EXPERIENCES OF AGRICULTURAL DEVELOPMENT IN SRI LANKA: THE RURAL SECTOR IN CONTEXT

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Introduction

This paper attempts to provide an overview of the history of agricultural development in the rural sector; the significance of the rural economy in the sphere of the national economy; the objectives and the progress of various agricultural development policies over the post-independence period and the consequences thereof; and how far those policies contributed to the relief of rural socio-economic problems.

The Sri Lankan economy is predominantly agricultural. Traditionally, the agricultural sector in Sri Lanka is divided into two sectors on several criteria like the land size, domestic and international market orientation, technological practices, nature of farm management strategies adopted, products cultivated and so forth. This division is named variously by different writers: the plantation sector vs. the peasant sector; the modern sector vs. the traditional sector; and the export sector vs. the subsistence sector. All these distinctions refer more or less to the same characteristics of the agricultural sector. It is usually the export-oriented agricultural crops of tea, rubber and coconut which are respectively described as the plantation sector, the export sector or the modern sector. The consumption-oriented crops such as paddy produced mainly

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by the rural sector are again variously called the peasant sector, the traditional sector or the subsistence sector\(^1\). In this context, it may be noted that these are not exclusive categories since export-oriented agricultural crops are produced also in the so-called peasant or subsistence sector. For example, in Sri Lanka, an agricultural holding of 20 acres (about 8.1 ha) in extent or more and under the same unit of management has been defined as an estate. There could be cases where different units of a land holding may add up to 20 acres or more, but such holdings are not considered estates. An estate should have at least one parcel whose extent is 20 acres and above. Moreover paddy lands and chena lands in holdings of 20 acres and over are not treated as estates, being not in the nature of estates. (Census of Agriculture, 1982). According to this definition, over four-fifths (81.4 per cent) of tea lands, nearly two-thirds (65.3 per cent) of rubber lands and about one-fourth (24.8 per cent) of coconut lands are in estates. Coconut in particular is produced in the rural areas in small homesteads to a large extent\(^2\). These three products

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1. This was contested by various writers of a different persuasion. Snodgrass (1966 : 56) has noted: the colonial economy of Ceylon was a veritable model of what might be called a dualistic export economy; (1) a split of the economy into two sectors, one modern in organisational structure and technology, producing for world market, and other traditional in both these regards, producing for the immediate village market. Dualism can be and has been defined in many different terms: capitalistic Vs. subsistence, monetized Vs. nonmonetized, export Vs. domestic, and a positive Vs. a zero marginal product of labour. In the present the general terms “modern” and “traditional” will be used to identify the two sectors. For different arguments, see Athukorala and Huynh, 1987: chapter two; Richards and Stutjesdijk, 1980 : 17; Karunatilake, 1987 : 1).

2. By the 1930's, some 100,000 Ceylonese were working on the estates, making up about 20 per cent of the labour force. Tea and Rubber small-holders were relatively unimportant and produced less than 15 per cent of the crop. But the small-holder participation in coconut industry was relatively higher (Snodgrass, 1966 : 46 and 57; Athukorala and Huynh, 1987 : 35–37).
of tea, rubber and coconut, moreover, are produced for the domestic market as well as the international market. Thus, it is difficult to divide the agricultural sector into two distinct sectors in Sri Lanka, called export and non-export sectors.

For the convenience of this study, the sector of the economy which produces tea, rubber and coconut for the export market in "estates" as defined above is defined as the 'plantation sector' and the rest of the agricultural sector as the 'rural sector'. This study focuses only on the rural sector which is composed of farmers who produce mainly paddy along with various other subsidiary crops like vegetables, fruits, root crops, spices and so forth. The rural sector also produces tea, rubber, coconut and minor export crops, and some villagers are engaged in handicrafts, livestock and poultry production on small scale. The 'rural sector' is this study consists of those living in the village, engaged in all the above types of cultivation activities as owner farmers, tenant farmers, owner-tenant farmers, landlords, wage labourers, marginal farmers or part-time farmers, irrespective of their non-agricultural activities.

The Rural Sector in Sri Lanka: An Historical Overview

Sri Lanka's food crop sector was considerably affected by the formation of the plantation mode of production during the British colonial rule. With the progress of the plantation sector, the colonial rulers neglected the traditional agricultural sector and discriminated against it under various legislations for the benefit of the plantation sector. The colonial agricultural policy had both 'direct' and and 'indirect' effects adverse to the rural economy.

British land policy is directly responsible for the failure of land use pattern in the wet-zone. The villagers in Sri Lanka used land for cultivation purposes as a common non-commodity resource rather than
as a commodity resource until the British colonial rulers relied on private enterprise and the interplay of market forces. The land utilisation pattern of Sri Lankan farmers has been three-fold; Paddy cultivation on low land, mixed crops on high land and Chena cultivation (slash and burn/shifting cultivation) and feeding of cattle on communal land (Farmer, 1957 : 81; Wickramasekera, 1986 : 142). However, the Crown Lands Encroachment Ordinance of 1840 and the Waste Lands Ordinance of 1897 enforced the idea of private property in land. Consequently, the ownership of the communal lands which were used for chena cultivation and pasture were taken over by the government, and sold to planters. For example, between 1933 and 1906, about 1.8 million acres of crown land had been sold to the private sector (Silva, 1973 : 262). The new concept and the associated change of land ownership resulted in a loss of household income and the cattle feeding facilities of the community. The introduction of the colonial land policy also created the problems of rural land hunger, food scarcity, unemployment and low income in Sri Lanka.

"British land policies also led to the emergence of a thriving market in land and thus facilitated the process of dispossession of peasant by rural capitalist. Salaried employees, traders and businessmen and money lenders were the main parties involved in the process. Problems of proving ownership to land, heavy indebtedness and the severity of the grain taxes compelled poor peasants to mortgage and part with their holdings very cheaply, thus leading to a concentration of land. The

3. It is clear from an examination of income level and other quantitative indicators of well-being and technology levels in 1939 that the estate revolution bestowed relatively few immediate benefits on the peasant sector (Snodgrass, 1966 : 46). In general, the colonial economic policy was characterised by the development of export-oriented plantation industries and relative neglect of the traditional rural sector and the peasantry. Traditional culture and values of the society also suffered under the colonial rule (Tilakaratna, 1983 : 9).
Partition Ordinance of 1863 which has been described as a notorious instrument of land grabbing was particularly instrumental in this process. The peasants thus dispossessed, often became share tenants of lands owned by absentee landlords” (Wickramasekera, 1986 : 143).

British Grain Taxes Act was another direct factor influencing rural agriculture, especially the paddy farming sector, during the colonial period. “The payment of the tax was a heavy burden on the stagnating paddy sector and the peasant had to engage in the production of cash crops and the sale of labour to raise money. The tax burden also made them indebted and thus led to the eventual loss of holdings through mortgage and sale to traders, moneylenders and other rural capitalists. In the period of 1880-1890, and extent of 36,800 acres of paddy land was confiscated and sold for default of tax payments. . . . The grain taxes were therefore a major factor in the move towards the differentiation of the peasantry during the colonial rule. Their subsequent abolition did not redress the position of those who had already lost their lands” (Wickramasekera, 1986 : 143).

The substantial development of the plantation sector had several indirect effects causing the stagnation of the rural economy. Before independence, the Ceylon (Sri Lanka) economy was a very typical dual economy with traditional and modern sectors existing side by side in virtual isolation⁴ (Richard and Stoutiesdijk, 1980 : 17). Inter-relationships between these two sectors were prevented as the most necessary production inputs like labour, capital, technology (except the land input) of the plantation sector provided from outside the rural sector (Snodgrass, 1966 : 46-48). These inputs were mainly imported and the output

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⁴ The earlier generalization that there were a few economic links between the modern and traditional sector and that the division between the two was distinct tend to be more applicable to the earlier decades than for the 1920's (Karunatilake, 1987 : 2).
also was mainly exported. Not only was all capital imported from abroad, but also mainly Indian labour was employed on the estates as the wage rates offered by the planters did not provide a sufficient incentive for Ceylonese farmers to move from the traditional to the modern sector (Richard and Stutiesdijk, 1980: 17). Most of the profits were drained away to the foreign countries.

The profits of the planters and the savings of the Indian labourers were sent to their own countries for the further development of their country or society. Even though Land Tax and Export Duty became the main source of government income, during the colonial period the revenue was also reinvested to improve the infrastructure for the plantation sector.

Dependence of the plantations on imports for the consumer goods requirements of their labour force prevented the development of a domestic market relationship between the two sectors. This hindered the spontaneous encouragement of the domestic agricultural production. The direct and indirect effects of the growth of plantations resulted not only in the stagnation of the rural sector, but also led to an extensive dependence of the local community on the foreign market.

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5. Basic consumer needs of the estate labourers and colonial masters as well as rest of the people in the country were mainly depended on exportmarket. The British colonial government was not encouraged the villagers sufficiently to produce consumer needs in domestically. Import of the rice, sugar, wheat flour consisted between 43 per cent and 51 per cent of import composition by value during the period 1925-50 (Peebles, 1982: 219). Some three hundred years ago the retiring Dutch Governor of Ceylon, Ryckloff van Goens, pressed his successor to encourage agriculture, in order to do without foreign rice, which consures most of the money of the inhabitants' (Farmer, 1957: V).
Rural Sector in the National Economy

The significance of the rural sector for the contemporary Sri Lankan economy is shown by the following four factors: (a) the village is the main source of national food supply; (b) the severest socio-economic problems of the people are faced by the village population; (c) the bulk of the population reside in villages and agriculture and agricultural services are their main occupation; and (d) the economic development of the country mostly depends on rural development.

The staple food and various other agricultural products to meet the basic needs of the population are produced mainly in the rural sector⁶. The significant factor is that the relative importance of the rural sector increased markedly in Sri Lankan agriculture. In 1950 the value added of domestic agriculture was (at current prices) estimated to about Rs. 518 million, contributing about 26 per cent of the total agricultural value added. This contribution rate of domestic agriculture increased to 49, 65 and 79 per cents in 1960, 1970 and 1986, respectively (see Table one for further informations). Decline of tea and rubber prices in the international market and poor performance of the coconut sector have a bearing on the increase of the relative contribution of domestic agriculture⁷. Rapid rate of increase in domestic production and the price in the domestic market also contributed to this. Particularly, the paddy sub-sector is mainly responsible for the above change in the composition of

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⁶ People in Sri Lanka, predominantly depend on rice as a primary dietary staple. Particularly, majority of the people in the rural sector, consume rice about three times per day while that of in urban sector comprise about two times per day. The rest of the necessities purchase from the village market with selling their agricultural surplus.

⁷ See Athukorala and Huynh, 1987: Chapter Four, comprehensive details on Sri Lanka's export instability in the international context.
the agricultural sector. For example, in 1986, 89 per cent of the rice requirements of the country was produced by the rural sector and only 11 per cent was imported. The composition of the GDP in the agricultural sector in 1986 (at current prices) indicates that paddy is the second largest contributor to agricultural value added, contributing about 23 per cent of the agricultural sector to GDP [CBSL (Central Bank of Sri Lanka) Annual Report, 1986].

The historical trend of the composition of each product and their quantitative significance in national products reveal that the agricultural sector contributes nearly one quarter of the GDP and paddy and other crops (including mainly subsidiary food crops) account for more than three quarters of agricultural GDP. Even though paddy and subsidiary food crops have been recognized as major agricultural products in the rural sector, it is rather difficult to examine the rural contribution ratio of tea, rubber and coconut due to the scarcity of data. However, as we stated previously, these three kinds of major export-oriented crops, particularly coconut are produced to considerable extent under the small-scale family farm in the rural sector. Moreover, many of the other major sectoral contributions like fishing, export processing, small industry and service in the GDP are largely provided by the rural sector, but it is not possible to recognize the proportion of them in the rural sector because of the lack of information on such activities. Nevertheless, it is doubtless that the rural sector is the main stream of food supply in the national economy.

Sri Lanka still spends large amounts of foreign exchange to import the food requirements of the country. In 1986, Rs. 6,746 million was spent to import agricultural products (food and drink) which accounted for nearly 12.3 per cent of the total imports\(^8\). By further expanding the food growing sector of the Sri Lankan economy can be saved a large proportion of valuable foreign exchange which could have been invested in the
non-agricultural sector.

It could also be noted that the rural sector is not only significant as main stream of food supply of the national economy but also important as a major source of employment⁹. In 1946, there were 556,600 (21.3 per cent of the total employment) persons engaged in paddy and related occupations while that increased to 2,017,299 (39.3 per cent of total employments) in 1985/86. The above figures disclose a 3.6 times of increase in labour absorption during the period 1946-86. This increase rate of the supply of employments in the domestic agriculture is higher than that of the increase rate in other two sectors¹⁰.

However, the major Socio-economic problems of the economy like unemployment, underemployment, landlessness, low income levels, and low standards of living have their disproportionate impact on the rural sector. The number of unemployed, according to the 1971 census, was estimated at 830,000 representing 19 per cent of the labor force, while the Consumer Finance Survey of 1973 recorded an unemployment rate of 24 per cent. However, comparison of the Consumer Finance Survey with the

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8. However, figure in 1986 reveals a significant improvement of the import substitution in country in proportion to previous condition of the import composition. In 1950, 1960 and 1980, the import of consumer goods (food and drinks) of total import were amounted to 51, 38 and 19 per cents, respectively (CBC, Annual Reports, various years.)

9. Farmer (1957: V) has noted that the economic and social future of the people of Ceylon will depend primarily upon the development of agriculture, and the production of food—mainly rice—to meet the needs of, and provide employment for a rapidly increasing population.

10. The total employment in the estate sector declined from about 632,000 in 1946 to about 475,090 in 1985/86 (Snodgrass, 1966 : 101; Labour Force and Socio-Economic Survey, 1985/86 : 40). The growth of the estate labour force in a situation of decline employment opportunities resulted in a high level of open unemployment and under-employment on estates (Gooneratne and Wesumperuma, 1984 : 9).
Socio-economic Surveys of 1978/79 and 1981/82 revealed a substantial improvement in the employment situation. The rate of unemployment declined from 14.8 per cent of the work-force in 1978/79 to 11.7 per cent in 1981/82. In the rural sector where the level of unemployment is higher, there was a slight drop in the rate of unemployment from 14.6 per cent of the work-force in 1978/79 to 12.0 per cent in 1981/82 [CBC (Central Bank of Ceylon), Review of the Economy, 1980 : 111; 1983 : 115-116]. However, more recent data from the Labour Force and Socio-Economic Survey of 1985/86 revealed that over 840,252 persons were without jobs or were actively looking for work or unemployed. This figure gives an overall unemployment rate of 14.1 per cent. Urban areas recorded an unemployment rate of 19.5 per cent while that for the rural and estate sectors were 13.2 per cent and 7.8 per cent, respectively (Department of Census and Statistics, 1987 : 4951). If the rate of underemployment is added to the above figure, the actual situation of the unemployment in the rural sector is worse than what is indicated by the above estimates. Particularly, it is mainly rural youth who are the victims of frustrating unemployment (or unsatisfactory employment) after a long and arduous struggle through the education system (Moore, 1981 : 97). It is therefore the unemployment problem in the rural sector which continues to push rural people deeper into the depths of rural poverty.

Another rural socio-economic problem, which has continued for a long time, is landlessness and near-landlessness or economically disadvantaged lands. For example, the survey of landlessness carried out in 1950-51 found that 38 per cent of the total families in the rural sector were landless (Wickramasekera, 1986 : 146-147). The Census of Agriculture of 1982 (based on ten per cent sample tabulation for small holding) reveals that 11 per cent of the operators did not have any land while the bulk of the operators (38.5 per cent) owned only home garden. The same survey recorded that about 43 per cent of the operators in the small
holding sector owned less than one acre (Department of Census and Statistics, 1984).

The small-holding dominates the paddy land utilisation structure in Sri Lanka and over time the average size of holdings tended to become smaller. Most of the agricultural economists noted this would increase the economically unproductive land area in the future. For example, the total land holdings under paddy as reported at the Census of Agriculture of 1982 was 734,532 of which more than two-thirds of them are holdings of less than two acres.

<table>
<thead>
<tr>
<th>Size class</th>
<th>Number of Holdings</th>
<th>%</th>
<th>Area (Acres)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1</td>
<td>319,950</td>
<td>43.6</td>
<td>142,626</td>
<td>11.8</td>
</tr>
<tr>
<td>1 to less than 2</td>
<td>174,558</td>
<td>23.8</td>
<td>210,267</td>
<td>17.3</td>
</tr>
<tr>
<td>2 to less than 4</td>
<td>178,836</td>
<td>24.4</td>
<td>448,858</td>
<td>36.0</td>
</tr>
<tr>
<td>4 to less than 10</td>
<td>52,301</td>
<td>7.1</td>
<td>274,000</td>
<td>22.6</td>
</tr>
<tr>
<td>10 acres &amp; over</td>
<td>8,887</td>
<td>1.2</td>
<td>137,368</td>
<td>11.3</td>
</tr>
<tr>
<td>All class</td>
<td>734,532</td>
<td>100.0</td>
<td>1,213,089</td>
<td>100.0</td>
</tr>
<tr>
<td>Average size of land holdings (Acres)</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Department of Census and Statistics, Ministry of Plan Implementation, Sri Lanka Census of Agriculture, 1982, P.40

The optimum or economically viable size of paddy holdings for a family farm is a controversial issue though there seems to be an agreement that holdings below the size of one acre cannot generally guarantee a sufficient income for a family (People’s Bank, January 1978 : 10). According to this notion, nearly half of paddy farmers in Sri Lanka do not have enough land resources to produce their daily family requirements. This poor condition of the landlessness and fragmented land holding in the rural sector is not a serious problem for the rural people themselves if they have alternative economic opportunities in the village itself.

It is a well-known fact that the rice ration was declared as a subsidy
for the low income group in the 1970s and, in 1979, it was converted into food-stamps\textsuperscript{11}. It became rather than a direct food subsidy scheme in the form of rations, a form of cash transfer to the poor; particularly because the food-stamps could be converted into savings deposits or the stamps used as ‘cash’ to purchase items outside the scheme (People’s Bank, March 1982 : 7). At the inaugurate time, the food stamp was available to about 7.5 million people of the total population (approximately 52 per cent). At present, about 50–60 per cent of the total population benefit from this scheme. This means that half of the population of the country falls under the category of poor. However, this subsidy programme does not contribute much for the improvement of poor people’s economic

\textsuperscript{11} Food stamp limiting eligibility to households earning Rs. 300 or less per month. The basic procedure of the scheme is given as follows: (a) Food stamps are consumer subsidy with entitlement value set in rupees. (b) People can buy on these stamps only rice, paddy, wheat flour, bread, sugar, milk products, locally produced pulses and kerosene. (c) Eligibility: (effect in June 1986)

<table>
<thead>
<tr>
<th>Income Group Per Month (Rs)</th>
<th>Eligibility Numbers of Family</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 300</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>301-399</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>400-599</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>600-700</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food Stamp Value (Age Groups)</th>
<th>Value Per Month (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 8 years (Infant)</td>
<td>25.00</td>
</tr>
<tr>
<td>8-12 (Children)</td>
<td>20.00</td>
</tr>
<tr>
<td>Over 12 (Adult)</td>
<td>15.00</td>
</tr>
<tr>
<td>Kerosene stamp</td>
<td>9.50</td>
</tr>
</tbody>
</table>

(e) Cooperative branch or authorized private retail dealer distribute the food on the above stamps. Recipients should be used their stamps within a month. Unused stamps deposited in a saving account before the 15th of following month (Thorbecke and Svejnar, 1984 : 183)
conditions partly because inflation has eroded the real value of the food stamps considerably.

The effort of both rice ration and food stamp policies aimed to achieve the alleviation of poverty, improve the consumption of nutrition and reduce the balance of payments and budget\textsuperscript{12}. The value of food stamp has remained constant since 1979 and the eligibility rules unchanged while the food cost of living index rose by 60 per cent between September 1979 and the end of 1982, the purchasing power of the food stamp has been significantly eroded. In addition, some needy groups (particularly estate workers) are excluded from the food stamp programme on the basis of their recorded income notwithstanding evidence of malnutrition within the group. But other groups like paddy farmers were eligible for food stamp by understanding their income (Thorbecke and Svejnar, 1984 : 97). This reveals the lower contribution of policy change from rice ration to food stamp to the alleviation of poverty because it is not an adjustment to the inflation in the country.

However the food stamp scheme contributed highly to a significant drain on public finance. Net food subsidies in 1970/71 comprised about 14 per cent of total government expenditure and that declined to about 3.14 per cent in 1986. Similarly, contribution rate of food subsidies to GDP sharply declined from four per cent to 1.2 per cent in the same period. Therefore, it is not unreasonable that the most deprived of our community eat less, and some probably much less, than they did two years ago (People’s Bank, March 1983 : 8).

Sri Lanka is, as already noted, predominantly a rural society according to the population distribution by sector and employment structure. Table 2 illustrates the composition of the rural sector and its quantitative

\textsuperscript{12} See Thorbecke and Svejnar, (1984 : 100-101) for more detail on the effect of food stamp on reduction of nutrition.
significance in population distribution and employment status during the period 1971-86.

Table 2: Distribution of Population and Employment in the Rural Sector

<table>
<thead>
<tr>
<th>Indicators</th>
<th>1971</th>
<th>1981</th>
<th>1985/86</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Population</td>
<td>68.5</td>
<td>72.2</td>
<td>72.7</td>
</tr>
<tr>
<td>2. Economically active</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>n. a.</td>
<td>78.0</td>
<td>71.7</td>
</tr>
<tr>
<td>3. Agricultural Workers</td>
<td>59.7</td>
<td>55.3</td>
<td>52.4</td>
</tr>
<tr>
<td>4. Production &amp; Related</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers, Transport</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Operators &amp;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labourers</td>
<td>22.2</td>
<td>23.7</td>
<td>27.2</td>
</tr>
</tbody>
</table>


The above Table brings out that more than two-thirds of the total population reside in the rural sector and this has not changed much in the last one and half decades. In addition, sectoral distribution of the occupations of the numbers of employed reveals that more than half of the workers in the rural sector is engaged in agricultural activities.

The above facts reveal that the importance of the rural sector in the economic development of the country according to any aspects of theoretical approach whether orthodox or new orthodox because most of the economic factors like land, labour, capital, market and many other materials resources are embedded in the rural sector. It is therefore, important to examine the experiences of the past development efforts and the utilisation patterns of the above-described development potentials in the rural sector of Sri Lanka.
Agricultural Policies and Programmes on the Rural Sector in the Post-Independence Period: An Overview

Since political independence in 1948, Sri Lankan authorities have made a noticeable effort to improve the socio-economic conditions of the rural sector which was largely neglected by the colonial rulers. Various development policies and a number of plans were introduced mainly to achieve self-sufficiency in food, especially in paddy. Paddy farming came to be treated the foundation or base of the life of the rural economy. "It was the pivot around which the economic and cultural life of the village revolved" (People's Bank, January 1978: 4). "The basis of rural economy in ancient Ceylon was Paddy cultivation. The social beliefs, customs and institutions were closely integrated with the system of paddy production" (Morrision et al, 1977: 3). There are number of other economic activities (non-paddy) of the people in the rural sector. Such activities could be recognized as subsidiary food crops, traditional export crops (tea, rubber and coconut under small holdings), nontraditional export crops, animal husbandry, small industries and services.

Agricultural policies implemented during the period 1950-70 were directed primarily to three major crops—tea and rubber in the export sector, and paddy in domestic peasant agriculture. In the export sector the emphasis was on the improvement of the large-scale plantation while the small-holders, particularly in coconut and rubber, were relatively neglected. The government programmes which benefited the peasant farmers concentrated almost exclusively on paddy. This was true of the massive outlay on colonisation schemes as well as the institutional sup-

13. The introduction of the plantations under colonial rule in the 19th century struck a blow at the peasant based agricultural sector (People's Bank, January 1978: 3).
port and extension services that were provided in the rural sector. Many areas with a high potential for growth, such as coconut, animal husbandry, horticulture, received little attention (The Five Year Plan, 1971: 33).

However, the Ten Year Plan (1959–68) also emphasised the necessity of the virtual self-sufficiency in terms of subsidiary food crops and animal husbandry. The plan did not reach its goals because of the political assassination of the prime minister. In 1970s, the government paid special attention to the development of non-paddy farming activities in the rural sector under the concept of import substitution. The Five Year Plan (1972–76) noted that the special policies and concerted efforts by all government agencies working in this field were necessary to develop and realise the full potential of peasant agriculture. Subsidized fertilizer for crops other than paddy and the traditional exports, credits and subsidies to finance the initial expenses for growing new crops, the support programme in the form of extension measures and advisory services, marketing arrangements and appropriate financial and pricing policies needed to be introduced if significant increases in rural incomes were to be expected (The Five Year Plan, 1971: 35).

Although the above policies had been achieved substantial improvement in the sphere of non-paddy farming activities in the rural sector, the open market economy introduced in 1977 had an adverse impact on such activities. For example, nearly all subsidiary food crops, whose production increased under import restriction in the period 1971–76, declined in 1978, 1979 and in the case of some items, in 1980 as a result of free imports and building up of buffer stocks of imported potatoes, onions, chillies and chicken. . . . some of the small industries such as milk, flour milling, handloom textile weaving, textile printing, manufacture of local machinery, components, ancillaries and spares, manufacture of motor spares, hand paper, chemical products, soap, paint, hardware, metal products and
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electrical appliances, were adversely affected by open market policies (Kelegama, 1986: 23). However, it is necessary to examine the favourable and unfavourable effects of the above policies on the rural socio-economic activities during the period 1950-86. The review of the consequences of those policies is made under two major categories for convenience: the first, policies for paddy sector promotion: and second, the non-paddy rural economy.

Policies for Paddy Sector Promotion

Agricultural policy of the government on paddy could be recognized as one of the most successful efforts in meeting food demand of the country, but it did not contribute considerably to the alleviation of rural poverty\textsuperscript{14}. The implemented agricultural policy in regard to the paddy sector during the period of post-independence is evaluated under three categories: (a) land development policy (extension of cultivable land, government investment in irrigation facilities and other relevant facilities); (b) policies to improve cultivation practices (agricultural research, extension services, institutional credit, price support on inputs and outputs); (c) institutional reforms (creation of farmers organisations for farm management, protection of tenancy right and land reforms).

Land Development Policies

The rapid expansion of the cultivated lands under various land policies of the governments is a main reason for the growth of paddy and other subsidiary food crops in the rural sector during the period of post

\textsuperscript{14} See Thorbecke and Svejnar, 1984: 23-28; for evidence of the worsening in nutritional intake in the lowest income group.
The total extent of paddy land cultivated in 1885 was about 242 thousand hectares, which increased to 370 thousand hectares in 1947. This reveals only about 1.5 times increase (53 per cent) of total land extent during 62 years (Snodgrass, 1966: 335-336). But, the extent of paddy land amounted to 569 thousand hectares in 1985 (CBSL, Annual Report, 1985). This means, the cultivable land area of paddy has increased by a similar rate of 1.5 times or about 54 per cent within a short period of 38 years.

In the study period, the successive governments allocated crown land and private land for the landless peasants. The alienated lands were created under seven major projects: (1) Colonisation Scheme, (2) Land Expansion Scheme, (3) Middle Class Alienation, (4) Marginal Land Alienation, (5) Youth Colonisation Scheme, (6) Highland Settlement Scheme, and (7) Other Schemes (Co-operative Farm, Agricultural Project under Divisional Development Council etc.) Among these policy measures on land distribution, the colonisation scheme\textsuperscript{16} is the most important project in the growth of domestic agriculture, particularly the paddy sector. The other policies were mainly to ease the land hunger of the people in the rural sector while generating the subsidiary crops to some extent.

The governments attempted firstly to increase the cultivable land area by providing irrigation facilities. Secondly, an attempt was made to increase the cultivated land area in the \textit{yala}\textsuperscript{17} season. Various land settlement schemes or colonisation schemes under the Land Development Ordinance of 1935, were a major effort to increase the new cultivable land area with irrigation facilities in the Dry Zone\textsuperscript{18}. The Mahaweli Develop-

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\textsuperscript{15} Some economists argue that this not exactly true for 1975-86 period. They emphasised, improvement of the new technologies as a major contributory factor for the development of paddy sector in post-1975 period.

\textsuperscript{16} See Farmer, 1957 for more information on the colonisation scheme in Sri Lanka.
ment Project in the 1970s was also another major scheme for the supply of sufficient water for old irrigation tanks in the land settlement schemes in the Dry Zone\textsuperscript{19} as well as in the new land settlement schemes. A main objective of these projects has been to relieve the population pressure in rural areas of the Wet Zone thereby solving the land scarcity problem and finding a satisfactory answer for unemployment and food scarcity problems of the national economy\textsuperscript{20}.

In the beginning of the land settlement schemes under the Land Development Ordinance of 1935, five acres (2.03 ha.) of irrigated land for paddy and three acres (0.81 ha.) of high land for setting up homesteads were provided to each household chosen to be settled in colonisation

\begin{itemize}
\item[17.] Paddy crop in Sri Lanka divided into two distinct season per year; \textit{Maha} (main season) and \textit{Yala} (minor season). \textit{Maha} cultivate from October to February; and \textit{Yala} from May to September. In the Dry Zone, where irrigation facilities are not available, only Maha crop is possible. These two paddy crops depend on two monsoon rains. The heaviest rains occur during the southwest monsoon from May through September and during the northeast monsoon from December through February. Wet Zone has enough rain for both \textit{Maha} and \textit{Yala}.

\item[18.] Sri Lanka divided into two agro-ecological zones based on difference in the amount and pattern of rainfall: (1) Wet Zone, and (2) Dry Zone. The Wet Zone or southwest portion of the country, with an average precipitation of 113 inches, has two peak periods of rainfall corresponding with the monsoons. The remainder of the island, called Dry Zone, with an average precipitation of 64 inches has only on period of rainfall [(see Map 1 for location) Bansil, 1971 : 8].

\item[19.] Generally, three months per year (June, July and August) consisted as a drought season in the Dry Zone. In this season, agricultural activities cannot be done without irrigation facilities. Many people in previously dealt with preparation of land for chena cultivation in this season.

\end{itemize}
schemes from among those who did not have more than 0.25 acres (0.101 ha.). People in the schemes brought their highlands under a *chena*\(^{21}\) crops and also improved the allotments under various kind of permanent crops like coconut, mango, jak and so forth. Moreover, the colonists were then organised into groups for the construction of their permanent house on a *shramadana* (voluntary contribution of labour) basis for which a subsidy was provided. Also they organised to extend the same communal effort towards clearing their paddy allotments and prepare them for cultivation for *maha* when irrigation facilities were provided (Ministry of Plan Implementation, 1981 : 161).

Additionally, government supplied the necessary infrastructure facilities like irrigation, housing, transport, health, education and marketing facilities to settlers free of charge. Other assistance included free agricultural implements, and free seeds and planting material at the time of settlement. Subsidies were also provided for wells, latrines and fencing. The overhead capital cost of these projects had been very high. For example, “the expenditure on major irrigation projects and land settlement schemes over the ten year period 1955/57 to 1966/67 amounted to about 66 per cent of the government capital budget” (Sirisena, 1986 : 72).

With the rapid increase of the demand for land under these schemes in the 1960s, the government reduced the extent of the land area distributed per

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21. Karunatilake has noted that *chena* cultivation is the least labour intensive form of agriculture practiced on a large scale. This cultivation has always been looked upon as a gamble because it is dependent on rains and the cultivated plot is situated some distance from the homestead. Since risk minimisation is a major consideration for the *chena* cultivation, he primarily uses family labour. Friends and relatives help each other and very often cultivate adjoining plots (Karunatilake, 1987 : 47). Mainly mixed crops (subsidiary food crops) are cultivated in these lands. However *chena* cultivation begun to diminution in recent past due to the government’s restrictions and scarcity of land.
household from five acres to one for total land alienated and from two acres to 0.5 acres for paddy.

During 1968/69, the number of allottees had been increased to 70,686 and the acreage of paddy and high land to 202,642 (820,70 ha.) and 111,300 (45,077 ha.) respectively (Gunasekera, 1974 : 159). By 1981 a total of about 90,000 families had been settled in 105 major colonisation schemes located in various part of the Dry Zone. In these schemes, over 237,000 acres (95,913 ha.) have been improved with irrigation and 163,000 acres have been brought under highland crops benefiting a total number of 85,120 farm families (Ministry of Plan Implementation, 1981 : 161). However, the number of unofficial settlers would be higher in a number in these schemes. Most of the unofficial settlers have reached here through kinship, relationship or socioeconomic relationship with the official settlers. The financial size of irrigation projects in the capital budget continued, although its relative significance has declined. In 1981, the total expenditure on major irrigation projects amounted to more than one half of the government’s capital budget. The Accelerated Mahaweli Development Project alone absorbed Rs. 4.5 billion of the government capital budget in 1981 (Sirisena, 1986 : 72).

The rapid expansion of colonisation schemes and irrigation projects resulted in significant increases of cultivated paddy land area from 431 thousand hectares to 881 thousand hectares during the period 1950-85 (including major, minor and rainfed areas in both seasons). This remarkable increase amounted to about 2 times or about 104 per cent (Peebles, 1982 : 122; CBSL, Annual Report, 1985 : 34). The cultivation under major irrigation works increased markedly from 25 per cent of the total cultivated land area. The irrigated land area (including major and minor irrigation facilities) out of the total cultivated area reached 68 per cent by 1985 (CBSL, Annual Report, 1985 : 25). The remarkable increase of the irrigated and the rainfed land area resulted in some relief to problems of
the food demand and land scarcity in the national economy. If the colonisation effort under the Mahaweli is also taken into consideration, these schemes give primary employment in agriculture to well over a million people. If in addition, ancillary occupations like trade and services in these schemes, like transport of produce, employment in mills, carpentry, bakeries and so on are taken into consideration, it will be seen that nearly two million people draw sustenance from these schemes (Ministry of Plan Implementation, 1981).

It could also be noted that the rapid expansion of the land under cultivation made feasible by improved irrigation facilities contributed most significantly, among other factors, to the increase in the paddy output in the last three and a half decades. During 1950–86, the total paddy production increased about 6 times and the annual compound growth rate reached 4.9 per cent. “The paddy output in the major irrigation schemes had been about 50 per cent of the total national paddy output in 1983–84. In the 1983/84 cultivation year the national average yield was 59.9 bushels per acre (3,092 kg/ha), the average yield in minor irrigation schemes was 57.5 bushels (2,968 kg/ha), while the yield in the rainfed area was 49.13 bushels (2,536 kg/ha). The average yield in major irrigation schemes during the same cultivation year has been 68.78 bushels (3,550 kg/ha). This clearly shows that the highest productivity in paddy land could be seen in major irrigation schemes” (Sirisena, 1986 : 73).

Along with the increase in irrigated land area, there was in general a considerable increase also in paddy land productivity. During 1960–85, the land area cultivated under major irrigation schemes increased from 28.0 per cent to 44.6 per cent of the total cultivated area, while the land area under minor irrigation and rainfed declined from 30 to 22 per cent and 43 to 34 per cent of the total paddy land respectively. The decline of the minor and rainfed areas of the total extent of paddy land cultivated may be the result of the development of major irrigation projects which
EXPERIENCES OF AGRICULTURAL DEVELOPMENT IN SRI LANKA

supply the water facilities to old tanks and new tanks in the Dry zone area. With the increase of the rate of land area cultivated under the irrigation facilities during the period 1960-85, in the same period, land productivity per hectare increased from 1877 kg. to 3464 kg., which amounted to a nearly 1.8 times increase. Apart from the expansion of irrigation facilities, many other interrelated factors contributed to the increase of productivity. It is however questionable whether the benefits obtained were adequate in proportion to the large amount of investment.

In addition to the colonisation schemes, the governments intended to provide of land for the landless people under six major projects which have already been noted. The Village expansion Schemes are another significant step towards the highland distribution to landless farmers in traditional villages. These distributed lands may be crown land or private land in close proximity to the allottees' village and allotment size ranged between 0.25 and 2.00 acres. The aims of these schemes were to reduce population pressure and landlessness in the traditional villages with the intention of using this land for residential or agricultural purposes. According to the informations on Ministry of Plan Implementation in 1981, 839,000 acres of land have been distributed among 698,000 persons under this scheme (The Ministry of Plan Implementation, 1981: 161). The allottees of these new villages are selected from the puranagama (traditional village) and therefore, they have kinship with those people. Most of these new schemes' people became the casual wage labourers of the main village and some became the tenant farmers of their relations, because these people do not have any economic source except the small highland.

22. According to the cost–benefit analysis on the Galoya colonisation scheme, the cost benefit ratio was 0.5 (Gunasekera, 1974: 182).

The Middle Class Land Alienation was another policy toward the distribution of highland to the middle class people in the country. Under this scheme, the Land Commissioner’s Department distributed the crown land for agricultural purposes where this land was not harmful for the general farmers’ activities in the area. The allotment size ranged between 10-50 acres. The government provided credit facilities at low interest rates as an encouragement for cultivation of those lands. During the period 1968-69, 148,257 acres of such land have been distributed among the people in middle income level.

In 1960s, the government introduced another land distribution policy known as the Marginal Land Alienation. The lands alienated under this policy consisted generally of those not required for cultivation purposes by local peasants. Most of the private investors interested in this project were desirous of obtaining certain tax concession (Ceylon Year Book, 1967 : 49). During the period 1962-69, 28,017 acres have been provided among 1,159 persons under this scheme. Many of the allottees in these schemes were not engaged in cultivating of the allotments. Majority of the allottees were forsaked their allotments after cutting of valuable trees and selling of them to timber traders in the country. However, one-third of the above-distributed land area has been cultivated by the allottees at the end of the 1969.

In 1966, Ministry of Agriculture and Land introduced a new land distribution policy named Youth Colonisation Scheme. The purpose of this scheme was to relieve the unemployment problem of the younger generation through agricultural income generation activities. The government proposed to create 235 such schemes and settle down there about 23,500 youths during the period 1965/66-1969/70, but completed only 41 projects which comprised 3,216 youths during the same period. One scheme consisted 100 youths while they organised through co-operative efforts clearing the land and preparing it for cultivation. Youths in these
schemes brought their common lands under the subsidiary food crops and also grew permanent cash crops like coconut, tea, cinnamon, cloves and so on. The management of the farm took place under the concept of a co-operative.

In addition to above alienations, 9,400 landless families have been allocated 32,400 acres of highland under the Highland Settlement Scheme for the purpose of cultivating commercial crops like tea, rubber and coconut and 4,620 educated youths have been allocated 19,375 acres for the cultivating of food subsidiary and commercial crops during the post-independence period (Ministry of Plan Implementation, 1981).

In 1970s, the government introduced a scheme to set up Co-operative Farms to reduce the unemployment problem among youth, save foreign exchange through production of agricultural products in the country and improve the youth’s income level. In 1971, the government established 52 such farms which consisted of about 3,183 youths. Following the same concept of co-operative, the public sector introduced Agricultural Projects under the Divisional Development Council (DDC)\textsuperscript{24}. During the period 1971-73, the Ministry of Plan Implementation approved 1,198 projects under the DDC system, in which 503 projects were categorized as agricultural. The DDCs had allocated about 10,623 acres for the above 503 of agricultural projects of which 87 of were engaged with animal husbandry. In addition, the government set up 18 Co-operative Villages with providing 5,240 acres to 1,161 people in several districts of the country in 1974. However, the above effort of land alienation under the

\textsuperscript{24} Under the import substitution policy in 1970s, DDC was set up in 1971 to decentralisation of the administrative system of the country. Under the DDCs, many agricultural and non-agricultural projects were initiated at village level. Mainly those projects aimed to develop the rural sector through improvement of agricultural and non-agricultural activities in the village economy.
concept of co-operative farming did not bring about the expected results due to various problems in the implementation process.

High Yielding Varieties

The introduction of high yielding varieties (HYV) along with the spread in the use of chemical fertilizer was made by the Green Revolution Technologies in the 1960s. Rice breeding and improved varieties of paddy have been diffused rapidly in the paddy farming sector in Sri Lanka. This diffusion of improved varieties took place in two steps; (a) from 1960 to 1970, and (b) from 1970 to present day.

Development in the first stage was based on locally bred H varieties such as H4, H7 and H8. From the early 1960s these spread fast so that about 70 per cent of total sown area in 1970 was under H varieties. In the second stage, a breakthrough was made in evolving high yielding varieties of higher potential and shorter duration to suit different agro-climatic regions25 (People’s Bank, January 1978 : 9).

The varieties popularised in the second stage increased IR 8, BG 11, LD 66, MI 66, MI 273, BG 34-6 and BG 34-8. Those varieties had a greater response to chemical fertilizers, pest and disease control, weed control, better irrigation facilities, transplanting and land preparations. The diffusion of new improved varieties and the increase of land productivity during 1970-86, can be seen in Table 3.

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25. Improvement of local varieties and breeding of new varieties of paddy and other agricultural product carry on by the number of National Agricultural Experiment and Research Stations, namely Bathalagoda, Makandura, Gannoruwa, Karadiyanaru, Killinochchi, Bomulla and Mahaelukpallama. In addition, agricultural schools and training centres are located in Bandarawela, Peradeniya and Polgolla etc.
# Table 3: Diffusion of New Varieties of Paddy, 1970-86

<table>
<thead>
<tr>
<th>Year</th>
<th>Area Sown* (000 ha.)</th>
<th>Area Sown Under Improved Varieties* (000 ha.)</th>
<th>Percentage of Improved Varieties to total Area Sown*</th>
<th>Yield Per ha. (kg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>760</td>
<td>536</td>
<td>71</td>
<td>2,644</td>
</tr>
<tr>
<td>1971</td>
<td>726</td>
<td>481</td>
<td>67</td>
<td>2,366</td>
</tr>
<tr>
<td>1972</td>
<td>727</td>
<td>507</td>
<td>70</td>
<td>2,416</td>
</tr>
<tr>
<td>1973</td>
<td>725</td>
<td>520</td>
<td>72</td>
<td>2,298</td>
</tr>
<tr>
<td>1974</td>
<td>825</td>
<td>667</td>
<td>81</td>
<td>2,353</td>
</tr>
<tr>
<td>1975</td>
<td>696</td>
<td>520</td>
<td>75</td>
<td>2,270</td>
</tr>
<tr>
<td>1976</td>
<td>724</td>
<td>559</td>
<td>77</td>
<td>2,315</td>
</tr>
<tr>
<td>1977</td>
<td>828</td>
<td>692</td>
<td>84</td>
<td>2,521</td>
</tr>
<tr>
<td>1978</td>
<td>876</td>
<td>685</td>
<td>78</td>
<td>2,613</td>
</tr>
<tr>
<td>1979</td>
<td>839</td>
<td>648</td>
<td>77</td>
<td>2,750</td>
</tr>
<tr>
<td>1980</td>
<td>845</td>
<td>683</td>
<td>81</td>
<td>2,927</td>
</tr>
<tr>
<td>1981</td>
<td>877</td>
<td>839</td>
<td>96</td>
<td>3,014</td>
</tr>
<tr>
<td>1982</td>
<td>845</td>
<td>763</td>
<td>90</td>
<td>3,260</td>
</tr>
<tr>
<td>1983</td>
<td>824</td>
<td>745</td>
<td>90</td>
<td>3,606</td>
</tr>
<tr>
<td>1984</td>
<td>990</td>
<td>989</td>
<td>100</td>
<td>3,076</td>
</tr>
<tr>
<td>1985</td>
<td>882</td>
<td>882</td>
<td>100</td>
<td>3,444</td>
</tr>
<tr>
<td>1986</td>
<td>897</td>
<td>n.a.</td>
<td>—</td>
<td>3,476</td>
</tr>
</tbody>
</table>

Source: Central Bank of Ceylon, Annual Reports, Various Issues
*Including both Yala and Maha crop seasons

According to Table 3, the new rice varieties have diffused to cover almost the entirety of the sown area. Yet, land productivity increased relatively slowly. The yield potential of these seed varieties ranged from 5157-7221 kilogrammes per hectare. The national average of the yield per hectare in 1986 was about 3,476 kgs., which was about 60 per cent of the potential. The reason for this lower than potential yields was the fact

26. A study on HYV revealed that Sri Lanka has been at the forefront of research on new rice technology and HYV. Some of the locally developed varieties are comparable if not superior, in Potential to the best alternative HYV available (Thorbecke and Svejnar, 1984: 83).
that the farmer did not adopt these varieties along with the other necessary related inputs on a package basis or in the recommended manner.

In addition, the willingness and the ability of the farmer to apply these new technologies depends on factors like the size of the land, educational level and economic status of the farmers. Small farmers and tenant farmers could not possibly practice these technologies on a well-managed basis. For example, it has been found that small farmers gained less yields than those cultivating lands more than 2.5 acres in size (Amarasinghe, Quoted by People's Bank, August 1982 : 12). The smaller the land size the greater was the unwillingness to adopt these technologies. Consequently, the small farmers were compelled to minimize the cost of production by using family labour and the traditional technologies which have been present for ages.

Application of Fertilizer

The use of chemical fertilizer in farming is a relatively new phenomenon. In the traditional system farmers use mainly green leaves, animal manure, husks and ashes and adopted crop rotation methods to fertilize their farm lands. With the introduction of chemical fertilizer in the 1950s, the traditional fertilising systems have become less important. Since the 1950s, the government provided various incentives like fertilizer subsidy to popularised chemical fertilizer among the farmers, particularly in the paddy sector. The subsidy rate ranged from 33 to 75 per cent from 1951 to date²⁷. Through this practice the farmer has come to depend on government subsidy on fertilizer. The changing price (or the rate of

²⁷. This subsidy scheme was introduced in 1950. Since then it has been continued with the exception of a short spell of about four months in 1974 during which no subsidy was granted (Fernando, 1987 : 53).
subsidy) of fertilizer became one of the main factors behind paddy output trends as the reaction of the farmers to changes in prices of fertilizer has been high. For example, in 1974, the government did not raise the subsidy in line with the increase of fertilizer price in the world market resulting from the sharp increase of oil prices. During this period, farmers' application of fertilizer declined to nearly 49 per cent of the previous year's level. This forced the government to increase the subsidy rate later. The reaction of the farmers to the changes of subsidy rates in fertilizer application is shown in Table 4.

Fertilizer consumption per hectare increased about five times, but the resultant increase in productivity was about thrice during the period. The yield of paddy per hectare did not fluctuate sufficiently according to the amount of fertilizer application. The reason of this is not only the change of policy for fertilizer subsidy but also the crop failure due to drought and flood in the years of 1965, 1970, 1974 and 1975. Additionally, fertilizer cannot alone contribute to the increase in productivity, because productivity depends on many other related direct and indirect factors. Therefore, it is difficult to examine the increase in productivity by using only the fertilizer input. Although there is an increase in the consumption of fertilizer, it is not known how efficiently it was used at the proper time with the other inputs.

The main factor for the rapid diffusion of the consumption of fertilizer among the farmers appears to have been its low relative price due to the fertilizer subsidy. Fertilizer prices were low compared to the price of rice and to farm wages. The government did not increase its price according to the increase of demand or increase in world price. This made fertilizer a low-cost input for producers. However the burden of the government expenditure was sharply increased along with the increased demand for fertilizer. In the first decade up to 1960, fertilizer utilisation in the paddy sector was low and the total annual subsidy cost
Table 4: Fertilizer Issues and Subsidy Rates for the Paddy Farming Sector, 1960-1986

<table>
<thead>
<tr>
<th>Year</th>
<th>Issue of Fertilizer (thousand M. T. tons)</th>
<th>Use per ha. (kgs)</th>
<th>Fertilizer Subsidy %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>20.5</td>
<td>44</td>
<td>50</td>
</tr>
<tr>
<td>1961</td>
<td>29.0</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>1962</td>
<td>38.1</td>
<td>76</td>
<td>50</td>
</tr>
<tr>
<td>1963</td>
<td>47.1</td>
<td>93</td>
<td>50</td>
</tr>
<tr>
<td>1964</td>
<td>60.1</td>
<td>116</td>
<td>50</td>
</tr>
<tr>
<td>1965</td>
<td>42.0</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>1966</td>
<td>44.1</td>
<td>82</td>
<td>50</td>
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<tr>
<td>1967</td>
<td>73.2</td>
<td>138</td>
<td>50</td>
</tr>
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<td>1968</td>
<td>85.2</td>
<td>154</td>
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<td>1969</td>
<td>83.5</td>
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<td>50</td>
</tr>
<tr>
<td>1970</td>
<td>89.5</td>
<td>118</td>
<td>50</td>
</tr>
<tr>
<td>1971</td>
<td>90.8</td>
<td>125</td>
<td>50</td>
</tr>
<tr>
<td>1972</td>
<td>81.9</td>
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<td>41.5</td>
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<td>50</td>
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<tr>
<td>1974</td>
<td>117.6</td>
<td>143</td>
<td>33</td>
</tr>
<tr>
<td>1975</td>
<td>43.8</td>
<td>63</td>
<td>50</td>
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<td>1976</td>
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<td>1978</td>
<td>113.8</td>
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<td>1979</td>
<td>73.7</td>
<td>88</td>
<td>*</td>
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<tr>
<td>1980</td>
<td>145.1</td>
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<tr>
<td>1981</td>
<td>165.0</td>
<td>188</td>
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<tr>
<td>1982</td>
<td>141.0</td>
<td>167</td>
<td>*</td>
</tr>
<tr>
<td>1983</td>
<td>160.0</td>
<td>194</td>
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<td>1984</td>
<td>171.0</td>
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<tr>
<td>1985</td>
<td>153.0</td>
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<td>*</td>
</tr>
<tr>
<td>1986</td>
<td>197.4</td>
<td>220</td>
<td>*</td>
</tr>
</tbody>
</table>

Source: Central Bank of Ceylon, Annual Reports, Various Issues

Note: (a) Fertilizer Use Per ha. = Amount thousand Kgs. / Total Cultivated Land Area

* The subsidy rate of fertilizer was adjusted several times during the period 1978-86, and still remain high around 60 per cent
did not exceed Rs 2.5 million. The low import prices and low demand in domestic farmers too contributed towards this. However the gradual rise of import prices and demand of chemical fertilizer resulted in a rapid increase of government expenditure. In 1983, subsidy rate and retail prices of fertilizer subjected to the overall annual allocation of Rs. 1,000 million (Fernando, 1987 : 54). Although the subsidy policy became as an obstacle, the fertilizer price cannot be changed for political reasons.

Agricultural Credit

In Sri Lanka, there are two agricultural credit sources: institutional credit sources (commercial banks), and non-institutional credit sources (private money lenders, merchants, landlords, wealthy farmers, relatives and friends). The institutional credit is provided by the government at low rate of interest and non-institutional credit is supplied by the private sector at higher interest rates or without interest through community relationship.

The significance of the non-institutional credit in the sphere of rural credit requirement has not changed substantially following the development of institutional credit sources in the rural areas. Therefore, the demand for the non-institutional credit in the rural community is still high. For example, in 1957, the informal sector (non-institutional credit sources) was responsible for nearly 92 per cent of rural borrowing, and in 1969, 75 per cent of rural debt was met by non-institutional source (Sanderatne, 1981 : 3). The Consumer Finance Survey indicated, the

28. In the social and political context of the country it is very unlikely that the government would introduce measures to reduce the subsidy significantly. Already it has become a politically highly attractive measure. Both politicians and officials believe that this is more efficient way to subsidize paddy producers in the country (Fernando, 1987 : 55).
loans from non-institutional sources increased to 81 per cent in 1978/79, compared to 78 per cent in 1973. However, this declined to 66 per cent in 1981/82 (Sirisena, 1986: 78). The rural community thus still continues to depend heavily on non-institutional credit rather than institutional credit sources.

The main problem of non-institutional credit is the prevalence of high interest rates which increases rural indebtedness on the one hand and reduces the profits from agricultural production, on the other hand. Often it has been pointed out that the average rate in this sector had been in the range of 60-120 per cent per annum (Fernando, undated: 3-4). This interest rate can be identified as "hidden interest rate" and "open interest rate", of which the hidden annual interest rate ranged about 100-150 per cent. Sanderatne stresses, It must, however be observed that interest-free loans could in fact have a hidden cost. Loans obtained from traders may be nominally free of interest but in fact the farmers' obligation and commitment to sell his produce to the lender could result in lower prices. Similarly, small shop-keepers may give credit on purchases and charge a higher price or overvalue the account without the knowledge of the purchaser (Sanderatne, 1983: 7) For example, some farmers in colonisation schemes borrow money from of village merchants or wealthy farmers on the assurance of repaying in kind which comes to less than 40-50 per cent of the GPS (Guaranteed Price Scheme—see p. 35) price of paddy per bushel (20.87 kg) when the farmer has to pay back. After the harvesting, the farmer repays the credit in kind, and then the merchant sells the paddy at the GPS price and makes a large amount of profits.

29. In 1981/82, non-institutional credit sources provided about 57 per cent of the total credit in the rural sector. In which 29 per cent of the total amount of credit had been supplied free of interest rates. This loans, which are mainly from friends and relatives or are a result of patronclient relationships, often have hidden cost (CFS, 1981/82: 300-301).
Institutional credit is mainly provided for the short-term production purposes at a low rate of interest\(^\text{30}\). Nevertheless, rural indebtedness mainly based on consumption-oriented credit obtained from the non-institutional credit sources. Especially, it is very common that villagers require credit in unforeseen situations (illness, death, various ceremonies etc.) that need immediate attention. CFS data in 1981/82 reveal that the consumption loans were most important in the rural sector where they form 33 per cent of the total value and 72 per cent of the total number. However, loans for agricultural purposes accounted for only 12 per cent and 17 per cent of the total amount of credit to the rural sector from all sources, in 1978/79 and 1981/82, respectively \([\text{CFS (Consumer Finances and Socio Economic Survey), 1981/82 : 294; Fernando, 1988 : 493]}\). This type of credit is not extended by the institutional sources. Owing to this, farmers borrow money to eke out their daily necessities in the traditional manner and this is an important factor of relationship in the village community. This type of borrowing does not imply the slightest burden of hidden cost, but it is a necessary factor for the growth of the community relationship.

The security for institutional credit requires some withnesses, but non-institutional credit has various forms of securities. The above-mentioned non-institutional short-term and small-amount credit with or without hidden interest rates mostly depends on 'oral security'. The borrower who needs a large amount of credit to repay in the long-term, may be required to produce some property or assets (land and other durable goods) as security. Particularly, it is very common in colonisa-

tion schemes, where they buy some durable goods after the harvesting. These goods disappear within a short period because they mortgage them for the credit requirements of consumption or cultivation.

The main problem of institutional credit is the heavy incidence of defaults. The defaulters in 1947–52, 1977/78, 1981/82 and 1985/86 have accounted for about 33, 74, 72 and 29 per cent respectively (Gunadasa, 1978; Silva, 1982 : 2; CBC, 1986; Wijayapala, 1985 : 159). The government has freed the farmers of this problem many times by writing-off the unrecovered debts. The immediate consequence of the increase in the failure to recover loans granted was the decrease in the capacity to supply credit to farmers. The worst result of this is the farmers' inability to obtain credit again from the institutions. It is necessary to increase the volume of credit according to the increase of land inputs, since more purchased inputs are required for cultivation.

Most studies in the sphere of rural credit have pointed out crop failure as a main factor which caused the increase of defaulters. In addition to this, the supply of credit for the small land-holdings without examination of the purposes for credit, division of the responsibilities of collecting repayments, and lack of support from the relevant institutions to collect the repayments may be identified as minor factors. For example, 71 per cent of the defaulters had less than 2 acres of land holdings (Gunadasa, 1978 : 7). Besides, rural borrowers for instance, are regarded either as dishonest or incapable of using loans for productive purposes. There is no doubt that some borrowers have little or no

31. The unprecedented volume of credit, amounting to Rs. 420 million, granted in Mahas "um season of 1977/78 did not receive the same reciprocity from the farmers as the generosity with which the government granted the credit. Certain requirement were relaxed as follows: (i) not being a defaulter; (ii) a minimum one-year period of being a member of a cooperative society; and (iii) limitation of credit to a ratio of 1 : 20 of share value (Wijayapala, 1985 : 164).
insertion of repaying loans or using them for productive purposes specified at the time in the loan is taken (Piyatissa, 1981: 19).

It should be emphasised that the 'community attitudes on institutional credit' have been the main factor for the increase of defaulters in the rural sector. The term of credit means *viswasaya* (trust) in the traditional rural life in Sri Lanka. Village people borrow money or commodity on *viswasaya* on the condition that it will be repayed. The commercialized credit system failed to recover money lent to villagers because there was no proper relationship between those credit system and villagers through *Viswasaya*. But the popularisation of credit as a commodity by the government sector has resulted in the change of people's attitude on credit in the village. Until recently, the rural people exchanged credit with neighbours but they did not think that it was a serious problem even if they failed to repay. Therefore, the government's attempt in the last four decades to introduce a new banking system has not succeeded because it was not based on *viswasaya*. Nevertheless, the net result of such rural banking policies contributed toward the rise in rural indebtedness.

**Guaranteed Price Scheme**

The Guaranteed Price Scheme (GPS) was introduced by the government for paddy production in 1948, with the aim of fulfilling four main objectives: first, to provide a regular market and remunerative price to induce the farmers and to improve the open market price; second, to obtain the rice from the local market for distribution under the rice ration; third, to achieve self-sufficiency in rice; and finally, to keep the income equality between agricultural and non-agricultural sectors. The implementation of the GPS to fulfill the above objectives can be examined under four stages.

The period 1948–1966 can be described as the initial stagnation period
of the GPS history. In this period the GPS price per bushel changed thrice (1948 = Rs. 8.00, 1951 = Rs. 9.00, and 1952 = Rs. 12.00). However, the GPS scheme found it difficult to compete with the private sector. The government purchased less than 0.5 per cent of the total production under this programme during this period. The factors responsible for this, are not only the lower price of GPS below open market price, but also the close relationship between farmers and merchants, traditional social and economic backwardness of the farmers, and farmers who produced mainly for their own consumption rather than for the market.

The period 1967–1971, was an important stage at which GPS was implemented most successfully to achieve its first two objectives. The GPS price was increased by only Rs. 2.00 (price per one bushel = Rs. 14.00). In 1971, the government was able to purchase about 49 per cent of total paddy production under the GPS (CBC, Annual Report, 1980). This was the highest percentage of GPS purchase during the period 1948–1986. The main reasons for this successful result are the efficient role of the co-operative branches33 in the rural areas, the supply of the initial money capital by the Central Bank at a concessionary interest rate of three per cent for the short-term to enable the co-operatives to purchase paddy from the farmers and the popularisation of paddy as a commercial

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32. GPS also had its origin in the World War II period. A scheme known as the Internal Purchase Scheme of Paddy (IPS) was introduced in 1942 to purchase locally produced rice and several other foodstuffs at pre-announced prices by the government (Fernando, 1987 : 13).

33. The Marketing department during 1949 bought paddy through 28 GPS stores it set up for the purpose in different parts of the producing areas, through 152 co-operative Agricultural produce sales and supply societies and 28 private agents (in areas where there were no co-ops). This system continued until the form of Agrarian Services Department in 1957. The number of co-operative procurement agent was increased. During the period 1957–59, 3000 Multi-purpose co-op societies were added as buying agents. In 1972, the Paddy Marketing Board over the administration of the GPS and rice milling activities hitherto handled by the Agrarian Services Department (Fernando, 1987 : 13–52).
product among the farmers with the development of the colonisation schemes in the Dry Zone area, where paddy became the main cash crop of the settlers. Moreover, the supply of credit and other agricultural inputs (fertilizer, chemicals for pest and weed control, pure line seed, small machinery etc.) by the co-operatives resulted indirectly in the improvement of the trade relationship between farmers and the co-operatives.

In the stage of 1972-1977, the government of Sri Lanka established a Paddy Marketing Board (PMB) and placed in its hands the monopoly of the paddy purchase, while paddy purchase and transport were prohibited to the private sector. The increase of the price of rice in the world market and the inward-looking development policy (import substitution policy) of the government may have caused the above monopoly policy of the PMB. During 1971/72-1973/74, the cost of a bushel of imported rice to the Food Commissioner increased from Rs. 7.77 to Rs. 38.37 which amounted to an increase of nearly 5 times (CBC Annual Report 1978: 24). The PMB was expected to buy the local paddy as much as possible, thereby exercising a dampening effect on price of paddy in the black market.

During this period, rice became scarce in urban and plantation regions. The average price of paddy in 1974 was Rs. 48.62 per bushel; however, in some regions it had risen to Rs. 52.15 (Sirisena 1986: 75). As a result, the consumer had to pay a higher price for rice. This brought about a slight growth of income inequality in both the agricultural and non-agricultural sector. Furthermore, rice became the cheapest item for the consumers in the most popular rice-growing regions and that resulted in the discouragement of the producers. The purchase of paddy by the PMB on GPS reduced dramatically; in 1972 the PMB bought about 42 per cent of the total production, which declined to 21 per cent in 1977. The government’s attempt through PMB was not only difficult to meet rice
distribution needs on the food ration scheme, but also it resulted in a stagnation of the paddy economy. Taking the 1971-76 period as a whole, the production level was lower, showing a marked depression in the paddy production which had been continuously increasing before. Therefore, the Food Commissioner’s Department had to increase rice imports by about six times (in value terms) during the period 1972-77 (CBC, Annual Report, 1978 : 58). In October 1975, the restrictions on paddy marketing were removed. The paddy sector once again became dynamic, expanding by about 10 per cent a year (Sirisena, 1986 : 77). As a result of the withdrawn the marketing restrictions, paddy and rice prices dropped sharply and were in the range of Rs. 2.50 to Rs. 3.50 per measure (Fernando, 1987 : 44).

The final stage of the GPS can be distinguished through the emergence of an outward-looking development policy (export-oriented industrialisation) which was introduced in the late 1977. As a result of this, the PMB was able to buy about one third of the total production of paddy during the period 1977-79. In the new open market strategy, the GPS price per bushel was raised from Rs. 33 to Rs. 40. Then, the period 1979–86 saws an increase of the GPS price from Rs. 40 to 70, but that did not increase the paddy purchasing capacity of the PMB, because the open market price may have been higher than the GPS price. Consequently, the PMB’s purchase of paddy came down to six per cent of the total production by 1986. Nevertheless, this did not affect the government’s food distribution policy because the government required a lesser amount of rice due to the change of rice ration into a food stamp scheme for the low income group of the population. Yet, the negative effect of this open market strategy is that rice became a very expensive item for the consumers, causing an increase in the cost of living. The GPS can anyway be considered a contributory factor for the growth of paddy from a subsistence crop to a market-oriented crop, and this encouraged the
farmers to produce more by adopting new technologies in the whole period.

Research and Extension

Already, we have evaluated some selected main factors which affected the development of paddy productivity in various ways in the last three and a half decades. New technologies developed in the laboratory have to be practiced in the paddy fields by teaching the farmers through extension services. Extension was defined variously by various academicians by considering its main role but most of them consisted of the same content.

Agricultural extension emphasizes three important factors of extension which deal with the farming sector: (a). education in practical technology; (b). helping people develop an understanding and reasoning ability that will enable them to think through and arrive at solutions to their own problems; (c). action to help in not only the improvement of farm business but also in the improvement of the farm household (Bansil, 1971: 106-107).

Sri Lankan extension services have been mainly directed to giving a practical knowledge on the new technologies, for improvement in productivity, increase in the income level of farm household and achievement of

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34. FAO defines agricultural extension as "an informal out-of-school educational service for training and influencing farmers (and their families) to adopt improved practices in crop and livestock production, management, conservation and marketing. Concern is not only with teaching and securing adoption of a particular improved practice, but with changing the outlook of the farmer to the point where he will be receptive to, and on his own in initiative continuously seek means of improving his farm business and home" (cited by Bansil, 1971: 106).
the self-sufficiency in the staple food crops of the country. For these purposes, the government adopted a “top-down approach” by creating a structural chain linkage among research units and extension officials at the level of the government, district, division and village. At the village level, the Krushi Vyapthi Sevaka (KVS-agricultural extension officer) is responsible for the diffusion of the new technologies in the field by getting advice and information from the relatively higher ranking officers at the divisional level.

In general, extension activities in Sri Lanka, reached some level of success. However, compared with the investment they did not contribute much to the increase in output. Although the application of new technology in the farming communities was diffused substantially, these were not used in the recommended manner, on a package basis. For example, HYV had already been adopted 100 per cent, but cultural practices like transplanting were used only about 22 per cent. The position in respect of the use of other related inputs and cultural practices was also unsatisfactory. In the policy context, it could be said that the reason for such low output was that most of the research and experiments in Sri Lanka were confined to the laboratory and were isolated from the farming sector. For comparison, in the Meiji era in Japan, the government enacted that the agriculturist of the experiment centres should do their experiments together with veteran farmers, while the results of the experiments should be diffused by combined groups of farmers and officers. In this sense, the Meiji government attempted to give the optimum practical knowledge to officers from veteran farmers who had a wealth of practical knowledge in farming. The farmers had good experience regarding weather change, fertility of soil and relevant seed varieties, pest controlling methods, and broad acquaintance with the combination of inputs in practice. Therefore, the farmers' advice and cooperation were most important to get quick results from the experi-
ments and for the rapid diffusion of the discovered results in the farming sector. This method gave an opportunity to the farmers to make direct contacts with the experiment centre. This 'farmer–officer linkage' was beneficial to officers as well as to farmers.

In Sri Lanka the main factors that prevented the farmers from active participation in the quick and systematic diffusion of the new technology were social rather than economic. Particularly, the gap in relationships and the gap in methods used by both groups were an important factor for this unsuccessful diffusion of new technologies in the paddy farming sector. "People in Sri Lanka are receptive and willing to adopt new practices provided they are sound and introduced to them in a convincing and friendly way" (Aris Davut, 1976). In spite of these social factors, the village level agricultural extension officer (KVS); who did not have sufficient knowledge of the new technology, engaged himself in his own business because of his low wage and transport difficulties in meeting a large number of farmers. These may have caused the low participation and the low interest in listening to his advice by the general cultivators in the village community.

In the last decade, the government introduced the Training and Visit system (T & V), and advised the KVS to select 36 farmers and meet at least six farmers per day in their farm and impart practical knowledge of new technological adaptation. In this case, a farmer can meet the KVS at least once in two weeks in his farm to get advice on the new technologies. However, this T & V system did not succeed and it became a mere paper plan since the KVS was burdened with the supply of various information for investigations and with his own agricultural work. "This is however, part of the mythology of extension which obscures the reality. Since all evidence points to the fact that this is not happening, the low level extension staff are over-burdened with reporting and submission of returns which result in paper work that tie them to office. In these
circumstances it is not surprising that field visits are rare” (Piyatissa, 1981 : 30).

Institutional Reforms

Over the last few decades, the political authorities of Sri Lanka had formulated many kinds of service institutions and farmers’ organizations to get the farmers’ participation in rural development plans which have been implemented by the government from time to time. In addition various reforms have been attempted in respect of social structures affecting farmers.

An early attempt at structural reforms was the Paddy Land Act of 1958 which gave legal protection to tenant farmers and imposed a ceiling on the rent that can be changed by the landlord. Elected farmers’ organisations called Cultivation Committees (CC) were created for water management and the development of paddy cultivation at the grass-roots level. The Act gave legal security to the tenant farmer. It was enacted to reduce the land rent to no more than 25 per cent of the total production in kind or in money terms. However, the Act could not be implemented properly in part due to the close relationship between landlords and tenants. Consequently, the traditional share-cropping system continues in the Sri Lankan village without much regard for the legal Act. “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” (People’s Bank, January 1978 : 10).

As regards ownership and operation of paddy lands, on the whole there were only 64 per cent wholly owned (owner cultivator) and operat-
ed paddy holdings with an aggregated extent of 819,000 acres (331,445 ha) which was about 67.5 per cent of the total paddy area. Twenty seven per cent of the holdings reporting paddy accounting for 19.5 per cent of paddy area were operated on a complete tenancy basis (tenant cultivator). The balance eight per cent of the holdings reporting paddy accounting for about 14 per cent of the paddy area were reported as operating on partly owned land and partly tenanted lands (owner tenant cultivator) (Department of Census & Statistics, 1987: 42). However, this situation varied according to the provinces concerned.

The land in the Puranagama is mostly owned by the cultivators and small landlords. Tenancy farming in both types of villages (traditional villages and colonisation schemes) is practiced in various forms. But in Sri Lanka, it is difficult to recognize the landlord and tenant clearly in the village as in Meiji Japan. For example, some farmers cultivate in their parents' or relatives' land on the tenant basis. In colonisation schemes some farmers work in their own lands as tenant farmers of the Mudalali (merchant) until they redeem the land from mortgages.

The Agricultural Productivity Law of 1972, established the Agricultural Productivity Committees (APC) in each village council area by adopting an appointing principle instead of the electing principle which was introduced in 1958. The Minister of Agriculture appointed 10 members to the APC, on the recommendation of the Member of Parliament (MP) of the electorate. This institution was responsible for promotion and co-ordination of village level agricultural works and settlement of disputes among farmers. Under this Act, Agricultural Services Centres (ASC) were established in all agricultural authority areas in the country and they functioned as the main offices of the APC. The ASCs were expected to co-ordinate the agricultural services and input distribution services. Consequently, all officers who were responsible for rural agricultural development were appointed to this office.
The Agrarian Services Law of 1979, had superseded all APCs and CCs while formulating the Agrarian Services Committees (ASC) in the APC's areas of the authority. The ASC consisted of 14 members of whom eight were government officials in the region and others belonged to the rural community and were selected by the political authority of the region. In addition to it, the MP of the electorate appointed a Velvidane\textsuperscript{35} (irrigation track leader) to the ASC among the farmers to assist the government irrigation officer (cultivation officer). The Velvidane became the farmer's representative to the ASC and was responsible for informing the officials of problems of water distribution and for following their advice.

Various village level institutions and organizations set up so far failed to achieve the expected results mainly because the participation level of the farmers was still at a very low level. A main factor for the failure of these efforts is the politicisation of the whole system whereby the principle of appointment by political authority was substitute for the electoral principle. Furthermore, the politicians who used the rural sector as their main power base sought to increase the political bias in the rural community. In this case, policy makers have neglected the traditional socio-economic power base and the value of traditional leadership in the rural community. Therefore, the gap between the common people and the organisation increased and this caused the loss of confidence in the officers appointed to these organisations when the majority of the farmers did not accept the political leadership. “Cultivation Committees functioned as a satisfactory means of farmers' participation for about fifteen years. It is commonly believed that the village farmers lost their

\footnote{35. See Karunanayake, 1980 : 1-16; Gunasekara, 1982 : 69-112 for comprehensive detail on the role of Velvidane in the traditional farmer organisation and irrigation management as well as the role of traditional water management in modern paddy cultivation in Sri Lanka.}
earlier interest in these councils after the elective principle was replaced by a system of nomination of its members by the Minister of Agriculture after 1973" (Wijepala, 1982: 25). Especially, not only the organisation's leaders and members, but also all officials of the government in the rural sector were appointed on political influences after 1970. This affected adversely the achievement of government's objectives.

The Cultivation Committee of 1958 did not pay much attention to tenant farmers. Tenant farmers were not allowed to attend the Kanna meeting (irrigation management) and the landlords participated in this meeting and made the decisions on behalf of the tenant farmers. Therefore, the landlords did according to their own wish what ought to be done in the sphere of water management. The Cultivation Committees did not have the powers to punish the violators of the irrigation rules, until 1968. Therefore, the CC could not play a significant role in irrigation management in the paddy farming sector. In other wards, the Paddy Land Act of 1958 did not put an end to the improper practices of the landlord-tenant relationship because the tenant was kept away from most of the farmers' organisations which were created by the policy makers. According to the above Act, the tenant farmer has to pay only 25 per cent of the total production to the landlord and the land tenure cannot be changed by the landlord. However, that was not implemented substantially and still the tenant farmers pay about 50 per cent or more of the total production as share to the landlord and the landlord can change the land tenure according to his own wishes.

Finally, the unsuccessful attempt of the government to get the farmers' participation in rural development after the independence, had resulted in the increase of inefficient utilisation of the most important and common resources such as water, land and irrigation facilities by the farmers, where these resources become the main sources of rural development. The fact is that those resources are non-economic goods for the
farmers, but were very expensive economic goods for the government. It is therefore difficult to introduce common responsibilities on common resources which come as an inheritance from the ancient times in the rural community.

Factors Contributing to Increase of Paddy Production

In this section, it will be attempted to recognize the factors contributing to the growth of paddy productivity among the above-evaluated government development policy by using the regression analysis. However, this analysis will not consider all the factors which contributed to the increase of paddy output because it is difficult to identify statistically some factor like farmers' attitude to the new technologies, cultural practice, organisation activities and farmers' participation, non-institutional credit and soil conditions. Therefore, only some major policy factors were selected for the analysis assuming that all other factors are constant. The objective is to give a general view of the impact of the government policy factors on the development of the paddy farming sector. The following equation with paddy production as dependent variable has been used in the regression analysis.

\[ Y =aX_1 + bX_2 + cX_3 + dX_4 + eX_5 + fX_6 + gX_7 \]

\[ Y = \text{Total Paddy output (in thousand tons)} \]
\[ X_1 = \text{Irrigated land area (thousand ha.)} \]
\[ X_2 = \text{Rainfed land area (thousand ha.)} \]
\[ X_3 = \text{Labour input (man-days thousand)} \]
\[ X_4 = \text{Area cultivated with improved varieties (000, ha.)} \]
\[ X_5 = \text{Use of fertilizer (thousand tons)} \]
\[ X_6 = \text{Guaranteed price per 20.9 kgs. of paddy} \]
\[ X_7 = \text{Institutional credit for paddy cultivation (thousand Rupees)} \]

The computation results of the above equation can be shown as
follows:

The regression equation is;

\[ Y = 0.279X_1 - 0.164X_2 - 0.272X_3 + 0.522X_4 + 0.180X_5 + 0.388X_6 + 0.050X_7 \]

The above regression equation implies the interpreting linear relationships between paddy output and its seven inputs: high yielding varieties, guaranteed price and irrigation land area could be identified as main influential factors on the improvement of paddy output in order of merit. Meanwhile, labour input and rainfed land area give negative values of partial regression coefficients with production. This may be a result of the droughts and over utilisation of labour on cultivation of limited paddy fields. In addition, the data which are used for the above regression equation have not taken into account the non-monetary exchange labour and family labour in paddy cultivation. These two factors may have led to the minus value of the standardized regression coefficient. The rest of the inputs are given a lower value of partial regression coefficient with output. The reasons for the difference values of the partial regression coefficients of those seven inputs with output have been discussed already in previous sections.

The general trend of the development of paddy productivity during the period 1960–85 is recognized through the regression line by means of
least squares. The formula of the regression line for the trend of the national average of paddy yield per hectare during the period is shown as follows:

\[ Y = a + bX \]

Where:

- \( Y \) = Paddy productivity per hectare (kilograms)
- \( X \) = Years
- \( a \) = Intercept
- \( b \) = Slope of the line (average increased productivity per year)

The computation results of the above straight line is as follows:

\[ Y = 1827.35 + 59.65X \]

The correlation coefficient of this line is 0.891, which implies a high degree of correlation between paddy productivity and years. This demonstrates the annual increased average productivity per hectare as about 60 kilograms during the period 1960–85. This high degree of increase rate could be determined as a result of the above seven inputs and favourable climate conditions. However, this increased volume of productivity has not occurred consistently in the entire period at the same rate, according to the scattergrams of the above line, which is illustrated in Figure one.

Figure one brings out four distinctive periods of the development of paddy productivity from 1960–85: the first, 1960–65; the second, 1965–70; the third, 1970–76; and fourth, 1976–85. The retard of the increase of paddy yield in the first period could be the result of the socio-economic

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36. One of study (Sirisena, 1986 : 70–71) have results of the regression analysis which attempted to identify the factors contributing to the increase in paddy output during 1959–83. The estimated regression coefficient for irrigated land area was 2.059 as against 1.442 for rainfed areas and .641 for yield increases. Land development through irrigation projects had been the most significant factor in paddy sector growth according to his study. See Thorbecke and Svejnar, 1984 : 88 for another result of the regression analysis.
condition as well as the utilisation of traditional technologies on paddy cultivation. The rapid increase of productivity during the second period is because of the diffusion of the so-called new technologies of the green revolution. Even the land-saving technologies prevailed rapidly in the third period, the increase of rate of productivity was stagnated due to the unfavourable government policy on inputs and outputs of the paddy and bad weather condition. In the fourth period, the productivity increased dramatically because the money economy had firmly grasped the paddy sector. In addition, the development of irrigation facilities under the major irrigation projects and favourable weather condition may have also contributed to this better growth in productivity.
Non-Paddy Rural Economy: Policies and Performance

In general, the term of non-paddy rural economy in Sri Lanka covers a wide range of activities like subsidiary food crops, other crops (traditional export crops in small holdings and minor export crops), animal husbandry, Small industry and handicrafts. The analysis is limited to the duration 1970-85 due to the scarcity of information and lack of attention to such activities by the successive governments until the beginning of 1970s37.

At first, the economic policies in the period 1971-76 were designed to creation of a viable small-scale sector in agriculture under the import substitution, both in domestic agriculture and industry. The Five Year Plan emphasised that the necessity of the growth of non-paddy rural activities for generation of income level of the village community. In this context, crops which have a ready domestic and export market were encouraged. The expansion of the horticultural programme, particularly in passion fruit and pineapples, and the cultivation of new crops which can provide raw material for industry like cotton, mulberry, sunflower, kenaf, cashew, sugar cane and castor, was an significant element in the plan. Together with this, an import-substitution programme in subsidiary food crops was given scope for the generation of income of the villagers (The Five Year Plan, 1971 : 34). In this regards, the government introduced various development policies like land alienation, price, subsidy, institutional, organisation, extensions, land reform and marketing for the expansion of non-paddy activities in the rural sector.

37. Bansil (1971 : 284) has noted that there is, however, no mention of any thing in this respect in the development proposals of the Ministry of Agriculture upto 1970.
Subsidiary Food Crops

Under the policy decision on the improvement of subsidiary food crops (see Table 6 for description of crops) in the period 1971-76, increasing of the guaranteed price along with banning of the import of some crops and progressively restricting the import of others are the vital element. Even though the raising of guaranteed price on subsidiary crops was not successful like GPS on paddy, it was given a remunerative price to producers and that resulted to sharp increase of price in the open market indirectly. The high price of these products in the domestic market was encouraged the village community to achieve self-sufficiency. Although the consumers' expenditure on these products were rapidly increased, it favoured to generation of villagers' income level as well as saving of foreign exchange in some extent.

One study on Effects of Macro-economic policies on Agricultural performance in Sri Lanka, 1960-82, states that “probably the single most important policy decision which explains the very favorable performance in 1970-76 was the embargo on minor food imports which resulted in much higher prices for these products and encouraged import substitution. The subsequent repeal of this embargo affected output adversely until the new government instituted support prices for these crops” (Thorbecke and Svejnar, 1984 : 106). Fletcher et al. remark in this context that “a comparison of price and production data shows a very high responsiveness of farmers to changes in prices received. For some crops acreage and production doubled or halved following major year to

38. In respect to our experience, most people in the rural sector dealt with growing of these crops under the slogan of waga sangramaya (grow more food) during the period 1970-76. Many of those people intended to produce such crops at least their own consumption due to the high price in the open market.
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<td>2.4</td>
<td>11.7</td>
<td>8.7</td>
<td>6.1</td>
<td>5.5</td>
<td>7.3</td>
<td>8.9</td>
<td>12.9</td>
<td>5.4</td>
<td>8.4</td>
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<tr>
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<td>41.4</td>
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<td>85.7</td>
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</tbody>
</table>

* Figures in parentheses = Extent Cultivated ('000 ha)

* Maha season only

Source: Central Bank of Sri Lanka, Review of the Economy, Various Issues

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year upward and downward price changes” (Fletcher et al., 1979: 26, cited by Thorbecke and Svejnar, 1984: 106). However, this situation was reversed along with the initiative of free play of market forces and the price mechanism under the policy of open market economy in 1977.

In spite of price and market policies on subsidiary crops, the provision of credit on low interest rates and supply of major production inputs on subsidized price are also significant elements on the improvement of these crops. In the last two decades, under the government credit schemes, 17 subsidiary or minor food crops, varying from maize to pepper and pulses were included in the scheme as being eligible to receive loans from the People’s Bank39. The number of minor food crops has been increased, subsequently (Wijayapala, 1985: 163). The total credit disbursed for minor food crops under various institutional credit schemes during the period 1973-86 were amounted from Rs. 24.74 million to Rs. 37.02 million, consequently. A notable feature in the loan granted for these crops is that more than half of the total disbursed credit had not been recovered during the period 1973-85 (CBC, Annual Report, 1973 and 1986).

Apart from the above-described major policies designed on the growth of subsidiary crops, there are many other policies like creation of cooperative farms and introducing of new institutional reforms intended to improve these products. It is reasonable however to conclude that those policies have paid less attention to the improvement of these crops compared with policies which intended to stimulate growth of the paddy sector. The Central Bank of Sri Lanka commented regarding those crops that less attention has been paid to research and development of high

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39. At the first time in 1973, the government introduced a new rural credit system for agricultural products namely “Comprehensive Rural Credit Scheme which provided credit facilities for all food crops (CBC, The Review of Economy, 1976: 27).
yielding varieties. Fertilizer application is poor and no fertilizer is applied at all in the case of certain crops. Marketing also constitutes a setback in certain remote areas with producers obtaining low prices. Limited access to institutional credit and extension services also hampers the realization of the full production potential in this sector (CBSL, Annual Report, 1985: 37).

The sharp decline of the *chene* cultivation in the last decade also causes a major drawback for these crops instead of the above main policy factors.\textsuperscript{40} The result of all the above policy attempt is explained in the performance of subsidiary crops which are given in Table 7. However, data on these crops are scanty and available information is based on crude estimate which make review of year to year developments difficult. Since many of those crops are grown in home gardens, and in very small holdings often as mixed crops, systematic collection of data on either extent under cultivation or production is also a difficult task (CBSL, Review of the Economy, 1983: 31).

Other Crops

The expansion of the other crops like traditional export crops in small holdings, minor export crops, sugar cane, tobacco, cotton, pineapples and passion fruit are also major non-paddy farming activities in the rural sector. Agricultural policies in the period 1970–76 were designed broadly to achieve income generation and increase of foreign exchange through improvement of the above products. In this regards, various policies have been introduced: price supporting for inputs and outputs; research and extension services; creation of certain institutions; provision

\textsuperscript{40} In the last decade, the government of Sri Lanka prohibited the slash and burn of jungle for *chena* cultivation because of their negative effect on the climatic condition and environment of the country.
EXPERIENCES OF AGRICULTURAL DEVELOPMENT IN SRI LANKA

of subsidies and credits; introduction of replanting, new planting and intercropping. The present government in 1977 pursued many of the above policies along with introducing certain modifications and intensives under the open market economic policy. The author does not investigate all the above policies in detail due to the coverage of this study.

The major shortcoming in this sector is the poor availability of statistical information on input and outputs. The available data are very sketchy, incomplete and quite inconsistent. Particularly, there is no statistical source which present the data on rural sector regarding the above products. Therefore, the performance of the production and land extent presented in this section is limited to minor export crops since they are entirely produced in the small holding sector. Table 7 brings out the performance of those crops during the period 1972-85.

The performance of the land extent and volume of production in the Table 7 reveals that the decline or stagnating of the minor export crops during the period even the export market is stable. It is however difficult

<table>
<thead>
<tr>
<th>Crops</th>
<th>Production (000' MT)</th>
<th>Extent Cultivated (000' Hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cocoa Production</td>
<td>14.7</td>
<td>14.0</td>
</tr>
<tr>
<td>Extent Cultivated</td>
<td>9.8</td>
<td>9.0</td>
</tr>
<tr>
<td>2. Cinnamon Production</td>
<td>15.8</td>
<td>17.4</td>
</tr>
<tr>
<td>Extent Cultivated</td>
<td>19.7</td>
<td>22.1</td>
</tr>
<tr>
<td>3. Cardamoms Production</td>
<td>8.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Extent Cultivated</td>
<td>3.7</td>
<td>3.9</td>
</tr>
<tr>
<td>4. Citronella Production</td>
<td>7.9</td>
<td>6.0</td>
</tr>
<tr>
<td>Extent Cultivated</td>
<td>4.4</td>
<td>5.6</td>
</tr>
<tr>
<td>5. Pepper Production</td>
<td>13.9</td>
<td>14.0</td>
</tr>
<tr>
<td>Extent Cultivated</td>
<td>5.9</td>
<td>6.0</td>
</tr>
</tbody>
</table>

to recognise the change of policies as main reasons for the poor performance of those crops because both state policies in the period 1970–76 and 1977–85 have been intended to improve this sector as a profitable source for foreign exchange. This means, policies of both the governments did not achieve expected results sufficiently. The main reason of the poor achievements in these crops is perhaps the poor organisation among the producers. These crops are also grown as mixed crops, mostly in home gardens. It is therefore necessary to organise the producers before intervention of the implementation of policies like provision of extension, subsidies and marketing arrangements. The Central Bank of Sri Lanka noted that middle men dominated marketing channels keep producers price low. Research effort in respect of these crops has also not been as impressive as in the major plantation crops and paddy (CBSL, Annual Report, 1985 : 33).

Animal Husbandry and Dairy Farming

Although the conventional development theories emphasised the need of improvement of animal husbandry and dairying as a major component of the poverty alleviation, the policies initiated since 1970 did not achieve a clear picture of growth in this sector. The five year plan stressed that the growth of meat, eggs and milk should be accelerated for income generation of rural community and increase of their per capita consumption of basic protein food items derived from animal husbandry. The expansion of the animal husbandry was assigned very high priority in the programme of import-substitution during the period 1971-76. According to the plan, the increase in domestic production of milk was sufficient to replace all imports of full cream milk powders as well as butter fat and skimmed milk for the condensary. A vigorous effort was also made to increase the output of butter, cheese, other milk products, eggs, poultry,
EXPERIENCES OF AGRICULTURAL DEVELOPMENT IN SRI LANKA

mutton, beef\(^\text{41}\) and pork in the short term (except beef) without heavy capital investment (The Five Year Plan, 1971: 54).

The development policies in the period 1971–76 were designed to achieve the above aims under the following efforts: (a) expansion of pasture and grassland in coconut lands and in the mid-country; (b) import of stud bulls and heifers; (c) expansion of the network of milk collecting centres under the Milk Board; (d) provision of credit and extension service for setting up of piggeries and poultry farms; (e) creation of sheep farms in the dry patanas and on coconut land; (f) formulation of pricing policies, organise the marketing of meat and promote commercial livestock enterprise.

In 1977, the government intended to pursue the above policies with modifications and alternations by allowing the free play of market forces and the price mechanism. During the period, the government intended the upgrading of cattle and calf in the country through pure line breeds and creation of farms in various districts. For example, The national Livestock Development Board maintained eleven farms in Coconut triangle, three farms in Dry Zone, three special projects in the mid and upcountry, two projects under the aid of International Development Association and number of dairy development projects under the financial aid of World Bank during the Period (ministry of Rural Industrial Development, 1980). There are many other projects which had been implemented uneer the financial and technical assistance of donor countries for the growth of animal husbandry. During the period, two major policies changes occurred: the first, “powder re-packing plant at Welisara handling the repacking operation of imported bulk milk powder was handed over to the

\(^{41}\) Beef is a comparatively cheap item in proportion to other meats due to low consumer demand. Most of the people, particularly in the rural sector, do not consider beef as a consumer goods because still they use cattle for their agricultural activities as a major power source.
C.W.E. on a policy change that the Milk Board should not continue to get involved in the importation and packing of imported powders; the second, a policy change is announced as regarding the operation of the Condensed Milk Factory at Polonnaruwa. Under this the condensary is to join hands with Nestle's of Switzerland forming a joint company with the National Milk Board in running the above factory" (Ministry of Rural Industrial Development, 1980 : 13). The most important point is how far the changes or modifications of policies contributed to the improvement of animal husbandry and dairying in Sri Lanka during the period. This would be realized in the production performance which presented in Table 8.

Table 8 reveals that the substantial improvement of the animal husbandry and dairying sector (except sheep, goats and pigs) in spite of policy change from inward-looking to outward-looking in the period 1978

<table>
<thead>
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<td>189</td>
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<td>183</td>
<td>192</td>
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<td>218,378</td>
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<td>736</td>
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<tr>
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<td>9,227</td>
<td>6,501</td>
<td>5,700</td>
<td>4,912</td>
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<td>6,296</td>
<td>6,248</td>
<td>6,571</td>
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<tr>
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<td>544,686</td>
<td>559,463</td>
<td>521,364</td>
<td>567,137</td>
<td>561,084</td>
<td>617,142</td>
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</table>

Source: As same as Table 2-9

* Unit in thousand

— 58 —
85. The pursuance of the implementation of special development projects on this sector since 1978 is the major reason for the expansion of animal husbandry. These projects included the CIDA project for Poultry Development, Sri Lanka/Netherlands, Poultry Development Project, Sri Lanka/west German Goat Development Project, Sri Lanka/Swiss Livestock development Project and the Sri Lanka/ADB livestock Development Project (CBS, Annual Report, 1955 : 40). Apart from the high burden of foreign investment, the favourable marketing demand and high prices in the domestic market also contributed to the improvement of this sector. The competition of similar imported goods in the domestic market led to the improvement of domestic market after 1977.

Rural Industry and Handicrafts

Rural industry and handicrafts play a vital role in the social and economic life of the village people in Sri Lanka. While, many of those activities originated over a period of above 2500 years, skills of these activities passed on from generation to generation. Most of those activities in the rural sector were mainly aimed to meet the family requirements rather than produce for market as commercial items until the end of 1960s. Even though the industrial programme was launched in the period 1960-70, it made negligible impact on the rural sector, with regard to both employment and the utilisation of raw materials originating in that sector. However, The Five year Plan emphasised the generation of the rural sector through a programme of agro-based and other small-scale industries as a major element (The Five Year Plan, 1971 : 62). The necessary facilities like consultation, supervision, credit, managerial skills, technical know-how and marketing facilities were provided by the various government institutions.

With the introduction of decentralised administration in 1971, the
Divisional Development Councils were set up. These attempted to establish small-scale projects by utilising appropriate technologies and other resources available in those villages and had the objectives of reducing the problems of unemployment and low income at village level through the co-operative management, ownership and responsibilities of farmers. They emphasized the adoption of labour-intensive technologies, and set up industries such as the traditional arts, crafts, handlooms, batik, pottery, coir, carpentry, rush & reedware, silver, brass & copperware, jewelry, wood carving & maskmaking, lacquer work, mat weaving and lace making. The output of these projects was to supply the local as well as international market. Wijenaike has emphasised that nearly all DDC projects were failures. Small certainly did not turn out to be beautiful as was the hope of the government (Wijenaike, 1986 : 60). Although these projects were unable to achieve a favorable outcome, they can be described as an unsuccessful attempt toward the adoption of the concept of self-reliance to develop the rural sector. However, “there is no evidence that attempts were made to give employment to the poorest, nor was it considered vital to offer jobs to persons from families where even a single member had not found employment. The selection of employees rested in the hands of a small committee that included a few officials and the Member of parliament of the District who invariably had a very vital say in the appointments. More than family need, political loyalties and affiliations seem to have governed selections to the DDC projects” (Karunatilake, 1978 : 16).

It was the very first time in Sri Lanka that an attempt was made to develop the rural sector through industrialisation on an approach of self-reliance, but unfortunately, it disappeared in a short period because it was unable to inspire confidence in the producers in terms of regular work, regular prices and regular markets. Mainly, the failure was caused by two factors: on the one hand, most projects were established without
an understanding of the village resources and indigenous skills or a study of the market potential of the output; on the other hand, the administrative body and workers of these centers did not belong to the real producer groups, but they had some status of social, economic and political power. Therefore, these projects failed to win the farmers' active participation and disappeared with the declaration of the new open market economy in 1977.

Although the government provided many intensives for rural industries under the open market economy, many of them were adversely affected by import liberalisation. A survey by the Ministry of Industries in 1980 revealed that local industries were faced with severe competition from imports. The chairman of the Ceylon National Chamber of Industries stated in 1984 that the local industry had been swamped by the import of manufactured goods (cited by Kelegama, 1986: 22). It is however impossible to provide the performance of this sector due to the scarcity of statistical sources.

Rural Sector: Continuing Problems

In the previous sections, we have examined the paddy and non-paddy rural development policies and their achievements and problems. It is however most important to examine what these achievements have contributed to the relief of the major socio-economic problems of the rural economy which were faced in the 1950s and are still continuing in the present. In this context, the study made an effort to provide the comprehensive analysis on following major problems in the rural sector: (a) improvement of per capita food availability; (b) increase of per capita real income; (c) equality of income distribution; (d) increase of employment opportunities and decrease of the unemployment level; (e) improvement of education level and health.
During the period 1948-86, the population has increased from 7.2 million to 16.1 million, which accounted for a growth of about 123 per cent. Simultaneously, per capita food availability also increased rapidly with the population. In 1948, although food requirements (food and drink in value terms) imported were nearly 53 per cent of total imports, this decreased to about 12 per cent by 1986. If we consider only the availability of rice, in 1948, rice accounted for 26 per cent of the total imports; this was reduced to 2 per cent in 1986 (Peebles, 1982: 219; CBSL, Annual Report, 1986). This direct impact was based on the rapid increase of paddy production which can be explained as a result of the improvement of the land and irrigation works and cultivation practices institutional reform policies. This rapid increase of paddy production led to an increase in the per capita consumption level, which can be observed from the Consumer Finance and Socio Economic Surveys of 1973, 1978/79 and 1981/82. The monthly per capita consumption of rice had increased continuously, in 1978/79 rice consumption was approximately 7.6 Kgs which was 7.2 Kgs in 1973, while the 1981/82 level was 8.4 Kgs. This means, the per capita rice consumption was increased by about 17 per cent during the period 1973-1981/82 in all island. Sector-wise data indicate that rural per capita consumption has increased without interruption, while the consumption in urban and estate sectors had declined in 1978/79 but increased in 1981/82. In the rural sector, the per capita consumption had shown a considerable increase, from 7.3 Kgs in 1973 to 8.7 Kgs in 1981/82 (CFSs, 1973; 1978/79; 1981/82).

However, the increase of the per capita consumption level varied and it depended on genuine changes arising through a combination of economic and social factors like consumer behavior and their income level, price level of the commodity, the rice ration scheme and food stamps, change in the relative price of rice, increase of wage rates and employment in the public and private sectors. For example, all island consum-
tion of rice was seen to increase with income until the monthly income level of Rs. 3,000 was reached. Rural sector rice consumption tended to increase with income. For the higher income groups consumption was highest in the rural sector (CFS, 1981/82 : 247). Particularly, rapid reduction of the purchasing power of the food stamps perhaps resulted in sharp decline of the consumption level of the poorer sectors of the population in the rural sector. The total expenditure on food subsidies was Rs. 1,230 million in 1975 and it has increased upto Rs. 2,025 million in 1987. This is an increment of 65 per cent in nominal terms. This means it is not an adjustment to the inflation in the country which increased by 229 per cent during this period. This increment when added on to the increased population (21 per cent or 2.8 million) in the country during the same period (1975-87) seems no increment at all for the food subsidies given to the poorer sectors of the population (Abeygunawardana and Pinnaduwage, 1989 : 26). Therefore, it could be argued that significant changes in per capita consumption of rice is influenced to a greater extent by changes in above factors than the increase of availability of rice in the domestic market.

It is however most important to examine whether changes have occurred in the pattern of the consumption of the other principal dietary items like wheat flour, bread, sugar and coconut. The trend of the per capita consumption of those major consumer goods are given in Table 9.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Wheat Flour (Grams)</td>
<td>1.058</td>
<td>854</td>
<td>568</td>
</tr>
<tr>
<td>Bread (Grams)</td>
<td>1.330</td>
<td>1.816</td>
<td>609</td>
</tr>
<tr>
<td>Sugar (Grams)</td>
<td>793</td>
<td>720</td>
<td>813</td>
</tr>
<tr>
<td>Coconut (Nuts)</td>
<td>n.a.</td>
<td>8.1</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Even though the wheat flour is a major component of cereal intake, the per capita consumption was reduced drastically (46 per cent) in the period. The sharp increase of price along with abolition of subsidy on this item is the main reason for this substantial drop in consumption. The Central Bank of Ceylon emphasised that with the introduction of the food stamp scheme in September 1979, the subsidy on this item was abolished and its pricing policy was on a 'no loss-no profit' basis. As a consequence, wheat flour prices more than doubled between the survey of 1978/79 and 1981/82 (CFS, 1981/82). Therefore, many people in the rural sector perhaps intended to consume rice, cereals and yams instead of the wheat flour.

Bread is also an another substitute item for the rice, serials and wheat flour. Although the bread is not generally popular in the rural sector as a daily consumption goods, monthly per capita consumption was increased by 37 per cent in the period 1973-1978/79 due to the favour of relative prices of bread and rice. The bread consumption however declined by reason of increased price in the market after 1978/79. Most people in the rural sector usually provided bread with tea as a morning meal for their helpers in the agricultural activities during the period 1971-76, but it was replaced by rice and yams and major cereals after 1977 because of the high price of bread.

Although sugar is one of the significant food item of the people in Sri Lanka, CFS surveys data in 1963, 1973 and 1978/79 revealed a declining trend in sugar consumption in all sectors. However this trend appears to have been reversed with per capita monthly consumption increasing by 13 per cent in the rural sector during the period 1978/79-1981/82 (CFS, 1981/82 : 252). The price is the major factor for the change of consumer demand on this item. In respect to our experience in the period 1970-76, many people in the rural sector utilized jaggary and relative items instead of sugar because of high price of sugar. CFS survey data in 1981/82
revealed that in both the urban and rural sectors, average monthly per capita consumption of income groups above the Rs. 2,000 level exceeded one kilogramme a month. The percentage increase in per capita consumption appeared to be higher in each successive quintile and ranged from about eight per cent for the second lowest quintile to 22 per cent for the richest quintile (see Table 6.20 in page 252 of the CFS Survey Report in 1981/82 for further informations).

Coconut is one of the most important ingredients for the preparation of various foods, that provide a large proportion of calories and fats of the average diet of the people in Sri Lanka. Although the per capita consumption has not changed in the country, the rural sector was implied a higher consumption rate compared to other two sectors. The reason is that majority of the rural people owned at least few coconut trees in their homestead that help them to pursue the consumption level without considering change of income level and price of the commodity. But CFS survey data in 1981/82 revealed that the per capita consumption in the rural sector increased steadily with income after the income level of Rs. 600.

It is however most important to examine how far the above change of consumption contributes to the poverty alleviation and nutrition which are major elements of the conventional development theories in the poverty alleviation. In the case of Sri Lanka, 2,200 calories per day per person is the recommended daily allowance expressed in terms of calories. There are a number of surveys over time which have been operated regarding the above subject, but these gave different results due to the change of survey designs. "The 1969-70 Socio Economic Survey found a small calories gap with the poorest individuals in the sample consuming about 1,950 calories daily as compared to the RDA of 2,200 and a gap of about 100 calories for the next poorest group (13.6 per cent of the population) and less than a 50 calories gap daily for the third undernour-
ished group (16.5 of the population). In contrast, the 1973 survey of Consumer Finances came up with a relatively large calories gap and the surprising result that 95 per cent of the total population consumed at least 200 calories daily less than the RDA of 2,200. The most recent Socio Economic Survey of 1980/81 concludes that 20 per cent of population consumes less than 1,600 calories daily and another 30 per cent consumes less than 1,950 calories, resulting in a significant calories gap as well" (Thorbecke and Svejnar, 1984 : 25). Although the results of the above surveys are different each other, the incidence of undernutrition in the population could be recognised well over the time.

In addition, a survey of the nutritional situation in Sri Lanka by the Ministry of Plan Implementation in 1985 revealed that one in every 15 Sri Lankan is suffering from severe malnutrition. It stated that over three million people struggled to survive taking minimum nutritional requirements (Quoted by Kelegama, 1968 : 32). Apart from the above-described major surveys on the incidence of nutrition, Matens concluded in his survey that the decline in the nutritional status was unambiguously pronounced for all three groups of the population, urban, rural and estate: the calorie deficiency of the rural population rose from 55.7 per cent to 68.2 per cent in the period 1969/70-1981/82——affecting the lowest quintile worst (cited by Thorbecke and Svejnar, 1984 : 25).

It is also important to estimate how far state policy contributed to the improvement of real income of the people in the country. “Until the result of CFS of 1978/79 were made available, relative income distribution in Sri Lanka was widely considered to have moved towards greater equality over time. The statistical basis for this argument was provided by the earlier CFSs, particularly those of 1963 and 1973” (Lakshman, 1986 : 24). However, sharp increase of inflation rate resulted in a considerable fall in real income of most income receiving groups in the country. According to the Consumer Finance Surveys of the Central Bank of Sri
Lanka, the average income (mean income at current price) per month (income receivers) in the rural sector in 1973 was Rs. 238, while this in 1981/82 increased to Rs. 1077 or by 353 per cent. But in the same period, the consumer price index (we take the data from the Colombo Consumers' Price Index because there is no other reliable index) increased by about 127 per cent. Therefore, (if we reduce the increase of price level from the income level of the rural sector) the real average per capita income per month in the rural sector increased only by about 99 per cent or up to Rs. 474. In the same period, the all island average real income per month increased up to Rs. 490 which amounted to about 115 per cent. In the urban sector real income per month increased to Rs. 716 or by 125 per cent in the same period. According to the growth of real income sector-wise and island-wise during the period 1973-1981/82, the income level in the rural sector increased at a lower rate compared to urban sector. In other words, the relative income position of the rural population on average declined vis-à-vis the urban population. The significant features in the sectoral income distribution in the period 1973-1981/82 is given in Table 10.

Table 10: Percentage of Total One Month Income Received by Each Twenty Per Cent Ranked Income Receivers—Sector and All Island 1973, 1978/79 and 1981/82

<table>
<thead>
<tr>
<th>Ranked Income Receivers</th>
<th>Per centage of Total Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest 20%</td>
<td>5.39</td>
</tr>
<tr>
<td>Second 20%</td>
<td>10.74</td>
</tr>
<tr>
<td>Highest 20%</td>
<td>45.32</td>
</tr>
<tr>
<td>Median Income</td>
<td>Raise for One Month</td>
</tr>
</tbody>
</table>

According to the percentage of total one month income received by each 20 per cent ranked income receivers in the rural sector during the period 1973–1981/82, the share of the lowest 20 per cent declined from 5.35 to 3.71 per cent. In contrast, the share of the highest 20 per cent increased from 43 to 54 per cent. Furthermore, the shares of the third and fourth ranked 20 per cent income receivers decreased substantially. These changes imply an increase in income inequalities as well as a widening of the gap between high income groups and low income groups in the rural sector. This is not surprising according to the conventional economic theories, because those theories predict an increase in the income level at early stages of development result in deterioration of income distribution as well as a widening gap between the high and low income groups.

This condition is worse according to the result of Labour Force and Socio Economic Survey in 1985/86. This survey revealed that about 80 per cent of the urban income receivers have mean income, less than the mean income of all income receivers in the urban sector. The corresponding percentages in the rural and estate sectors were nearly 70 per cent and 60 per cent respectively. The mean income of the richest 10 per cent of the income receivers was considerably higher than the mean income of rest. This was apparent in all three sectors, though it was more marked in the urban sector (Labour Force and Socio-Economic Survey, 1985/86: 54).

The inequality of income distribution in the rural sector can be evaluated with emphasis on three indicators: median income, Gini ratio and change of ranked income receivers. According to the above surveys, in 1973, median income in the rural sector was Rs. 197, while this increased to Rs. 781 (current price) by 1981/82 and that accounted for a near 296 per cent increase (CFS, 1981/82: 193–194). However, the real income increased only by about 75 per cent or up to Rs. 345. In the same period, the monthly real median income in the national economy in-
Experiences of Agricultural Development in Sri Lanka

creased to Rs. 270 or by about 50 per cent only. Consequently, median income in the rural sector increased more higher than the national level. How far this increasee of rural income level contributed to the increase or decrease of income inequality in the rural sector can be observed by examining the change of the Gini ratio and income distribution in ranking level. Table 11 brings out the Gini Co-efficient of concentration for income receivers for 1963, 1973, 1978/79, 1981/82 and 1985/86.

Table 11: Gini Co-efficient Based on One Month Income of Income Receivers by Sectors and All Island

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Urban</td>
<td>0.49</td>
<td>0.40</td>
<td>0.51</td>
<td>0.54</td>
<td>0.62</td>
</tr>
<tr>
<td>Rural</td>
<td>0.44</td>
<td>0.37</td>
<td>0.49</td>
<td>0.49</td>
<td>0.56</td>
</tr>
<tr>
<td>Estate</td>
<td>0.27</td>
<td>0.37</td>
<td>0.32</td>
<td>0.32</td>
<td>0.41</td>
</tr>
<tr>
<td>All Island</td>
<td>0.49</td>
<td>0.41</td>
<td>0.49</td>
<td>0.52</td>
<td>0.58</td>
</tr>
</tbody>
</table>

*Computed for income receivers' income by residential type


The above Table indicates a high inequality of income distribution in the urban sector in proportion to the other two sectors. This is mainly due to the fact that urban income receivers would form a relatively heterogeneous group in terms of levels and sources of income (Labour Force and Socio-Economic Survey, 1985/86 : 55). Even though the income distribution has worsened at a considerable level during the period 1963-1985/86, a stability is revealed by a comparison of Gini Co-efficient in the period 1978/79-1981/82. Substantial and sustained incentives for agricultural production, spread of irrigation facilities and a continued expansion of double cropping are among the important factors which contributed towards increasing agricultural activities in the rural sector. These changes in the rural economy opened up new sources of income both in agriculture as well as in other dependent activities. The emergence of
such sources of income in the rural society may have helped to check the

The situation of the unemployment problem of the rural sector in the
1950s as well as the 1980s cannot be seen to be substantially improved
according to the available statistical sources. The International Labor
Organisation Survey of 1959 had revealed that 10.5 per cent of the labour
-force was unemployed, while 45.4 per cent of the rural labour-force was
underemployed (did not have and opportunity to work more than 40 hours
per week). A survey by the Department of Census and Statistics in 1969/
70 had disclosed that 552,000 economically active persons were un-
employed of which 384,000 or about 69 per cent reside in the rural sector
and 83 per cent of them were in group of 15-24 years. According to the
CFS in 1973, nearly 793,000 persons were underemployed in the country of
which 550,566 or 69.4 per cent belonged to the rural sector. The findings
of the Consumer Finance and Socio-Economic Surveys of 1978/79 and
1981/82, reveal a substantial improvement in the employment situation.
The rate of unemployment declined from 14.8 per cent of the work force
in 1978/79 to 11.7 in 1981/82. In the rural sector, where the level of
unemployment was higher, a slight drop in unemployment was recorded
from 14.4 per cent to 12.0 per cent in 1978/79 and 1981/82 respectively

If we consider the underemployment rate of 20.6 per cent in 1981/82
along with underemployment rate in the rural sector, the employment
situation is worse than any other sectors. The main reason for this high
unemployment rate in the rural sector could be attributed to seasonality
in agricultural activities in this sector where peasant farming predomi-

42. Unemployed persons were those who were 14 years and above and had no
employment during the reference week, but were actively seeking work for
pay, profit or family gain (CFS, 1981/82 : 6).
nates (CFS, 1981/82 : 169). Furthermore, the Labour Force and Socio-Economic Survey in 1985/86 estimated the total economically active population or the labour force about 5,972 thousand persons in which about 840 thousand or 14 per cent were unemployed. Sectorally, the urban sector recorded high unemployment rate of 19.5 per cent while that for the rural and estate sectors were 13.2 per cent and 7.8 per cent, respectively (Labour Force and Socio-Economic Survey, 1985/86 : 51). The reason for this rapid increase rate of unemployment in the economy could be recognised as an insufficient expansion of the major sectors in the post-1977 regime. CFSs data imply that the more rapid employment expansion had taken place in this period in a few sectors like textile and garments industry, construction, trade and transport, where the bulk of the labour force continued to be earning low wages and low labour incomes (Lakshman, 1986 : 28). Hence, it is reasonable to emphasise that the change of state policies from import substitution to export-oriented contributed little towards the relief of the unemployment problem in the country.

The government’s effort to relieve the unemployment problem in the rural sector by increasing the land input became a temporary solution because it was difficult to meet the demand to land for cultivation purposes. In the post-independence period, population increased at a high rate compared to the increase of arable land. In 1946, man-land ratio (agricultural land) in the rural sector was 1.34; in 1969 it increased to 2.02 and in 1982 it was even higher at 3.11 (Census of Agriculture, 1982; Review of the Economy, 1983). In the near future, it will become more difficult to increase the land input according to the further increase of the labour-force in the rural sector. Therefore, it is not possible to resolve the problem of unemployment through this measure.

As a result of these unsuccessful effort of successive governments on the relieve the unemployment problem in the country, the unrest of the
rural youths' increased rapidly since 1970, which caused the major drawback of the development activities. Moore has noted that no one can doubt the political significance of the problem of unemployment among educated Sri Lankan youth. The frustration of those who felt entitled to permanent formal sector jobs by virtue of their school certificates was clearly a major factor behind the 1971 youth insurgency, and continues to fire militant separation in the Tamil North (Moore, 1981: 97). Owing to this, it is necessary to create more productive non-agricultural, non-land-using employments in the rural sector in keeping with the increase of the labour-force in the future.

It is important to observe the impact of government development strategies on rural economic prosperity in the study period. According to the conventional economic theories, poverty was described in relation to the ratio of food expenses to their total income and to the ratio of savings. This means that if poverty increases, then the food expenses ratio also increases and the saving ratio declines. Generally, the average food expenses ratio of the one month income in developing countries is about 53 per cent, but in developed countries it is less than about 30 per cent (Report on International Statistics, 1987). The Consumer Finances Survey\(^\text{43}\) of the Central Bank of Ceylon in 1963 revealed that the rural peoples spent about 59 per cent of the total income for food, while the same survey in 1981/82 disclosed that this was about 61 per cent (CFSs, 1963: 121; 1981/82: 228). In 1985/86, the proportion of expenditure on

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\(^{43}\) The first of this survey was conducted by the Central Bank of Ceylon in 1953, and the report was published under the title "Report on the Sample Survey of Ceylon's Consumer Finances". Thereafter, the same survey was undertaken by the Central Bank of Ceylon in 1963, 1973, 1978/79 and 1981/82. The result of the surveys were published under the titles "Report on the Sample Survey of Consumer Finances" and "Report on Consumer Finances and Socio-Economic Survey" in 1963 and thereafter, respectively. Author use the term CFS to refer all above surveys for convenient.
food in the rural sector was about 56 per cent of the total one month income of income receiving (Labour Force and Socio-Economic Survey, 1985/86 : 62). It is however, necessary to increase the savings for capital endowment when the country is at a certain stage of developing. In the rural sector of Sri Lanka, during the period 1963-1981/82, the savings rate of average income increased from 2 per cent to 12 per cent (CFS, 1963; 1981/82). Nevertheless, this increased rate of savings was not sufficient to meet the capital requirements for economic development in the country. This low savings rate of the rural economy implies that the development strategies which were introduced by the policy-makers in the last few decades did not contribute to the increase of the income level significantly.

It is important to observe the extent of improvement in the socio-economic conditions such as the level of literacy and education, health conditions, housing and amenities during this period. The literacy rate of Sri Lanka, has been among the highest in Asia. Considerable progress has been made in mass education as a result of expanded school facilities and the policy of free education that has been in force since the 1940s. The overall literacy rate of the population was found to be 84 per cent in the 1985/86 (Labour Force and Socio-Economic Survey, 1985/86 : 34). The corresponding figures in the CFSs of 1973 and 1981/82 were 81 per cent and 85 per cent, respectively (CFS, 1978/79 : 24). There is no

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44. In many ways the educational system is fraught with traditional western concepts of education which emphasize: (i) examinations and access to employment as goals-versus-means; and (ii) the extremely narrow concept of functional literacy as education (Mattis, 1978 : 10).

45. A person was determined to be illiterate if that person had no schooling and was unable to read and understand a simple sentence as well as write a name and address. Those who had schooling were determined as literate. Only persons aged five years and above were taken into account in determining literacy (CFS, 1981/82 : 6).
considerable difference when the national level figures were compared with the rural sector. The no-schooling rate of the country declined consierably during 1973-1985/86 from 31 per cent to 12 per cent.

Even though the people in Sri Lanka have a higher literacy rate, school avoidance rate is not improved even today. According to the CFS data, school avoidance rate in the estate sector is very high (36 per cent) when compared to other sectors. This has further deteriorated between 1978/79 and 1981/82, the corresponding figures in urban and rural sectors are 11 per cent and 15 per cent, respectively. A comparison with the 1978/79 data under that school avoidance has increased in 1981/82 compared to 1978/79. The increase in the urban sector is marginal but it was significant in the rural sector (CFS, 1981/82 : 62). The school avoidance rate mainly depends on the age of the child, and income level of the family head. CFS findings reveal that in general the school avoidance rate is higher for older age cohorts, and in low income families in the rural sector. Inability to provide the basic requirement is one of the major reasons for school avoidance in the rural sector in Sri Lanka (CFS, 1981/ 82 : 62–66).

However, total government expenditure on general education declined from 13 per cent to 11 per cent of total government expenditure in the period 1970-76. Similarly, during the period 1977-85, total government expenditure on general education appears to have fallen from about nine per cent to five per cent of total government expenditure. Moreover, total government expenditure on general education was reduced slightly from four per cent of GNP (Current Factor Cost Price) in the first region (1970-76) and that fell marginally from about 2.2 per cent to 2.1 per cent in the second period. On the other hand, school going population was increased by 36 per cent during the period 1970-85. However, total number of schools have increase only about 1.3 per cent (130 school) in the same period (CBC, Economic and Social Statistics of Sri Lanka, 1978
and 1985). Such information reveals that the insufficient improvement of the education facilities to meet the increasing demand of the children in the country.

It may be interesting to examine whether the improvement of education level of the people in the country has any implications with the employment and productivity. Central Bank of Ceylon emphasised that the education system has produced a labour force with a relatively higher level of general education than in many developing countries. But Sri Lanka's education system has been blamed for not being able to match the supply of skills with the manpower requirements of the country (CBC, Review of the Economy, 1979 : 76). In this regard, successive governments in the period 1970-85 attempted to modernise the education system with introducing several reforms for the general education as well as higher education. However such attempts have resulted in a more complicated education system instead of in modernisation. One of the studies indicated that the core of the educational system does not seem to be able to respond to the fundamental development problems with which Sri Lanka is faced (Mattis, 1978 : 11).

The health condition of the people in this sector had improved considerably since the development of free medical facilities provided by the government, particularly, the sector was able to bring down the crude death rate, infant mortality rate and increase the life expectation sufficiently, within a short period. The indirect result of this was that villagers became accustomed to western treatment rather than ayurvedic (indigenous) treatment which they resorted to traditionally. At present, more than 75 per cent of the rural people oft for western treatment even in minor ailments. The incidence of illness as a percentage of the population in the rural sector recorded about 11 per cent, while the average number of days absent from work due to ill-health declined to 2.5 per cent in 1981/82 (CFS, 1981/82 : 96). The main factors which
contributed to the improvement of the health condition of the community can be described as the development of health facilities by the public sector as well as the private sector, the improvement of the literacy rate and income level, expansion of better food, safe water and improvement of sanitation. The consequence of this was that the expectancy of life at birth increased to 68 years by 1982, which is one of the highest rates in Asia.

It is also a matter for concern that the pursuit of a free health care system is becoming more difficult for the government due to the increasing population, rising cost of medicine and improved medical equipment, and maintenance of service. This could explain the decline of the government expenditure on the health facilities while encouraging the private treatments. In 1970, total health expenditure was about two per cent of GNP, that reduced to 1.3 per cent in 1984. In the same time, number of hospitals and doctors increased from 459 to 494 and 1893 to 3,814, respectively. Meanwhile, in-patient treated and out-patients visited were rose by 30 per cent during the period 1970-84 (CBC, Economic and Social Statistics of Sri Lanka, 1978 and 1985). The shortage of nurses in August 1985 was estimated at 4,000. Generally there has been a deterioration in the country's medical facilities (Kelegama, 1986 : 28).

Apart from the inadequancy of the health facilities to meet the patient's requirements, an urban bias of the development of medical facilities and high dependence of the country on foreign nations could be recognized as the major problem in the sphere of health policy in Sri Lanka. Although the facilities were improved substantially in the country during the last two decades, many of them lay in the large cities, particularly in Colombo. Most of such facilities are limited to people who are in the better social and economic condition. Therefore, the majority of the people in the rural sector could not have opportunity to use such improved health facilities even if they come to Colombo. The other problem is that
the high dependence of the country on foreign countries due to the over consideration of the government health policy on Western medicines. In 1972, the government spent Rs. 41 million for import of pharmaceutical products and that rose by nine times in 1983 (CBC, Economic and Social Statistics of Sri Lanka, 1978 and 1985). If the state policy intended to improve the ayurvedic system as well as Western medical facilities, the dependency could be removed to some extent.

Improvement of the housing conditions and popularisation of the ownership of durable goods reflected a slight upward direction in the rural community in the period 1963–1981/82. The special feature of this is that the condition of houses did not improve in proportion to the ownership of durable goods. For instance, in the rural sector houses which did not have latrines amounted to 36 per cent in 1963. This was only reduced to about 32 per cent in 1981/82. This means that the number of latrines increased slowly in contrast to the rapid increase of houses in the rural sector. But ownership of durable goods like radio, TV, sewing machine and refrigerator have increased in considerable level.

The majority of the rural people live in untenable houses because 52 per cent of the houses were constructed of wattle and daub and clay. According to the definition of the Consumer and Finances Socio Economic Survey of 1981/82, the number of persons per room is an indicator of the degree of over-crowding. On average there were 1.5 persons per room. If having two persons or more per room is considered to be over-crowding, then over-crowding is most striking in the one-roomed and two-roomed categories (CFS, 1981/82 : 80). Consequent to this, about 33 per cent of the houses in the rural sector were over-crowded in 1981/82. The one-room houses were occupied by 4.2 persons on an average, while the average floor area per person was nearly 11.5 square meters. Therefore, the scarcity of, and population pressure on the rural houses had declined to some extent, but housing has not really improved accord-
ing to the requirement of the village community. The government’s housing policy and housing loan facilities contributed to this slight improvement in housing conditions.

All the above discussed government policy for rural development in the last four decades is successful if we consider it as a ‘rice import substitution policy’ in the country. “The generally accepted interpretation of Sri Lanka development experience, in the 1970s and at the dawn of the 1980s, was that the country succeeded in meeting the basic needs of the bulk of its population and in moderating relative distributional inequalities in the society while at the same time achieving a slow yet generally consistent GNP growth” (Rasaputram, 1972: Jayawardena, 1974; Marga Institute, 1974; Lakshman, 1975a; 1980b; & 1986 : 5). However, this does not imply that the village economy achieved a substantial improvement or a major transformation of the community life since those implemented development plans did not provide a sufficient solution to the villagers’ serious socio-economic problems faced in the 1950s and still faced in the present. This means, in spite of all previous policy attempts, the basic problem of rural poverty and low living conditions remain to a considerable extent.

Sri Lanka implemented many development plans to improve the peasant agriculture but most of the plans did not reach their intended goal. “They were mostly ‘paper’ plans. The focus of the development programmes was ‘peasant agriculture’ rather than the peasantry who were considered as an ‘input’ in achieving higher productivity and food self-sufficiency” (Wickramasekera, 1986 : 156-157). Although, there was improvement of the food production capacity of the country, inequalities of income and other assets and dependents’ problems added themselves in as new difficulties to the economy, particularly, post-1977 regime. The reason for these crises is that the Sri Lankan economy awakened to find short-term solutions to the present socio-economic problems rather than
to find long-term solutions. Those solutions were mainly intended to create some employment to satisfy the community in the short-term. We could state therefore that most of the solution for those problems was short-term sticking plaster because these solutions were not found in a productive manner.

It is also interesting to note that the surplus of paddy production in the near future will reflect as a main constraint in the rural sector. Even if Sri Lanka produces high quality rice of international standard, it may not help creating an export-oriented rice industry because most of the rice consuming countries have their own programmes for self-sufficiency. Owing to this, the production of other crops should be encouraged along with paddy, where they would have a high market potential domestically as well as internationally. In addition, the price of rice has to be reduced in proportion to that of the substitute product and this can increase rice consumption.

It is therefore, time to reconsider the rural development theory instead of the poverty alleviation approach which was practiced for many years. In this context, many economists and world development agencies had focused their attention on macro development in some countries, on social action at the grass roots level and on possible answers to the question as to why development efforts of the past have neither given good results in either material terms or in wider human terms to the majority of people in third world (Wignaraja, 1984 : 3). Over the past ten years in Sri Lanka, the respective government as well as non-government organisations have intended to reorient their approach on rural development which are initiated within a free market frame work, and participatory development exercises in isolated villages (to help them from self-reliant village communities).
Recent Policy Experiments in Rural Development

This section is makes an attempt to provide a comprehensive details on the selected on going policy experiments in rural development of Sri Lanka. Although several types of rural development projects have emerged in Sri Lankan villages during the past ten years, this study selected only two projects for discussion which are the most popular phenomenon among the political and economic authorities in Sri Lanka: (a) Integrated Rural Development Projects (IRDP); and (b) Participatory Institute for Development Alternatives (PIDA).

(a) Integrated Rural Development Project

The concept of IRDP is a newly emerged phenomenon of the state policy in the rural development in Sri Lanka. “The rationale for this approach is the need to supplement national policies and plans with

46. Government and NGO intervention in rural development was rapidly increased after the independence in 1948. These organisations attempted to improve various social and economic aspects in the rural sector, which were largely neglected by the colonial masters. Such movements emerged pre-1970 regime are as follows: Religious Organisation, Social Service Organisations, Women’s organisations, Cooperative Movements, Rural Development Societies, family planning Association and Sarvodaya Movement. In the period since 1970, the government and non-government involvement in rural development showed significant expansion under the following programmes: DDCs, Land Reform of 1972 and 1975 (various settlement schemes that followed), APC and ASC, Decentralised Budeget in 1974 and creation of Political authority (later replaced by District Minister), Development Council with Gramodaya Mandala, IRDP, Women’s Bureau, PIDA, Gam Udawa (village awakening) movement and EPV. We have already discussed the many of the above programmes where those were considered as rural development attempts according to the conceptual approach of this study. However, some of them have neglected in the analysis due to the coverage of this study.
projects specifically addressed to problems, needs and resources of relatively small areas. A District being an administrative unit forms a suitable locality for such a development attempt in Sri Lanka” (Agrarian Research and Training Institute, 1980: 1).

This project will be a further step of the development policy in the 1970s. The focal point of agricultural development had been changed by the government of Sri Lanka in the 1970s, by emphasizing for the first time that economic development should begin as the regional level. For this purpose, in 1973, the government introduced a certain degree of decentralisation of administration, decentralised budget system and a system of district political authority and, in 1978, appointed District Ministers. With the introduction of decentralised administration in 1971, the Divisional Development Councils were set up. These launched a number of small-scale industries in the rural areas by adopting the strategy of rural industrialisation. In 1979, the present government introduced IRDP utilising both foreign capital and domestic capital. The two projects emphasized that rural development projects should be started in accordance with the village level resources endowment.

Kurunegala District IRDP was the first project launched in the country in 1979, and was followed many other districts thereafter. The plan for the implementation of this project was five years 1979-83 with a total investment package of about Rs. 465 million of which about 67 per cent (Rs. 310 million) is provided by the International Development Association (IDA) as a loan while the balance is met by Sri Lankan government (ARTI, 1980: 1; Bandara and Gunasena, 1983: 2). The allocated fund subject to utilized for improvement of 12 interrelated components: irrigation and water management, coconut development, agricultural extension, agricultural input provisions, credit, livestock, ground water exploration, rural road, rural water supply, rural electrification, health, education and project coordination and investigation.
This new rural development effort had multiple objectives, yet, it is generally similar to earlier development projects of the country. The main objectives of the project are as follows: organisation of the development activities at a district level and coordinate with the national development plan; raising agricultural productivity through improved agro-technologies; income generation of the rural community through creation of employment opportunities; promotion of socio-economic development by improving welfare and infrastructure facilities; to achieve the people’s participation in development plans and to reduce the inter-regional disparities in terms of access to social and economic infrastructure (Appraisal report to World Bank, 1979; ARTI, 1980; 3, Bandara and Gunasena, 1983 : 1). It is difficult to determine whether those objectives have been fulfilled as yet. However, it could be said that it would not be easy to reach the said goals merely by a change in the administrative system and with such a huge foreign capital investment.

Recent studies on the Kurunegala IRDP indicate that the existing resources in the same district may be diverse in quality and mobilisation from village to village. Without a proper insight into the farmers’ decision-making process in production activities, the implementation of a common development plan would not have given many advantage to the farmers who are at the bottom of the economy. In addition, this project did not make much effort at creating a grassroots level organisation to obtain the participation of the villagers in the implementation and management activities of this project. Most economists have emphasized the validity of the fact that there cannot be any significant achievement in any development project without the active participation of the public. Wickramasepara (1983 : 1) has noted that those IRDP’s exercises are however, carried out at a highly aggregative level and do not result in a satisfactory identification and mobilisation of local resources. The size of the planning entity, the district, is too large for a meaningful analysis
of this nature.

Although the scheduled implementation period expired five years ago, the targeted objectives of the project in Kurunegala district was not achieved yet substantially. The main reasons for this that the concept of IRDP had not given proper consideration to the reasons of the failure of rural development projects in 1970s. At first, IRDPs have to be set up at least at electorate level while mobilising people and resources as a group of villages. Secondly, leadership of the project management and all other development activities should be given to the producers in the villages but not to the political leaders at the village level. However, District Minister and government officials are the leaders of this project and they are responsible for supervision, coordinating and monitoring the progress of all activities of IRDP. According to our experiences on rural development activities in Sri Lanka, it is impossible to achieve sufficiently successful results under the leadership of government officials and politicians. These leaders have to become supporters of the people and present them with ideas for various development activities under their own leadership, while providing necessary technical know-how and other facilities through a combination of the relevant public and private institutions with village communities. However, this was not recognised by the concept of IRDP even after about ten years of implementation without getting considerable improvement of the people's major socio-economic problems, particularly poverty.

(b) Participatory Institute for Development Alternatives

The concept of the Participatory Institute for Development (PIDA) is a one of the recent emerged non-governmental policy experiments in rural development of Sri Lanka. This project established in 1980, is engaged in ‘Participatory Action Research (PAR)’ with selected rural communities (Tilakaratna, 1983 : 22). PIDA is the new generation of
people’s organisation which was being build up in the village of Sri Lanka in recognition of the fact that the poor are the subjects and not the objects of development and social change, and without the full participation of the poor, no major social changes were possible (Sethi, 1984). The emergence of this alternative development strategy of grass-roots experiment will be a result of the failure of over a two and half decades of development efforts in Sri Lanka.

In the mid 1970s, several social scientists in South Asia had begun to find a alternative theoretical approach for development because they recognised the poor achievements of orthodox development theories according to the past experience. As a result of those social scientists’ efforts, they concerned two specific notions as alternative approach for development: the first, emphasised the creation of organisation and group in the villages to experiment with alternative approaches to mobilize and

47. "The term 'non-government' is a necessary but not a sufficient criterion to define the nature of a NGO. It defines as a residual ('what is not') rather than a concrete or a positive category ('what is'). Nevertheless, the term focuses on a central characteristic, namely that the organisation is not set up or controlled by a government, is not a part of the state apparatus and in fact, is often, different from the state apparatus. The organisation may be registered under some government legislation which gives it a legal status or official recognition, but is voluntarily organised and not set up by state intervention or sponsorship" (Tilakaratna, 1983 : 1).

48. "PAR is a methodology which attempts to combine social investigation, analysis, and action (to bring about change) in a single process, in contrast with (a) the conventional social science methodology where research has no direct, often not even an indirect, relation to social action, and (b) pure activism which has no conceptualisation process, have does generate new knowledge. In PAR, the researcher interacts with the community in a subject -subject relationship (in contrast to a situation where people are considered objects or research), to investigate and analyse the ‘reality’ of the social situation (an awareness creation process) as a basis for people’s action to change the ‘reality’" (Tilakaratna, 1983 : 22).
alert the rural poor to undertake self-reliant action to improve their livelihood; the second, concerned the failure of past development efforts and the need to interact with the emerging grass-roots initiatives for conceptualisation and development of new perspectives and methodologies (Wignaraja and Tilakaratna, 1987:47). PIDA is a one of the product of those two notions.

This new strategy of rural development aims to achieve a participatory self-reliant development through organising of people in the village on productive manner according to the wealth of those people's human and material resources. The first pilot project was initiated as a coir producers' group in Minuwangoda, Kurunegala district. "At present PIDA conducts its action research programme in 11 rural locations (village cluster) and in addition, it undertakes training of cadres in participatory development methodology" (Tilakaratna, 1983:22). According to the available theoretical information, this project has obtained dominant process at work, building village unity and exerting vigilance over community development process. It is however, impossible to prove in statistical performance due to the scarcity of such data in the academic literature although this project had run for about eight years.

The first question is why this project was not popular among the people in Sri Lanka in the last decade if it is a successful approach for the villages' socio-economic problems. The second question is why this project did not prevail in other villages rapidly. These two questions perhaps reveal that the project still remains at the stage of experiment or has not matured in the practical sense, although it has developed in a theoretical sense. Theory does not always contribute to the abatement of rural poverty in the developing countries of the world. It should be applied to the relief of actual problems in the community and should be achieved by the practical results. Unfortunately, the practical result of this marvelous alternative rural development theory is unknown by the
outside people in the country. However, social scientist in UNDP, UNU and some of economists in South Asia have already recognised the PIDA as one of the most successful alternative approaches for rural development in developing countries and also it won an alternative Nobel prize recently.

Conclusion

So far we have described briefly some selected rural development approaches together with their implications and the various positive and negative arguments on rural development in Sri Lanka. These arguments have given a large range of factors in the rural development literature in Sri Lanka, and they show that commonly there are no significant differences of objectives in any projects which are not caused by important changes of rural economic structure in Sri Lanka.

Rural development policies designed and implemented during the post-independence period in Sri Lanka aim to meet the improvement of the rural sector through agricultural development, particularly in the paddy sector which is aimed at import substitution to abate a number of serious socio-economic problems in the rural economy. In this regard, the government introduced two types of strategy: the first is to increase paddy land through the expansion of irrigation and other infrastructure facilities; the second is to intensity cultivation through provision of land-saving and labour-intensive technologies. The necessary inputs for production activities of agriculture and relevant facilities for disposal of output were also provided by the government at subsidized prices. As a result, Sri Lanka was able to meet her rice demand of the domestic market within a short period.

However, this theoretical approach has not provided long-run solutions to the rural socio-economic problems, though it has supplied a
temporary solution to these problems and created a new invisible problem called economic dependency. Most of the rural people now-a-days, are depending on the government, government institutions and officials or nearby regions for their socio-economic activities. In turn, the government is always depending on international marketing activities. Although there have been increases in the levels of money income, it has not contributed to alleviating rural poverty because of this economic dependency. Furthermore, the government designed rural development policy provided all necessary inputs which resulted in increasing the dependence of villagers on government subsidies. For example, if the government were to abolish the fertilizer subsidy, the majority of farmers would not use fertilizer, and this invariably leads to a decline of productivity. In addition, the government provides food stamps for poor without utilising their labour in a productive manner. This has also caused an indirect increase in economic dependency in the rural sector.

On the other hand, the dependency of the rural development strategy on foreign capital and technology has resulted in increased economic dependence of the country as a whole on international donor agencies. Almost all rural development projects launched throughout the period have not considered the utilisation of major production inputs on non-commodity aspects. Many of the production resources, activities, and consumer items are available as free or cheap goods in the rural sector, and could be organised in a productive manner for improvement of the rural economy. However, many of the government and non-government rural development efforts launched under the determination of everything on commodity aspects might have resulted to lower achievements than envisaged. It has however contributed to an increase in food supplies to a greater extent domestically, but it did not benefit the poorest of poor in the society.

In the last two decades, the government has attempted to modernise
the rural agricultural sector by adopting new technologies all over the country. However, only three-fifths of the actual targeted paddy productivity has been achieved. The reasons for this, many researchers have concluded, that farmers in this country will not apply the new technologies according to the recommended manner, which has resulted in the low level of productivity. To provide a solution for these constraints, the government has provided all inputs on subsidy price to reduce the cost of production and has supplied extension services and other institutional support to teach farmers the benefits of the use of recommended processes. But the government did not devote sufficient attention to clarify the attitude of the farmers on expeditious changes because they need to increase the food requirement of the country by using the rural sector as an input.

On the other hand, economic development planners did not attempt much to give the required attention to land, labour and credit as the main factors of the socio-economic relationship within the country. However, the farmers' attitude towards these three factors has changed from non-commodity to commercial in the traditional villages as well as in the land settlement schemes. For example, farmers who have emergency money needs, sell or mortgage their lands to mudalali or to the wealthy farmers, thus using landed property as a commodity. Land ownership shifts to the outside villager or to the wealthy person of the community and adversely villagers become dependent on those people. Another negative effect of this was the increase of landless or marginal farmers who migrated to other villages as casual labourers during the busy cultivation seasons.

Most of the development policy emphasized the importance of farmers' participation for successful completion of the development projects. For this purpose the government of Sri Lanka from the Paddy Land Act of 1958 to the Agrarian Services Act of 1979, has introduced many farmers' organisations and by decentralizing the administrative
system intended to get the farmers' participation in implement development projects. However, it has not made any significant achievements so far in comparison with the efforts made. "A remarkable feature about the Sri Lankan peasantry is the virtual absence of effective peasant organisations or movements. Gold remarks: 'Sri Lanka is an Asian country where the peasantry has never been organized'. It is only the agricultural workers in the tea and rubber estate sector who have been organized to some extent. This is clear from the fact that certain major measures affecting the peasantry have been implemented with only passive or no participation from the peasantry' (cited by Wickramasekera, 1983: 170). The most important hindrances to the creation of farmers' organisations in Asia are the landlord's influence, caste heritages and share cropping, although in Sri Lanka, the influence of those factors is insignificant. In Sri Lanka, the most powerful constraint is political influence which forms the basis for the creation of all farmers' organisations and for the appointment of rural level government administrative officials. Therefore, it is difficult to get the farmers' active participation in the public development plans.

Meanwhile, it is necessary to pay attention to the following factors which are essential for the establishment and mobilisation of villagers: ability to understand the villagers' aspirations as well as their present and future needs, due consideration of the resource endowment (human and material), and power structure of the village (giving the leadership and membership mainly to the producers).

Until the mid-1970s, the development of the agricultural activities in the rural sector took place at macro-level, and thereafter it adopted the micro-level approach. The DDC and IRDP are the major outcomes of this microlevel approach. However, the proposal to develop rural industries under the DDC programme failed to meet the desired targets and disappeared after the introduction of the open market economy in the late
1977.

Both the macro and micro-level approaches of the rural development policies aimed at alleviating rural poverty through the improvement of basic needs and through human development. The immediate supply of capital and technology was the major strategy of achieving the purposes. Foreign capital and technologies were introduced in order to meet the government policy which was implemented by a top-down process. Although the country achieved considerable improvement of basic needs and human development through this policy, the rural poverty was not alleviated to a sufficient level during the period 1950-85. According to statistical evidence, the condition of the rural economy became worse in the 1980s when compared to that of the 1960s and 1970s. In particular, unemployment, income inequality and the nutrient level emerged as serious problems which might be a major cause for the prevailing social unrest of the rural people. This means that the increased food availability, improvement of health, education, housing and infrastructure facilities did not contribute sufficiently to the alleviation of rural poverty. In fact, these adopted development policies were indifferent and inimical to rural development. Almost all of the policies were transferred from industrialized countries through world development agencies like World Bank, IMF etc. These policies mainly considered the national need at macro-level rather than actual needs of the rural community at micro-level. For example, successive governments in Sri Lanka attempted to improve the paddy sector more than any other activities in the rural sector. This efforts resulted in self-sufficiency in rice for the country but stagnation occurred in all other activities of the rural sector. Meanwhile, the adopted technocratic approach on the expansion of paddy sector resulted in the poor becoming poorer and the rich richer in the rural sector.

Meanwhile, a number of non-government organisations have emer-
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ged in the rural sector at the end of the 1970s to ascertain alternative methods for the improvement of rural life. Many of them sought economic self-reliance as the major target of their activities and thought that this could be achieved through improvement of agricultural or non-agricultural activities under the mobilisation of disadvantaged people in the rural sector. The necessary capital and technologies have depended on donor countries and created a small extent of such factors from the village itself.

Another major finding is that the recurrent government expenditure on various activities, specifically food subsidy, free medical facilities, free education and many public service revealed the diminishing role of the government on such activities. Particularly since 1977, the government has reduced several subsidies including those relating to agricultural inputs like fertilizer and food while privatization unprofitable public enterprises, as a major policy change to reduce the government expenditure. Meanwhile, liberalization of exports and imports resulted in the rapid increase of the supply of various kinds of durable foreign goods in the domestic market. However, demand in the rural sector was not increased due to only slight improvement in purchasing power a fact which might be the cause to some extent, for the prevailing social unrest of rural youth in the country.

Finally, we can conclude that these development efforts have made some general improvement in the rural sector, but especially have stimulated a significant group to develop their social and economic status.
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