INTERNATIONAL
JOURNAL OF
AGRARIAN AFFAIRS
Vol. IV, No. 4, June 1964

1. Prospects for Indian Tea Exports

2. Agricultural Economics in some African Countries

Produced by the
University of Oxford Institute of Agrarian Affairs
in conjunction with the International Association
of Agricultural Economists

Price 10s. 6d. net

OXFORD UNIVERSITY PRESS
LONDON

By MICHAEL BUTTERWICK

University of Oxford Institute of Agrarian Affairs

PROSPECTS FOR INDIAN TEA EXPORTS

Introduction

THIS study was prompted by a visit to India early in 1963. Much of the limited time available was spent visiting universities, but I was also able to have talks with a number of people concerned with tea in India. I was much impressed by the importance of this industry to the Indian economy. A further visit at the end of 1963 provided an opportunity of supplementing to some extent the information and impressions obtained during the earlier visit.

The study makes no attempt to be comprehensive. The Indian tea industry has been well served by a number of textbooks[1] as well as receiving attention from the Government through the Plantation Enquiry Committee whose report published in 1954 still deserves careful attention. Reliable and well-presented statistics are available through the International Tea Committee's *Annual Bulletin of Statistics* as well as through the excellent publications of the Indian Tea Board and the Indian Tea Association.[2] There are also the published results of tea companies both Sterling and Rupee. Finally there is the FAO report on *Tea-Trends and Prospects* published in 1960 which was intended to be a full and comprehensive study of the supply and demand factors affecting the tea trade throughout the world, including the Indian tea industry.

In view of the wealth of information that is already available, it seemed best in a study of this kind to concentrate attention on the economic aspects of the Indian tea industry that are most significant at present and on those particularly related to exports. It is, however, impossible to avoid a few introductory remarks describing the place of tea in the Indian economy and its importance among her agricultural exports, as well as a brief description of the main points in the history of the tea industry.

[1] e.g. T. Eden, *Tea*, Longmans, Green & Co., London, and C. R. Harler, *The Culture and Marketing of Tea*, Oxford University Press.

[2] See, in particular, *Tea in North East India*, The Indian Tea Association, February 1961.

Tea in the Indian economy

Since Independence in 1947, and particularly since 1951 when the First Five-Year Plan began, India has made fairly satisfactory progress in expanding her industries. During the era of Indian planning the capacity of iron and steel mills has increased, new chemical and cement works have been built and expansion has taken place in a great number of different industries. Industrial production has been rising at an annual rate of about 7 per cent. compared with a rate of increase of gross national product of only 4 per cent.

In spite of this progress in industrialization, agriculture is still by far the most important economic activity in India. About three-quarters of the total population, or over 350 million people, still live in rural areas. Agriculture accounts for as much as half of India's gross national product.

The preponderance of agriculture in India's economy has necessarily meant that a satisfactory level of overall growth has been dependent on the performance of the agricultural sector. Generally speaking this has been disappointing. Table 1 shows that agricultural production has increased by about 40 per cent. since 1950/1, an annual average increase of less than 4 per cent. Productivity per acre has improved a great deal less. It has been calculated that about half the increased production is due to extension of the area under cultivation. There is only a very limited further amount of virgin land suitable for cultivation. The central problem of Indian agriculture is, therefore, that productivity per acre is hardly keeping pace with increases in India's population, which is rising at about 2 per cent. annually. This is occurring in spite of the large amounts of capital that have flowed into agriculture over the last twelve years, amounting to a total of Rs 1,400 crores from the Government alone over the first two Plans; and also in spite of the agrarian reforms that have been carried through with varying success since Independence.

In the Third Five-Year Plan (1961/2 to 1965/6) agriculture was given first priority. This has not proved sufficient. Following the recent mid-term review of the Plan the total financial provision for agriculture has been increased by nearly 10 per cent. to just over double the amount allocated to agriculture during the Second Plan. The Central Government is also urging the State Governments, which are responsible for agricultural administration, to curtail long-term measures for agricultural development, and concentrate instead on projects which will increase farm production over a short period. This action recognizes the fact that agricultural production was nearly static over the first two years of the Third Plan. To achieve the overall planned increase in agricultural production of 30 per cent. over the five years of the Plan will now necessarily involve a lot of luck with the weather as well as really vigorous efforts by the Central and State Governments. A failure in this all-important sector could have drastic effects on the whole Indian economy.

TABLE 1. *Index numbers of agricultural production in India, 1950/1–1961/2*

	Weight	*1950/1*	*1955/6*	*1956/7*	*1957/8*	*1958/9*	*1959/60*	*1960/1*	*1961/2*
I. Foodgrains	66·9	90·5	115·3	120·8	109·2	131·0	126·8	135·6	135·2
(*a*) Cereals*									
Rice	35·3	87·9	114·2	120·4	105·7	128·4	125·3	136·2	136·0
Wheat	8·5	101·1	131·3	140·7	118·5	147·4	151·7	162·7	174·8
Jowar	5·0	89·8	96·7	105·3	124·1	129·8	116·9	134·6	111·9
Bajra	2·7	83·8	108·3	90·1	113·5	121·3	112·1	101·2	111·6
Maize	2·1	84·4	112·3	132·8	135·9	135·5	146·5	144·5	146·2
(*b*) Pulses†	8·6	91·7	118·4	122·9	103·0	136·0	120·0	128·6	121·1
Gram	3·7	98·0	138·9	159·8	125·8	180·3	143·5	162·3	152·7
II. Non-foodgrains	33·1	105·9	119·9	131·5	129·5	139·4	132·0	148·5	148·4
(*a*) Oilseeds‡	9·9	98·5	108·6	120·3	119·0	136·8	118·3	131·2	136·9
Groundnut	5·7	101·4	112·4	127·2	137·5	149·0	122·5	136·5	145·5
Sesamum	1·2	101·6	104·8	98·2	85·7	123·1	92·0	81·0	93·8
Linseed	0·8	87·8	97·1	90·3	60·0	104·7	104·9	94·7	95·2
Castorseed	0·2	80·5	96·1	95·3	68·7	85·9	82·8	69·5	78·9
Rapeseed and Mustard	2·0	94·6	105·8	128·3	114·8	128·3	130·9	166·9	160·6
(*b*) Fibres§	4·5	108·6	149·7	170·7	164·4	175·8	141·2	175·7	182·3
Cotton	2·8	110·7	153·9	181·2	178·8	175·8	138·5	203·3	169·7
Jute	1·4	106·3	135·8	138·7	128·8	158·7	140·7	121·7	191·6
Mesta	0·3	100·0	174·7	221·5	196·2	255·9	168·5	170·5	257·0
(*c*) Plantation crops	3·6	104·0	113·2	123·0	122·7	127·3	128·4	131·3	138·7
Tea	3·3	103·8	107·2	117·2	115·7	119·4	119·6	116·7	130·3
Coffee	0·2	112·3	196·1	204·1	229·8	240·8	259·6	355·1	257·6
Rubber	0·1	93·8	146·1	152·9	140·1	160·2	154·6	165·2	177·0
(*d*) Miscellaneous crops‖	15·1	110·3	120·1	129·2	127·5	133·1	139·1	155·3	150·4
Sugarcane	8·7	113·7	119·8	137·2	138·1	141·5	150·3	173·9	162·0
Tobacco	1·9	97·3	112·9	113·7	89·4	113·2	106·5	116·4	128·5
III. All commodities	100·0	95·6	116·8	124·3	115·9	133·8	128·5	139·9	139·9

* Including Ragi, small Millets and Barley. † Including Tur and other pulses. ‡ Including Sesamum. § Including Mesta. ‖ Including Potatoes, Pepper, Chillies and Ginger.

Source: Government of India, Ministry of Food and Agriculture.

Agriculture plays an equally important part in India's trade. Table 2, showing some of the main agricultural exports, reveals that these amount to nearly half of the total value of her exports and that the first two items, tea and jute manufactures, together comprise 40 per cent. of total exports. (It is recognized of course that jute manufactures, unlike raw jute, are frequently classed as non-agricultural exports.)

It is well known that India has had very considerable and increasing balance of payments difficulties during the past decade. This is illustrated in Table 3. The table reveals how extraordinarily constant India's exports have been over the period in question. While imports have increased very substantially, exports have remained obstinately static at around Rs 600 crores per annum. During this period India's gold and foreign exchange reserves fell from about $1,800 million to about $600 million.

TABLE 2. *India's principal agricultural exports, 1961/2*

	(*Rs lakhs*)	*Percentage of total exports*
Jute manufactures	1,44,79	22
Tea	1,22,40	18
Coffee	9,01	1½
Raw cotton	20,37	3
Tobacco	14,04	2
Spices	17,57	2½
Total	3,28,18	49

TABLE 3. *India's balance of payments position*

Fiscal year (April–March)	*Imports*	*Exports*	*Trade balance*	*Net invisible earnings (excluding official grant aid)*	*Net current account (before official grant aid)*
		Million rupees			
1952/3	6,330	6,019	−311	−805	+494
1953/4	5,918	5,397	−521	−805	+284
1954/5	6,838	5,966	−872	−774	−98
1955/6	7,614	6,402	−1,212	−885	−327
1956/7	10,995	6,352	−4,643	−1,125	−3,518
1957/8	12,336	6,685	−5,651	−1,040	−4,611
1958/9	10,290	5,763	−4,527	−908	−3,619
1959/60	9,283	6,237	−3,046	−812	−2,234
1960/1	11,002	6,305	−4,697	−362	−4,335
1961/2	9,780	6,675	−3,105	−121	−3,226

Source: *Reserve Bank of India's Annual Reports.*

The performance of India's main agricultural exports during this period is analysed in Table 4.

The table shows that while there have been important changes in individual products (a modest increase in tea and jute exports and a big rise in coffee exports) the total of the main agricultural exports has recently changed very little. The total for 1961/2 is only 6 per cent higher than that for 1956/7 although in this five-year period world trade expanded by about 20 per cent.

TABLE 4. *India's major agricultural exports, 1953/4, 1956/7 and 1961/2*

	1953/4 Rs lakhs	Index 1953/4 = 100		Index 1953/4 = 100	
		1956/7 Rs lakhs		1961/2 Rs. lakhs	
Jute manufactures	1,13,92	1,19,21	105	1,44,79	127
Tea	1,02,19	1,45,15	142	1,22,40	109
Coffee	1,46	6,69	410	9,01	617
Raw cotton	19,28	20,50	107	20,37	106
Tobacco	11,02	12,49	113	14,04	127
Spices	16,87	9,01	54	17,57	104
Total	2,64,76	3,13,05	118	3,28,18	125

Over the past five years tea has made the biggest total contribution to India's foreign exchange earnings. Its future looks generally more promising than that of jute manufactures. (The 1962/3 target for tea exports was Rs 140 crores compared with Rs 130 crores for jute manufactures.) The tea industry therefore deserves very careful consideration. It is likely to remain in the future just as important to the Indian economy as it has been in the past.

India and the tea trade

India was a late-comer to tea production and export in comparison with China. It is thought that tea-drinking has been practised in China and parts of Upper Burma since the fourth century A.D., where its cultivation and the preparation of the drink had undergone great refinement long before Europe was aware of it. Tea was brought to the notice of Europe by Ramusio the Venetian traveller in 1559. But it was not until the early part of the seventeenth century that imports into Europe began through the initiative of the Dutch. The British, later to dominate the tea trade through the British East India Company, were some years behind competition from the Continent. The first public sales of tea in London occurred in 1657, but at that time tea was extremely expensive, £2 to £3 per lb. or more. The East India Company began direct importation of tea from China in 1689.[1]

[1] For an account of the early history of the tea trade see Gervas Huxley, *Talking of Tea*, Thames & Hudson, London.

The Indian tea industry dates from the early part of the nineteenth century. The first exports took place in 1838, and these were sold in London on 10 January 1839. The gradual expansion of the industry and increased demands from Britain permitted exports of 164·6 million lb. in 1900, nearly all of which went to Britain. India had taken China's place as the world's leading tea exporter, a position which she has retained ever since.

Why was tea drunk? How was it successfully introduced in Britain, when it relatively failed elsewhere? What was its appeal as a new beverage against the very strong competition of coffee, chocolate, wine and beer? There is no simple answer to these questions. In Britain tea was popular from the time of its first introduction. People were prepared to pay the very high prices brought about by duties and the monopolistic position of the East India Company. Tea was, however, particularly lucky in the amount of publicity it obtained. It was a controversial drink from the earliest times. Some people claimed that it had very adverse effects on the drinker. Only a few doctors were prepared to agree with the seventeenth-century Dr. Jonquet of Paris, who proclaimed it a 'Divine Herb' capable of remedying all sorts of ills. In an age lacking advertising techniques this was just the sort of attention that was needed to stimulate interest. In Britain tea-drinking soon became a popular habit among the rich, which the poorer people began to imitate to an increasing extent as tea became a cheaper drink.

It must have been taste and fashion rather than any economic influence which made Britain a tea-drinking country while most of the continent of Europe turned to coffee. It is true that some competing beverages like wine and milk have generally been cheaper on the Continent than in Britain, but this does not seem to answer this problem at all satisfactorily. Until comparatively recently tea had been drunk in Britain in spite of its high cost—the last duty on tea was not removed until the Ottawa Agreements of 1932.

The tea plant, *Camellia sinensis*, can be grown at many different elevations provided rainfall and soil conditions are favourable. Soon after the tea industry had been developed in India other countries began to compete for the expanding British market. The first to do so was Ceylon, where enormous areas were planted to tea during the 1880's and 1890's. By 1900 Ceylon had obtained over a third of the British market and was India's leading competitor. Tea cultivation had begun much earlier in Java and Sumatra, the industry being established by about 1700. Between the two world wars Indonesia was an extremely important producer, but production is now about half the pre-war level. Russia grew tea on a small scale before the First World War and by 1938 the area used had increased to about 120,000 acres. East Africa, which now contributes a significant amount of tea for the world market, was even later in the field. Before the First War only about 40,000 acres were planted to tea, a third of the present acreage. Other countries growing tea include Japan (a large producer), Portuguese East Africa, Turkey and Argentina, which is just beginning to establish a fair export business.

While there are many countries in the world producing tea, and even more capable of doing so, the bulk of world production is in the hands of five countries, India, Ceylon, Indonesia, Japan and China. Very little is known about recent developments in Chinese production; when last reported—in 1959—it stood at 337 million lb., or nearly half India's production. There are no reliable estimates of what has happened since then. Chinese exports were about 65 million lb. in 1962.

The remaining four countries produce about 90 per cent. of the world's tea outside China. Their production in recent years is shown in the following table:

TABLE 5. *World tea production: Major producers, Made tea in thousand lb.*

	1947	*1951*	*1955*	*1959*	*1961*	*1962*
India	560,566	629,127	678,372	718,609	781,311	756,980
Ceylon	298,526	326,279	380,013	413,130	455,229	467,049
Indonesia	3,299	102,543	96,992	97,612	95,107	104,104
Japan	48,816	97,027	160,616	164,439	174,439	170,763

So far as the export market is concerned Japan can be ignored, as she consumes virtually all her own production of tea. Indonesia remains an important exporter, though her production and exports have never recovered to the pre-war level. Indonesia is now exporting about three-quarters of her total production, but this represents no more than half her pre-war exports. The extent to which India and Ceylon now dominate the export market for tea is illustrated in Table 6.

The current position is that India and Ceylon are together accounting for about 75 per cent. of total world trade in tea. The share that each of the two countries has is now very similar. As competition from Ceylon has such an important effect on India's exports of tea, the export performance of the two countries must be shown in greater detail.

TABLE 6. *Exports of tea: India, Ceylon and all other countries*
Quantities in million lb. Calendar years

	1938	*% of total*	*1946*	*% of total*	*1953*	*% of total*	*1960*	*% of total*	*1962*	*% of total*
India	351·5	38	304·1	46½	496·5	47½	425·7	36½	485·9	39
Ceylon	235·7	25	291·7	44½	335·6	32½	409·1	35	451·6	36½
All others*	344·2	37	59·5	9	207·0	20	332·0	28½	306·0	24½

* Approximate figures after 1946. Includes China (Mainland)

TABLE 7. *Exports of tea: India and Ceylon only*
Quantities in million lb. Calendar years

	1938	*1946*	*1950*	*1954*	*1958*	*1960*	*1961*	*1962*
India	357·7	304·1	403·2	443·8	505·6	425·7	455·5	485·9
Ceylon	235·7	291·8	298·1	361·3	410·8	409·8	425·7	451·6
Ceylon as % of India	66%	95%	74%	81%	81%	96%	93%	93%

India now has about the same percentage of the total export market as she had before the war. Ceylon, however, has increased her share of the market from about 25 per cent. to rather over 35 per cent. Ceylon seems to have profited more than India from the reduced scale of Indonesian exports. The two main exporters of tea, India and Ceylon, are now more or less level in volume. But Ceylon has increased her exports by 17 per cent. compared with 1959 whereas Indian exports are almost exactly the same as they were in that year.

The significance of this from the point of view of India's foreign exchange earnings has already been indicated. An increase of only 1 per cent. in tea exports would earn at current prices about Rs 1·25 crores, or nearly £10 million. Why has India's share of the total market declined? Why does Ceylon appear to be so much more successful in export sales?

The amount of tea a country has available for export consists of production less the quantity taken by home demand. Comparing 1947, the first year of Indian independence, with 1961 it is found that Indian production increased by slightly under 40 per cent. whereas in Ceylon production was 52 per cent. up. The acreage of tea planted in each country increased over this period to almost exactly the same extent, 6 per cent. That is to say, while yields per acre have been satisfactorily improved in India, the results in Ceylon have been a great deal better still.[1]

Ceylon's better production performance would anyway have given her an advantage in developing her export trade in relation to India. Much more significant has been the change in the amount consumed within each country. Ceylon, with its comparatively small population of about 10 million people, only consumes about 8 per cent. of the tea it produces. The remainder, over 90 per cent., is exported. By contrast in India about one-third of total production is consumed within the country. In both countries *per caput* consumption has risen compared with the pre-war level. But in India the *per caput* consumption (about 0·70 lb. per year) is still less than one-quarter the *per caput* consumption in Ceylon. The present low *per caput* consumption of tea in India, where many areas have a tradition of tea-drinking, is the most important single factor in the present situation of the tea industry. It would require only a fairly small increase in domestic demand for Indian tea for the whole supply/demand equation to be disrupted. This requires an illustration.

In the twenty-five years since 1938 the *per caput* consumption of tea in Ceylon has approximately doubled. If the same thing happened in India over the next twenty-five years consumption *per caput* would still be only half the current level in Ceylon. But after allowing for the increase in population it would mean that India herself would then be consuming considerably more than the whole of her current production of about 800 million lb.

Exports versus home consumption

Before examining the crucial question of the future level of Indian domestic tea consumption it is worth considering more closely the relationship between home and export demand for Indian tea. This is complicated by four factors:

1. Tea is by no means a homogeneous product. Much of the tea consumed domestically is not of a type that is normally sold for export.[2]
2. All tea sold by auction on the London market (which accounted for about 190 million lb. of Indian tea in 1961—or about a quarter

[1] But in spite of this improvement the average yield per acre in Ceylon is still about 18 per cent. below that in India.

[2] The average price of North Indian teas sold in London in 1962 was about 5*s*. per lb. The average prices in Calcutta for the same year were about 3*s*. 6*d*. per lb. for leaf grades and 3*s*. 3*d*. per lb. for dust grades.

of total Indian production—is shipped unsold. The price that the tea will command is not known precisely at the time when the decision is made whether to export it or not.

3. The Indian Government has in the past influenced this relationship by various fiscal measures as well as by promotion through the Tea Board both at home and abroad. These measures include the export duty on tea (now abolished), the tea cess and the excise duty which was previously partly remitted on tea exported.
4. Tea producers can vary the quantity of lower grade teas they produce in relation to better grades by coarse plucking, and also by changing factory sorting techniques. If the domestic demand increases there is some possibility of satisfying it by producing a larger quantity of lower grades but at the cost of losing some quantity of the better grades that would normally go for export.

The average tea producer in India aims to get as large a proportion as possible of his teas up to export quality. In many cases, particularly among the Sterling companies, he also aims to sell as much as possible of his better grades in London[1] rather than in Calcutta in the belief that higher prices can be obtained there. (This is something which is difficult to prove one way or the other because of variations, or supposed variations, in the qualities of teas.)

Stocks of loose tea may vary from year to year at any stage in the year, but there is no deliberate carry-over, tea being a perishable commodity. Besides, the companies are generally anxious to sell their teas as soon as possible in order to raise cash. Much the same is true of the packeting trade. The policy of the major tea-blending companies is to buy as regularly as possible throughout the year, though they may need to increase their purchases of a grade of tea which is available only for a limited time in order to have enough of the grade to carry them through the year and thus avoid changing the blend.

In the immediate past no saleable Indian tea has been destroyed or otherwise disposed of except through normal marketing channels. The answer to the central problem of 'Why has India not expanded her exports of tea?' is therefore simple. Her production has not increased sufficiently to provide for rising domestic demand and to compete for (and to retain her share of) rising export demand. Short of rationing the home market (or checking demand by putting up the excise duty)

[1] This does not apply to tea from the Darjeeling area, which is normally auctioned in Calcutta.

the only way to increase the quantity of tea exported from India is to increase the amount produced. This point may seem self-evident, but it is not always appreciated.

To expand her exports in competition with Ceylon, India has therefore no effective alternative policy but one of encouraging production. Without this extra production, on a fairly large scale, she cannot expect to get the increased exports she needs. The remainder of this paper is mostly concerned with estimating whether this increase can be absorbed without difficulty by home and foreign markets, with or without promotional activity, and with considering what steps should be taken to encourage a moderate increase in production.

Domestic consumption of tea

The figures published by the Indian Tea Board of internal consumption of tea are given in Table 9. It reveals that consumption has been increasing at a rate of roughly 6 per cent. annually. Over the ten-year period population was rising at a rate of nearly 2 per cent. The rise in consumption is fairly impressive, but the present level represents an average of only about $\frac{2}{3}$ lb. per head annually.

The Third Five-Year Plan forecasts that internal consumption will rise during the period covered by the Plan at about the same rate as during the years immediately prior to the Plan. This would mean that consumption would be up 25–30 per cent. within the five years.

Prospects for consumption of tea in India depend on four considerations:

1. *Income levels.* The growth of the Indian economy has been disappointing over the past two years, especially in the agricultural sector. While a slightly more optimistic view is now justifiable, it is difficult to maintain that there is any real sign of the 'take-off' occurring in the near future.
2. *Tea-drinking habits.* Within India there are large variations in consumption. For instance surveys conducted by the Tea Board show that there are areas where over 90 per cent. of the population drink tea (Broach, West Gujerat and Ahmadnagar, Maharastra) and others where 20 per cent. or less are tea-drinkers. It is difficult to predict when the tea-drinking habit will become stronger in the latter.
3. *Fall in tea prices.* No reliable calculations are available of how consumption, particularly of lower grade teas, might be affected by a fall in tea prices.

4. *Promotion.* The Tea Board is now switching practically all its promotional activities to export tea. In view of the importance of export business this is the right decision. It is too early to tell how much effect the reduction of internal tea promotion from the previous level (Rs 14·32 lakhs in 1961/2 and Rs 12·56 lakhs in 1962/3) will have on consumption. It may be accompanied by an increase in the advertising expenditure of the domestic tea packeters. This increase is likely to occur because the present high Super Excess Profits tax is an incentive to expenditure on promotional activities. The most recent profits statement of Brooke Bond Ltd. reveals that the company made a much larger profit last year from its Indian subsidiary. In future years the high level of taxation may encourage companies like this to spend more on promotion in order to reduce their taxable profits. This might have important effects on consumption, particularly if incomes are improving at the time.

The most recent tea surveys published by the Indian Tea Board are concerned with tea consumption and other related information in eighteen towns in India in 1961. They also provide comparisons with the previous year for five of these towns. The following table gives some of the more significant results for the first nine towns:

TABLE 8. *Selected statistics from Tea Board's 1961 Tea Surveys*

Town	*State*	*% of tea-drinking families to all families in the group*	*Overall annual consumption of tea per family (kg.)*	*% of literacy*	*Income elasticity of tea consumption*
Guntur	Andhra Pradesh	34·3	0·74	60·1	0·50
Kakinada	,, ,,	54·3	1·78	54·6	0·39
Ongole	,, ,,	28·1	0·50	55·4	0·53
Tuni	,, ,,	47·3	1·27	52·4	0·32
Ballimora	Gujerat	94·9	6·01	48·7	0·41
Bulsar	,,	98·3	6·39	59·2	0·58
Dohad	,,	96·2	6·34	68·4	0·49
Gobichettipalayam	Madras	28·8	0·66	54·4	0·34
Tanjore	,,	30·9	0·83	67·0	0·47

The table illustrates the remarkable differences in tea consumption in India. In Ongole the overall annual *per caput* consumption is slightly less than ¼ lb., whereas in Bulsar, which has about the same literacy rate, the overall *per caput* consumption is $2\frac{3}{4}$ lb. Ongole has a high rate of coffee consumption, about $5\frac{1}{2}$ lb., whereas no coffee is apparently drunk in Bulsar. Surprisingly there seems to be very little difference in income elasticities of tea consumption between the coffee-drinking and the tea-drinking areas. From the survey one can estimate a country-wide elasticity of tea consumption of roughly 0·40 at current levels. What would be the income elasticity of demand at higher national income levels? There is no way of knowing this for certain, but there are indications that it would be higher than the current figure. Even in areas where tea-drinking is most strongly established the *per caput* consumption is still very much lower than in the United Kingdom; and the national average is extremely low.

'Poverty' is one of the reasons shown in the tea surveys for not taking tea. Replies to questionnaires of this kind cannot be taken too literally, but it is significant that in many towns this is the reason given by a big proportion of non-tea-drinking families—around 10 per cent. of the total, but as much as 59·4 per cent. in one town.

Forecasts of Indian consumption of tea in say ten years' time are extremely difficult. Given a reasonable rate of economic growth, consumption is likely to be at least 50 per cent. higher than now, or a total of about 450 million lb. a year. It may well reach 500 million lb. a year, or about 230 million kg.

TABLE 9. *Estimate of internal consumption of tea in India (figures are in thousand kg.)*

Year (1)	*Opening stock as on 1 April* (2)	*Production during the calendar year* (3)	*Export during the year* (4)	*Closing stock at the end of financial year* (5)	*Estimated consumption cols. (2+3) cols. (4+5)* (6)	*3 years moving averages* (7)	*Values obtained by the method of linear regression* (8)	*Values obtained by linear regression applied to moving averages* (9)
1953/4	49,115	278,777	213,500	31,727	82,665	..	78,264	79,553
1954/5	32,084	295,519	208,462	39,922	79,219	87,368	85,029	85,996
1955/6	39,652	307,704	183,769	63,367	100,220	88,961	91,794	92,439
1956/7	63,367	308,719	233,088	51,554	87,444	100,053	98,560	98,882
1957/8	51,554	310,802	191,755	58,104	112,497	102,939	105,325	105,325
1958/9	58,104	325,225	217,322	57,132	108,875	112,204	112,090	111,768
1959/60	63,933	328,011*	216,145	60,559	115,240	116,137	118,855	118,211
1960/1	60,559	322,429*	198,983	59,709	124,296	125,334	125,620	124,653
1961/2	59,709	353,859*	205,738	70,363	137,467	..	132,386	131,096
1962/3	70,363	344,445	220,790	N.A.	130,000(P)	N.A.	N.A.	N.A.

* Relate to Financial Year.
P = Provisional.
N.A. = Not available.

Export customers for Indian tea

Indian exports of tea by country of destination for the year ending 1 April 1963 are shown in the following table (in thousand lb.):

TABLE 10

Europe		
United Kingdom	283,163	
U.S.S.R.	30,961	
Ireland	16,232	
Netherlands	7,292	
Western Germany	3,577	
Eastern Germany	568	
Others	4,720	
Total		346,513
North and South America		
United States	24,530	
Canada	12,903	
Chile	739	
Others	27	
Total		38,199
Middle East and North Africa		
Egypt	39,365	
Sudan	11,558	
Iran	10,544	
Afghanistan	9,891	
Iraq	5,774	
Turkey	4,636	
Kuwait	1,922	
Others	1,017	
Total		84,707
Australasia		
Australia	11,616	
New Zealand	1,292	
		12,908
Others		3,584
Total		485,911

The table shows the special importance of the United Kingdom, which currently is taking nearly 60 per cent. of India's tea exports. No other country is importing as much as 10 per cent. of the total. Perhaps surprisingly, Egypt is India's second-biggest customer, followed by Russia, the United States and Ireland. There then follow a number of countries importing about 10 million lb. a year, such as Canada, Sudan, Iran, Afghanistan and Australia. Most other countries are at present fairly small tea consumers.

The table also shows the importance to India of the tea consumption of a number of Middle East and North African countries. In this area consumption *per caput* is often high. In Libya and Iraq the average is now over 6 lb. a year, in both cases over double the pre-war figure. Egypt, an important tea-consuming country, has a *per caput* consumption of nearly 2 lb. a year, about the same as Iran. In all these countries consumption is tending to rise both absolutely and *per caput*. This area, which takes nearly one-fifth of India's tea exports, should provide a useful market in the future.

There are a large number of potentially interesting markets for tea; for instance, Scandinavia, where the Tea Board has recently launched a promotion campaign which has evidently met with a good response. But this study will be confined to examination of markets and prospects in four countries which appear particularly significant. These are: the United Kingdom, the United States, Western Germany and Russia.

The markets for tea in these four countries are very different. Innumerable references have been made to the British as tea-drinkers. Nearly 200 years ago a visiting Frenchman reported during a tour of England: 'throughout the whole of England the drinking of tea is general. You have it twice a day and though the expense is considerable the humblest peasant has his tea twice a day just like the rich man.' No similar devotion to the beverage has ever existed in the other three countries selected. America has seen many attempts to make inroads into the coffee-drinking habit. By contrast, in Western Germany, also a coffee-drinking country, much less effort has been made, at least until recently. Russia is chosen as another example, as she is a tea-producer as well as being a large and interesting market for Indian tea.

The United Kingdom

The United Kingdom market for tea deserves very special attention. British consumption accounts for nearly a third of all tea produced throughout the world (except China, for which reliable figures are not available). Since the war Britain has regularly taken roughly 50–60 per cent. of India's tea exports. She is far and away India's most important customer. The Indian tea industry was developed to supply the United Kingdom market, and its future, at least while new markets are in course of being developed, is closely tied up with trends in British consumption of tea. (United Kingdom imports by country of origin for 1962 are shown in Table 11.)

For centuries tea has been part of British tradition and culture. It was drunk as a luxury in the seventeenth century, long before India had started producing tea. By the end of the following century the tea-drinking habit had spread throughout the country though tea was still expensive. The first Indian tea arrived for auction in London in 1839 at which time British imports were running at over 50 million lb. a year —an average *per caput* consumption of about 2½ lb. annually. Total and *per caput* consumption continued to rise very rapidly during the second half of the nineteenth century, and by 1900 had reached about 250 million lb. or about 6 lb. per head. At this time India's rapidly expanding tea industry was almost completely dependent on the United Kingdom market. Total production was 170·5 million lb., 97 per cent. was exported and practically all exports (94 per cent.) went to the United Kingdom.

TABLE 11. *United Kingdom imports and re-exports of tea, 1962 (thousands of lb.)*

Imports from:	
India	270,081
Ceylon	174,862
Nyasaland (F.R.N.)	22,832
Kenya	20,141
Uganda	5,326
Singapore	220
Indonesia	7,970
China	3,532
Vietnam	2,927
Congo	3,049
Mozambique	15,162
Argentina	4,141
Netherlands	2,343
Other foreign countries	839
Total	557,346
Re-exports of tea imported from:	
India	13,923
Ceylon	10,832
Nyasaland (F.R.N.)	3,135
Other countries	2,417
Total	38,665
Net imports	518,681

By the Second World War India's domestic consumption had much increased and was running at nearly 90 million lb. a year. India's exports (including Pakistan's) had risen to about 350 million lb., but the United Kingdom was still taking nearly 90 per cent. of them. Annual average consumption per head in Britain was 9·2 lb. in the period 1936–8. It was much the same at the end of food rationing in the early fifties. For the period 1959–61 the annual average was 9·74 lb. per head. The International Tea Committee has published figures of 'apparent consumption' in the United Kingdom after making allowance for re-exports, changes in stocks, &c. These figures, which are to a relatively small extent approximate, are shown in the table below for the period 1953–62, with a calculation of the *per caput* consumption for each year.

TABLE 12

	1953	*1954*	*1955*	*1956*	*1957*	*1958*	*1959*	*1960*	*1961*	*1962*
Apparent consumption (million lb.)	481·7	507·1	478·0	507·2	512·2	518·5	501·5	501·3	529·4	509·7
Per caput consumption (lb.)	9·5	10·0	9·4	10·0	10·0	10·0	9·6	9·6	10·0	9·4

Per caput consumption in the United Kingdom has therefore been very steady over the past ten years and is, if anything, very slowly declining.

The percentage share of the U.K. market enjoyed by India has fallen since the war. In the period 1960–2 India supplied slightly less than half of Britain's imports. Ten years earlier (1950–2) she was supplying nearly two-thirds. The basic reasons for this very significant decline are discussed elsewhere in this paper. We are here only concerned with the total U.K. market. Household surveys have revealed that the majority of British housewives do not recognize any difference between tea from India and tea from Ceylon or elsewhere, and do not specify the country of origin when they buy tea.

Is tea consumption in Britain likely to decline in the future? Will *per caput* consumption, already barely stable, fall as public taste swings over in favour of other drinks? In order to attempt to answer questions like these, one must first analyse more closely the figures for *per caput* consumption.

Household surveys in Britain made for the Indian Tea Board reveal very considerable differences in *per caput* consumption between various classes and age groups. Much more tea is bought by lower income families than by those described as upper middle and middle class. Among working-class families more than double the number buy over ¾ lb. of tea per week, compared with families with higher incomes. *Per caput* consumption has been reported as 8·7 lb. annually for upper-middle- and middle-class families, 9·7 lb. for lower-middle-class families and 10·6 and 11·4 lb. respectively for skilled and unskilled working classes. There is a difference of about 30 per cent. between the biggest and the smallest consumers, and the largest consumers come from the poorest class.

In general the household surveys bear out Professor Stone's[1] frequently quoted conclusion that the income elasticity of expenditure on tea in Britain is negligible. In other words about the same amount is spent on tea whether incomes rise or fall. But the marked difference between consumption of tea in Britain between various income groups must be taken into account. Given a rise of say 30 per cent. in the real incomes of the poorest classes, is there any reason to suppose that tea consumption will remain the same? It seems very possible that if the price relationship between tea and coffee and other drinks remains the same there will be a tendency for competing and more expensive beverages to be bought in preference to tea.

Even more significant is the apparent fall in consumption among young people. The surveys (including the National Drink Survey) show clearly that young people are drinking more coffee and bottled drinks than they did before the last war. Over the past six years coffee consumption has increased by over 50 per cent. and soft drinks by about 20 per cent. while tea consumption has scarcely changed. The importance of this development can hardly be over-stressed. Habits admittedly die very slowly, but if the coffee-drinking habit becomes established among young people this could have a disastrous effect on the tea trade in Britain within perhaps a generation.

Differences in British tea consumption by age groups are illustrated in the following table:

TABLE 13. *Average weekly expenditure on tea and other beverages—households of one man and one woman. Year 1961*

	Both under 55 years		*One or both over 55 years*	
	pence per week per person	*% total expenditure on food and drink*	*pence per week per person*	*% total expenditure on food and drink*
Tea . . .	16·82	3·2	18·66	4·0
Other beverages	19·64	3·8	14·45	3·1

In Britain tea-drinking is most common among poorer and older people, who spend a much larger proportion of their incomes on tea than do younger and richer people. This is the main problem facing those engaged in tea promotion in Britain.

[1] *Measurement of Consumer Expenditure and Behaviour in the United Kingdom 1920–1938*, Cambridge University Press.

Over 80 per cent. of the British market is shared by only four blenders. The Monopolies Commission which investigated the tea industry in 1955 found that while there was some mild collusion over price information between two of them, conditions were generally very competitive. The household surveys show that British housewives are notably disloyal to one particular brand. In one survey it was reported that more than a quarter of those interviewed had bought more than one brand during the previous month. This survey made in 1961 showed that Brooke Bond with 29 per cent. of the market and Typhoo with 26 per cent. were much the largest blenders. They were followed by the Co-operative Wholesale Society and Lyons, which had about 15 per cent. and 12 per cent. respectively. Since then it appears that Typhoo has lost ground to the other three and that Brooke Bond has just about a third of the total market. These four large blenders now sell about 85 per cent. of all tea bought in Britain.

With competition so keen it is not surprising that the blenders spend large amounts on advertising. The total amounts to nearly £2 million a year. This seems a large sum, but it is only slightly higher than the cost of promoting milk, with the difference that the type of advertising used by tea blenders is not calculated to assist the expansion of the total tea market (see page 238).

The Government of Ceylon has been active in tea promotion in Britain for some years, the principal medium being Tea Centres (restaurants specializing in tea drinks) in the main cities. The Indian Tea Board is now spending more money in Britain than before. Tea Centres are being opened and there has been some newspaper advertising of Indian tea. A joint advertising campaign to which the main producing countries and the trade would subscribe has been under discussion for some months. This campaign would be directed towards promoting tea as a drink in the same way as the merits of beer have been advertised by the Brewers' Association. At the time of writing (January 1964) it is not known for certain whether the efforts to promote this joint scheme will be successful. If it is, and a large-scale tea-as-a-drink campaign is started, the following points seem particularly relevant:

1. Tea is a cheap drink. The tea in a cup of tea costs only about ½*d*.[1]

[1] The exact cost, of course, depends on how strong the tea is made. An inexact measure, a teaspoonful per person, is generally used. Roughly 200 teaspoonfuls go to 1 lb. of tea, which costs approximately 6*s*.–7*s*. retail. Surveys show that on average 2·2 teaspoonfuls are used to make a pot of tea for two and 3–4 teaspoonfuls to make a pot for four.

Until recently its cheapness must have assisted sales. But this situation is now changing. Higher incomes permit greater choice of beverages. The 1955 survey in the United States showed that expenditure increases very slightly with income (+0·1) up to an income level of $1,300, but beyond that point it declines fairly rapidly (– 0·4). One tea can be sold against another on price, but it is almost certainly wrong to try to promote tea in general for price reasons.

2. In the same connexion the very cheapness of tea counts against it as a status drink. When offering a drink to a visitor to the home or a guest in a restaurant many people are probably inclined to suggest coffee or some other beverage rather than tea because it is known that tea is cheap. The emphasis of any promotion campaign should be on tea as a 'smart' and sophisticated drink.
3. Bottled drinks can be opened with a flick of the wrist. Coffee can be made very simply by putting a teaspoonful of an Instant brand into a cup and pouring hot water on it. Tea is much more troublesome. Tea-making involves a teapot, which should be warmed, and tea leaves, which are left over and have to be disposed of. It is also much slower, as a few minutes of infusion of the leaves is necessary to produce well-made tea. Anyone directing an advertising campaign for tea must be aware of these objections and must either stress tea as a symbol of a leisured life or otherwise emphasize the availability of tea in tea-bags and in the form of Instant tea.
4. It is widely believed in Britain that tea soothes the nerves and enduces a more relaxed view of life. Presented with bad news the British housewife traditionally makes herself a cup of tea. These curative properties, real or imagined, must be emphasized in advertisements.
5. It seems unlikely that other uses of tea apart from as a beverage will ever be important. The Indian Tea Board has recently been spending money in Britain on advertising tea jellies and other such unusual dishes. It is very doubtful if this money is well spent.
6. The type of packet customarily used for tea in Britain is not assisting sales. It looks distinctly old-fashioned.

With a large-scale and lively advertising campaign in support of tea as a drink there is no reason why tea should not retain its addicts in Britain. The cost of such a campaign would be fairly high, perhaps

£1 million to £2 million a year, but this represents only a tiny proportion of the value of the British market to tea-exporting countries (over £100 million a year). Tea exporters are presented with the real possibility that *per caput* consumption may fall in their most important market *unless* something is done about it. With intelligent promotion, however, one would expect *per caput* consumption to remain at about the current level and for total consumption to rise at about the same rate as the population increases, i.e. slightly under 1 per cent. annually.

The United States of America

The United States is the fifth largest tea-importing country in the world. In the past twenty years she has regularly imported roughly 100 million lb. of tea, of which between one-quarter and one-third has come from India.

TABLE 14. *U.S.A. Tea passed by the examiners for admission Quantities in thousand lb. Calendar years*

Country of origin	*1952*	*1956*	*1960*	*1962*
India	35,676	31,719	25,543	28,550
Ceylon	42,188	42,871	49,235	50,503
Indonesia	10,031	12,492	15,455	12,984
British East Africa	1,512	3,076	6,596	9,024
Formosa	1,788	4,485	7,985	6,133
Japan*	2,601	3,100	2,020	1,958
Blended	210	1,403	5,144	13,087
Others	553	2,546	4,099	5,732
Total	94,559	101,692	116,077	127,971

* Green teas only included.

Imports have risen slowly but have barely kept pace with the population increase. *Per caput* consumption is roughly the same, or perhaps very slighly lower than it was before the war. It now stands at about $\frac{2}{3}$ lb. annually.

Tea promotion in the United States is handled by a Tea Council to which all but one of the packeters belong. It is financed by the major producer countries (with the exception of East Africa) and the local trade. The budget for 1962/3 was set at $500,000, of which the producing countries together subscribe $350,000, India's contribution being $132,608.

It is difficult to be optimistic about the prospects for tea in the United States when one considers the strength of the coffee-drinking habit, the association between tea and pre-Independence colonialism and the long stagnation of the market. One might reasonably conclude that the tea trade there would be fortunate if it managed to grow at the same pace as the rate of increase in population if it were not for three recent developments.

The tea-bag has been in existence in the States for a long time. The tea connoisseur, however, often regards it as a very poor tea-maker. The choice has therefore been between an insipid cup of tea made with a tea-bag and the inconvenience of tea leaves and the teapot. Recent improvements to the tea-bag have largely got round these objections. The result has been that sales of tea in tea-bags has expanded rapidly. Ten years ago about half the tea sold in America was packed loose; now less than a third is sold in this way.

Secondly, there is a possibility that iced tea will become really popular, especially in the southern States. It is an excellent and refreshing drink and extremely cheap. It is quite possible that its use in hot weather may become much more general.

Finally, there is Instant tea. Introduced about twelve years ago Instant tea has made great strides and now constitutes over 10 per cent. of total tea sold in the United States. Its use avoids some of the disadvantages of both the tea-bag and loose tea. The main doubt is whether the proper tea taste can be preserved. By no means everyone who drinks tea made in the conventional way can be expected to like Instant tea just as well.[1]

It is, of course, possible that the modern techniques of tea-making are being accepted by those with the tea-drinking habit, and that the total market is not expanding to any significant extent. (Both tea-bags and Instant tea usually require more tea per cup than does loose tea.) In which case the market can be expected to settle down again as soon as the techniques have been fully accepted, and there will be no long-term expansion. For the time being, however, sales of tea continue to expand, if only slowly. Imports at about 67 million lb. for the first six months of 1963 were about 2 per cent. up on the same period in the previous year. The figures for the second half of 1963 are not yet available, but the indications are that they will be encouraging.

The cost of promotion—about $\frac{1}{4}$*d.* per lb. of tea sold by the three participating countries seems small. The Tea Council would do well to continue their activities in the United States on at least this scale.

[1] The possibility of manufacturing Instant tea direct from the green leaf is of great interest. This is currently being investigated in India by Tata-Finlay.

Western Germany

In Western Europe the best prospects for a rapid rise in tea sales appear to exist in the Federal Republic of Germany. Some other European countries have higher *per caput* consumption of tea, notably the Netherlands, Denmark and Switzerland, but the population of these countries is small in comparison with Western Germany. Imports have shown a gradual rising tendency as the following table shows.

TABLE 15. *Imports of tea into Western Germany*
Quantities in thousand lb. *Calendar years*

	1950	*1952*	*1954*	*1956*	*1958*	*1960*	*1962*
Imports from:							
India	2,128	2,914	5,649	6,157	6,089	5,903	8,967
Ceylon	419	1,041	1,969	2,640	2,611	3,357	4,387
Indonesia	1,030	1,844	2,712	3,388	4,402	4,254	4,053
Others	124	311	320	1,321	1,131	2,174	1,528
Total	3,701	6,110	10,650	13,506	14,233	15,679	18,935
Re-exports	2	52	107	243	438	1,435	460
New imports	3,699	6,058	10,543	13,263	13,795	14,244	18,475

Over the past ten years Western Germany has more than doubled its imports of tea. India has maintained the position of leading supplier and is now selling nearly half the tea imported into Germany. *Per caput* consumption is still low in comparison with Britain, but it has now reached about ⅓ lb. per person per year.

There are three reasons why Germany is a particularly interesting market for India and other tea-exporting countries. First, tea-drinking is a more socially accepted practice in Germany than for instance in France. It is a fashionable drink and is nearly always available in good-class restaurants and hotels. Secondly, the combination of import duties and internal taxes has in the past made tea a very expensive drink. The decision of the European Economic Community to abolish the duty on tea, at least for a period, should mean that tea will become more attractively priced.[1] There remain the internal taxes, amounting to a total of Rs 2·26 per lb., which add about 70 per cent. to the c.i.f. cost, but it is by no means impossible that this heavy burden will ultimately be reduced by the Federal Government.

Lastly, it appears that consumption of tea in Germany is responding

[1] The duty on tea was suspended by EEC at a meeting on 10 September 1963 with effect from 1 January 1964. The permanent abolition of the duty will be discussed at the GATT negotiations starting in Geneva in May 1964.

satisfactorily to promotion. India combines with Ceylon to finance the activities of the Gesellschaft für Teewerbung, an organization for promoting tea consumption, at a joint cost of about £60,000 for 1962/3. This is equivalent to about 1*d.* per lb. of tea sold by the two countries combined. An active campaign has been undertaken which appears to be producing very satisfactory results.

The ratio between cost of promotion per pound and the added sales which the two countries are getting suggests that more advertising would be worth while. Tea consumption could be assisted in other ways. Merchants and blenders should be encouraged to have labels printed in German. At present one frequently finds the commonly used tea-bag bearing instructions in English. While large numbers of Germans speak English, how many understand the word 'infusion'?

Promotional activities in Germany should centre on teaching people how to make tea, e.g. to use freshly boiled water. The first essential for developing the taste for drinking tea is that the drink should be properly made. This is rather rare in Germany. In this connexion it will be interesting to watch the progress in Germany of Instant tea. Finally, an emphasis on the health-giving properties of tea might be particularly rewarding in Germany.

In spite of the strongly entrenched coffee-drinking habits there are good prospects for tea in Germany. Given the right type and scale of promotion, German consumption of tea should increase to at least 30 million lb. a year in ten years' time.

The Soviet Union

There are about 150,000 acres of mature tea in the Soviet Union. Production over the last few years has been running at slightly over 80 million lb. a year. Acreage planted has been more or less unchanged since 1957, but the trend of production has been slowly upwards as yields per acre have improved. The average yield per acre pre-war was less than 200 lb. a year. By 1955 this had nearly doubled. Currently yields are averaging a little over 500 lb. per acre—still strikingly less than averages obtained in India and Ceylon.

In addition Russia has been importing tea on a fairly large scale. Over the past eight years imports have averaged about 45 million lb. per year. The source of these imports is shown in the following table, which also gives details of re-exports.

TABLE 16. *Imports of tea into the Soviet Union*

Quantities in thousand lb. Calendar years

	1955	*1956*	*1957*	*1958*	*1959*	*1960*	*1961*	*1962*
Imports from:								
India	..	7,100	19,600	23,600	26,500	24,700	25,400	24,300
Ceylon	..	..	..	2,734	..	1,069	..	3,613
Indonesia	..	..	701	..	..	..	..	..
China and Hong Kong	22,500	27,800	25,400	28,700	38,100	22,500	6,600	6,800
Japan	..	..	..	300	..	..	..	..
Vietnam (North)	..	247	551	1,424	1,113	1,409	926	811
Other countries	..	..	..	..	..	..	..	..
Approximate total	22,500	35,300	46,300	56,700	65,700	49,800	32,800	35,500
Re-exports to:								
Czechoslovakia	..	..	..	..	441	1,435	1,312	2,046
Germany (Eastern)	245	675	690	661	769	672	1,157	1,523
Poland	..	..	..	115	996	1,376	2,205	3,051
Afghanistan	..	1,541	271	181	661	584	514	1,052
Mongolia	10,069	9,749	11,332	8,078	7,487	6,800	6,000	8,200
Other countries	2,300	2,100	300	400	..	800	1,400	700
Approximate total	12,600	14,100	12,600	9,500	10,400	11,700	12,600	16,500
Approximate net imports	9,900	21,200	33,700	47,200	55,300	38,100	20,300	19,000

After allowing for re-exports the total quantity of tea consumed within the Soviet Union is now about 100 million lb. per year or roughly ½ lb. per person per year. This is a very low figure for a country where tea-drinking, at least in some districts, is very popular. But it is nearly double the pre-war level and the trend since the war has also been slowly upwards.

Russia is a notably interesting market for India, because she particularly requires the high-quality tea in which India specializes. It is well known that Russia has been buying large quantities of tea produced in the Darjeeling area and the very high prices obtained for these teas are due in large part to strong Russian demand.

Patterns of Soviet trade are of course strongly influenced by political considerations. The current coolness between Russia and China is likely to work to the benefit of Soviet-Indian trade, including that in tea. Indeed Russia has recently signed an agreement to purchase an additional quantity of tea amounting in value to some £16 million. The very successful 1963 trade display by the Tea Board in Moscow is another sign of the interest, official and otherwise, that is being shown in trade in Indian tea.

On more predictable economic grounds there seems every reason to believe that Russia will continue to take Indian tea and will develop into an increasingly important customer. Russian yields are likely to remain considerably lower and production costs (in spite of mechanical plucking) very much higher than in India. It is, of course, difficult to make any accurate forecast of future Russian consumption, but it seems likely that demand could increase much more rapidly than domestic production and that Indian high-quality tea could benefit from this. It would not be surprising if Russia developed into India's most important customer after Britain, taking within ten years at least double the current level of about 25 million lb.

The Government and the tea industry

The importance of the tea industry to the whole Indian economy and in particular to Indian exports is recognized by the Tea Act, 1953, which gives very wide powers over the industry to the Central Government. This Act, passed in May 1953, provides for 'the control by the Union of the tea industry including the control, in pursuance of the International Agreement now in force, of the cultivation of tea in, and of the export of tea from, India'.

The Act set up a corporate body called the Tea Board to discharge these powers. The Board consists of a Chairman, a salaried civil servant, and 40 unpaid members, 6 representing the governments of the principal tea-growing states, 13 representing owners of tea estates, 5 representing exporters and manufacturers, 7 representing labour interests, 3 representing Parliament and 6 representing consumers and other interests.

The general functions of the Board are described as being 'to provide, by such measures as it thinks fit, the development under the Control of the Central Government of the tea industry'. In particular the Board is charged with:

(*a*) regulating the production and extent of cultivation of tea;
(*b*) improving the quality of tea;
(*c*) promoting co-operative efforts among growers and manufacturers of tea;
(*d*) undertaking, assisting or encouraging scientific, technological and economic research and maintaining or assisting in the maintenance of demonstration farms and manufacturing stations;
(*e*) assisting in the control of insects and other pests and diseases affecting tea;
(*f*) regulating the sale and export of tea;
(*g*) training in tea tasting and fixing grade standards of tea;

(*h*) increasing the consumption in India and elsewhere of tea and carrying on propaganda for that purpose;
(*i*) registering and licensing of manufacturers, brokers, tea waste dealers and persons engaged in the business of blending tea;
(*j*) improving the marketing of tea in India and elsewhere;
(*k*) collecting statistics from growers, manufacturers, dealers and such other persons as may be prescribed on any matter relating to the tea industry; the publication of statistics so collected or portions thereof or extracts therefrom;
(*l*) securing better working conditions and the provision and improvement of amenities and incentives for workers;
(*m*) such other matters as may be prescribed.

The Board is therefore charged with responsibility for all aspects and activities of the tea industry including production, acreage and quality control, scientific research, sales both internal and for export, registration of dealers, the collection of statistics and the working conditions and amenities of labour. The way in which these powers should be exercised is described in some detail by the Act (supplemented by the Tea Rules, 1954). The Act lays down how the Central Government, mostly through the Tea Board, will control tea cultivation and export, tea prices and sales, storage and transportation. The Board is given very wide powers in order to achieve this through licences, regulations, permits and inspections. But the powers are only temporarily delegated. The Central Government retains complete control through Section 31 of the Act, which states:

1. All Acts and proceedings of the Board shall be subject to the control of the Central Government which may cancel suspend or modify as it thinks fit any action taken by the Board.
2. The Board shall carry out such directions as may be issued to it from time to time by the Central Government for the efficient administration of the Act.
3. The records of the Board shall be open for inspection at all reasonable times by an officer authorised in this behalf by the Central Government.

Aggrieved persons are also able to appeal to the Central Government from decisions of the Tea Board. Ultimately therefore the Tea Board's powers are severely limited.

Finally the Act gives the Central Government power to levy a 'duty of customs', referred to as the cess, on tea exported from India.

Following the Act the rate of this duty (which is additional to any other duty levied on tea) was originally set at Rs 8·80 per 100 kg., but from 1 October 1960 tea was exempted from paying a cess exceeding Rs 4·40 per 100 kg. (Rs 2·00 per 100 lb.), which is therefore the current level. The proceeds of the cess are paid into the Consolidated Fund of India. The Central Government then makes disbursements to the Tea Board to cover its expenses 'as it may think fit'. The most recent report of the Tea Board (covering the year to 31 March 1963) reveals that the cess yielded a total of Rs 94·38 lakhs and that the Central Government paid out Rs 120·00 lakhs to the Board, drawing to a small extent on the balance of Rs 449·49 lakhs which stood to the credit of the Consolidated Fund at the beginning of the year in respect of previous cess collections.

The income and expenditure position of the Tea Board relating to the Tea Fund for the last two years is shown in the following table:

TABLE 17

RECEIPTS

	1961/2	*1962/3 provisional*
	(Rupees in lakhs)	
To opening balance	40·05	12·02
To monies received under Sec. 26 of the Tea Act, 1953	84·42	120·00
To Licence fees, &c.		
(*a*) Licence fee for exports	4·75	5·29
(*b*) Licence fee under Tea Waste (Control) Order	0·06	0·03
(*c*) Licence fee under Tea (D & E) Control Order	0·09	0·11
(*d*) Dust Licence fee	0·11	
To other receipts including hire-purchase	1·07	14·41
	130·55	151·86

EXPENDITURE

	1961/2	*1962/3 provisional*
	(Rupees in lakhs)	
By Administration	9·81	9·84
By Tea promotion in India	14·32	12·56
By Tea promotion outside India	30·65	35·17
By Statistics	2·92	2·58
By Tea Licensing	4·98	4·61
By Directorate of Tea Development	1·78	3·20
By Labour Welfare	7·39	10·76
By Works	6·76	3·39
By Research	6·15	3·67
By Development	33·40	49·24
By Other miscellaneous expenditure	0·07	0·04
By Advances	0·30	0·32
Total expenditure (A)	118·53	135·38
Closing balance	12·02	(B) 16·48
	130·55	151·86

(A) This does not include payments on account of Rs 5·00 crores Plantation Finance Scheme separately provided as shown by Central Government.
(B) Includes balance of Rs 6·00 lakhs in offices abroad.

Most of the Tea Board's activities are, of course, either directly or indirectly connected with tea exports. Indeed the principal emphasis of the Board's work is now directed to increasing the amount of foreign exchange earned by India through tea exports. In practice the most important aspects of this work are the control of acreage under tea and tea development in general, export licensing, tea promotion abroad and to a lesser extent labour welfare and scientific and other research.

1. *Acreage of tea.* The Tea Act, 1953, supplemented by the Tea Rules, 1954, provides regulations for extensions of tea estates. These depend on the size of the existing estate. They appear to be generous. Estates over 200 hectares, for instance, may extend their areas by 30 per cent. over a 5-year period. Few, if any, estates are likely to wish, or to have the resources, to do as much. The Tea Board reports that in the last year under review permits were issued for 6,438 hectares of extensions and that 'these permits were issued whenever asked for within the limits of the Rules'.
2. *Tea development.* The desire of the Tea Board to see increased production leading, it hopes, to increased exports, is shown by the many schemes of assistance, mostly by credit subsidy that it provides for the industry. Of these, the most important is the Tea Plantation Finance Scheme. This will provide loans up to a total of Rs 5 crores, which should be sufficient to provide for some 15,000 acres of new planting. It is expected that the funds provided for this Scheme will be exhausted by the end of 1963/4. The Tea Board, however, hopes to be able to continue the Scheme and will be recommending the Central Government to release further funds.
3. *Export licensing.* Exports of tea and tea seed from India must receive a Tea Board licence. Tea seed exports are at present not permitted. At the moment there is no quantitative control of tea exports and licences are given automatically and generally very quickly. A small licensing fee is charged, but the total of these fees barely covers the cost to the Tea Board of carrying out the licensing (about Rs 5 lakhs).

   Export licensing sounds like a mild encumbrance to the trade and a minor export disincentive. On the other hand it does enable proper export records to be kept. In addition it seems worth while preserving the machinery of export control, provided that it does not involve a lot of clerical work. It may possibly be needed if market conditions change and a genuine export control is required as part of a new International Tea Agreement (see below, page 237).
4. *Tea promotion abroad.* The activities of the Tea Board in export promotion are discussed in detail elsewhere in this paper (pages 238–40). The conclusion reached is that the Tea Board is moving in the right direction but could afford to be bolder. It is

suggested that if further funds are required for tea promotion abroad as an alternative to, or in addition to, running down the large balance in the Consolidated Fund, the most sensible course would be to extend the cess, perhaps at a different rate, to all teas whether exported or not.

5. *Labour welfare.* The important Plantation Labour Act, which so vitally affects the whole industry, is administered by State Governments. The Tea Board has no direct connexion with its operations. On the other hand the Tea Act gives the Board a fairly general responsibility for Labour Welfare, which it carries out primarily through assistance to educational and medical institutions at a total annual cost now of about Rs 10 lakhs.

   The Tea Board is not directly concerned with wage negotiations in the industry. The best it can do is to use its influence with employers and with representatives of State Governments and labour interests, all of whom sit on the Board, to get reasonable terms of employment agreed between the parties concerned, which are in the best long-term interests of the industry.

6. *Scientific and other research.* The Tea Board makes a number of grants for research in various aspects of the tea industry. But by far the most important work is carried on at the Tocklai Research Station in Assam, which has been financed since its inception 60 years ago by the Indian Tea Association. At the time of writing it is uncertain whether the Government of India perhaps through the Tea Board will contribute to the increasing cost of operating this research station, though it seems likely that the Government will in future meet at least half the cost.

   The Tea Board may well play a more active part in research in the future. It is suggested elsewhere in this paper that it might be advisable to carry out further economic research as well as continuing with scientific work on at least the present scale.

The Government of India has, therefore, very wide responsibilities for the tea industry (some of which it exercises through powers delegated to the Board). In the current situation facing the industry what should be the principal matters of concern for the Government?

Prospects and issues for the industry

1. *A new International Tea Agreement.* The 1960 report of the United Nations FAO on tea in its Commodity Bulletin Series has

already been mentioned. This report predicted a 'surplus' by 1965 of some 100 million lb. It added, quite rightly, that if this surplus materialized prices of the lower grades of tea would fall further than those of better qualities. This rather pessimistic conclusion may largely have been caused by adopting too static an approach to the problem and by ignoring altogether the effects on demand of active and carefully planned promotion.

The most up-to-date figures available from the International Tea Committee suggest that a condition of only very mild surplus exists in the world tea market. The world supply and absorption of tea over the past five years is given in the following table, which shows that over

TABLE 18. *World supply and absorption of tea*

	Average 1934–8	*1958*	*1959*	*1960*	*1961*	*1962*
Supply						
Total production:						
India, Pakistan, Ceylon, Indonesia	808	1,294	1,287	1,286	1,390	1,380
East Africa	17	80	87	95	104	110
Exports only:						
China	90	104	108	91	68	65
Rest of Eastern Asia	65	49	55	57	58	56
Rest of Africa	0	6	8	8	7	9
Other countries	0	2	3	9	15	18
Total supply	981	1,534	1,548	1,545	1,642	1,637
Absorption						
Importing countries:						
United Kingdom	439	520	502	501	529	510
U.S.S.R.	42	55	63	45	26	27
Rest of Europe	75	88	97	92	95	98
America	135	170	170	172	168	190
Asia	54	109	119	129	126	138
Africa	69	165	149	147	166	168
Oceania	57	76	76	81	80	80
Total	871	1,183	1,176	1,167	1,192	1,210
Exporting countries:						
India, Pakistan, Ceylon, Indonesia	105	334	349	371	405	400
East Africa	2	14	13	13	15	14
Others (imports only)	3	3	4	4	5	4
Total	110	352	366	388	425	418
Total absorption	981	1,535	1,541	1,555	1,616	1,629
Balance						
Excess of supply over absorption in year	0	−1	+7	−10	+26	+8

this period an apparent surplus of 30 million lb. was created (but there was a deficit of about 30 million lb. in the year immediately preceding this period).

Preliminary results for 1963 indicate that world production has increased by only about 1 per cent. compared with the previous year. At the time of writing it is too early to give any accurate predictions about the balance for the year. But at all events it seems certain that any surplus of supply over absorption will be very small.

Given promotional effort on the right scale the prospects for the industry do not seem in general at all discouraging. On the other hand, it would be wise for the main producing countries to set up a system for dealing rapidly with problems that might arise if production began to show signs of outstripping demand. An International Tea Agreement is needed, at least in outline, along the lines of the agreement which terminated in 1955. This agreement was concluded in order to deal with the disastrous slump in the tea industry in the twenties. It is worth describing briefly the origins and achievements of this agreement.

Immediately after the First World War new plantings on tea gardens were made on an extensive scale. By the end of the twenties the increased acreage in both India and Ceylon was beginning to have a strong effect on supplies, which were considerably higher than the average of the years immediately before the First War. This coincided with a world-wide fall in demand which began with the 1929 Depression. Tea prices fell rapidly and in 1932 reached 9½*d.* per lb., much lower even than the prices in the 1952 slump.

At this price-level tea production was obviously completely unremunerative. The Growers' Associations of the principal producing countries had already (in 1930) set up a scheme for voluntary restriction of exports, but this only lasted for a year. Two years later things were much more serious. Further meetings led finally to the establishment of the International Tea Committee and an agreement between India, Ceylon and Indonesia over controls which each would impose on its exports of tea. This agreement was set up initially for five years. It was extended for a further five years in 1938 and, after various war-time and post-war extensions, lapsed in 1955.

The agreement was in principle quite simple. It sought to regulate world supply by placing ceilings on exports, which were controlled at the level of the 'standard exports' of 1929–31 or a proportion of these standard exports. The share of the total market enjoyed by each producing country was therefore fixed in advance. It was not surprising that smaller producers such as the East African countries were normally unable to agree to join the Scheme.

The Tea Agreement of 1933 is often regarded as the most satisfactory of the Commodity Control Schemes which were established during the Depression. Tea prices recovered fairly quickly to around 75 per cent. of the pre-Depression level and became much more stable. There were two principal reasons for this success. First, supplies were effectively controlled, as the main producing countries had about 80 per cent. of the market (and they were joined at times by other countries). Secondly, emphasis was placed on the need to *expand* the market for tea. In 1934 the International Tea Market Expansion Board was set up to promote increased tea consumption.

The Tea Agreement came to an end on 30 March 1955 having had for the last ten years of its life very little effect on the tea market. The Tea Market Expansion Board died at the same time, leaving the collection of statistics as the only activity of the International Tea Committee. Since then efforts have been made to renew the Agreement but so far without success.

What is needed now is not a restrictive agreement but rather an agreement on principles between the main producing countries. One benefit that should follow is the exchange of information about government policy and perhaps also a harmonization of export duties, cesses, &c. But the first object should be to establish an effective machinery of consultation between producing countries so that swift action can if necessary be taken. While prospects are at present fair it would be wise to prepare for a less favourable outlook.

In the present state of the world market limitations on exports are not required. But if this action later becomes necessary any agreement with Ceylon is likely to involve recognition by India of the bigger proportion of the total world market that Ceylon now has. If an average of the five years 1958–62 were taken the proportion of tea exports between Ceylon and India would be 1:1·115, whereas the proportion during the previous five years 1953–7 would be more favourable to India (1:1·344). It seems equitable, as well as perhaps inevitable, for India to recognize this change on the ground that Ceylon lacks the large and growing home market which India possesses.

The first task therefore for the Indian Government representing the interests of its tea industry is to press for a renewal of an International Tea Agreement.

2. *An active world-wide campaign to sell tea.* Earlier in this paper there have been several references to the importance of promotional efforts to help sell tea. Advertising on a much larger scale than at present is required if India and the other producing countries are to expand their sales in Britain and elsewhere.

Tea as a beverage should lend itself admirably to promotion. It is generally well known and it is comparatively cheap. Most people would agree that it is also very good at what is presumably the first function of a drink, quenching one's thirst. The advertiser's job is made easier by the fact that it is grown in some of the most attractive parts of India. There is also the interest of the various types and blends of tea. Finally it can be drunk satisfactorily in summer and winter. There should be no special difficulty over advertising intensively and effectively the merits and attractions of tea as a drink and particularly as a sociable drink. This applies as well in low-income countries as in countries like Western Germany or the United States.

At present tea is earning for India about Rs 120 crores of foreign exchange. The Tea Board is spending about Rs 35 lakhs on export promotion or about one-quarter of 1 per cent. of earnings. The scale of promotional effort is altogether inadequate.[1] Including her contribution to the proposed joint scheme in Britain, India will soon need at least Rs 1 crore for tea promotion abroad. How should this larger advertising expenditure be paid for?

The Tea Board finances are sustained through the cess which is levied only on export teas. The yield from the cess is insufficient to cover the current expenditure of the Board, which is anyway rising. The Tea Act limits the cess to export teas. This needs modification as there seems no good case for the Tea Board to be wholly dependent for its revenue on a tax on exports, many of its activities being for the benefit of the domestic trade.

If the cess at its present rate were extended to all tea whether shipped abroad or not, a sum of about Rs 60 lakhs would be available in addition to the Rs 95 lakhs which is collected on exports. To make this change would involve new legislation, as the Tea Act specifically limits the imposition of the cess to exports.

At the same time as the export duty was abolished (effective 1 March 1963, having been reduced from 44 nP. per kg. to 25 nP. per

[1] The advertising expenditure of tea blenders is, of course, very much higher (currently over Rs. 2 crores a year in Britain alone), but the emphasis of this is on the brand name rather than on tea itself.

kg. early in 1962) the excise duty was increased by 20 per cent. and the rebate of 15 nP. per kg. of the duty which was given to exporters was abolished. It appears that the net result of these changes will be to leave the total taxation borne by exported tea about the same as before. In rough terms the abolition of the export duty has saved the industry rather over Rs 5 crores, but very nearly as much as this has been added on to the bill the industry will have to meet for excise duty, after taking into account the end of the rebate. The Tea Board's claim in its most recent report that 'the total impact of Central duties and taxes on export teas would be lower than last year' is probably justified, but there will be very little in it.

An extension of the tea cess at its current rate to all tea whether exported or not would produce a sum which would be nearly sufficient to cover the cost of the required extra promotion of Indian tea. If further money is wanted this could be obtained by running down the balance of previous cess collections amounting to over Rs 4 crores which is held in the Consolidated Fund of India.

The total impact on exported tea of customs duties and taxes and the cess amounts at present to about Rs 12 crores a year, of which the excise duty is by far the most important. This is equivalent to about 10 per cent. of the value of India's tea exports. How does this compare with taxes levied by other exporting countries? Is the Indian tea industry at a disadvantage compared with its competitors so far as duties, &c., are concerned?

Most exporting countries levy special taxation on their tea exports. Indonesia used to have a duty of 10 per cent. *ad valorem*, i.e. effectively about the same rate as the total of all the various impositions on Indian tea, but this has recently been abolished. In East Africa there is a small cess and Tanganyika levies a duty, but the rate is only 10 cents per lb. In Pakistan the taxes are higher, totalling 79 paise per lb., but very little tea is exported.

The most important comparison, however, is with Ceylon, India's main competitor. In 1962 the export duty in Ceylon at 35 cents per lb. raised Rs 1553·0 lakhs, the *ad valorem* sales taxes Rs 717·8 lakhs and various cesses a total of Rs 332·1 lakhs, a grand total of about Rs 26 crores, or roughly 68 cents per lb. This is slightly over double the burden per pound borne by Indian tea exports.

The comparison with Ceylon should not be pressed too far because the Ceylon Government provides more cash benefits to its tea industry. For instance Ceylon is providing grants for replanting over a ten-year period (starting from 1959) which may amount to a total cost of some Rs 12 crores. However, in general it can be said that the Indian tea industry has no reason to complain that it is treated any worse than its main competitor over the burden of special duties and taxes on tea exports.

Efforts to promote Indian tea should continue on the lines of, for instance, the new Indian Tea Centre in London that has very recently been opened in Oxford Street. But the main emphasis should be on joint promotional undertakings in which all the main producers would combine with the tea trade. The clearly established inability of most consumers to distinguish between tea of various origins (and besides, tea is of course normally blended) makes joint promotion of tea as a drink the best way of increasing sales. The Government of India will have a large part to play in the planning and financing of these schemes.

3. *Encouragement to a moderate rate of sustained growth.* It appears that the Indian tea industry may be presented in ten years' time with a home market in which demand has increased by some 150 million lb. Within the same period the demands of the importing countries may have increased by some 300 million lb. If India is to preserve her share of the total world tea market she should aim to obtain about 120 million lb. of this additional quantity. India should therefore plan to have an increased production of tea available for home and export purposes of some 270 million lb. by 1973/4, that is to say an increase of about 35 per cent. over the period of ten years.

Tea is, of course, included among commodities under the survey of the Planning Commission. The Second Five-Year Plan (April 1957 to March 1961) forecast a modest increase in tea production. It was estimated that there would be an increase of about 8 per cent. for the period, bringing production up to about 700 million lb. This total was comfortably exceeded during each of the last three years of the Plan. The Planning Commission estimated that exports would continue at about the same level as was achieved during the last year of the First Plan, i.e. at around 500 million lb. In fact of course they have been considerably below this level ever since.

The current (Third) Five-Year Plan is much more ambitious. Production is planned to increase by about 18 per cent., to 900 million lb., and exports are to go up by roughly the same amount, to 550 million lb. Both these would easily constitute records. The Government of India has given very little information as to how these levels are to be achieved.[1] The Tea Board, however, has provided the following table dealing with the last three years of the Plan:

TABLE 19. *Anticipated production on the basis of the Third Five-Year Plan Target*

(figures in thousand kg.)

	1963	*% of total*	*1964*	*% of total*	*1965 Plan target*	*% of total*
North India	293,817	77·32	303,907	77·01	312,979	76·67
South India	86,183	22·68	90,718	22·99	95,254	23·33
Total	380,000	(100)	394,625	(100)	408,233	(100)

The projected increase in production for these years is about 3½ per cent. This is more than the yearly average that was achieved in the Second Five-Year Plan but about the same as in the period 1960–2.

The preliminary results of the 1963 crop show that there will be practically no change in the year's production compared with 1962. A loss in production in North India of about 14 million lb., due to the drought, has been made up for by a rise in South Indian production. As a result of this year's disappointing crop the 1965 level will have to be about 17 per cent. above that of 1963, if the Plan's target is to be achieved.

Given very favourable weather conditions it is not impossible that this will be done. But it is beginning to seem very unlikely. It is likewise unlikely that the export target will be reached. The Third Plan envisages domestic consumption of about 350 million lb. in 1965. This is about 50 million lb. more than the 1961/2 level. Consumption was rather lower in 1962/3, but this was probably a temporary phenomenon.

A sustained rate of growth of about 3½ per cent. a year is required if the tea industry is to have sufficient production to meet the demands that seem likely in ten years' time. This is about the same rate of annual increase as is planned for the last three years

[1] One suspects that here, as for other industries, the Planning Commission set a high target in the naïve belief that this would 'encourage' the industry to make greater efforts. It has never been very clear how the 18 per cent. increase was to be achieved. The yield from the tea bush is infinitesimal during the first five years of its life. Increases in production during a Plan period therefore depend on increases in yield from bushes that are already in the ground at the beginning of the period.

of the Third Five-Year Plan. This rate of increase can be compared to the average annual increase in production of less than $2\frac{1}{2}$ per cent. which has taken place since Independence. It seems very doubtful whether the necessary rate of growth is being achieved at present or that it will be achieved in the future unless special measures are taken by the Government designed to stimulate production. Here it is perhaps worth examining what are the influences on the level of tea production and distinguishing between short-term and long-term influences.

It is a well-accepted theory of the tea industry that the clue to profitability is a high level of output, provided that this can be achieved without a loss in the quality of the tea. Tea garden managers and superintendents know that in the short run their acreage cannot be expanded, that the extent of their own production cannot have any influence on tea prices, that much of their costs including labour is more or less fixed, and that their main task is to make sure that this fixed cost can be set against as large a production as possible, so that cost per pound is kept low. There is therefore a disposition throughout the industry to produce as much as possible provided quality can be retained. Things would of course be very different if the labour regulations allowed greater flexibility in labour costs.

In the short run there are only two important influences[1] on the volume of production, apart from changes in climatic conditions. If market conditions alter so that there is a reduction in the premium on quality tea as compared with ordinary grades (thus reducing the incentive to produce quality tea) it is possible to change the style and method of plucking so as to increase the quantity plucked, with some lowering of the average quality. In fact, however, it seems more likely that the trend in prices will be the reverse and the demand become even keener for the best quality.

The other method is to increase the amount of fertilizer used. While much research[2] has been done on the rate of application of sulphate of ammonia and other fertilizers on tea, the industry in general seems still to work from fairly crude rules of thumb, e.g. up to but not exceeding the equivalent of 100 lb. of nitrogen per acre. A garden manager should of course apply fertilizer to every section of his garden

[1] A third short-run influence is the pruning technique employed, but most gardens work on an established annual pruning programme.

[2] Several studies of this kind have been made by the Scientific Department of the Indian Tea Association at their Tocklai experimental station at Cinnamara, Assam, and published in their *Newsletter* and elsewhere.

so that the marginal cost of application equals marginal revenue. The trouble is that it is not easy to tell when this point has been reached. Costs of production can be calculated accurately and so can yields. But it is extremely difficult to keep track of the value of the yield after it has entered the factory. Few managers can give anything more than average figures for the value of the yield of any section, or say with certainty that they would not profit by obtaining an increase of say 10 per cent. in yield even if there was some loss in quality. Normal factory operation does not, unfortunately, permit one to follow through the crop from one particular section into the form of made tea so that the exact profitability of the section can be ascertained.

While the Tea Board might provide further encouragement for economic studies on fertilizer application (and for that matter for other such studies within the industry) it is clear that in the short run very little influence can be exerted by the Government on the industry's production.

In the longer run the level of tea production is determined by the acreage of mature tea and the average yield of tea per acre. Here there is much scope for Government action to help the industry. The average effective life of a tea bush is about 40 years. Replanting (or replacement on new land)[1] is necessary in order to preserve the acreage under tea-carrying bushes capable of producing high yields of good-quality tea simply in order to preserve the existing area of good tea. Replanting and/or replacements should therefore occur on about $2\frac{1}{2}$ per cent. of all tea land every year. Table 20 shows that only about 1 per cent. to $1\frac{1}{2}$ per cent. of the total area has been so treated annually even after including in the total the figures for extensions to gardens.

Part of the explanation for this extraordinarily low rate lies in the fact that South India has been notably backward over this work of renewal, due to the high costs there. But even North-East India is not achieving the necessary minimum rate of $2\frac{1}{2}$ per cent. Why is this?

Taking replacements and replanting first, it is probable that many managers are not fully aware just how unremunerative are some of the worst sections of their gardens, particularly after allowing for interest on the value of the land and other capital employed. Secondly

[1] The distinction is between replanting on the land from which the old bushes have been cleared and planting tea on virgin land to replace the acreage of old tea. The latter applies when the old tea land is required for another purpose or when it is considered unsuitable (perhaps for reasons of soil fertility) for new planting.

it is an expensive operation involving a total cost of perhaps Rs 5,000 per acre. The Government of Ceylon recognizes the need for replanting and its cost and provides a subsidy of up to Rs 3,500 per acre to assist this work provided approved clones are used. Ceylon plans to replant 50,000 acres over the ten-year period 1959–68.

TABLE 20. *Extensions replacement and replanting of tea carried out in 1949/50–1961/2*
(figures in hectares)

Year	*Extensions*	*Replacements*	*Replantings*	*Total*
1949/50	3,155·12	523·28	1,344·19	4,022·59
1950/1	1,571·27	302·35	1,509·01	3,382·63
1951/2	2,375·92	278·46	1,537·28	4,191·66
1952/3	2,166·83	180·00	1,189·70	3,536·53
1953/4	1,346·78	239·72	844·40	2,430·90
1954/5	2,322·11	549·85	1,418·05	4,290·01
1955/6	655·01	264·03	2,004·72	2,923·76
1956/7	954·29	480·80	2,400·46	3,835·55
1957/8	1,952·28	755·29	2,399·97	5,107·54
1958/9	2,109·32	580·08	2,434·33	5,123·73
1959/60	2,316·83	526·00	1,886·86	4,729·69
1960/1	1,713·47	352·77	1,781·87	3,848·11
1961/2	1,852·20	393·18	1,607·48	3,852·86

The Indian Government also recognizes this need but its plans are more modest and its assistance less generous. No grants are paid, but loans are available on reasonable terms under the Tea Plantation Finance Scheme, the total sum available at present being Rs 5 crores, sufficient for about 15,000 acres. Of this sum Rs 1·10 crores had been committed at the time of publication of the Tea Board's 1962/3 report.

This is almost certainly a case where a fairly small grant or subsidy of say 15 per cent. to 20 per cent. of the approved cost would be a better incentive than a loan. But the Scheme is a great deal better than nothing. If the Government has decided in principle in favour of subsidized loans rather than grants it should certainly continue with the Scheme and make further funds available for it.

The Plantation Finance Scheme can also be used for new planting, i.e. extensions to the existing acreage of an estate, which requires a licence from the Tea Board, which is normally granted. An important difference to the economics of extensions as against replanting is that the former can only be treated as a capital cost. (This also applies normally to replacements.) With company taxation so high it is obvious that there is a strong inducement to the industry to replant but no inducement to extend (or to replace). If the object of the Indian Government's policy is to encourage a steady expansion of the industry there seems no good reason for treating the two so very differently, especially as licensing powers exist to control the amount by which any garden can extend. The most important difference involved in choosing an extension rather than a replanting is that with the former the estate still retains the old tea area and its production, which may suit the general economy of the estate; and the new tea may be planted on better land than would otherwise be possible.

There seems every reason for the Government of India to alter the tax regulations so as to permit the cost of replacements (made necessary by the need for using tea land for, for instance, labour housing) to be treated in the same way as replanting, and expenditure incurred on extensions to be written off against revenue over a period of 5 or 10 years. This should be an adequate and worth-while inducement to the industry to produce the necessary expansion.[1]

4. *Regulations affecting labour and capital.* There are two other important aspects to the Government of India's role in supporting a reasonable rate of growth in the tea industry. These are concerned with labour and with the capital needs of the industry.

Labour costs constitute about half the total costs of an average tea estate. Labour costs per pound of made tea and as a percentage of total costs, including agency commission and all management expenses, are shown in the following table in respect of four estates in Assam which can be regarded as fairly typical:

TABLE 21

	Labour cost per lb.	*Percentage of total costs*
Estate A	Rs 1·19	51·26
Estate B	Rs 1·18	52·81
Estate C	Rs 1·19	50·88
Estate D	Rs 1·05	50·96

(The figures represent all-in labour costs, including medical care and other welfare, and housing).

[1] Grants and tax concessions for agricultural undertakings are of course common in many countries. For instance the British Government provides a grant of one-third of the cost of a wide range of improvements to agricultural fixed equipment, as well as permitting the cost to be written off against income from any source over a period of ten years, although the expected life of the asset is normally very much longer.

Tea production involves an intensive use of labour per acre of an estate. A 500-acre tea estate may well employ permanently 700–800 workers or about $1\frac{1}{2}$ workers per acre (including factory workers), though the overall average for the whole of India is rather lower than this. According to Indian Tea Association statistics there were 1·1 labourers per acre in the industry in 1896. By 1944 labour used per acre had increased to an average of 1·2 per acre, which is about the current figure.

Labour employed per acre has changed very little, but output per worker has increased rapidly in recent years. Output per worker at the beginning of the Second World War was about the same as in 1914, at 480 lb. of made tea per worker per year. Since 1939, however, the average has gone up to 640 lb. per worker. A high-yielding garden under first-class management with adequate transport facilities, &c., may well have an average output of over 800 lb. per worker.

With labour representing such a big proportion of total costs an estate manager will naturally look first at his labour bill when trying to make economies. Wage rates have risen recently and many estates are becoming more conscious of the extent of their labour costs. There is undoubtedly considerable scope for economies both in the factory and in the garden, but there are several limitations. Of these the two most important are the restrictive attitude of the trade unions representing tea garden labour, which are fully aware of the shortage of other employment in tea areas, and the high requirement for labour at certain times of the year, particularly at the height of the plucking season.

Unlike Russia where machines are commonly employed, all Indian tea is plucked by hand. Most estates maintain a regular plucking round so that each area of tea is plucked at certain times, in the height of the season often once a week. In Assam a skilled woman picks about 60–70 lb. of green leaf per day. (This requires very quick movements of the hand as about 720–840 shoots of two leaves and a bud go to each pound of green leaf. Depending on the spacing of the tea bushes, a woman probably spends about $\frac{1}{2}$–$\frac{3}{4}$ minute plucking each bush.)

In spite of this very rapid plucking 5 women are required in Assam on the average to do a day's plucking on one acre. Working a 7-day round therefore the labour requirement on plucking alone is at present not far short of 1 per acre. Tea estates vary considerably as to labour requirements, making generalization difficult. But after allowing for factory workers (improved processes have already much reduced the labour required in factories on some estates) and clerical, transport and maintenance workers, the average estate is not likely in the near future to get much below a figure of 1·2 workers per acre of mature tea.

Whatever labour economies are possible many managers of tea estates feel themselves to be 'stuck' with a fixed and sometimes ever-growing labour force. Acreage expansion where possible provides an opportunity for spreading their labour over a larger total amount of work which in many cases should ultimately bring an improvement in output per worker and profit per lb.

Regrettably in the past efforts to relate wage increases to improvements in labour productivity or to the profitability of the tea industry have been unsuccessful. Increases have been given as a result of negotiation rather than on an economic basis. As managers analyse more closely the composition of their costs it should be possible for labour to be deployed in a more economic manner to the benefit of the whole industry. Some redundancy is very likely to arise, especially in areas with a high birth-rate. It need scarcely be said that the cure for this is not a restrictive attitude on the part of the unions but co-operation between unions, employers and State Governments in finding and creating new opportunities for alternative employment.

At present the Government of India has no direct say in these negotiations. Responsibility for implementing the Plantation Labour Act rests with State Governments, as does the general responsibility for agriculture. It should be possible to leave this situation much as it is now, but the Central Government should make greater efforts to co-ordinate the rulings and standards of the State Governments. (This is something which is needed throughout Indian agriculture.) One of the more reasonable complaints of the industry is that State Governments are continually changing housing standards.[1] Vacillations of this kind can be in nobody's interest.

Finally there is the question of the capital needs of the industry. A moderate rate of expansion will require financing. There are two ways in which this can be done (apart from the long-term government loans, which have already been mentioned): by raising new capital or through retained profits.

[1] In the case of the Government of Assam see G.L.R. 81/56/68 of 21 December 1956, G.L.R. 335/59/20 of 31 December 1960, and G.L.R. 503/60 of 28 February 1963, to which several subsequent modifications have been made.

The Indian tea industry has a large element of foreign control. Probably a little over half is still in the hands of the British companies that pioneered the industry. It is perhaps not surprising, particularly in view of the extent of this foreign ownership, that two views have grown up about the controversial question of the profitability of the industry. On the one hand there is the attitude, which is not uncommon in India, that considers that the industry can perfectly well look after itself so far as profits are concerned and that any increased profits are to be avoided as these will only go to the benefit of the foreign shareholders. On the other hand there is the clearly expressed view of the London Stock Exchange, which seems to have little use for Indian tea shares. Starting from an index at the end of 1923, tea shares stood at 82·8 in 1946 and 95·7 towards the end of 1963. Using the same index the comparable figures for all other shares were 164·4 and 453·1. Investors and their advisers seem to think very little of the present profitability or future prospects of the Indian tea industry.

This has at least one important effect. Low capital values of shares mean high yields. To raise new equity capital to finance replanting and extensions and other estate improvements involves a company, in effect, in borrowing at an absurdly high rate of interest. It is not surprising that in practice tea companies have normally relied on financing themselves from retained profits rather than by new issues on the Stock Exchange. The geographical situation of the tea industry in North-East India, to which the Chinese invasion drew attention so dramatically in autumn 1962, and the feeling that the Nehru Government has not long to last, make it unlikely that there will be any change in this situation for some time to come.

Improvements of all kinds have become very much more expensive in recent years. Wage rates have gone up. Tea companies tend to be isolated and materials are often expensive. Financing of improvements out of retained profits is always going to be difficult particularly in view of the incidence of Indian Government and State income taxes. Tax concessions such as the one suggested for the treatment of extensions should be considered in this light. (The problem of obtaining earnings high enough to meet the cost of modernization is typical of an old-established industry like this.)

India is short of capital and desperately low on foreign exchange reserves. It would make good sense to take steps to encourage increased foreign capital investment in the tea industry. The Government should take every opportunity to repeat emphatically that its policy is against expropriation of foreign-owned companies and plantations. Otherwise what is required is nothing dramatic: a more pragmatic attitude to tax questions, especially those concerned with the treatment of capital, and a practical recognition of the important place that the tea industry—and especially its exports—has in the Indian economy.