17.2	..	..
1947	16.7	..	..
1948	18.7	..	..
1949	23.1	..	..
1950	22.0	1,066.0	20.6
1951	22.0	1,073.5	20.5
1952	28.9	1,161.9	24.9
1953	21.9	1,046.9	20.9
1954	31.1	1,253.8	24.8
1955	35.7	1,346.9	26.5
1956	27.5	1,203.6	22.8
1957	31.3	1,207.6	25.9
1958	36.6	1,382.2	26.5
1959	36.4	1,330.2	27.3
1960	43.0	1,468.4	29.4

[1]Equals the sum of the Maha and Yala crops harvested in a given calendar year; see Table A-27, below.

[2]Equals acres sown in the Yala season plus acres sown in the Maha season. Source: Statistical Abstracts.

[3]Column 1 divided by column 2; yield is more commonly expressed in terms of bushels per acre harvested; not all of the acres on which paddy is sown are harvested (because of drought, flooding, etc.), so these yield figures are somewhat lower than those figured on the conventional basis. For the latter, see Table A-28, below.

One front in the campaign was technical. No scientific experimentation was needed to show that the adoption of various improved practices could raise yields enormously. Practices which were standard elsewhere -- especially in Japan, where yields per acre were running about four times as high as those in Ceylon at this time -- were scarcely employed at all in Ceylon. These included transplanting rather than broadcast sowing, the use of pureline seed, row planting, harrowing, the use of insecticides, and even such basic operations as fertilizing and weeding. The Department of Agriculture and the Department of Food Production (later reorganized as the Department of Agrarian Services) embarked upon an intensive campaign of demonstration and propaganda. Attempts were made to persuade peasants to adopt several specific improved techniques and, beginning in 1954, a more ambitious campaign was launched to bring about a full-scale conversion to the "Japanese method" of cultivation, "...the special features of which are the selection of good seed, transplanting in wide-spaced rows so as to facilitate weeding and intercultivation, the use of heavy dressings of artificial fertiliser in two applications and the practice of mechanical weeding."[1] The adoption of the Japanese method by a few of the more progressive cultivators where conditions were favorable (a sizeable labor force is needed for the extremely labor-intensive transplanting process and in some areas this cannot be obtained) produced striking results. By 1956 the Director of Agriculture was reporting yields ranging from 60 to 150 bushels per acre on land cultivated by the Japanese method, with an average of about 70 (this at a time when the all-island average was 30 bushels).[2] In 1957 it was estimated that 20,700 acres were being cultivated using the entire system.[3] But this was only a drop in the bucket, representing a mere 2.5

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[1] A.R. of the Director of Agriculture for 1954, p. 7.

[2] Ibid., 1956, p. 7.

[3] Ibid., 1957, p. 10.

per cent of the acreage sown in the 1957-58 Maha season. Even in regard to the piecemeal improvements, gains during the fifties were very limited (see Table 4.23). This bodes well for the future, since it shows how much potential for future gains remains to be realized, but it indicates that only a small proportion of the output and productivity gains observed up to 1960 can be explained by improved techniques.

Table 4.23

Use of Improved Practices, Maha 1959-60 and Yala 1960[1]

	Maha 1959-60		Yala 1960	
	Extent (Acres)	% of Total	Extent (Acres)	% of Total
Transplanting in rows	8,968	1.0	2,633	0.5
Transplanting, not in rows	54,899	6.0	7,447	1.4
Sowing in rows	19,100	2.1	9,360	1.7
Harrowing	6,552	0.7	4,874	0.9
Pureline seed	59,800	6.5	23,898	4.4
TOTAL ACRES SOWN	920,747	100.0	547,659	100.0

[1]Source: Statistical Abstract 1961, pp. 200-201.

A certain further contribution to increased paddy output has been made by the extension of irrigation facilities which has paralleled the development of new peasant land already discussed (pp. 4.7 - 4.9, above). Water availability is a crucial factor in paddy cultivation and since ancient times Ceylon has depended heavily on irrigation to increase the chances that the right quantity of water will be available when needed. Reliance on irrigation is especially heavy in the Dry Zone, where rainfall, though not light, is narrowly concentrated in four months (October through January) and is unpredictable, leaving the area liable both to drought and to flooding. The classic solution is to build reservoirs ("tanks" in Ceylon parlance) to trap the water and systems of canals to carry it to the fields when needed. Through the efforts of the Department of Irrigation the proportion of the paddy crop that was artificially watered was raised substantially during the fifties. Table 4.24 tells

the tale in brief. Even with irrigation, of course, the dependence of the crop on the vagaries of the monsoon is not eliminated; it is lessened, though, and an important step toward higher and steadier levels of output is thus taken.

Table 4.24

Distribution of Paddy Acreage by Watering System, 1950 and 1960[1]

Crop	Major Irrigation Schemes Acres Sown (thousands)	% of Total	Minor Irrigation Schemes Acres Sown (thousands)	% of Total	Rainfed Acres Sown (thousands)	% of Total
Maha, 1949-50	131.3	19.5	140.5	20.9	400.3	59.6
Maha 1959-60	258.2	28.1	239.0	26.0	423.2	46.0
Yala 1950	114.8	29.1	64.8	16.4	214.5	54.5
Yala 1960	196.4	35.8	140.7	25.7	210.8	38.5

[1]Source: Statistical Abstract, 1952 and 1961.

A few other technical factors deserve mention. To go with the advice given by extension workers, the government has been producing simple agricultural implements of improved design -- plows, harrows, rotary weeders, and row seeders. The fertilizer subsidy is another case of the government's trying to bracket new techniques and new materials. Since 1951 a one-third subsidy has been given to cultivators who buy fertilizer through cooperative societies for use on paddy land. The subsidy has led to a rapid increase in fertilizer use during the 1950's: by the end of the decade over 20,000 tons of paddy fertilizer were being bought through the coops each year (this does not count additional amounts being purchased through private dealers).

Although it is not possible to assign a precise quantitative significance to each factor working for greater paddy output, it should be clear that the factors mentioned here cannot account for more than a fraction of the observed increase in roduction. New land has been brought into cultivation very slowly and the spread of improved techniques has not (with the exception of fertilizer use) gone very far yet. More important than any of these during the fifties was the Guaranteed Price

Scheme (GPS).

The GPS, which provides for government purchases of paddy (and certain other products of peasant agriculture) was innaugurated in 1948. The dating is deceptive, though, since the incentive offered for increased output has risen gradually through time as the effectiveness of the scheme's administration has risen. The mechanics of the GPS are as follows. The government authorizes a producers' cooperative society to act as its agent in a given village. The society buys the produce from the cultivator at the government-set price (this price is reviewed annually by the Minister of Agriculture, but for paddy it has remained constant at Rs. 12 a bushel since 1952) and subsequently resells it to the government at the guaranteed price, plus a commission and reimbursement of transport costs. The government then ships the grain either to a government-owned mill or, more likely, to a government-licensed private mill for milling. In the final step, the milled rice is distributed to consumers under the rice rationing scheme.

The proportion of the paddy crop which was purchased under the GPS rose during the fifties from a mere one per cent to over half the total. In physical terms, there was a hundredfold increase, from 221,000 bushels collected in 1950 to nearly 22 million in 1960 (see Table 4.25, below). Both the rapid rise in the amount collected and the continuing tendency for large quantities of paddy to be marketed outside the GPS are significant. The rise is not, in the main, explained by increased subsidization. The guaranteed price has remained at Rs. 12 ever since 1952; previously, it had been Rs. 7 (to February 28, 1950), Rs. 8 (to March 31, 1951), and Rs. 9 in succession. So only in 1950, 1951, and 1952 can increased purchases be attributed to a higher absolute government purchase price. To some extent, though, increases in GPS purchases since 1953 can be explained by the rise of the guaranteed price relative to free market price, since the latter has fallen slightly. When the Department of Census and Statistics collected its first data on free-market paddy prices in 1953

it found the producer price on the open market to be above the newly-established GPS price of Rs. 12 in eight of Ceylon's nine provinces (in the ninth, Western Province, it was Rs. 11.94). By 1960 the situation had altered sharply: by that time only three provinces were found with a free-market price of Rs. 12 or greater. In most areas, therefore, the free market price fell from 1953 to 1960, making sales to government a more attractive outlet to the cultivator than they had been. All this does not answer one fundamental question, though: why, in the six provinces where the free-market price was below Rs. 12, did not everyone sell to the GPS? Why was any paddy available on the free market? The key to this riddle lies in the administrative effectiveness of the scheme.

Table 4.25

GPS Purchases and Total Paddy Output, 1950-60[1]

Year	GPS Purchases (thousand bushels)	Total Output (thousand bushels)	GPS Purchases as a % of Total Output
1950	221	22,000	1.0
1951	592	22,000	2.7
1952	1,535	28,900	5.3
1953	311	21,900	1.4
1954	3,372	31,100	10.8
1955	12,918	35,700	36.2
1956	9,454	27,500	34.4
1957	13,111	31,280	41.9
1958	16,261	36,600	44.4
1959	16,642	36,400	45.7
1960	21,836	43,000	50.8

[1]Source: Statistical Abstracts.

One important part of the GPS, for instance, is the functioning of the cooperative societies which act as the government's purchasing agents. These societies have to be formed by the cultivators themselves and then be officially recognized by the government; both processes are fraught with delays. The number of such societies in existence grew from about 200 at the beginning of 1950 to more than 5,000 by the end of 1960; aggregate membership mounted to roughly 700,000, which should have

ncluded the great majority of paddy farmers in the country, but some of these societies were in fact defunct and not more than half the cultivators were actually members of an active society.[1] Naturally, the existence of an active cooperative society in his village is a necessary prerequisite for a cultivator's selling his crop under the GPS.

Another important question, though one which cannot be answered precisely, is the extent to which the system has functioned as planned. The scheme lends itself to fraud and an astonishing variety of abuses have been uncovered. Many abuses grow out of the indebtedness of the cultivator and his constant need for liquid assets. Some shopkeeper or other enterprising soul (contemptuously called a "mudalali" in Ceylon) with transportation facilities at his command will show up at harvest time with a spot cash offer: Rs. 8 a bushel, say, for the crop, to be paid immediately in cash. The farmer can get Rs. 12 under the GPS, but even assuming that there is a cooperative society in his village and that it can buy his crop -- many societies have been unable to buy their members' crops because they lacked the storage facilities needed to keep the produce until representatives of the government come to purchase it -- he will have the problem of getting the paddy to the coop himself (and poor peasants do not even have bullock carts) and, in addition, it may be some time before he actually receives payment from the society, which is likely to be so illiquid that it will have to wait for the government to pay it for the paddy before it can pay the farmer. Transportation difficulties and his crying need for cash combine to induce the peasant to sell now for ready cash. The mudalali, if he is willing to push enterprise over the line of legality, can then make some arrangement to take the crop to the cooperative society himself and sell it for Rs.

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[1] The figures are from the A.R. of the Director of Food Production for 1954, p. 10, and the A. R. of the Director of Agrarian Services for 1959, p. 56. The last estimate was made by the Director of Agriculture in his 1960 A.R. (p. 159).

12 a bushel, though this privilege is supposed to be open only to cultivators.

This ploy is only one of several kinds of abuse possible under the GPS. There are others, all related to four basic facts:[1]

1) There is a very wide gap between the GPS paddy price and the consumer price of rationed rice -- and even, at times, between the GPS paddy price and the open-market paddy price.

2) Paddy is purchased under the GPS by volume (bushels), while the rice milled from it is issued by weight.

3) Paddy is milled by hundreds of registered private millers and this involves the transportation of both paddy and rice over long distances, where checking is not feasible.

4) There are large quantities of paddy and rice in the hands of middlemen.

Aside from the increases in the level of price support already noted, the main cause of the increase in GPS paddy purchases is the success of the government in widening the coverage of the system, providing additional facilities, and mitigating abuses. Recently, attempts have been made to move ahead on three measures which interlock with price subsidies to make them more effective output inducements: credit provision, land reform, and crop insurance.

The cooperative societies, among their other functions, channel government credit to the cultivator. Loans are made for various purposes, the most important among them being for seed paddy, fertilizer, and other cultivation expenses. In recent years about Rs. 15 million of such loans has been extended per annum. But the program has had a spotty history. The default rate on these loans has always been very high and the total amount defaulted grows every year. And in any case the system of cooperative rural credit has made no more than a superficial impression

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[1]See A.R. of the Director of Agrarian Services for 1960, p. 45.

n the overall structure of rural credit. The Survey of Rural Indebtedness of 1957 found that the coops furnished only 3.9 per cent of all rural credit, while "undesirable sources of credit" accounted for 48 per cent.[1]

The desire to do something about the production-inhibiting effects of some forms of land tenure -- especially ande tenancy -- was first expressed in the Paddy Lands Act of 1953. The act provided for security of tenure and maximum levels of rent for paddy-farming tenants, as well as the enforced leasing of paddy lands not at present in cultivation. The act was proclaimed effective in two of the island's (then) 20 revenue districts, but it proved to be unenforceable and had little impact. In 1958 another attempt was made. A new Paddy Lands Act was passed, embodying much the same features as the earlier act, but written so as to be more easily enforced and administered. It gave life-long security of tenure, as well as the power to assign tenancy rights to an heir; there was only one escape clause; within five years of the passage of the act, the landlord could evict his tenant, provided that he would cultivate the land himself. Other features of the new act were the fixing of maximum rents and the creation of village cultivation committees, which were elected by all the paddy cultivators in the village and had the responsibility of administering many sections of the act.

In 1958 the security of tenure provisions were applied throughout Ceylon and the rest of the act, which came into effect only through ministerial decree, to the Colombo and Hambantota districts. A few months later, although the Commissioner of Agrarian Services complained that he lacked the staff to administer the act efficiently,[2] it was extended to four more districts. The first reaction to the act was an island-wide spate of evictions; the great majority of these were illegal under the

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[1]Department of Census and Statistics, Survey of Rural Indebtedness, 1957.

[2]A.R. for 1958, p. 55.

act, but it proved to be hard to take effective legal action against them. For one thing, while the security of tenure provisions of the act applied to the whole island, the provisions embodying sanctions for improper eviction were applicable only to the decreed districts; in the rest of the island the tenant had no legal recourse. Even in the decreed districts the number of such cases clogging the courts was so great that it was not unusual for a case to take two years to complete. The initial impact of the act was thus harmful to the tenant cultivator.

The Paddy Lands Act of 1958 was amended twice (in 1958 and again in 1959) in an attempt to block illegal evictions and make the cultivation committees a more effective instrument of the act's intentions (they were being weakened in many areas by the refusal of the landlords to cooperate). By 1960, despite considerable legislative and administrative effort, little overall progress had been made.

Crop insurance is the most recent device tried in the continuing attempt to raise rice production. The scheme, a simple one involving the collection of premiums from all cultivators and the payment of benefits to those whose crops suffer misfortune from natural causes, was initiated on a pilot basis in 1959. By 1960, then, it had no measurable effect on output, though it does appear to have promise for the future. The hope is that the peasant can be induced by the insurance to abandon the traditional conservatism which leads him not to plow his land until the village tank is full, thereby wasting time and (through evaporation) water.

Only in rough terms can one say what the main causes of rising paddy output and productivity have been. The GPS, extension services, the fertilizer subsidy, colonization, and improvements in irrigation have all clearly had some effect. On the other hand, the value of some other elements in the government program -- land reform, cooperative credit, and crop insurance -- was still more of an open question in 1960. It seems obvious, though, that the cornerstone of the whole program and by

the GPS. Its existence and, even more important, its progressive effectuation during the fifties have worked a virtual revolution in the peasant economy. For the first time paddy has been established as a cash crop and the peasant has been taught to think of it as such. An incidental result is that the GPS has created an environment in which producers are more economically minded and in such an environment many of the other efforts of the government are likely to meet with more success. A large area of potential future gains is thus opened up. The GPS has, in fact, been so successful that the government has begun to wonder how it will be able to go on paying the subsidy bill if producers continue to expand output and sell increasing proportions of it to the government. Of course, the magnitude of the subsidy might be questioned, particularly at this point. Perhaps the same job might be done in the future with a more modest subsidy, though Ceylon's political history suggests that it would be a brave Minister of Agriculture who would actually take the step of reducing it.

Gains in output and productivity in the various minor peasant crops grown in Ceylon have, in the main, been much less impressive than those recorded in paddy production. Basically, this is because the inducements offered to expand output have been less attractive than the rice subsidy and also because the vigorous response to the rice subsidy has diverted land and effort away from some of the minor crops. Table 4.26 summarizes the trend of output in 13 of the leading minor crops, showing the effect of acreage changes and variations in per acre yields on production. If the crops listed in the table can be taken as representative of all minor food crops (and, in general, they can) and if the rather unreliable statistics on minor food crops can be trusted (this is less certain) it can be said that output rose by about 70 per cent between 1950 and 1960 and that this rise was entirely attributable to increased output per acre, the area devoted to minor food crops actually falling slightly over the decade. According to the table, yields rose even more rapidly in the minor crops

percentage increase only three-fourths as great as that of paddy.

Table 4.26

Minor Food Crops: Changes in Output, Acreage, and Yield, 1950-60

Crop	% Change in Output[1]	% Change in Acreage[2]	% Change in Yield[3]	Area Sown in 1960 (thousand acres)
Kurakkan	- 12.7	- 13.7	- 1.2	88.8
Maize	1.6	- 8.5	11.0	36.8
Mineri	95.4	75.9	11.1	6.5
Greengram	647.5	9.2	584.5	11.6
Cow pea	979.0	216.0	241.5	8.1
Manioc	41.1	- 39.2	132.1	112.3
Sweet potatoes	51.2	- 44.3	171.5	31.2
Potatoes	28.6	101.0	- 34.0	1.0
Chillies	19.6	36.1	- 12.1	31.3
Onions	53.5	97.1	- 22.1	14.3
Ginger	15.9	21.4	- 4.5	5.7
Tumeric	102.3	29.4	56.3	3.4
Pepper	99.6	51.2	32.0	19.7
Weighted average[4]	70.5	- 2.9	79.6	--

[1]Source: Statistical Abstracts. Refers to the total output during the two growing seasons.

[2]Source: Ibid. Refers to the total area sown in the two growing seasons.

[3]Output index divided by acreage index.

[4]Weighted by total acreage planted in 1960.

Many of these minor crops have traditionally been grown by the villager, as an adjunct to his main occupation as a paddy cultivator, to satisfy his family's limited demand for foodstuffs to supplement their staple diet of rice. These are known as "highland" crops, meaning that they are grown on land which is too high and dry for paddy cultivation. Others of the crops in Table 4.26, especially the secondary grains -- kurakkan, maize, and mineri -- are grown mainly on a chena basis, in shifting plots hacked from the jungle, planted for a year or two, then left to lie fallow for a decade or more. In neither case would one expect to find scientific farming methods practiced, but in several instances the data show the same kind of striking rise in

yield exhibited by paddy. The technical advisory and subsidization efforts of the government have been applied to minor crops as well, though usually with less vigor. Most -- though not all -- of the crops in Table 4.26 have been covered by guaranteed prices throughout the fifties, but the degree of support offered has generally been less and the collection network has been less well developed than for paddy. Many of the coops have preferred dealing exclusively in paddy, which comes to them in larger volume and yields higher commissions, and have discouraged farmers from selling them minor crops covered by the GPS. Only for maize and onions have GPS collections ever exceeded ten per cent of estimated annual production.[1]

The nonagricultural part of the primary sector is not very important in Ceylon's economy. Its main component is fishing, a traditional economic activity similar in many ways to peasant agriculture. The official statistics indicate a rise in total catch of 15.1 per cent from 1950 to 1960.[2] The data for all years are definitely understated and nothing is known of their biases, but the gradual rise of Ceylon's fish imports suggests that the general picture that they give of very slowly rising output is likely to be correct. During the late fifties in particular attempts have been made to reform the industry and make its operation more commercial, mainly by improving marketing facilities and providing better equipment, such as light outboard motors. The basic problems of the industry remained to be solved in 1960, but the measures taken up to that time were largely responsible for the rapid rises in annual catch which seem to have occurred late in the decade.

INDUSTRY

Industrial activity was only an insignificant part of Ceylon's economy before World War II. By 1960 the industrial sector remained small but some noteworthy

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[1] See Statistical Abstracts.

developments had taken place. From 1946 to 1960 total employment in industry expanded from about 250,000 to some 450,000, or from 11 to 15 per cent of aggregate employment.[1] The industrial contribution to gross domestic product grew similarly: in 1950 it amounted to 11.7 per cent of the total; by 1960 it had risen to 15.5.[2] According to the best available output index, industrial output stood at 135.0 in 1960, with 1952-56 equal to 100.[3] This considerable overall increase masked some divergent trends within the sector. It has already been noted (pp. 4.13 - 4.14, above) that mining declined, manufacturing and construction grew noticeably, and utility output climbed steeply. Another way of looking at the sector is in terms of (1) small-scale and (2) large-scale industry; the latter category can be split further into (a) private and (b) government operations. A brief glance at how each of these fared in the period since 1946 is called for.

As in most countries, small-scale industry is one of the sectors of the economy about which least is known. Official Ceylon government definitions cut the sector into three parts: (1) cottage industry (firms run wholly or largely by family labor as a full-time or part-time occupation), (2) small-scale industry, narrowly defined (firms using hired laborers: fewer than 20 or, if no motive power is used, fewer than 50), and (3) handicraft industry (cottage or small-scale industries which require artistic skill and craftsmanship in their manufacturer).[4] Categories (1) and (3) include the handloom weaving, carpentry, pottery, coir products, gold and silver work, bamboo products, and similar trades, all of which have some basis in Ceylon's ancient traditions. Category (2) covers the smaller units found in virtually all of the island's manufacturing industries, as well as in construction. Of output and employment trends in categories (1) and (3) relatively little is known; of category (2)

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[1] See Table 4.2, above. "Industry" here includes mining and quarrying; construction; manufacturing; and electricity, gas, and water.

[2] See Table 4.8, above.

[3] See Table A-36, below; the index leaves

[4] A.R. of the Director of Rural Development and Cottage Industries for 1955, pp. 48-49.

it is virtually correct to say that nothing is known, since no organized inquiry into this area of economic activity has ever been made.

As has been noted, all forms of industry boomed during World War II. The market was willing to absorb any available local output and the only important limitations on production were the shortages of capital equipment and raw materials. Small industry, because it worked with little capital and relied heavily on local materials, was able to benefit from this situation even more than large industry. When the war ended and the normal flow of imports was gradually restored the shock to small-scale industry was correspondingly severe. It appears that the resulting disillusionment of the participants in cottage and handicraft trades has been a blight on these industries ever since, a powerful deterrent to their growth in later times. Although the coir products industry is the largest of this group in terms of output and employment, it is handloom textiles which has received the most government attention. Elements of the government program have been the establishment of demonstration centers, assistance of producers through their cooperative societies (these two measures have been extended to most of the cottage and handicraft industries), and protection from foreign competition through the Industrial Products Act. Under the latter provision, which was instituted in 1949 to cover towels, banians (a widely worn man's garment similar to an undershirt), and sarongs (the other half of the standard working class man's attire), ratios were set requiring merchants importing such goods to buy fixed proportions of locally produced articles at the same time. Protection was later increased by tightening up the ratios and extending the coverage of the act to other textile products. By the end of the decade, with cottage output bolstered by the production of one modern private spinning and weaving mill, self-sufficiency in these textile goods had been attained. Further attempts to build up the cottage weaving industry were now taking the form of establishing power weaving centers in selected villages and making other organizational and technical improvements in the interests

This was the most successful cottage industry program. The other industries, despite sporadic attempts to help them, appeared to be in dire straits at the decade's end. Many were feeling heavy competitive pressures from newly developing modern industry: e.g. hand-made bricks from locally-produced machine-made bricks, pottery from the growing domestic output of aluminum and plastic ware. All in all, the progress of small-scale industry appears to have been uneven and slow in the fifties, with the exception of handloom textiles. The future of the sector is beclouded. It is a pity, in a way, that cottage and handicraft industry has not received more wholehearted government support because its potential for soaking up underemployed rural labor, teaching rudimentary industrial skills, and, with proper organization, producing efficiently a wide variety of useful articles, was and is considerable.

When private large-scale industry was surveyed in the 1952 Census of Industry it was found to consist of some 700 establishments, employing 53,000 persons and producing value added of Rs. 224.7 million with a productive capital employed of Rs 355.8 million. Value added per man employed averaged Rs. 4,203.[1] In terms of both employment and value of output, the most important industries were engineering (which included producers of tea and rubber machinery, truck bodies, etc.), coconut and oil milling, printing and bookbinding, and coir fibre and coir goods. Smaller contributions to employment and output were made by firms in other areas: plumbago mining, salt, rice milling, confectionery, brewing and distilling, soft drinks, tobacco, textiles, lumber, rubber goods, fertilizer mixing, soap, matches, ceramics, cement, and electricity. The sector was

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[1] Census of Industry 1952, pp. 10-11. The scope of the census included establishments which met three criteria: (1) they had not less than five paid employees, (2) they employed a capital of not less than Rs. 3,000, and (3) they used mechanical power in at least part of their operations (p. 2). Mining, manufacturing, construction, and gas and electric utilities were covered. Many small-scale establishments were obviously excluded and even within the chosen field of purview coverage was far from complete. Of the list of establishments to which questionnaires were sent, about 85 per cent responded (p. 4); those which failed to answer were predominantly the smaller operations, but, on the other hand, the list probably suffered from some omissions.

small and almost all the industries included clearly fell into one of three categories: (1) those processing locally produced raw materials for export and, to a lesser degree, for local consumption, (2) those producing for local consumption goods which were too bulky to import cheaply, and (3) a small number of industries which existed because of protection in earlier times (notably matches). About a quarter of these enterprises were corporations, but they were the larger ones and produced 64 per cent of the output.[1] Some of these corporations were locally owned, but more often foreign-owned organizations (British or sometimes Indian) were dominant. Most of the sector was in private hands, but there were areas (the utilities, as well as cement and ceramics) in which government plants had been established.

It has already been noted that through 1958 there was very little private enterprise investment on Ceylon's economy.[2] Until the very end of the decade there was little expansion in the private large-scale industrial sector. The probable reason for this is that, given the structure of the economy, there were very few additional fields into which modern large-scale industry could be pushed profitably. Even the existing large-scale firms made, in general, low rates of return on their invested capital, especially late in the decade as company taxation rose to over 60 per cent of before-tax profits.[3]

Private foreign investment was especially reluctant to come forth, despite attempts made from time to time to attract it to the island. In 1949 tax concessions were granted for certain types of investment and four years later, though the Minister

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[1] Ibid., p. 14.

[2] See pp. 4.6 - 4.7, above.

[3] Much of what expansion there was did come through the growth of existing firms, though. N. Ramachandran, "Finances of Manufacturing Companies in the Post-War Period," Central Bank of Ceylon Bulletin, December 1963, 10-15, found that six of the leading corporations doubled their aggregate assets between 1948 and 1961. Their after-tax profit rates on capital fell, though, from 5.6 per cent in 1948-50 to 5.5 per cent in 1951-53, to 5.1 in 1954-56, and finally to only 3.3 per cent in 1957-61 (p. 14).

of Finance conceded that they had had little effect on the volume of investment, they were extended and made more liberal.[1] In 1951 a complete exemption from income and profits taxation for three years was offered to new industrial undertakings, but this too seemed to have little impact. Despite avowals of good faith made on various earlier occasions, it was not until 1955 that a general statement of policy regarding private foreign investment was issued.[2] This statement was in fact too general, since while it welcomed foreign investment and granted various kinds of tax relief, it failed to spell out precise criteria for acceptable private investment (each case was left subject to individual negotiation), gave no guarantee that the announced policy would not be altered in the future, and spoke vaguely of the desirability of hiring large proportions of Ceylon nationals.[3] In any case, the government changed hands within a year and once again the established policy was a matter for doubt.

The new government which came in did not define its policy towards private investment in general until 1957, when it granted a limited investment allowance on individually approved new investment projects.[4] As for foreign private investment, the first statement of official policy was made late in 1958, when the previous policy of granting tax and tariff concessions to individually approved investments was reaffirmed; this time, though, criteria of approval were somewhat more precisely stated and, in addition, long-term guarantees of capital repatriation and no nationalization for at least ten years were given.[5] Numerous lengthy negotiations with foreign business interests were entered into, but something, either the

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[1] See Budget Speech, 1949-50, pp. 136-37.

[2] M.D.H. Jayawardane, Minister of Finance, Government Policy in Respect of Private Foreign Investment in Ceylon, 1955.

[3] See Reinhard Kovary, Investment Policy and Investment Legislation in Under-developed Countries, Rangoon, 1960, for a critique of this approach to attracting foreign capital.

[4] Budget Speech 1957-58, pp. 35-36.

difficulty of reaching sufficiently attractive terms in particular cases or the general distrust of the new government felt by many foreign investors, led to frequent break-downs in the negotiations and the volume of foreign private investment remained low. Total enterprise investment in plant and equipment, though, rose to a substantial level in 1959 and 1960 (estimated at about Rs. 300 million in both years).[1] Here the main factor was the sharp increases in import duties which were being made, starting with the 1958-59 budget, to improve the country's ailing balance of payments. Concessions on direct taxes and import duties on raw materials and competing final goods remained to be hammered out on a case-by-case basis with the government, but the attraction of a protected domestic market proved to be far stronger than all the inducements which had been tried earlier and a large number of entrepreneurs came forth to negotiate. An expansion of the industrial sector which was to accelerate considerably in the early sixties thus had its start.

The government, meanwhile, was attempting to build a publicly-owned industrial sector. At first, it tried simply to maintain what industry had been built up during the war.[2] Since these plants were jerry-built and obviously unsuited to the rigors of the postwar competition to which they were subjected, this proved to be a futile attempt. By the end of 1950 these plants, which had earned an accumulated profit of Rs. 412,000 through 1946, had incurred aggregate losses of Rs. 5.35 million.[3] The Commission on Government Commercial Undertakings, which reported on the situation in 1953, found fault with the government plants on technical grounds and also criticized

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[1]See Table A-7, below. These totals include investment by government corporations, but this could not have been more than about Rs. 100 million for the two years together; see Table A-65, below.

[2]See pp. 3.7 - 3.8, below.

[3]Development Division, Ministry of Industries, State Industrial Projects, Bulletin 1, 1961, p. 12.

their organization as direct arms of government departments.[1] It recommended closing some plants, selling others to private industry, and reorganizing others, making them technically more efficient and turning them into corporations with a considerable degree of freedom in decision-making. Some of the recommendations of the Commission were implemented shortly after the publication of its report, but not until 1955 was a general policy for government-sponsored corporations laid down.[2] The existing plants, producing cement, ceramics, leather products, oils and fats, and plywood, were given corporate status, but not until the act was amended in 1957 was authorizati to establish new government corporations written in. Meanwhile, progress in building a substantial government industrial sector had been slow. Three factors inhibited advance along these lines: (1) the preoccupation with reorganizing the older plants, (2) the fact that the UNP government placed more stress on investment in agriculture and in the infrastructure of the economy than on industry, and (3) the general stringency which prevailed in government finances from 1952 through 1955, as expenditures were adjusted to the much lower revenues available after Korea.

With the defeat of the UNP and the accession of the MEP government in 1956, a new attitude towards government economic activity became dominant. It found its expression in a sharp rise in government investment and especially in an acceleration of government activities in the industrial field. Through 1960, projects to produce caustic soda and chlorine (1956), ilmenite (1957), sugar (1957), salt (1957), cotton yarn (1958), brick and tile (1959), and hardboard (1959) were launched. Together, these projects represented an investment of about Rs. 120 million.[3] Like their predecessors, the new industrial plants usually ran into delays in construction and

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[1] S.P. 19 of 1953.

[2] By the Government-Sponsored Corporations Act, No. 19 of 1955.

[3] See Table A-65, below.

further difficulties in breaking in new equipment and untrained labor and getting production up to planned capacity. At the end of 1960 the situation was as follows.[1] On an invested capital of nearly Rs. 200 million, output worth about Rs. 50 million at prices inflated by heavy protection was being produced. Employment had been furnished for just over 3,000 men. Only four corporations (Ceylon Ceramics, Ceylon Plywoods, D.I. Leather Products, and Ceylon Cement) had even been able to show a one-year profit and only one, the cement corporation, had shown the ability to earn substantial profits with any consistency. Of course, several plants were still either under construction or in the break-in stage at this point, but it is still basically correct to say that the state industrial corporations had performed disappointingly in terms of output, employment, and import competitiveness and had been an expensive experiment in government economic initiative.

Part way between government and private enterprise lay an experiment in the jointly-financed corporation. This organizational form was tried with a small number of medium-sized companies -- producing, for example, asbestos cement, light bulbs, glassware, and flashlight batteries -- but under the MEP government the emphasis put on it declined and it was not extended to a large number of industries.

Although the upsurge in industrial investment which started about 1958 and accelerated after 1960 was largely not a product of conscious government policies to promote industry, it did receive an important boost from the publication for the first time in 1957 of an attempt to define exactly the government's views on the proper role of government and private initiative in the industrial sector of Ceylon's economy.[2] Three lists were published. One, of seven industries, defined the area reserved to government production. It was composed of some of the industries in

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[1] See Table A-65 for the data on which these estimates are based.

[2] A.R. of the Director of Industries for 1957, pp. 32-34.

which the government had or was planning plants: (1) iron and steel, (2) cement, (3) chemicals, (4) fertilizers, (5) salt and its byproducts, (6) mineral sands, and (7) sugar, power alcohol, and rayon. The second listed 23 areas open to government corporations, mixed corporations, or private corporations; the possibility of more than one of these forms operating in any one industry was specifically mentioned. This list was made up of generally lighter industries, such as textiles, tires and tubes, bicycles, ceramics, glassware, paper, etc. The third list, containing 82 industries, most of them producing light consumer goods, defined areas reserved to private enterprise (though prolonged negotiations with the government over tax and tariff concessions were necessary for profitable operation in almost all cases). This policy statement can be regarded as an important precondition for the later expansion, especially in the areas covered by the third list, where most of the later activity centered.

One industrial area in which government initiative did succeed in bringing about a tremendous expansion was electric power. The development of Ceylon's ample hydroelectric potential had begun under the British in the late 1920's, but depression and then world war had interrupted the work. As soon as possible after the war ended construction was resumed and in 1950 the first hydro generation facility ("Stage I" at Laxapana) was opened, with a capacity of 25 megawatts. Although there had been fears that Stage I would provide more power than would be needed for many years to come, capacity generation was actually reached by December 1952. Financial stringency followed by delay in obtaining a World Bank loan and then construction difficulties put off the opening of Stage IIA, with another 25 megawatts, until late 1958. By 1960 a Stage IIB expansion of hydro and thermal capacity was under way and a Stage III hydro project /was under investigation. Demand showed a distinct tendency to grow as rapidly as supply conditions allowed and between 1946 and 1960 nearly a six-fold increase in government power generation, from 53 million kilowatt hours to 302 million, took

place.[1] Private power generation, which had dwarfed government generation prior to the hydro era, grew more slowly and declined to secondary importance.[2]

SERVICES

Having said something about output and employment trends in agriculture and industry, one is left with that large and hetrogeneous mass, the service sector, to analyze. Between 1946 and 1960 the service sector absorbed nearly 300,000 additional workers; its employment grew more rapidly than that of agriculture -- though more slowly than industrial employment -- and it thus raised its share in total employment from 27 to about 30 per cent.[3] What is the economic significance of this increase in service-sector employment? No government ever sets out deliberately to raise aggregate employment in services, though there are several high-productivity portions of the sector which it might try to enlarge. Services can be among the most modern parts of the economy and they can be among the most backward. To complicate matters still further, problems of measuring output and productivity are much more acute for services than they are for goods-producing sectors.

Looking at income originating in the service sector, it is seen that during the 1950's it has been rising slowly as a percentage of gross domestic product at current factor cost prices: from 28.5 per cent of the total in 1950 to 29.5 on 1960.[4] Estimated output per employee has also been going up, climbing from Rs. 1,746 in 1950 to

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[1] See Statistical Abstract 1962, p. 229

[2] See Table A-38, below.

[3] See Table 4.3, above.

[4] See Table 4.8, above. Income originating in the service sector is taken to be the sum of transportation and communications; wholesale and retail trade; banking, insurance, and real estate; public administration and defense; and services n.e.c. Income originating in ownership of dwellings is excluded from the total so as to make the income figures comparable with the employment totals.

Rs. 2,195 in 1960; this is an increase of about 26 per cent.[1] What is not known is how much of this rise represents growth in real output and how much price increases. There is some evidence to suggest that prices of services rose somewhat more rapidly during the fifties than did prices of goods.[2] Since real output per man employed in the economy as a whole rose by 25 per cent over the decade of the fifties[3] it is evident that in real terms productivity in the service sector rose distinctly less than productivity in other areas. Does this mean, then, that the service sector has been used as a haven for the disguised unemployed, perhaps soaking up labor which has moved out of agriculture?

Something can be learned by looking at the four main parts of the service sector separately, as is done in Table 4.27. The sector can be split into (1) trade, commerce, and finance, (2) transportation and communications, (3) other private services, and (4) other government services (i.e. those not already included in a functional category). This breakdown is useful in some ways, but it still leaves lumped together in each subcategory groups with widely divergent productivity levels and economic implications: bank employees with boutique keepers, export shipping workers with bullock-cart drivers, doctors with domestic servants, and government engineers with the peons who swarm around every government office. Since there are no census data for the terminal year to give an idea of what has happened to the employment totals for each of these small categories, one cannot say which types of groups are growing. One does get the strong impression that the number of professionals in the country -- doctors, lawyers, accountants, and, to a lesser degree, engineers and scientists -- is increasing rapidly, but in only a few cases are there data to prove

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[1] Obtained by dividing income originating (Table A-8) by estimated employment (Table 4.2).

[2] The "miscellaneous" component of the consumer price index, which includes services other than housing and goods other than food, clothing, and fuel, rose by 29 per cent in the fifties; some of this rise is attributable to luxury goods but service prices also rose. See Table A-66, below.

this. In terms of broader aggregates, the figures in Table 4.27 indicate that it is the two groups with the highest productivity levels, transportation and communications and government services n.e.c., which have experienced the most rapid increases in employment. The services n.e.c. group, which is likely to contain the highest proportion of disguised unemployment, grew slowly and, in addition, experienced a fairly rapid rise in the value of its per-capita output. The addition of approximately 50 thousand persons to government payrolls in the 1950's is especially difficult to interpret. Apparent productivity did rise substantially in this sector, but all this means is that the salaries of government employees went up, since it is virtually impossible to measure the output of government employees and conventional accounting simply assumes it to be equal to the labor input, which is measured by wages and salaries paid. Although government service continues to occupy a high rung on the ladder of occupational prestige, the Ceylon government has not shown any general tendency to use government employment as a form of unemployment relief. It is logical to conclude, then, that the rapid expansion of government employment is attributable to the great expansion in the scope of government activities as the population has risen and the government has become active in more fields of social and economic endeavor and not to a desire to expand employment beyond the requirements of the work to be done.

Table 4.27

Employment and Output per Man in the Service Sector: 1950 and 1960[1]

Industry	Net Output per Man (current-price Rupees) 1950	1960	Employment (thousands) 1950	1960	% Change in Employment, 1950-60
Trade, Commerce, & Finance	1,630	2,077	208	253	21.6
Transportation & Communications	3,197	2,611	92	133	44.6
Government n.e.c.	2,058	3,262	97	148	52.8
Services n.e.c.[2]	1,300	1,714	313	382	22.0
Total: Services	1,746	2,195	710	916	29.0

[1]Source: Tables A-8 and 4.2

[2]See note 4 p. 4.74.

Within the bounds of the very incomplete information pertaining to the service sector, then, one is inclined to say that it has not been used to any marked extent as an artificial way of absorbing additions to the labor supply for whom there would otherwise be no work. The proportion of very low-productivity workers in the service sector remains high relative to what would be found in a more developed country, of course, but there is no evidence that it has risen very much during the 1950's. A fair part of the increase in service-sector employment can be accounted for by rises in the numbers of relatively high-productivity service occupations -- professionals and, if one agrees with the foregoing argument, government servants. Of course, this situation could change sharply in the future: as the labor force grows more rapidly and the development of industry and the estates fails to absorb more than a fraction of the new workers, the service sector could become more and more of a reservoir of underemployment

SUMMARY

National output rose by 49 per cent in the 1950's, despite the fact that the labor force increased by only 24 per cent, the supply of arable land by only eight per cent, and the capital stock too by only a small percentage. With a population increase of 29 per cent, the economy was able to record a noticeable increase in real income per head. The saving grace of the situation was the fact that some key sections of the economy, through a combination of apt government policy and good luck, achieved substantial increases in output per man employed and, in the case of tea and rice cultivation, per acre of land used. The economy did not depart markedly from its past economic structure but it did benefit from the emergence within that structure of some new foci of economic growth. The resource-extensive growth of plantation agriculture and the "modern" sector which supported it was replaced by technical innovation and increasingly intensive use of resources in tea cultivation and peasant agriculture and by a fairly rapid rise of the still-small industrial sector. For the

time being, this pattern of growth proved to be an acceptable successor to the old pattern and an adequate answer to the new Malthusian challenge as well. By the latter part of the fifties, though, it was becoming increasingly obvious that this pattern of growth was not likely to solve the nation's economic problem in the longer run and that it might even be said to contain within it the seeds of its own destruction. This side of independent Ceylon's economic experience is examined in Chapter 6. A Note to Chapter 4, which details the method used to derive the labor force and employment estimates used in the early part of the present chapter, and Chapter 5, which examines the government's role in promoting economic growth and transforming the structure of the economy, intervene.

Note to Chapter 4:
Trends in Labor Supply and Use, 1946-60

SOURCES OF INFORMATION

The reader is asked to start with this minimal premise: if one is to study the economic development of Ceylon in the period 1946 to 1960 it is necessary to have estimates of the growth of labor supply and also of the extent to which the available labor has been utilized in the economy. Given this premise it is clear that whatever materials are available and whatever past surveys have been made must be used to develop the best possible estimates, however weak those materials -- and, thus, the estimates themselves -- may be.

Ceylon has no regular series of data on labor force, no good data on unemployment, and only a spotty coverage of employment by industry. There have been sporadic investigations, though, which can be used to put together a proximate picture of trends in labor supply and use:

(1) The population censuses of 1946 and 1953 included questions on the economic status of the populace -- whether gainfully occupied or not and, if so, in what area and in what status (whether paid employee, employer, own-account worker, etc.). The censuses also asked those who considered gainful employment their normal activity whether they were actually employed at present, but the answers received are of little value, since they obviously yield too low a total for unemployment (which, in any case, is defined so as to exclude first-time job seekers). Moreover, there is definitional variation between the two censuses: while the 1953 census provides a fairly conventional industrial classification the 1946 census uses an older and less useful system of classification, which combines industrial and functional status (e.g. it identifies "paddy cultivators" and "paddy land owners" but lumps all "land cultivators" and "land owners" of other food crops together); while the 1953 census includes unpaid family workers in the "economically active population" the 1946 census excludes them. The difficulties of using census data as inputs into these

estimates are evident enough.

(2) A census of the unemployed was conducted in 1949,[1] but its results are of little value for the present purpose, being rendered utterly noncomparable with any other data by their exclusion of all job seekers who were over 60 or under 17 in age from the ranks of the unemployed, as well as all those who desired seasonal rather than year-round employment. It is not surprising that these constricted terms of definition resulted in the low implied all-island unemployment rate of 3.1 per cent (based on estimates made here of the labor force at the time).

(3) An annual series of the numbers of unemployed registered at employment exchanges throughout the island has been in existence since 1939 but is of no use at all for these estimates. As is the case almost everywhere else where this type of data exist, the amount of unemployment is grossly understated. Moreover, the degree of understatement is not ascertainable and it does not even seem likely that the trend in registered employment can be taken as equivalent to the trend in total unemployment, since the number of employment exchanges has changed from time to time.

(4) Employment data for selected industries, generated by the operation of the Wages Boards Ordinance, have been published since 1948. They are of some value. For the plantation industries they can be taken as equivalent to industry employment figures. For some other industries they are good, but for yet other industries the collection of data started only in more recent years and in still others the number of establishments reporting varies too much from year to year for the figures to afford much help.

(5) The Central Bank Survey of Consumer Finances of 1953 also canvassed people on their economic status: not in the labor force, unemployed, or employed (and if so in what industrial group). The survey obtained a labor force equal to 40 per cent of

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[1] See Statistical Abstract 1952, pp. 155-56.

the population sample and an unemployment rate of 16.6 per cent of that labor force. Its sample, however, was extremely small for this purpose -- just over 5,000, or about .06 per cent of the population -- and since labor supply and use were not the main concerns of the study the investigation of them was not overly intensive (e.g., no attempt was made to determine the degree of seasonality in the unemployment that was found).

(6) The most recent sample survey dealing with the problem -- and one that was specifically designed to do so -- was the Employment, Unemployment and Under-employment Sample Survey of 1959.[1] It investigated the anatomy of employment, unemployment, and the many borderline states that can lie between the two, especially in an underdeveloped country. Although there are some difficulties involved in interpreting the EUUSS (as it can be abbreviated) it has served as a basic source for the calculations made here.

In summary, there is no absolute shortage of materials bearing on the supply and use of labor in the 1946-60 period. There are instead a great problem of comparability and, of course, sizeable gaps in the existing knowledge as well. The task that must be undertaken is to try to provide as accurate and complete a picture of labor availability and use as possible, given the basic materials which are at hand.

LABOR FORCE

The most important measure of labor availability is probably the labor force, defined as the total number of people who are either working or seeking work at a given point in time. It is true, as the EUUSS notes, that the labor force concept presents certain difficulties of interpretation in underdeveloped countries, where seasonal unemployment, perpetual underemployment, and multiple job-holding are endemic. Under these conditions, the specific identification of a severely limited time frame of reference made by the labor force concept may be misleading. The

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[1]Still unpublished.

alternative is the "gainfully occupied worker" or "economically active population" concept, which classifies people on the basis of what they state their "normal" activity to be, with no mention made of any explicit time horizon over which the respondent should make his judgement about a "normal" activity. Actually, as far as labor supply goes, the conceptual difference seems to matter little in practice. The EUUSS estimated the labor force to be 32.4 per cent of its sample population and the gainfully occupied 30.7.

The simplest way to estimate the size of the labor force in various years would be to take an estimate of it as a percentage of total population (e.g., for 1953 from the Central Bank survey; for 1959 from the EUUSS) and apply that percentage to the estimated population for other years. In some circumstances this simple procedure would yield an adequate measure. In the specific context involved here, though, this will not do. At least two important trends in Ceylonese society lead one to expect a changing ratio of labor force to population. For one thing, population started to grow very rapidly in 1946; the cause was a falling death rate and the main beneficiaries of the falling death rate were infants and mothers. As a result, the proportions of young people and women in the population should have risen and this would be expected to reduce the labor force-population ratio. The other notable trend is the striking spread of education, both in terms of the increasing numbers who attend school and the lengthening period of time for which they attend. This, too, should have worked for a falling ratio of labor force to population.

Allowances should be made for the effects of these two trends on the labor force. They can be made using three tools: the breakdown in the 1953 census of the gainfully occupied by age and sex groups, a projection of the 1953 participation rates by age-sex group to other years, and some calculations about the student population. A precondition of this operation is the need to work with the "economically active population" concept, since it is the one employed in the census. What is measured, then, is

actually the "economically active population", but this is unlikely to differ much in practice from the labor force and for that reason the latter term, which is more convenient and familiar, will continue to be used.

Use will be made of a well-known and generally accepted fact of labor economics: over a span of just a few years the size of the labor force relative to population is almost entirely determined by the age and sex structure of the population, the other possible determinant, the "participation rates" of the various age and sex groups in the labor force, being institutionally determined and changing only very gradually over time. The basic technique of the estimates made here is to apply participation rates taken from the 1953 census to the estimated population of each age-sex group in other years, thus obtaining an estimate of labor force in each of those years. This procedure, used in conjunction with estimates of the changing age-sex structure of the population, automatically corrects for the rising ratios of young people and women in the population; a special correction will have to be made subsequently for the spread of education.

The participation rates implied in the 1953 census are as follows:

Table 4n.1

Participation Rates from the 1953 Census

Age group	Male	Female
0-14	2.9[1]	2.7[1]
15-19	46.5	27.7
20-24	81.4	28.7
25-54	95.1	31.9
55-59	91.2	34.1
60-	73.6	25.6
All Ages	53.1	18.9

[1]The rates for the 0-14 age group were not based directly on the census totals but on those totals corrected for underenumeration in the 0-4 age bracket, which the Registrar-General's Department says amounted to some 135,000 children. See A.R. of the Registrar-General on Vital Statistics for 1960, p. 11.

These rates yield a labor force on the census day (March 20, 1953) of 2,993,000, or 36.4 per cent of population. This ratio is a very low one relative to other countries but is not too surprising in a country whose population is growing very rapidly and is thus heavily weighted towards the age brackets with the lowest participation rates and in which the participation rates of women are very low. It is somewhat lower than the ratio found by the Central Bank for May of the same year (which was 40.0 per cent) but seasonal fluctuation and statistical error in both sources could easily explain the discrepancy. In the light of the findings of the EUUSS for 1959, the fact that we are working with "economically active population" and not directly with the labor force concept may result in some slight understatement.

The labor force estimates for other years were obtained by the following means. First the age-sex structure of the population in each year was calculated. The 1953 census, with the addition of 135,000 children in the 0-4 bracket, was the starting point in this. Estimates were then made of the numbers at each year-end back to 1945. This was done by "demoting" the population of the preceding year by one year and adding in deaths by age and net emigration registered during the year following the year-end in question (previously, a modification of this procedure had been used to convert the census-day figures to an end-of-1952 basis). In some cases, upward adjustments had to be made in the lowest age brackets because the number of infants projected from the census totals plus registered deaths in the intervening period was less than the number of registered births in the year in question (births tend to be under-registered, never over-registered, so such a thing is impossible). For the years after 1952 the procedure was reversed: the population at each age was "promoted" by one year, deaths by age were subtracted out, births were added, and net emigration was removed. The final results for all years accorded well with the estimates of total population made by the Registrar-General's Department,

but gave in addition a reasonable estimate of the age-sex structure in the various years, something the Department does not provide.

The 1953 participation rates times the estimated numbers in each age-sex category yielded the "uncorrected estimates" of Table 4n.3.

The correction to allow for the spread of education was made by taking the 1953 census totals for the gainfully occupied in the 0-14 and 15-19 brackets and comparing these with estimates of the participation rates of non-students in 1953. The A.R. of the Director of Education gives the numbers in school by age. Using the residual, non-student population, as the divisor, the new (non-student) participation rates turned out to be 4.9 per cent for the 0-14 group and 48.4 per cent for 15-19. These new rates were assumed to hold among non-students in all years of the period. This new estimate of labor force in the 0-19 age group minus the original uncorrected estimate (i.e. total population at these ages times overall 1953 participation rates) gives the student correction, a measure of the number of potential labor force participants whose entry into labor supply has been delayed by the continuation of their education.

Table 4n.2

School and Non-school Population, Age 0-19[1]
(thousands)

	Age 0 - 14		Age 15 - 19	
Year	In School	Not in School	In School	Not in School
1946	872	1,812	73	729
1947	956	1,814	85	766
1948	1,046	1,832	100	673
1949	1,147	1,832	116	654
1950	1,176	1,913	127	623
1951	1,411	1,776	132	596
1952	1,348	1,927	136	588
1953	1,416	1,974	165	558
1954	1,437	2,064	191	539
1955	1,475	2,100	184	576
1956	1,537	2,120	184	623
1957	1,679	2,083	211	633
1958	1,785	2,076	235	647
1959	1,892	2,073	267	653
1960	1,963	2,107	293	659

[1]Source: A.R.s of the Director of Education; age-sex group projections (see text).

Table 4n.3

Mid-year Labor Force Estimates, 1946-60
(thousands)

Year	Uncorrected Estimates	Student Correction	Corrected Estimates	Per cent of Population
1946	2,516	67	2,583	37.7
1947	2,573	57	2,630	37.4
1948	2,643	47	2,690	37.1
1949	2,721	37	2,758	37.0
1950	2,801	30	2,831	36.9
1951	2,871	15	2,886	36.6
1952	2,939	18	2,957	36.6
1953	3,012	--	3,012	36.3
1954	3,087	-10	3,077	36.1
1955	3,165	- 3	3,162	35.8
1956	3,234	1	3,235	36.2
1957	3,308	-30	3,268	35.7
1958	3,377	-23	3,354	35.7
1959	3,451	-36	3,415	35.5
1960	3,549	-47	3,502	35.4

EMPLOYMENT

The ideal way to measure the degree and pattern of labor use in the economy would be to use data that are completely independent of those used to estimate labor supply. If both independent estimates were accurate, a comparison of their totals would yield an accurate measure of unemployment. This, however, would require a very high degree of accuracy: unemployment, as a small number found as the difference between two much larger numbers, would absorb the errors of both -- unless they happened to be offsetting -- and have its total distorted by a much larger degree. Here the ideal of independent estimates can be only a goal; in some industries there are good independent data, but in others some reliance on census information will be necessary.

First among the industries with reliable independent data is the plantation sector, where there are good wages boards employment totals. There is some independent indication of trends and fluctuations in manufacturing employment and government employment can also be directly estimated. For the other sectors of the economy, unfortunately, the information on labor use must come from sources which, strictly

speaking, deal with labor supply: the population censuses of 1946 and 1953 and the EUUSS of 1959. Still, with appropriate adjustments, these data can be used to gain at least a partially independent view of labor use.

The employment estimates for the 1946-60 period are given in Table 4.2, pp. 4.4, above, and their method of calculation is explained in detail in the source notes below on pp. 4n.10 - 4n.12. Some general comments are necessary in addition, however.

(1) In those industries where 1946 and 1953 census data serve as a basic source, the two have been rendered comparable by an adjustment of the earlier totals to include unpaid family workers, who were included among the "gainfully employed" in the 1953 inquiry but not in 1946. This adjustment is made on the assumption that unpaid family workers bore the same ratio to total "gainful employment" in each industry in 1946 as they later proved to bear in 1953.

(2) A particularly knotty problem concerns the interpretation of the EUUSS relative to the censuses. Since there has been no census since 1953 the EUUSS is essential as a source taken from near the end of the period for industries for which there were no independent estimates. But how is it to be interpreted? The EUUSS found the "gainfully employed" to be an extremely small -- an unbelievably small -- proportion of total population: only 30.7 per cent. By contrast, the percentage calculated for the 1959 labor force here was 35.5, itself very low in a world context. This poses a dilemma: if the EUUSS finding were to be utilized in estimating 1959 employment, absolute totals substantially below 1953 levels would be the result. Yet the EUUSS did furnish figures on the distribution of the gainfully employed by groups which are essential to the present estimates. A solution to the dilemma, though not an entirely satisfactory one, is to assume that the EUUSS reflects sampling error in putting the labor force-population ratio so low but that its breakdown by industry

reflects the correct proportions. These proportions are applied to the labor force total obtained here to yield the estimates shown in Table 4.2. The trouble with this is, of course, that the question of whether employment in these sectors has grown over the 1953-59 period has to some extent been begged. But, since the only alternative was to accept utterly incredible totals, the unpleasant choice has been made.

(3) Where the data used are of the "gainfully occupied" type there is the difficulty that they obviously over-state actual employment according to the concept of current -- as opposed to "normal" -- status. Some deflation must be made, but how much? Here the simple assumption has been made that there was five per cent unemployment among the "gainfully occupied" in "other" (i.e. traditional) agriculture and ten per cent in all other industries where data on the "gainfully occupied" are used. The assumption of a lower percentage in peasant agriculture is founded on the general notion that the sector is characterized more by underemployment than by outright unemployment, but obviously nothing very sophisticated is meant by this (unemployment in the sector probably varies between nil and a level far above five per cent on a seasonal basis). These assumptions are probably not too far off the mark in the employment estimates they provide. They do go a very long way, though, toward begging the question of unemployment (see below, pp. 4n.14 - 4n.15).

Source notes to Table 4.2 (p. 4.4, above):

Agriculture, fishing, etc.: Agriculture plus Fishing, hunting, forestry, below.

Agriculture: Estates plus Other, below.

Estates: Wages Boards data back to 1948. For earlier years, other data reported to the Labour Department (on "labor strength") were used, corrected for the under-reporting they seem to exhibit relative to the later data. The three components of estate employment are from the same source. Each includes only estate employment and so to a certain extent underestimates the total amount of labor involved in all (i.e.,

estate and smallholder) cultivation of each crop.

Other: For 1946, 1953, and 1959 the census and EUUSS totals for the whole Agriculture, fishing, etc. group were reduced by the Estates and Fishing, hunting, forestry totals and by the five per cent assumed unemployment, leaving non-estate agriculture as a residual. The figures for other years were interpolated and extrapolated.

Fishing, hunting, forestry: Census totals for 1946 and 1953 were simply interpolated and extrapolated.

Mining and Quarrying: 1946 and 1953 census and 1959 EUUSS were deflated by the assumed ten per cent unemployment, interpolated and extrapolated.

Construction: From the 1946, 1953, and 1959 figures (minus the ten per cent unemployment allowance), a trend was established. Fluctuations around this trend were allowed, based on the fluctuations of estate employment around its trend (this was taken as a rough indicator of how employment in the construction industry might have fluctuated).

Manufacturing: A trend was determined from the usual three figures, minus assumed unemployment. An allowance for short-run fluctuations was made as follows. Six Wages Boards industries were chosen for which the year-to-year employment changes were identifiable. The percentage fluctuations from trend for these six industries were taken to be those for total manufacturing employment from its trend. For the pre-Wages Boards years of 1946 and 1947 employment in the six industries was assumed to be, respectively 110 per cent and 105 per cent of 1948, on the assumption that there was during these years a general declining phase, caused by the eclipse of war-born industry.

Electric, water, gas: The 1946 and 1953 census totals, interpolation, and extrapolation were used. (The EUUSS total for some reason, probably sampling error, was far too large to be believed.)

Trade, Commerce, Finance: Censuses, EUUSS, unemployment allowance, interpolation, and extrapolation were used to develop a trend. Fluctuations were based on an index of the

of
total value/foreign trade.

Transport and communications: Same procedure as with trade.

Services n.e.c.: Census and EUUSS data, interpolation, extrapolation, and an unemployment allowance of ten per cent.

Government n.e.c.: This total excludes government services already classified elsewhere (transport, communication, utilities, health, education, etc.). For 1946 and 1953 estimates were based on census figures. The years 1947-52 were interpolated. From 1954 on the figures are based on an examination of comprehensive figures on
employment
central and local government/published each year in the Statistical Abstract.

After an exposition of methodology such as this, it hardly seems necessary to say that the employment estimates must be used with great care. Only for the estates and, since 1954, government n.e.c. is a literal interpretation of both growth trends and year-to-year fluctuations fully justified. For other industries, there are control figures which keep the growth rate of employment close to the true mark (subject to the problems of interpreting the EUUSS already mentioned), but year-to-year fluctuations have either been ignored altogether (in cases where they were not thought to be important) or assumed to be related to some outside variable (in cases where it was felt that such a rough approximation of probable fluctuations was preferable to implying no fluctuations at all). Obviously, for these industries the yearly fluctuations cannot be treated as legitimate research findings. For the economy as a whole there is slightly more justification for viewing them that way. But even there the "findings" are heavily dependent on the assumptions made for the various industries. Probably, little more can be said about employment trends than is hazarded above, pp. 4.3 - 4.5.

For some purposes (e.g. for estimating output per worker in various industries; see p. 4.18 above) it is desirable to have employment within the primary sector broken down on a strictly industrial basis, as opposed to the estate versus other approach

used in Table 4.2 and elsewhere. Table 4n.4 shows the results of such a recalculation.

Table 4n.4

Estimated Employment within the Primary Sector
By Industry, 1946-60
(thousands)

Year	Tea[1]	Rubber[2]	Coconut[3]	Other Primary Activity[4]	Total: Agriculture, Fishing & Forestry
1946	536	194	67	638	1,425
1947	537	190	71	655	1,453
1948	538	190	76	666	1,470
1949	539	189	81	651	1,460
1950	544	192	86	703	1,525
1951	548	207	93	682	1,530
1952	520	202	97	744	1,563
1953	523	200	91	760	1,574
1954	545	187	93	762	1,587
1955	542	194	91	791	1,618
1956	547	204	92	804	1,647
1957	557	203	93	823	1,676
1958	559	195	83	855	1,692
1959	566	186	87	870	1,709
1960	576	192	85	876	1,729

[1]From 1950 on, estate employment is divided by the ratio of acreage covered by estates to total acreage under the crop and the product is multiplied by .86 (this is an allowance for overstatement, obtained by comparing an estimate made by this method for 1953 with the figure from the 1953 census, assuming 95 per cent actual employment among the "gainfully employed"). The 1946-49 totals are derived from total acreage on the basis of an assumed constancy of the .97 labor/land ratio which held in 1950.

[2]For 1950-, the same as for tea, except that the overstatement allowance for rubber works out to .84. The 1946 figure is 95 per cent of the census total and the 1947-49 estimates depend on the assumed constancy of a labor/land ratio of .3 (the average of 1946 and 1950).

[3]For 1950-60 the method is as above, but the hazard of estimating employment in this way is greater for coconut because total acreage is not precisely known. It was taken as constant at 1,070,000 acres throughout. The overstatement allowance for coconut is .664. The 1946 figure is 95 per cent of the census total and the figures for 1947-49 are simply interpolated.

[4]A residual: the total minus the three preceding items.

UNEMPLOYMENT

It is inevitable that estimates of labor force and employment in an economy must also constitute estimates of unemployment, since the latter is simply the difference between the former two concepts. The estimates of the preceding two sections of the present paper are no exception. Even though they were made with the measurement of labor force and /unemployment as primary objectives, still they do yield employment estimates and these should be examined, if only briefly. The reason that they should be examined is only partly that it would be desirable to know what actual trends and levels of unemployment have been. Approached in that light, the unemployment estimates presented here must be judged most unsatisfactory. For one thing, their general level is heavily dependent on the assumed ten per cent employment among the "gainfully occupied" in several industries. For another, as already suggested, unemployment is so small a quantity compared to employment or labor force that estimates which give a reasonably accurate view of the growth and fluctuation of these may be very bad representations of the degree -- or even direction -- of change in unemployment. Really, the main question that should be asked about unemployment is only whether the implied size of it is reasonably credible. If the question can be answered in the affirmative, a check on the estimates of labor force and employment will be obtained.

Not surprisingly, the level of unemployment implied by the present estimates hovers around ten per cent. Through time there is perhaps some very slight tendency for the level to rise, but certainly not so much as popular discussion -- to say nothing of the data on registered unemployment -- would lead one to expect. The apparent cycles in percentage unemployment shown in Table 4n.5 do make some sense in terms of economic events of these years and also conform loosely to cycles in registered unemployment. The really interesting and important question, though, is whether the virtual failure of unemployment to rise as a percentage of the labor force is credible.

Table 4n.5

Estimated Labor Force, Employment, and Unemployment, 1946-60

Year	Labor force	Employment	Unemployment	Unemployment as a % of labor force	Registered Unemployment
1946	2,583	2,299	284	11.0	29
1947	2,630	2,348	282	10.7	37
1948	2,690	2,370	320	11.9	51
1949	2,758	2,415	343	12.4	68
1950	2,831	2,493	338	11.9	67
1951	2,886	2,535	351	12.2	59
1952	2,957	2,633	324	11.0	53
1953	3,012	2,676	336	11.2	52
1954	3,077	2,689	388	12.6	57
1955	3,162	2,791	371	11.7	67
1956	3,235	2,852	383	11.8	99
1957	3,268	2,911	357	10.9	99
1958	3,354	2,936	418	12.5	115
1959	3,415	3,043	372	10.9	123
1960	3,502	3,102	400	11.4	140

On this nothing positive can be said in view of the evidence at hand. Too much depends on arbitrary assumptions: the subtractions of a constant ten per cent from "gainful employment" in non-agricultural fields and five per cent in peasant agriculture; the interpretation of the EUUSS employment data as applying to the labor force estimates made here. All that can be said is that, using the assumptions which seem most appropriate . . . there is no apparent tendency for percentage unemployment to rise.[1]

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[1]Evidence from outside sources is confusing rather than helpful. The Central Bank, in 1953 found employment of 16.6 per cent (significantly, it did not even mention this findings, but it is implicit in its figures, given in the Survey of Consumer Finances). Six years later the EUUSS calculated unemployment at 3.5 per cent. (Again the figure is implied in the data -- if labor force is defined as those who worked at least one hour in the past seven days plus those who were seeking work and the unemployed as the latter category -- rather than explicitly spelled out). Yet it is unlikely that unemployment fell between 1953 and 1959. Similar definitional differences and sampling errors make comparisons of any two of the various studies that have been carried out from time to time exceedingly difficult.

Chapter 5. The Government's Role in Resource Allocation

Aside from the pressure of environmental changes -- outgrowths of independence and the demographic upswing -- the other major force working to alter the structure of the economy between 1946 and 1960 was the resource reallocating activities of the government of Ceylon. These were motivated partly by political and social philosophy and partly by simple expediency but they did result in some sectors of the economy being, in the net, subsidized and others being heavily taxed. Such disproportionate government impacts on resource availabilities in the various sectors could not help but lead to a certain amount of structural transformation of the economy.

The main means of financing the government's contribution to economic development in Ceylon has been its revenue system. Other methods of diverting resources to the government's purposes have assumed some importance at times -- drawing down foreign assets, assuming loan liabilities at home and abroad, and even, of late, inflationary finance -- but the prime source of finance has always been the revenue system of tax and nontax receipts.

THE SEARCH FOR GOVERNMENT REVENUE

Like so much else, the revenue system of independent Ceylon is a legacy from colonial days. As such, it reflects the structure of the classical export economy and the limited revenue needs of the colonial government. It would be a fortunate coincidence if it should happen to be the revenue system best suited to the vastly different revenue needs of the present-day government, which requires considerably larger volumes of revenue from a system that provides (1) an elastic growth of revenues as the income level rises, (2) reasonable year-to-year reliability without excessive revenue instability, (3) easy and cheap enforcement, and (4) a pattern of differential burdens on the various social and economic groups in the country which conforms with the prevailing social philosophy and the economic interests of the country. In many ways the inherited system failed to satisfy these canons of taxation.

Modifications were essayed from time to time, but these achieved only very limited success.

In 1947-48, the first financial year of independent Ceylon, the inherited revenue system brought in just over half a billion rupees.[1] Of this total, about 60 per cent was provided by customs duties, which had long contributed 50 to 75 per cent of the government's revenues, depending on the level of foreign trade. Import duties, which had been the largest single source of revenue since the nineteenth century, accounted for Rs. 177 million of revenue in 1947-48; they were collected at an average rate of about 18 per cent of the c.i.f. value of imports. In 1947-48 export duties gave somewhat less revenue than import duties: Rs. 137 million, which amounted to about 14 per cent of the f.o.b. value of domestic exports. Besides these major revenue sources several minor ones (e.g. port dues) also depended on foreign trade.

Direct taxes were in existence but underdeveloped. A bare total of Rs. 100 million was raised in 1947-48 from an income tax (applying both to individuals and to companies), a profits tax, an estate tax, and pension contributions (plus a wartime excess profits tax, which had been replaced by the profits tax in 1947 but was still yielding a certain amount of revenue in the form of arrears). The base for these direct taxes was extremely narrow. The income tax at this time had an exemption limit of Rs. 4,800 annual income (had incomes been up to 1953 levels, which they were not, this tax would still have covered fewer than two per cent of the country's income recipients)[2] and only a 1 1/2 per cent tax rate in the lowest bracket.

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[1]Various delimitations of the government sector can be made. In this section reference is to the central government, including such quasi-commercial activities as health services, posts and telecommunications, and port facilities, but excluding the government-run railroad and electrical networks. See Table A-60, below.

[2]Based on Central Bank of Ceylon, Survey of Ceylon's Consumer Finances, 1954, Table 10.

The base of the profits tax was similarly narrow: it was that part of agricultural, business, or professional income that exceeded Rs. 50,000 or, alternatively, six per cent of invested capital. The estate tax, too, applied to only a miniscule fraction of the population; it had an exemption limit of Rs. 20,000 and its rates ran from one to twenty per cent (during 1948 these were raised to three and forty per cent respectively).

Table 5.1

Central Government Revenues, 1947/48 - 1960/61[1]
(Rs. millions)

Year	Export Duties	Import Duties	Direct Taxes	Commodity Taxes	Nontax Revenues	TOTAL REVENUES	Overall Surplus
1947/48	137.0	177.0	100.5	64.0	62.1	540.6	- 52.3
1948/49	149.1	180.2	117.7	62.8	66.2	576.0	-115.1
1949/50	167.6	188.3	128.0	65.0	74.4	623.3	-172.4
1950/51	282.7	245.0	144.3	84.6	75.7	832.3	- 58.3
1951/52	227.3	259.9	218.1	78.3	86.2	869.8	-287.7
1952/53	193.2	250.6	243.5	92.8	87.8	867.8	-247.0
1953/54	259.1	244.1	231.3	100.6	99.6	934.8	5.0
1954/55	370.7	258.2	219.7	95.4	119.8	1,063.8	90.5
1955/56	322.1	286.3	313.6	112.1	122.8	1,156.9	- 65.5
1956/57	323.9	303.6	282.6	131.9	112.6	1,154.6	-245.5
1957/58	325.0	292.0	278.7	147.9	137.1	1,180.7	-273.3
1958/59	328.9	367.0	218.2	160.9	142.5	1,217.5	-442.8
1959/60	327.2	406.5	215.2	190.9	143.6	1,283.4	-458.6
1960/61	303.6	435.3	313.9	190.6	147.1	1,390.5	-490.9

[1]Source: Table A-69, below.

The remainder of the government's tax revenues were supplied by a stamp tax and various excise duties. The former covered a wide variety of legal transactions and the latter centered on gasoline, tobacco, and liquor. All told, tax receipts made up 85 per cent of central government revenue. The remainder came from charges for services and property income of various kinds.

The revenue structure was, of course, a reflection of the colonial economic

structure. The heavy dependence of national income on foreign trade was the main reason for the parallel concentration of the tax burden on the trading sector. It was not, however, the only reason. Ease of administration and collection, the desire of the colonial ruling class to avoid the more severely progressive forms of direct taxation, the fact that the colonial regime had no need for more extensive revenue sources, and the extremely low ability to pay of the masses also helped to shape the revenue structure. Independence introduced a desire for more rapid growth, some restructuring of the economy, more equitable income distribution, and additional social services. The revenue system was called upon to serve a multiplicity of social ends -- to redistribute income, foster the growth of particular sectors, discourage certain kinds of consumption, and so on. Far and away its greatest problem, though, was to raise the additional funds needed to finance the government's many programs.

Up to and through the Korean boom the inherited revenue system, with only a few modifications, did a fairly satisfactory job of fulfilling the limited demands made on it. Revenue from both export and import duties rose each year from 1947-48 through 1950-51, with export duty receipts more than doubling and eclipsing import duties at the top of the boom (import duties rose by 38.4 per cent). Direct tax revenue also rose satisfactorily (by 43.6 per cent), while commodity taxes and non-tax revenues were predictably less elastic. Overall, the revenue increases (which came with essentially constant tax rates) were sufficient to permit a 50.2 per cent rise in government expenditures accompanied by only modest levels of borrowing.[1] Even this record is one of inelasticity with respect to income growth, though, since GNP (by the Census and Statistics measure) climbed by about 60 per cent during this period and revenue did not keep up. That the government was still running a deficit at the top of the greatest export boom in recent history underlines this inelasticity

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[1]See Table A-61, below.

of revenue.

At the height of the boom in 1950 a number of changes were made in tax rates. Import duties were reduced (they reverted to the levels at which they had stood before being raised in December 1947). Income tax liability among the middle class was lessened by raising the exemption limit. These were billed as "anti-inflationary" measures but they did not attack inflation's cause. They would be more accurately described as devices to ease the supply of imports and allow inflationary pressures to work themselves out in the form of increases in import volume rather than price rises, though this, too, might well be regarded as a form of inflation. Some attempt was made to hold down the level of demand through export duties: the tea duty was raised from 38 to 45 cents per pound; a duty on rubber, amounting to 15 cents a pound, was reintroduced and a two rupee duty was imposed on the minor export of pepper; coconut duties were left unchanged except for a steep rise in the tax on copra. The Minister of Finance stated in his budget speech that as a result of these measures he expected an addition to customs revenue in 1950/51 of Rs. 71.25 million.[1] The actual increase turned out to be more than twice that, Rs. 152.2 million.

Although there was naturally some accretion to government revenues during this period of prosperity the revenue system was sluggish in its response. Such changes in tax rates as were enacted were perhaps appropriate to the short-term stabilization problem but they hardly took full advantage of the revenue-raising potentials of the situation. The magnitude of the opportunity to capture control of resources for development which the Korean boom offered was not recognized until it was too late.

Since 1951 the government has been faced with the basic problem of trying to increase its revenues and expenditures as a percentage of GNP during a period when income generated in the export sector, its traditional source of tax receipts, was

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[1] J.R. Jayawardene, Budget Speech 1950-51, p. 19.

rising much less rapidly than GNP (though imports grew a bit faster than GNP and, strictly from the revenue-raising point of view, this helped). This attempt has engendered a vigorous fight for revenue, in which the rates of most existing taxes have been increased repeatedly and attempts have been made to impose new taxes of various kinds.

Perhaps the most serious error made by the government at the time of the Korean prosperity was to raise rates of export taxation too little and too late and thus allow estate producers and traders to reap large windfall profits. In late 1951 this failure, for which the government had been roundly criticized, was corrected by a change-over from a system of specific duties to a sliding scale of duties, still levied on a per-pound basis but varying automatically with the price of the commodity. Alas, the sliding scale proved to be just one more decision which came too late. Almost immediately after its adoption the boom came to an end, prices plummeted, and export duties slid to the minimum points on their scales.

Using hindsight, it is now clear that the colonial revenue system had failed its crucial test. Neither by automatic adjustment nor by administrative action had it been able to take full advantage of the unique opportunity for raising revenue afforded by the world commodity boom. The boom did, however, have the effect of substantially increasing the revenue expectations of the government. It is clear from a reading of the budget speeches of the period that the government was tacitly assuming that revenues would continue at something like their 1950/51 levels. Expenditures were planned accordingly. The conservative United National Party government acquiesced to the food subsidy program, towards which it had previously been unfriendly, and even adopted measures which ultimately led to sizeable increases in expenditures on the program: increasing the size of the ration, selling subsidized rice in unlimited quantities outside the ration, and raising the GPS producer price of paddy from nine rupees to Rs. 12 a bushel. Other programs, some directly related

to economic development and some much less so, were also refrained along more generous lines. There was no systematic effort made at the time to weigh the alternative uses to which the additional resources might best be put; the various spending schemes just grew according to their natural bent. Meanwhile, populat expectations for the provision of consumer goods and services, both private and collective, were soaring.

All these expectations were based on a woefully inadequate estimate of the country's and the government's resources. With the end of the boom total government receipts underwent their first absolute decline since independence. Income and profits tax collections, which have about a two-year lag, continued to move up but customs revenue sagged, dropping 8.9 per cent in 1952/53. The budget of that year contained no new tax proposals at all. Instead, an economy-minded government tried to meet the crisis by trimming current expenditure by a large enough amount to keep either taxation or borrowing from increasing. The end of the boom was an especially rude shock to the totally unprepared public. When in desparation the government resorted to successive cuts in the food subsidies popular discontent reached the boiling point. The first forced change of government in Ceylon's independent history followed, with Dudley Senanayake (who had replaced his father, the first Prime Minister, upon the latter's death in 1952) resigning for "health reasons" and being replaced by Sir John Kotelawala, his leading rival within the United National Party.

The generally traumatic effects of the boom's culmination and its political aftermath, coupled with ever-mounting pressure on the government to satisfy both the current and the long-term needs of the country, led to a demand for a thorough-going review of the government revenue system. In time, a Taxation Commission was appointed. Its report, however, was not made public until 1955[1] and in the meantime two more annual budgets had to be framed. In 1953 the import duty cuts of

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[1] Report of the Taxation Commission, S.P. 17 of 1955.

1950 and 1951 were more than restored. Rates charged on government postal, telegraph, railroad, and electrical services were raised. An excise tax was put on locally grown tobacco. Income tax rates were raised and made more progressive. Despite these rate increases revenue from both income taxes and import duties fell in 1953/54, as the size of the tax bases declined. Yet government revenue turned out to be 7.7 per cent higher than in 1952/53, in fact a record high. The reason was the sudden revival of the tea and coconut markets, which led to a whopping 34.1 per cent gain in export duty receipts. Aided by a substantial cutback in expenditures, the revenue increase wiped out the quarter-billion rupee deficit of the preceding year and replaced it with a small surplus.

Further gains in export duty revenue were made in 1954/55 as tea continued to boom (though the coconut upsurge had proven to be short-lived). Export duty receipts in that year totalled Rs. 370.7 million, by far the largest sum ever recorded, before or since. Ironically, this record collection was achieved without the use of the vaunted sliding scale which had been introduced in 1951. The sliding scale had not been a success; it had been subject to manipulation by the larger export companies to reduce their duty liability and had been dropped in October 1953. Although the duty increase in May 1954 did help the government benefit from the boom not so much revenue was raised as would have come in under the sliding scale. Leaning heavily on tea, the 1954/55 budget stood pat and waited for the Taxation Commission's report.

Unfortunately the Commission evaluated Ceylon's revenue structure from a false premise. To express the government's intended expenditure on development it had only the modest recommendations of the World Bank team, which had called for expenditures of Rs. 1,600 million over a six-year period (there had been an additional Rs. 400 million worth of projects which might be carried out if adequate financing could be provided). On this basis the Taxation Commission predicted that the prevailing

tax structure would produce anything from an overall six-year deficit of Rs. [illegible] million to a surplus of Rs. 201 million.[1] It thus concluded that the overall level of taxes was adequate, though it did suggest a number of specific changes to stimulate growth. Actual central government investment, however, ran close to two billion rupees. Since no one spelled out government intentions on current expenditures (the government itself could not have provided an accurate prediction at this time) there was a natural tendency to underestimate. The Commission counted on current expenditure of Rs. 5,499 million for the six years beginning in 1954. The actual total turned out to be Rs. 7,048 million.

The 1955/56 budget made a few revenue-seeking tax increases; the estate duty was raised, as were some excise taxes and import duties on luxury consumption goods. Total revenue rose slightly in 1955/56 (by 8.5 per cent) but this was more a lagged response to the tea boom than a result of the minor rate increases in the new budget. Meanwhile, government expenditures had now climbed back above Korean boom levels. The Rs. 90.5 million surplus of 1954/55 turned into a deficit of Rs. 65.5 million.

Before the 1956/57 budget was presented to Parliament a general election took place and, to the surprise of most observesr, the UNP, which had ruled since independence, was swept out of office and replaced by the "Peoples' United Front" (Mahajana Eksath Peramuna; MEP), led by Mr. S.W.R.D. Bandaranaike. From 1956, with a more ambitious and more popularly sensitive government in power, the growth of government expenditures, both current and capital, was to accelerate rapidly and the pressure on the Finance Minister to uncover new sources of revenue was to become increasingly intense.

At first, though, there was little action on the tax front. In 1956/57 there were small increases in rates of income and estate taxation and minor adjustments in import duties. Government receipts were virtually unchanged from 1955/56, though, as declines in tax bases offset slightly higher rates. Again in 1957/58 scattered

1. p. 30.

rate increases had little ultimate effect on revenue. At this point the first of several new taxes, designed to broaden the tax base, was introduced: a bank debits tax, amounting to one-tenth of one per cent on all debits to current accounts in commercial banks. Still total revenue stagnated and the deficit rose.

Now came the visit of a notable foreign expert in taxation. Nicholas Kaldor was invited to survey the system of direct taxation and make recommendations for its fundamental revision. Kaldor's proposals were designed to make it possible for the government to rely more heavily on direct taxation in the future. He suggested tightening the income tax as applied to individuals by taxing capital gains, greatly reducing the range of deductible business expenses, and making compulsory the aggregation of children's income with that of their parents. With regard to business taxation, he advocated merging the profits and income taxes, abolishing tax concessions on the commencement and cessation of businesses (these had been exploited by companies and partnerships which had liquidated in years of high profits and reformed in years of low profits), and granting liberal investment allowances. Three new personal taxes were proposed. The net wealth tax was to take a small percentage of the net wealth of families possessing over Rs. 100,000 in net wealth each year. To compensate for a recommended cut in the progressivity of the income tax scale in the highest brackets, an expenditure tax was promulgated; it provided for the taxation, at rates starting at 25 per cent and rapidly progressing to 300 per cent, of expenditure over and above a Rs. 10,000 allowance (for a single person), excluding certain categories of business and investment expenditures and "necessitous" personal expenditures. The third personal tax, the gift tax, was designed to prevent the avoidance of the estate duty by means of gifts made during the lifetime of the donor; its rates were set so as to equalize the tax burden between the two methods of bequest. Finally, Kaldor espoused a new system of tax administration, which

featured automatic reporting on a single form for all the personal taxes.[1]

The 1958/59 budget put into effect most of the Kaldor reforms, in at least proximate form. The taxation of capital gains (though not at the rate applying to ordinary income, as Kaldor wanted), disallowance of certain business expense deductions (again, in less stringent form), aggregation of family incomes, abolition of the commencement and cessation provision, immediate depreciation of new investments, abolition of the profits tax, and other recommended features were all added to the income tax law. A personal tax, which included the wealth, expenditure, and gift taxes of the Kaldor proposals, was enacted. The new tax called for higher exemption levels and lower rates of taxation on both expenditures and wealth than Kaldor had proposed. But the administrative reforms advocated by Kaldor were not brought into being and this ommission was soon to have serious consequences.

The 1958/59 budget speech marked a new departure in government finance in Ceylon. Projected expenditures were at an altogether unprecedented level. Yet the Finance Minister said that he did not expect the revised system of direct taxation to yield any appreciable revenue gains during the year to come.[2] The export crops, he said, were in no position to stand additional duty impositions. Only import duties were left and some increases were made there: on oil, tobacco, and luxury cars (the last of these now almost prohibitively taxed and thus yielding little revenue). The speech left unresolved the question of how to finance the estimated deficit of Rs. 464.6 million which remained after predicted receipts from the duty increases were added in; this was the first time that such a large deficit was not covered somehow in the budget

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[1] The Kaldor proposals are embodied in Nicholas Kaldor, Suggestions for a Comprehensive Reform of Direct Taxation, S.P. 4 of 1960.

[2] Stanley de Zoysa, budget speech, Hansard, vol. 31, no. 12, July 17, 1958; revealingly, this is the only budget speech since independence which was not published as a separate pamphlet by the Department of Information.

estimates, if only by planned borrowing. What in fact happened was that income tax receipts fell of sharply (as a lagged response to the three lean years through which the export sector had just passed and as a result of the complications of switching over to the new tax law) but import duties compensated for this decline as import expenditures soared to record heights. The net result was that the deficit turned out to be Rs. 442.8 million, easily a record but a little less than expected.[1]

1959/60 was a year of marking time while the external position of the economy worsened rapidly. It was estimated that Rs. 32 million would be raised through a number of import duty increases but the continuing large volume of imports led to an actual increase in revenue from this source of Rs. 73.4 million. The rise in expenditures was slightly greater, though, so the budget deficit was even greater than in 1958/59.

By the time the budget for 1960/61 was announced a new set of duties and excise taxes, intended to yield Rs. 55 million, had come into effect. The budget aimed at a further revenue increase of Rs. 130 million, to be raised partly through a 15 per cent surcharge on the income tax and increases in some fees and excises. More important, though, four new taxes were grafted on to the already complicated tax structure. A land tax of Rs. 15 per acre of agricultural land was enacted; plots under 100 acres and land under government-sponsored replanting and rehabilitation schemes were exempted and the tax was made non-additive with the wealth tax, only the higher assessment of the two being charged. A second levy was the share capital tax, of Rs. 50 per Rs. 10,000 of share capital, to be levied on new companies incorporated

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[1]The Rs. 367 million collected in import duties in 1958/59 signalled the failure of the attempt to stop the rise of imports by raising duty rates; see pp. 6.13 - 6.20 below.

after September 15, 1960. Thirdly, a business registration tax of Rs. 1,000 for non-nationals and Rs. 250 for nationals was enacted. Finally, a visa tax of Rs. 400 a year was imposed on foreigners resident in Ceylon for longer than three months. The Finance Minister affirmed his expectation that the land tax would add Rs. 15 million to revenues, the share capital tax ten million, the business registration tax Rs. 50 million, and the visa tax 15 million.[1]

Collections under these new taxes, particularly the share capital and business registration taxes, did not come up to the Finance Minister's optimistic expectations. An overall revenue increase of Rs. 107 million over 1959/60 was recorded, but this was thanks largely to a recovery of income tax collections.

The further convolutions of Ceylon's revenue system lie outside the time period of this section. Suffice it to say that through 1960 the frantic search for revenue increases through direct taxation had proven a failure and that only rising import duty collections kept the government's finances from deteriorating more than they did. What did occur was bad enough, since by 1960/61 the deficit was up close to half a billion rupees and a smaller and smaller proportion of it was being covered by noninflationary domestic or foreign borrowing.[2]

THE ELASTICITY AND RELIABILITY OF REVENUE

It is clear that Ceylon's revenue system had proven to be deficient by several of the criteria on which it should logically be judged. It has been inelastic with respect to income growth because it relied so heavily on foreign trade at a time when the trade sector was lacking in dynamism. Despite a general upward trend in

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[1]Felix R. Dias Bandaranaike, Budget Speech 1960-61, pp. 25-26.

[2]See pp. 6.4 - 6.5, below.

import duty rates, it proved hard to raise the proportion of the tax base collected (see Table 5.2). Part of the problem, where import duties are concerned, is the conflict with other policy objectives. It is axiomatic that excluding imports to protect local industry or to reduce the balance of payments deficit reduces the usefulness of the import duty as a revenue device; through 1960, though, policies to promote these other goals often failed and revenue did not suffer much in practice. Another limitation on the expansibility of duty receipts is demand elasticity for imports in Ceylon; there comes a point at which further duty increases will reduce quantity demanded by enough to cut into duty receipts and by 1960 this point was being reached for many goods. Export duties run into even clearer limits as revenue sources. Even if the government is willing to tax at a very high rate it must avoid bankrupting the estates, since the incidence of the tax is mainly on the producer. Customs duties as a whole were capable of only a little expansion relative to national income, as Table 5.2 shows.

Table 5.2

Export and Import Duties as a Percentage of their Tax Base and of GNP, 1947/48 - 1959/60[1]

Year	Export Duty as a % of Exports f.o.b.	Import Duty as a % of Imports c.i.f.	Customs Revenue as a % of GNP
1947/48	13.8	16.0	11.2
1948/49	15.4	17.6	10.9
1949/50	13.6	17.5	9.7
1950/51	14.9	16.8	11.9
1951/52	14.6	15.9	10.7
1952/53	13.9	15.6	9.9
1953/54	15.7	16.2	10.7
1954/55	20.1	18.0	12.3
1955/56	18.1	18.6	11.9
1956/57	19.6	16.4	12.1
1957/58	23.3	18.6	11.4
1958/59	18.4	18.2	12.2
1959/60	12.2	19.5	12.3

[1]All data stated in financial years; GNP is the Census and Statistics Department concept. Source: Ceylon Customs Returns; Statistical Abstracts.

Over most of the period from independence to 1960, direct taxes showed a greater elasticity, relative both to their tax base and to national income as a whole, than customs duties. Primarily as a result of a long series of rate increases but also because of income spurts in 1951-52 and 1954-55 the relative impact of these taxes rose steadily (see Table 5.3). Still, the highest percentage of national income ever mobilized through direct taxation was only 6.1 per cent, in 1955/56. Direct taxes on individuals (income and estate taxes) ran around one or two per cent of personal income. The reason for the relative unimportance of direct tax collections was, of course, the narrow range of application of these taxes. During th 1953/54 assessment year, to take just one example, only 46,014 individual income tax assessments were made, covering income of Rs. 598.7 million, or 14.5 per cent of all personal income earned during the period.[1] This narrowness of the tax base persisted throughout the period and was the main cause of the failure of direct taxation to become more important. Starting in 1958/59 direct tax collections and especially income tax receipts underwent an absolute decline. The cause of the decline was an overloading of the administrative machinery (already heavily burdened by the cumbersome procedure used in applying the income tax) which resulted from the precipitate application of succeeding rounds of tax reform. These difficulties had been largely overcome by 1960/61.

Commodity taxes and nontax revenues, almost by their very nature, are limited and inelastic sources of government revenue. Excise tax rates were raised very rapidly during the late fifties but they still remained a relatively unimportant part of the revenue system. The only reform which could have promoted commodity

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[1] A.R. of the Commissioner of Inland Revenue for 1954, p. 15; some further assessments covering the year in question were made later, so the coverage was actually a bit broader than the above figures suggest.

taxes to a major role would have been the levy of a general sales tax. This was talked about from the mid fifties on and actually tried in 1962, but badly mismanaged and withdrawn a few days after its introduction. Most nontax revenues -- fines, charges, sales -- are incidental byproducts of government policies in other fields -- land policy, the existence and profitability of state corporations, the amount of business done by the ports -- and can seldom be manipulated very much for revenue raising purposes.

Table 5.3

Direct Taxes on Individuals as a Percentage of Personal Income and Total Direct Taxes as a Percentage of National Income, 1947/48 - 1959/60[1]

Year	Direct Taxes on Individuals as a % of Personal Income	Total Direct Taxes as a % of National Income[2]
1947/48	..	3.6
1948/49	..	3.9
1949/50	..	3.5
1950/51	1.4	3.3
1951/52	2.1	4.8
1952/53	2.3	5.4
1953/54	2.2	4.9
1954/55	1.9	5.3
1955/56	2.3	6.1
1956/57	2.1	5.5
1957/58	2.1	5.1
1958/59	1.7	3.8
1959/60	1.5	3.6

[1]Source: Table [illegible], below; Statistical Abstracts.

[2]National income is measured by the Census and Statistics Department concept.

Taking all revenue sources together, how successful was the attempt of the government to appropriate an ever-increasing proportion of national income to its own uses? Through the mid fifties a fair degree of success was achieved (see Table 5.4). In 1955/56, revenues, riding the crest of the tea boom, topped 20 per cent of GNP. It was only after that year, though, that serious attempts were made to increase tax revenues by raising tax rates and these attempts were not notably

successful. By 1960, in fact, the proportion of national income collected had actually slipped slightly. The main reason for this slippage was that export markets were weak and that export duty collections (these duties are progressive in everything but name, since rates are raised when prices go up and reduced when they fall) were thus actually lower than in the mid fifties. What economic growth there had been was mainly in production for the domestic market. Much of the new output was produced by recently founded firms which enjoyed various exemptions from direct taxes. Then there was the administrative disruption connected with the new tax system. And finally, many suspect that higher rates of direct taxes have meant increased tax evasion, though this cannot be proved.

Table 5.4

Government Tax Revenues as a Percentage of GNP, 1947/48 - 1959/60

1947/48	17.0	1952/53	17.4	1957/58	19.3
1948/49	16.9	1953/54	17.8	1958/59	18.9
1949/50	15.0	1954/55	18.5	1959/60	19.1
1950/51	17.1	1955/56	20.2		
1951/52	17.3	1956/57	20.1		

[1] Source: Table A-60. below; Statistical Abstracts.

Aside from its lack of long-run expansibility, another fault of Ceylon's revenue system has been that a certain amount of year-to-year unreliability follows naturally from its reliance on foreign trade. This shortcoming should not be exagerated. In only one year, 1952/53, when exports suffered a catyclysmic decline, did total revenue actually fall. Otherwise, the authorities have been able to count on at least some rise in revenues each year. Particular revenue sources have been far less reliable. Export duties, which account for over a quarter of total revenues in an average year, have registered gains as large as 68.7 per cent and drops of 19.6 per cent. Import duties, too, have shown an occasional drop, despite the

steady upward trend in their base. A saving grace of the system, though, is that income taxes are collected with a lag averaging about two years and thus peak later than customs duties (export duties rise first, import duties about a year later, and direct taxes a year after that). This series of lags greatly smoothed the transition following the Korean boom. Given the openness of the economy total government revenues have been remarkably dependable.

Table 5.5

Revenue from Selected Sources as a Percentage of The Previous Year's Revenue, 1947/48-1959/60[1]

Year	Import Duties	Export Duties	Income Tax	Total Tax Revenue	Total Revenue
1947/48	106.2	164.5	112.3	118.1	117.2
1948/49	101.8	108.8	123.5	106.5	106.1
1949/50	104.5	112.4	102.5	107.7	108.2
1950/51	130.1	168.7	122.8	137.8	134.1
1951/52	106.1	80.4	152.4	103.6	104.7
1952/53	96.4	85.0	111.1	99.6	99.6
1953/54	97.4	134.1	95.0	107.1	108.0
1954/55	105.8	142.1	98.8	113.0	113.5
1955/56	110.9	86.9	139.0	109.5	108.6
1956/57	106.0	100.6	94.9	100.8	99.8
1957/58	96.2	100.3	95.2	100.2	102.4
1958/59	125.7	101.2	101.2	103.0	103.3
1959/60	110.8	110.8	97.3	106.0	105.6

[1] Source: Table K-60, below.

THE RISE OF GOVERNMENT EXPENDITURES

Reference has already been made to the ever-rising demand for government expenditures of all kinds. These expenditures can be divided into four basic categories: (1) expenditure on current goods and services (these may or may not be closely related to economic development), (2) expenditure on capital goods, (3) transfer payments and subsidies, and (4) net loans of the government to private and local bodies. Table 5.6 shows the broad trends in each of these as far as the central government is concerned in the years since independence.

As the table indicates, all kinds of expenditure rose substantially from independence through 1960. The rates of increase were by no means equal, though. While capital expenditure went up 162 per cent transfer payments rose 218 per cent and current expenditure increased by 234 per cent. The type of expenditure which presumably contributed most to the economic growth of Ceylon thus fell as a percentage of total expenditure. Government investment started out at about a quarter of total central government spending and on two different occasions was pushed by strenuous efforts up to 30 per cent, but by the decade's end it had dropped back again to little more than 20 per cent of the total. Current expenditures and transfer payments also had their ups and downs, but by the end of the period they were proportionally a little greater than they had been at the beginning. Current expenditures and transfers were not without their contributions to economic growth but in general Ceylon government finance in this period is a story of the more essential kinds of expenditure (from the growth point of view) being elbowed aside by the less essential. The cause of this phenomenon is political. At all times during the period the effective political pressures for consumption and transfer spending outweighed the drive to create new capital assets. It was the government's misfortune to be committed in a fairly rigid way to roughly constant per capita expenditures on a variety of consumption services -- notably educational and health services -- and to the provision of subsidized food and other forms of transfer payments, also on a per capita basis. The rapid increase in the size of the population for which these services had to be provided, coupled in some instances with rises in the per-unit cost of providing the services, pushed the total bill to the government up at a brisk pace. Caught between these rising service bills and the relative inelasticity of government revenues, capital expenditures suffered.

These commitments to provide current services had their origins in the decade of the forties. For example, food subsidization for the consumer started as

a natural outgrowth of wartime rationing but both the subsidization and the rationing were permitted to linger on long after their initial justification had disappeared. During the war the program had been a relatively expensive one, since consumer prices were held constant while the cost of imported rice rose, but in the late forties increased world food supplies brought the cost down and reduced the burden on the government. The efforts of the government to provide cheap food and thus block any rise in living costs during the Korean period have already been alluded to. By 1952 they had resulted in rice being sold to the consumer at less than one-third its imported cost. In 1951/52 a third of government expenditures went to subsidies and food subsidies bulked large within the total (that government revenues were allocated in this way is another indication of the shortsightedness of the government attitude towards the boom). The later turnabout, with the announcement in July 1953 that all net subsidization of food would cease, and the violent demonstrations and forced change of government which followed sealed the political commitment to food subsidies once and for all. The UNP government, anxious to make up for past misdeeds, raised the per capita ration to two measures a week for all persons in November 1954[1] (it had previously been two measures for manual workers and 1 1/4 measures for all others) and cut the price from 55 cents to 50 cents in May of the following year. Under the MEP government which followed in 1956 the price was eventually reduced to 25 cents. These moves to liberalize the food subsidy simply accelerated the effects of population rise on the total subsidy bill.

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[1] A "measure" equals about two pounds.

Table 5.6

Types of Central Government Expenditure, 1947/48 - 1960/61[1]

Year	Current Rs. mln.	Current % of Total	Capital Rs. mln.	Capital % of Total	Transfer Rs. mln.	Transfer % of Total	Net Loans Rs. mln.	Net Loans % of Total	TOTAL EXPENDITURE
1947/48	260.6	44.0	152.5	25.7	172.7	29.1	7.1	1.2	592.9
1948/49	293.6	42.5	209.2	30.3	158.6	22.9	29.7	4.3	691.1
1949/50	321.7	40.4	241.6	30.4	141.5	17.8	90.0	11.4	795.7
1950/51	383.6	43.1	228.7	25.7	246.4	27.7	31.9	3.6	890.6
1951/52	420.7	36.3	320.7	27.7	382.7	33.1	33.4	2.9	1,157.5
1952/53	457.3	41.0	316.5	28.4	278.6	25.0	62.4	5.6	1,114.8
1953/54	470.1	50.6	253.8	27.3	147.9	15.9	57.8	6.2	929.8
1954/55	526.2	54.1	295.1	30.3	191.0	19.6	-39.0	- 4.0	973.3
1955/56	547.1	44.8	307.8	25.2	288.4	23.6	79.1	6.5	1,222.4
1956/57	595.3	42.5	298.8	21.3	341.4	24.4	164.5	11.7	1,400.1
1957/58	684.6	47.1	350.4	24.1	406.5	28.0	12.9	0.9	1,454.2
1958/59	790.1	47.6	357.2	20.5	480.4	27.6	56.9	3.3	1,742.0
1959/60	871.7	46.3	399.0	21.2	549.3	29.2	61.4	3.3	1,881.4

[1]Source: Table A-61, below.

Looked at from a real resources point of view, the consumer food subsidy (like all transfer payments) is simply a device for redistributing income from taxpayers to transfer recipients, basically from the wealthy to the poor. As such it must be attacked or defended on simple equity grounds. It does not reduce the quantity of resources available for the use of the government for current and capital expenditures. But the government of Ceylon did not look at the food subsidy and its other transfer programs in this way. Expenditures on transfers appeared in the government's accounts and it looked on them as a drain on its resources, as indeed they were in a financial sense, and saw the rise in spending on transfers as an occasion for cutting down on expenditures in other lines. Because of this outlook the more equal income distribution produced by the food subsidy and other transfer payments was achieved only at the cost of a certain amount of growth-inducing investment expenditure.

Since the tide was turned in 1953 transfers made to consumers via the food

subsidy have slipped somewhat in importance relative to other types of subsidies and consumer transfers. As Table 5.7 shows, subsidies to food producers (already discussed, pp. 4.56 - 4.59, above) and to government corporations and transfers to individuals in the form of social security benefits, welfare payments of various kinds, and interest on the public debt have assumed much greater importance. The general line of explanation for most of these is similar to that of the food subsidies: the government has taken on fairly ambitious commitments in each of these areas and then stuck with them as their total cost has climbed. In only one case, that of subsidies to public corporations, was it the adoption of new policies (in this case the founding of new public corporations, most of which proved to be unprofitable, at least at first) rather than the continued execution of old policies which was the key to the soaring transfer expenditures. As regards producer subsidies, the impact of the commitment on economic growth is by no means entirely negative, however, as the story of the GPS paddy scheme suggests.

Table 5.7

Types of Subsidy and Transfer Payments, 1950-60[1]
(Rs. millions)

	SUBSIDIES				TRANSFER PAYMENTS					
Year	To Food Producers	To Public Corporations	To Private Firms	TOTAL	Interest on Public Debt	Social Security Benefits	Food "Subsidy"	Other	TOTAL	TOTAL: SUBSIDIES PLUS TRANSFERS
1950	0.8	6.8	6.3	13.9	20.2	31.4	59.0	47.6	158.2	172.1
1951	0.3	8.5	6.0	14.8	21.9	35.5	160.4	54.8	272.6	287.4
1952	0.1	10.9	6.1	17.1	24.8	40.4	217.5	65.4	348.1	365.2
1953	1.7	18.1	7.2	27.0	31.1	43.4	96.7	61.8	233.0	260.0
1954	8.9	14.6	2.2	25.7	35.3	50.7	9.5	56.3	151.8	177.5
1955	55.5	36.4	5.0	96.9	33.6	52.1	- 8.6	57.5	134.6	231.5
1956	43.4	55.1	8.3	106.8	34.2	63.4	42.6	71.2	211.4	318.2
1957	68.8	55.4	17.7	141.9	35.7	70.2	38.3	86.9	231.1	373.0
1958	85.1	61.4	31.0	177.5	37.9	80.5	35.5	99.1	253.0	430.5
1959	89.3	62.4	22.9	174.6	46.3	91.8	68.8	95.7	302.6	477.2
1960	124.9	57.9	9.9	192.7	57.0	94.8	81.9	100.0	333.7	526.4

[1]Source: Table A-3, below. This table differs from Table 5.6, above, in that it includes all levels of government, goes by calendar rather than budget years, and nets out transfers from central government to local governments; its total is thus not comparable to the figure for transfer expenditure in Table 5.6.

The mechanism working to increase current government expenditure was very similar to the one operating on transfer payments. The colonial government had assumed fairly ambitious obligations in the areas of education, health care, transportation, and communications. The independent government accepted these obligations in all cases and in several areas enlarged upon them. For instance, the already impressive commitment in education was enlarged to a guarantee of free education from kindergarten through university. Of course, facilities could not be provided to allow everyone who wanted this free education to have it, especially at the highest levels, but a valiant attempt was made. Despite a 50 per cent rise in the school-age population between 1946 and 1960[1] the percentage of these young people who were enrolled in school was raised from just over 40 per cent to more than 60.[2] Hundreds of new schools were opened and thousands of teachers hired. The literacy rate and other indicators of educational achievement rose. The story for health services is similar. Despite heavy pressures on facilities enough new hospital beds were provided and enough nurses and doctors trained to raise the level of medical services relative to total population. In other areas, such as road maintenance and telephone service, past standards were sometimes permitted to deteriorate but in general the commitment to maintain past services and do this on a per capita basis where appropriate was recognized and met.

It would not be correct to regard the provision of current services by the government as entirely competitive with economic growth. Most current services can be construed to contribute <u>something</u> to growth, though some types are clearly more closely related to it than others. Table A-5, the relevant part of which is duplicated in Table 5.8, below, breaks current expenditure into two categories: <u>general</u> expenditures, which represent the "overhead cost" of government and bear only a tenuous relation to economic growth, and <u>developmental</u> expenditures, which

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[1] See Table A-11, below.

[2] See Table A-14, below.

by supporting investment outlays on either human or physical resources make a direct contribution to the development effort. As the table suggests, trends in the proportion of current expenditure devoted to these two types of activities leave something to be desired. Through 1958 general expenditures rose faster than developmental expenditures. In part this rapid rise in the overhead costs of government was attributable to increasing defense requirements; Ceylon had been fortunate in needing to devote only a very small percentage of its resources to military expenditure at first, but internal unrest -- principally in 1953, 1957, and 1958 -- eventually led to a ten-fold increase in military spending over the decade. Also, though, administrative expenditures moved steadily upward as government employment rolls lengthened and wage and salary increases were granted to various groups of government employees. Only in 1959 and 1960 was the lid placed on general expenditures; at that time the rate of increase was slowed down enough that the percentage of current expenditure going for developmental purposes could be raised (though it ended up below its 1950 level in 1960). The rise in expenditures on education and health has already been commented upon. Government commitments in most other areas of social services and for all economic services were less firm, so these areas tended to be squeezed in a manner similar to capital expenditures. Only in the last two years of the decade were substantial increases in spending on these important services -- community development, irrigation maintenance, road repair, and many others -- achieved.

Left to compete on rather unequal terms with expenditures on current goods and services, government investment in Ceylon has had a checkered history. Through 1960 it increased neither so much nor so regularly as current spending. Besides having to compete disadvantageously with current expenditures, capital expenditure faced two additional liabilities. For one thing, planning investment projects is more of a job than continuing or even extending current spending programs; often investment projects must be integrated into a full-blown national plan and this

entails still more time-consuming delays. Secondly, even after investment plans are drawn up investment expenditure is harder to execute than current spending; capital expenditure has thus tended to take up a smaller proportion of actual government spending than it did of the original budget allocations.

Table 5.8

Types of Current Government Expenditure, 1950-60[1]

	GENERAL				DEVELOPMENTAL						
Year	Administrative	Defense	TOTAL	% of all Current	Education	Health	Other Social	Economic	TOTAL	% of all Current	TOTAL CURRENT
1950	88.6	7.6	96.2	28.1	97.8	65.2	7.2	75.8	246.0	71.9	342.2
1951	106.9	11.1	118.0	29.5	108.9	72.6	9.8	90.2	281.5	70.5	399.5
1952	103.5	18.4	121.9	27.7	122.8	84.7	12.8	98.4	318.7	72.3	440.6
1953	115.3	29.2	144.5	30.7	126.8	88.9	12.5	97.3	325.5	69.3	470.0
1954	120.4	30.2	150.6	31.1	125.5	91.7	22.0	94.0	333.2	68.9	483.8
1955	138.6	27.5	166.1	31.3	134.7	95.3	22.3	112.4	364.7	68.7	530.8
1956	148.7	31.2	179.9	31.7	149.9	104.0	22.9	111.4	388.2	68.3	568.1
1957	167.8	41.2	209.0	32.7	171.9	112.4	18.7	126.4	429.4	67.3	638.4
1958	179.3	66.2	245.5	32.9	198.5	126.4	33.1	142.1	500.1	67.1	745.6
1959	188.9	71.9	260.8	31.4	232.3	144.6	51.6	142.2	570.7	68.6	831.5
1960	198.7	71.3	270.0	30.9	201.0	146.4	95.1	161.3	603.8	69.1	873.8

[1] Source: Table A-5, below.

ECONOMIC PLANNING

For a number of reasons, economic planning in Ceylon has never measured up to its potential. Several national plans have been drawn up, reflecting a recognition of the need for economic development and a desire to conceive and implement an investment program to enhance growth, but these have never become a major effective force in guiding investment allocations. The effective decision-making unit within the government has remained the ministry (rather than the various planning institutions which have been set up from time to time) and the main decision maker the minister (rather than the planner). How much investment expenditure is made in each area is thus likely to depend more on the vigor and political influence of the

minister involved than on any preconceived scale of national priorities.

Economic planning of a sort began even before independence. In the Post-War Development Proposals of 1946, ministry plans to smooth the conversion to peacetime production and "...to raise the standard of living by designed action, to maintain full employment, and to provide [the people] with the opportunities to lead a fuller life"[1] were published. Added together, the ministry proposals took the form of a national plan, though they were really something less than that. They envisioned the spending of Rs. 1,739 million on capital projects by the government and laid out the general order of priorities which reigned throughout the UNP regime. Communications and works (Rs. 560 million), agriculture and lands (Rs. 420 million), and education (Rs. 372 million) were to receive the bulk of the funds.[2] Diversification of agriculture, the promotion of Dry Zone colonization by peasant agriculture, and the building of infrastructure were given prime emphasis. Plantation agriculture was generally ignored and industry received only nominal allocations. Emphasis on industrialization was in fact deliberately scorned: the ministers proclaimed that they could think of few prospectively efficient industries; the level of protection would be reduced in the future so as to prevent the formation of inefficient industry.

Although the Post-War Development Proposals were little more than an intellectual exercise they did represent the kind of thinking which guided policy through the early UNP years. Central government investment expenditure grew from year to year, rising from about Rs. 150 million in 1947/48 to over Rs. 300 million in 1951/52 and 1952/53. As has already been mentioned, investments in electricity, land development, and other pet projects of the UNP government were cut back in the adjustment to the post-Korean slump; central government capital expenditure fell to just over

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[1] Post-War Development Proposals, 1946, p. v.

[2] Ibid., p. 51.

Rs. 250 million in 1953/54. The cut was restored in the following year, though, and the total continued to run at about Rs. 300 million through the rest of the UNP era.

Several flurries of activity in the field of planning during the UNP years had relatively little effect on actual investment allocations.[1] With the formation of the Colombo Plan in 1950 the Ceylon government was called upon to submit a six-year development plan for the period beginning in mid 1951. Its submission was an extremely modest proposal to invest Rs. 1,359 million in the economy, Rs. 503 million of it in agriculture, Rs. 375 million in social services, Rs. 297 million in transportation and communications, and much smaller sums in power and industry. The plan was purely a pro forma exercise and had no influence on policy.[2] Then in late 1951 came the visit of a World Bank team, which produced an exhaustive analysis of Ceylon's development prospects and also a proposed development plan for the years 1953-59.[3] A modest plan, the IBRD proposal looked for government investment of Rs. 1,600 million over the six-year period. Its emphasis was heavily on agriculture (and on irrigation and land development within agriculture), transportation, and power; health and education also received substantial allotments but industry was virtually neglected. The report thus reflected the familiar UNP priorities but became a political football when it was attacked by politicians to the left of the government for being insufficiently ambitious in both its growth and its structural transformation goals. In any case, the plan had little influence on actual investment allocations, less because of the raging debate over national priorities than because soon after its publication came the commodity price slump and growth began to take a back seat to

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[1] The 1947/48 and 1948/49 budget speeches were published by the Information Department as A Six-Year Plan for Ceylon, which they were only in the general sense that they stated long-run government intentions in several economic fields.

[2] See The Colombo Plan for Co-operative Economic Development in South and South-East Asia, Report of the Commonwealth Consultative Committee, London, 1950, pp. 28-32.

[3] International Bank for Reconstruction and Development, The Economic Development of Ceylon, Baltimore, 1953.

stabilization policies.

Only in 1954 was a serious plan produced by the Ceylon government itself. The Six-Year Programme of Investment 1954/55 to 1959/60 was only a plan for government investment and not a full national plan but it did represent an attempt to coordinate the investment decisions of the various ministries and fit them into a general framework. The plan indicated a desire on the part of the government to accelerate its investment rate; total planned government investment over the six years amounted to Rs. 2,529 million. The system of priorities had changed little from earlier periods: public utilities and agriculture between them were to receive about 70 per cent of the aggregate sum invested; social services were downgraded somewhat but industry remained a minor concern. Like its predecessors, the Six-Year Programme was destined to have little effect on policy. The UNP government which drew it up remained in office only long enough to write the budget in two of the six years covered by the Programme and when the MEP came to power in 1956 it brought with it a quite different idea of how public investment should be allocated; the Six-Year Programme thus became a dead letter.

Though economic issues had not played a major role in the defeat of the UNP government the new government did come into office possessing a conviction that economic development was being mismanaged and that improvements were called for. Of two things in particular was it convinced: that the government should play a more vigorous role in development and that the promotion of industry should be given a much higher priority than it had received hitherto. The MEP government set about drawing up a new national plan which would express these convictions. An unprecedented degree of interest in planning was engendered by the Ten-Year Plan which finally emerged in 1959. The new plan was for the first time a plan for the whole national economy, embodying programs for the government to follow not just in regard to public investment but also in other aspects of government policy including

ways of influencing the decisions of the private economy. The plan was designed, according to its chief architect, as an exercise to show that despite the relatively unimpressive growth record of recent years it was possible to draw up a plan containing reasonable magnitudes which could overcome Ceylon's economic problems and set income and employment upon a satisfactory growth path.[1] As such, it was ambitious though not impossibly so. For public and private sectors together total investment over the ten years 1959-68 was to come to Rs. 13,600 million; this meant annual investment of Rs. 1,360 million, as compared with the then current figure of about Rs. 800 million.[2] Relative allocations were greatly altered from past plans: agriculture was downgraded and industry moved far up the priority scale (agriculture was to get Rs. 3.1 billion in total investment, industry Rs. 2.7 billion); investment in social services, transportation and communications, and other areas trailed behind in positions of secondary importance. Technically an elegant document, the Ten-Year Plan then went on to calculate in great detail the policy ramifications in various sectors of its proposals. But as things were to happen, it too failed to become a working document.

A combination of changes in the economic environment and political instability doomed the carefully worked out Ten-Year Plan. Within just a few months of its publication the Prime Minister, Bandaranaike, was assassinated and the worst period of political turmoil since independence was ushered in, featuring three governments, two general elections, and innumerable minor political crises in the course of less than a year. Simultaneously, the economic position of the country approached crisis

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[1]Gamini Corea, formerly Secretary of the Planning Secretariat and now Director of Research of the Central Bank of Ceylon, in an interview, June 27, 1963.

[2]The climb was to be gradual, from about Rs. 700 million in 1959 to approximately Rs. 900 million in 1960, and so on, up to more than Rs. two billion in 1968.

proportions. The paralysis of decision making which followed naturally from the political ferment helped worsen the economic situation. As in the past, political interests came to dominate economic interests and, when attention could be spared for economics, short-term stabilization took precedence over long-term growth. Thus planning, though it had made great strides in terms of the quality of the documents produced, failed once again to make itself a major influence on investment policy.

Meanwhile, economic policy was being made on a continuing basis within the cabinet and particularly through the annual budgeting process. Despite the attempt to create new institutions -- planners and a plan -- virtually all expenditure proposals, developmental and nondevelopmental, still originate through a financial procedure which has changed little since colonial days. A brief account of the budgeting process will aid the reader in understanding the government's role in Ceylon's economic development.

BUDGET FORMATION[1]

The financial year runs from October 1 to September 30. About November of the preceding year the Treasury asks all departments to submit expenditure estimates for the coming budget year. Revenue-raising departments are asked for estimates of revenues from taxes and charges under their administration, made on the assumption that prevailing rates will continue. With regard both to expenditures and to revenues past experience serves as a guide to the future. Thus, it is deviations from past levels of expenditure and revenue which must be defended specifically and in detail; the continuation of past programs has the burden of proof on its side.

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[1] Public Accounts in Ceylon, 1956 (a government training pamphlet); I.D.S. Weerawardena, "Parliamentary Control of Finance," Ceylon Economist, September 1951, pp. 28-39; and several interviews constitute the sources of this section.

On the expenditure side, the departments invariably ask for a continuation of past allocations and frequently add a request for new funds for various purposes (it is a useful bargaining device to have something that can be sacrificed relatively painlessly to later Treasury pruning). In addition, they add in the estimated costs of any new programs for the coming year; these are often development projects.

How do development projects come to be incorporated in the budget at all? Ideas for projects may originate in any one of several places: the minister having jurisdiction over the department into whose bailiwick the project falls, the department itself, or even the Prime Minister. In any case, the proposal is referred to the relevant department for study of its feasibility and probable cost. In some of the more important cases the services of independent experts, usually foreigners, are engaged. A project plan is drawn up and submitted to the ministry and, if it is a major project, to the Cabinet for approval. The necessary sum is then voted by Parliament. The final decision to undertake a project can come at any time but funds must be voted as part of the annual budget. If the possible origination of a project during the coming financial year is foreseen, a "token vote" of, say, Rs. 10 is included in the budget; later, when the project receives final approval, a supplementary vote can be passed by Parliament. This is a necessary legalistic device, since supplementary votes can only increase old votes, not originate new ones.

The task of preparing budget estimates belongs to the departments. There is no real central control over the number and nature of the projects proposed. There need not even be interdepartmental coordination on projects which for their execution will require the efforts of more than one department (e.g. the Departments of Land, Land Development, Agrarian Services, and Irrigation must all cooperate on colonization schemes). Where the departments are all constituents of a single ministry there may be a ministerial planning committee set up to facilitate coordination, but this

is by no means always the case. Project planning is generally a highly decentralized operation.

The Treasury scrutinizes departmental proposals and generally cuts them. The cutting, which is done mainly by minor bureaucrats within the Treasury, is a purely administrative process. The total volume of expenditure is reduced in a rather indiscriminate manner. For instance, it is common for the travelling votes of all departments to be cut by, say, ten per cent. The bargaining items added by the departments to meet just this eventuality tend to be weeded out. Occasionally, though, Treasury review is a more meaningful process; the Finance Minister may feel called upon to question some of the projects which have been put forward. In part, he is guided by the general economic policy of the government in such actions but the political interrelations among ministers and the noneconomic goals of the government also enter in as deciding factors.

Any cut, whether routine or fundamental, can be appealed, but it seldom is. The ministry in question must be willing to press the claim of the department which has suffered the cut. If it agrees to do so it enters into negotiations with the Treasury. Routine matters can be worked out at this level, but more basic questions must be set aside for Cabinet consideration.

Meanwhile, estimates of revenues have been made. In some years a "pre-budget commodity conference" has been held to predict export and import quantities and prices and thus forecast the most important components of government revenues. Estimates made in this way are at least quasi-scientific; often, though, revenue estimates are based on simple projections by the revenue-producing departments.

When the cabinet gets the estimates of revenue and expenditure two types of questions remain to be solved. One is the resolution of outstanding differences between the operating departments and the Treasury; such issues are now decided on basically political grounds. A favorite project of the Prime Minister, a minister

close to him, or an independently powerful minister will go through; one coming from a relatively unimportant minister may well be shelved. The question of overall magnitudes is then tackled. Some degree of imbalance is implied in the revenue and expenditure estimates made so far. Almost inevitably, there is a deficit. The Minister of Finance then puts forth his views on the feasible amount of noninflationary domestic borrowing and on anticipated foreign aid. There is likely to be a deficit remaining after borrowing and aid are counted in, so the question of cutting expenditures or raising taxes arises. Usually the Finance Minister calls for new taxes which he claims will fill the gap. Since 1959, though, the gap has not been filled. Prior to that year, with the help of generous estimation of aid and borrowing potentialities, it was always filled -- on paper.

The budget is then presented to Parliament by the Finance Minister in his annual budget speech. He reviews the economic situation, the success of previous policies, and the new projects to be proposed. He then considers ways and means, outlining the expected results of the current budget year (it is July by this time so the present financial year still has two months to run) and presenting the government's tax and spending program for the new year. Following the speech there are 20 days of Parliamentary debate. Since the budget is always passed intact (there can be no amendments, since any government defeat would mean its fall[1]) debate centers on minor points of interest to Opposition members and Government backbenchers. Parliamentary review seldom gets down to basic points of economic policy.

Once passed, the budget tightly binds the expenditures of the departments. Each department has been allocated a fixed sum, broken up into the amounts which

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[1] The only important exception occurred in 1962, when the two desperate measures which had been resorted to by the Cabinet to close the gap -- a cut in the rice ration and the introduction of a sales tax -- were withdrawn after backbench indignation threatened to wipe out the Government majority.

may be spent in providing each of a number of specific services. By law, the department cannot exceed its voted expenditure; the only way that additional funds can be secured should they be needed is by obtaining a supplementary vote from Parliament. This must be approved by the Treasury. In theory supplementary votes are frowned upon but in practice the reception they receive depends on the harmony of the service in question with the goals of the government. Departments are also subject to criticism if they spend less than the sum allotted to them, since this opens them to the charges of tying up funds which could have been used elsewhere and failing to provide the services which they promised to give. The basis for expenditure estimates, it will be remembered, was highly inexact, but the standards applied in matching actual with planned expenditures are rigid. Frequently departments are either starved for funds or are driven to some lengths to find ways to spend the money they have been given. The post-expenditure audit, which is performed by the Auditor-General's Department, is a searching inquiry into the use of allocated funds. The audit itself is scrutinized by the Public Accounts Committee of Parliament, which is composed of leading Government and Opposition members. Between these two watch-dogs, the departments are sometimes hard pressed to justify their actions. Post-expenditure audit, though, is mainly concerned with questions of administrative detail, particularly instances of incompetence or fraud, and only occasionally touches upon questions of whether announced policies are being executed, whether they are appropriate, etc.

This budgeting process is the sole means of releasing public funds for any type of economic policy which necessitates the expenditure of public monies. It has been seen that the impetus for new policy proposals comes from many places -- departments, ministries, the cabinet -- and at no point are all these proposals surveyed collectively as an economic policy. No overview of the whole budget is undertaken, except in terms of total expenditures and revenues. Projects are subjected

to no uniform tests of suitability. Moreover, the execution of policy will depend on the vigor and ability of the particular civil servants charged with carrying out the project. The degree of decentralization in both the making and the execution of policy is striking.

It is clear that this budgeting procedure is in its fundamentals a colonial system. The system is well suited to the routine annual renewal of funds needed to carry on usual government activities in much the same form year after year. It is a system in which bureaucrats make most of the decisions and is thus best adapted to solving purely administrative problems. Expenditure along lines familiar from past experience is encouraged by weight of precedent; new and unfamiliar types of spending are discouraged by having to bear a heavy burden of proof. If one substitutes "consumption" for "familiar" and "investment" for "unfamiliar" he gains an appreciation of one of the basic difficulties of Ceylon's economic development. The rigidity of old procedures works against the expansion of developmental activities.

What relation, if any, has there been between the various national plans and the all-important annual budget? In the first place, there is no legal connection at all. Whether a plan has any practical significance depends entirely on the initiative of the politicians and civil servants who are concerned with budget formation and policy execution. Of late there has been increasing talk of institutional changes to tie project planning to the national plan[1] but as yet nothing has come of it. To be sure, some of the projects mentioned in the Ten-Year Plan are currently being implemented by the ministries and departments, but this does not mean that they originated with the plan. On the contrary, the plan was made up from the submissions of these same ministries and departments, which simply outlined

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[1]See the Draft Short-Term Implementation Plan prepared by the Department of National Planning in 1962, pp. 58-59.

projects that they already had under way or in the planning stage. It was the departmental plans which came first, not the national plan. The drawing up of a true national plan is for several reasons a promising portent for Ceylon's economic development but its influence on the budgeting process to date has been minimal. In other, harsher, words the plan has remained unimplemented.

PROJECT EXECUTION

More than just political and demographic pressures and the system of budget formation works in favor of government consumption and against government investment. There has been a pervading tendency for actual expenditures on consumption programs to come much closer to the budgeted sum than does actual spending on investment projects. Table 5.9 shows how persistent the underspending on capital allocations has been. Since by law no money can be spent for any purpose which has not been voted by Parliament actual expenditure cannot exceed total (i.e., original plus supplementary) provisions. Actual expenditure as a percentage of the original provision gives the best indication of the relation between intended and actual spending: a percentage greater than 100 indicates that it has been possible to obtain supplementary provisions and thus push spending beyond the limits specified in the budget, while a percentage less than 100 shows that spending did not reach original planned levels. The contrast between current and capital expenditure in this regard is striking. Current expenditure has always either gone over the original provision or at least come within one or two percentage points of it. Capital expenditure went over the original provision in only one year and has more often fallen far short, sometimes by more than 40 per cent. The reasons for the much greater shortfalls in capital expenditure are not hard to imagine. According to one Finance Minister of recent times, they "...may be found mainly in the lack of trained staff, the inadequacy of existing organisation to meet the increased demands of development

and the dilatory effects of certain existing financial regulations."[1] In short, the need for creative originality and the shortages of men and material which inevitably crop up in development projects add further to the bias against government investment. It is not clear from Table 5.9 whether this difficulty was being overcome to any significant extent as the years went by.

Table 5.9

Expenditure from Revenue and Loan Fund Expenditure as a Percentage of Original and Total Provisions, 1947/48 - 1959/60[1]

	EXPENDITURE FROM REVENUE		LOAN FUND EXPENDITURE	
	Actual Expenditures as a% of:		Actual Expenditures as a % of:	
Year	Original Provision	Total Provision	Original Provision	Total Provision
1947/48	141.3	90.3	..	..
1948/49	102.8	93.2	72.6	67.2
1949/50	99.9	92.2	86.2	71.6
1950/51	122.8	92.5	103.6	71.2
1951/52	104.1	85.7	58.5	54.3
1952/53	97.8	89.7	58.0	55.8
1953/54	99.8	95.1	66.4	65.0
1954/55	107.1	94.3	74.7	70.7
1955/56	116.2	93.4	70.9	67.9
1956/57	103.6	95.4	73.0	69.4
1957/58	114.2	91.0	88.4	80.8
1958/59	120.5	95.3	61.4	59.7
1959/60	110.2	93.9	81.3	77.8

[1] The distinction between expenditure from revenue and loan fund expenditure refers to method of financing and is an accounting convenience employed by the Ceylon government through 1960. It is not identical to the current versus capital dichotomy but it is close to it: loan fund expenditures are almost all capital items and expenditures from revenue are mostly current. The figures thus give a general idea of underspending on consumption and investment. Source: Accounts of the Government of Ceylon, S.P., various years.

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[1] Felix R. Dias Bandaranaike, The Budget and Economic Growth, presented to Parliament on July 27, 1961, p. 10.

Table 5.10

Categories of Expenditure as a Percentage of Original Estimate (Central Bank Data), 1955/56 - 1960/61[1]

Category	1955/56	1956/57	1957/58	1958/59	1959/60	1960/61	Avg.
Purchase of goods & services	97.4	102.6	106.1	99.8	100.9	97.7	100.8
Administration	102.1	106.9	110.9	93.6	94.6	98.6	101.1
Defence	97.8	100.8	107.8	85.1	84.6	91.4	96.3
Civil	103.0	109.2	111.8	95.2	96.8	100.8	102.8
Legislative	100.0	90.0	111.6	111.0	115.5	102.5	105.1
Social services	95.3	103.0	110.9	108.0	107.1	99.1	103.9
Economic services	95.1	94.3	90.6	92.6	97.2	91.8	93.6
Economic development	94.0	95.4	79.6	90.9	93.1	84.0	89.5
Utility services	96.3	93.4	102.5	94.4	101.8	101.2	98.3
Payments to government enterprises	99.2	106.9	109.2	99.1	98.8	100.7	102.3
Transfer payments	171.2	108.0	108.7	119.5	125.4	106.6	123.2
To private current accounts	183.9	108.1	108.0	122.0	128.7	107.3	126.3
Food subsidy	..	105.5	83.6	135.1	178.7	124.0	125.4
Interest on national debt	96.0	92.3	97.5	99.5	100.6	103.6	98.3
Pensions	109.6	106.4	107.7	106.7	106.0	100.2	106.1
Direct relief	136.1	139.9	134.3	115.5	105.9	91.6	120.6
Other	265.5	106.3	357.5	204.4	52.4	8.2	165.7
To local governments	107.5	106.5	116.5	99.1	98.9	98.4	104.5
Total current payments	110.2	104.1	106.9	105.1	107.4	100.5	105.7
Total capital expenditure	88.1	79.3	107.9	75.5	90.7	99.3	90.1
Acquisition and creation of real assets	78.5	73.0	91.9	69.3	80.6	93.7	81.2
(Capital maintenance)[2]	97.0	95.2	156.1	94.3	96.0	79.5	103.0
Administration	52.7	61.5	94.5	80.2	75.8	77.4	73.7
Defence	56.0	51.9	121.8	89.9	98.9	73.0	81.9
Civil	51.2	68.0	74.9	64.7	48.7	84.9	65.4
Social services	83.2	70.3	85.3	55.0	57.8	77.4	73.7
Health	56.8	64.0	96.0	37.9	54.8	72.2	63.6
Education	70.4	72.1	111.2	59.2	65.6	86.1	77.4
Housing	88.0	77.9	77.7	52.8	55.7	67.2	69.9
Rural development	220.0	58.2	65.3	74.7	48.9	81.0	91.4
Economic services	80.5	75.2	93.5	72.3	88.5	100.1	85.0
Public utilities	72.6	73.0	82.1	61.2	74.8	76.6	73.4
Agriculture, irrigation & fisheries	95.5	77.4	99.0	89.1	104.1	120.4	97.6
Manufacturing, mining, & trade	23.5	81.4	120.9	46.4	80.8	111.0	77.3
Total expenditures[3]	104.3	104.8	103.0	95.1	102.5	100.9	101.8

[1]The data on which these calculations are based are compiled by the Central Bank from a reclassification of the official government accounts. The categories used differ in several ways from those used elsewhere in this work, but the differences are not important for the purpose at hand. Source: Central Bank, Annual Reports.

[2]"Capital maintenance" is also included in the various categories of capital expenditure.

[3]Certain loan activities of the government have not been listed separately but are included in the total.

As Table 5.10 shows, certain types of activities have suffered much more from the underexpenditure problem than others. Transfer payments have been immune to it, consistently running well in excess of alloted sums. Consumption expenditures have come very close to intended amounts, although those kinds of current spending which are most intimately related to economic development have fared less well than other types. Capital expenditure as a whole has fallen about 20 per cent below planned levels and when allowance is made for the fact that this figure includes maintenance expenditure, which averaged just a bit more than allocations, the picture is even dimmer. Investment in civil administration, health, education, housing, public utilities, and industry have all run far behind estimates. Rural development and agricultural projects, perhaps because these are more familiar government activities in Ceylon and have thus required fewer innovations in their execution, came closer to intended levels.

SECTORAL IMPLICATIONS OF GOVERNMENT ACTIVITY

Throughout the period of its concern with economic development the government of Ceylon has been faced with the problem of sectoral priorities. It is convenient in this regard to think of the economy as being composed of three sectors: (1) export agriculture (mainly, but not entirely made up of estates), (2) domestic (almost entirely food-producing) agriculture, and (3) the rest (including both modern industry and trade and traditional handicraft and service occupations). Into which of these sectors should the bulk of the government's resources be poured? From which should the bulk of taxation be extracted? Intellectually, these questions were often asked but never answered conclusively. But with or without intellectual support policy decisions have been made which have supplied de facto answers. A consideration of the facts presented here suggests that the de facto answers are not closely aligned either with what thinking there has been on the subject or with

what the most desirable pattern might in fact be.

It has already been suggested that there have been some changes in thinking as time went on.[1] If only because D.S. Senanayake, the founder of the United National Party and Ceylon's first Prime Minister, was passionately interested in the development of peasant agriculture, the UNP in its early years of power stressed the building up of traditional agriculture, especially its extension into a broader land area through land development and irrigation schemes. The UNP government proclaimed its interest in promoting the development of all sectors, of course, but in fact no great effort was made to promote export agriculture and industrialization was regarded with scepticism (though power development was stressed). As time passed, various factors led to some evolution in this outlook. The death of Senanayake in 1952; the growing realization that tea, coconut, and especially rubber would have to be replanted; and the rising pressure for more ambitious diversification and industrialization programs led the UNP gradually to turn its interest away from traditional agriculture and increasingly toward the other two sectors. As far as industry was concerned, the advent of the MEP government in 1956 hastened this trend. More resources were now to be directed towards industry, though the desire to do something for everyone persisted.[2]

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[1] For a detailed discussion of thinking on economic development, see Henry M. Oliver, Jr., Economic Opinion and Policy in Ceylon, Durham, N.C., 1957, particularly pp. 66-110.

[2] The visit of a star-studded panel of visiting economists in 1958 and 1959 did nothing to resolve the dilemma of sectoral priorities. In his "Reflections on the Economic Problems of Ceylon" (Planning Secretariat, Papers by Visiting Economists, 1959, pp. 7-21) John R. Hicks came out for emphasis on traditional agriculture as the only sector which offered a real hope of increasing employment fast enough to absorb the rapidly growing labor force and one area in which considerable productivity gains could be made with little capital cost. Nicholas Kaldor (Observations on the Problem of Economic Development in Ceylon," pp. 23-33), by contrast, noted that Ceylon owed what prosperity she had realized so far to her plantation agriculture and urged further concentration on that relatively productive sector: "Contrary to the widespread belief according to which a 'colonial' economy is necessarily at an economic disadvantage as compared with countries which do not depend on the exports of primary products for their livelihood, it seems to me that it is the further development of the plantation economy which provides the means for a rapid increase in Ceylon's national wealth." (p. 25). And in the third paper in the volume ("Economic Possibilities of Ceylon," pp. 35-71) Joan Robinson rounded out the list of possible sector emphases by stressing industry as the ultimate solution to Ceylon's economic problems. It is no wonder that the discussion within Ceylon was inconclusive.

But in the overall sense, when all government economic activities -- taxation, borrowing, consumption expenditure, investment, subsidies, loans, and transfer payments -- are considered it is nearly impossible for the government to do something for everyone. Except insofar as foreign aid comes to the rescue by adding to the supply of resources at the government's command, injections into one sector of the economy via the provision of public services, investments, subsidies, or loans must be balanced by withdrawals from the same or other sectors in the form of taxes or borrowing. In the general case some sectors are net recipients of resources from the government and some are net providers of resources to it. The structure of the economy and the rate of growth of output in each sector is likely to be influenced by the pattern that these injections and withdrawals take.

In Ceylon, the differences in treatment among the three main sectors in regard to each type of government activity have been great and this fact has indeed been an important influence on the relative growth rates of export agriculture, domestic agriculture, and non-primary output. Table 5.11 summarizes a set of rough estimates made in this regard. In brief, these calculations show, taking either the population or the income share of each sector as a basis for comparison, that export agriculture has been subject to disproportionately heavy taxation and has received only a small share of resource injections from government investment and transfer payments, that domestic agriculture has been a major recipient of benefits from the government while it pays only a small share of total taxes, and that the rest of the economy has paid taxes and received benefits in slightly less than its proportionate share.

It has already been seen[1] that export agriculture has borne an extremely heavy tax load, made up mainly of export duties, direct corporate taxes, and import duties

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[1] Pp. 4.22 - 4.43, above.

Table 5.11

Estimated Share of Three Main Sectors in Government Expenditures and Government Receipts, 1950-60[1]

	Export Agriculture	Domestic Agriculture	The Rest	Total
		(% of total)		
Control figures:				
Population[2]	25	25	50	100
Income[3]	25	20	55	100
Government expenditures:				
Consumption[4]	25	25	50	100
Investment[5]	15	50	35	100
Transfers & subsidies[6]	20	25	55	100
Total	20	35	45	100
Government receipts[7]	50	10	40	100
		(Rs. billions)		
Government expenditures	3.0	4.6	6.4	14.0
Government receipts	5.7	1.0	4.4	11.1

[1]As the following notes will make clear, these estimates are very rough.

[2]These are the proportions of the economically active population attached to each sector, as shown in the 1953 census (rounded off). See Table A-21, below.

[3]Relative proportions of gross domestic product at factor cost prices originating in each of the three sectors, 1950-60. See Table A-3, below.

[4]There is no easily available method of improving on the very rough estimate that government consumption expenditures were distributed approximately in proportion to population.

[5]Source: Central Bank of Ceylon, Annual Report for 1962, Table 20. Investment in administration, health, education, and housing was allocated among the three sectors on the same proportions as population; investment in "rural development" and "agriculture, irrigation, and fisheries" was assigned to domestic agriculture; investment in public utilities was allocated on the same ratio as income; and investment in "manufacturing, mining and trade" was assigned to the third sector.

[6]Source: Table A-5, below. Subsidies to food producers were assigned to domestic agriculture, subsidies to government enterprises and public corporations and social security benefits to the rest, and subsidies to private firms (mostly replanting subsidies) to export agriculture; interest on the public debt was allocated by income shares and other transfer payments to individuals by population shares.

[7]Corporate profits taxes were arbitrarily divided equally between export agriculture and the rest; property taxes, excise taxes, import duties, other business taxes and fees, and property income paid to government were all divided according to the income ratio; export duties were assigned to export agriculture; surplus of government enterprises and social security contributions were put into the third sector; and personal taxes and other payments by individuals were split between export agriculture and the rest on a ratio corresponding to their relative incomes (domestic agriculture was omitted in the belief that peasant farmers do not pay income taxes).

on many of the consumption, intermediate, and investment goods used by the sector. By contrast, it has received a disproportionately small share of government spending, with total withdrawals from the sector adding to roughly twice as much as total injections. All this is in contrast to the situation that prevailed in colonial days, when taxation depended heavily on export agriculture but government receipts were largely plowed back into the sector as well. The government of independent Ceylon has retained the colonial revenue structure while redirecting its expenditures to other parts of the economy. Indeed, the burden exacted from export agriculture for the support of other sectors is so great as to make one marvel at the good performance of at least part of the sector in the postwar years. In part this performance is attributable to the extreme inelasticity of supply characteristic of tree crops; despite heavy taxation estate owners with large sums tied up in tea or rubber could find no preferable alternatives to continuing to produce, even at lower levels of profitability. When the trees gave out, as most of Ceylon's rubber acreage did during the period studied here, producers could have chosen to convert their land to other uses, like food production, which would have been much less heavily taxed. That they did not is largely attributable to the government's replanting subsidy, which emerges as a shrewd device for inducing a socially desirable activity at the same time as it was being heavily taxed.

The striking performance of domestic agriculture, and especially paddy production, is more easily understood when one sees the extent to which this sector has been the government's favored child. Exempt from income and profits taxes, as well as export duties, traditional agriculture received very light tax treatment. Only a few import duties and excise taxes succeeded in making notable withdrawals from the sector. But government expenditures, especially investment, were directed towards it in generous amounts. By contrast to producers of export crops, who benefited from virtually no government investment during the period, food producers received

large outlays for irrigation, land development, and agricultural services and facilities of many kinds. This channeling of government funds to domestic agriculture was largely responsible for the increasing substitution of locally produced food for imports and the building up of domestic agriculture during the fifties.

The rest of the economy includes both modern and traditional nonprimary activities. Relative to its share in income and population, this residual sector received more nearly proportional treatment from the government than did the other two sectors. Within the sector, though, and unrevealed by the figures in Table 5.11, there was highly divergent tax treatment as between corporations and corporate and government employees on the one hand and individual proprietors, partners, and their employees on the other. Income and profits taxes hit only the former group and import duties, too, fell much more heavily on them. Benefits were distributed on a roughly equal per capita basis. Here, as in agriculture, the modern, efficient producers were penalized by being liable for more kinds of taxes and at higher rates and thus having to bear a large proportion of the total tax bill. In the interests of equalizing income distribution, of course, this policy can be defended but there is no doubt that it hampered the growth of the potentially more dynamic sectors of the economy. It has already been noted that efforts to overcome the effects of the tax burden by offering various economic incentives to new industrial producers were less successful than the similar attempt to induce estate owners to replant. Not until severe import restrictions came along to offer an even more attractive incentive to industrial development did any notable growth in the industrial sector take place.

In the net, then, estate agriculture and modern industry have been penalized by government economic activity and traditional economic activities rewarded. Whatever the correct answer to the question of sectoral priorities is, it is unlikely that this pattern accords well with it. Nor does it fit closely with the avowed preferences of Ceylon's leaders; although their tastes are to some extent mirrored

by the pattern of expenditure, the structure of government revenues remains basically a tribute to inertia and expediency. The sectoral pattern of the government's economic activities does go a long way, though, towards explaining why export agriculture had its troubles in the fifties, why peasant agriculture did so well, and why the birth of a modern industrial sector was such a painful process.

SUMMARY

There are four important points which must be made about the relation of Ceylon government finance to the country's economic development. (1) Given the lingering (but progressively weakening) attachment of the government to financial responsibility in the traditional sense, the scope of the government role was limited by the inelasticity of its revenue structure and, to a lesser extent, its short run unreliability. (2) What expenditure the government did make was biased by a number of influences -- demography, political pressures, inertia, and the difficulties of planning and executing development projects -- towards current programs and away from investment. (3) The sectoral patterns of taxation and spending had an important effect in biasing sectoral growth rates: favoring domestic agriculture and penalizing export agriculture and modern industrial activity. (4) The increasing failure to cover total expenditures by tax revenues and non-inflationary borrowing introduced an element of excess aggregate demand into the economy, which proved to be fatal to the continued existence of the export economy. The first three points have been brought out in the discussion of the present chapter; the fourth, for dramatic effect, has been saved for Chapter 6.

Chapter 6. The Growth of Aggregate Demand, 1946-60

DEMAND AND THE EXPORT ECONOMY

Despite the fairly steady growth of Ceylon's national output in the years since the war, the aggregate demand of Ceylon nationals for goods and services often rose at a faster clip. By definition, the emergence of this excess aggregate demand would necessarily have had to have some combination of three possible effects on the island's economy. It could raise prices. It could lead to increased imports. And it could act as a stimulus to increased domestic production. Within the pattern of the export economy, which of these effects might actually be expected to appear is quite predictable. In the short run, if an unexpected upsurge appears in the demand for some particular good, prices do rise, but this is a purely short-run, disequilibrium situation. In a matter of weeks or months increased imports will flow into the country to answer the rise in demand and prices will fall back to their previous level. Except for such intermittent disturbances, Ceylon's price level in the fifties was basically determined by the world price level, depending on the supply-demand relation in the global market and only in the very short run on the balance of the local market. Prices of imported goods were invariably equal to prices in the supplying country, plus margins for shipping costs, import duties, and dealers' costs and profits. Since domestically produced goods were usually in close competition with imports, the world prices of the competing imports determined their prices as well. For services, which usually cannot be imported, local market conditions were more important in setting the price. But in general prices were determined abroad, not at home. Nor did the development of excess demand provide much impetus for the expansion of local production. For Ceylon's traditional export goods, which were consumed in only very small quantities at home, it was obviously world prices, not domestic prices, that ruled. It has already been noted that for import-competing local production for domestic use, which included nearly all the remainder of national output, foreign prices also exercised great influence. Hence a rise in local prices

gave scant incentive for the expansion of domestic output of any kind and it is not surprising that output responses to the growth of local demand were negligible.

There are exceptions to this last generalization. Through the Guaranteed Price Scheme of subsidies, to cite the most important exception, a price incentive was deliberately offered to rice growers, giving them substantially more than the world price for domestic output. Late in the decade of the fifties, other goods began to be offered such incentives. These examples, of course, do not disprove the contention that local demand is irrelevant to price-level determination in an export economy, but rather suggest that by the late fifties Ceylon was beginning to move out of the classical pattern.

If one is willing to accept a somewhat overly rigid variant of this argument and regard both the price level and real output as completely unrelated to domestic demand, then the deficit in the current account of the balance of payments, which is the sole channel into which the excess demand can flow, can be taken as a measure of the excess demand actually present in the economy. Table 6.1 lists the annual deficits for the years 1948-60. As the table shows, there were two periods of serious excess demand during these years. The first was 1952-53, when a lagged response to the Korean export boom, coming after export prices had slumped badly, produced sizeable current-account deficits. This episode, though, was less a case of excess aggregate demand than of demand lagging behind a rise in income. The surpluses earned in 1950 and 1951 largely balanced out the deficits of 1952 and 1953 and for the four-year period as a whole the current account deficit was small. Following this two-year period of lag-induced deficits came another two years of great export prosperity. The really persistent deficits, and the only ones which can be strictly assigned to excess aggregate demand, started in 1957 and continued through the rest of the decade. The 1957-60 years formed a period of essentially constant merchandise exports coupled with rising merchandise imports and a generally

unfavorable balance on invisible items. In short, it was a period in which aggregate demand continued to grow despite the stagnation of exports. To what can this new and alarming tendency be attributed?

Table 6.1

Items from the Current Account of the Balance of Payments, 1948-60
(Rs. millions)

Year	Merchandise exports	Merchandise imports	Trade Balance	Balance on invisibles[1]	Current account Balance excluding transfers
1948	985	891	94	..	..
1949	1,064	1,027	37	- 6	31
1950	1,412	1,173	239	-33	206
1951	1,783	1,545	238	-72	166
1952	1,410	1,707	-297	-45	-342
1953	1,495	1,633	-138	25	-113
1954	1,724	1,384	340	9	349
1955	1,893	1,478	415	-31	384
1956	1,772	1,576	196	-59	137
1957	1,669	1,764	- 95	-61	-156
1958	1,624	1,713	- 89	-41	-130
1959	1,773	1,956	-183	-13	-196
1960	1,796	1,999	-203	-39	-242

[1] Excludes international transfers. Net private transfers were invariably outward and only in 1960 did official donations outweigh them, so the overall current-account balance was somewhat less favorable than the balance shown here in all years except 1960. Transfers are generally unrelated to the volume of aggregate demand present in the economy and this is the reason why they are excluded from the table.

Since households did not dissave during this period and corporate investment demand remained an insignificant element of aggregate demand, government is left as the likely culprit. And once the government accounts for the late fifties are examined it is all too clear that it is the deficits run by the central government and the way in which these deficits were financed which are mainly responsible for the excess demand and the persistent external imbalance.

ROLE OF GOVERNMENT FINANCE

Except for two years in the mid-fifties (1953/54 and 1954/55), when a wave of austerity prompted by the post-Korean debacle gripped the nation, all central government budgets in independent Ceylon (i.e., post-1948) have shown overall deficits. As has been seen, the basic reason for these deficits was that while the pattern of government revenues reflected the pattern of the export economy the effective political demand for government services of a wide variety of kinds had grown far out of the bounds of traditional governmental activity under the colonial regime. Revenues were heavily dependent on customs duties (see Table 6.2) and thus varied mainly with the wide year-to-year vicissitudes and the slow secular growth of the aggregate value of trade. Demands on the government were continuous and insistent and grew far faster than revenues. As a result, deficits were run in nearly all years, throughout the period of independence. Starting with the financial year 1956/57, though, a new trend set in. It was closely connected with the fact that in 1956 a populist government had replaced the conservative rule which independent Ceylon had had up to that time. The size of the deficit grew but, more important, the way in which it was financed began to change. In the absence of any noteworthy upswing in foreign grants and loans, the proportion of the deficit which was financed locally began to rise. And to cover the locally-financed proportion, increasingly inflationary measures were resorted to. Although borrowing from the nonbank public took place at an increasing rate much of the deficit was "financed" in name only through the sale of government bonds to the Central Bank, through "administrative borrowing" from various of the government's deposits and trust funds, and through the drawing down of the government's cash holdings. As Table 6.2 indicates, these three methods were used to "finance" nearly two-thirds of the total deficit in the last four financial years of the decade. Together they added nearly one billion rupees to the stream of aggregate demand with no corresponding withdrawals from

the private sector. There can be no doubt at all that it is here that the predominant cause of the payments deficits of the late fifties lies.

Table 6.2

Selected Items of Central Government Finance, 1945/46 - 1959/60[1]
(Rs. millions)

Year	Revenue			Expenditure			Deficit	"Inflationary Financing"[2]
	Customs Duties	Other	Total	Current	Capital	Total		
1945/46	146.6	236.7	383.3	..	..	348.9	- 34.4	..
1946/47	250.0	211.2	461.2	..	..	437.5	- 23.7	..
1947/48	314.0	226.6	540.6	440.4	152.5	592.9	52.3	..
1948/49	329.3	246.7	576.0	481.9	209.2	691.1	115.1	..
1949/50	355.9	267.4	623.3	554.1	241.6	795.7	172.4	156.7
1950/51	527.7	304.6	832.3	661.9	228.7	890.6	58.3	15.0
1951/52	487.2	382.6	869.8	836.8	320.7	1157.5	287.7	272.1
1952/53	443.8	424.0	867.8	798.3	316.5	1114.8	247.0	6.8
1953/54	503.3	431.5	934.8	676.0	253.8	929.8	- 5.0	-210.2
1954/55	628.9	434.9	1063.8	678.2	295.1	973.3	- 90.5	- 15.7
1955/56	608.4	548.5	1156.9	914.6	307.8	1222.4	65.5	36.1
1956/57	627.5	527.1	1154.6	1101.3	298.8	1400.1	245.5	100.8
1957/58	617.0	563.7	1180.7	1103.8	350.4	1454.2	273.3	295.6
1958/59	695.9	521.6	1217.5	1297.3	363.0	1660.3	442.8	211.4
1959/60	733.7	549.7	1283.4	1384.8	357.2	1742.0	458.6	349.0

[1]The budget year extends from October 1 to September 30. See Tables A-60, A-61, and A-62, below, for additional detail.

[2]Defined as domestic borrowing from all sources other than the nonbank public; i.e., borrowing from the Central Bank and commercial banks, "administrative borrowing" from government trust funds, and declines in cash balances and reserves. For a breakdown, see Table A-62, below.

BALANCE OF PAYMENTS EFFECTS

The balance of payments deficits of the late 1950's are of supreme importance to the analysis of Ceylon's economy because they marked the end of the era of the open export economy. Table 6.3 surveys the key elements in the growing payments crisis.

Table 6.3

Selected Items from the Balance of Payments, 1948-60[1]
(Rs. millions)

Year	CURRENT-ACCOUNT BALANCE: Merchandise Surplus	Surplus on Invisibles	Net transfers from Abroad	Overall	Autonomous Capital Inflow[2]	BASIC BALANCE[3]	Increase in Foreign Assets[4]	Other Balancing Items[5]
1948	94	..	..	24	..	..	51	..
1949	37	- 6	-59	-28	..	..	-34	..
1950	239	-33	-69	137	-26	111	169	..
1951	238	-72	-77	39	-15	24	34	- 5
1952	-297	-45	-104	-446	-17	-463	-343	-120
1953	-138	25	- 45	-158	-22	-180	-233	53
1954	340	9	- 43	306	50	356	304	52
1955	415	-31	- 61	323	-42	281	285	- 4
1956	196	-59	- 55	82	-43	39	47	- 8
1957	- 95	-61	- 39	-195	-18	-213	-214	1
1958	- 89	-41	- 23	-153	8	-145	-129	- 16
1959	-183	-13	- 12	-208	8	-200	-199	- 1
1960	-203	-39	22	-220	22	-198	-193	- 5

[1]Unless otherwise noted, the source for all items is the balance of payments (see Table A-52, below).

[2]Defined as net inflow of long-term capital on private or public account, minus net changes in long-term foreign assets held by the government and Ceylonese banks. Source: Central Bank of Ceylon, Annual Reports.

[3]Defined as current-account surplus (deficit), minus any autonomous capital outflow (inflow).

[4]Source: Table A-55, below.

[5]A residual; consists of declines in short-term liabilities to foreigners, plus errors and omissions.

Looking first at current transactions, it has already been seen that late in the decade a strong tendency developed for Ceylon's demand for goods and services from abroad to exceed the value of her sales to foreigners. On merchandise account there were more surpluses than deficits in the fifties (the cumulated surplus amounted to Rs. 423 million), but things went steadily downhill in the later years of the decade and deficits of ever-increasing magnitude were run. Moreover, the effect of the fading merchandise surplus was made worse by the steady outpayment for

invisible items (in all years except 1953 and 1954), coupled with the considerable outflows of private remittances and migrant transfers (mainly to India). These were both familiar facts of the past and probably inevitable consequences of the export economy, but as the merchandise balance deteriorated they served to drag the current-account balance down into a heavily deficit position. The cumulative surplus of Rs. 423 million on merchandise account was turned into a cumulated deficit of Rs. 443 million on the current account overall. Exchange control was tightened up and succeeded in limiting remittances and invisible imports to an increasing extent in the late fifties and increasing official donations from abroad also worked to reduce the deficit-creating effect of these transactions, but the combined effect of these two developments was not large enough to prevent a mounting current-account deficit.

An attempt has been made in Table 6.3 to separate out capital flows to and from Ceylon which are autonomous (i.e. motivated by considerations of foreign economic aid, private direct investment in Ceylon, purchases of assets like estate property from foreigners, and the like) from those which are simply induced by the necessary accounting of balancing the foreign payments accounts. Of the latter type of capital movement, there are two variants which are particularly important in the case of Ceylon. All changes in the external assets of the government and the banks can be regarded as induced capital movements; doing so entails very little oversimplification. That is, foreign assets are drawn down primarily to finance payments deficits and are built up primarily as an incidental accompaniment to payments surpluses. The other kind of capital movement which can be identified as an induced flow is changes in Ceylon's short-term liabilities to foreigners. This leaves flows of long-term capital other than changes in holdings of long-term assets by the government and the banks as autonomous capital movements.

The "basic balance" of Ceylon's balance of payments can be defined as the balance on current account, plus the balance of autonomous capital flows as just defined. Under favorable circumstances in a developing country it would be hoped that autonomous capital inflows would be adequate to cover whatever current-account deficits might be incurred in the process of development and that there would thus be no deficit in the basic balance. Unfortunately for Ceylon, net inflows of the magnitude needed have not been forthcoming. There has been some foreign aid, of course, and a small amount of private foreign investment, but these have amounted to very little relative to the current-account deficit. Furthermore, in the early years of the decade in particular there were actually some autonomous capital outflows, representing sales of assets which had previously been foreign-owned to Ceylon nationals. Many tea and rubber estates and a wide range of commercial concerns -- newspapers, hotels, department stores, etc. -- changed hands during the early fifties. The revenues generated by the Korean commodity boom greatly stimulated such sales, which had started some years before with independence. In a sense, since the current-account surpluses accelerated this kind of capital outflow, it might be regarded as partly induced rather than strictly autonomous. In any case, capital outflows of this type, which were heaviest during the years 1950-52, were sufficient to outweigh -- by a margin of Rs. 145 million -- all autonomous inflows enjoyed by Ceylon during the 1950's. As a result, the overall payments account was in an even worse state of imbalance than the current account: the cumulated deficit for the fifties mounted to Rs. 508 million.

There were two basic ways in which Ceylon could finance this half-billion rupee deficit. It could draw down its accumulated foreign assets or it could take on more short-term liabilities to foreigners. The extent to which the latter alternative was really open to it, of course, depended on the willingness of foreigners to supply goods and services on payment of such I.O.U.'s. In fact, only in the case

of the 1952 deficit did increasing foreign liabilities serve as an important means of financing the deficit. Over the rest of the period and particularly during the uniformly deficit years of the late 1950's the full brunt of financing fell on the external assets. The level of the foreign assets and the rate at which they were being dissipated thus served as the best indicators of how much excess demand was being financed through external deficits and how long this process could be continued.

It is not too much to say that the total value of foreign assets furnishes the best indication of the overall viability of an export economy. Over the long run, viability requires a tendency for the basic balance as it has been defined here to be positive or, at worst, zero. There must be no persistent deficit or eventually total foreign assets will be exhausted. For the reasons which have just been discussed this condition for viability was not satisfied by Ceylon's export economy in the late fifties. Consequently, it was only a question of whether the tide would shift before the foreign assets were all gone or whether the export-economy pattern would have to be abandoned. Had the late fifties been marked by even a relatively short export boom, similar to those which graced the early and middle portions of the decade, the need to make fundamental revisions in the structure of the economy might never have arisen, but since the period brought only an unbroken string of bad or mediocre years the level of foreign assets was in time forced down to rock bottom. By the end of 1960 foreign assets were so badly depleted (see Table 6.4, below) that a reluctant government was forced to take drastic and unpalatable policy measures.

The fall in external assets is more dramatically and more relevantly illustrated if one takes account of the fact that the burgeoning population and the slowly rising per capita income level were also applying upward pressure to the import bill.

In terms of the value of imports in the preceding year, Ceylon had on hand at the end of 1946 foreign assets equivalent to nearly 21 months' purchases. At the top of the Korean boom, on the other hand, this figure reached not quite 12 months. In 1954 it peaked again, but at less than ten. And by the end of 1960 it had fallen to just over three and could not go much lower.

Table 6.4

Foreign Assets, 1946-60[1]

Year	Foreign Assets, End of Year (Rs. million)	Change in Assets (Rs. million) During Year	Change in Assets (Rs. million) Cumulated	Assets in Terms of Months of Imports[2]
1946	1,210.3	- 49.6	- 49.6	20.9
1947	947.3	-263.0	-312.6	11.8
1948	997.9	50.6	-262.0	13.4
1949	963.7	- 34.2	-296.2	11.3
1950	1,132.9	169.2	-127.0	11.6
1951	1,216.8	83.9	- 43.1	9.5
1952	873.8	-343.0	-386.1	6.1
1953	640.4	-233.4	-619.5	4.7
1954	944.3	303.9	-315.6	8.2
1955	1,228.8	284.5	- 31.1	9.2
1956	1,275.7	46.9	15.8	9.7
1957	1,061.9	-213.8	-198.0	7.2
1958	933.2	-128.7	-326.7	6.5
1959	734.0	-199.2	-525.9	4.5
1960	541.3	-192.7	-718.6	3.2

[1]Source: See Tables A-51, A-52, and A-53, below.

[2]Includes only merchandise; taking account of invisible imports as well would lower all of these figures slightly.

POPULATION GROWTH

Although it was not the main cause of the mounting payments crisis, population growth also made some contribution to the island's difficulties. Population's impact was felt in both private and public consumption expenditures. The need to feed and clothe the new additions to the populace (and since they were mainly children there was relatively little need to provide other kinds of goods) led to rapid

increases in national consumption of these necessities. For both food and clothing, Ceylon had in the past relied heavily on imports financed by her estate exports. There was only an insignificant domestic textile industry; the main sources of supply were India, Japan and Britain. Food production, of course, was a major local endeavor, but in the late forties nearly 60 per cent of the rice consumed in the country was imported and the reliance on foreign sources for many other staple foods -- as well as virtually all luxuries -- was correspondingly heavy. The precise effect of population growth on aggregate demand is hard to work out, but it seems likely that it did lead to a chanelling of demand into staple commodity lines and perhaps to a more rapid growth of private consumption than would have ensued with the same level of income and a less rapidly growing population. In addition, population growth was a major factor contributing to the tendency for government expenditures to outrun revenues.

Another condition for the continued viability of an export economy is that its exports must, over the long run, provide enough foreign purchasing power to maintain its imports at, to say the least, a constant real per capita level. This means that the value of exports, deflated by an index of import prices, must rise at a rate at least equal to the rate of population growth. The only other way that imports can be maintained over time is for there to be a capital inflow; for short periods declines in foreign assets and increases in foreign liabilities can also be used to tide the economy over lean years. Between 1946 and 1960 Ceylon's population rose at 2.6 per cent a year. The purchasing power of exports in terms of imports did rise at a somewhat higher rate over the period as a whole (2.9 per cent) but by far the briskest increase came in the late forties. The rate of increase from 1950 to 1960 was only 1.3 per cent a year. In some years -- 1949, 1952, 1953, and 1957 -- the purchasing power of exports (figured using 1946 as a base) actually fell behind the growth of population. Putting the condition for viability in these minimal

terms the economy barely managed to satisfy it over the entire postwar era and to an increasing extent failed to live up to the condition in the later years of the period (see Table 6.5).

Despite a rise in the percentage of Ceylon's rice supply that was produced internally (from 47.6 in 1946 to 52.6 in 1960) the volume of food imports rose at an annual rate of 3.1 per cent. The volume of textiles, the other important item of mass consumption, imported increased by 4.6 per cent a year. In both of these cases the press of population was probably a stronger force for raising the import bill than was rising per capita income. The latter is the cause of the soaring quantity of other consumption goods imported, though; for these less essential items the annual rate of increase in volume was a startling 11.5 per cent.

One might claim that any developing country should have a deficit in its balance of payments, representing large quantities of capital-goods imports, intended for its development program, which have not yet matured and added to exports or substituted for imports. In the case of Ceylon, there was some substitution of capital goods for consumer goods imports as all imports rose but investment goods imports rose fastest. Between 1948 and 1960 the annual rate of increase in the quantity of all consumer goods imported was 4.9 per cent; during the same period; imports of intermediate goods rose at 5.6 per cent and capital goods 8.9. By far the largest part of the import bill in 1960 continued to be made up of consumer goods, though.[1]

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[1] 61.1 per cent, according to an estimate of the author. In making up the import volume indexes just cited, the Central Bank has classified many imports into one of the three categories, but a sizeable unclassified residual remains and there is thus no official estimate of imports for consumption, intermediate, or investment purposes.

Table 6.5

Population and the Purchasing Power of Exports, 1946-60[1]
(1946 = 100)

Year	POPULATION Total	POPULATION % Change, Annual	EXPORTS[2] Value	EXPORTS[2] Volume	EXPORTS[2] Prices	IMPORT PRICES	PURCHASING POWER OF EXPORTS Value[3]	PURCHASING POWER OF EXPORTS % Change, Annual	PURCHASING POWER OF EXPORTS Per Capita[4]
1946	100.0	..	100.0	100	100	100	100		100
1947	102.7	2.7	116.4	95	129	112	104	4	101
1948	105.7	2.9	132.2	108	129	121	109	5	100
1949	108.8	2.9	139.0	108	137	147	95	-13	87.
1950	112.0	3.0	204.4	119	184	155	132	39	118
1951	114.9	2.6	248.8	120	223	198	126	- 5	110
1952	117.8	2.5	197.9	123	172	196	101	-20	86
1953	121.0	2.7	214.6	125	175	196	109	8	90
1954	124.3	2.8	242.0	129	195	182	133	22	107
1955	127.3	2.4	261.6	136	204	175	149	12	117
1956	130.3	2.4	233.4	128	189	175	133	-11	102
1957	133.7	2.6	226.9	123	182	186	122	- 8	91
1958	137.0	2.4	241.6	133	179	173	140	15	102
1959	140.4	2.5	262.9	130	186	175	150	7	107
1960	144.4	2.8	262.7	138	186	175	150	0	104
Annual rate of increase:									
1946-60		2.6				2.9			
1950-60		2.6				1.3			

[1]Sources: Tables A-9, A-44, A-45, and A-46, below; Thirty Years Foreign Trade Statistics; Statistical Abstracts.

[2]Value includes invisible items (from 1950 on), but the quantity and price indexes are based only on merchandise trade; for this and other reasons, price times quantity does not necessarily equal value.

[3]Equals export value divided by import prices.

[4]Purchasing power of exports divided by population.

THE CRISIS OF THE EXPORT ECONOMY

The government of Ceylon has always had a problem of conflicting policy objectives when it comes to deciding on its commercial policy. On the one hand, import and export duties have traditionally been its most important sources of revenue. For import duties, this implies a goal of trying to set duty rates at a revenue-maximizing point, which, given the infinite elasticity of supply from the world market, would mean charging duties so as to determine an import price that

would drive quantity demanded in the local market to the point of unit elasticity. Setting it any lower would mean that there was still an unexploited range of inelastic demand from which more revenue could be earned by raising the duty; setting it any higher would mean that local demand was being choked off by a large enough extent to cut into duty receipts. For export duties, short-run revenue maximization implies using the inelasticity of supply of export-crop output to extract as much revenue as possible from producers; long-run protection of this source of revenue, as well as equity considerations, suggests not pushing duties so high as to maximize revenues in the short run, though, and an ideal of providing a generally constant per-unit profit margin by varying duty rates as world prices changed has been adopted by the Ceylon government. Under this rule, export duties were set in close accordance with the formula and were thus not really available for use as discretionary policy tools.

Competing with revenue considerations, though, were other criteria of duty application. For exports, the main worry was to keep Ceylon's export crops competitive in price and quality with crops from other sources. For imports, considerations of balance of payments policy and the protection of local industry entered in. When export revenues fell off import outlays tended to exceed them; increases in import duties were often used to offset the tendency for balance of payments deficits to develop in such cases. In an export boom, however, the government would either halt the rising trend of import duties or (as it did on one occasion) actually reverse it. This prevented the large surplus which otherwise would have been accumulated, but it also let demand work itself out in the form of higher imports rather than in higher prices. It ran counter, though, to the long-run goal of balance of payments policy: to achieve a rough balance of inflows and outflows on the trade and autonomous capital accounts in the long run and thus protect the stock of foreign

assets. Finally, protection of local industry is more of a matter of duty structure than of duty level: capital equipment and necessary materials must be allowed to enter the country cheaply and competing final goods must be penalized. In some cases, though, protection considerations might be expected to compete with balance of payments and revenue criteria.

In colonial days this potential conflict of policy goals did not arise in practice. Within the colonial concept of limited government revenue needs were slight and could be easily satisfied through modest import duties and, at times, export duties. Balance of payments problems were seldom severe, since local demand for imports was tied closely to export receipts and there were often substantial autonomous capital inflows; changes in rates of duty were required only infrequently. Protection of local industry and the structural transformation of the economy were not important policy goals. With independence, though, the policy conflict became a very real one. Government revenue needs multiplied. Balance of payments problems became acute. And import substitution through protection came to be a major national goal, though only hesitatingly and selectively at first. Successive governments understandably found it difficult to decide which policy goals should be given maximum emphasis at any particular time.

All of the foregoing is stated in terms of import duties. Actually, since World War II the government has had at hand three separate tools of commercial policy: duties, quantitative import and export control, and exchange control. Trade and exchange controls can be used to reinforce duty changes as means of achieving balance of payments and protection goals and exchange control has the additional property of being able to work on other kinds of international transactions besides goods trade: invisible imports, flows of factor payments, and capital movements. Import control and exchange control in Ceylon have their historical roots in the desire of the colonial government to control a wide range of international transactions during

the Second World War. They were relaxed to the vanishing point during the late forties and the Korean period but were always maintained in stand-by form. When severe balance of payments difficulties struck in the late fifties it was easy to reinstate these strong forms of control.

Before the 1930's Ceylon had had extremely low trade barriers. In 1929, for example, import duties collected ran to only about ten per cent of merchandise imports. With the depression and then the war duties were raised but as soon as the war ended rates were cut again. As the availability of world commodity supplies and the Sterling-area trade position permitted, import control and exchange control were also eased. When the new government of independent Ceylon gained control of the island's finances with the 1947/48 budget it raised most duties as a protective device. Several classes of goods were excluded from the general rise, either on welfare or on protection grounds: (1) those which entered into the cost-of-living index, (2) industrial raw materials, (3) capital goods, and (4) drugs and medicines. The new duty structure was left intact (though other restrictions were gradually relaxed) until 1950, when many of the 1947 increases were revoked as an allegedly anti-inflationary measure. As export receipts continued at fabulous levels as a result of the Korean boom, the following year saw additional duty cuts. Even such luxuries as cars reverted to pre-1947 duty levels at this point. In retrospect, this two-year episode emerges as a wasteful squandering of precious foreign reserves for consumption purposes. On the other hand, the selective protection of promising local industries was begun at this time; rubber goods, tobacco products, soap, and furniture were the first beneficiaries.

The Korean boom did not last forever, as some Ceylonese policy makers apparently expected it to, and in 1952 and 1953 export receipts came crashing down. There was a backlog of demand, though, and imports continued to rise, to the severe detriment

of the stock of foreign assets. Drastic retrenchment measures were indicated. Only in 1953 was the growth of the import bill finally brought to a halt. Balance of payments considerations necessarily dominated commercial policy during this period. In September 1952 a ten per cent surcharge was added to import duties on all but the most essential goods. A few months later tariffs on automobiles and other luxury goods were raised substantially. Exchange control was tightened and a permit system was applied to a variety of imports from outside the Sterling area. Then, with the partial recovery of export receipts in 1954, a selective manipulation of the tariff structure was enacted: auto duties were raised but bicycles were cut; concessions were given on some machinery and raw materials imports. Nevertheless, when the Taxation Commission published its report in 1955 it found Ceylon's import duty structure to be insufficiently differentiated as between luxury and necessity consumption items and between all consumption goods on the one hand and capital and intermediate goods on the other. It recommended lower duties for capital goods and raw materials and moderately higher duties for many consumption items. In a modified form, these proposals were implemented in the 1955 budget.

The new MEP government, in its first (1956) budget, pushed the policies recommended by the Taxation Commission further, but it also complained that duties on some consumption goods had been driven so high that revenue collections were falling off. As Table 6.6 indicates, it was indeed true that at this time further increases in duty rates ceased to produce much rise in collections, either in the aggregate or relative to import value. Since external assets had been bolstered by the 1954-55 tea boom, the government actually cut tariffs on some products which it described as semi-luxuries for the avowed purpose of increasing duty revenue. Apparently it had some idea of what the elasticity of demand for various imports might be, though, since it raised the duty on petroleum products, again citing increased revenue as its goal. When the balance of payments deteriorated in the following year, the

government was forced to accept the dominance of import-control and import-substitution goals over revenue considerations. It cut duties on raw materials and capital goods further, raised some consumer luxuries to a 100 per cent duty, and hit gasoline, tobacco, and beer hard. Again in 1958 it enacted more increases for control and protection purposes; luxury autos were by this time subject to a virtually prohibitive tariff. The 1959 budget brought more of the same: cuts for materials, some increases to protect nascent local industries, and further increases on cars, gasoline, and watches. By now, though, the balance of payments deficit was growing rapidly (see Table 6.3, above) and the piecemeal measures adopted each year at budget time were obviously not enough to stop it. No doubt the government kept hoping for a revival of export prices, but none came. At last it was forced by its ill luck and lack of foresight to extreme measures.

Table 6.6

Export and Import Duty Receipts: Total and as a Percentage of Their Tax Base and of GNP, 1947/48 - 1959/60[1]

	EXPORT DUTIES		IMPORT DUTIES		TOTAL CUSTOMS REVENUE	
Year	Rs. mln.	as a % of exports f.o.b.	Rs. mln.	as a % of imports c.i.f.	Rs. mln.	as a % of GNP
1947/48	137.0	13.8	177.0	16.0	314.0	11.2
1948/49	149.1	15.4	180.2	17.6	329.3	10.9
1949/50	167.6	13.6	188.3	17.5	355.9	9.7
1950/51	282.7	14.9	245.0	16.8	527.7	11.9
1951/52	227.3	14.6	259.9	15.9	487.2	10.7
1952/53	193.2	13.9	250.6	15.6	443.8	9.9
1953/54	259.1	15.7	244.1	16.2	503.3	10.7
1954/55	370.7	20.1	258.2	18.0	628.9	12.3
1955/56	322.1	18.1	286.3	18.6	608.4	11.9
1956/57	323.9	19.6	303.6	16.4	627.5	12.1
1957/58	325.0	23.3	292.0	18.6	617.0	11.4
1958/59	328.9	18.4	367.0	18.2	695.9	12.2
1959/60	327.2	12.2	406.5	19.5	733.7	12.3

[1] Source: Customs Returns. The periods shown are budget years (October 1 - September 30). GNP is measured using the Department of Census and Statistics concept and converted from the calendar to the budget year. The percentages given here represent average duty yields; no attempt has been made here to measure average rates of duty; see the text for a general qualitative idea of rate changes.

The 1960 budget increased import duties once again. The familiar targets -- cars, gasoline, liquor, and tobacco -- were hit again. This was the ninth consecutive year of duty increases and the continual raising of the duty level was at last beginning to have some effect on import value. Merchandise imports, which had been almost continuously on the upgrade for six years, leveled off. The volume of duty collected, meanwhile, was being pushed towards the maximum possible sum, given the elasticity of demand for imports in Ceylon. Exports failed to recover, though, and the decline in external assets continued unabated.

Ceylon's policy on import duties in the late fifties was not successful in achieving its main goal, which was to right the increasingly precarious balance of payments. The rate increases enacted were too little and too late to correct an imbalance as large as the one which actually developed. Had another export boom emerged from the blue to restore the balance, as policy makers at the time must devoutly have wished, the crisis would have been solved -- at least for the time being. A measure of the failure to achieve the balance of payments goal is the relative success enjoyed in revenue collection. Duties which keep imports out cannot collect revenue and the fact that receipts from import duties soared to over Rs. 400 million a year shows that the goods were still flowing in abundance despite the high duties (some of these flows were speculative, based on a belief on the part of traders that the situation was serious and that ample stocks should be obtained before more severe sanctions were imposed). Probably the basic failing of Ceylon's policy makers at the time was that they continued to think of balance of payments defense as a cyclical problem which could be counted on not to persist for more than three or four years at a time. They failed to understand the strong demographic and political forces within the economy working for persistent deficits and thus underrated the need to manage import trade and encourage more actively the restructuring of the economy. In the light of these forces, it can now be said that even if there had

been another export boom it would only have served to postpone the day of judgement, not to cancel its appearance.

In January and August 1961 the government finally took vigorous action. The measures taken included still more increases in import duties: a five per cent surcharge was added to the general duty and additional five per cent increases were levied on a wide range of goods. More important, though, textiles, many food items, and a large number of manufactured goods were placed under quantitative import restriction for the first time. Several luxury items, notably cars and watches, were banned outright by the simple expedient of declaring that no more licenses would be issued for their importation. From now on, duties were to be abandoned as the chief tool of commercial policy and import and exchange control would come to play the dominant role. The framework for a system of state-managed foreign trade and payments was established; now all that needed to be done was to extend these measures to a wider and wider variety of transactions and eventually to the entire balance of payments.

It is quite possible that future economic historians will date the end of the export economy in Ceylon from January 2, 1961. Even though the nation's economy would continue to be tied closely to foreign trade in the future and even though the economy had in many ways deviated from the classical export economy model in earlier years, it is probable that on that day the irrevocable move away from the old economic system was made. Less by conscious design than by the sheer weight of circumstance, a whole new environment was created for economic growth in Ceylon. In it, the emphasis on local production and import substitution would have to rise. Management of international trade and, indeed, most of economic development would be thrust into the hands of the government. Both industrialization and price inflation would for the first time become real possibilities. It would be a very different world from that of the classical export economy.

Chapter 7. Since 1960: A New Era?

SINCE 1960

By 1960 the export economy of Ceylon, whether permanently or temporarily, had become unviable. Years of excess aggregate demand had led to the virtual disappearance of the country's foreign assets. Yet the central government, which through its massive budget deficits was the main source of the excess demand, continued to pump purchasing power into the system. It was no longer possible to draw down foreign assets to cover the balance of payments deficit. Loans from abroad did not come close to closing the gap. There was no alternative left but to trim imports to the level permitted by Ceylon's export receipts, plus any capital inflow which might develop. Since there was a tendency inherent in the economy for deficits to arise this in turn meant that import controls of various kinds would have to be imposed.

The measures taken have already been outlined. Unlike the duty changes and comparatively mild forms of direct control used in the late 1950's, these severe direct measures were strikingly effective in their initial task of controlling over-all import volume. The aggregate quantity of imports, which by 1959 had risen to 145 per cent of the 1953 level, was sliced by 20 per cent as a result of the 1960 and 1961 measures. To put this feat of economic control in perspective one should keep in mind the inexorable pressures pushing imports up. In only one previous year since World War II (1953) had import volume failed to rise. Not only were the direct controls unprecedentedly effective in holding down the over-all volume of imports but they also succeeded in discriminating, according to a predetermined scale of priorities, among imports of different types of goods, concentrating their restrictive efforts on those deemed less essential to the national welfare. Food imports fell relatively little. Within the food category the distinction between staple foodstuffs on the one hand and luxury and semi-luxury food and drink items on the other was sharply made. Staples, which were by this time imported and sold largely by the

government or cooperative organizations, were little affected by the controls and continued to be imported in about their past volume. Canned goods, spirits, and other foods of the less essential type were put under severely limited quotas or banned outright. Among other consumer goods, textiles had previously been subject to more controls than other consumer goods and were thus hit relatively lightly at this point (though textile supplies were tightly curtailed later, in 1963). It was consumer goods other than food and textiles which were most easily identified as nonessential imports and thus felt the full brunt of import restriction. As Table 7.1 indicates, these goods as a class suffered a 70 per cent drop in import volume from 1960 to 1962. Many luxury consumer goods which had once been imported in considerable quantities were now cut to zero.

Table 7.1

Import Volume and Structure, 1958-62[1]

	1958	1959	1960	1961	1962	1963
	(Rs.millions)					
Imports (current prices)[2]	..	2,176	2,209	1,972	2,070	2,014
	Indexes (1958 = 100)					
Consumer goods	100	112	111	83	78	65
Food and drink	100	111	104	96	90	85
Textiles	100	89	86	75	74	42
Others	100	129	148	49	45	25
Intermediate goods	100	121	121	118	131	124
Investment goods	100	131	117	102	116	93
All imports	100	116	113	91	92	79

[1]Source: Central Bank, Annual Report for 1963.

[2]These figures, which include both visible and invisible items, are derived from a new Central Bank series which originates in 1959 and are not directly comparable with any earlier data.

It is a tribute to the selectivity of the new controls and to the relative efficiency with which they have been administered that it was possible to make such sizeable cuts in luxury consumer goods imports while at the same time allowing the volume of intermediate and investment goods imported to continue at much the same level as before. It is true that at a lower level of aggregation the controls were often arbitrary. In particular cases, local producers -- especially new manufacturers of goods not previously made in Ceylon -- often did encounter difficulties in obtaining permission to import needed materials and capital goods. Looking at the indexes in Table 7.1, though, one is impressed with the degree of effective discrimination involved in the new policy. Only in 1963, as the continuation of austerity came to require even more stringency, did the volume of intermediate and investment goods imported begin to suffer.

Up to mid 1964, at any rate, it seems that the physical control of imports has been adopted by the Ceylon government as a permanent feature of its economic policy. Both exchange control and import control have been gradually tightened since their sudden stiffening in 1960-61. During 1962, for instance, the percentage of total imports which were subject to individual licensing was raised from 17 per cent to 48 per cent of the 1961 import bill; by the end of 1963 coverage had been extended to 60 per cent.[1] Although these controls may be partially relaxed at some time in the future and even though there had been some direct trade controls in effect throughout the fifties, it does seem that an important qualitative change took place in 1960-61 -- a move from an essentially open economy to an economy with government-controlled import trade.

The immediate improvement which the drastic policy changes of 1960-61 wrought in the balance of payments was slight.[2] Export volume rose by four percent in 1961

[1] This is in terms of 1961 imports; as a percentage of 1962 or 1963 imports the figures would be lower, since by this time the structure of imports was changing in response to the controls themselves. See Central Bank Annual Report for 1962 (p.56) and 1963 (p.52).

[2] The source for all data in this paragraph is the Central Bank Annual Report for 1963.

and another seven percent in 1962, then suffered a decline of three per cent in the following year. But export prices registered falls of nine and two per cent respectively in 1961 and 1962 (they were constant in 1963) and prevented a rise in export receipts. When invisible items are added in, the value of exports followed a generally downward path, going from Rs. 1,796 million in 1960 to Rs. 1,725 (a provisional total) in 1963. Through 1962, through, falling import prices kept the purchasing power of exports on the rise. With 1960 = 100, an index of export receipts deflated by import prices fell to 96 in 1961 but rose again to 106 in 1962, thus nearly keeping abreast of population growth. But in 1963 prices of imported food and other consumer goods rose sharply and the purchasing power of exports index slumped to 93.

As a result of all these volume and price changes the current deficit in the balance of payments was reduced in size but not eliminated. It was brought down from Rs. 220 million in 1960 to only 94 million in 1961, but crept back to Rs. 144 million in 1962 and Rs. 146 million in 1963. After a slump in 1961, there was a noticeable increase in autonomous capital inflows: from Rs. 11 million in 1961 to Rs. 38 million in 1962 and Rs. 79 million (provisional) in 1963. These increased flows helped to reduce the amount of further balance of payments financing needed. Still, there remained a basic deficit to be covered somehow: Rs. 83 million in 1961, Rs. 106 million the next year, and Rs. 67 million in 1963. Foreign assets could not fall much further (they did drop from Rs. 541.3 million at the end of 1960 to Rs. 462.3 million at year-end 1963), so a rise in external liabilities, particularly two drawings from the International Monetary Fund, had to be resorted to as the main means of financing the continuing deficit. To sum up, the rapid deterioration in the external accounts which had characterized the late fifties was arrested but there was no reversal of the earlier trend. Although production for export continued to rise quite satisfactorily declining prices in the world market kept export value from going up. And despite the severity of the new controls and the fillip they gave

to import-substituting local industry imports were not reduced by a large enough amount to eliminate the deficit entirely.

The fiscal operations of the central government kept the economy brimming over with excess demand. The deficit for 1960/61 -- Rs. 490.9 million -- was the largest ever, breaking the 1959/60 record by some forty million rupees.[1] Again in 1961/2 a deficit of about half a billion rupees was run, while in the following year the size of the deficit was reduced by some Rs. 50 million.[2] The effect of these continuing large deficits on aggregate demand was moderated, however, by two key monetary phenomena. For one thing, only a small proportion of the debt was monetized. The money supply rose at a relatively modest rate through 1962 (as money supply is defined in Table A-56, below, it went up 6.7 per cent in 1961 and 1.1 per cent in 1962), then accelerated (11.4 per cent). And, secondly, the public showed a helpful willingness to hold on to currency, presumably on the assumption(which was without doubt irrationally optimistic) that while there were few goods available which were worth buying at current prices supplies would improve in the future and prices would fall. The bank debits tax, the prohibition (in 1961) on the opening of new accounts in British and Indian owned banks by Ceylon nationals, and, worst of all, the fear that the government might freeze or even confiscate bank accounts created a move away from demand deposits and into currency. Total demand deposits fell from 1960 through 1962 (Rs. 588.9 million at the end of 1960, 571.6 in 1961, and 565.6 in 1962), then rose again in 1963 (to Rs. 595.5 million). Currency in circulation rose steadily, though: from Rs. 595.3 million at year-end 1960 to 692.2 in 1961, 712.6 million in 1962, and 828.4 in 1963. The extent to which the public was using this currency as a store of value rather than to satisfy its current transactions needs is indicated by the rapid rise in the number of Rs. 100 bills outstanding.

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[1] See Table A-60, below.

[2] The data needed to make a precise comparison of the 1961/62 and 1962/63 deficits with deficits of earlier years were not available to the author in mid 1964; the former deficit was, however, very close in size to the one run in 1960/61 and the latter was a bit smaller.

This denomination, the largest issued, is too big to be used in any but a very few transactions in Ceylon but it is admirably suited for hoarding purposes. The value of Rs. 100 notes issued shot up from Rs. 148.4 million at the end of 1960 to Rs. 211.9 million by the end of 1961, then continued its brisk climb and was up to Rs. 275.3 million by December 1963. Of course, it was naive for people to believe that while the government could tamper with demand deposits it could not touch currency and to doubt that prices would continue to rise. The more sophisticated recognized the fallacy in this thinking and instead bought real property of various kinds.[1]

For all of these reasons not so much inflation as one might expect was created by the abrupt closing of the economy. Of course, there was some upward pressure on prices. Just how much is hard to define. The official consumer price index, which is heavily weighted by subsidized and price-fixed items and has other downward biases as well, had been rising at an annual rate of only 0.7 per cent throughout the fifties; after 1960 it started going up a bit faster: 1.3 per cent in 1961, 1.4 in 1962, and 2.4 in 1963.[2] Even allowing for the considerable understatement which is obviously inherent in this index the rate of increase in consumer prices in general was clearly moderate. However, the Ceylonese public is extremely sensitive to rising living costs and by 1963 the popular clamor had grown so loud that the government was directing more attention to attempts to bring living costs down than to efforts to raise incomes. Many prices which were not included in the consumer price index, particularly those of consumer goods used mostly by the middle and upper income groups and those suitable for use as a store of value, rose more rapidly. An extreme case was used cars, whose prices doubled in the course of

[1] The public as a whole had no choice, of course, but to hold the money supply issued by the government and the banks (though it could and did alter the proportions held in currency and bank deposits respectively). Those with inflationary expectations presumably bought tangible assets, even at prices which were grossly inflated by past standards, and the others held cash. Cash, especially large bills, was also attractive to those holding wealth acquired through illegal operations of various kinds.

[2] Central Bank, Annual Report for 1963, Table 41.

about two years. Prices of intermediate and investment goods, whose importation had been less severely curtailed, presumably rose less than those of consumer goods in general. How much inflation one says there has been since 1960 is thus clearly dependent upon the particular types of goods one wishes to price. And, even though price increases have perhaps not been so great as one might expect given the severity of the shortages which developed, an important step had been taken: the tie with world prices had been severed and the door was now open to an inflation of considerable magnitude.

Aside from price inflation, the other way in which excess aggregate demand might work itself out now that imports were being forcibly restrained was through increased local production for domestic use. The abrupt choking off of imports of a wide range of goods upon which the middle class and, to a less extent, the ordinary people, had learned to rely created for the first time an extremely attactive market for domestic manufactures of the simpler consumer goods. There was a great flurry of new activity in these areas. Delays in obtaining tax concessions and import licenses for machinery and supplies and in clearing other bureaucratic details with the government appeared to be all that inhibited the rise of a host of small private manufacturers. Whereas previously entrepreneurs had been reluctant to enter manufacturing they now showed no tendency to be discouraged by the capital shortages, lack of skills and technical knowledge, inexperience, or other problems to which their former inactivity had long been ascribed. The products of these small manufacturers -- jams, pickles, chocolate, pots and pans, and an almost endless list of similar consumer products -- were often crude but they usually improved as time went on and some even succeeded in gaining the favor of a critical, import-coddled public. Thus the controls, for all their faults, did achieve one thing for which official policy had long striven with only slight success: a channeling of the proven abilities of the local entrepreneurial class out of the

old familiar lines -- estate agriculture, real estate, and trade -- and into manufacturing.

Other side effects of the import controls were less desirable. The lower volume of imported goods handled created a recession in some segments of wholesale and retail trade, especially in the large import firms and department stores of Colombo. Holders of imported consumer goods and of used consumer durables, notably cars, made huge windfall gains. Offsetting in part the salutary influence of the new incentives that had been injected into the economy were the additional layers of red tape through which the potential manufacturer was forced to wade and the increased number of rather arbitrary government decisions upon which the success of his business came to depend. For the ordinary man a period of austerity began. Real consumption per head ceased to grow, stagnating at about Rs. 480.[1] For the middle class man, who had formerly consumed a high proportion of imported goods, real income undoubtedly fell and a considerable amount of belt-tightening became necessary. All in all, then, the abrupt transition from open inflation via the balance of payments to inflation suppressed by direct trade controls was far from painless.

It is too soon to say just what effect the closing of the economy will have on the rate of economic growth. In the early sixties the economy experienced growth rates which were somewhat lower than those of the fifties, but problems of transition and an unfavorable turn in export prices were mainly to blame for this slackening of the rate of expansion. As Table 7.2 shows, real output rose from 1959 through 1963

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[1] Using Central Bank aggregate consumption figures (Central Bank Annual Report for 1963, p. 27), the CPI as a deflator, and population estimates from the Registrar-General's Department and from the 1963 census, apparent consumption per capita in 1959 prices rose from Rs. 486 in 1959 toRs. 513 in 1960. Thereafter, though, figures of Rs. 480 for 1961, Rs. 477 for 1962, and Rs. 482 for 1963 were recorded. Any bias in these data is upwards, since the downward-biased CPI is an inadequate deflator and the 1963 preliminary census count seems a bit low relative to the estimates made for earlier years by the Registrar-General's Department. Actual real per capita consumption thus fell considerably from 1960 to 1963.

Table 7.2

Gross National Product and Main Components, 1959-63
(Rs. millions)

	1959	1960	1961	1962	1963
A. In Current Market Prices[1]					
Private consumption	4,678	4,991	4,849	5,010	5,309
Government consumption	881	911	926	979	1,011
Gross domestic fixed capital formation	1,069	966	978	1,021	982
Change in stocks	-11	-47	67	2	12
Exports of goods & services	2,016	2,011	1,907	1,966	1,914
Imports of goods & services	2,176	2,209	1,972	2,070	2,014
Gross Domestic Product	6,457	6,622	6,755	6,919	7,213
Net factor income from abroad	-37	-44	-40	-47	-52
Gross National Product	6,420	6,578	6,715	6,872	7,161
B. In Constant (1959) Factor Cost Prices					
Gross National Product[2]	5,854	6,078	6,260	6,493	6,611
Gross National Income[3]	5,854	6,064	6,087	6,391	6,349
C. Annual Growth Rates (per cent)					Av. 1959-1963
GNP in current market prices	-	2.5	2.1	2.3	4.2	2.8
GNP at 1959 factor cost prices	-	3.8	3.0	3.7	1.8	3.1
GNI at 1959 factor cost prices	-	3.6	0.4	5.0	-0.7	2.1

[1] Source: Central Bank Annual Report for 1963, pp. 25-26.

[2] Ibid., p. 33.

[3] Allows for changes in the terms of trade by deflating export value in current prices by the import price index rather than by export prices; see Table A-3 and the last note attached to it.

In physical terms, production for domestic use grew at almost the same rate as output for export: by 13.1 per cent from 1959 to 1963.[1] Paddy output and yield continued their strong upward trends, even though interrupted by bad years in 1961 and 1963; gross output rose by 34.8 per cent, 1959-63.[2] Industrial production had begun to grow at a good pace (see Table 7.3), but it was still too small a proportion of national output to influence the overall growth rate very much.

Table 7.3

Indexes of Industrial Production, 1958-62[1]
(1952-56 = 100)

	1958	1959	1960	1961	1962
Mining & quarrying	53.3	73.0	101.0	87.1	86.8
Manufacturing	113.8	124.5	133.0	139.0	151.3
Electricity	140.7	157.5	174.4	185.0	202.3
Industrial production	114.2	125.1	135.0	141.1	152.3

[1]Source: Table A-36, below; Development Division, Department of Industries. There is a distinct possibility that increases in manufacturing output after 1960 arising from small-scale private activity are understated in this table.

In seeking to determine what Ceylon's growth rate might be in the near future, one should look not only at recent rates of growth but also at the rates of capital formation which have prevailed in the post-1960 environment. Capital formation rates give some limited basis for optimism. Even though there were new incentives to invest in facilities designed to produce for the local market, the straitened circumstances of the economy led to a fall in gross investment from 1959 to 1960 (see Table 7.4). Thereafter the volume of investment made a limited recovery, but in 1963 import restrictions bit into investment goods imports for the first time and

[1]Ibid.

[2]Ibid, p. 35.

investment volume may have slipped again. Throughout the whole period, though, gross domestic fixed investment as a percentage of GNP was apparently running ahead of its average level for the fifties; according to Central Bank data it averaged 14.5 per cent of GDP in 1960-63.[1] Moreover, the composition of fixed investment underwent some promising changes: imported transportation equipment declined sharply while private investment in plant and machinery (still a relatively small item) showed a healthy buoyancy. Although the changes in investment volume and composition were far from dramatic the optimist might be able to see in them some promise that the acceleration of growth and structural change which had not yet fully materialized by 1963 might emerge in the near future.

On the basis of all this fragmentary evidence, the operation of the post-1960 economy can be tentatively assessed. Despite some fairly high transitional costs, most of which can be ascribed to the suddenness with which the economy was closed, it is clear that the process of restructuring the economy has been accelerated.[2] At the same time, though, growth has slowed down a bit. In part this is a transitional problem. Some of the blame must also go to world price movements, the factor perennially outside the control of Ceylon's policy makers. Still, through 1963 the closing of the economy had not had any noticeable effect of accelerating economic growth. What the future holds one can only guess. If, as the author believes, the changes of the early

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[1] The average for 1950-59 according to the Center accounts (see Table A-2, below) was 11.5 per cent. A direct comparison of this figure with the 14.5 per cent Central Bank estimate cited in the text would be misleading, though, because on the basis of a comparison of the two accounting systems for 1959 and 1960 (the only two years of overlap) the Central Bank accounts yield an investment ratio which is two or three percentage points above the one derived from the Center accounts. Thus it is even possible that the investment ratio of the early sixties was not actually higher than that of the fifties.

[2] Especially in the sense that investment has been redirected to new fields. As noted in the text, no tendency for real output for domestic use to rise relative to output for export had emerged by 1963 (though output for domestic use did rise as a percentage of GDP in current value terms as export prices fell).

Table 7.4

Gross Domestic Capital Formation, 1959-62[1]
(current Rs. millions)

	1959	1960	1961	1962	1963
Private Sector and Public Corporations					
1. Gross domestic fixed capital formation.					
a. Planting and replanting	62	63	63	64	61
b. Building	336	341	320	342	262
c. Plant & machinery	119	77	113	113	154
d. Transportation	153	109	85	92	63
e. Imported capital goods n.e.s.	64	59	55	57	59
Total	733	618	652	627	610
2. Change in stocks	12	-31	16	-41	12
Total Private GDCF	745	618	652	627	610
Government and Government Enterprises					
1. Gross domestic fixed capital formation	336	317	341	364	384
2. Change in stocks	-23	-17	52	43	0[2]
Total Government GDCF	313	300	393	407	384[2]
All Sectors					
1. Gross domestic fixed capital formation	1,069	966	978	1,031	982[2]
2. Change in stocks	-11	-47	67	2	12[2]
Total GDCF	1,058	918	1,045	1,033	994[2]
GDFCF/GNP	16.7	14.7	14.6	15.0	13.7
GDCF/GNP	16.5	14.0	15.6	15.0	13.9

[1]Source: Central Bank Annual Report for 1963, p. 28.

[2]Provisional.

1960's are permanent alterations in the economic environment in which the economy must operate and not just a passing phase, the future holds problems and possibilities unimagined in the past. Under favorable circumstances both growth and structural change might proceed more rapidly than in the past. If the circumstances are not favorable and the challenges not met, then economic retrogression is a very real possibility.

A NEW ERA?

It has been contented here that to be adequately understood the economic experience of Ceylon since the late forties must be looked at in the light of the structure and dynamics of the classical export economy. From this point of view that experience emerges as an attempt to continue on with the old economic system at a time when several features of the environment in which the classical economy had once operated successfully had changed and when a number of additional demands were being made on the economy which no one had asked of it in earlier times. The period from 1946 to 1960 was thus a time of mounting contradictions and tensions, culminating in a

breakdown of the system which, given the apparent inability of Ceylon's leaders to reform the export economy and make it viable, came to be inevitable.

The features of the classical export economy were outlined in Chapter 2. To recapitulate, they were:

(1) A dualistic economic structure, consisting of (a) a dynamic export sector producing for the world market which, given sufficiently high and steady prices, was capable of rapid output and employment growth (first resource-extensive, then resource-intensive) and (b) a traditional sector producing for the village market which was static in the sense of having its cultural and technical roots in ancient customs, though it was subject to gradual change through the indirect influence of export-sector growth; minimal economic interrelations between the sectors.

(2) In the export sector, a labor supply which adjusted automatically to labor demand; in the traditional sector, a low growth rate of the population and hence of the labor force.

(3) Adequate land (to a point) for the export sector and few severe land scarcity problems for the traditional sector.

(4) Relatively easy access to capital for the export sector.

(5) Limited government, collecting revenue from the export sector and providing services mostly to it; total expenditures trimmed to match revenues.

(6) Automatic adjustment of money supply (both currency and bank money) to export-sector conditions; no independent monetary policy and few monetary problems.

Several important deviations from this system, most of which entered the picture in the late 1940's, became increasingly evident during the 1950's:

(1) Government activity expanded; the export sector was taxed much more heavily and resources were channeled from it into the traditional sector and

into an embryonic "third sector" (i.e. a sector which is technologically modern but domestically oriented); this attempt to grow through structural change was, however, only moderately successful.

(2) Migration ended; labor supply became tied to a high rate of natural increase of the domestic population.

(3) Cultivation was pushed so far out on to the extensive margin that the cost of putting new acreage into cultivation rose to prohibitive heights.

(4) Capital shortage became a problem.

(5) The government felt severe pressures to provide more current services to a public whose numbers were increasing rapidly; it pushed its traditional revenue sources to their limits, generally failed in attempts to develop new sources, and finally resorted to massive budget deficits.

(6) Institutional changes opened up the possibility of autonomous monetary policies and events; inflationary fiscal policy had inflationary monetary repercussions.

By 1960 most of these effects had had time to work themselves out. In many ways the years intervening since independence had been good ones: there had been some output and productivity growth in almost all sectors, a lot in some of them. In a few economic spheres -- unemployment, pressure on land, international finance -- things had been getting worse. In general, insufficient preventative action was taken to forestall further deterioration in these areas. For the first time in 1960, though, something deteriorated to the point where the need to act became imperative. Predictably, it was the foreign balances which reached this point first, but it could have been something else. The actions taken by the government brought import trade under tight government control for the first time and thus constituted another major step away from the classical export economy. It is probable, though, that this was more than just another modification in an extemporized transitional version of the export economy. More likely it was nothing more or less than the beginning of a new era.

It is unlikely that Ceylon can ever return to its old pattern of export dependence and relatively free entry of imports. The likelihood that government deficits will continue and the probability that once a fairly substantial industrial sector is built up behind a protective tariff wall it is not likely to be exposed to the rigors of open competition with imports in the foreseeable future both work against a reopening of the economy. True, another export boom similar to that of the early fifties could provide a sudden improvement in the external balances. If it did, imports would be eased once more (though hopefully not so much as in 1950-52 -- one hopes that the Ceylon government has learned something from experience) but such an occurance could only be a temporary reversal of the trend. The long term forces working against the continuation of the export economy are too great and would soon serve to reestablish the tendencies noted throughout the 1950's. The rising population, coupled with the necessarily slow rise of export production and the unfavorable trend of export prices, make it most unlikely that the plantation sector can ever again generate enough export receipts to satisfy all the import needs of Ceylon's population. In any case, to think in terms of another major export boom is probably to indulge in fantasy. The more likely course of events is that 1961 will truly turn out to be the end of an era and that the export economy, even in the modified form in which it existed during the fifties, will not be reinstated, even briefly.

The end of the export economy does not imply, of course, that Ceylon will abandon the production of tea, rubber, and coconuts for the world market and become autarkic. In the new era the export sector can be expected to continue along a growth path similar to the one it followed in the 1950's. But the permanent control of import trade by the government and the forced alteration of the structure of imports should induce more and more local production for the domestic market. This opens a new set of potentials for economic growth and structural change.

Just what are the potentials of the new era, if indeed one is beginning? Certain trends, some transitional and others likely to become permanent features of

the new environment, have already been noted. With the turning of aggregate demand inward which followed the closing off of imports, a stimulus was given to the domestic sector. But would the domestic sector respond? Through 1962 the response was fairly impressive, but still not great enough to prevent shortages and increases in the prices of many goods. All in all, there is reason to be optimistic about the prospective growth of production for local use. There are roadblocks in the way of this growth -- capital scarcity, lack of skills, needs for imported machinery and materials -- but all of these can be overcome. Despite high company tax rates, capital can be generated by plowing back profits. Given the demand for goods, skills can be acquired. The need to import capital equipment and supplies is perhaps a more difficult problem, especially since it involves positive government action on individual cases and often this takes time. There is hope, though, that the government, now recognizing the importance of action to aid private industrial development and trying to gain advantages from adversity, will be able to streamline its administrative machinery and make it work more closely in line with the needs of the country.

All of this is on the positive side. It leads one to expect that Ceylon's economy will now be rapidly restructured. If output for local use can be made to grow more rapidly and output of export goods continues to rise at its past rate, then ipso facto the rate of economic growth will be enhanced. This is the hope held out by the new economic system. On the darker side, though, there are some major forebodings. Will employment grow as fast as output and will it grow fast enough to soak up the increasingly large annual increments to the labor force anticipated in the years to come? What is the long run promise of economic growth based on internal demand for a small country like Ceylon; isn't a particularly inefficient form of autarky likely to be the ultimate result?

There is indeed much less cause to be sanguine about employment prospects in Ceylon than about the chances of a sufficiently rapid rise in national product.

The natural consequences of past demographic trends, abetted perhaps by a slowing down of the spread of education as bottlenecks in the provision of educational facilities grow worse, will gradually raise the rate of growth of the labor force from the 2.2 per cent annual rate of the fifties towards the population growth rate of about 2.6 per cent. Even very rapid growth of industrial output will absorb little additional labor. The government plants built so far have been highly capital-intensive (see Table A-65, below) and the ones under construction or being contemplated at the present writing -- steel, tires and tubes, grain milling, and fertilizers -- are even more so. The type of small-scale private industry which has proliferated since 1961 is less capital-intensive but it will provide employment for only a tiny fraction of the available labor. Perhaps with increases in the prices of imported factors of production relative to domestic factors private firms will be induced to use more labor-intensive methods than they otherwise would. Even using high projections of industrial growth, though, it is clear that the main burden of providing jobs for new workers will continue to fall, as it did in the fifties, on the agricultural and service sectors. Here Ceylon's rapidly rising level of educational achievement poses a serious problem. Increasing education means that many new entrants to the labor force rule out employment in virtually all of agriculture and much of the service sector as unbefitting to their social and intellectual level. Outside of industry, the only jobs open to their consideration are thus professional and clerical service occupations. It is hard to say which aspect of the unemployment problem is more forbidding: the aggregate problem of finding jobs for some 100,000 new workers every year or the difficulty of obtaining suitable employment for the much smaller but growing number issuing forth from the Ceylonese educational system each year.

Is concentration on production for the local market a blind alley for Ceylon? There are two major limitations to the industrialization of Ceylon: lack of almost all of the raw material inputs needed for modern industry except hydroelectric

power[1] and the smallness of the national market for most finished goods. The former consideration dictates that industry must be based either on processing local agricultural raw materials or on imported materials. There is some possibility of extending the processing of Ceylon's traditional export crops further: e.g., by manufacturing "instant" tea from green leaf or by producing auto tires. Aside from these possibilities, which are obviously quite limited, and unless the production of some agricultura raw material which has not been a major product of Ceylon in the past -- such as cotton or sugar, both of which have been tried with scant success -- can be developed, the main reliance will have to be put in imported raw materials. This is a serious limitation, but not necessarily a fatal one, as the Japanese and Hong Kong success stories show.

The hurdle posed by the smallness of the national market may be a more difficult one to clear. In part, the growth of income and population will solve this problem over time by enlarging the national market. But at no conceivable level of per capita income will Ceylon be able to support an efficient automobile-producing operation, for example. This is an extreme case, but it is true that the list of goods for which a substitution of local production for imports can be made quickly and easily will soon be exhausted. The smallness of Ceylon's population and the still low per capita income level place a fairly definite limit on the number of commodities that can be produced in Ceylon purely for the local market without an enormous sacrifice of efficiency. When this limit is reached, economic policy will be faced with three alternatives: to be satisfied with the degree of industrialization already achieved, to press on regardless with increasingly inefficient plants requiring ever-increasing degrees of subsidization, or to seek foreign markets for industrial exports, presumably in countries which are trying to bring about a similar change

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[1]Ceylon has little mineral wealth; there are some iron deposits but as of 1964 these seemed to be of no commercial value.

in the structure of their own economies and are similarly penalizing or excluding foreign competition. The first two alternatives are unacceptable. The chances for a reasonably efficient industrial sector depend on Ceylon's being able to escape from the autarkic pattern they imply and enter into international trade in manufactures. Such trade will probably not be possible along conventional private, multilateral lines. It may be conducted through bilateral barter agreements of the kind which were entered into by the Ceylon government with various Communist-bloc and underdeveloped countries during the late fifties and early sixties. Better still, it might be worked out through some multilateral regional trade and cooperative development system. The obstacles to full-scale industrial development, while formidable, are clearly not insurmountable.

Partly because of the nature of the author's competence and interests and partly because the subject of a book must be limited somehow, relatively little has been said here about noneconomic aspects of Ceylon's experience with economic growth. Yet they have clearly been important in the past and will continue to be in the future. Many Western observers have viewed Ceylon as a country with great economic potential which, for some set of political, sociological, and even psychological reasons has failed to realize its potential. Without going into the country's noneconomic problems in any detail, one might ask whether these difficulties are likely to worsen or ease in the future. During the fifties the noneconomic issues of national life often distracted the attention of the public and the government from economic development.[1] Education, religion, language, international politics, the civil service -- each of these spheres provided a burning national issue during the 1950's, drawing the attention of the nation away from economic matters and preventing the emergence of a strong

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[1] For a good summary of Ceylon's political experience (which, however, covers only the period up to 1959 and says relatively little about events after 1956), see W. Howard Wriggins, Ceylon: Dilemmas of a New Nation, Princeton, 1960; for an analysis of the deep-rooted split between the Sinhalese and the Tamils, see B. H. Farmer, Ceylon: A Nation Divided, London, 1963.

feeling of national identity and unity. Many of these thorny issues had been essentially resolved by 1960, but often at the cost of leaving an embittered minority feeling more and more alienated from the mainstream of national life. Thus, by 1960 there were fewer distracting issues outstanding than there had been earlier but the sought-for national unity was no closer at hand.

Some readers who possess prior familiarity with Ceylon's troubles may have felt that some of the hopes and judgments expressed in this volume have been overly optimistic. Yet this book has dealt with economics, and the economic problems of the country, while considerable, are far from insurmountable. The view that Ceylon's economic future is black -- and the fear that its hue may be red -- are not predicated on a disparaging judgment of the island's economic potential but on doubts that its people can do what is required of them. This pessimistic assessment of the noneconomic imponderables may yet turn out to be correct. On the other hand, a more optimistic view of Ceylon's economic future has much to recommend it: now that a new and independent nation has been formed and the basic issues of nation-building settled, it is possible that Ceylon's people can now devote their full attentions to a determined effort to lift themselves step by step up the ladder of economic development.