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EMPLOYMENT AND POVERTY ERADICATION PROJECTS: MALAYSIA'S EXPERIENCE 25 YEARS AFTER INDEPENDENCE

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The New Economic Policy (NEP) was inaugurated in Malaysia in 1969 to overcome the twin problems of poverty and socioeconomic imbalance. In line with this, two major strategies were pursued, namely agricultural and land development, and industrialization via the dispersal of industrial estates, as exemplified by three major projects which were: 1) the FELDA Land Development Schemes, 2) Muda Irrigation Scheme, and 3) the industrial estates development. This paper attempts to review the role and effectiveness of these projects, as well as the problems encountered. Its major conclusion is that overall, Malaysia's performance in addressing rural poverty has been better than those of many other developing countries in spite of the very real problems of ethnic factionalism. It underscores however the importance, not only of the industrialization and mechanization of agriculture, but also of the proper attitudes of the people and the elite groups which are essential to the modernization process.

Structure of Labour Force and Employment

After 1970, the population of Malaysia grew at an estimated rate of around 2.5 per cent per annum, increasing from 10.8 million in 1970 to 13.7 million in 1980 and 14.7 million in 1983. The labour force was growing annually at 3.3 per cent from 3.7 million (34% of the population) in 1970 to 5.1 million (37% of the population) in 1980. The rate declined to 3.0 per cent during the 1980-83 period (see Table 1). This rapid growth of the labour force was largely due to the growth of the population and the greater proportion of women entering the labour force. In 1980, 48.0 per cent of the labour force was in the 20-34 age group and another 13.2 per cent in the 15-19 age group.

The data for Peninsular Malaysia[1] indicate that while the male labour force participation rate declined from 87 per cent in 1970 to 85 per cent in 1979, the female participation rate increased substantially from 37 per cent to 48 per cent. In comparing the rural and urban labour forces, the participation rates are higher in rural areas, especially among women. For example, in 1979, the male participation rate in urban areas (84%) was not different from that in

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[1] In 1980, about 83% of the Malaysian population was in Peninsular Malaysia, 7.5% in Sabah and 9.5% in Sarawak.

the rural areas (85%). But in the case of females, the participation rate was 45 per cent in urban as against 49 per cent in rural areas.

Between 1970 and 1980, the total employment created in Malaysia was 1.42 million, increasing at an average annual rate of 3.6 per cent. As a result, the unemployment rate declined by two percentage points from 7.8 per cent to 5.7 per cent within that decade (Table 1). A large portion of the unemployed consists of the young. In 1980, about 64 per cent of the unemployed in Malaysia was in the age group of 15-24 (Malaysia, 1984). However, with the turn of world events that has caused a significant decline in the growth rate since the end of the 1970s, the number of unemployed has increased by 15 per cent from 292 thousand in 1980 to 335.5 thousand (6.0 per cent of labour force) in 1983.

As shown in Table 1, of the total employment in 1980, 40 per cent was in agriculture, 15.6 per cent in manufacturing, 13.4 per cent in commerce, 19 per cent in services and 5.5 per cent in construction. The high growth rates in the 1970s were found in construction and manufacturing, around 7 per cent per annum, while those in agriculture and mining were roughly stagnant. This shift in employment pattern was the result of past strategies, mainly of industrialization and modernization of agriculture which were pursued since independence for a desired transition from a colonial-type primary product export economy to a more diversified growth system.

The overall performance was however not without hitches. After 12 years of independence, it was recognized that "although rapid strides were made in development, the country continued to face the problem of poverty, unemployment and economic imbalance, particularly among racial groups' (Second Malaysia Plan, p. 16). The failure of the pre-1970 developments which assumed that the commitment to accelerated economic growth was sufficient to percolate through the economy at all levels via the 'trickling-down' effects, was therefore implicitly acknowledged in the Second Malaysia Plan, 1971-1975 (See especially Chapter I). In reviewing the development plans before 1970, Corner (1983) strongly argues that the "trickle-down strategy was revealed by events to be both socially inefficient and politically unacceptable" (p.47)[2]

Consequently, the New Economic Policy (NEP) was inaugurated in 1971 to overcome two major obstacles that remained:

[2]For detailed discussions on estimation and trends in unemployment and income distribution in the 1960s, see for example Blake (1975), Ishak Shari and Rogayah M.Z. (1978), Snodgrass (1975), and Anand (1973).

Table 1 — Malaysia: Employment Distribution by Sector, 1970-1983

Sector	1970		1980		1983		Annual Growth Rate (%)	
	No. ('000)	%	No. ('000)	%	No. ('000)	%	1970-1980	1980-1983
Agriculture, Forestry and Fishing	1,714.6	50.5	1,910.9	39.7	1,940.9	37.0	1.1	0.5
Mining and Quarrying	88.6	2.6	80.8	1.7	64.9	1.2	-0.1	-7.5
Manufacturing	386.5	11.4	750.5	15.6	800.3	15.3	6.9	2.2
Construction	136.7	4.0	267.8	5.5	345.6	6.6	7.0	8.9
Utilities	26.5	0.8	50.8	1.0	56.8	1.1	6.7	3.8
Transportation, Storage and Communication	115.1	3.4	199.1	4.1	241.8	4.6	5.6	6.7
Commerce	402.6	11.8	644.2	13.4	712.8	13.6	4.8	3.4
Services	525.3	15.5	912.8	19.0	1,081.7	20.6	5.7	5.8
TOTAL	5,395.9	100.0	4,816.9	100.0	5,244.8	100.0	3.6	2.6
Population	10,776.9		13,745.2		14,744.0		2.5	2.4
Labour Force	3,681.9		5,108.9		5,580.3		3.3	3.0
Unemployment	286.0		292.0		335.5		—	—
Unemployment rate(%)	7.8		5.7		6.0		—	—

Source: Fourth Malaysia Plan and Mid-Term Review of Fourth Malaysia Plan 1981-1985

persistence of poverty and the socioeconomic imbalance. The P is quite a unique and bold planning strategy based on what has n referred to by Mehmet (1984) as 'development by trustee-'. The essential features of this trusteeship are:

i) decisions about budget allocations and investment priorities are made non-competitively by procedures and rules set by trustees; and

ii) control is separated from ownership of wealth and resources, the controlling power being vested with the trustees.

The NEP views growth and structural changes as means to ate a much larger modern sector. Economic growth is to be pur-d with emphasis on employment which is perceived as an impor-t prerequisite for eliminating poverty as well as restructuring the iety.

Trends in Socioeconomic Structure, Poverty and Migration

One of the significant characteristics of the Malaysian employ-nt structure is the very marked identification of race with eco-nic functions. In 1970, 64 per cent of the Malays were employed the lower productivity primary sector compared to the 46.5 per it of Indians and 28.5 per cent of Chinese. On the other hand, the ondary sector provided employment to only 12 per cent of lays, 15.8 per cent of Indians and 34.0 per cent of Chinese.

The Malays were also under-represented in the tertiary sector e Table 2). Under the NEP period, by 1980, improvement in the ance of employment structure was noticeable with reduced Malay l Indian dependence on the primary sector, and increased partici-ion in the secondary and tertiary sectors (Table 2).

Consequently, there was significant poverty reduction between 70 and 1980. According to official estimates, in 1970, there was otal of 791.8 thousand poor households in Peninsular Malaysia, of om 89 per cent were rural and 11 per cent urban (Table 3). By 80, there had been a poverty reduction involving 155.9 thousand useholds (or by 20%) over the decade. Rural poverty declined by 3.8 thousand (or by 23%), but poor households in the urban

Table 2 — Peninsular Malaysia: Employment By Sector and Race 1970 and 1980

(In per cent)

Year/Sector	Malay	Chinese	Indian	Total[4] (1000)
1970				
Primary[1]	64.1 (67.6)	28.5 (21.4)	46.5 (10.1)	1369 (100.0)
Secondary[2]	12.0 (30.1)	34.0 (61.2)	15.8 (8.2)	570 (100.0)
Tertiary[3]	23.4 (39.8)	37.5 (45.6)	37.7 (13.3)	844.0 (100.0)
Total	100.0	100.0	100.0	2783
1980				
Primary[1]	45.8 (68.2)	18.3 (18.2)	41.2 (12.7)	1432.0 (100.0)
Secondary[2]	21.7 (39.7)	41.5 (50.5)	24.6 (9.3)	1167.4 (100.0)
Tertiary[3]	32.5 (48.6)	40.2 (40.1)	34.2 (10.6)	1423.6 (100.0)
Total (%)	100.0	100.0	100.0	
No. (in 1000)	2133.9	1419.8	440.0	4023.0

Source: Mid-Term Review of Second and Fourth Malaysian Plan.

[1]Agriculture, forestry, hunting and fishing.

[2]Mining, manufacturing, construction and transport.

[3]Wholesale & retail, trade, banking, public administration, utilities and defence.

[4]including other races.

Table 3 — Poverty Trends in Peninsular Malaysia by Rural-Urban Strata, 1970-83

Sector	Total Households ('000)	Poor Households ('000)	Incidence of Poverty (%)	Percentage Among Poor (%)
1970				
Rural	1203.4	705.9	58.7	89.2
Urban	402.6	85.9	21.3	10.8
Total	1606.0	791.8	49.3	100.0
1980				
Rural	1449.5	542.1	37.4	85.3
Urban	743.5	93.8	12.6	14.7
Total	2193.0	635.9	29.0	100.0
1983				
Rural	1489.5	619.7	41.6	86.4
Urban	881.2	97.9	11.1	13.6
Total	2370.7	717.6	30.3	100.0

Sources: Fourth Malaysian Plan, 1981-85 and Mid-Term Review of the Fourth Malaysia Plan, 1981-85.

sector increased by 7.9 thousand (or by 9%) to 93.8 thousand. However, between 1980 and 1983, the absolute number of poor households increased again (mainly because of the effects of world economic recession) in both rural and urban areas. Between 1970 and 1983, therefore, there has been a net poverty reduction of 80.8 thousand households in the rural sector, but an increase of 11.8 thousand in the urban sector. Overall, there was a poverty reduction by 9.4 per cent over the 1970-1983 period.[3]

Similarly, the incidence of poverty has declined from 49.3 per cent in 1970 to 29.0 per cent in 1980 but increased again to 30.8 per cent in 1983. In the urban areas, the incidence of poverty decreased from 21.3 per cent in 1970 to 12.6 per cent in 1980 and to 11.1 per cent in 1983. But in the rural sector, the incidence of poverty declined from 58.7 per cent to 37.4 per cent and up again to 41.6 per cent in 1970, 1980 and 1983 respectively.

Poverty in the rural agricultural sector declined in absolute as well as in relative terms between 1970 and 1980 and then increased slightly by 1983. As shown in Table 4, total poor households declined from 582.4 thousand in 1970 to 422.5 thousand in 1980 and then increased to 497.6 thousand in 1983; the incidence of poverty declined from 68.3 per cent to 45.7 per cent and 54.9 per cent during the same period. However, the agricultural sector still accounted for around two-thirds of total poor households. The large number of poor households consist of the rubber smallholders, padi farmers and estate workers. In fact, poverty in rubber smallholdings rose absolutely as well as relatively during the 1970-83 period, mainly because of the adverse effects of the fall in commodity prices after 1980. Poverty however has decreased absolutely in other agricultural sectors, especially among padi farmers and fishermen. In the case of padi farmers, this was mainly due to off-farm income and employment opportunities as well as higher subsidies rather than higher productivity of labour. In the case of fishermen, poverty reduction was mainly confined to the West Coast where productivity increased following the introduction of trawling and better fishing techniques. But little has changed with respect to fishermen in the East Coast. In contrast to the situation in rural areas, poverty in mining, manufacturing, transport and other services in the urban sectors has increased not only relatively but also absolutely between 1970 and early 1980s. Only the construction sector registered a declining trend in the number of poor households.

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[3]The absolute reduction in the number of poor households may be overstated since some poor households were transferred to the urban sector without raising their incomes above the poverty line (Fourth Malaysia Plan, p. 171).

Table 4 — Peninsular Malaysia: Poor Households by Sector, 1970-1983

Sector	1970			1980			1983		
	Total poor households ('000)	Incidence of poverty (%)	% among poor	Total poor households ('000)	Incidence of poverty (%)	% among poor	Total poor households ('000)	Incidence of poverty (%)	% among poor
Rural									
Total agriculture of which:	582.4	63.3	73.6	422.5	45.7	66.5	497.6	54.9	69.4
Rubber smallholders	266.4	64.7	28.6	168.9	41.3	26.6	247.9	61.1	34.6
Oil palm smallholders	2.0	30.3	0.3	1.8	7.7	0.3	1.5	6.5	0.2
Coconut smallholders	16.9	52.8	2.1	12.8	38.9	2.0	10.1	32.7	1.4
Padi Farmers	123.4	88.1	15.6	76.4	52.7	12.0	75.0	54.0	10.5
Fishermen	28.1	73.1	3.5	18.6	45.3	2.9	18.1	44.7	2.5
Estate workers	59.4	40.0	7.5	37.9	35.1	6.0	57.7	54.6	8.0
Urban									
Mining	1.8	33.3	0.2	1.7	33.0	0.3	2.1	41.0	0.3
Manufacturing	19.7	23.5	2.5	23.5	13.4	3.7	28.0	12.6	3.9
Construction	5.9	30.2	0.7	5.7	17.4	0.9	5.2	13.7	0.7
Transport & utilities	13.1	30.9	1.7	15.7	19.2	2.4	14.4	15.6	2.0
Services	45.4	18.1	5.7	47.2	10.5	7.4	48.2	9.2	6.7

Source: Fourth Malaysia Plan and Mid-Term Review of the Fourth Malaysia Plan, 1981-85.

Table 5 — Peninsular Malaysia: Mean and Median Incomes, 1970 and 1979 ($ per household per month in 1970 prices)

	1970	1979	% change 1970-79
Malay			
Mean	172	296	6.2
Median	120	197	5.7
Mean/Median	1.43	1.50	
Chinese			
Mean	394	565	4.1
Median	268	373	3.7
Mean/Median	1.47	1.51	
Indian			
Mean	304	455	4.6
Median	194	314	5.5
Mean/Median	1.56	1.45	
Others			
Mean	813	1147	3.9
Median	250	331	3.2
Mean/Median	3.25	3.47	
Total			
Mean	264	417	5.2
Median	166	263	5.2
Mean/Median	1.59	1.58	
Gini Coefficient	0.513	0.508	—
Urban			
Mean	428	587	3.6
Median	265	361	3.5
Mean/Median	1.62	1.63	
Rural			
Mean	200	331	5.7
Median	139	222	5.3
Mean/Median	1.44	1.49	

Source: Mid-Term Review of the Fourth Malaysia Plan, 1981-85.

Two related dimensions of income inequality are the inter-racial and intra-racial distributions. In particular, while there has been a narrowing down of inter-racial income disparities, intra-racial distribution has become more unequal, particularly among the Malays and the Chinese. Table 5 shows that the mean income for all households had increased by 5.2 per cent per annum and income inequality had declined somewhat as indicated by the fall in the ratio of mean to median monthly household income as well as Gini coefficient between 1970 and 1979. Among the major racial groups, the Chinese has the highest income while the Malays, the lowest. However, the decline in the ratio of Chinese/Malay mean income (from 2.29 to 1.91), Indian/Malay mean income (from 1.77 to 1.54) and Others/Malay mean income (from 4.73 to 3.88) indicates that the Malays have been catching up with the other racial groups. Nevertheless, if we look at the mean/median ratios, it is evident that there had been increased inequality among the Malays, Chinese and 'others'. Within both the rural and urban areas, the data also indicate a growing inequality, especially in rural areas. An improvement in the ratios of urban to rural average income was however recorded during the 1970s, with the urban/rural mean monthly household income ratio declining from 2.14 in 1970 to 1.77 in 1979.

The above trends do reflect the rural-urban poverty transfer process. Of course, there was a large volume of internal migration during 1970-80, and two out of every three internal migrants were Malays (Table 6). But unlike most developing countries, in Malaysia, rural-rural migration was more significant than rural-urban (Table 7). In fact, rural-urban migration was smaller than urban-urban migration.

The structural changes that have taken place in the 1970s and early 1980s were primarily the results of the NEP. Since Malays comprised the bulk of the poor in the rural areas, the NEP assumed that more assistance to the Malays would help achieve both the objectives of poverty eradication and ethnic restructuring of society simultaneously. To help the poor, especially the Malays, in the rural areas two major strategies were pursued, namely, (1) agricultural and land development, and (2) industrialization via dispersal of industrial estates. These strategies must have played important roles in explaining the employment and income distribution trends in Malaysia in the 1970s.

Table 6 — Internal Migrants in Peninsular Malaysia, By Sex and Race, 1970-80 (Nos. in Thousands)

Race	Male	Female	Total	%
Malay	777.8	760.2	1,538.0	64.5
Chinese	296.5	291.3	577.8	24.2
Indian	132.2	127.1	259.3	10.2
Others	5.5	5.2	10.7	6.4

Source: Khoo Teik Huat, 1983.

Table 7 — Direction of Internal Migration in Peninsular Malaysia, 1970-80 (in '000)

Area of Origin	Area of Destination		Total
	Urban	Rural	
Urban	517.5	416.8	934.3
Rural	364.4	1,004.7	1,369.1
Total	881.9	1,421.5	2,303.4

Source: Same as Table 6, p. 78.

In the following sections, this paper attempts to review the role, effectiveness and problems of three major projects in the light of the NEP objectives of job creation and poverty eradication in the Malaysian pluralistic society. These projects are the FELDA Land Development Schemes, the Muda Irrigation scheme and the industrial estates.

I. Land Development: FELDA Schemes

Large-scale land development for agriculture in Malaysia started way back during the colonial period around 1900. It coincided with the development of rubber estates, especially in the West Coast states of Peninsular Malaysia (Voon Phin Keong, 1976). In 1908, almost 100,000 hectares were developed for rubber estates and this increased to over 500,000 hectares in 1920 and around 750,000 hectares in 1930. There was little expansion in the agricultural area since then till late 1950s, due mainly to the Great Depression, the International Rubber Restriction Scheme, the Second World War and the Japanese Occupation, and followed by the State of Emergency from 1948 to 1960 (Lim Sow Ching, 1976). Until the late 1950s, investment in new land development was almost exclusively undertaken by the private sector and by foreigners.

The idea of organized land development in Malaysia was rooted in 1955 during the period of self-government preceding Independence. In August 1955, a government Working Party was set up with a realization that "there is a very real need for planned and coordinated development of land so as to ensure that economic development goes hand in hand with social development". Hence the Federal Land Development Authority (FELDA) was established by the Government as an independent statutory body in 1956 "to promote and assist the investigation, formulation and carrying out of projects for the development and settlement of land in the Federation."

During the formative period, 1956-60, progress was slow. For various reasons[4], FELDA only managed to establish 14 rubber schemes covering 5,900 hectares and settling 2,772 families (Jamaludin Lamin, 1976). However the early periods provided useful lessons for the planners and implementors. It was found that large-scale jungle clearing, planting and maintenance of crops using modern methods were specialized undertakings which required proper planning, coordination and scheduling of work. The settlers could not be assumed to be able to do the work on their own just because they came from rural areas and were used to manual work. Therefore, in 1960, FELDA switched its role from being merely a "loan agency" to taking direct part in land development and settlement. It was since then that impressive progress has been made. The settlers

[4]For example, lack of cooperation between the State and Federal Governments especially with regard to land which is a state matter; shortage of qualified staff in surveys, land office and settlement work; and inadequate coordination among various departments involved.

were educated to accept a radical change in environment and working habits, from that of non-fixed hours of work to a fixed daily routine of eight hours in specific types of work on their holdings. Hence, FELDA has to provide the settlers a 'package deal' in which farmers are to be given not only land but also training in modern practices of farming, social and community leaderships, capital and other inputs (Tunku Shamsul Bahrin and Perera, 1977, p. 25). Basic amenities, such as roads, schools and clinics were also provided. In the context of the NEP, "the opening up of new areas for land settlement forms an important part of the Plan's strategy to eradicate poverty, by enhancing rural incomes and expanding job creation in agriculture" (Second Malaysia Plan, 1971-75, p. 103). Employment opportunities in land development schemes are therefore seen as crucial steps in diversifying rural jobs and making them both attractive and remunerative.

FELDA is now the biggest land development and settlement agency in the country.[5] Between 1971-80, for example, 866,058 hectares of land were opened up in Malaysia, of which FELDA developed 373,705 hectares (43.2%), FELCRA 50,710 hectares (5.8%), RISDA 31,463 hectares (3.6%), other state agencies combined 290,133 hectares (33.5%) and private sector 120,047 hectares (13.9%) (Fourth Malaysia Plan, 1981-85, p. 300). Till the end of 1981, FELDA has developed 556,584 hectares of cropland in 330 schemes and settled 70,563 families in 182 schemes. The remaining 147 schemes were still in various stages of development and not yet ready to take settlers (Jamaludin Lamin, 1982). Most of the areas developed are found in Pahang (40%), Johore (22%) and Negeri Sembilan (15%). During the period 1981-83, a total of 303,200 hectares of new land or 55.8 per cent of the original Fourth Malaysia Plan target was developed, 34 per cent of which (104,200 hectares) was developed by FELDA. This agency alone resettled 15,800 families (Mid-term Review of Fourth Malaysia Plan, 1981-85, p. 167). More significantly, since 1979, FELDA has moved to Sabah and till 1981/82, has developed over 16,000 hectares.

As shown in Table 8, the average scheme size is around 1.7 thousand hectares and each family is allocated an average size of 6 to 8 hectares. The major crops planted are oil palm (65%) and rubber (31%).

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[5]Other agencies include Federal Land Consolidation and Rehabilitation Authority (FELCRA), Rubber Industry Smallholders Development Authority (RISDA), State Economic Development Corporations (SEDCs), State Land Development Board (SLDB) and State Agricultural Development Corporation (SADC).

Table 8 — FELDA Agricultural Land Development Schemes, 1956-1982

Crop		1956-60	1961-65	1966-70	1971-75	1976-80	1981/82	Total
Rubber	Hectarage	5909	35354	18561	45320	54968	11823	171,935
	Scheme	14	37	5	22	34	12	124
Oil Palm	Hectarage	—	11092	53900	116579	126696	53969	362,236
	Scheme	—	9	25	60	69	28	191
Sugarcane	Hectarage	—	—	—	354-6	1123	—	4,669
	Scheme	—	—	—	1	1	—	2
Cocoa	Hectarage	—	—	—	992	10718	5501	17,211
	Scheme	—	—	—	1	10	1	12
Coffee	Hectarage	—	—	—	—	533	—	533
	Scheme	—	—	—	—	1	—	1
Total (hectares)		5909	46446	72461	166437	194038	71293	556,584
Scheme (Number)		14	46	30	84	115	41	330
No. of Families		2772	6083	11863	13779	29566	8554	72617
Average scheme size (hectare)		442	1010	2415	1981	1687	1739	1687
Average land size per family		2.1	7.6	6.1	12.1	6.6	8.3	7.7

Source: Adapted from Jamaludin Lamin, 1982, Table 5.

The majority of the participants in FELDA land schemes are Bumiputera (the Indigenous). It was argued that this is not the result of a deliberate policy of exclusion of other races, but rather the consequence of the concentration of Malays among the rural poor which form the target group of FELDA's development efforts in line with the NEP. However, some view this as a discrimination against other racial groups or others who do not support the ruling political party (see Syed Hussein Wafa, 1972; Jomo and Ishak Shari, 1981; Thillainathan, 1976).

Nevertheless, the expansion of land development by FELDA has served as an instrument for the establishment of a new Malay middle class composed of migrants who were formerly unemployed or underemployed from various parts of the country. The extent to which FELDA has helped to divert rural-urban migration can be judged from the composition of participants of FELDA's settlements in the three states of Pahang, Johore and Negri Sembilan where FELDA's activities have been concentrated (Table 9). Although most of the migrants were from within the same state, in Pahang, it was found that 47 per cent of the FELDA settlers originally came from other states. Studies have shown that the "pull" factor has been the major determinant of migration and most migrants were quite reluctant to move far away from their established place of work (See for example, Mac Andrews and Yamamoto, 1975 ; and Cheong Kee Cheok and Fong Chan Onn, n.d.).

The net average incomes of the settlers in rubber and oil palm schemes are shown in Table 10. During the period 1976-81, oil palm settlers received an average monthly income of about $680 which is about 60 per cent higher than the $425 for rubber settlers. The difference is mainly attributable to the difference in commodity prices. For example, the average annual price of RSS 1 rubber during the period was $2.57 per kilogram and that of crude palm oil was $1,184 per metric tonne.[6] Thus, the average income of FELDA settlers is higher than the poverty level which has been estimated at around $200 to $300 per month per family.[7] In general, despite the dislocation and inconveniences caused by migration, settlers were and felt better off than before (Cheong Kee Cheok and Fong Chan Onn).

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[6]For each hectare of FELDA land, the net revenue estimated in 1977 was $1,216 from the rubber scheme and $2,095 from the oil palm scheme. The figures were lower than those for the estate sector but higher than for smallholding (Table 11).

[7]See, for example Ishak Shari, 1979; Young, Baldwin and Galenson, 1980; Kusnic and Davanso, 1980 for estimates on poverty line.

Table 9 — FELDA's Participants in Pahang, Johore and Negeri Sembilan in 1981

State of Origin	Pahang	Johore	Negeri Sembilan
Johore	1,417	16,745	252
N. Sembilan	362	35	9,483
Pahang	15,517	46	23
Malacca	745	124	400
Selangor	2,592	35	280
Perak	2,756	67	160
Perlis	384	1	3
Kedah	2,050	24	35
Kelantan	1,752	16	31
Trengganu	766	56	10
Pulau Pinang	801	19	16
Total	29,142	17,168	10,693
Outside	13,625 (46.8%)	423 (2.5%)	1,210 (11.1%)

Source: Jamaludin Lamin (1982), Table 8.

Table 10 — FELDA Settler's Average Monthly Income, 1976-1981

Year	Rubber scheme ($/month)	Oil Palm scheme ($/month)
1976	340	514
1977	370	573
1978	398	804
1979	482	831
1980	472	709
1981	492	643
Average	426	679

Source: FELDA.

FELDA settlements, apart from serving as sites of primary production, also generated ancillary economic activities in the nearby townships. Although no survey has been carried out, one can observe that towns such as Temerloh, Maran and Jerantut in Pahang, Kulai and Kota Tinggi in Johore, Kerteh in Trengganu, to mention a few, are experiencing accelerated growth and expansion due to the spill-over effects of increasing demand, especially for consumption goods from FELDA settlers. A study by Thillainathan (1976b) has concluded that the social rate of return on FELDA oil palm scheme was 28 per cent and that for rubber scheme, 13 per cent. The private internal rate of return on the FELDA oil palm scheme was 21 per cent before duty (or 17% after duty) and for rubber scheme it was 8% before duty (or 4% after duty). Hence the writer asserts that "the public-sector-sponsored rubber replanting scheme as well as the diversification programme based on the cultivation of oil palm have proved to be highly successful."

Despite the success story, land development schemes such as FELDA have their problems too. Firstly, the cost incurred to develop such schemes has been very high. It has been estimated that the average cost to settle one family in FELDA's scheme has increased from around $27,750 in 1974/75 to around $50,000 in 1981/82 (Jamaludin Lamin, 1982). The settlers are only required to pay back with interest the actual cost of development for the agricultural holdings and the house and house lot given to them.[8] In 1974/75, the settlers had to pay back an average of $18,500 but in 1981/82 it was $31,000, assuming 6 hectares of agriculture holding and about a quarter acre house lot and a house. The total cost of developing a hectare of land was $6,860 for rubber and $6,755 for oil palm in 1974/75. In 1981/82 the cost went up to $12,333 and $12,414 respectively. The increase in the cost of development was due not only to inflationary trend but also to the scarcity of accessible land, making it necessary to move to areas with more difficult terrains and which were less accessible. Zulkifly Mustaffa (1982) has cautioned against this trend and argued that "a balance has to be worked out between attainment of employment and output objectives on one hand, and high investment cost on the other, for there will always be alternative uses for much funds as are available for public investment' (p. 222).

Secondly, the demand for land always far exceeds the supply. It was reported that about 10,000 families become landless every

[8] In FELDA schemes, the development cost is borne by the settlers, to be paid on an installment basis, while the government bears the cost of administering the schemes and provides the infrastructure facilities.

year in Malaysia (Jomo and Ishak Shari, 1981). It is therefore not surprising that less than 15 per cent of the rural Malay population benefit from land schemes. Hence, while FELDA has managed to expand the supply of cultivated land and helped to decelerate rural-urban migration in Malaysia, such a land development programme, by itself, will not be able to solve the land and income distribution problems. On the other hand, it tends to perpetuate income inequality among the rural population.

Thirdly, to date FELDA has mainly been dealing with perennial crops which have a viable economic lifespan of twenty to thirty years. While having obvious advantages, perennials do have some drawbacks. The economies of scale involved and the high costs of investment do make the supply of the commodities inelastic. Because of the vulnerability of their prices to changes in demand, it follows that farmers' incomes are also subject to ups and downs. While "multicropping" system can help to dampen income fluctuations, it also involves better forms of management and training of farmers.

Fourthly, in the initial stages, the settlers recruited are mostly young, between 20 to 35 years of age with small families. This has two important implications. One is that these people are leaving the traditional rural areas and thus leaving behind the old and the very young to manage the traditional farms. It somehow has affected the productivity in the traditional sectors like padi and rubber smallholdings. The other implication is that, after a generation or two, these same settlers would themselves experience 'overcrowding'. If measures are not adequately taken, a new round of rural outmigration will recur.[9] Under such circumstances, steps have to be taken to provide adequate employment opportunities, for example, to establish agro-based industries in the schemes or their immediate environs. Hence, urban-based activities have to be part and parcel of land development planning. Otherwise the government may have to provide support through greater subsidies over time and this can be a very costly affair in the long run (see also Amir Baharuddin, 1979). Thus, on the basis of effective allocation and equity, the land development programmes have to be designed such that more settlers can be absorbed without increasing farm size any further and even at a lower, but still above poverty income level.

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[9]In FELDA schemes, the unit of holding will remain unaffected because of the conditions attached to the land grants whereby lots cannot be subdivided. Under the Islamic Law (Faraid) this system is not permissible as each of the children should have a share should the parents pass away. To overcome this, there is a move to change the land-grant system to a land-share system.

II. In Situ Agricultural Development: the Case of the Muda Irrigation Project

In contrast to the large and highly organized land settlement schemes typified by the FELDA scheme, another form of development strategy is the *in situ* development which involves both the improvement of amenities and services available in the village, and the modernization of the productive and income earning power of village people in their existing location. This aspect of modernization and development has not been given priority in some countries, such as India, Bangladesh, Burma and Thailand. Malaysia is an exception (Fisk and Sundrum, n.d.). In fact modernization of amenities was recognized and became one of the major thrusts of the late Tun Razak's "Red Book" planning in the 1960s. However, it was during the Third Malaysia Plan period (1976-80) that the government began to give special attention to *in situ* development (Mid-Term Review of the Third Malaysia Plan, 1976-80, pp. 82-92).

Recognizing the fact that the 'cooperative' land schemes such as FELDA's,[10] are not likely to provide a viable long-term solution to the rural poverty problem of the country, alternative methods have to be designed through reallocation of development expenditures away from land development in favour of *in situ* village level investments.[11] This policy reorientation is expected to complement the land scheme projects and increase the flow of investment resources into existing villages. The main advantages of improving existing agricultural areas compared to new land development are: a larger number of family households benefiting, a minimum dislocation of the rural structure and, of course, lower costs of development. (See Table 11 for a comparison of new land and *in situ* land available for agricultural development in Malaysia as of 1981.)

The major characteristics of those areas targetted for *in situ* development are low productivity, small size of farms, underutilization of land and inadequate agri-support services (Arshad Ayub, 1979). It is therefore the objective of the *in situ* development strategy to provide integrated agricultural support services and overall development for the rural areas. As stated in the Mid-Term Review of the Fourth Malaysia Plan:

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[10] Among the cooperative features of FELDA schemes are common development planning, administration, marketing and costs as well as the adoption of cooperative 'Block System' (Mehmet, 1981).

[11] A recent government policy paper on land development has in fact called for a substantial reduction in land development from 1.0 million acres in the Second and Third Malaysia Plan periods to 750,000 in the Fourth Plan, 600,000 in the Fifth and to 500,000 during the 1990s (quoted by World Bank 1981, Vol. II, p. 65).

Table 11 — Malaysia: New Land and *In Situ*[1] Land Available for Agricultural Development by State, 1981 (Hectares)

State	New Land Available for Agriculture[2] ('000)	%	In Situ Land Available for Redevelopment[3] ('000)	%
Johore	461.5	10.5	47.1	3.0
Kedah	65.4	1.5	140.1	9.0
Kelantan	85.4	1.9	168.5	10.8
Melaka	11.3	0.3	23.0	1.5
N. Sembilan	72.3	1.6	35.7	2.3
Pahang	1095.7	24.5	59.8	3.9
Perak	145.7	3.3	102.1	6.6
Perlis	12.1	0.3	26.7	1.7
Penang	0.3	—	21.7	1.4
Sabah	1696.6	38.6	309.1	19.9
Sarawak	323.8	7.4	513.2	33.1
Selangor	87.3	2.0	28.3	1.8
Trengganu	340.5	7.7	77.0	5.0
Federal Territory	—	—	—	—
MALAYSIA	4397.9	100.0	1552.3	100.0

Source: Mid-Term Review of the Fourth Malaysia Plan, 1981-85, Tables 5-11.

[1]In Situ land refers to land already alienated for agriculture but has not been fully utilized or has been left idle.

[2]Based on Soil Suitability Classification.

[3]Abandoned or idle padi land and non-padi land.

> The natural resource development strategy will focus on *in situ* agricultural development, including more efficient utilization of idle and abandoned land. Emphasis will be placed on maximizing farm income by raising productivity through shifting where feasible, to more remunerative crops and cropping pattern, increasing farm sizes by rehabilitating and consolidating farm holdings, and introducing new modern modes of farm organization. (p. 184).

The approach of the *in situ* development took two forms: integrated agricultural development projects (IADP) approach and normal individual departmental programmes. The IADP approach involved the provision of necessary infrastructure, inputs and services and the development of institutions as well as the level of technology among the farmers through training and extension.

Among the IADPs, the construction of the Muda Irrigation Scheme provided the infrastructure necessary for integrated agricultural development to take place, and the Muda Agricultural Development Authority (MADA) was eventually given the task of carrying it out.[12] Various other similar IADPs have started in the 1970s, such as the Krian/Sungai Manik, Barat Laut Selangor, Johore Barat Phase I, Kedah Valley, Kemasin Semerak, Melaka, Negeri Sembilan Timur, Rompin-Endau and Trans-Perak Projects. In all, there are 15 IADPs being implemented covering a total of about 847,500 hectares and expected to benefit 480,100 farm families. Increased productivity ranging from 23 per cent to 103 per cent was experienced in the completed IADPs, namely, Besut, Kemubu and Muda. In terms of income, an increase ranging from 23.6 per cent to 197.0 per cent per household was reported and production increases averaged between 53 per cent to 128 per cent (Mid-term Review of the Fourth Malaysia Plan, p. 233).

Among the IADPs, the Muda scheme has been considered as a model of success, at least as far as padi cultivation is concerned. The Muda Irrigation Scheme is situated in the northwestern part of Peninsular Malaysia, covering over 100,000 hectares of padi land, extending beyond the state of Kedah into the state of Perlis. Since its de-

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[12]The Muda Scheme was originally not identified as an IADP project until the Muda II scheme was started in 1978. However, as noted by Gibbons (1984), many elements of the IADP approach, such as the provision of infrastructure, the integration of water management and farm practices, credit and extension services, were already present in Muda I. Furthermore, many of the methods of operation developed by MADA were emulated by subsequent IADPs. Hence, Muda I can be considered as an initial testing ground for the development of the IADP approach.

Table 12 — Peninsular Malaysia: Producers' Returns for Rubber, Oil Palm and Padi, in Ringgits Per Hectare, 1977

Commodities	Gross Revenue	Total Cost	Net Revenue
Rubber			
Estate	2,958	1,441	1,517
FELDA	1,982	766	1,216
Smallholding	1,344	628	716
Oil Palm			
Estate	3,835	1,399	2,436
FELDA	3,185	1,090	2,095
Smallholding	2,639	852	1,787
Padi			
MADA	3,432	1,586	1,846
Kemubu	2,392	1,364	1,028
Tanjung Karang	3,039	1,520	1,520
Krian	2,283	1,208	1,075
Trengganu	1,346	946	400

Source: Economic Planning Unit, "Review of Agricultural Prices, Taxes and Subsidies," Vol. I, 1979 (unpublished).

velopment in the 1960s, it has met with considerable success. Muda peasants' share of national rice production has reached over 50 per cent of the total. It has benefitted more than 50,000 peasant families who live and work in the scheme. Over 40 per cent of the double cropped areas in the country is in the Muda Irrigation projects. The total padi production in the scheme increased by 53 per cent from 1970 to 1981 (Shukor Kassim et al., 1981, Vol. II, p. 10), and had provided increased income among padi farmers as well as non-farm families (World Bank, 1981). According to the Fourth Malaysia Plan there was an increase in productivity by 32 per cent in the Muda area from 1,448 gantang per hectare in 1970 to 1,909 gantang in 1980. For comparisons, in KADA area the increase was from 1,071 gantang to 1,624 gantang (or by 52%) and in Besut from 721 to 1,369 gantang (or by 90%) during the same period.

Table 12 shows that in 1977, the net revenue of the Muda area per hectare ($1,864) was higher than any other padi area and even higher than the rubber sector, including the rubber FELDA and estate sectors.

Part of the success of the Muda Irrigation Schemes is due to massive government spending on the projects,[13] enabling double cropping and mechanization. Yet the socioeconomic impact of the Scheme is not so clear. The need to consider the problems of Muda peasants has continued to be recognized (De Koninck, 1979; Gibbons *et al.*, 1980).

A study by Jegatheesan (1977) shows that in 1975 the incidence of poverty among padi farmers in the scheme area was about 32 per cent compared to 68 per cent in 1971/73. This estimate might be too good to be true. A study by Shukor Kassim *et al.* (1983) using agriculture census figures, indicates that in 1976 the incidence of poverty in the Muda area was around 63-69 per cent. The World Bank studies (1979 and 1981) further show that the incidence of poverty was about 50 per cent in 1979 and 1981. A review of IADP's shows that the proportion of specialized padi farms that were below the poverty line size (0.25 hectare per capita or 1.25 hectare for an average size household of five people) in predominantly padi schemes ranged from a 'low' of 55 per cent in the Muda scheme to a high of 75 per cent in the Kemubu scheme in Kelantan, with intervening figures being 60 per cent in Krian Sungai Manik and Besut and 61 per cent in northwest Selangor (Gibbons, 1984b). On these latter estimates of around 50%, Gibbons (1984), therefore argued that:

> If the actual poverty incidence as of 1982 is anywhere near this estimate, than the effectiveness of the integrated agricultural development approach *a la* MADA as a poverty eradication strategy would be in serious doubt as would be its potential for reaching the proposed 1990 target poverty incidence of 25% (p.3).

For this reason Gibbons' (1984) study was carried out in mid-1982 in the Muda scheme to ascertain the incidence of poverty and compare it with the situation in 1972/73 based on the FAO-IBRD Muda River Study. The sample coverage was 93 per cent. The findings of the study are as follows:

(i) Over the period 1972-82, despite a substantial increase in the number of farm families from 45,400 to 56,800, there was a substantial decrease, from 68 per cent to 46 per cent in real terms, in the incidence of poverty among house-

[13] Since 1957, the government has spent about two billion ringgit on padi sector development in Peninsular Malaysia, of which $1,250 million was earmarked for drainage and irrigation, $92 million for subsidies on inputs, $101 million for agricultural research and $198 million for IADPs.

holds interviewed in both years, based on the 1972 official poverty-line income of $28 per capita per month. However, the decrease in poverty incidence varied widely between districts in the area, from a high 60 per cent in Yan to a low 37 per cent in Perlis. In absolute terms, the number of poor padi farm households declined by 15 per cent during that period, from 30,845 households in 1972/73 to 26,240 in 1982.

(ii) About half of the poor padi farm households in Muda (23%) were in the "hardcore" poverty group.

(iii) There was an increase in real per capita income from $24.26 in 1972 to $30.17 in 1980 (in 1972 price) and over 90 per cent of all households that had been planting in 1972 and were interviewed in 1982 had a higher per capita household income in 1982 than in 1972. But 5.6 per cent had experienced a declining per capita income during that period.

(iv) The overall degree of satisfaction of basic needs (such as nutrition, health, education, housing and sanitation) was close to 70 per cent in 1982, and did not vary much among districts.

Behind these successes some serious problems still persist. What is of special concern is that about half of the remaining poor are still trapped in the 'hardcore' category, and there still exist wide variations in the incidence of poverty among districts in Muda. Thus the prospects for achieving the target of 25 per cent in the incidence of poverty by 1990 are not at all encouraging. Due to high rates of population growth and household formation in the rural areas, and inadequate rates of outmigration (unfortunately, employment creation in the modern sector and a number of places on land development schemes together were insufficient to bring a net decrease in the number of padi farm households), pressure on the padi land increased and this set the limit on improving income inequality.

The persistence of poverty is closely linked to small and uneconomic farm size, and commercialization of peasant agriculture with mechanization that results in a tendency towards concentration of land in few hands.[14] At the same time, the opportunities for

[14] At this stage, there is however no evidence of a tendency to landownership concentration, but what mostly happened was a tendency to repossession by enterprising farmers by either taking back land from tenants or leasing land from owners who did not wish to operate it. This process has been accelerating

small farmers to earn additional income from working on other people's farms decreased as labour is displaced by machines (Shukor Kassim, 1984; Gibbons, 1984b; De Koninck, 1981). As noted by Gibbons (1984b):

> Small padi farmers could no longer earn much from ploughing and threshing because of increasing competition from tractors and combine harvestors; and their wives could not get much work cutting padi because this too was done by the combine. Even transplanting work by women declined because of increasingly widespread use of direct seeding (p. 28).

Of significance is the upward pressure that had been exerted on agricultural salaries of wage labourers over recent years because of competition from more efficient machines (Jagatheesan, 1980).

The process of modernizing the agricultural sector has changed the structure of farm size and tenure. Gibbons, *et al.* (1981) estimated that out of a total of 46,547 farms in the Muda area in 1955, 32.5 per cent were small (less than 2.84 acres), about half were medium-sized 2.84 - 7.0 acres) and the big farms (more than 7.0 acres) accounted for 17.8 per cent. Twenty years later, nearly 50 per cent of the farms were in the small category while the big farms maintained their hold over padi cultivation (Table 13). This was mainly because, with the lowering costs of production through government subsidies and the increase in productivity through double cropping, smaller amounts of padi land could now support a household. Furthermore, the inheritance law encouraged existing households to fragment their holdings to enable children who could not find work outside the sector to earn a livelihood from it. Thus the proportion of small farms grew.

Available evidence shows that, currently, there is no significant difference in productivity per unit of land between small and large padi farms in Muda, in spite of the widespread adoption of mechanization and direct seeding.[15] Hence total farm size is not a very crucial factor in explaining income differences among padi farmers.

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since combine harvestors began to operate in the Muda region in 1977. By Mid 1980, there were already over 200 of them in the Muda Scheme. Most owners owned one machine each and most of them were Chinese traders or small industrialists. But the majority of those who rent the services of these machines were the Malay peasants (De Koninck, 1981).

[15] In fact in some parts of the Muda scheme and in other parts of the Peninsula, such as in Sekinchan area (Kuala Selangor) and Province Wellesley, small padi farms are substantially more productive than large farms (Gibbons, 1984).

Table 13 — Farm Size Distribution in the Muda Area, 1955-1975/76
(in percentage)

Farm Size (acres)	1955		1966		1972/73		1975/76	
	Farms	Area	Farms	Area	Farms	Area	Farms	Area
> 7.0	32.5	10.1	38.1	17.3	39.5	16.8	46.7	17.0
2.84-7.0	49.6	46.9	46.4	44.9	48.5	52.8	38.9	43.2
< 2.84	17.8	43.0	15.3	37.8	12.0	30.4	14.6	39.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of Farms	46,547		49,772		43,921		61,164	
Mean Farm Size (acres)		5.1		4.0	4.0	4.0		4.0
Gini Index	0.396		0.354		0.360		0.445	

Source: Gibbons, *et al.* (1981).

The increase in the profitability of padi agriculture also partly explains why there occurred a transition to owner-operated farms, and the gradual displacement of tenant farmers. The tenant class has declined from 42.3 per cent in 1955 to only 24.3 per cent in 1975/76 of total padi farmers in Muda area (Table 14). Since pure tenants could not possibly join the owner-operator class, most of them were probably marginalized (Shukor Kassim, 1984, p. 400).

Attempts at introducing tenancy reform legislation in 1955 and in 1967 had failed (Smith and Goethals, 1965; Ministry of Agriculture, 1973). The failure has been largely connected to the significant political clout of padi landlords. As noted by Shukor Kassim (1984), unlike redistribution of ownership of agricultural land, tenancy reform does not deprive landlords of their power (i.e., control over access to the land) which they then use to block its implementation.

Also, while subsidies have been important for increasing farmers' income, they tend to benefit the rich more than the poor. In Malaysia, there are three main subsidies for padi, i.e. government support price, a payment of $10 for each picul of padi sold through the Lembaga Padi Negara (National Padi Authority) or its agents, and the provision of free fertilizer at the rate of two bags per relong up to a maximum of 8.5 relongs[16]. All these methods naturally favour the big farmers, the first two since they produce and sell more padi, and the last, because the big farmers own bigger farms. All these therefore only tend to increase the concentration of padi farms in the Muda area. Such a situation, if left unchecked, may worsen the position of small farmers over the years.

Based on his fieldwork experience, Gibbons (1984b) argues that it is the widespread underemployment (rather than surplus labour) which is the immediate cause of the persistence of poverty in Muda area. This is not shown clearly in official statistics. The fact is that small farmers cannot afford to be unemployed. Although it is recorded in official statistics that these farmers work more than 25 hours a week (indicating full employment), the type of work that they do are not that productive, like looking after the animals. According to Gibbons: "On the rare occasions when they have something better, their children will tend the goats or the buffalo. Most of the time they are underemployed, no matter what the statistics say".

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[16] 1 hectare = 2.47 acres = 3.48 relongs (Kedah).

Table 14 — Land Tenure in the Muda Area, 1955-1975/76

Tenurial Status of Farmers	1955		1966		1972/73		1975/76	
	% Farmers	% Area	% Farmers	% Area	% Farmers	% Area	% Farmers	% Area
Owner-Operator	37.6	30.9	44.5	39.5	44.0	43.2	56.1	45.3
Mean Farm Size	4.2		3.6		3.9		3.2	
Tenant	42.1	40.0	41.4	38.8	37.6	30.3	24.5	22.7
Mean Farm Size	4.8		3.8		3.2		3.7	
Owner-Tenant	20.3	29.1	14.0	21.7	18.5	26.6	19.4	32.0
Mean Farm Size	7.3		6.1		5.7		6.6	
Total Farmers	46,547		49,772		43,921		61,164	
Mean Farm Size (acres)		5.1		4.0		4.0		4.0

Source: Gibbons, *et al.* (1981).

While rural outmigration from the overpopulated land-scarce states of Kedah and Perlis has eased the problems of employment and underemployment in the Muda Area,[17] and this has brought undeniable benefits for the outmigrants and the economy as a whole, the benefit to the rural community of origin is not obvious. The outmigrants were mostly the younger, potentially more productive, better educated and more economically active than non-migrants or inmigrants.

> "The loss of a significant proportion of the younger, more able and better educated men and women increases the dependence of rural communities on the elderly and the women and tends to increase their conservatism and hamper the viability of local level social and political institutions. As always, it is the poorer households who suffer most, being obliged to substitute elderly or female labour for the outmigrant male labour because of their lack of cash with which to acquire the mechanised, capital intensive technology available to more affluent households" (Corner, 1983; pp. 49-50).

Finally, since the problem of poverty is still serious in an area like Muda where it is well taken care of, the situation in other predominantly padi regions of the country is bound to be worse. Clearly the issues of employment and poverty eradication in the padi sector will continue to be matters of great concern.

Rural Industrialization: Role of Industrial Estates

Although Malaysia is primarily an agricultural country, it had long been envisaged that the pace of development had to depend on industry. A start was made in the 1950s with the opening up of a 120-hectare industrial site in Petaling Jaya, a satellite town of Kuala Lumpur, by the Selangor state government. The expansion of indus-

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[17] In the study by Corner (1982), it was found that 73% of single cropping farm households had generated long-term outmigration, while a further 13% had experienced short-term outmigration. Among double cropping farms, 36% of households had produced long-term outmigration, a further 29% had experienced short-term outmigration and 35% remained unaffected. It was also reported that the smallholders, in Perlis expecially, had no choice but to work their padi land themselves while some "took the easy way out" by engaging cheaper labour from southern Thailand even at a risk that these workers abandon the fields halfway to look for jobs in other areas, as often happened after being paid for part of the work. This resulted in padi planting falling behind schedule. Late planting could lead to all sorts of problems, including diseases, and the farmers incurred losses unnecessarily (New Straits Times, October, 31, 1984).

trial estates was dictated by the industrialization policy prevailing during different periods of time. After independence and into the 1960s, emphasis was given to the creation of an industrial base in order to diversify the economy and create employment opportunities. It was natural then for industrial development to start from the vicinity of Kuala Lumpur in the Klang Valley. This was because infrastructure, human resource and other services, which are vital for the success of any industrial project, are most available in such an area.

In the beginning, the occupancy rates were slow, and the development of industrial estates was concentrated in the more developed states. Thus in the 1960s, when Malaysia experienced a rapid growth of the manufacturing sector, regional imbalance had been aggravated. Industrial location behavior of investors, more so foreign investors, was oriented towards the already developed urban areas in the west coast of the Peninsula. Especially during this period of import substitution, the orientation towards the major markets for consumer goods constituted an additional factor attracting industries into these areas (German Development Institute, 1978). By 1970, there were 13 industrial estates existing in Malaysia, covering 1,934 hectares, of which 45 per cent were in Selangor and 25 per cent in Perak. There were no estates in the poor states of Kedah, Perlis, Kelantan, Trengganu and even Melaka (Table 15). It was estimated that in 1972, about 30 per cent of the manufacturing labour force was employed on industrial estates (UNIDO, 1978).

The majority of the estates have been developed by state governments through their State Economic Development Corporations (SEDCs). The SEDCs are responsible for the provision of land layout, surveying, provision of infrastructure and maintenance of estate. In addition, they also monitor the progress of estates, regulate and select industries, and contribute toward the policy formulation at the state as well as federal government levels.

At the federal level, the Malaysian Industrial Development Finance (MIDF) was established in 1960 with the specific purpose of providing loan and facilities to private enterprises. The subsidiary of MIDF, the Malaysian Industrial Estates Limited (MIEL), was originally formed with the intention of helping small industries to acquire needed buildings and other facilities for their operations.[18] To facilitate further the development of industry, the Federal In-

[18]But it later turned out that factories built by MIEL were not cheap and loans by MIDF were being mainly motivated by profit motives. They attracted more large foreigns firms than small local ones.

Table 15 — Structural Changes in State Manufacturing, 1970-1982

State	State's Share in Total Manufacturing Employment (%)			Industrial Estate Development (Planned)					
				Number			Share of Total Hectarage (%)		
	1970	1980	1982	1979	1981	1982	1970	1981	1982
Johor	11.4	13.0	13.0	2	12	12	8.6	15.5	15.2
Kedah/Perlis	4.9	3.4	3.8	—	7	6	—	5.1	4.5
Kelantan	3.1	1.8	2.4	—	6	6	—	5.8	5.7
Melaka	3.3	4.5	3.8	—	7	7	—	3.2	3.2
N. Sembilan	2.8	2.9	3.4	1	5	5	6.9	2.6	2.6
Pahang	3.2	4.2	4.5	1	8	8	0.3	12.2	12.0
Perak	14.4	10.8	10.3	2	6	8	24.6	6.4	7.6
Pulau Pinang	11.6	18.0	15.7	1	8	8	5.2	12.7	12.5
Sabah	1.8	0.9	3.4	2	5	6	5.8	3.5	2.7
Sarawak	7.0	2.7	4.0	2	5	5	0.2	6.5	6.6
Selangor*	31.6	36.3	33.4	2	14	16	44.6	21.1	22.1
Trengganu	5.0	1.5	2.2	—	8	9	—	5.4	5.5
Malaysia	276,000	750,500	778,700	13	91	96	1,934	10,671	10,885

Source: MIDA Reports.

*Including the Federal Territory.

dustrial Development Authority (FIDA), now renamed the Malaysian Industrial Development Authority (MIDA), was effectively established in 1968 to act as an "all purpose clearing house" – to undertake feasibility studies, to promote industries, to coordinate industrial activities, to recommend industrial site development, and to advise the government regarding industrial development issues.

With the establishment of such institutions, and with the promulgation of the Investment Incentives Act of 1968 (which superceded the 1958 Pioneer Industries Ordinance) and subsequently the New Economic Policy, the role of industrial development and industrial estates changed. Industrial estates began to be regarded as a very important and promising tool for urban and regional development. The role of industrial estates has also included the modernization of rural areas, relieving of urban congestion, and promotion of exports of labour-intensive manufactured goods via the Free Trade Zones (FTZs). In the Second and Third Malaysia Plans, it was emphasized anew that new townships and 'growth centres' would be selected and developed so as to bring industries to the rural areas, thereby reducing regional imbalances.

By the middle of the 1970s, all states in Malaysia, except Perlis, had their industrial estates which totalled 54 and covered 6,674 hectares. By then, the industrial estates programme in Malaysia was already regarded as successful. In a comparative study of industrial estates in 12 developing countries by UNIDO (1978) it was concluded that the benefits of industrial estates, viewed quantitatively, had been marginal, with the exception of Malaysia. The success of the Malaysian industrial estates was explained by two major factors: the liberal package of fiscal incentives and the provision of adequately secured plots at lower prices than industrialists could obtain by themselves. This conclusion is at best very general and may be accepted in as far as attracting industries to the estates. But to what extent the objectives of decentralization and rural development have been fulfilled is not certain.

However, by early 1980s, many industrial estates in the less developed states have already been opened up, making up a total of 96 in 1982 (Table 15). This included eight FTZs,[19] which covered an area of about 1,600 hectares or 15 per cent of the total industrial estate area of 10,885 hectares. With this, the share of total estate hectarage for the states of Selangor and Perak declined substantially

[19]They are Bayan Lepas, Prai and Pulau Jerajak in Penang, Sungai Way/Subang, Ampang/Ulu Klang, and Telok Panglima Garang in Selangor, and Batu Berendam and Tanjung Keling in Melaka.

to 22.1 per cent and 7.6 per cent, respectively in 1982 from 44.6 per cent and 24.6 per cent in 1970. Nevertheless, the share of the three most developed states, i.e. Selangor, Penang and Johore, together accounted for about 50 per cent of total hectarage, compared to 37 per cent in terms of population.

Generally, as expected, the distributional pattern of industrial estates tends to correspond to that of overall regional development. At the national level, manufacturing is dominated by the Klang Valley region in Selangor (including the Federal Territory) which serves as a focal point of the nation. Other smaller centres represented by state capitals like Georgetown-Butterworth, Johore Bharu, Ipoh and Seremban, control flow of smaller magnitudes and represent secondary level growing points. The remainder consists of a vast periphery in which manufacturing activities are much limited and lacking in diversity. Nevertheless, they represent an important aspect of rural development as well as intra-state or intra-regional industrial development (Chi Seck Choo, 1980).

In summarizing the development of industrial estates in Malaysia, two distinct phases can be observed. In the 1960s, the main emphasis had been to spread away from the Klang Valley to other major state capitals. After 1970, the spread had involved more of intra-state or intra-regional dimensions. In the more developed regions, the estates have tended to expand in size around the major urban areas such as those in Klang Valley of Selangor, in Penang, in Kinta Valley of Perak and in Southern Johore. On the other hand, in the less developed regions, industrial estates have been spreading sporadically away from the state capitals towards smaller towns in the hinterlands, which include areas where there are virtually inadequate infrastructural facilities and external economies on which industrial development can be based. Besides, the distance separating the smaller towns from the major urban centres is quite considerable. The basic idea was to push industries into the lagging rural areas.

It was estimated that by 1980, about 26-28 per cent of manufacturing employment was located in industrial estates (Economic Planning Unit, 1982). This was slightly lower or at least not higher than that ten years earlier. Nevertheless, the contribution of industrial estates to increasing employment is relatively large in Malaysia compared with most countries which normally do not exceed five per cent (UNIDO, 1978).

Among the employment characteristics which typify the sample of industrial estates studied in 1981 are:

(i) Most workers (about 98%) were full-time paid employees and less than 0.5 per cent were working proprietors or active business partners. This reflects the fact that firms in estates are generally bigger in size.

(ii) There was a high proportion of Bumiputras (54% against 45% for total manufacturing), thus indicating the achievement of the NEP in encouraging greater Bumiputra participation in the industrial sector. However, a substantial proportion of Bumiputras were in the lower occupational categories (Table 16).

(iii) Total female Bumiputra employees in industrial estates comprised 31.6 per cent and Non-Bumiputras, 22.7 per cent, making up a total of 54.3 per cent of female participation. Only a small proportion (19%) of female workers were in the managerial, supervisory and technical groups. But female workers accounted for 61 per cent of total factory workers as against 54 per cent of the total industrial workers in the country. Most of them were rural migrants working in electronic, textile and clothing factories.

(iv) The majority of factory workers were young, about 70 per cent of them below the age of 30. Among the females, 76 per cent were within the 15-29 age group. The main reason was because of the more recent entry of female workers into the industrial labour market which requires a substantial number of young unskilled and semiskilled female labour force for factory operations.

(v) The majority of workers were originally from localities surrounding the industrial estates. About half were originally from within a radius of 25 kilometres from their place of work, and certainly a large number from within the same state. Most of the industrial estates which registered a high proportion of employment of local manpower were those in the less developed areas.

(vi) About two-fifths of the industrial estate workers had no working experience prior to their present jobs. This means that more workers (60%) had some previous jobs before being employed in the industrial estates. Notably, 41 per cent of total workers or 68 per cent of the previously employed were farmers or agricultural estate workers.

Occupational Category	Malaysia				Expatriate	TOTAL
	Bumiputra		Non-Bumiputra			
	Male	Female	Male	Female		
Managerial & Professional	1,211 (17.1)	259 (3.6)	4,255 (59.9)	781 (11.0)	595 (8.4)	7,101 (100)
Supervisory & Technical	3,370 (22.2)	971 (6.4)	8,417 (55.5)	2,237 (14.7)	182 (1.2)	15,177 (100)
Clerical & Related Occupation	1,990 (15.3)	2,113 (16.3)	3,787 (29.1)	4,961 (38.2)	146 (1.1)	12,997 (100)
Factory Workers — Skilled	15,186 (21.6)	26,676 (38.0)	12,072 (17.2)	16,104 (23.0)	126 (0.2)	70,164 (100)
— Unskilled	11,256 (26.8)	16,237 (38.6)	4,532 (10.8)	9,865 (25.5)	150 (0.3)	42,040 (100)
General workers	7,040 (54.1)	2,868 (22.0)	1,780 (13.7)	1,307 (10.0)	21 (0.0)	13,011 (100)
TOTAL	40,053 (25.0)	49,124 (30.6)	34,843 (21.7)	35,255 (22.0)	1,220 (0.7)	160,495 (100)

The above conclusions from the study by the EPU[20] indicate that, although industrial estates have provided jobs, especially for the young and the females from nearby locations, their actual contribution to new job creations was fairly limited. Perhaps they contributed in terms of better paying jobs, or shifting the workers from lower paid rural occupations to higher paid industrial activities. Nevertheless, quite a substantial number of workers were also drawn from the urban labour market.

In addition, most of the workers were less educated and engaged in low paying unskilled factory operations. It was noted that 27 per cent of the workers had only primary or no formal education, 37 per cent had lower secondary and 30 per cent had upper secondary levels of education. Some 23 per cent of the industrial estate workers earned below $250 per month, which can be considered below poverty income level, and another 33 per cent had income between $250 and $400 a month. It is tempting to lump the majority of the workers with monthly income below $400 in 1981 within the poverty group if we are to take into account the cost of living, considering that the cost transportation and house rents could form a significant proportion of income. As noted earlier, approximately half of the workers lived more than 25 kilometres away. For example, Melmet (1984) observed in a study that:

> A high proportion of rural industrial workers were commuters residing in rural areas but being bussed to factories located on industrial estates. This was true especially for labour-intensive industries such as textiles, garments and electronics. These industries, which were responsible for much of the job creation in the manufacturing sector, paid wages in 1981 that were as little as 60 per cent of the average for the manufacturing sector as a whole: ranging between $1,500-$2,000 (per year in constant 1970 prices). If, following Young, *et al.* (1980), then the annual PLI (Poverty level of income) for a household of 5 works out to $1,980 (1970 prices), implying that a significant proportion of workers from rural areas working in the manufacturing sector were earning wages below the PLI.

But then, as conceded by Mehmet (1984), the rural poor working at sub-PLI wages in the manufacturing sector, though still living in poverty, might be better-off as compared to their earlier

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[20]Most of the conclusions are also supported by other studies, although limited in coverage. See Chi Seck Choo, (1980), Ismail Salleh and Osman-Rani (1982), Lim, C.C. (1979), German Development Institute (1978), Jamilah Ariffin (1981).

economic status. In another study on the poor state of Kedah, it was also found that in 1981 about 65 per cent of the industrial workers earned an average of $250 or less per month, with the majority of them in the $100-$200 bracket. Compared to their counterpart in the Muda Irrigation Area, their average income was lower (Ismail and Osman-Rani, 1982). This might have explained why, in the case of Kedah, only 2.2 per cent of industrial workers were originally farmers. The rest were mainly previously unemployed (54.2%) or factory workers elsewhere (21.6%).

Nevertheless Mehmet disregarded the point that many of these 'poor' workers were staying with their family and were therefore merely 'additional' workers to provide extra income, however small, to the family. The survey made by the EPU indicates that 43 per cent of the industrial estate workers did often provide extra money for the family expenditure at home and another 25 per cent sent home some money occasionally.

A question that we need to answer is this: How efficient or effective has the industrial estate programme been in achieving its objectives of employment and regional income equality? In general, the share of industrial estates in terms of area in the less developed states has increased in the 1970s at the expense of the share of more developed states. Thus the distribution of industrial estates has improved over the years. However, the distribution of manufacturing output or employment has not been improving. Similarly, the growth of industrial estate area far outstripped the growth of manufacturing output or employment. This indicates that while there has been a tendency towards a more widespread distribution of industrial estates, the impact of these estates varied from location to location. Those in the less developed regions have been less successful in attracting industries than those in the more developed regions. What happened was that the plants in existing industrial estates in more developed regions have been expanding (in fact more rapidly) at the same time that the number or hectarage of industrial estates in the less developed regions has been increasing. Morever, the occupancy rates of industrial estates in the less developed regions have been generally lower. In addition, it has been observed that many of the lots sold have not been occupied for some time or have been occupied by non-industrial units. There are also indications that industrialists have taken the opportunity to buy plots of land in industrial estates because of the attractive low prices, mainly for speculative purpose.[21] Even those who occupy them tend to overbuy them

[21] It is not uncommon to find cases where the time lag between the date of approval and the date of production is long, stretching up to a few years, especially in the less developed regions.

owing to the low prices.

The lower prices of industrial estate land in general compared to that outside industrial estates, and the price differential across regions indicate that the price of industrial estate land is quite a crucial factor for buying decisions but not necessarily for location decisions. But the availability of the saleable industrial site practically everywhere, including in the more developed states, means that the shortage of land is still to date not a serious constraint for industrial location in Malaysia.[22] To prove further an analysis based on available data from the Directory of Approved Companies published by MIDA,[23] for the years 1975 and 1979, 56 per cent of approved companies in production were in industrial estates in 1975. But then the percentage fell to 43 per cent by 1979. Even if we exclude resource-based industries, like wood and wood products, the increase in the number of companies outside industrial estates was higher than inside industrial estates. In fact, in 1979, almost 80 per cent of companies outside industrial estates were without any tax incentives compared with 54 per cent inside industrial estates.

Hence, while an industrial estate may provide a sufficient condition for industrial location,[24] it may not be necessary to many firms. Interestingly, 62 per cent of the new approved companies between 1975 and 1979 in the more developed western states (Selangor, Penang, Perak and Negeri Sembilan) were outside industrial estates; the corresponding figure for new companies in northern (Trengganu, Kelantan, Kedah and Perlis) and eastern states (Sabah and Sarawak) was 69 per cent. Thus even in less developed regions, the effectiveness of industrial estates was limited.

In terms of employment creation, the performance of industrial estates is still biased towards concentration in the more developed states. In fact, the distribution of employment on industrial estates was more skewed than that off industrial estates at the end of the

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[22]For example, by end of 1982, Selangor and the Federal Territory had still 127 hectares of industrial estate land available for sale, in Penang 606 hectares and in Johore 176 hectares. Together they accounted for about 50 per cent of total hectares still available in the country (MIDA 1982 Annual Report, Table XIII).

[23]The figures may be underestimated since they include only the big firms, and majority of industrial estates cater mainly to big firms and most small industries are found outside industrial estates.

[24]See for example, Lim Kok Cheong (1978) which shows that the availability of industrial estates ranked at the top of the list of location factors for industrialists in Malaysia, followed by transport facilities as the next most important factor.

1970s. A major reason for this is the concentration of labour-intensive electrical, especially electronic, and textile industries in industrial estates in the developed states like Selangor and Penang.

The analysis of the incentive policy, revealed that, due to a lack of strategy, the use of incentives was not ruled by clear locational and subsectoral priorities. In short, "the shortcomings of the dispersal components of the incentive system prevent the full achievement of the decentralization goal" (German Development Institute, 1978). Whatever advantages offered to attract industries to less developed regions (such as the Labour Utilization Relief and lower price of land) have not been able to offset the disadvantages of the less developed regions or the advantages of the more developed regions.

Notwithstanding this, it should also be noted that a substantial number of establishments were actually being relocated in industrial estates without much industrial development taking place. The EPU study indicates that about 20 per cent of establishments have been relocated. In fact, those estates with high percentage of relocated establishments were mostly in the less developed states. The relocations therefore have not affected the regional distribution of industries in any significant way. The majority of the relocated firms were from within the same states. There were several reasons for the relocations. Firstly, the need for establishments to expand was being hampered by the lack of space in original locations. Secondly, as part of urban land-use planning, the firms have been required by the state authorities to move to new locations. Thirdly, although never explicitly mentioned, was the low price of industrial estate land in relation to previous locations.[25] Other reasons include better infrastructure facilities, better access to material and/or labour supplies, and other personal reasons.

It has also been found that many industrial estates in less developed regions suffer from shortage of power, water and communication facilities. On top of that, as indicated earlier, some of the estates were located too far away from agglomeration centres, rendering them practically useless. As admitted by the government (Mid-Term Review of the Fourth Malaysia Plan, p. 157), the fiscal and locational investment incentives favoured large capital-intensive, export-oriented industries which required skilled labour, specialized services and port facilities, which were not present in many rural locations.

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[25] In this situation, industries would be able to realize high capital gains by selling their more expensive land and moving to cheaper industrial estates.

There are very few industrial estates which cater mainly (i.e. more than 50%) to small firms. Even the bigger ones are mainly those of resource-based industries. Examples are Tupai in Perak, Dioh in Negeri Sembilan and those in Kedah. The case of Kedah is an interesting example of success of industrial estates in less developed states.[26] In their study on industrialisation and rural development in Kedah, Ismail and Osman-Rani (1982) found out that the four major advantages enjoyed by firms in the industrial estates there were: availability of basic facilities, availability of unskilled labour, cheap land and availability of raw materials. Highly skilled or trained workers were not important because most of the industries were small, labour-intensive, using low technology and mainly catered to the local market.[27] On balance, it was the small-scale industries which tended to have greater linkage effects, backward as well as forward, with the rural sector.

However, the fact still remains that the industrial workers were generally not stable. There was a high rate of turnover. Among the reasons were low income, the workers' propensity to seek opportunities for better jobs (especially during the peak planting and harvesting seasons), lack of discipline, and the understandable reluctance of female workers to work on night shifts. Of course these problems were not unique. Many other industrial estates are also suffering from such problem (see for example, Chi Seck Choo, 1980).

Other general problems of industrial estate development in Malaysia include selective linkage to certain industries and sectors, or the lack of it. Also, according to Chi Seck Choo (1980) and the EPU study (1982), regional income generation was limited by the low employment multipliers, by low wage and by a high proportion of local value added (minus wages) which leaked out of the region. This low multiplier effect was basically due to the limited intersectoral interdependencies in the regional economy itself. The planning with regards to industry mix was practically absent as industrial estate planning in Malaysia was carried out at the state level. This means that it was widely decentralised and influenced by interest which do not always comply with the goals of the national decentralization policy. The competition among states is normally judged on the basis

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[26]Kedah is one of the poorest states in Malaysia. Its GDP per capita or household income per capita was 40% below the national average in the early 1980s. About 90% of industrial workers were in industrial estates. Agriculture accounted for more than three-fifths of Kedah employment and within the agriculture sector two crops predominate, i.e. rubber (53%) and padi (30%), in terms of land-use.

[27]The larger firms were mainly export-oriented rubber-based industries which took advantage of Penang port facilities nearby.

of the quantity of industrial land sold rather than the industry-mix. Therefore, claims by the UNIDO study that the Malaysian industrial estate were successful may be rather exaggerated.

Summary and Prognosis

Malaysia is fortunate in some ways. Unlike most developing countries, Malaysia is well endowed with natural and valuable resources. It has a stable and, more importantly, a committed government. The problem in Malaysia is not growth. This has been achieved pretty well under an essentially capitalistic regime, where the modernization of the economy has been based on manufacturing, extractive industries and the cultivation of commercial crops for world markets. The major problem of development policy is distribution, which the government aims to achieve through growth. Thus, even under the New Economic Policy, the development efforts continue to depend on an indirect, trickling-down strategy to distribute some of the national prosperity to the poor.

While there has been considerable reduction in the incidence of absolute poverty, there has at the same time been a widening of income disparities within ethnic groups, sectors and strata. Hence, in terms of relative poverty, the success of the development policy is still questionable, especially when seen from the radical critics' point of view. This does not mean however that the NEP is a dismal failure. The immediate concern of the NEP is overcoming absolute poverty for all races. And its ultimate objective of national unity is apparently being translated into overcoming the problem of relative poverty along the line of ethnicity. The underlying assumption is that the problem of inter-racial inequality is more crucial or more urgent than inter-class inequality (at least in the Malaysian context as proven by the racial riots of May 1969). Therefore an evaluation of the achievement of the NEP is a also matter of interpretation and priorities.

It is not the purpose of this paper to be involved in the above controversies. The fact still remains that the government is committed to ethnic restructuring by closing the economic gap between Malay and Non-Malay communities, thus "giving poverty eradication a second row seat" (Shang Rern, 1984). The government sees the proximate cause of this to be the concentration of Malays in rural areas, in poor states, and in low productivity agricultural occupations (Hainsworth, 1980). Thus several projects have been implemented to help the rural sector.

In this paper I have attempted to discuss three major relevant projects, i.e. the Felda Land Settlement, Muda Irrigation, and Industrial Estates Development, for several reasons. The government has

mobilized so much money, energy and talents on these 'priority' projects and their failures can easily propel the poverty eradication objectives to a political and social imperative. As such these projects have persistently been under the scrutiny of researchers, politicians and economists alike. Their reactions are mixed. While some have regarded them as successful, especially by international comparisons, others have thrown in much skepticism. Nevertheless, they have significantly determined the development performance of Malaysia.

The FELDA settlements, Muda Irrigation Scheme and the dispersal of industrial estates are all part and parcel of the overall strategy for the accelerated and orderly development to reinforce the national development objectives of achieving balanced regional growth through greater employment opportunities and increasing incomes. The FELDA schemes have been successful in providing more stable employment and high income, holding back the migration of rural population to urban centres, and generating ancillary economic activities in the surrounding areas, thus creating a semi-urban environment. The land development activity is mainly for commercial agriculture (in particular oil palm and rubber) with export orientation. Attempts at diversification involving cocoa and sugarcane has so far not met with success. The crop planting activities of FELDA have given the smallholders management and technological knowledge to obtain maximum benefits for their lands. The land development has so far been an important instrument for economic growth, utilization of remote unpopulated areas, and changing the structure and attitudes of the society.

However, the success of FELDA is mainly limited by high costs of implementation and the instability of agricultural prices and hence income. In addition, the land schemes suffer from major structural changes owing to the fixed land-labour ratio. The 'second generation' problem can destabilize the situation in the long run if not closely monitored. The latter problem, however, can be remedied through a carefully planned policy of 'managed migration', to use Mehmet's (1982) term, which involves a diversified rural development policy to successfully expand employment and income opportunities. Hence *in situ* development and industrial dispersal are important complementary strategies. Equally important is the income stabilization scheme where, as proposed by Mehmet (1982), excess revenues accumulated during the boom phase will be used to cover the income shortfall during the slump. There has also been a move to provide adequate training in commercial and industrial activities to the children of land settlers to prepare them for jobs outside the scheme. What is clear from all these is that land settlement alone will never be adequate to handle the rural problems as the demand for land will always outstrip the supply. The limited jobs offered by land de-

velopment schemes, so far, have in a way contributed to the widening of income inequality among Malays and among the rural population in general.

Apart from land development projects, the focus on *in situ* development in the padi sector is understandably important. It is not only because this sector is one of the poorest but also because of its strategic significance,[28] being the supplier of the staple food for the population. While the Muda project has been successful in increasing the incomes of the majority of farmers, at least a quarter of them are still among the poorest of the poor. Since Kedah and Perlis do not have much suitable land for development, the prospect for employment expansion in padi land is extremely limited. The opportunities offered by new land development elsewhere is also not encouraging. So the only way to ease the poverty situation in Muda area is to increase the productivity of farm households. The National Agricultural Policy (NAP) introduced recently this year suggests "estatized rice-farming" as one of the solutions to overcome poverty. This has been proven successful by a cooperative society (Koperasi Gabungan Negeri) which consolidated abandoned rice-fields in Province Wellesley and replanted them with rice (Goh Cheng Teik). Because the consolidated holdings are large, they have been able to mechanize their operations and reduce the unit cost of production.

The idea behind this is for the poor farmers in the Muda area with uneconomic sized holdings to pool them and then run on a "mini-estate" basis with the use of the best technology available. However, Gibbons (1984) rejected the assumption that padi estates would be more productive per unit of land than the small ones over a long period. The basic reason is because there is no significant difference in productivity per hectare between large and small padi farms in Muda. The failure of the Assam Jawa area in Kedah is a glaring example. Furthermore, "estatizing" of padi farms does not guarantee regular employment because the resulting mechanization displaces the small, less educated poor farmers who are not suitable for jobs in agro-based activities of the cooperative. Worse still, according to the NAP, the role of subsidies in agricultural development is going to be progressively reduced as the "subsidy mentality" has to be removed. It will have to be replaced by sheer hard work, better management practices, work ethic and self-reliance. This may be a good long-run strategy, but the present ageing agricultural workers may have to

[28] According to the original target of the National Agricultural Policy, national food security requires that Malaysia be 80-85% self-sufficient by the year 2000. Now it is about 70%. However, there was a change in emphasis recently providing that the income objective should override the security objective; hence 70% sufficiency should be regarded adequate.

suffer since the young and the educated are moving out of the farms. Furthermore the problem of small farm size (even if "estatized," the share is still too small) is not likely to be offset by increase in productivity because it needs an increase of 100 per cent to reach poverty line income level (Shukor Kassim, 1984). As the option of land reform does not seem possible, subsidies have to be continued until such time as sufficiently large numbers of poor padi households have been transferred to other sectors. The subsidy system needs proper control lest it be abused. There have been allegations that a substantial amount of the aid did not go to the poorest.

As part of the overall strategy, the industrial dispersal policy should play a very important role in providing employment opportunities in the modern sector, especially for the rural workers. Experience has shown that moving into remote locations for industries, away from existing agglomerations, has been futile. On the other hand, concentrating industrial activity in just one or two national centres is an impediment to the economic development of the country as a whole. Therefore, Malaysia has to pursue a strategy of "decentralization by concentration", whereby new industrial activities will be decentralized only to new agglomerations, including where land settlement areas are.

In the past, the industrialization strategy has met with some success in terms of creating employment, notably in the labour-intensive electronics and textile industries. But these industries are mostly located in large urban centres in Penang and Selangor, thus causing a significant rural-urban migration. Findings of a study by Jamilah Ariffin (1981) showed that most electronic workers worried about their job security. In the recession years of 1974-75, for example, over 6,000 women workers were retrenched and many did not receive compensation. Furthermore, the firms paid monthly wages which were the poverty urban income level. Therefore, with the implementation of an export-oriented industrialization policy, characterized by foreign companies operating in free trade zones, the intra-urban income inequality worsened, and the number of squatters increased, consequently spawning many social problems.

It is therefore imperative that rural industrialization be intensified. The promotion of industries and crafts in rural areas should serve as an instrument for skill formation and the development of regional industrial structure, rather than employment *per se*. The recent emphasis on small-scale industries undertaken by the Kedah Regional Development Authority (KEDA) is an encouraging sign.

Malaysia has reached the stage where labour shortage is taking place. The continuing rural-urban drift caused by both the 'push'

and 'pull' factors has already resulted in serious problems in the agriculture sector. Surveys by the Rubber Research Institute of Malaysia (RRIM) and the United Planting Association of Malaysia, for example, have clearly indicated that in the early 1980s, there was a shortfall of workers to the tune of 4 to 10 per cent in many agricultural estates and smallholdings. According to Lim Sow Ching (1984), the nature and extent of labour shortage varies from place to place, but the most serious is in Pahang and Johore. This is made worse by some immobility of labour as evidenced by 'pockets' of labour surplus in certain estates or parts of the country. What is more disturbing is that a majority of the youth are reluctant to stay in rural areas, preferring to work in towns even with less income.

The problem of labour shortage was reduced, somewhat temporarily, by the employment of illegal immigrants from neighbouring countries. In some places, immigrant workers accounted for over 90 per cent of the workers.

But the massive outmigration of workers from the agriculture sector has also caused vast areas of land being left idle or underutilized; this was estimated to be around a quarter of total cultivated area in Peninsular Malaysia, 17 per cent of which are padi lands (Lim Sow Ching, 1984). In the context of poverty reduction and organized land development, steps are being taken by the NAP to rehabilitate the idle padi land for the growing of export-oriented tree crops.

Overall, Malaysia's performance in addressing rural poverty has been better than those of many other developing countries in spite of very real problems of ethnic factionalism. One lesson that has surfaced is that the self-generating, integrated and progressive rural development is a very complex and difficult process to engineer. As noted by Sigurdson (1978), rural industrialization and mechanization of agriculture, although important in themselves, are only partially the keys to rural modernization. More fundamental than these are the attitudes not only of the people who provide the power base for the politicians, but also those of the elite groups which are needed in the modernization process. They provide the crucial decision of whether or not to transfer the assets which are required for rural modernization.

Radical critics of the government policy regard as inadequate the 'social justice' components so far being implemented in Malaysia. They blame the 'neo-classical' approach of the government and claim that the lot of the poor will improve only by conforming to 'reformist' solutions which may require changing the present economic sys-

tem as a necessary step. Others though still find hope in the regeneration of the agricultural sector through the conventional approach where rural development is emphasized through 'growth', right attitudes and work ethics, and a stable economic environment. This direction is precisely what the Malaysian Government has taken and intends to continue doing. So far, available data indicate that these efforts may fail to eliminate poverty and correct the inequality in the long run. Malaysia, however, still has room to maneuver within the present system in seeking solutions as long as the political commitment is decently maintained. Whether the present system can really work is left to be seen.

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