



ECONOMIC REVIEW

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PEASANT AGRICULTURE

PROGRESS OF PEASANT AGRICULTURE



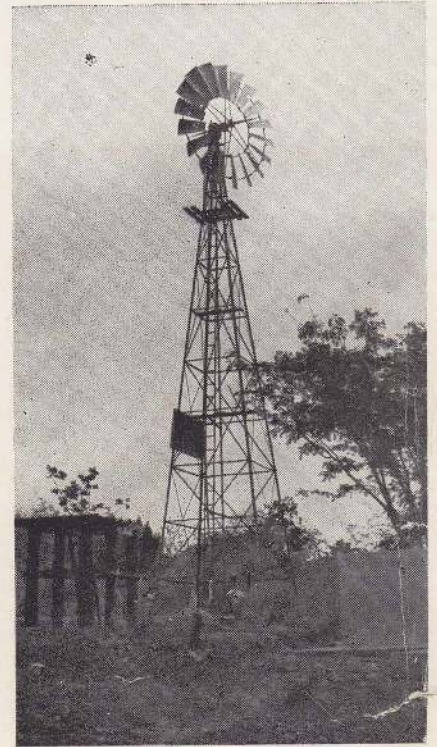
Sri Lanka's agriculture is still viewed in terms of the plantation sector on the one hand and the traditional or peasant agricultural sector on the other. The distinction is based on a number of well recognised factors: the scale of operations and technology employed in these two sectors and their objectives of production — in the case of the latter for domestic consumption. Rapid development of the domestic agricultural sector has become vital for the general economic uplift of the country in recent years.

As in the rest of the developing world, one of the most pressing problems in Sri Lanka too has become the need to find ways of ensuring that all people have adequate supplies of food that is within their means and here the progress of agriculture and increased productivity has been a key factor. It has been realised that it is not merely the practising of agriculture that matters, but the maximising of agricultural production and food crops, increasing yields of our basic food crops, and that the largest increase in output could be achieved in the shortest time by adopting improved methods of cultivation. In this context the modernising of traditional agriculture has received considerable attention during the past quarter century.

The adoption of new technologies has, however, brought with it attendant problems: it has increased the capital requirements of the farmer, exposed him to a higher degree of risk and increased his dependence on critical inputs such as water, fertilisers and plant protection chemicals. In these pictures are illustrated some of the agents of change and their impact.

The picture at top left illustrates the advance of modern irrigation systems, a concrete channel for diversion of water to fields while at right is a more recent irrigational device being adopted in Sri Lanka for obtaining water supplies through wind powered pumps.

The buffalo traditionally used in the ploughing of fields is fast making way for the motorised tractor while winnowing in the traditional manner (bottom left) is also giving way to winnowing by mechanised means (bottom right).



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THE ECONOMIC REVIEW is intended to promote knowledge of and interest in the economy and economic development process by a many sided presentation of views & reportage, facts and debate.

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NEXT ISSUE

- Forests — their role in environmental and human welfare and economic importance, with special reference to Sri Lanka.
- Urban housing for low income groups
- A scheme for mixed farming in Sri Lanka's wet zone
- Developments on the economic scene — an interview with Dudley Seers.

COVER

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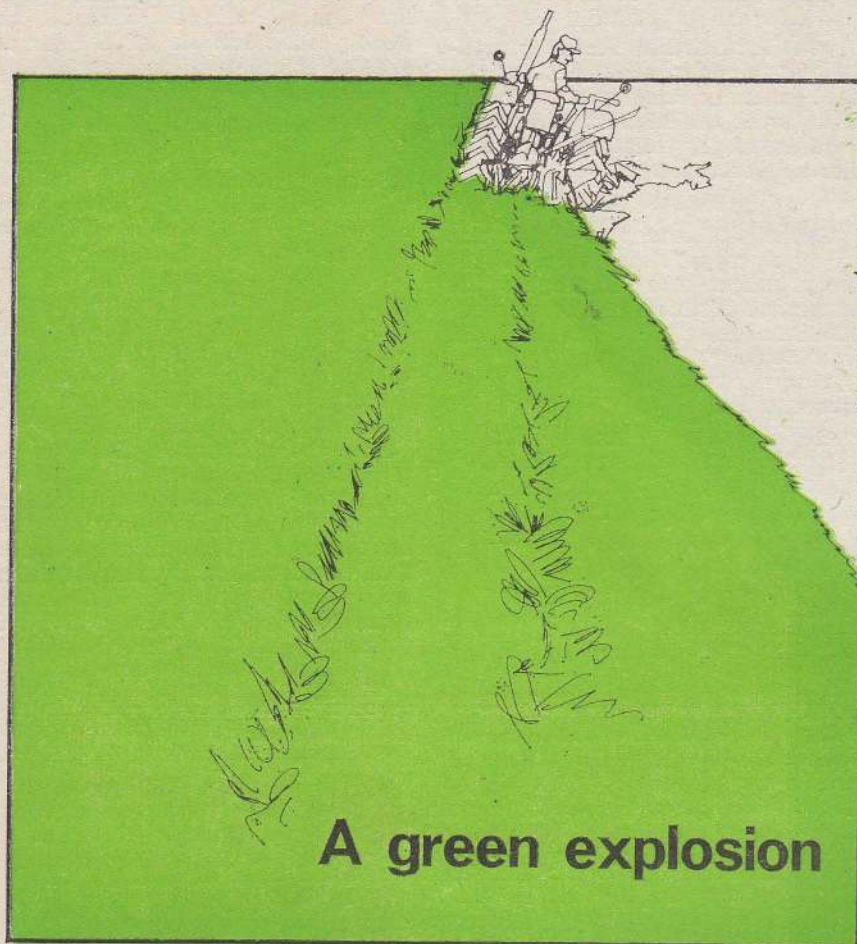
DIARY OF EVENTS

DEC.

1977.

- 1 The U. S. Department of Agriculture approved a \$300 m. credit to Poland for the purchase of grain. A further \$ 200 m. credit is under consideration, according to the U. S. Secretary of Commerce.
 - 2 Indonesia's recent purchases of more than 1 m. tonnes of rice will include 800,000 tonnes from China and 100,000 tonnes from the D. P. R. of Korea, the U. S. Department of Agriculture announced. In its weekly roundup of world production and trade, the USDA said the 100,000 tonne purchase, for delivery from November 1977 to March 1978, is the largest purchase since 1976 when Indonesia imported 336,000 tonnes of Chinese rice.
 - 3 Employment would be found for the 1.2 million jobless persons within the next six years, the Prime Minister Mr. J. R. Jayewardene told the 23rd annual conference of the UNP in Colombo. The main avenue of job creation, he said, would be the Mahaweli project, the Colombo Development Scheme, the project to develop the suburbs of Colombo and the Free Trade Zone.
- Britain's official reserves of gold and foreign currency climbed by a modest \$188 million (\$210 million) in November ending a run of spectacular increases dating back to May. But the \$183 million rise was enough to take the reserves to a new all time record of \$20,824 million (\$21,227 million), the British press reported.
- The developing countries — members of the Group of 77 — are strongly determined to continue and intensify their economic and political efforts to change the current focus of raw materials and other primary products, it was decided at a plenary meeting of the Group in Geneva. (Also see page 22).
- 8 The Bank of Europe joined 14 overseas banks, led by Lloyd's Bank International, to grant a loan of \$7 million dollars to Mauritania. It was announced in London. This is the first occasion when an Islamic bank has joined in raising a syndicated loan in the euro-dollar market for a foreign country.
 - 9 The Government of Peru devalued its currency, sol. The revised exchange rate was fixed at 48.28 sols per US dollar.
- Vietnam's Vice-Foreign Minister, Mr. Vo Dong Giang, said that his country has agreed to take part in the Association of Natural Rubber Producing countries, states a report in the *Public Ledger*.

- 9 The Government announced the creation of the Agriculture Development Authority, a new statutory body, to assist in the development of all agricultural land throughout the country.
- 10 The British Export Credits Guarantee Department guaranteed a \$5 m. line of credit which Morgan Guaranty acting on behalf of itself and a syndicate of London and Scottish clearing banks, made available to the National Bank of Hungary. It will help finance contracts awarded by Hungarian banks to U. K. exporters for capital goods and services, according to Britain's *Financial Times*.
- 12 The U. S. S. R. has given Libya 4,000 tonnes of wheat and some agricultural machinery to a total value of \$1 m, the journal *West Africa* announced.
- 13 The Australian Government revealed its dollar by 15 cents against the U.S. dollar, the second upward move after it was curbed by a record 17.5 per cent in November 1977.
- 14 The dollar fell to its lowest point in two-and-a-half years when hectic trading in New York followed wild fluctuations on European markets. Dealers said the US Federal Reserve Board intervened only slightly, amounting to the hectic trading, but not attempting to stem the dollar's fall. The dollar closed at 2.0714 Swiss francs and at 2.1387 West German marks.
- 21 The Budget was passed in the National State Assembly without a division. The Minister of Finance and Economy, Mr. Antonio de Mel said the most important part of the budget was putting it into operation. He proposed to make 1978 Development Year.
- 22 The dollar strengthened mainly on New York's foreign exchange market following President Carter's pledge that the US currency would be protected.
- 23 A bill to establish "The Greater Colombo Economic Commission" was sponsored by the Minister of Planning.
- 28 1978 is likely to be a tough year for the British economy than 1977, according to the Paris-based Organisation for Economic Co-operation and Development (OECD). But the British improvement will take place despite a deepening recession in the rest of Europe which poses to be a threat to the economic well-being of the whole world, including the United Kingdom, stated the *London Times*.



PEASANT AGRICULTURE

Paddy production in 1977 is reported to have reached 80.4 million bushels, the first time in the country's history that the 80 million bushels mark has been exceeded. Provisional estimates place the Maha crop at 54.8 million bushels and the Yala crop at 25.6 million bushels, which should finally amount to a total of 80.4 million bushels for 1977; while forecasts for 1978 are an even more optimistic 90 million bushels. If these targets are achieved we should be closer to producing our entire requirements of rice; and the country should be closer to its major goal in the domestic agricultural sector,

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of replacing all imported rice with that produced locally, than ever before in recent years — a goal which has eluded the country for some time.

The success of many an economic plan or political programme and the progress of the entire economy have been based on the success of the food drive — on increased productivity in the domestic agricultural sector. Is Sri Lanka achieving that level of development in agriculture that we so long hoped for? Any assessment of the current situation has to be viewed in the perspective of the agricul-

tural and fiscal policies that have existed over the last 150 years and the consequences that flowed from the implementation of these policies.

The traditional peasant based domestic agricultural sector dates back to ancient times and has always provided a livelihood for the majority of the people. The introduction of the plantations under colonial rule in the 19th century struck a blow at the peasant based agriculture sector. The transition from a rural subsistence economy to a modern export economy also began with the establishment of the plantations. The transformation in the economy was completed when the plantations made deep inroads into the existing village economy. The economy of the village in turn became less and less adapted for supplying the everyday needs of the community. The country thus became dependent on foreign sources for even its basic necessity, food. The plantation system which was based on wage labour, factory type operation of large estates and production for foreign markets offered very few immediate benefits to the peasant sector. The surpluses produced were also either re-invested in the plantation sector itself or paid as dividends to foreign investors. One result was that the domestic rice economy remained stagnant for nearly a century.

In contrast to the plantation sector, which was modernised and based on capitalist enterprise, the peasant agricultural sector consisted of subsistence agriculture, employing traditional technology. The individual farmer had self-sufficiency as his goal and supplemented paddy cultivation with other crops. The main characteristics of this sector were: small holdings, fragmentation of land into still smaller uneconomic holdings, traditional technology, tenancy agreements which inhibited the cultivator from making an improvement to the land and increasing output, and indebtedness which kept the cultivator tied to the village landlord. This pattern remained more or less unchanged upto the end of World War II when a significant transformation occurred and the stagnant peasant agricultural sector emerged as a dynamic sector in Sri Lanka's economy. Today the food crops sector is regarded as most crucial for the country's development strategy.

ROLE OF THE FOOD CROPS SECTOR IN THE ECONOMY

The importance of the food crops sector can be viewed from several points of view.

For instance, its contribution to the gross national product and the growth of the economy. Comparable national accounts data is available only from about 1959. The following table places in perspective the contribution of the food crops sector from 1960 onwards.

Table I. GNP and the Agricultural Sector
(1959 constant prices)
3 year moving averages (Rs. mn)

	1960	1965	1970	1975
① Paddy	350.0	377.4	597.1	549.6
② Subsidiary food crops	105.1	118.5	240.8	501.3
3. Major export crops	1,337.0	1,547.4	1,524.7	1,449.1
4. Minor export crops	21.3	22.0	24.9	59.4
Total Agriculture and Fishing	2,450.5	2,846.6	3,332.8	3,576.2
Total GNP	6,202.2	7,577.4	9,570.8	11,096.0

The above data also highlights the growing importance of the subsidiary food crops sector. By 1976 the value added in the latter sector was very close to that in paddy. This development has occurred largely over the last 6 to 7 years under favourable price conditions resulting from import bans on these products. There was a realisation in official circles also that excessive concentration on one crop would not result in the best use of our land and water resources. "A paddy field is no longer a place where only paddy is grown. Water is no longer a resource that is applied only to paddy", stated the Draft Agricultural Plan, 1971-77 Vol. 1. In some contexts, the term subsidiary food crops has been replaced by 'other field crops' since the former expression implies that paddy is still the principal crop.

The table above also shows the changing importance of the food crops sector over the years. The relative role of the export sector has been reduced over the years, though the combined value of minor and major exports still exceeds that of the food crops sector. The percentage of food crop production to GNP has increased from 18.5% in 1960 to 29.3% in 1975. (Three year moving averages were taken as the agricultural sector is very susceptible to weather conditions).

The importance of the food crops sector can also be viewed from its contribution as a provider

of employment. Table 2 below illustrates the position.

The agricultural sector provided employment to about 52% of the total gainfully employed. Paddy accounts for the highest percentage of employed in relation to any other single crop.

Consumption

Again, the extent to which rice and food crops form part of the family budget also highlights the importance of this sector. Accord-

The index for highland crops has almost trebled whereas the paddy index has shown a high degree of fluctuation, as seen in table 3 below.

THE PADDY SECTOR

Paddy cultivation has dominated peasant agriculture from ancient times and throughout these years formed the basis of the rural economy. "It was the pivot around which the economic and cultural life of the village revolved". This has been reflected in the agricultural policy of successive governments, a policy which has been oriented mainly towards the development of the paddy sector.

The underlying theme in all planning exercises since 1948 has been the objective of attainment of self sufficiency in rice. The strategies for attaining this objective, however, have varied in different degrees with each successive plan. Production increases could be attained in two different ways:

- The extension of cultivated area by irrigating new areas and by increasing cropping intensity.
- Increasing the productivity of land already under cultivation, that is by increasing the per acre yield of paddy

Source: *Central Bank of Ceylon*

ing to the Consumer Finances Survey of 1973, expenditure on rice formed 27% of total expenditure on food while the proportion spent on starches and pulses and other cereals (excepting wheat flour) formed 5% of the total. This may be an underestimate of actual

Table 2. Employment in the Agricultural Sector — 1971

	('000)
Agriculture, forestry and fishing	1,829.0
Paddy (rice) cultivation	802.8
Other field grains	1.8
Vegetable and fruit gardening	62.2
Tea, rubber, coconut	740.3
Cultivation of other crops (excepting minor export crops)	132.4
Livestock	4.7

Source: *Population Census 1971: Economically Active Population*

consumption since only direct consumption has been considered.

Growth of Agriculture

The relative growth of paddy and highland crops is clearly seen by the trends in index numbers of agricultural production.

through intensive application of fertilizers, agrochemicals, high yielding strains etc.

The relative weight given to these two strategies has varied over the years. In the early fifties,

Table 3. AGRICULTURAL PRODUCTION 1962=100

Year	Paddy	Highland Crops	Animal Husbandry	Overall Index (all agricultural products)
1962	100.0	100.0	100.0	100.0
1964	105.2	130.3	121.0	109.8
1968	134.4	132.4	125.9	117.2
1970	161.3	157.2	177.7	129.2
1972	131.0	174.0	166.4	124.3
1974	160.0	269.4	140.5	122.9
1976	125.1	287.0	155.1	120.3

Source: *Department of Census and Statistics*

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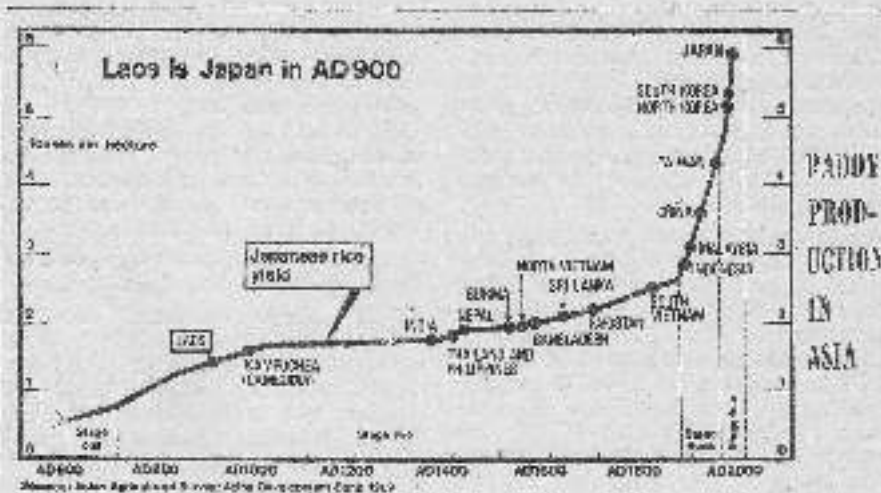
the availability of large areas of unutilized land in the dry zone and on-going colonisation and settlement programmes tended to favour the first strategy. The post-war Development Proposals of 1946 stated that "the first object of the plan is to produce locally as much of our staple food and other requirements as we are able to do with reasonable efficiency." This plan was followed by the first Six Year Plan both of which were not implemented. These also stressed the importance of the agricultural sector on grounds of need for self-sufficiency, availability of vast areas of potentially cultivable land and the lack of an industrial base.

The Ten Year Plan of 1958 was the most ambitious of these attempts at national planning. "A considerable increase in rice production is a major objective. The Plan aims at more than doubling of present rice output by 1968. A substantial contribution to this increase will accrue through the raising of productivity per acre."

The plan therefore marked the shift in emphasis towards more intensive strategies, such as increased use of fertilizer, in the drive towards self-sufficiency. However, like the previous plans, the Ten Year Plan could not be implemented and the actual amounts of investment followed here little addition to planned magnitudes. The Short Term Implementation Programme of 1962 which stressed the raising of productivity by less capital intensive means shared the same outcome.

More serious attempts at planning as well as implementation in relation to agriculture were observed in the latter half of the 1960s. The Agricultural Development Proposals of 1966 presented a five year programme of development for the paddy sector. The approach adopted was based on the view that rice production could be intensified only through a "package" of activities and the plan worked out details relating to supporting services of input supplies, credit and extension and institutional arrangements as well.

"The best laid plan can be nullified unless a detailed strategy of implementation is worked out and imaginatively carried through," it stated. In keeping with this view an organisational network for implementing the paddy programme was evolved, which co-ordinated



Source: Asian Agricultural Survey, Asia Development Bank, 1974

In a recent issue of *The Economist* (London), its deputy editor Norman Macrae, recording an Chinese agricultural growth record, with the above illustration, cast "most south-east Asian countries, from Laos to South Vietnam, still have levels of rice production per hectare equivalent to the 14-24 tonnes already reached by Japan in AD 900. But, on the right hand side, seven countries are dragging themselves triumphantly out of the middle ages now!"

"China, Taiwan and the Korea have advanced to levels (24-32 tonnes per hectare) that Japan reached in the first half of this century. Moreover, I think the chart contains an understatement. In many parts of China,

production of rice is now going well above even the present Japanese average of 6 tonnes per hectare (which isn't surprising because southern China has much hotter weather)."

"In one county we visited in Hunan the proportion of farms with two crops a year has risen from 28% to 95% in the past eleven years, and within that 95% about a quarter have now gone on to three grain crops a year; the triple croppers were planting the winter wheat between the year's two rice crops while we were there. The double croppers average 8 tonnes of grain per hectare a year, the triple croppers over 10 tonnes..."

divisional and district level programmes with national programmes. The proposals were implemented in the form of annual programmes and the targets were more or less attained by 1970.

Intensification of paddy production on a regional basis was another guiding principle of planning for development of the paddy sector during this period. Given the diverse agro-ecological zones found in the country the potential of production varied considerably from region to region. This was given due recognition in policy making as well as in research.

The next stage was set by the Five Year Plan, covering the period 1972-1978. The emphasis in this plan was on increasing of productivity in lands already under cultivation, which were expected to contribute around 80% to the total increase in production. By 1978 paddy output was expected to reach 118 m. bushels which would

have made the country about 97% self-sufficient, according to the Plan. The institutional structure of this sector was changed through a series of legislative measures. Agricultural Productivity Committees were set up at the divisional level to co-ordinate the activities of Cultivation Committees. These were vested with wide powers to promote optimum use of the land resources in their respective areas. The credit and insurance schemes pertaining to paddy were replaced by new schemes. However, the period was not a successful one for paddy mainly due to droughts in the latter part of this plan period, particularly in the 1974-75 and 1975-76 seasons.

Growth Record
 "The question of paddy output is a complicated one, involving as it does hundreds of thousands of small peasant cultivators and a tangled web of social and economic problems: technology, knowledge,

ancient custom, economic incentive, co-operative action, tenure relationships, law and government administration". This view of D. R. Snodgrass in his book "Ceylon" sums up many of the reasons why there have been problems connected with the attainment of targets in the paddy sector.

There can be no doubt that the paddy sector has experienced substantial growth over the past two decades. Starting from a low production base of 43.0 million bushels in 1959-60 production increased to 77.4 million bushels by 1969-70, representing an increase of over 85 per cent during the period. The increase in later years was mainly the result of an increase in the yield per acre which rose from 36.38 bushels per acre in 1959/60 to 46.87 bushels per acre in 1971/72. During the period 1959/60 to 1971/72 the acreage under paddy also increased to 1,578,929 acres by 1971/72. Last year's performance, however, as expected reached an all time high with paddy production increasing from 60 million bushels in 1975/76 to over 80 million bushels in 1976/77.

The growth has not been a consistent one and also not im-

pressive in relation to targets set. This same period also saw several bad crop years — 1955/56, 1958/59, 1964/65 and 1974/75. Crop years 1963/64, 1969/70, 1973/74 and 1976/77 will go on record as years of exceptionally good harvests. What is implied is that fluctuations have occurred around an upward growth trend, as seen in table 4.

In terms of growth these years may be divided into four broad periods.

- (1) 1950-59 production less than 40 mn.
- (2) 1959-65 production 40-50 mn.
- (3) 1966-70 production 50-78 mn.
- (4) 1971-77 production 60-80 mn. bushels. Dampened growth due to adverse weather.

Growth of production by sub-periods is instructive in analysing changes in paddy output.

Paddy production has grown at an annual rate of 3.8% since 1952. The annual growth rate would have been higher were it not for the adverse weather conditions in recent years. This increase in production was achieved both by increases in the extent cultivated and in that of per acre yields. Growth rates of area and yield indicate that their contribution by sub-periods show the same tendency, the only exception being the 1966-70 period. The growth rates here are rather inflated because of the poor performance in the crop year 1966 and hence they may not convey the correct picture. Despite advances in the breeding of high yielding varieties and their diffusion, the yield contribution to total production was hardly signifi-

Table 5. Growth rates by sub-periods (annual compound rates in percent)

	1952-76	1952-59	1960-63	1964-70	1971-76
(1) Production	3.8	3.0	3.4	7.3	— 2.1
(2) Area	1.9	1.4	2.0	2.5	— 1.4
(3) Yield	1.9	1.6	1.4	4.8	— 0.7

(A word of caution is necessary about these growth rates which have been computed using base and end-year values only).

cant over the years. It is necessary to analyse the area and yield trends to assess their role in expanding production.

Table 4. Production, Area and Yield of Paddy (1952-1976) — (Original Values) 3 years moving averages
Original Values (a) 3 years moving averages (b)

Year	Production million bushels	Net Harvested acreage in '000	Average Yield per acre	Production million bushels	Net Harvested acreage in '000	Average Yield per acre
1951/52	28.90	936.62	30.80	—	—	—
1952/53	21.90	808.78	27.00	27.30	922.28	29.27
1953/54	31.10	1,021.45	30.02	29.57	974.25	29.82
1954/55	35.70	1,092.51	32.45	31.23	1,002.78	30.83
1955/56	26.90	894.37	30.03	31.29	984.81	31.61
1956/57	31.28	967.56	32.35	31.59	971.75	32.26
1957/58	36.60	1,053.32	34.40	34.76	1,021.59	33.89
1958/59	36.40	1,043.89	34.91	33.67	1,093.73	35.23
1959/60	43.00	1,183.97	36.38	40.83	1,141.21	35.81
1960/61	43.10	1,195.78	36.13	44.70	1,216.07	36.80
1961/62	48.00	1,268.46	37.90	46.77	1,253.58	37.31
1962/63	49.20	1,296.51	37.91	49.23	1,289.82	38.17
1963/64	50.50	1,304.50	38.69	45.33	1,219.07	36.97
1964/65	36.30	1,056.21	34.32	44.17	1,215.39	36.21
1965/66	45.70	1,285.46	35.62	45.63	1,224.54	37.07
1966/67	54.90	1,331.95	41.27	55.03	1,335.47	41.13
1967/68	64.50	1,383.99	46.49	61.75	1,343.14	46.03
1968/69	65.86	1,308.49	50.33	69.27	1,402.33	49.37
1969/70	77.45	1,509.52	51.30	70.70	1,425.06	49.18
1970/71	66.90	1,457.16	45.90	69.08	1,436.25	47.84
1971/72	62.90	1,342.07	46.32	64.38	1,470.88	45.63
1972/73	62.90	1,410.83	44.58	67.85	1,442.49	44.86
1973/74	76.33	1,659.73	45.99	64.90	1,425.82	44.71
1974/75	55.32	1,256.90	44.01	63.40	—	—
1975/76	60.05	1,360.82	44.13	—	—	—

Source: (a) Dept. of Census and Statistics
(b) Compiled from series 'a'

Area Expansion

Expansion of area can take place in two ways.

1. Expansion of asweddumized area (that is land ridged and hunded and prepared for paddy cultivation).
2. Increases in cropping intensity (that is, asweddumized land may be cultivated both seasons - double cropping).

There are two ways of increasing the asweddumized area under cultivation - by governmental schemes of irrigation or through farmers' own efforts. The figures on these trends are as follows:

Year	Acres	Index
1952	961,484	100
1960	1,460,003	150
1965	1,572,684	163
1970	1,408,927	146
1974	1,549,857	161

Asweddumized area has increased progressively over the last 24 decades as shown in this table.

It has increased by slightly more than half a million acres over this period. This may reflect basically the impact of new irrigation schemes and to some extent expansion of acreage owing to more attractive prices for paddy.

The beneficial effects of irrigation, higher prices and various subsidies may also be seen in intensification of paddy farming. The cropping intensity index, however, does not show any marked changes. The ratio is highly sensitive to weather conditions. The position in a good crop year may reflect the possible extents of double cropping.

Paddy Cropping Intensity

Year	Per cent
1952	120.6
1965	133.9
1970	133.1
1974	136.1

Cropping Intensity = (Total annual sown area/Asweddumized area) x 100.

With the operation of the Mahawel Scheme the situation may change but the cropping intensity so far has not shown a very marked improvement. One would have expected a significant improvement of cropping intensity following changes in development of new and improved varieties, increased irrigation and government incentives offered to farmers but this has not occurred for various reasons.

Yields in net harvested area are more relevant when observing production behaviour. The growth

rate (annual compound) of net harvested area was only 1.9 per cent over the period concerned. Growth by sub-periods indicates the following position.

Year	Growth Rate
1952-59	1.4%
1959-64	2.0%
1964-73	3.3%
1973-76	1.4%

The impact of successive droughts during the period 1971-76 on paddy acreage is clear and crop failure is a sizeable problem and it has ranged from about 70,000 acres to 244,000 acres roughly, implying a loss of the order of 16 mn. bushels in a bad crop year. Crop failure statistics collected by the Department of Census and Statistics show the following pattern for two good and two bad crop years.

Table 6. Crop Failure Rates

Year	(Percent of gross area sown)			Total	Average affected (1960 acres)	Potential output lost at 15 bushels per acre (1960 bushels)
	Major	Minor	Rated			
1965	3.18	14.8	18.0	14.8	212.7	3,191
1970	3.23	3.9	8.1	5.2	36.7	486
1974	3.01	4.38	3.71	3.36	68.6	1,027
1975	2.1	16.0	16.0	14.2	243.6	3,652

The main cause of crop failure as we see it therefore is the problem of water. Making due allowance for the reliability of this data, the following picture emerges from available figures.

Paddy Crop Failure

1965 1970 1974 1975
(Mnha)

All-Weather Factors	1965	1970	1974	1975
Drought	0.9	1.4	4.2	1.1
Floods	28.1	14.3	50.7	24.4
Others	2.0	57.9	22.9	1.6
Peak	0.7	5.0	15.9	1.1
Others	7.4	47	6.2	1.5

Source: Census and Statistics Department

Drought and floods appear to be the main factors that govern crop damage.

Yield Behaviour

The behaviour of yield constitutes another important determinant of total production. Despite remarkable advances in breeding of high yielding varieties and their diffusion it is significant that average yield per acre still remains one of the lowest in Asia. Average annual yield per acre still ranges from 45 to 50 bushels per acre, which is about a 50 per cent increase over that of the early 50s. This con-

cerns average yield level of course conceals important regional variations in yield levels; but it is clear that yields are low in relation to the widespread adoption of improved varieties. The actual yield in some cases have amounted to almost 100 bushels per acre.

In fact the main impact of a green revolution strategy would normally be on increasing yield. This to an extent reveals the limited impact of new farm technology which has shown impressive results only in localized contexts.

ATTAINMENT OF SELF-SUFFICIENCY

Problems and Precepts

"The idea of self-sufficiency can be understood in various ways

but in the popular mind it has meant the elimination of imports. The desire to be self-sufficient in rice has always received a sympathetic response from the people not only because of the economic advantages but also because it was a matter of national pride", stated the Draft Agricultural Development Plan 1971-1974, Annual Crops.

Several international reports predicted self-sufficiency for Sri Lanka in the early 1970s. A Field Report of the FAO/IFDC Ceylon Fertilizer Project (1968) stated that "self-sufficiency is no longer in doubt" and "it is now simply a matter of reliable extrapolation from existing trends."

Viewed in retrospect, many of the forecasts about attainment of self-sufficiency seem to have been unduly over optimistic. If plan targets and achievements are considered, the Agricultural Development Proposals of 1966-70 produced a good performance as table 7 on the following page shows. The targets of the Agricultural Development Proposals 1966-70 were broadly attained by 1970. The Five Year Plan of 1972-76 planned an output target of 116 mn. bushels by 1976 but there was a marked divergence between

plan targets and actual achievement throughout this period. The years 1972, 1973, 1975 and 1976 were particularly bad crop years. The attainment by 1976 was only 52 per cent of the target. The annual compound growth rate in production between 1971 and 1976 was negative. However, the situation seems to have changed with the onset of the 1976/77 Maha season which produced the record harvest of 54.8 mn. bushels and indications are that annual production in 1977 has exceeded 80 mn. bushels.

It is not possible to work out self sufficiency projections on a detailed basis but an attempt is made here to derive rough guidelines on

Table 7. Paddy Output — Production Targets and Achievement 1966-70 and 1972-76

Year	Production mn. bushels		Actual as % of target	Year	Production mn. bushels		Actual as % of target
	Target	Actual			Target	Actual	
1966	51.97	45.79	88.1	1972	78	62.9	80.6
1967	53.95	54.96	101.9	1973	94	62.9	66.9
1968	61.45	64.59	105.1	1974	100	76.8	76.8
1969	71.34	65.86	92.3	1975	107	55.3	51.7
1970	74.97	77.4	103.2	1976	115	60.0	51.7

the basis of some crude assumptions.

The concepts of total demand for rice should be distinguished:

1. estimates based on per capita consumption at optimum fixed by nutritional or other norms, and

2. estimates based on actual or apparent consumption which is the sum of production and imports allowing for seed waste, etc.

Self sufficiency is in a sense a relative concept.

Comparing per capita consumption trends, according to Consumer Finance Surveys and food balance sheets, a per capita consumption of 100 kg. of rice seems reasonable. It has been found in various surveys that our cereal consumption, which includes wheat flour, in average terms approximates the standard nutritional requirements. The recommended per capita daily allowance for cereals is 586 grams. Per capita consumption, especially, has been closely tied up with the rice ration which has in turn contributed to a certain stability in consumption levels. The rice ration has in fact guaranteed a minimum level of consumption. See table 8.

Some crude estimates of demand could be worked on the basis of projected population data and assumed average per capita consumption of 100 kg. According to the high population projection (15.90 mn. in 1981) the estimated requirement by 1981 is about 125 mn. bushels. If per capita consumption rises to 105 kg. (to allow for rising incomes) the total requirement would be around 130 mn. bushels.

This may be contrasted with production estimates within the next five years. Recent experience has demonstrated the danger of extrapolating from past trends. However, the new area to be aswed-dumized during this period could be ascertained from programmes of the Ministry of Irrigation. It is estimated that about 120,000 acres will be brought under major and minor irrigation schemes by 1981. Assuming an increase of national yield per acre to about 60 bushels, a production of 123 mn. bushels has been tentatively estimated in official circles. This estimate is of course based on

Table 8. Imports, Domestic Production, GPS Purchases and Self-sufficiency Ratio

	a.	b.	c.	d.
	Imports of Rice thou sand tons*	Local production of rice thousands tons	GPS Purchases million bushels of paddy	Self-sufficiency Ratio %
1952	386	371	1.3	44.9
1953	439	276	0.3	34.6
1954	407	399	3.6	45.5
1955	381	461	13.4	50.8
1956	471	351	8.7	38.7
1957	556	402	13.7	38.0
1958	580	472	13.2	40.9
1959	519	471	16.2	43.6
1960	532	561	20.8	47.3
1961	497	563	22.4	49.1
1962	515	642	27.0	51.5
1963	551	644	27.7	49.9
1964	547	661	29.7	50.7
1965	642	466	21.4	38.1
1966	494	593	28.0	50.6
1967	381	723	13.4	61.5
1968	344	853	14.9	67.3
1969	260	873	13.9	73.1
1970	526	1028	26.2	62.2
1971	334	880	32.3	68.5
1972	262	828	26.4	72.0
1973	338	828	22.9	67.0
1974	297	1015	20.9	73.4
1975	450	725	11.3	57.7
1976	419	788	12.8	61.3

* Long tons

Sources: a. Food Commissioner's Department
 b. Census and Statistics Department
 c. Self-sufficiency ratio has been calculated in the following manner.

$$R = \left\{ \frac{(P - S) \times 100}{M + (P - S)} \right\} - W$$

R = Self-sufficiency ratio in per cent.
 P = Domestic production of paddy (annual)
 S = Seed requirements at the rate of 2 bushels per sown acre.
 M = Volume of imports
 W = Correction factor for waste in handling, processing, transport, etc. Assumed to be 4% for both domestic production and imports.

It is assumed that rice imported in a given year is consumed in the same year and that stock changes are negligible.

many assumptions particularly normal weather conditions, removal of certain deficiencies in availability of farm power and input supplies, and effectiveness of rural institutions. When estimated requirements are contrasted with production prospects for self-sufficiency in the early 1980s not good.

The question in regard to self-sufficiency in food or total cereal consumption is a different matter. In view of the fact that wheat flour has established itself as a more or less stable component of local cereal consumption patterns, the role of self-sufficiency will be sensitive to trends in wheat flour consumption. The following table shows that though Sri Lanka has produced a higher proportion of cereals over the years the ratio of self-sufficiency is less than 60%, the lowest among these Asian countries.

Domestic production as a percentage of total cereal consumption in selected Asian countries

	1960-1969	1970-1974
	Per cent	
Bangladesh	88.1	86.2
India	81.4	87.4
Pakistan	89.3	89.8
Malaysia (West)	86.3	88.5
Philippines	85.7	87.2
Indonesia	84.3	82.5
Sri Lanka	59.4	58.7

Source: ADB Quarterly Review 3: 77

SPREAD OF NEW TECHNOLOGY

The advent of a 'green revolution' in relation to food growing and its likely effects have been a matter of considerable controversy in recent years. The new farm technology is mainly based on high yielding seed varieties which are responsive to fertilizer. In examining the extent to which Sri Lanka's paddy sector has been affected by the improved methods of cultivation, the extent to which the following practices have been adopted are relevant:

- i. Use of high yielding varieties
- ii. Fertilizer application
- iii. Pest and disease control
- iv. Transplanting of paddy
- v. Ploughing by bullocks and tractor
- vi. Weed control

Sri Lanka has made the biggest advances in the breeding and distribution of improved varieties of rice. Two stages in this programme can be identified:

a) From the use 50% up to about 1970.

b) from 1970 to date.

Developments in the first stage were based on locally bred II varieties such as H4, H7 and H8. From the early 1960s these spread fast so that about 70 per cent of total sown area was under II varieties by 1970. In the second stage, the breakthrough was in evolving varieties of higher potential and shorter duration to suit different agro-climatic regions. The spread of these varieties is also extensive as shown by the following figures:

Variety adopted — Maha 1973-74	
	% of farmers
Newly improved	42.6
Old improved	37.3
Traditional	24.7

Source: Crop Cutting Survey.

Despite the wide diffusion of new varieties whose yield potential ranges from 100 — 140 bushels per acre, the national average yield is rather low, (around 50 bushels). One main reason is that the new technology is not adopted on a 'package' basis. For instance while improved varieties are widely adopted, other inputs such as fertilizer, agro-chemicals and weed control are not made use of in the recommended manner which affects the yield potential. The new varieties have not given the expected yields. Some have cautioned about a process of 'over-adoption' of high yielding varieties in the sense of adopting them in areas for which they were not meant.

"Fertilizers provide the most potent weapon in the strategy for raising agricultural productivity" (Chaudhry, Marga, Vol. 3, 1, 1978). Substantial gains in fertilizer use have occurred over the last decade or so. However the world oil crisis sharply increased the cost of fertilizer. The government has been operating subsidy schemes over a long period with a view to popularizing fertilizer. The peak in fertilizer consumption in paddy was reached in 1973 but there was a sharp drop in subsequent years due to bad weather and high prices. The main features of the fertilizer problem are high cost in terms of foreign exchange and sub-optimum application due to financial constraints and lack of effective extension work. This may partly explain the observed low yields.

The different control mechanisms created over the years have resulted in delays, artificial shortages and unnecessary costs for the economy as a whole. This situation applies as strongly to fertilizer distribution as it does in several other essential items. One of the key factors for the non-application of fertilizer or its application in small doses, therefore, was its non-availability in village level stores. The availability of fertilizer at the correct time and price for farmers is a problem that has to be tackled.

Fertilizer issues for Paddy (Thousand Tons)

1961	120
1962	131
1963	141
1964	161
1965	120
1966	141
1967	153
1968	153
1969	153
1970	171
1971	184
1972	184
1973	193.7
1974	184
1975	187
1976	124

Transplanting of rice is practised on a very small scale. During Maha 1973-74, only 18% of the farmers reported transplanting. This practice is not popular because of high demands on labour. Absence of transplanting adds to the problem of effective weed control also. There is no doubt that remarkable advances have been made on the technological side which could effect a marked increase in productivity though this is still to be realized.

"Deficiencies in institutional arrangements appear to have impeded research advances in Sri Lanka in recent years. Farmers' fields remain progressively regressed the experimental stations as the result of research."

Land Settlement and Colonization

Large scale colonization of the dry zone under major irrigation schemes was initiated in the 1930s with the enactment of the Land Development Ordinance of 1935. The main objectives of these schemes were relief of population pressure in the wet zone, contribution to food production, establishment of a peasant proprietor group and employment creation. Generous assistance was initially given to settlers but this policy was changed after 1953 due to the high costs of settlement. The initial allotment of 8 acres (consisting of 5 acres of paddy and 3 acres of highland) was scaled down to 5 acres and subsequently to 3 acres as a result of a heavy demand for allotments. Roughly about 400,000 acres come under these schemes at present, (excluding the settlements under the Mahaweli Ganga Project).

The objectives of land settlement under these schemes have been realised only to a limited extent. It is estimated that about 20-25 per cent of national paddy production is accounted for by these schemes but the share may rise once the Mahaweli Project exerts its impact. Wide variations in the level of performance of colonization schemes has been a major problem. Low cropping intensities due to excessive use of water, low productivity and under-utilized highland, illegal tenancies and fragmentation and increasing unemployment among the second generation are characteristic of the problems faced in most of these schemes. This situation, described by B. H. Farmer in 1957, would still apply to many of these aspects. Under a World Bank initiative, the Land Commissioner's Department embarked on a special projects programme in selected areas, starting with the Elahera Scheme. The objective was to obtain a higher rate of return to capital invested in these schemes by promotion of productivity at high levels, with the concentration and coordination of extension activities under a Project Manager. Even here, success was short lived and the Land Commissioner's Department seems to have stopped extension of the scheme to other schemes.

The Mahaweli Project is the most ambitious of our land settlement schemes. It plans to benefit

132,000 acres of existing farm land for double cropping and 70,000 acres of newly irrigated land. The newly irrigated areas are expected to benefit about 25,000 families.

Besides the colonization under major irrigation schemes, land alienation was effected under several other schemes such as village expansion schemes, highland colonization and middle class lessees schemes. Since 1966 experiments were carried out with youth settlements on co-operative lines. The early seventies saw the emergence of several types of collective farms: the Land Reform Commission, Janawasas, Samupakara Gammanas and D.D.C. farms. These were established on already developed land and the settlers were largely youth. However, there was no uniformity in the degree of success achieved in these schemes. The scope for collective farming is an important issue in view of increasing pressure on cultivable lands with population increases. The experience upto now with establishing co-operative farms has not been very encouraging but serious thought would have to be given to ways and means of making them effective in order that the principle could be extended in the future.

Irrigation and Water Controls

The experience of the last few years clearly indicates the crucial role of assured water supply for attainment of production targets. International experience also has shown that the basic constraint on the diffusion of new technology is that of irrigation. This could be remedied in two ways.

- (a) Expansion of irrigation facilities. (The high cost of irrigation is the basic constraint in this regard).
- (b) More efficient management of existing sources of irrigation.

It is very often pointed out that inefficient water management procedures result in considerable waste of costly irrigation water, staggering of cultivation schedules and flooding of fields as a weed control measure. Ineffectiveness of rural institutions in charge of water issues is said to be a major cause that leads to excessive use of water. The result is that tank water cannot be very often reserved for a second crop. It has been estimated that more effective water control alone could add about four to ten million bushels to our paddy output, according to Robert Cham-

bers. How to enforce stricter discipline and economy in use of water has been a controversial issue. Some have suggested going back to the old *vel vidane* system (irrigation headman) while some favour pricing of irrigation water. This issue now becomes particularly important in the areas irrigated by the waters of the Mahaweli Ganga.

Land Tenure and Land Reform

Two aspects of the tenurial situation deserve attention:

- i) small holdings
- ii) share cropping

Paddy is predominantly a small holder's crop with over 94 percent of the holdings below 5 acres in extent (1962). Parcelisation of the holdings added to this problem. The Land Reform Law of 1972 imposed a ceiling of 25 acres on ownership of paddy lands and its impact on the paddy sector was at best marginal. The optimum or economically viable size of paddy holdings for a family farm is a controversial issue though there is general agreement that holdings below the size of one acre cannot generally guarantee a sufficient income for a family. In this sense, the holdings in the dry zone are larger than those in the densely populated wet zone.

Under different land alienation schemes, land was allotted to settlers on a lease-hold basis and restrictions were placed on fragmentation, transfer and sale. It was often pointed out that this form of tenure gave the peasant little incentive to improve productivity on a long-term basis. The Sale of State Lands Law of 1973 was designed to enable settlers to acquire ownership of the land by outright purchase or in instalments.

About 75% of Sri Lanka's paddy holdings are operated under various forms of tenancy but the dominant system is that of "*andē*" or share cropping. Traditionally the tenant had to surrender 50 percent or more of the produce to the landlord. This system has been criticised on grounds of equity as well as production efficiency. The tenant has little incentive to invest in high yielding inputs since he has to surrender half or more of the output. Empirical studies indicate that productivity differences between owners and tenants are not marked but the net incomes of tenants are much below those of owners.

ECONOMIC REVIEW, JANUARY 1978

The Paddy Lands Act of 1958 was aimed at ensuring security of tenure and rent regulation on lands operated under lease. It established cultivation committees at the village level for implementing the regulations. However, the implementation of the Act was far from satisfactory and a large number of evictions took place. Ineffectiveness of cultivation committees, protracted legal procedures and the superior economic position of the landlord in the village setting, meant that tenants had limited access to benefits accorded by the Act. The Paddy Lands Act was superseded in 1973 by the Agricultural Lands Law which extended the act to cover all agricultural land and established District Agricultural Tribunals. Available studies indicate that there has been no marked improvement in the situation mainly because of the inefficient functioning of Agricultural Productivity Committees and the landlord bias of the existing committees. Measures which attempt to regulate terms and conditions of tenancy are unlikely to succeed in the absence of any organization of tenants and sharecroppers. The view that radical approaches, such as the abolition of share cropping may be more fruitful, are worth considering.

Agricultural Credit

Though government intervention in the sphere of agricultural credit dates back to 1947 the farming community still continues to depend heavily on non-institutional sources of credit. A major change in policy was effected in 1967 with the launching of the new Agricultural Credit Scheme under which the People's Bank channelled credit to farmers through the Co-operative network. This was followed by the Comprehensive Credit Scheme of 1973 which envisaged the provision of the entire credit requirements of the farmer through Co-operative Rural Banks and Banks of Open Branches located in Agricultural Productivity Committees buildings. With the 1973-74 Maha season, some modifications have been carried out to this system. Credit is provided for both paddy and subsidiary food crops but the bulk of credit granted up to now is for the paddy farmer.

The experience of these credit schemes follows what is now a familiar cycle. Initial liberalisation and expansion of credit dis-

Table 9. Paddy Loans and Recoveries

		(Rs. mn)	
		Total loans granted	Total repayments
			Percentage of repayments
1967/68	1968/69	100.00	71.0
1970/71	1973/74	442.10	50.2

bursements, an increasing rate of defaults over successive seasons and a subsequent drastic reduction in the volume of credit granted with the fall in the number of eligible borrowers. The twin objectives of supplying credit on liberal terms for promotion of productivity and credit discipline in the sense of penalising defaulters thus came into conflict. All new schemes have a built-in mechanism for the volume of credit to decrease with increasing defaults. Table 9 above sums up recent experience with regard to disbursement and repayments.

As at the end of Yala 1977, the total outstanding volume of credit was Rs. 300 mn. It has been decided to grant credit this season to all applicants including defaulters. It is estimated that total credit volume will exceed Rs. 300 mn. This in the absence of a carefully worked-out programme of follow-up and supervision is likely to encourage further defaults.

In inaugurating a paddy crop insurance scheme from 1968. By 1970, nearly 200,000 acres had been brought under the coverage of the programme in 10 districts of the country. But there were inherent defects in the scheme reflected in a high rate of indemnity payments and unduly low premium collection. Hence the Agricultural Insurance Law of 1973 attempted to reform this by establishing a system of compulsory insurance for paddy. The Agricultural Insurance Board was set up to administer the scheme. A regional approach was adopted in the fixing of premium rates. The experience up to now over 3 to 4 seasons has not been very impressive and does not indicate any significant improvement over the earlier scheme. Low premium collection and the high rate of indemnity payments in the face of unprecedented draughts have created the need for large scale subsidisation by the Board. The situation seems to be im-

Table 10

	Performance of the Agricultural Insurance Scheme					
	1975	1976		1977		1978
		Maha	Yala	Maha	Yala	Maha
1. No. of acres insured	21,081	198,110	114,150	245,930	71,212	370,229
2. Indemnity paid						
Rs. mn.	1,200	4,734	2,846	3,091	—	—
3. Premium Collected						
Rs. mn.	0.0	3.854	1.507	4.175	0.801	6.89

Various solutions to this situation have been suggested. It is believed that there should be a firmer commitment not to write off any defaults. A greater degree of autonomy to the banks in the selection of eligible borrowers is also said to be necessary. Linkage of credit, marketing and insurance also could facilitate the problem of recoveries.

Crop Insurance

It has been recognised that risk and uncertainty act as disincentives to production promotion by restricting increased investment and also to the adoption of improved methods of cultivation. Hence the government felt justified

proving now as seen in the above table.

Paddy Marketing Problem

The marketing problem as defined here refers to all problems connected with disposal of paddy by the farmer upto the time of consumer purchase. The GFS which had been a voluntary support scheme upto 1971 was modified in that year with the establishment of the Paddy Marketing Board which has monopoly power of handling paddy. The purchasing network at the village level was still to be the Co-operative Movement. The monopoly situation led to various problems in the face of successive bad harvests and restrictions were removed in 1975.

AGRICULTURAL LOANS PEOPLE'S BANK

The highest rate of credit disbursements, in the form of agricultural loans for any single season given by the People's Bank upto date, has been for the Maha of 1977/78. A sum of Rs. 221.5 million had been granted upto December 31, 1977. In the early 1960's the People's Bank stepped in to meet a vital need of the traditional paddy farmer. The lack of finances was a major obstacle in the path of his progress. The farmer was indebted to money lenders and others in his village. A solution to this problem, it was realised, was central to the problem of increasing production of the small paddy farmers. It was necessary for an institution to help him to tide over this difficulty. Most of the institutionalised credit for paddy cultivation thus came to be provided by the People's Bank through the Co-operative Societies.

The idea that the peasant farmer should be given financial assistance goes back to before the Guaranteed Price and Crop Insurance Schemes. Production oriented agricultural credit has taken three forms: short term loans to cultivators for the purchase of seeds and fertilisers; medium term loans intended for the purchase of machinery; and long term loans for capital expenditure and storage, transport and rice milling equipment. The Co-operatives, either Co-operative Credit Societies or Multi-Purpose Co-operative Societies, have been agents in the distribution and recovery of loans.

The New Agricultural Credit Scheme and the Comprehensive Rural Credit Scheme operated by the People's Bank and the Bank of Ceylon and to a lesser extent by Hatton National Bank, has been the main source of institutional credit for the peasant farmer.

Unlike commercial credit, however, agricultural co-operative credit is not given on security. This is generally decided by the past performance in repayment of loans. But with past overdues becoming a problem and possibilities of further defaults tending to become a decisive factor in restraining the expansion of rural credit, it was decided to use the instrument of the Guaranteed Price Scheme for effecting loan re-

coveries. Loan instalments were recovered from the amounts due to a cultivator from the sale of his paddy under the G.P.S. This was expected to enable immediate recovery of arrears of loans and to lead to a rapid expansion of agricultural credit, which in turn was expected to have a decisive impact on production. Yet the scheme has not always worked as anticipated.

The trend, as pointed out on page 11, has been an initial liberalisation and consequent expansion of disbursements, followed by an increasing rate of defaults and then a drastic reduction in the volume of credit granted and a fall in the number eligible borrowers. The original objectives of rescuing the farmer from private money lenders is thus defeated and many farmers are compelled to go back to their original states of indebtedness. For the 1977/78 Maha season, however, it was decided to grant credit to all applicants including earlier defaulters. As evident from the table below the percentage of recoveries has dropped heavily in recent years and the Co-operatives have not been able to bring any real pressure on borrowers for repayment of loans.

Very large amounts of People's Bank resources, particularly in the form of liquid cash had to be channelled to the operation of this scheme. Earlier it was the practice to count the cash holdings in the People's Bank branches for computing the statutory cash reserves which the Bank has to maintain with the Central Bank. A recent directive from the Central Bank, however, has made it impossible for the Bank to consider this cash, commonly known as 'till cash', for providing the required deposits. The directive was to have the effect of freezing the 'till cash' component of the Bank's reserves. The need to restore the former condition of permitting the bank to maintain three-fourth of the reserve requirement in 'till cash' was brought immediately to the notice of the Central Bank. This new condition has aggravated the situation for the Bank, which is expected to assist the peasant farmer in his credit requirements. In order to keep to this requirement the Bank is compelled to find many millions more of money each month. It is apparent that financing of paddy purchases and farmers requirements could be crippled due to the non availability of cash at Bank branches and therefore a heavy toll of this type of lending should be viewed more rationally.

New Agricultural Scheme and Comprehensive Rural Credit Scheme (People's Bank) — Paddy Loans position as at 31st December, 1977)
(Rs. '000)

Cultivation Season	Loans Granted	Total Repayments	Overdue Amount	Amount Outstanding	Percent of Recovery
67/68 Maha	61,424	52,845	8,526	8,570	86.0
68 Yala	11,288	9,788	1,500	1,500	86.7
68/69 Maha	45,802	28,498	16,981	17,304	62.2
69 Yala	9,867	8,100	1,726	1,767	82.0
69/70 Maha	39,347	20,516	18,755	18,831	52.1
70 Yala	12,358	8,706	3,638	3,652	70.4
70/71 Maha	23,456	12,946	10,510	10,510	55.2
71 Yala	5,817	5,068	749	749	87.1
71/72 Maha	23,956	15,200	8,756	8,756	63.4
72 Yala	6,667	5,385	1,261	1,282	80.8
72/73 Maha	20,236	13,485	6,751	6,751	66.6
73 Yala	8,029	5,078	2,951	2,951	63.2
73/74 Maha	34,305	42,817	41,488	41,488	50.8
74 Yala	24,744	14,753	9,991	9,991	59.6
74/75 Maha	70,450	30,394	40,058	40,056	43.1
75 Yala	6,613	4,814	1,799	1,799	72.8
75/76 Maha	44,520	20,616	23,894	23,904	46.3
76 Yala	11,847	8,186	3,635	3,661	69.1
76/77 Maha	65,299	18,834	46,423	46,465	28.8
77 Yala	7,852	2,094	38	5,758	26.6
77/78 Maha	221,586	31	—	221,555	—
TOTAL	805,463	328,154	249,425	477,309	40.7

PMB Paddy Purchases

	% of output bought by PMB	Quantity Purchased (million bushels)
1970	33.6	26.2
1971	48.1	38.4
1972	41.8	33.4
1973	26.4	22.9
1974	27.2	20.9
1975	30.5	11.3
1976	21.6	13.3
1977	20.8	23.8

The situation that arose in 1977 was unprecedented; with the bumper Maha harvest storage prob-

The need for agricultural credit through institutionalised sources, as is agreed by all, is unambiguous. The mechanics of executing such a scheme particularly the freedom of remittance, has been the subject of much debate. Different views have been expressed on equality in the requirement of credit later. Even government officials have prevented peasant farmers from joining their loans to the Co-operatives. A recent view on this problem was expressed by T. A. Wickremaratne, in *Sri Lanka - A Survey on Institute of Asian Affairs Hamburg, Publication 1977*, which states that "even when one may make every allowance for the difficulties of the cultivator, the evidence suggests that default has often been due to his own rather negative attitudes. Having benefited from a number of welfare measures, the peasant evidently feels that it is the business of an essentially paternalistic government to look after his interests. In other words, credit has been viewed in the light of a further increment in social welfare - a view reinforced by the pledges given from time to time by respectable politicians to get the state to write off these debts." A view which illustrates that in order to make the peasant farmer more receptive to the rationale behind an institutionalised agricultural credit scheme his fundamental attitudes would need to be changed. Recent statements by the Ministers of Finance and of Agriculture urge farmers to view government sponsored agricultural credit as loans to be repaid would therefore have to be followed up in a more purposeful and sustained manner by all extension personnel who come into daily contact with the farmer.

blems occurred all over the country and the movement of paddy to PMB stores was rather slow. Inadequacy of the milling capacity available to the PMB also affected the disposal of paddy. With the record harvest (55 mn. bushels) farmers found it increasingly difficult to sell and paddy prices came down. In many instances this seems to have played into the hands of petty village-level officials such as some PMB store keepers, co-operative managers and mudalalis. The pressure on storage capacity underlines the need for early PMB action on the paddy storage facilities in the country.

With the cut in the rice ration, the PMB's involvement in paddy procurement may be reduced. It is believed that the PMB should now concentrate on improving the rice milling, processing and storage facilities so that the consumer may be assured of better quality rice.

Farm Mechanisation

Another controversial area of policy making is that of farm mechanisation. There are three forms of farm power - (i) human (ii) animal and (iii) mechanical.

Official circles have advocated a policy of selective mechanisation on the grounds that the buffalo population in the country is not sufficient in relation to the demand. However, the tractor availability situation is also far from satisfactory. Four-wheel tractors have sharply gone up in price. Research has shown that two-wheel tractors are better suited to local conditions. Foreign exchange problems in the past have led to a situation where the number of tractors imported was small in relation to demand which resulted in inflated hire prices charged by tractor owners in the village context.

Policy in regard to farm power needs to concentrate on two main aspects.

- (i) encouraging the breeding of buffaloes
- (ii) rationalisation of existing sources of farm power and augmenting the stock of simple to use farm machinery.

It is in the area of highland farming that the absence of suitably designed implements for use at farm level is clearly observed. Continuous highland farming would give rise to problems of weed control and tillage. Hence the need for popularising implements that

could be productively used in rain-fed highland farming.

Price Policy

Price policy consists of two broad aspects: (a) input price policies; (b) output price policies. On the input side, the government has been operating a subsidy scheme for paddy since the 1850's. Heavy subsidisation is also implicit in the supply of irrigation water and the large volume of defaults on agricultural loans. On the output side, price support schemes have been adopted to almost all food crops. The Guaranteed Price Scheme for paddy dates back to 1936. This price was revised by Rs. 12/- by 1952 and it remained at this level until 1968 though import prices fell sharply since then. Paddy prices have been revised upwards in stages to reach the present level of Rs. 40/- per bushel.

The incentive effect of the GPS on paddy production is difficult to assess since it was only one among a number of measures oriented to promotion of production in the paddy sector. Though GPS price was not determined in an objective manner, the attractiveness of the GPS price has to be assessed in relation to costs of production and open market prices. A survey carried out by the Central Bank of Ceylon in 1967 showed that the cost of production of paddy exceeded the GPS price only in a few districts. The situation has changed somewhat since then due to upward revisions of the price. According to a recent ARTT survey the cost of production of a bushel of paddy varied from Rs. 38.00 to Rs. 39.00 in five districts in 1968/75. Assuming that the costs have changed only marginally since then, the present price of Rs. 40/- per bushel seems quite attractive.

The powerful leverage effect of the price factor to stimulate production has been used over the years, particularly in the late 60s. With consumers given only part of their requirements through imports they are left with the option of supplementing this by purchasing locally produced supplies in the open market. Often prices of local supplies were higher than world market prices but these benefited the local producer. This dual price technique came to be applied to other agricultural products as well in the late 60s. Imports of chillies and onions for example were

restricted to levels which fell short of total consumption requirements.

Guaranteed prices for other produce have generally served as floor prices, as market prices were generally much higher. The amounts purchased by the government under the scheme have remained low. With the ban on imports open market prices of many subsidiary food crops rose to unprecedented levels. This has proved very effective in inducing recent production gains in crops such as chillies, pulses and cereals. Unlike in the case of paddy the prices of subsidiary food crops have been subject to wide fluctuations. Food import policies have contributed in some measure to this instability. The sharp fall in the price of manioc consequent on the free import of wheat flour is a case in point. The relative profitability of chillies, onions, pulses and such crops has declined to some extent due to falling prices recently. The sections worst affected by these trends would be the small producers. The basic issue involved here is that of reconciling producer interests with consumer interests. The problem is really one of guaranteeing the producer a reasonable margin of profit while also ensuring supply to consumers at reasonable prices. The trend, however, has been a greater reliance on guaranteed price schemes by these producers.

Subsidiary Food Crops

Foodstuffs other than rice and fish products, sugar, livestock and livestock products constituted nearly 40 per cent of the value of our food imports upto the mid-1960's; by 1976 they made up less than 5 per cent. With import prices moving up steeply it was realised that many of the crops from which these foodstuffs were prepared could be grown in this country. A programme was therefore launched to move towards

self sufficiency in regard to most of these crops by a process of import substitution. Although paddy cultivation is the chief means of livelihood of the peasant farmer he generally does not depend on paddy alone. The subsidiary food crops sector too plays an important role in peasant farming. The key factor that has assisted in the development of this sector is the need for substitutes of rice and flour and also the need to cut down on imported pulses, cereals, seed crops, chillies, onions and potatoes. When rice was freely available or flour imported in large quantities, the demand for these subsidiary food stuffs was less felt. In recent times successive governments were committed to a policy of promoting the cultivation of subsidiary crops. Among the main causes for the growth of the sector, however, were the import restrictions on these food stuffs, favourable prices for producers in the open market and a guaranteed minimum price; the wheat flour and rice deficit situation which occurred from time to time and the role of chena cultivation and relaxation of rules regarding cultivation on crown land. The changes in acreage in the principal food crops over the years are seen in the table below.

Looking back at the crop figures over the last two decades, however, it's apparent that the area under subsidiary food crops did not increase as rapidly as the area under paddy. The Agricultural Census of earlier years show that between 1953 and 1970 the acreage under subsidiary crops has grown very slightly. This is one area to which sufficiently concentrated attention had not been paid to the development and growing of better yielding strains and of cultivation practices. For instance, the potential for using rainfall for developing systems of rain fed farming in the dry zone, especially

in the Yala season, could be dramatically changed if very short duration strains of 50 to 60 days for a range of cereals, pulses and oil seeds could be bred. There are also rapid advances taking place in the production of potatoes, manioc, sweet potatoes, chillies and onions in some of the advanced research centres of the developing world from which Sri Lanka could benefit much.

Institutional Framework and Agriculture Extension

There is obvious room for improvement in the services and institutions concerned with agricultural extension. There is a lack of sufficient staff to cover all farmers adequately, many Co-operatives are not capable of providing inputs, credit and marketing arrangements in an efficient manner, while the Cultivation Committees have not had uniformly good results.

Another charge is that many of the rural based agricultural officials do not seem to have undergone adequate training in extension work, credit administration, rural living etc. and do not appear to participate, with the same degree of involvement in improving the country's agriculture, in contrast to their counterparts in some other Asian countries.

Another characteristic of the situation is that the administrative structure has expanded on the same lines of the traditional schematic approach in administering different aspects of agricultural development through different departments. The results are that at the local level there is a multiplicity of offices and officials, each working often in a compartmentalized manner, without any integrated approach to solve the problems of the 'new' agriculture.

The changes generated by the adoption of the new technology and the implementation of institutional reforms on the one hand and the increasing degree of politicization among rural people on the other call for an altogether different kind of capability and commitment on the part of the rural administrator today. The adoption of the new technology has increased the capital requirements of the farmer, exposed him to a higher degree of risk and increased his dependence

ACREAGE OF PRINCIPAL FOOD CROPS

	1965	1970	1976
Paddy	1,323,317	1,775,897	1,788,891
Kurakkan	64,635	52,078	97,630
Maize	29,408	50,730	94,592
Chillies	48,603	58,990	134,873
Red Onions	14,559	16,660	23,892
potatoes	1,662	8,188	7,693
Manioc	130,492	147,036	373,575
Sweet Potatoes	34,418	39,150	112,548

Source: Department of Census and Statistics.

on critical inputs such as water, fertilizers and plant protection chemicals.

The Agricultural Extension service of the Department of Agriculture is the main agency responsible for supply of farm advisory services. The hierarchy consists of Agricultural Extension officers at district level (DAEO), Agricultural Instructors (AI) at divisional (APC) level and Krushikarma Vyapthi Sevakas (KVS) at the village level.

As pointed out earlier, diffusion of the new technology has not been even. While high yielding varieties are generally adopted, adoption of other components of the package such as fertilizer is not very satisfactory. The low paddy yields in relation to potential yields also has been cited as evidence of ineffective extension. It must, however, be pointed out that extension alone cannot motivate farmers to adopt practices which require investment of money and effort. Two criticisms of the present extension network are often made.

- (a) The number of extension workers is relatively low in relation to demands made on them.
- (b) There is a "paddy-bias" in extension activity, especially at the levels which reach the farmers.

Improving farming techniques and agricultural practices would however, necessitate the change in the outlook of the traditional farmer, and winning his cooperation by understanding his psychology and the society he is a part of. Traditional farmers often show a negative reaction to change and their willingness to take any risks in agricultural ventures is low. The final success of agricultural development in Sri Lanka, however, will depend on whether these farmers will respond to modern practices and the consequent prospective increases in their incomes and whether they will be eager to make the extra efforts necessary to achieve this. It is clear that a more effective struc-

tural framework and extension servicing will have a vital role to play in this regard.

The future

The preceding analysis shows that the development of agriculture in this country has a difficult path to traverse; we have seen that a wide gap has existed between the various plans and their actual outcome from the early 1950s. The country's experience over the years now demands that purposeful and sustained efforts be made if our agricultural development objectives are to be achieved. It is only after about three decades of planning for self-sufficiency in rice that this goal appears to be in sight for Sri Lanka within the next few years. Good harvests have been reaped last year and even better harvests are forecast for 1978. But we have to guard against dangers that befell some successful rice producing countries where, "after each good harvest the temptation is to forget the urgency of rural development. The impetus for early decision is lost and complacency about food production stalks the halls of Governments as officers congratulate each other. Expenditures lag and older plans are scrapped or delayed or set aside for another day." For the efficient planning and programming of agricultural development it is imperative that past policies are critically analysed and the constraints that impeded development correctly identified.

Self-sufficiency per se should not be the goal. The costs and benefits of attainment of self-sufficiency must be critically examined. Certain inefficient (high cost) producers may remain in business because of the policy of heavy subsidisation of inputs and outputs currently being pursued. It would be necessary to programme carefully the dismantling of these incentives once self-sufficiency is attained.

It is also pointed out that heavy emphasis on specific crops were

somewhat misplaced. If the ultimate objective is that of upliftment of the standard of living of farmers, the emphasis should be on developing appropriate farming systems combining low land, highland and hill-land. The Department of Agriculture has identified 24 agro-ecological regions in the country. Each of these regions has a potential for the production of a different group of crops and each would require different cropping patterns and management systems. In the long-run, optimum utilisation of resources has to be ensured by diversifying our agriculture on this basis.

The need for stabilising the water and irrigation supplies and adopting improved methods of water exploitation and management for crop production have been highlighted in recent years. Some basic investments will need to be made in this connection. At the same time, rain fed farming should be actively promoted on scientific lines to better developed areas now under traditional shena cultivation. The institutional framework for input supplies, extension and research may have to be modified accordingly. Areas that have not received due attention, such as the provision of infrastructure facilities like road construction, transportation, storage space and the ready availability of inputs and extension services need to be taken up more purposefully. A sustained drive at creating a comprehensive integrated pattern of modern services for the farmers of each region can no doubt improve the capacity in that region to increase its agricultural production.

A viable domestic agricultural system offering the peasant farmer a standard and way of living commensurate with the expectations generated by education and the force of social and political change in the country, will need to be established. It is clear from the present demographic situation in Sri Lanka that a large part of the increasing work force would have to find opportunities for employment or gainful living in the rural areas if the present agricultural sector is to succeed in providing such opportunities, an agrarian structure substantially different from what has existed must emerge.

The Dollar

Wide fluctuations in international currency values was a major feature of the monetary scene, particularly in Western capitals, throughout 1977. The second half of 1977 especially was full of uncertainty for the world foreign exchange markets mainly due to chronic weaknesses of the U.S. dollar. The dollar weakened against the stronger currencies and this resulted in a growing concern about what should be done to save the dollar from further deterioration. The crucial international currency question in 1978 will therefore also hinge on the issues connected with the fate of the dollar.

The question raised most often at the end of 1977 was why the world's most powerful economy had wound up with one of the world's weakest currencies. By and large, the world has been on a *de facto* dollar standard and it became apparent that a prolonged dollar crisis could have serious repercussions on the international financial system and the economic situation of almost every country. A counterpart of the dollar depreciation was the strengthening of the other major currencies notably the Japanese Yen, the Deutsche Mark and the Swiss Franc. The dollar depreciated by more than 18 per cent against the Yen; 12 per cent against the Deutsche Mark and in Switzerland the Franc had risen 25 percent against the dollar in the past year. It is estimated that the dollar declined by 12 percent in 1977, against the trade-weighted average of sixteen major currencies. The depressing of the value of the dollar with regard to other major currencies during the year 1977 is seen in table 1 and in the graph. It is now evident that such a zig-zagging in the currency exchange graph would have long range political and social implications.

Fluctuating currency values, for instance, have left businessmen with their CIF quotes varying considerably. In the West German market, for example, buyers of imported goods quoted in U.S. dollars found that they had benefitted by nearly 10 per cent over a period of about three months. Or once

again in India foreign exchange reserves dropped by over Rs. 100 crores because of readjustment of the rupee-dollar rate at the end of January, reflecting the growing strength of the Indian Rupee.

Prior to the second half of 1977, the situation with respect to the international currencies was relatively stable compared to the unsettled conditions of 1976 when the Sterling Pound, the Italian Lira and the French Franc came under heavy pressure within a short period. In spite of the large trade deficit and high inflation in the U.S., the dollar remained fairly stable in the first four months of 1977. Evidence of this can be found in table 1, when the position of the dollar at the end of 1976 and at the middle of 1977 is compared. By mid 1977, however, the dollar, had begun to show signs of weakness particularly vis-a-vis the Yen. But the deterioration of the dollar grew significantly evident and also more rapid towards the last quarter of the year.

appeared to be either to have a strong stable dollar or Middle East oil; not possibly both.

On the other hand, measures to cut down the massive trade deficit in the balance of payments would include domestic deflation and trade protectionism. Both these would have domestic as well as international implications. Such measures can contribute to a recession in the economy, higher unemployment and still greater budget deficits in the U.S.A. Ironically, a trade deficit in the U.S. balance of payments appeared to be imperative to facilitate liquidity to the rest of the world; as there has been a tendency to hold dollars for want of an alternative. But with the dollar continuing to deteriorate steadily and rapidly there were fears of a shifting away from dollars to other strong currencies.

Pressure both externally and internally for action to prop up the falling dollar reached a pitch by the end of 1977; resistance to intervention could no longer be

TABLE 1
DOLLAR RATES WITH RESPECT TO SELECTED
KEY CURRENCIES

Currency	31, Dec.	19, June	31, Oct.	28, Dec.
	1976	1977	1977	1977
Deutschemark	2.3579	2.3417	2.2521	2.1266
Pound Sterling	1.7017	1.7210	1.8405	1.8950
Japanese Yen	293.2361	267.5769	249.3888	240.6332
French Franc	4.9553	4.9216	4.8289	4.7230
Canadian Dollar	1.0105	1.0623	1.1076	1.0966
Swiss Franc	2.4476	2.4651	2.2331	2.0396
Italian Lira	873.8318	884.6602	879.1089	873.3506

The widespread impression is that the decline of the strength of the dollar as an international currency is due to problems at home. The enlarged current account deficit in the U.S. balance of payments which rose to a massive 30 billion in 1977, appears to have contributed greatly to the weakness of the dollar. It has been said that, probably the dollar's position could not be restored and stabilised until the U.S.A. establishes a firm energy programme which will enable a cut in oil imports. The U.S. had to pay 45 billion dollars for imported oil and gas in 1977 and so long as an import bill of this magnitude had to be met for U.S. energy requirements, the U.S. balance of payments would continue to be in trouble. The choice for the U.S.

stalled. Some economists argue that even in the absence of a threat of dollar depreciation the US would not be able to bridge its trade gap with foreign capital inflows. These lobbies were advocating a confidence in the free market and were against "engineering a recession just to achieve a narrow objective of pegging the dollar parity".

But the growing trade deficit of the U.S. tended to expand the amount of Eurodollars (i.e. dollars circulating abroad, particularly in Europe) which resulted in a swelling of the volume of external dollar liquidity. This, in turn, adversely affected the market value of the dollar. The marked increase in the Eurodollar component of the Euro-currency system has been cited as evidence of the fact that

the U.S. authorities were not exerting control over their currency.

Finally the policy of non-intervention had to be, at least, partially abandoned and the U.S. Treasury and the Federal Reserve Board had to come to the rescue of the dollar. In deciding to intervene in saving the dollar, the U.S. abandoned what was known as "malign neglect" of its currency.

In the first week of January U.S. authorities issued a large announcement that the U.S. would actively begin supporting its weakening currency on world markets. It decided to buy up 35 billion worth of dollars in exchange for foreign currency from the International money market. Soon afterwards, the interest rate of the Federal Reserve was raised to 8.5 per cent. The first action was aimed at mopping up the excess dollars that had been in circulation, in order to avoid further deterioration of the market value of the dollar. The second was intended to attract foreign investments into the U.S.

policy. Throughout much of 1977, foreign governments had bought dollars on their own to keep the price from sliding and pushing up values of their own currencies, for fear that such a rise would hurt their economies by making their exports more expensive. But Western Europeans were gaining the impression that the U.S. actually wanted the dollar to go down because it would help American exports. The Americans, however, found out that in classic theory a decline in the dollar made American goods cheaper and easier to sell in the foreign markets, but the benefits were smaller than they were often supposed to be. Many of the products the U.S. sold abroad such as commercial jet aircraft and computers are "price inelastic"; sales do not necessarily go up when prices come down. So too with U.S. agricultural exports; the quantity of wheat that American farmers sold to Japan or the Soviet Union depended on factors other than only prices.

Five years ago while Japanese cars, television sets and transistor radios were also much dearer for the Japanese transnational firms such as Sony, which supplies about a third of its exports to the American market. While dollar profits remain at the present level, receipts will be considerably less when calculated in Yen.

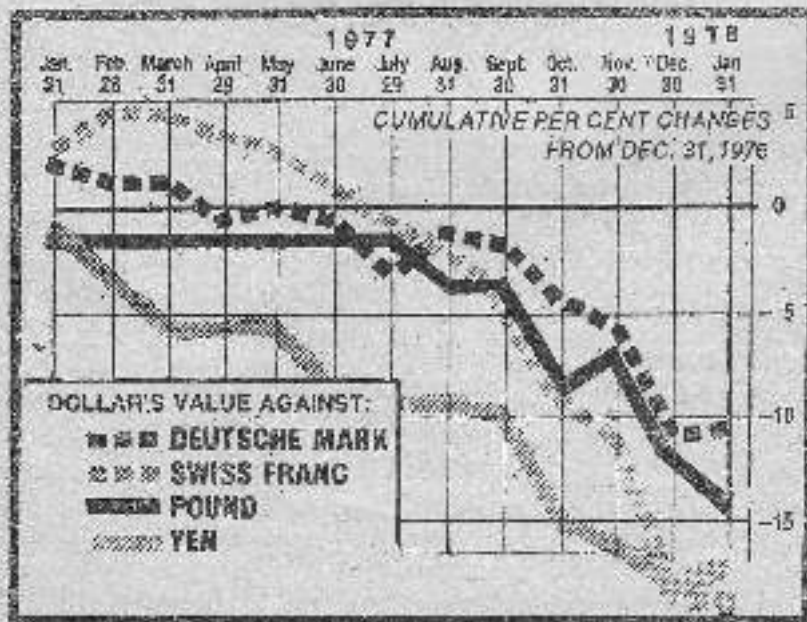
The dollar pressure on the Yen in 1977 led to its revaluation by 22 percent in relation to the U.S. currency, and according to one interpretation this amounted to introducing customs duties on all Japanese goods exported to the United States. The dollar pressure on the West German Mark has the same impact.

West German businessmen were apprehensive about the growing appreciation of the Mark as exports tended to fall and imports rise. The German economy is so structured that it is heavily dependent on exports and is naturally affected by the dollar's decline. This could lead to a further recession in its job market and also have serious political implications.

The OPEC countries were also worried about the current situation and there have been persistent rumours that OPEC was attempting to stop pricing oil in US dollars. One estimate states that in all, the OPEC members lost between 15,000 and 16,000 million dollars within a year because of the dollar's depreciation.

The Saudi Government suggested recently that if the present trend in the dollar value continued, there might be second thoughts about keeping Saudi cash in American securities and investments. The other OPEC nations are talking a "currency basket" formula for oil pricing. The oil receipts of the exporters in the currency of the importers or in the "basket" of their trade-related sales would be more in keeping with the latter's share in the OPEC countries' trade. It is estimated that, with the dollar rate falling by 5 to 6 per cent, oil pricing at the "currency basket" rate would mean an increase in the dollar price of oil.

Financial analysts feel that the U.S. Government would soon be forced to tackle the energy problem more firmly than at present.



so that a greater capital inflow would facilitate the financing of the balance of payments of the country.

This action and its impact was short-lived, but what was significant was that this decision marked an about-face in U.S.

The decline of the dollar against currencies such as the Yen or the Deutsche Mark, however, makes Japanese or West German goods more expensive on the American market. For instance, a Volkswagen car now costs almost twice as much in dollars as it did

The U.S. treasury will be forced to finance the trade deficit by borrowing in foreign currencies. And above all, the U.S. administration will be forced to push up the interest rates to attract the "footloose funds".

Prospects of stabilising the value of the dollar are by no means certain. A fall in the dollar's value is expected to continue until the US government resolves the problem of its trade deficit caused largely by oil imports and a poor export performance. The situation was by no means improving with the U.S. trade deficit recording dollars 2.4 billion in January, continuing the pattern that led to the record deficit of dollars 26.6 billion in 1977.

With respect to the other currencies the outlook for 1978 is expected to be as follows: the surplus of Japan will remain unchanged at \$ 10 billion, while the German surplus is estimated to decrease marginally to \$ 3 billion. It is also anticipated that the position of the previously weaker economies will improve in 1978. Thus the U.K. could move into a substantial current account surplus. The French deficit is expected to decline from \$ 3 billion to \$ 2 billion and Italy could have a surplus of \$ 1.5 billion. The overall surplus of the OECD countries is projected to decline from \$ 40 billion to \$ 35 billion. But such trends in themselves are relatively unimportant and it is the overall performance of the dollar that would hold the key to the performance in the foreign exchange markets during 1978.

The present sickness of the dollar, however, is not due to problems of the U.S. balance of payments alone it is more a manifestation of the inherent dilemma of the international monetary system. The currencies such as the Dollar, the Pound and the Deutschmark, in addition to their serving as a national currency have to perform an international function as a reserve currency. The creation of international liquidity therefore requires some country with a hard currency running into deficit in its international transactions. The weakness of dollar is only an indication of the problems associated with the international monetary system, solutions to which are already overdue.

Sri Lanka's Economy in 1977 and 1978

Sri Lanka's economy has been experiencing moderate growth rates during the past decade and the year 1977 was no exception. The average annual rate of growth of the economy in the years 1970-76 was a low 3.0 per cent approximately. Compared to this growth rate, however, the performance of the economy in 1977 has been significantly better as the estimated rate of growth in 1977 stands at about 4.1 per cent. Table I, given below, indicates that after 1970 (when the economy recorded a 4.1 per cent growth rate) the best performance has been in the past year.

of Sri Lanka, a high performance in the agriculture sector is vital for raising the overall economic growth of the country. In fact, the inability to achieve high growth rates during the previous years of the decade was largely due to the erratic performance of the agriculture sector.

Adverse weather conditions (mainly droughts), high fertilizer prices and high cost of other farm inputs appeared to have arrested the expansion of agriculture production during the seventies. In addition, the unavoidable disruption associated with the land reform programme would have

TABLE I Sri Lanka's Economic Growth Rates 1970-1977

Year	Real rate of growth in output	Rate of growth in population	Per capita growth rate
1970	4.1	2.1	2.0
1971	0.4	1.5	-1.0
1972	3.2	2.0	1.2
1973	3.8	1.1	2.7
1974	3.0	1.6	1.4
1975	3.6	1.7	1.9
1976	3.0	1.7	1.3
1977	4.1	1.6	2.5

Also significant in this table is the fact that with the population of the country growing at about 1.6 per cent, the per capita output has grown by 2.5 per cent in 1977. This per capita increase in output is the second highest registered in the seventies and also is well above the average per capita growth rate (which was less than 1.4 per cent) in the period 1970-76. However, the inadequacy of a per capita growth rate of 2.5 per cent can be seen from the fact that even at this rate it would take nearly 30 years to double the national output of the country.

The recovery in economic activity during 1977 can be mainly attributed to the satisfactory performance of the agriculture sector. This sector recorded an estimated growth rate of about 8 per cent which is significantly more than the average rate of growth of this sector in the seventies. Considering that agricultural activities account for about one-third of the total national output

adversely affected this sector, particularly plantation agriculture. Furthermore, unfavourable prices for export crops in earlier years had contributed to a lower rate of growth in the plantation sector. Since a good portion of Sri Lanka's service sector activities (such as transport, trade and banking) are also ancillary to the agriculture sector, the performance of the latter was an important determinant of the overall growth rate in the seventies.

The improvement in the agriculture sector with an estimated growth rate of 8 per cent was the main force behind the economic recovery in 1977. Favourable weather conditions in the past year, helped particularly the domestic agriculture sector's good performance. Paddy production which was on the average about 68 million bushels during 1970-76, registered a record level of over 80 million bushels in 1977. Compared to the level of production

TABLE 2 Production and Price Trends of Major Agricultural Crops

CROP	1970	1971	1972	1973	1974	1975	1976	1977
Tea								
Production (Mn. lbs)	465	490	471	485	450	471	488	480
Average f.o.b. price per kilo (Rs.)	5.87	5.51	6.11	6.14	7.75	9.00	10.50	12.0
Rubber								
Production (Mn. lbs)	351	313	309	341	291	328	335	350
Average f.o.b. price per kilo (Rs.)	2.78	3.38	2.95	3.80	5.75	4.06	4.50	6.08
Cocunut								
Production (Mn. Nuts)	2610	2610	2885	1935	2041	2398	2095	1969
Average price per kilo of desiccated coconut	2.01	1.96	1.58	2.71	5.91	3.26	3.07	3.03
Paddy								
Production (Mn. bushels)	77	70	69	63	97	55	60	50

in the previous year (which was only 80 million bushels) the level achieved in 1977 represents a 32 per cent increase.

Several subsidiary food crops also contributed to the improved performance of the agriculture sector in 1977. Since 1970, an appreciable degree of diversification of the domestic agriculture was evident, and crops such as chillies, onions and grain varieties have emerged as cash crops bringing in an additional income to the small farmers. The upward trend in subsidiary food crops continued through 1977 and was further supported by the improved performance of several minor export crops such as cocoa, cardamoms, pepper and cloves.

Plantations

In the plantation sector, from the early 1970s the production of tea has been subject to fluctuations showing a declining trend, particularly after 1973. The year, 1977, however, witnessed a slight recovery in production compared to the performance of the previous year — an increase of 12 million kilos over 1976. More than the improvement in production, however, were the high prices fetched by tea which enabled the country to earn a substantial amount of foreign exchange. The average f.o.b. price of tea was Rs. 10.50 per kilo in 1976 and throughout 1977 the monthly f.o.b. prices of tea were well above this. The prices in latter half of the year were particularly favourable and were in the range of Rs. 27 and Rs. 19 per kilo. The average f.o.b. price of tea in 1977 worked out to about Rs. 19 per kilo reflecting an almost two-fold increase compared to 1976.

While rubber production showed

a modest improvement the production of coconut deteriorated further in 1977 compared with that of 1976. Rubber prices too showed signs of improvement towards the latter quarter of the year. In the case of coconut too the low level of production to some extent, was offset by higher f.o.b. prices fetched by Desiccated Coconut throughout 1977, and especially, in the last quarter of the year.

Industry

The manufacturing sector accounts for about 13 per cent of the total output in Sri Lanka, and this share has been static as the contribution of the Industrial sector to the growth of national output in 1970s has been disappointing. The average rate of growth per annum of the manufacturing sector during 1970-78 worked out to less than 2 per cent;

as against the previous five Year Plan (1972-76) envisaged target of a 3½ per cent growth rate in this sector. The performance in 1977 is estimated to be not much better than that of the previous years. The major bottlenecks in industrial expansion in the past years have been the lack of foreign exchange for the import of raw materials, machinery and spare parts. The situation has been somewhat relieved in recent years from the 68 per cent of the installed industrial capacities which remained unutilized in 1974. This ratio has been reduced to a level of 48 per cent in 1975 and further reduced to a level of 38 per cent by 1976. The availability of about 1/3 of the total capacity as unutilized capacity indicates the potential for expansion of this sector.

Construction

Construction activities suffered a negative growth (about 12 per cent less compared to the previous year) in 1977. As a result the share of construction industry in the aggregate national output also dropped in 1977. The relative availability of principal building materials (such as cement) and the escalating costs of construction were largely responsible for this situation. To some extent various legislation that came into effect with respect to private ownership of houses and rent controls also appears to have acted as a disincentive for private sector construction in recent years.

TABLE 3 The Relative Importance of Different Production Sectors in Sri Lanka's Economy

Sector	1969	1970	1977*	Change during 1958-1977
1. Primary Sector	39.8	35.7	35.9	-4.6
1. a. Agriculture (including forestry, hunting & fishing)	39.1	35.0	32.5	-6.6
1. b. Mining & Quarrying	0.5	0.7	2.5	+2.0
2. Secondary Sector	16.4	20.9	17.0	+0.9
2. a. Manufacturing	11.8	12.8	13.0	+1.4
2. b. Construction	4.8	6.2	4.0	-0.8
3. Tertiary Sector	44.0	44.3	46.0	+1.6
3. a. Transport & Communication	9.2	9.4	10.0	+0.2
3. b. Trade & Commerce	13.8	14.2	15.5	+0.4
3. c. Housing Services	2.1	3.1	2.0	-0.4
3. d. Public Administration & Defence	5.1	9.7	6.0	+0.9
3. e. Other Services	12.0	12.4	15.0	+2.5

* Very provisional data

In the Services Sector, major improvements were seen in the Transport and Communication services, and in the Trade and Commercial activities. These two services have exhibited approximately 4 per cent growth rates in 1977 compared with their values of output in 1976. The relative share of Transport and Communication Services stands at about 10 per cent while that of the Trade and Commerce services account for almost 13 per cent, of the national output of the country.

Table 3 on page 19 indicates that the economy of Sri Lanka has not undergone any significant structural change in the past two decades. The structure of the economy has remained basically unaltered except for a modest decline in the share of the primary sector comprising that of agriculture, fisheries and mining activities. There were no indications that the secondary sector would emerge as a leading sector, thereby initiating a move towards a more industrialized economy. The services sector encompasses a range of activities whose expansion is dependant primarily upon the rapid growth of the other two sectors. Thus in the absence of a marked increase in the rate of growth in the primary and secondary sectors the relative importance of the tertiary sector has also remained fairly static. That the economy of Sri Lanka has not shown any remarkable improvements in growth or structural change over the past two decades becomes apparent. It is important to note that the economic growth rate of 1971, cited at the outset, is in real terms; i.e. net of price changes over the period 1976-77. The Colombo Consumers Price Index during the year 1977 reflected a relatively stable price level approximating only a 2 per cent increase over the index for inflation; as this index exceeded 140 towards the end of 1977 compared to 112 observed for the year 1976.

The price increases for export crops in 1977 appear to have more than offset the relative stagnation (or even deterioration) of the exportable surplus of commodities such as Tea and Rubber. As a result the export earnings in 1977 were estimated to have been enhanced by almost 40 per cent over the 1976 earnings (in rupee terms). The total export earnings have passed the Rs. 6,600 million

mark in 1977. The principal contributors to this have been tea and minor agricultural exports which recorded great improvements in their earnings.

The favourable position with respect to export earnings has also resulted in a surplus in the foreign trade account. The balance of trade which was in deficit continuously since 1966, turned out in 1976 to be a surplus after almost a decade. Compared with the trade surplus in 1976, which was around 125 million rupees, in 1977 the estimated surplus showed a five fold increase. This was the outcome of maintaining an import bill of about Rs. 6,000 million as against export earnings exceeding Rs. 6,600 million.

This improvement in the trade balance in 1977 appears to have contributed to a favourable position in the current account balance of the country's balance of payments. With a greater amount of grants and aid flowing into the country and higher earnings from tourism and other invisibles the current account balance could appear in a surplus in 1977, breaking a trend of continuous deficits in the past two decades.

Prospects for '78

Turning to the prospects for 1978, it is important to recognise that the 'new economic policy package' promised in the Budget Speech in November, 1977, aims at accelerating the pace of economic growth. In particular, the exchange reform, the import liberalization scheme and the production oriented expenditure programme are expected to help expand economic activities and expedite the rate of growth this year.

The import and exchange liberalization schemes are mainly intended to facilitate greater capacity utilization in the existing industries as well as to encourage the establishment of new industrial ventures, particularly by the private sector. In addition, the setting up of an Investment Promotion Zone should enable a higher rate of industrial growth in 1978 than what was observed in the previous years of this decade.

Construction activity can also be expected to expand due to the incentives offered for house builders and developers and greater availability of building materials. The public sector is also contemplating playing a major role in increasing the housing stock and im-

proving housing conditions. The anticipated expansion in industrial activities, particularly in the Investment Promotion Zone, should also act as a stimulus to the construction industry.

Until the Mahaweli Development Scheme is fully completed an overwhelming increase in the domestic agriculture sector cannot be expected. However, with greater availability of fertilizer (at the 75 per cent subsidy) higher GPS price and improved credit and extension facilities it should be possible, if weather permits, in 1978 to exceed the level of paddy production (80 m. bushels) achieved in 1977.

The diversification of domestic agriculture whereby subsidiary foodcrops such as onions, grain varieties and sugar cane are expanded need to be given special attention in 1978. In this respect, greater liberalization of food imports aimed at consumers' welfare should in no way be allowed to adversely affect local production.

The setting up of an Agricultural Development Authority and the emphasis on improving the management of the plantation sector are desirable moves in increasing the output of export crops. The enhanced subsidies for rubber and tea replanting and the increased rupee incomes resulting from the exchange rate unification should also prove useful in encouraging production in the plantation sector. As proved by the last year's performance minor agricultural export crops such as cocoa, coffee, cardamoms, cloves and pepper also have considerable scope for expansion in the years to come.

The linkage effects of agricultural and industrial expansion would benefit the service sector activities. In this regard, Transport and Communications, Trade and Commerce and the Finance and Banking sectors in particular can be expected to grow at faster rates in the course of 1978.

A higher level of activities can also be expected in terms of both exports and imports. If the price trends observed in the last quarter of 1977 continue through 1978, both major and minor export crops are bound to register higher levels of foreign exchange earnings. The benefit of favourable prices, however, can be fully realised only if supply responses are good and there is a greater exportable surplus.

(To be concluded
in our February issue)

CHINA'S SPECTACULAR 'GREEN REVOLUTION'

An Interview with Norman Borlaug

"China's determination to feed its own people has created one of the most spectacular transformations of agriculture the world has seen," stated Dr. Norman Borlaug, Nobel Peace Prize winner for his work in breeding the dwarf Mexican wheat and getting it widely accepted in Southern Asia. One of the key factors in China's success is the incentives to encourage production: prices paid to farmers have gone up but the cost of fertilizers and other inputs has been kept down.

In an interview with the U.S. Christian Science Monitor in December 1977, Dr. Borlaug said "China also is leading the developing countries in its adaptation of other modern scientific farming methods, especially double and triple cropping, which now blankets almost the entire country."

Dr. Borlaug, who visited China for the second time in June and July 1976, speaking at the International Maize and Wheat Improvement Centre in El Bajano (Mexico) where he directs the wheat programme, expressed admiration at China's determination to feed its own people, a goal so far not fully realized.

"I have great admiration for what the Chinese have done in wheat, rice and maize," he said. He reported that although the Chinese already have been testing dwarf wheats developed in Mexico for many years, the Chinese green revolution in wheat really dates from 1971.

In 1971, China imported more than 1,000 pounds of experimental seed lines from Pakistan and Australia. Then in 1973 and again in 1974 it bought 15,000 tons of the Mexican seed, and its green revolution was on. By 1978, the Chinese had produced 41 million tons of wheat, third in the world after the Soviet Union's 68 million, and 58 million by the United States. India in the meantime, produced 26 million tons.

"Agriculture has the highest priority in China," Dr. Borlaug said, "in research, production and distribution. Food goes to every-

one suitably. I've never seen a hungry person in China."

Dr. Borlaug said that since 1963 China has been heavily investing in agricultural inputs. For example, in 1969 virtually no chemical fertilizer was used in China. They converted animal and human waste and in that way maintained the organic strength of the soil. In China they developed coal mines and got the coal out to the villages for cooking fuel. In India they have the coal, but they have never exploited it. Instead, the cow dung is used as cooking fuel, which is why India's soil is so poor", Dr. Borlaug said.

Then in 1963, China began selling up some chemical fertilizer plants. When I visited in 1974 they had 1,200 or more small factories scattered around the country....By 1976, China was also the largest importer of nitrogen fertilizer in the world. But most of it was coming from Japan. When petroleum imports from Japan fell, after the oil-price rise, Japan abruptly cut back on fertilizer production, mainly to supply its own farmers".

"Within six weeks, China decided to build ten 1,000-ton-per-day-capacity anhydrous ammonia plants. They hired the top people in the world to build them — Soviet, French, German and Japanese. Now they've added two more, for a total of 12. It represents the largest investment in chemical fertilizer in a short time any country has ever made."

Dr. Borlaug was asked if he thought the concept of Maoist man, motivated by moral rather than material incentives, would endure. Under Mao Tse tung, peasants, workers, and the Army accepted the doctrine of sacrifice for the common good, without him asking not each want a bigger share of the cake?

He replied "as you know, all through China's history it has been dominated by a bureaucratic elite. The great proletarian cultural revolution aimed to prevent the build-up of a bureaucracy that would stifle all progress. Mao was

fourth, that unless he found some way to perpetuate the revolution, the historical pattern would take hold in China".

Dr. Borlaug, who grew up on a farm near Cresco, Iowa, much admires Chairman Mao's strategy of sending intellectuals "out to the villages to live with the lowest, poorest, hard masses". He noted that only 4 per cent of Americans now live on the land and that finding successors of plant breeders with useful farming experience was becoming a problem in the United States.

"We get all these young men with Ph.D. degrees and I have to baptize them in the dust, mud, and sweat out on the farms with Mexican farmers before they are any good", he said.

Success Banking

Asked to rank the successes of the green revolution in order, Dr. Borlaug listed China, India, Argentina, Egypt and Pakistan. He said India still suffered from a distribution problem; at present it has nearly 26 million tons in stock "but the poorest people are still going hungry".

He thought both Argentina and Pakistan have failed to realize their tremendous agricultural potential because of political leadership that kept farm prices down to provide cheap food to restless city people.

In contrast, Chinese policy has been to give incentives to encourage production: prices paid to farmers have gone up but prices they have to pay for fertilizer and other inputs have been kept down.

Dr. Borlaug said he had not been aware that President Johnson once threatened to withhold \$1 million tons of emergency relief wheat to India unless that country enacted policies to launch the green revolution and keep it going. The deal was secretly struck in negotiations in Rome between the then U.S. Secretary of Agriculture, Orville Freeman (who did not divulge it until years later) and the then Indian Agriculture Minister, Mr. C. Subramaniam, and later was confirmed in private talks between Mrs. Gandhi and Mr. Johnson in Washington.

Dr. Borlaug said he has two main concerns for the future:

— Present record harvests in North America may once again lead to "dumping" wheat on other or at concessional prices to poor countries that may then

(Continued on page 22)

FOREIGN NEWS REVIEW

UNCTAD's Poor Progress on Commodities

UNCTAD's Common Fund Conference reconvened for the second time in 1977, during December, but once again recorded little progress. In March 1977 the four week long negotiating conference on a Common Fund to finance international commodity arrangements ended with a general consensus among the developing nations that this session had ended in "complete failure". Both developed and developing nations had agreed on the principle that there should be *some kind of* Common Fund, but there continued to be profound disagreements on just what kind of Fund it should be. The developing countries were asking for a new financial institution whose establishment would also encourage, by the availability of cash, the setting up of individual commodity agreements. They wanted the Fund to have a broader role than simply financing buffer stocks.

China's spectacular

be tempted to again ignore agriculture. He said most of the world's present political leaders are overly concerned with getting cheap food to their cities, a situation that would tend to magnify possible future problems should the North American wheat crop do badly some year.

— Only 10.15 per cent of the world's 3 billion cultivators so far have been affected by the transfer of American farm technology that began in the 1960s, most of them engaged in dry zone irrigated farming. The wet rice basis and small fry land rain-fed holdings that feed most subsistence peasants are still to be reached.

WORLD FOOD SUPPLIES...

contributes to a better life for all. Neither of these conditions has been met in any of the countries in which people are hungry today.

E R. You have emphasised self-reliance in food is basic to the economies of the less developed countries, but considering how practical this goal is in a global system that is so inter dependent, would you continue to think that this is a

Their hope was that they could invest monies from this Fund in other ways to improve their incomes from Commodities.

The developed countries, who are the main consumers, are on the otherhand not in favour of a new institution which could actively intervene in the world's raw materials markets and over which they would not have much control. These countries were of the view that a smaller Fund should be set up only *after* each individual commodity agreement is signed and then *only* used to finance buffer stocks.

The outcome of the Common Fund negotiations can have a profound effect on all individual commodities, particularly that of copper which is likely to be the biggest drawer on the Fund. Failure to reach agreement could ultimately leave the world's raw materials and commodity production and trading system in a chaotic state. Following suspension of negotiations on the Common Fund, attention was focussed in Geneva on the progress achieved so far on the eighteen individual commodities covered by UNCTAD's Integrated Programme for Commodities. An assessment of the meeting, together with an evaluation of the Common Fund Conference was the major concern of UNCTAD's session from December 12 to 16, 1977. Preparatory work was to have proceeded by February 1978 to negotiations which would conclude international commodity arrangements. A report presented to this session by Secretary General Dr. Gamani Corea revealed that little headway had been made regarding the commodities under review. This held true in particular for the preparatory work on copper. The

feasible way out of the situation?

Collins: In my view achieving food self-reliance requires several conditions that are fundamental to the entire situation. It involves achieving of at least seven fundamentals which Frances Moore Lappe and I have set out clearly in a chapter in our most recent book "Food First Beyond the Myth of Scarcity", which I shall be sending you on my return. (We hope to reproduce this view point on food self-reliance in a subsequent issue.

position seems pessimistic, except that for sugar an international agreement had been reached and for rubber there were good prospects that governments may decide to begin negotiating an international agreement to stabilise rubber prices.

Besides this little progress, it is clear that in no case have formal decisions been taken to move to the negotiating stage, and there is no indication when this will be reached for any single commodity, except perhaps for rubber. There has been a tendency for the preparatory meetings to recommend further meetings and studies, according to the UNCTAD secretariat.

Since it has been impossible to meet the deadline of getting through the preparatory meetings by February 1978, the schedule of meetings on individual commodities for 1978 has been revised. This was approved by the *Ad hoc* Intergovernmental Committee on the Integrated Programme for Commodities which also hoped the preparatory meetings in December would be actively continued so as to move into the negotiating stage as soon as possible. This Committee stressed the close relationship between negotiations on a Common Fund and the discussions on individual commodities. It has emphasised that in providing a framework for these discussions, rapid progress on the Common Fund would in fact have a major impact on progress on individual commodities.

At the end of the UNCTAD meeting in March 1977 Secretary General Dr. Gamani Corea commented "The Fund has the support of many developed countries—while others in the Group have indicated new and more positive attitudes. If the time was not ripe in March to translate all this into positive decisions, the opportunity will be there when the Conference resumes later this year. But the task will not be easy".

The outcome of these resumed sessions has proved that the task is by no means easy and UNCTAD will now have to seek another opportunity.

The *Economic Review* of April 1977 concluded its comment on the March Common Fund meeting thus: "The most recent message of Geneva is clear. The only agreement arrived at Geneva seemed to be "that the conference reconvene....."

This comment holds good for the December sessions too.

ECONOMIC REVIEW, JANUARY 1978

Tax Havens Explained

Milka Casanegra de Jantschler

Many countries of the developing world, in their bid to attract foreign capital with the hope of speeding up their development, have been granting liberal concessions to foreign investors, and contemplated tax havens, numbered bank accounts and several such mechanisms. Here Mrs. Casanegra, a Chilean national attached to the World Bank, as a Senior Tax Administration Analyst, discusses the possible strengths and drawbacks for countries contemplating tax rates status.

What do the Bahamas, Bermuda, Hong Kong, Liberia, the Netherlands, the New Hebrides, Panama, and Switzerland have in common? They are all "tax havens". As such they are not to excite either passionate praise or passionate denunciation, depending on the point of view of the commentator.

What is a tax haven?

Essentially, a tax haven is a place where foreigners may receive income or own assets without paying high rates of tax upon them. Although strictly speaking not all tax havens are countries, we can refer to them as such here for the sake of convenience. In some havens the tax relief that foreigners enjoy stems from the absence of the chief forms of direct taxation: income, estate, and gift taxes; but in most countries the relief stems from special features of the tax system that result in a very low effective tax rate on certain forms of foreign investment. Some countries that enjoy a reputation as tax havens have cultivated it, in others the features that make them a tax haven are merely a consequence of their having followed certain principles of taxation, such as that of strict territoriality in applying income taxation, but without the intention of establishing a tax haven. Such countries are likely to con-

sider the tax haven label derogatory.

In the absence of reliable data on the use being made of tax haven concessions flourish. The advantages that these countries offer to taxpayers are well described in guides written by professional tax advisers in carrying out operations in tax havens for their clients. But hard statistical information on the extent of the economic losses suffered by high-tax countries and the benefits which tax haven countries derive from their status is woefully meagre. There is general agreement on only a few facts, principally that the amount of business activity carried out in tax havens is considerable, even though exact figures are not available. Moreover, it appears that the use of tax havens by enterprises in high-tax countries, particularly by multinational enterprises is growing.

Even though the list of tax havens includes several developed countries, most are developing countries. It is precisely their example that other developing countries are tempted to follow, in the hope that becoming a tax haven will help them solve some of their economic problems. While the tax haven status does bring some benefits to the tax haven country, it is one of the objects of this article to dispel the myth that the tax haven status is a panacea for a country's economic problems.

The *modus operandi*

Tax havens are used for a great variety of operations. The main purpose of those who patronize them is to minimize the taxpayer's total tax burden by subjecting at least a part of his income or wealth to a lower effective rate than would otherwise be applicable. But care should be taken to distinguish between operations whose main purpose is that of diminishing a taxpayer's total burden and those that have a bona fide business purpose. The latter are generally not considered tax haven operations, even if they take place in a tax haven. Some

industries located in tax havens are engaged in producing goods for the domestic or international market. Some royalties are paid from tax havens for patents or know-how actually being used in the country. Some foreign citizens work in tax haven countries. Even though these individuals or corporations benefit from the country's low rates, they do "real" business within its borders.

In contrast, much "tax haven" business is fictitious, in the sense that little or none of it is effectively carried out in the tax haven proper. Goods that are bought and sold by tax haven subsidiaries often do not pass through the tax haven's territory; they move directly from the country of origin to the country of destination. The assets of trusts that are established in tax havens are usually kept thousands of miles away; and neither the grantor nor the beneficiary is normally resident in the tax haven country.

Tax haven operations consist fundamentally in establishing within a tax haven country one or more legal entities, such as trusts, personal holding companies or corporate subsidiaries, and attributing to them income earned elsewhere in order that it should be taxed at the country's low rates - or perhaps not taxed at all. This objective is usually accomplished by either (1) accumulating income in the tax haven country at low rates of tax, to be withdrawn later and invested elsewhere according to the investors' wishes; or (2) artificially shifting business profits from high-tax countries to a tax haven country.

In the case of passive investment, from which dividends, interest, or royalties are derived, trusts and personal holding companies are used as buffers or screens between the real investor and his assets. For many years the creation of these legal entities for the purpose of obtaining a tax advantage was among the most popular uses of tax havens. As a result of counter measures enacted during the past few years in certain capital exporting countries, the use of tax havens to shelter passive investment income has apparently not increased as fast as other tax haven activities.

At present, the most rapidly growing type of tax haven operation is that of shifting business profits from high-tax countries to tax haven countries. These profit-shifting transactions are usually carried out by large corporations through tax haven subsidiaries, using sophisticated methods that are designed to diminish the tax base artificially in high-tax jurisdictions while increasing it in the tax haven country.

"There is a tendency to exaggerate the number of jobs created by tax haven activities"

The most important of these methods involves transfer pricing: the setting of prices on goods and services that are bought and sold between a parent company and its foreign subsidiary. No "arm's length" bargaining takes place between these parties, so the prices that are set can be manipulated to minimize the enterprise's total taxes. (The "arm's length" relationship implies dealings between two independent and unrelated parties, where prices are determined according to market forces). For example, instead of a company selling goods directly to a foreign buyer and realizing a profit that is fully taxable in its home country, it may sell the goods at an artificially low price to its subsidiary in a tax haven country. Thus, it shows only a small profit on which it has to pay a low tax, or perhaps even a loss. Its subsidiary then resells the goods to the ultimate buyer at the normal price, earning a large profit, all of which however is taxed at a low rate, or not taxed at all, because the subsidiary is located in a tax haven.

Another type of activity is carried out in tax haven countries by the financial sector. In most of these countries there exists a financial sector whose size and importance are out of proportion to the size and resources of the country itself. This sector usually comprises a large number of banks and trust companies most of which are branches of subsidiaries of foreign owned institutions. The reasons for their presence in tax haven countries are quite varied. These institutions manage trusts and holding companies that have been established to shelter foreign passive investment income; they hold deposits for foreign investors, they provide administrative facilities for a variety of corporate subsidiaries. Foreign banks also use "shell" bank

or branches located in tax haven countries to do Euro-currency business.

The activities of the financial sector are largely of an ancillary or dependent nature. The main object of many of these banks or trust companies is to provide services to other tax haven activities, such as administering tax haven trusts and corporate subsidiaries and holding deposits for foreign investors. Much of the business of

this sector is "real" business in the tax haven. Banks and trust companies that administer trusts or holding companies do a large amount of the technical, audit, and legal work of administration in the tax haven country. In other cases, however, such as the Euro-currency branches of foreign banks, the "real" activity is carried out elsewhere, except perhaps for a nominal presence in the tax haven.

Tax havens also attract foreigners who come to work for foreign banks or other companies, and retirees, who decide to establish their residence where the advantage of a temperate climate is joined to that of a low-tax environment. In these cases there is "real" activity in the country—whether working or merely residing in it—and the tax factor is only one of several considerations that induce these individuals to settle in a tax haven country.

Tax and other advantages

Low tax rates are perhaps the principal attraction offered by tax havens. Usually these low rates are associated with income taxation; in fact what springs to mind immediately upon hearing the words "tax haven" is the absence of income taxation, or the existence of a form of income taxation that exempts foreign investment. Though it is true that many of the advantages offered by tax haven countries are income tax advantages, these are by no means the only benefit that these countries offer to foreign investors.

Within the tax field, the absence of other taxes such as estate, inheritance, and gift taxes may be as important to certain investors as the absence of an income tax. Bilateral tax treaties between a tax haven country and some of the major developed countries are another feature that may attract investors.

The existence of a tax treaty allows third-country investors to base their holding companies in tax havens and obtain a reduction in withholding taxes applied to the dividends and interest they receive from developed countries with which the tax haven country has the tax treaty.

Strict and well-enforced rules of banking secretary and, in general the possibility of doing business without close supervision by government agencies are additional attractions usually offered by tax haven countries. Other factors, such as the low cost of doing business, the existence of liberal banking regulations, and the absence of exchange controls are also important. These advantages were the chief reasons why foreign banks established Euro-currency branches in the Bahamas; the country's attractive tax climate was apparently of only secondary importance. Finally, a good communications service, a well developed legal system with an abundance of legal and accounting expertise, and, above all, a high degree of political and financial stability also help to make a country successful as a tax haven.

Countering tax loopholes

Are these all the elements necessary to enable taxpayers from high-tax jurisdictions to minimize tax burdens? In fact, there is one other element without which they could not do so and that is the existence of features in the tax systems of developed countries that allow taxpayers to take advantage of the benefits offered by tax haven countries. Among these features are, for example, the more favourable tax treatment granted to trusts located abroad than to domestic trusts, and the mechanism of tax deferral that allows taxpayers of high-tax countries to defer income tax payments on income from foreign sources until it is repatriated. These and other mechanisms may be likened to escape valves left in their tax systems by high-tax countries, in order to grant taxpayers relief from the pressure of taxation. As long as these provisions remain in effect, high-tax countries cannot place all the blame on tax havens for the losses of revenue they suffer.

During the past two decades some countries have moved to eliminate these safety valves. The United States has pioneered, the way, with other countries, such as Australia, Belgium, Canada, the

Federal Republic of Germany and the United Kingdom following that example. The enactment of measures against the use of tax havens has not been easy and in each of these countries has produced an uproar among interested taxpayers in high-income brackets.

In general legislation on this subject is aimed at one or both of the following objectives: (1) preventing the tax-free accumulation by tax haven companies of certain forms of income, such as passive investment income, and income derived from the assignment of service contracts to a foreign subsidiary; and (2) attacking the problem of transfer pricing, by attempting to tax a parent company on the profits it would have obtained if the transaction with its subsidiary had taken place at arm's length.

The tax systems of a number of industrialized countries, such as Canada, the Federal Republic of Germany, the United Kingdom, and the United States, permit domestic companies to postpone the payment of taxes on profits earned by foreign subsidiaries until those profits are repatriated. This has made attractive the establishment of foreign personal holding companies in tax haven countries that can accumulate income either free of tax or subject to a very low effective rate. The rules recently enacted in some developed countries to prevent this accumulation generally requires the companies of these foreign holding companies to be taxed on an accrual basis, thereby eliminating the tax deferral privilege that the owners previously enjoyed.

Complex rules

There are several reasons why these rules are complex. Perhaps the main one is the wish of the developed countries to soften their impact upon companies that are accumulating income in low-tax jurisdictions for normal business reasons, without intending to avoid taxes. In order to achieve this purpose, anti-accumulation rules rely heavily on percentage criteria, which have the merit of being objective but which at the same time leave a wide margin for manoeuvring by taxpayers.

Thus the anti-accumulation rules usually apply only when the subsidiary established in a low-tax country is "controlled" by taxpayers in the high-tax country. "Control" is defined as ownership of more than 50 per cent of the stock of the foreign subsidiary. The United States and Canada, however,

only count corporations or individuals, each of whom owns more than 10 per cent of the foreign corporation, toward the 51 per cent "controlling" share of the company. This latter rule attempts to exclude portfolio investment from the anti-accumulation provisions. The Federal Republic of Germany does not employ this provision. Obviously, these percentage criteria can be easily circumvented. A case in point is the recent increase in the number of subsidiaries in low-tax countries whose parent company legally owns only 50 per cent of the stock, but in practice exercises full control without being subject to the anti-accumulation provisions.

Apart from these loopholes due to the percentage criteria, there are other important exceptions to these rules that have usually been enacted in response to special interest groups. This is the case, for example, of the exceptions to these rules that until recently favoured shipping interests in the United States.

Transfer pricing

In spite of the shortcomings of the rules first attempt to prevent the accumulation of tax-free income in tax havens through holding companies, these rules appear to have been more successful than the provisions designed to curb the use of transfer pricing to shift income from high-tax to low-tax jurisdictions. The tax laws of several developed countries contain provisions to ensure that sales and other operations carried out between domestic subsidiaries are transacted at arm's length prices. These provisions are difficult to administer, since the actual determination of the arm's length price is fraught with complexity.

As a result, the provisions against the use of tax havens that developed countries have lately introduced have mainly affected the accumulation of passive investment income in tax haven countries, not by banning accumulations outright, but only for very wealthy investors and complex. Therefore, the accumulation of income by holding companies and trusts is still possible, but only for very wealthy investors or the large corporations. As the latter are also the corporations that use transfer pricing to shift income to tax havens, and as transfer pricing countries have not been much affected by the provisions against the use of tax havens, it is probable

that the "allents" of tax havens are increasingly being drawn from higher-income and greater wealth brackets. In fact, some of the movements against tax havens in developed countries has stemmed from medium or small corporations that claim that tax havens afford tax relief mainly to large corporations, making competition more difficult for other enterprises.

The benefits

But what are the benefits that tax havens may obtain from their status and what is the price they must pay for those benefits? For developing economies one of the main apparent advantages of being a tax haven is the possibility of achieving a higher employment level. This is particularly attractive to countries with a narrow resource base, which tend to have chronic unemployment problems.

However, there is a tendency to exaggerate the number of jobs created by tax haven activities. The establishment of hundreds and even thousands of corporations and trusts and the large number of transactions that technically take place in tax haven countries are generally accomplished by using little manpower within the tax haven countries. The case of Norfolk Island, a possession of Australia and a former tax haven, illustrate this point. According to a survey quoted in a manual on tax havens, in 1973 more than 1,450 companies were incorporated in Norfolk Island—nearly one per inhabitant. Nevertheless, it appears that the tax haven sector was directly benefiting only 25 residents of the island, as much of the business was being carried out by lawyers and accountants in Australia.

It should be remembered that the main purpose of tax haven activity is to avoid taxation and that no business or trade is actually carried out in the country. The main exceptions are the institutions in the financial sectors which are the principal generators of employment opportunities and additional demand for services within the tax haven sector of the economy. However, these institutions usually prefer to staff their organizations with expatriates—particularly in the higher positions—so not all the jobs created by this activity will be available for nationals of the host country.

Other economic activities are also stimulated by tax haven operations. Construction is boosted, principally of commercial buildings,

As in the case of employment, the number of new buildings required is much smaller than the size that the tax haven sector might indicate, as hundreds of holding companies or other subsidiaries may require only enough office wall space on which to hang a nameplate. Only those enterprises that actually do something—again mainly enterprises in the financial sector—require sizable office space to carry out their activities. Another activity that may be stimulated is tourism, particularly if the country enjoys an agreeable climate and meetings of directors in the country are a requirement for incorporation. A tax haven country may also attract retired persons as residents, and their presence provides employment opportunities and helps bring in foreign exchange.

The existence of a large financial sector has other important effects too. It may help a country maintain a free and open foreign exchange and payments system. In

"Tax haven countries tend to be more vulnerable to external factors than developing countries that are not"

addition, the advantage of having a readily accessible financial market is considerable. Government bond issues may be underwritten or subscribed to by foreign banks, thereby making funds available for public investment and economic development.

Finally, the tax haven sector is a source of revenue to the government. However, liberal the tax system of a country may be, there will always be some form of tax or fee for which the foreign investor will be liable. These contributions range from a simple annual fee payable by all corporations established in the country to income tax on profits considered to be of domestic origin. For example, in the case of banks that do both domestic and foreign business, profits from domestic sources may be taxable while income from foreign sources is exempt. Moreover, in most tax haven countries indirect taxes such as customs duties, sales taxes, and others are fully applicable.

The drawbacks

Is there a price to be paid for all these advantages? Yes, and it is generally not fully apparent when countries set out to become tax havens but may become burdensome later.

The problems created and constraints imposed by the tax haven status vary according to the degree of development of the country, the size and composition of its tax haven sector, and the kind of benefits granted to this sector. In general terms, the most troublesome problems arise in developing countries where the tax haven sector contributes a relatively important share to the country's gross national product. (GNP).

At first glance this may appear paradoxical. The fact that the tax haven sector is contributing substantially to GNP should mean that new economic activity is taking place, which is desirable. This is true, but the problem lies in the nature of tax haven activity. As its main purpose is that of tax avoidance, tax haven activity generates very little investment in tangible assets; therefore, tax haven business is extremely volatile and lacking in stability.

The one sector that does engage in real economic activity—the financial sector—is heavily dependent on what occurs in the rest of the tax haven sector. If this foreign business disappears, the domestic activity will not be sufficient to retain the large number of banks, insurance companies, and other organizations that form the financial sector of a tax haven country.

Tax haven activity is highly sensitive to national and international developments. Within a tax haven country itself, the slightest whiff of financial scandal—such as a prominent bank defaulting on its obligations—is enough to send investors in search of another tax haven that offers more security. Situations such as these are difficult to prevent, as one of the things investors look for in tax havens is absolute secrecy and as little prying as possible by government into their affairs. Secrecy and supervision do not go well together, and generally the latter suffers in tax haven countries; accordingly, it is not surprising when bank failures or other financial problems do occur.

Another circumstance that may frighten away investors is the suspicion that a country's leaders

are considering important changes that may include nationalization or other radical measures. Even the smallest indication of this may precipitate a flight of depositors and other investors. A tax haven government must also be cautious about hinting that it may change its policies to meet revenue demands, for such hints may destabilize the tax haven sector. This seriously constrains the formulation of a coherent domestic tax policy, as there is a natural reluctance among authorities to jeopardize the tax haven sector by any changes, however necessary, in the tax system.

International factors

Internationally, one of the factors that can influence tax haven investment is the attitude of developed countries toward this activity. The measures against the use of tax havens already taken by them have all had some impact. Future measures are already being studied by some developed countries that will make the use of tax havens more costly and complex than it is at present.

Fluctuations in the world economy and disturbances in international financial markets also affect tax haven activities. Competition among tax havens trying to outdo one another by offering more stability, lower taxes, and better commercial facilities accentuates the volatility of tax haven investment.

Tax haven countries tend to be more vulnerable to external factors than developing countries that are not tax havens. Not only are they sensitive to changes in international commodity prices like other developing countries, as well as to international economic fluctuations, but they are also directly affected by the tax policies of developed countries, which are beyond their control. Accordingly, the greater their dependence on tax haven activities, the more unstable is their economic situation. These considerations together with the constraints that the tax haven status places on the formulation of national fiscal policies, suggest that developing countries should think twice before aspiring to become tax havens. Meanwhile, those that are already tax havens should try to diminish their dependence on the activities of this sector.

Some notes on the role of banks in capital formation

R. Suntharalingam

Capital formation takes many forms in a country, varying with its level and stage of development. Some of the ways in which the banking sector could help in Sri Lanka are discussed here by R. Suntharalingam, who has practical experience as a manager in the People's Bank.

Political freedom to be a reality must be accompanied by economic freedom. To achieve economic freedom, there must be all round economic development of the country. Economic development is the result of turning out of goods and services for the people of the country, utilising available natural and human resources coupled with capital.

One of the most pressing problems of the third world countries is the lack of capital i.e. finance to produce the necessary goods and services by utilising the available labour and raw-materials.

In the existing pattern of life income earned is utilised in three different ways: that is, it is consumed immediately, set aside for consumption in the immediate future (deferred expenditure), and set aside for a rainy day or savings. More enlightened, and may be, affluent sections of the population may consciously save a certain percentage of their income. By and large the average man settles outstanding bills and consumes a major portion immediately, sets aside a substantial portion for consumption in the immediate future, but little or nothing for a rainy day.

One of the characteristics of money is that it is received at a point of time but is spent over a period of time. For example, a paid employee receives his salary towards the end of the month, but his expenses are spread out. The money that is received at the end of the month has to be kept and or spread out and evenly utilised till the end of the succeeding month. The money that is in the hands of the people during this period is

idle funds. It is of no use to anybody. This type of money has no intrinsic value except for a miser who receives mental satisfaction by the mere possession of it. Money has derivative value. If it is idle it is of hardly any use.

More important therefore is the mobilising of those savings. The pooling of all these idle funds would make substantial amounts available in the hands of banking institutions for their lending operations and for providing necessary fixed and working capital within the economy.

Take the case of an average wage earner. Suppose he receives Rs. 100/- today; on the same day he may have to settle outstanding bills with the gross of say Rs. 100/-, rent another Rs. 75/-, and immediate requirements another Rs. 50/-. He has then to keep the balance Rs. 275/- and dole it out in small instalments for daily expenses till next pay day. If in this income group there are 300,000 wage earners in the country the amount that is being temporarily hoarded amounts to Rs. 82,000,000/-. If this amount has been brought into the banking sector, the banks will have at least 75 per cent of that amount at their disposal for lending activities. If all those wage earners have bank accounts their individual debts are set off against individual credits and the ultimate result is that the full amount will go with the banking sector. Even if there are withdrawals for expenditure the average that could be expected could be at least 50 per

cent. Thus the amount which otherwise would be worthless, idle funds would serve as a foundation for credit creation by the banking sector.

One of the most important steps therefore that should be taken is to popularise the banking habit. More and more people should be encouraged to channel all their transactions through the banking institutions of the country.

What are the impediments to the development of the banking habit in the country? Generally, with the exception of the State banks, most of the Commercial Banks in the island cater to the developed sectors of the economy. They have not ventured to make banking a popular habit. The table below gives a general picture of the situation.

However the banking habit has not gone deeper. It is still the privilege of the 'Big Business', Government Departments, Public Sector Corporations and Co-operatives who have perforce to transact their business through the banking institutions.

The small man treats the bank as a source of loans and not as a medium to channel his transactions.

The Government, Co-operatives and Corporate Sectors are statutorily expected to channel their transactions through their bank accounts except for petty cash payments. 'Big Business', managed by paid employees, channel their transactions according to their own systems of proper accounting and control. The government sector is exempted from debit tax. Co-operatives and the Corporate Sectors are also semi public sectors, but

End of Period	Savings Deposits			Fixed Deposits			Savings Certificates	Grand Total
	Commercial Banks*	National Savings Bank	Total	National Savings Bank	Commercial Banks*	Total		
1973	1,043.2	740.8	1,784.0	100.8	602.2	703.0	97.9	2,687.9
1974	1,211.1	807.4	2,018.5	107.6	808.4	915.0	106.8	3,170.4
1975	1,023.7	947.4	1,971.1	243.1	760.8	1,003.9	112.9	3,197.9
1976	1,078.9	1,216.1	2,295.0	307.8	975.3	1,283.1	114.9	3,598.3
1977 Nov.	1,413.7	1,821.5	3,235.2	729.8	1,911.1	2,640.9	100.9	5,828.1

*Figures of commercial banks include deposits of Government Current, Savings and Fixed Deposits. Provisions for Taxation and other Accounts of the People's Bank.

At December, 1975
Rs. 2,214.8 mn

At December, 1976
Rs. 2,687.9 mn

they bear the main burden of this tax. The country is full of small traders, artisans, public servants, wage earners and similar categories who do not transact their business through the banking system.

A typical case is that of the small trader. For instance, when he wants to make a payment, he draws a cheque for Rs. 5,000/- He gives it to the payee, the payee credits his account and draws one of his cheques for one of his payments for Rs. 5,000/-. Likewise say five such traders go on depositing and drawing cheques. As it is, if each trader has to pay Rs. 5/- per transaction as debit tax all five traders would have to pay Rs. 25/-.

What they do now to avoid the debit tax is that the first cheque is endorsed by the payee and handed over to the second party and so on till the fifth man receives the cheque. Suppose the fifth has dealings with the first man the cheque goes back to him. All five transactions have been done without any one of them losing by way of debit tax or even the handling of cash. The banking instrument is used without going through the banking system; it circulates amongst the traders. It serves as a negotiable instrument without going through the banking system. The account holder may have issued a number of cheques, transacted business for hundreds of rupees without any of his cheques reaching the banking sector. The cheques are in circulation for an undue length of time and retired by the drawers at their convenience.

The debit tax then serves as a deterrent to expansion of the banking habit. These transactions bypass the banking system. Here the business community uses banking instruments to transact business amongst themselves without permitting them to pass through their accounts. They may at any moment withdraw their cheque in circulation and give out money instead.

Bank accounts are sparingly used and cheques are drawn only when absolutely necessary say for purchase from an institution where they insist on a cheque.

Before the debit tax was introduced, account holders would draw cheques to obtain Drafts, Mail Transfers, Telegraphic Transfers etc. from the banks. Now instead of drawing from their accounts they

are depositing cash to obtain the instruments. By and large this taxation does not bring in much revenue to the Government, but rather serves as a deterrent to the development of banking habit.

The time involved in transacting business in the Banks too discourages banking habits. In advanced countries, in view of the development of the banking habit, the necessity for a large number of heavy cash transactions has been reduced. Moreover, mechanisation and computerisation has made banking transactions more subtle and discreet, efficient and fast. The long hours taken in our country is due to lack of staff, machinery and equipment and lack of an awareness on the part of a large number of customers regarding their responsibilities and their rights.

The hard core practice of issuing cheques as a medium of deferred payment rather than as a medium of exchange is also to be reckoned with. If a sales representative goes to a shop to sell his merchandise the shop-keeper would purchase the items, issue a cheque and tell the representative to present it a certain number of days later. He will indicate the date on the reverse of the cheque. This is a practice among traders. He may sometimes recall the cheque and pay money from his sales too. If the transactions and books of a small account holder are analysed it will be seen that of the cheque leaves obtained, all cheques do not reach the bank. If and when they are asked they would say that the cheques have been 'spoilt'. It may be so to an extent. The position is that in several cases cheques have been used for private circulation and for issue as postdated cheques to be retired on payment of cash.

Certain concrete steps have to be taken to develop the banking habit. One of the measures that could be adopted is to pay interest on Current Account balances above a certain minimum. As it is when the Current Account is overdrawn the customer is liable to pay interest. The banks would be in a position to attract deposits if interest is paid for amounts above a certain stipulated minimum. This is done by certain banks. This would encourage the customer to retain funds in his account for

short term withdrawal for expenses in the immediate and near future.

Another measure that could be adopted is to credit salaries to the accounts of officers instead of paying them cash.

The direct debiting system introduced by People's Bank would take away the burden of keeping track of payments and thus help customers to concentrate on their other duties. This type of 'factoring' services would help in development of the banking habit.

The Insurance Corporation gives a rebate of 5 percent on all premiums paid through Standing Orders. If this practice is extended to other Corporations and institutions more and more people will channel their transaction through the bank.

Certain banks levy service charges. This could be dispensed with if more deposits are received and more accounts are serviced. The cost of servicing accounts will be more than covered by the deposits left with the Banks, which would also serve to expand the lending activities of the banks without recourse to refinancing.

The loss in revenue, if the debit tax is withdrawn, could to a certain extent be covered by the stamp duty earned by fostering and encouraging the banking habit. There will be more cheque leaves issued and more savings withdrawn used.

The very high standards expected of Current Account holders in the form of very high initial deposits, should be relaxed to enable the low income group to open current accounts. A regularly operated Current Account if properly analysed would enable the bank to study the customer more deeply than his balance sheet or tax returns. When the bank shows personal interest the customer too responds by maintaining high standards of behaviour.

What is possible at this juncture is not to enforce savings or wait for the people to save but to encourage them to leave their idle funds in the hands of the banks and not in their till boxes, in pots, under pillows, behind curtains or in the numerous other secret enclaves. The hoarded money must be brought into the banking system to serve as an essential base for credit creation for development purposes, both short term and long term.

WORLD FOOD SUPPLIES

"How can there be a shortage?" asks Joseph Collins

Joseph Collins who with Frances Moore Lappé authored "Diet for a Small Planet" was in Sri Lanka in January and the ECONOMIC REVIEW interviewed him on the subject of food supply and the current world food situation, a subject he has been researching on for the past several years. His latest book, with co-author Frances Moore Lappé, is "Food First" where these two young Americans argue that there is no such thing as an absolute scarcity of food in this world. Excerpts from our interview:

R.E.: A popularly held view is that world population is outstripping food production and that soon there would be too many people in this world in relation to our food and agricultural land base. Have you, in your years of researching the problems of world food supply, found evidence that would lead to contrary conclusions?

COLLINS: Most people believe there is just not enough food to go round. Yet, despite the tremendous wastage of land and the "food crisis" of the 1970s, the world is producing each day two pounds of grain, or more than 8000 calories for every man, woman and child on earth. 3000 calories is about what the average American consumes. And this estimate is minimal. It does not include the many other staples such as beans, potatoes, cassava, range fed meat, much less fresh fruits and vegetables. Thus, on a global scale the idea that there is not enough food to go around just does not hold up.

Moreover, we have found "acre-to-person" comparisons to be poor measures of food scarcity. To many, the size of a plot of land is obviously the most important determinant of how many people it can feed. We have had to learn, however, that much more important than size are four other factors:

First, the level of human investment made to improve productivity.

Second, how many people on one acre can feed depends on whether the land is used to feed people directly or to feed livestock. In the Andean region of South America and in the Caribbean nearly four times as much land is used for extensive grazing of cattle as is devoted to crops. Cattle ranches often occupy the relatively flat land of the river valleys and coastal plains while food crops are relegated to poorer soil on erosion-prone slopes. Moreover, in a world where many people are too poor to buy all the food they

produce, livestock has seen not only service to rid the economy of surplus grain that might drive down prices, livestock consumes over one third of all the world's grain annually. The result is that the four billion human beings on earth, a figure many would use to measure the burden on our world, need four billion equal units at all.

Third, how many people a given amount of land can feed depends on whether it grows luxury crops for export or food for the local people. What Americans think of as "food-deficit areas" caused by the pressure of over-cultivation are often "food-deficit areas" because much of the food produced goes to small urban elites or is exported. Worst of all, the experts are frequently misled in the name of development.

Here are some food paradoxes to ponder:

Africa is a hot exporter of maize, beans, peanuts, fresh vegetables, and cattle (not to mention ivory crop exports such as coffee and cocoa), yet it has a higher incidence of protein-calorie malnutrition among young children than any other continent.

In 1967, annual exports to France increased notably during the years of drought, while production of food for domestic consumption declined by 1974 to one quarter of what it had been in 1967.

Senegal now supplies the United States with over one half of its supply of several winter and early spring vegetables while infant deaths associated with poor nutrition are common.

Fourth, agricultural land will, of course, feed no one at all unless it is cultivated. This fact seems the obvious to state, and yet many forget that in Africa and Latin America much good land is left unplanted by large landowners. A study of Colombia in 1960 showed that while farmers only use up to about thirteen acres, toward the end of their land, the largest farmers, con-



tribute 70 percent of the agricultural output, generally cultivated only 4 percent of their land.

The relationship of hunger to land turns out to be less a question of quantity than of use. We discover that the amount of land has less to do with hunger than who controls it.

R.E.: Possibly there may be enough food-producing resources to go round but aren't there heavily populated countries like Bangladesh that cannot feed themselves and where hunger is growingly widespread among the increasing population?

COLLINS: One sees so many maps with the "hungry countries" coloured in a darker shade and reads so many references to the "hungry world" that it is hard to escape thinking of hunger as a place—usually as a place "over there".

But think for a minute. Hungry people live in a country with the greatest food surpluses in history. Over 15 percent of all Americans are eligible for food stamps. Yet nutritionists have testified that even with food stamps it is impossible to buy nutritionally adequate diet.

Is it true, that the most densely populated countries are also the hungriest countries? Surveys around the world show no such pattern. Some nations, very dense in people per acre, also have adequately nourished populations. Three comparisons come to mind. France has just about the same number of people for each cultivated acre as India. Taiwan, where there are adequately nourished, feeds twice as many people per acre as famine-endangered Bangladesh. And China where starvation was eradicated in only twenty-five years, has twice as many people for each cropped acre than India.

On the other hand, countries with relatively few people per cultivated acre nevertheless are often ones where most of the people are malnourished. In Africa, south of the Sahara one of the worst famine areas in the world, there are almost two and a half cultivated acres per inhabitant, more than in the United States or the Soviet Union and six to eight times more than in China. As long as food is something bought and sold in a society with great income differences, the degree of hunger tells us nothing about the density of the population.

E.R.: The prices of food have been rising throughout the world and isn't this clear evidence that we have now entered an age of scarcity? How is it then that you maintain that this global trend is not, in large part, a reflection of the growing numbers of people trying to exist on a limited agricultural base?

COLLINS: As strange as it may sound, what we are taught to view as scarcity is actually a product of efforts to cope with the problem of over-production in a world where most hungry people cannot buy the food that is produced.

The crisis of over-production spawns scarcity-creating solutions: production cutbacks, the planting of nonfood and animal feed instead of food crops, and built-in inefficiencies in the use of what is produced. There is scarcity, but it is not a scarcity of food. The scarcity is of people who have either access to the means to grow their own food or the money to buy it.

What Americans know as the "food crisis of rising prices" starting in 1972-1973 was largely the direct and intentional result of United States "Food Power" policies that hit upon scarcity as a way to increase both the volume and price of agricultural exports. Against the backdrop, United States officials started in manoeuvre. By devaluing the dollar (thus making our grain cheaper abroad), by rescinding a law requiring that half of our grain going to the Soviet Union and Eastern Europe be carried by American ships, and by offering the Soviet Union financing for its grain purchases, the United States set the food ball. Other countries began to bite. The notorious Soviet grain deal was the first catch. Nineteen million tons of grain

went not to feed the hungry but to feed Soviet livestock. In early 1973, when export sales had started to cool down the United States devalued the dollar for a second time suddenly making American grain 15 percent cheaper for the Japanese. The Japanese jumped at the bait. A new cycle of scarcity was generated by the decisions of a few government policy makers. The result was that world grain stocks that had stood at ninety-five days worth of grain in 1961 were now down below thirty days. This planned and rapid depletion of grain reserves, more than any other single factor, contributed to the unprecedented increase and volatility in food prices. Scarcity, however, was not the problem; the world produced more grain per capita in the so-called scarcity year 1972-1973 (about 832 pounds) than it had in the year 1960, not considered a crisis year.

E.R.: You say the hunger problem is not the result of over-population. But then you have not answered the fundamental question of: Why can't people feed themselves? As Senator Daniel P. Moynihan put it brashly, when addressing himself to the Third World, "Food growing is the first thing you do when you come down out of the trees. The question is how come the United States can grow food and you can't?"

COLLINS: The answer to the question "Why can't people feed themselves?" must begin with an understanding of how colonialism actively prevented people from doing just that. It forced peasants to replace food crops with cash crops that were then expropriated at very low rates; it took over the best agricultural lands of the colonized countries for export crop plantations and then forced the able-bodied workers to leave village fields to work for low wages on plantations; it encouraged a dependence on imported food; and it blocked native peasant cash crop production from competing with cash crops produced by settlers or foreign firms.

The suppression of indigenous agricultural development helped the colonizing powers by preventing direct competition from more efficient native producers of the same crops.

Rather than helping the peasants, colonialism's public works programmes only reinforced export crop production. British irrigation works built in 19th century India did help

to increase production, but the expansion was for selling export crops, at the expense of millets and legumes which were grown as the basic local food crops. In many cases, the people living on these lands, would not go against their natural and adaptive drive to grow food for themselves, and colonial powers had to force the production of cash crops. You had this situation in your own country in 1815 when the British designated vast parts of your central highlands as crown land. When it was determined that coffee, a profitable export crop, could be grown there, the Kandyan lands were sold off to British investors and planters at a mere 5 shillings per acre. The government even defrayed the cost of surveying and road building.

The introduction of the plantations meant the divorce of agriculture from nourishment as the notion of food value was lost to the over-riding claim of "market value" in international trade. Crops such as sugar, tobacco and cotton were thus selected not on the basis of how well they feed people but for their high prices. In fact stagnation and impoverishment of the food producing sector was not the mere by-product of neglect or unintended consequence of the over emphasis on export production. Colonial administrations devised various policies to undercut self-providing or subsistence agriculture and made rural populations more dependent on plantation wages and the plantation system. Government services and even the most minimal infrastructure such as access to water, roads and agro-services such as seeds, credit and disease control were systematically denied, while plantations usurped much of the good land and fields.

Perhaps the most insidious tactic in "freeing" the peasant away from food production and the one with profound historical consequences — was a policy of keeping the price of imported food low through the removal of tariffs and subsidies. The policy was double-edged: first, peasants were told they need not grow food because they could always buy it cheaply with their plantation wages; second, cheap food imports destroyed the market for domestic food and thereby impoverished local food producers. Many colonial governments thus succeeded in establishing dependence on imported food stuffs.

REVIEWS

I.L. But with most under developed countries independent for around 15 to 20 years now isn't colonialism dead? So why cannot people now feed themselves?

COLLINS: Colonialism may be dead. But it left an indelible imprint on every society it touched. The effects of colonialism could not be wiped clean simply by a proclamation of independence. The colonial enforcement of export agriculture handicapped future development by orienting indigenous production and trade patterns to serve narrow export interests. Internal trade that might have served as the means for autonomous development was disrupted or even destroyed in the wake of all-encompassing colonial cash crop systems geared to the needs of foreign interests.

The irony is that development "experts" see the answer to underdevelopment in throwing Third World economies who cease into the very international market system that was initially structured to keep them in subordination.

I.L.: You seem to argue that the under developed countries are faced with what appears to be a choice between continued "dependence" and "isolationism"; but wouldn't isolationism be a step backward?

COLLINS: It is not isolationism but a constructive inter-dependence that is required and this can only come from a position of strength and security. Basic food self-reliance is the sine qua non of that security; without it, "interdependence" becomes a smokescreen for food control of one country by another. One example will explain more fully what I mean.

The history of Cuba during the last twenty years, particularly in contrast to a country such as the Dominican Republic, reveals that, once the basic food needs of the people are being met, trade need not work against the welfare of the majority. At the beginning of the Cuban Revolution, the revision against the elite-controlled sugar economy was so strong that not only were food crops promoted but sugar production was actively neglected. In time, however, the Cuban people learned that they could produce food for local consumption and still earn considerable foreign exchange by exporting sugar.

The impact of export agriculture depends on whether or not food for local consumption has been made the first priority and whether the export income earned

(continued on page 23)

**RALPH PIERIS (1) Social Development and Planning in Asia,
(2) Asian Development Styles. (1977 125 pp.)
Abhinav Publications, New Delhi.**

*"If a professor thinks what matters most
is to have gained an academic post
Where he can earn a livelihood, and then
Neglect research, let controversy rest,
He's but a petty tradesman at the best.
Selling retail, the work of other men."*

Prof. Ralph Pieris's *Asian Development Styles* begins with the above quotation from Kaldasa. Ralph Pieris who was one time Professor of Sociology in the University of Ceylon had earlier published two books, *Stateless Social Organisation* (1958) and *Studies in the Sociology of Development* (1969). Of the two books reviewed here the first is a collection of 30 essays written at different times and published in different places in a period spanning over twenty years. The second is a short monograph examining various styles of development followed in Asia.

Sociology came as a serious subject to Sri Lanka in the early 1900's. It was a transplanted product removed in time and place from its general origins in the systematisation of the thoughts of several writers like Comte, Durkheim, Weber and Marx pondering on the dramatic socio-economic changes occurring in the Europe of the 18th and 19th century. The "sociology" that was transplanted in Sri Lanka and of course in other countries outside the European centre had associated with it closely another strand of social thought, namely, anthropology. In addition the transformation of so-called "primitive" societies, the subject matter of various theories of modernisation that began to sprout in the 1950's and 1960's, formed also an important third leg on which sociology in Sri Lanka rested.

The growth of sociology in Sri Lanka has been successful or unsuccessful depending on the various criteria that one uses to measure this. If one measure is the employment of sociologists in the country, sociologists, over most

of the last twenty five years or so have obtained entry into respectable professions like the administrative service, found relatively better in contrast to other disciplines in the humanities and social sciences. This is perhaps largely due to the fact that in the early years, the study of sociology was restricted to only a few. Another criterion of "success" would be the number of sociologists who going into an academic career in the University, obtained teaching posts in sociology (or allied subjects like anthropology) in Western countries. In fact, in no other discipline taught in the Sri Lanka university campuses (whether in the hard sciences, social sciences or humanities) has there been, in relative terms, such a concentrated brain drain. Sri Lanka sociologists are busy in America, Australia, Canada or Great Britain explaining Sri Lankan society (with of course occasional references to other developing countries) to natives of Western countries. However, on the more important level of real and fundamental contributions to the subject (meaning for our purposes a systematic and insightful understanding of the social processes we are undergoing in the manner in which the Western classical "sociologists" such as Comte, Marx or Weber attempted to do for their societies), our expatriate sociologists have been relatively unsuccessful. Further their raw material and laboratory (to use a metaphor from the physical sciences) are in Sri Lanka while their audience is elsewhere, a strong contrast to the case of physical scientists who migrate to rich countries with considerable intellectual and pro-

essional rewards in search of laboratory facilities and raw material.

Prof. Pirijs stands out among the senior Sri Lankan sociologists not to have left permanently the Asian region for an academic career in a Western country. He has remained within the region and has participated actively in the attempt to scientifically examine the socio-economic processes that are transfiguring the entire region.

Professor Ralph Pirijs's collection of essays is not only a commentary of the growth of the subject and its protagonists in Sri Lanka and the region but also of the subject matter of study, namely Sri Lanka and other regional societies and their on-going transformations. His canvas is large; his interests vary from the epistemological to existential from the past of the Western societies to the future of Asian ones. (Some sample chapter

in colonial times were exogenous triggered by alien domination, a good deal of social thought was implanted, and drew the attention of the colonial intelligentsias to the features of Western industrial society. The colonizers studied the people they were to govern out of necessity. Their desire to "know" colonial society was dictated originally by the practical requirements of governing an alien people. A scholarly literature did emanate as a by-product, and had an indelible impact on the indigenous intellect." Further, the division of human populations for the purpose of the new science of anthropology corresponded by and large to the medieval "dichotomy of mankind into Christian and heathen, and to the contemporary distinction between 'developed' and 'underdeveloped'." In addition, "It is significant that the most defunctionalized forms of sociology and economics gained currency in colonial universities, although they they had no relevance for the

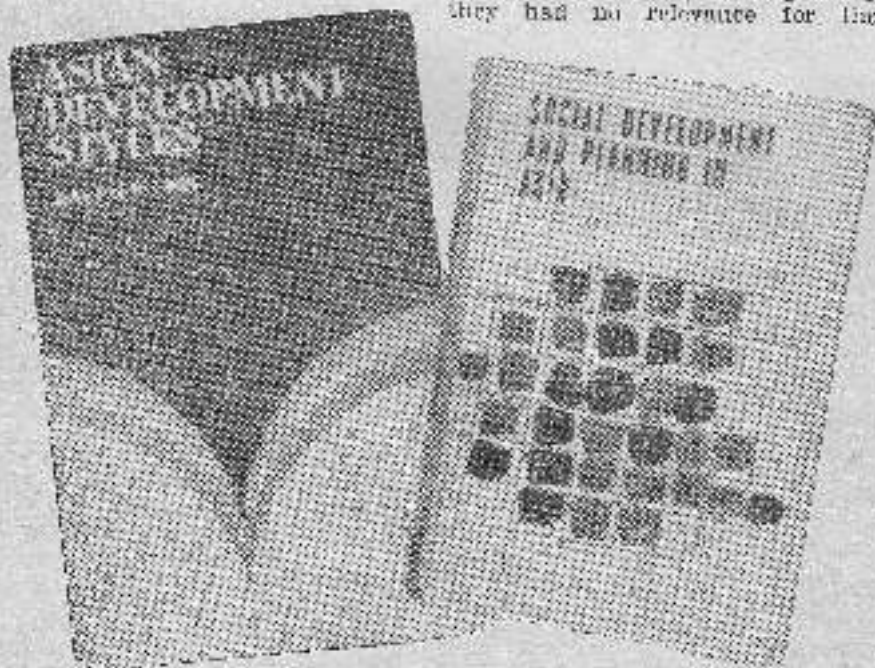
to understand socio-economic processes that are changing Sri Lanka and other societies whilst at the same time questioning its incl. the basic tools of his science. He comments acutely on the mistaken views of Western writers who had a simplified view of the unchanging "Eternal East".

Pirijs's essays have a sense of immediacy as well as of conceptualisation at a depth often lacking in the writings of outside commentators (or of their local imitators). One of the foremost of the former was Myrdal with his massive work *Asian Drama* published nearly 10 years ago. Prof. Pirijs's essays are often more insightful and have a greater tangibility than Myrdal's (although the latter's work for rather obvious reasons is better known). Pirijs refers to the latter "obvious factors" when he writes of the Western oriented academic establishment that has ignored the work of writers like Radhakrishnan Mukherjee who had worked on institutional economics long before Myrdal. Pirijs regrets the fact that Myrdal makes no mention of the socialising mode pioneered by Mukherjee whilst this mode now re-enters its country of origin, India, through Myrdal's *Asian Drama* by what Pirijs terms the "piggy effect".

These two books are by no means the ultimate analysis of Asian socio-economic systems. Several points of departure would be found for debate and discussion on some of the positions taken by the author; thus, for example, his use of the concept "post industrialism" its definition and application to various societies. But to my mind, the issues that Prof. Pirijs has brought forward (especially on the nature of the social sciences and their relevance to countries like ours) are of fundamental importance to the development of the subject. The social sciences in the region, whether it be economics, sociology or political science, are yet to strike that cord of perception and empathy which Western social scientists have realised in analysing their social transformations. It is here that Prof. Pirijs has made in these sets of essays perhaps the most tangible analytical effort among our still very small breed of creative professional social scientists.

Susantha Gunatillake

Economic Review, January 1972

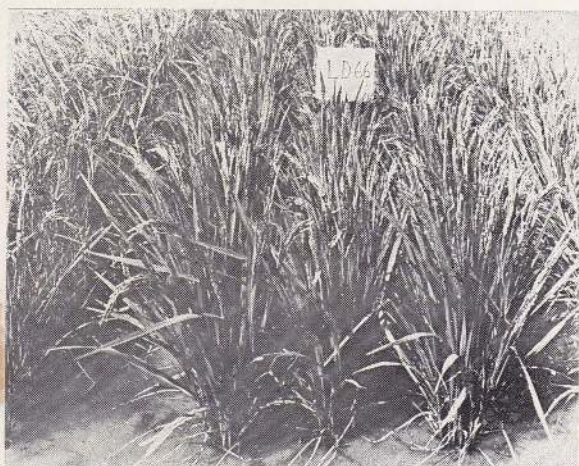


headings: The Paradoxical Involution of Capitalism; Development: Terminable or Indeterminable; Insiders and Outsiders in Asian Development Studies; The Implantation of Sociology in Asia; The Hardening of Soft States; A Note on Styles of Development in Asia).

Writing on the implantation of sociology in Asia, he notes that as the "changes which took place

study of Asian conditions and this intellectual dependence, consolidated in the two decades after independence. Indigenous scholars feared these intellectual chains because they thought they were accepting aims and methods of universal validity."

In the different chapters, Professor Pirijs grapples unconsciously as well as consciously with the basic problem of trying



Paddy — the high yielding varieties. This experimental plot has yielded in the region of 80 bushels per acre.



Sugarcane harvesting at Haldumulla. This has become an important domestic crop in recent years.



Chillies—the ban on imports encouraged domestic production heavily over the last decade and today the emphasis is on increasing yields as illustrated by the extension officer in the picture seen explaining to dry zone farmers.

The activation of the domestic agricultural sector was spurred by Sri Lanka's balance of payments difficulties and the need to cut down on imports of food supplies. Subsidiary food crops gained most by this measure and the country moved rapidly towards self sufficiency in items such as chillies, potatoes, onions and cereals. The present emphasis in this sector too is on the increase of yields, as the pictures show.



Sorghum — one of the two most important staple foods of the 400 million people who live in the world's semi arid tropics. This robust, hardy, drought resisting plant has grown to be a thriving crop in Sri Lanka in recent years.



Groundnuts have also become an important subsidiary food crop for small farmers.



Onion cultivation in the dry zone, particularly in the North, has been gaining ground. The picture shows a successful new crop just harvested.

ECONOMIC REVIEW

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