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LOCATION, LINKAGE AND LEAKAGE: MALAYSIAN RURAL INDUSTRIALISATION STRATEGIES IN NATIONAL PERSPECTIVE

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I. INTRODUCTION

1. Introduction

This paper is addressed to a narrow, but strategically significant, area of concern focusing on the potential role of rural industrialisation in contemporary Malaysian economic development. It opens with a discussion of some relevant Malaysian macro-economic, structural characteristics. A general discussion follows on rural industrialisation as a policy instrument, and a distinction is drawn between one approach which regards it as a strategy for initiating or relocating industrial enterprises in the countryside, and an alternative, though not a mutually exclusive one, which treats it as a strategy which adopts as its objective the generation of rural non-farm incomes primarily through encouraging the migration of the rural work-force to industrial enterprises located in contiguous local urban centres. Subsequently, the focus turns to the Malaysian context, and Section III profiles the rural non-farm sector using diverse sources. Finally, Section IV is devoted to a discussion of selected strategic issues in the context of the revised development strategy enunciated in the Fifth Malaysia Plan; themes relating to industrial location, linkages and leakages, and migration receive special attention.

2. The Macro-economic Context

A few contextualising observations of a macro-economic nature are necessary. Viewed in aggregate terms, the Malaysian economy has had a highly successful run in the period since the 1960s. The average

rate of growth of GNP was 4.5% per annum during 1965-83, which though slower than the Korean rate of 6.7% still compared favourably with those for Brazil (5.0%), Thailand (4.3%), the Philippines (2.9%), and, say, Pakistan (2.5%). However, in the few years since then, while the Korean economy has continued to expand at a similar rate, the Malaysian one has slowed down virtually to a halt. The international recession has been a common element of the external environment for both economies, but changes in this element have affected the two in dramatically different ways, highlighting the special vulnerability of the Malaysian system to such fluctuations. The extreme dependence on primary resource exports, coupled with a very high foreign trade ratio, has emphasised as never before the need for local industrial as well as export sector diversification away from the traditional natural resource bases. Structural transformations of the economy are more easily achieved within a fast growing economy. But the present strategy of diversification in Malaysia has to be formulated and implemented within the pessimistic growth scenarios now being forecast unofficially for the next decade. This means immediately that the resources necessary for affecting such a transformation through changes in the direction of resource allocation at the incremental level are not available in sufficient magnitude. As such, the questions of prioritisation and policy formation gain an edge sharper than ever before.

3. Three Structural Features

As a point of departure, three structural features of the Malaysian economy and its recent growth process might be noted. These features have important implications for strategies of industrial diversification including rural industrialisation. The first pertains to the relative degree of under-industrialisation of the Malaysian economy, with respect to the level of its per capita GNP. This is arguable in terms of the share of the industrial and manufacturing sectors in GDP, or in total employment, and is borne out through comparisons with other developing economies which have a similar level of per capita income.

The second structural feature relates to the nature of GDP growth. Far more than in other economies, Malaysian economic growth has been derived from the classic enclave type sectors. In agriculture, these have been the plantation crops: rubber, coconut and oil palm. More significantly, even in the industrial sector - defined to include mining and quarrying activities - the sources of growth have been such as to have notoriously low linkages with the rest of the economy. This is true for the non-agricultural natural resource extractive sub-sector, comprising mainly petroleum and natural gas, and tin. But this is also demonstrated dramatically by the recent entrant, the Free Trade Zones. While the major industrial sectors here are electronics and textiles, the firms operating in the FTZs display extraordinarily low levels of linkages with the national economy. It may be mentioned here parenthetically that most of the successful early industrialisers have relied on the major textile industry to carry the burden of industrialisation in the first phase. This was true for Great Britain; even more so for Japan, and subsequently, forms the common thread in the East Asian fabric of economic success. Not only is this industry capable of substantial labour absorption,it also has, at the same time, the capacity for generating substantial linkages with other industrial activities through backward and forward linkages. Industrial skill formation has been an important element of the role of the textile sector. In the Malaysian case, two factors which negate this role can be noticed: firstly, the sector is itself very small; secondly, much of it is located in the FTZs, where the generation and exploitation of the forward and backward linkages was effectively preempted.

It is also worth mentioning that in the framework of an enclave type growth process, there could be economic forces inherent in the system which cause the non-agricultural sector to atrophy. It has been argued in the South East Asian context that the rise of agricultural export crops in the nineteenth century caused a secular transfer of resources away from the non-export crop sectors. The deindustrialisation of the Burmese, (Thai) and Philippine economies under colonialism has been attributed to such a negative

linkage, generated essentially through an improvement in the relative prices of export crops -in relation to other economic sectors - consequent upon the expansion of international markets for commercial crop exports. Similar effects probably also occurred in the Indonesian economy under Dutch colonialism, and the Malaysian economy under British rule. For our purposes, the point to elicit is that the enclave style of growth generates, both through its direct investment pattern and through the negative side-effects of such growth, a weakened non-farm sector in the countryside and a lopsided and frail manufacturing sector in the cities. In the Malaysian context, the subsequent sources of growth, relying disproportionately on low-linkage processes, have probably allowed this inter-sectoral distance to widen, with the implication that the export crop and the manufacturing sectors are separated from the rural poor producers by a relatively wide thinly populated economic space.

The third feature concerns the external trade sector. On the export side, Malaysia continues to show an overwhelming dependence on the "fuels, minerals and metals" plus "other primary commodities" groups. In 1965, these two groups accounted for 94% of merchandise exports; the percentage was 95% for Thailand and the Philippines, though it was a low 40% for Korea. In 1982, however, in Thailand and the Philippines the percentage had declined to 71% and 50%; in Korea it had plummeted to a mere 8%, but by contrast, in Malaysia it remained high at 77%.

On the side of imports, the story is a complementary one. It is summarised by one statistic: the ratio of net manufacturing sector exports to the manufacturing sector contribution to GDP. In Korea, the ratio for 1982/83 was over 0.5, approximately; for Malaysia, the ratio was less than -1.0. That this should have been the case even after the import-substituting industrialisation phase in Malaysia testifies to the extreme weakness of the original base, as well as to its current underdeveloped status. On prima facie grounds there

would appear to be room for further rounds of substantial import substitution.

4. Strategic Implications: Wage and Skill Gaps

The significance of the above findings about the weakness and relative underdevelopment of the Malaysian industrial, and especially the manufacturing sector, could be queried. After all, a similar "structural" weakness could also be said to characterise the Saudi Arabian economy, without automatically validating ideas of any wide-ranging industrial diversification there. However, such a response would be inappropriate in the Malaysian case. Here, unlike the Saudi case, natural resources do not allow for a near perennial source of earnings, while the virtually total absence of other resources necessary for diversified industrialisation in the Saudi case argues against any ambitious import substitution plans. Thus, the case for living off natural resource generated quasi-rents, or for converting such quasi-rents into alternative flows of rentier income - for instance, through the purchase of real estate in Western Europe - is impossible to make in the Malaysian system. As such, there is no serious option to the strategy of industrial diversification.

Even then, one might argue that the comparison with Korea, Thailand and the Philippines merely goes to show that Malaysia is a late starter in the industrialisation game. While this is no doubt true to an extent, the real significance of the discussion above is to identify certain structural conditions which render this late start more difficult. Effectively, the delayed industrialisation drive, preceded by growth of per capita GNP based on natural resource exploitation, is handicapped simultaneously by a high wage level on the one hand, and by a low level of skill formation and dispersion on the other. These handicaps have to be viewed in the comparative Asian perspective where they jointly imply a loss of competitiveness to neighbouring economies. Thus, for its wage level, Malaysia would find it correspondingly difficult to compete successfully in the

markets for relatively labour-intensive export-oriented industries. On the other hand, on account of its lower skill level, it would find it difficult to enter the more demanding markets for more advanced industrial products appropriate for its higher industrial wage level. This is one current Malaysian industrialisation dilemma, though by no means the only one.

It is arguable that redistribution policies might well have exacerbated this predicament. But, to some extent, the backwardness is a historical legacy. Thus, high Korean educational levels, and their orientation towards economic ends, were partly products of the pre-War period when the Japanese colonisers initiated policies for the wide-spread dissemination of education to the Korean population. But the record since 1965 is not so encouraging for Malaysia. In that year, both countries displayed similar educational enrollment profiles, with a marginal advantage for Korea. But by 1982, Korean performance outstrips the Malaysian one in clear terms. Thus, in 1982, there was universal primary educational enrollment in Korea (a similar level having been achieved even in 1965); but in Malaysia the primary enrollment rate stayed near its original 90% mark. But in secondary education, while the Malaysian enrollment rate rises from 28% to 49%, that for Korea jumps to 89%. The higher education enrollment rates were 5% and 24% for the two, respectively. It might be mentioned that Malaysia's performance is, in itself, quite creditable, and places it ahead of Thailand and the South Asian economies, at least with regard to the primary and secondary levels; in comparison, the Philippines outperforms Malaysia. However, while such tolerable educational performances might make for an efficient and skilled professional sector in the economy, its linkage to the performance of the industrial sector must remain tenuous. Here, what are called for are lower level entrepreneurial and industrial work-force skills, such as those derived from indispensible learning-by-doing processes. And it is here that the relative underdevelopment of the industrial manufacturing sector, accentuated by its concentration on low-linkage products, might have created the infertile no-man's land between the high-productivity plantation

agricultural sector and a narrow modern industrial sector, where in other Asian economies the required intermediate and low level industrial skills have been generated by the small-scale and so-called informal sectors. And it is in the setting of these structural handicaps that an outward-looking strategy of industrial diversification - incorporating rural industrialisation - must be viewed.

II. RURAL INDUSTRIALISATION: LOCATION OR LINKAGE?

How is the term "rural industrialisation" to be interpreted in the Malaysian context? No unique and universally appropriate definition can be elicited from the diverse experiences of "rural industrialisation" in the process of economic development. It would be useful, before proceeding to the Malaysian case, to seek some definitional clarity.

1. Two Alternative Approaches

Two alternative - though partially overlapping - approaches to the theme need to be distinguished. In the first, which we might for convenience label the locational approach, the primary criterion adopted for the definition of rural industry is its location in a designated rural area. This views the policy instrument primarily as a device for furthering objectives related to physical and spatial planning. Most frequently, in this approach, rural industrialisation is a safety valve for controlling problems of urban industrial concentration, with all its negative externalities. Regional or rural dispersal are motivated, in essence, by objectives of urban development planning. Such an approach includes the relocation of urban industries to lower-order urban (and ultimately to rural) centres, as well as the initiation of new industrial

enterprises at a faster rate in the industrial hinterland than at its core.

In sharp contrast to this is the linkage approach. Here, the rural industrial sector is viewed from the rural end, and the key criterion for defining an industrial enterprise or other economic activity as "rural" is whether it generates significant developmental linkages with the rural sector. One simple index of the intensity of linkage effects could be the percentage of the gross output value of the enterprise that is accounted for by the rural sector either through receipts for rural raw materials purchased by the enterprise, or through income flows received in the form of wages or profits for labour or capital provided by the residents of the rural sector. Restricting the index to the disposition of the value added by the enterprise would be inappropriate since it would exclude the linkage through the raw material purchases made in the rural sector. This linkage index also restricts itself to the direct effects generated by the production of the output.

Two modifications could make the quantitative measurement of linkages still more meaningful. Firstly, the notion could be widened so as to include the capital equipment expenditures of the enterprise as well; secondly, the index could be based on both the direct as well as the indirect rural linkages generated by the production of one unit value of gross output. However, as a quick proxy, the simple direct linkage index would suffice. If a separation is made between the raw material, labour and capital linkages, the index could also throw up a useful classification of the industrial enterprises by type and intensity of linkage. For multi-product enterprises, indices could indicate the type and intensity of rural linkages with respect to each product line, or with respect to each factor of production. These indices could range between zero and unity with respect to direct linkage effects, though the inclusion of indirect effects generated through the multiplier could raise the direct-cum-indirect linkage index to

levels greater than one. The problem remains of having to mark an arbitrary threshold level such that an enterprise with a linkage index above it could be thought of as being a "rural" enterprise. The choice of the cut-off level would have to depend upon local circumstances and objectives, with an eye to the sensitivity of the results to minor variations in the cut-off level.

The locational and linkage approaches could yield quite different profiles of "rural industry". On the one hand, not all industries located in designated rural areas would necessarily display high levels for the linkage index. This might be especially true for cases where modern medium-, or large-scale industrial enterprises are being coaxed through incentives to relocate their plants in designated rural areas. While taking the pressure off the urban centre, it might still leave the high urban linkage effects more or less intact. On the other hand, from the point of view of the linkage approach, location, per se, is of no consequence. What matters is the linkage effect, and this could be high or low irrespective of the location, at least in principle. Realistically as well, there could be several types of industries which though located in the smaller urban centres nevertheless display exceedingly high rural linkages, either through a high dependence on rural labour and/or rural raw materials within production processes which are labour and raw material intensive.

Which approach is found more meaningful depends upon the objectives of policy and the concrete circumstances of the economy. It is necessary to emphasise though that the generation of rural linkages is not contingent upon a deep rural location. Whether a locational criterion is super-imposed on the linkage one would depend upon the ease with which resources, including the rural labour force, could move from their rural residential locations to the urban work-places. Where settlement patterns are thin and scattered, and where infrastructural development levels are high - especially those relating to mobility, i.e., transport and information flow systems,

labour-force migration would provide a viable alternative to rural plant location without a loss in the level of rural linkage.

In what follows, the theme of rural industrialisation is viewed in the context of strategies for rural income and employment generation within the poorer rural sector communities; as such, preference will be given to the linkage approach, and rural industrialisation will be understood as the sub-sector of the mainstream industrial sector which displays sufficiently strong rural linkages, irrespective of whether such enterprises are located in designated rural areas or not. The following four categories will be utilised: (i) rural-located, rural-linked (RLoc-RLink); (ii) rural-located, urban-linked (RLoc-ULink); (iii) urban-located, urban-linked (ULoc-ULink); (iv) urban-located, rural-linked (ULoc-RLink). ULoc will then refer to all urban located industries and RLoc to all rural located ones; ULink will refer to all urban linked industries and RLink to all rural linked ones. The three categories connected through location or linkage with the rural sector generally cover a remarkably wide variety of activities and enterprises, ranging from petty household-based cottage and handicraft production activities to large scale relatively complex industrial plants. These specific characteristics will become relevant in the context of discussion relating to concrete situations.

2. Development Objectives

What are the objectives assigned to rural industrialisation strategies in developing countries? A summary enunciation of these will also provide a check-list of possible criteria for the evaluation of specific country policies and performance. The first, over-arching objective is usually employment generation. However, this is not enough since such employment could be generated at unacceptably low levels of productivity, as in the case of rural poor households which accept implicit wage rates which are well below the poverty-line equivalents as part of a strategy of economic survival under harsh conditions. It is therefore necessary to

introduce the second objective of income generation; but here again, while high productivity could generate high incomes, i.e., value-added, the share of the workers, i.e., the rural poor, might be as low as before if the labour market conditions are either saturated or monopsonistic, as might well happen when individual rural workers are confronted by large-scale, profit-seeking private or institutional employers. Hence the necessity to introduce the third level objective, viz., ensuring acceptable levels of income generation for the target group, i.e., the labour force drawn mainly from the rural poor. But even then, the conditions under which the labour is performed might have other serious objectionable features about it: labour organisation might be banned; worker safety might be low; working conditions might be of the sweat-shop type; and there might be obnoxious features relating to the exploitation of sub-ordinated categories of labour, i.e., women and children. Thus, worker welfare levels constitute the fourth objective. From a wider developmental point of view, it is necessary to introduce a few more criteria for judging success. The fifth objective, thus, might address itself to the question of growth. Do the enterprises (or activities) display a dynamic investment behaviour, or are the surpluses from the enterprises disposed of mainly as consumption by those who are in receipt of the components of the value added? In this context of dynamic effects, a vital objective is raising the level of industrial skill formation in the countryside. Sixthly, again stressing the need for generating rural linkages, the question of positive linkages with the agricultural sector and its population - which does not participate directly in these higher-productivity rural industries - could legitimately be raised. This bifurcates into two aspects: one concerns the relationship of rural industrialisation to local agricultural development; the other concerns the transfer and sharing of the benefits of the additional incomes generated by rural industries to the agricultural population. (The first would form one, but not the only, way of contributing to the fulfillment of the second.) Thus, a full listing of the objectives would include the generation of: employment, higher productivity, wages, worker welfare and

participation, internal accumulation, skill formation, agricultural development, and positive spin-off for the agricultural population not directly engaged in rural industry.

III. RURAL NON-FARM ACTIVITIES IN MALAYSIA: SOME EMPIRICAL EVIDENCE

The rural non-farm sector is notorious for its heterogeneity everywhere, and Malaysia is no exception. At one end are the rural industrial estates, and the rural agri-processing industries, which in the Malaysian case can be quite large scale. At the other end of the range are the part-time, seasonal, household-based non-farm activities (NFA) of marginalised agriculturists. Within these extremes are a variety of full-time specialised operations, e.g., traditional handicrafts, new non-farm occupations generated by the process of economic growth, and these could have a variety of organisational and ownership characteristics. As such, it is not surprising that in Malaysia, as elsewhere, systematic statistical information on the NFA sector is hard to come by. Reliance therefore has to be placed on diverse strands of empirical evidence which are difficult to weave together into an even fabric. NFA, here, will be understood as all rural labour-absorbing and income-generating activities, whether conducted on one's own, or anybody else's, farm or off farms altogether, which are not directly involved in agricultural production. Thus, hired agricultural labour, though off-farm is excluded, and domestic cottage industry activities, though on-farm, are included. Rubber-tapping is excluded, as is mining. There is a choice among non-crop agricultural activities: forestry, dairying and animal husbandry, poultry raising and bee keeping, aqua- and horti-culture. Since these usually tend to be products with high income elasticities of demand, and not especially land intensive in production, it would be appropriate, in principle, to include these in the domain of the sector so that they could also be included in an integrated manner

in policy and programme formulation (though they will not be dealt with in this section).

1. The Rural Labour Force: Some Characteristics

The period since the early 1970s has seen noticeable changes in the structure and deployment of the Malaysian labour force in both the rural and urban sectors. Some of these will be identified below.

(i) Considering the population aged 10 and above (which may be taken as a proxy for the labour force (LF)), a comparison of the 1970 and the 1980 Censuses of Population reveals an annual growth rate of 2.35%, with the rural labour force (RLF) growing much faster, at 3.17% than the urban one (ULF), at 1.18%. The female LF grew at 2.43% while the male LF growth rate was 2.28%. The fastest growth was recorded by rural females, at 3.27%. Thus, over the inter-censal period, the rural labour force grew rapidly.

(ii) The above pattern is reflected in the female:male sex ratio. For 1970, it was 1005 in rural, and 1000 in urban areas, leading to a national figure of 1003. By 1980, the divergence had widened: the rural figure rose to 1024, and the urban to 1008, while the national figure rose to 1018. These are strong changes in a decade; one explanation is international out-migration of Malaysian males (which is more plausible than a heavy in-migration of overseas females). Such migration would appear to have come, in net terms, more from the rural sector. Thus, over the decade, the rural labour force grew increasingly mobile.

(iii) Turning to the labour force participation rates (LFPR), it is interesting to note that the rates for 1970 and 1980 are virtually constant for the rural sector, rising from 50.00% to 50.16%. On the other hand, the urban rate (ULFPR) rises dramatically from 44.04% to 50.95%. The rates for females remain less than half of those for males in both sectors. In the rural areas, the male rate rises from 66.05% to 68.06%; the female one actually drops from 34.03% to

32.69%. In the urban sector, the rise is shared by both males and females: the male rate rises from 63.13% to 69.67%; the female rate rises even more quickly, from 24.95% in 1970 to 32.38% in 1980. With the exception of the case of rural females, the annual rates of growth of the active labour force are higher than the corresponding LF growth rates.

(iv) Another significant feature is the decline in the percentage of the active labour force that was "looking for a first job". For the economy, it drops from 4.68% to 1.61%. For the rural sector, it falls from 3.89% to 1.72%. While it drops for both males and females, the level remains (marginally) higher for the latter. The more dramatic declines are in the urban sector, where for females, for instance, it falls from a high 9.08% to just 2.03%. This is evidence of labour market tightening in general, but especially in the urban sector.

(v) Another relevant change has been in the employment status of the labour force. Looking at the rural sector as a whole, the main change appears to be a drop in the category unpaid family workers (UFW) from 24% to 15%, and a corresponding rise in the category of employees from 38% to 48%. But the pattern is different for males and females. For males, UFW was only 13.4% even in 1970, and fell a little to 10% in 1980; but for females, the level was 45% in 1970, and dropped to just 24% by 1980. Among males, the share of own account workers (OAW) fell from 37.4% to 34%, while that of formal employment rose from 42% to 51%; but for females, while the share of formal employment rose even more (from 29.1% to 42%), that of OAW also rose sharply, from 20.1% to 30%. This last feature contrasts sharply with the males, and is lost in the aggregate rural sector figures. It appears that the rural labour force was becoming increasingly formalised, and this applies to both males and to females. But the routes to formalisation were different. In the case of males, formal employment has drawn upon all other categories of labour, while in the case of females, there appears to be a step-wise formalisation, where the path travels from unpaid family

work simultaneously into own account workers and into a formal employee status. One could surmise that in a subsequent phase, the female labour force would also experience a decline in the share of own account workers, as with the males. However, the overall evidence of the "formalisation" or "proletarianisation" of the rural labour force is unmistakeable. The pattern is identical for females as well as males in the urban sector. One difficulty here is the interpretation of the OAW category. This would include farmers, as well as informal sector NFA workers. Thus another possible conclusion is that more males than females exit from employment on their own farms in favour of formal employment - who could well be as hired labourers on other farms, or in NFA enterprises - while females step into employment on the family farm as their replacement.

For the rural sector, as in general the above evidence is suggestive of increasing absorption and labour market tightening; of increasing mobility; of an increasing induction of females into the labour force (for urban areas); as well as of increasing formalisation. These trends must be viewed in the context of the rapid structural and technological changes in the rural sector, which had a high degree of initial internal inequality. It is likely that a corollary of this trend is a process of agrarian differentiation which churns out small holders from the ownership structure and places them in the labour market. There is some evidence that over the period, the degree of inequality of land ownership rose in several major irrigation schemes (including Muda). The inequality in the <u>access</u> to land might have risen even more since a standard pattern of increasing farm holdings is for larger owners to lease-in land from marginal cultivators, who then function essentially as formal employees.

However, the findings must not be taken as evidence of the existence of an integrated national labour market. Indeed, it is more likely that dramatically different situations would prevail in different regions. In the absence of detailed labour market studies

for the rural areas, this theme is impossible to explore, though the segmentation of the regional labour markets could arguably be taken on board as a stylized fact.

2. Importance of Rural Non-Farm Occupations

Some useful evidence on the numerical significance of various non-farm occupations in the rural sector can be gathered from the Census statistics. Using these, separate occupational profile for all rural males and females in the rural sector labour force will be compared for 1970 and 1980, followed by a comparison of rural Malay and the Chinese ethnic groups. For convenience, and to avoid the loss of relevant information, certain categories of occupations have been merged. "Professional, technical and related", "administrative and managerial", and "clerical and related" will be jointly labeled the PAC group; and "sales" and "service" categories will be merged into an SS group. The other categories are "agriculture and related" or the A group, and "production and related", called here the P group. For the present purpose, two figures are of special relevance. The first concerns all NFA occupations and is derived by deducting the percentage share of A from 100; the second looks within the NFA group to focus on the P group, which is concerned with non-farm production, rather than service oriented activities. The findings are summarised below.

(i) In 1970, the share of A was 65.98% of the total in the rural sector, and 34.02% of all NFA. Within this, P's share was about one-third, or 12.58%, and the rest were in the PAC and SS occupations. By 1980, some sharp changes had taken place. A was down to 50.71%, NFA had risen to 49.29%, and among P's share had risen to 20.60%. Thus, over the inter-censal period, the importance of the NFA sector, and its hard-core production oriented element had increased substantially. Every other worker in the rural sector had a NFA occupation in 1980, and at present, NFA workers almost definitely form the majority in the countryside.

(ii) Comparing rural male and female occupations in 1970, males have a higher rate of participation in both the NFA and P occupations, with percentages of 37.37% and 27.54% for males and females in NFA; and 15.87% and 6.23% for males and females in P, respectively. The gains in NFA and in P shares applied to both sexes. By 1980, 52.68% of the males and 42.39% of the females were in NFA occupations; the percentages for P were 24.13% and 13.42%.

(iii) The comparison between the rural Malay and Chinese communities provides the expected, sharp contrast for both group in 1970 as well as for 1980. In both years, the Malays are underrepresented in NFA and P occupations while the Chinese share is far in excess of its share of the rural population. In 1970, for all rural Malays NFA was 29.20% [males=31.33%; females=25.18%], whereas it was 51.42% for all rural Chinese [males=55.42%; females=42.25%]. By 1980, though the Malays had gained substantially in relative terms, the gap was still very wide: the overall NFA share for Malays had risen to 45.46% [m=47.22%; f=41.93%], while the Chinese figure was 64.14% [m=68.16%; f=54.85%]. Within the NFA group, another feature is relevant. It is systematically the case that the share that P forms of all NFA is higher for the Chinese than for the Malays. For rural Malay males, P/NFA = 40.0% for 1980; for the Chinese, 53.3%; for Malay women, the figure is 28.3%, for Chinese women, 33.6%. This feature has some bearing on strategies for rural industrialisation in the context of the objective of "re-structuring" society.

3. Industrial Profile of the Rural Labour Force

The Census also provides data on the deployment of the rural labour force according to industry groups. However, the classifications used for the 1980 Census were not entirely compatible with those for 1970, and though the 1980 Census Report (Vol.I) does reclassify the data on a comparable basis, this is done for the economy as a whole, and not for the rural and urban sectors separately. To avoid serious

problems of comparability, we will only make a few observations about the non-agricultural (NAG) sector (treating it implicitly as a proxy for the NFA sector), and within it about the "manufacturing" (M) sector.

(i) For the rural sector as a whole, the NAG share rose from 32.31% in 1970 to 46.20% in 1980. Within this, M's share rose from 4.60% to 10.50%. [This compares with figures of 12.58% and 20.60% cited earlier for the P group of occupations. The latter is obviously greater since not all production related occupations are restricted to the manufacturing industrial group.] Clearly, the importance of the NFA sector, now proxied through the industrial profile of the labour force, rose sharply over the period.

(ii) Considering the position by gender, the rates for NAG were: m=35.24%; f=26.65% in 1970; and, m=50.63% and f=37.20% in 1980. However, the rates for M reveal an interesting variation. In 1970, the M share for males was 4.65%, and it rose to 9.48% in 1980. In contrast, the female rate of 4.51% in 1970 - marginally lower than that for males - overtook surpassed the male rate and rose to 12.57% in 1980. Thus, while males still had higher shares in the NAG industrial labour force, a significantly higher share of the female labour force was engaged in manufacturing.

(iii) With respect to the inter-racial comparison, the pattern is again similar to the one found for the occupational profile, though it is perhaps not as sharp. For 1970, NAG's share in the Malay group was 28.35% [m=30.28% f=24.72%]; for the Chinese, it was 48.79% [m=52.33%; f=40.67%]. The increase for the Malays was greater over the 1970-80 period than for the Chinese, but the gaps were still significant in 1980. NAG for Malays in 1980 was 42.24% [m=45.52%; f=35.61%]; for the Chinese it had risen to 59.68% [m=64.17%; f=49.32%].

(iv) For the M group, the basic pattern is similar, and the disproportionate rise of the M share in the case of women is apparent in both ethnic groups. The Malay shares were: 3.72%

[m=3.29; f=4.52] in 1970; and, 8.99% [m=7.65%; f=11.68%] in 1980. The Chinese share was, 9.51% [m=10.44%; f=7.38%] in 1970 and, 14.11% [m=13.11; f=16.41] in 1980. This, examined with the occupational profile suggests that women's production related jobs occur disproportionately in the manufacturing industrial sector, and is probably explicable in terms of the increasing importance of labour-intensive industries in rural or semi-urban areas which primarily employ women as production workers on account of the significantly lower wages that apply to them in relation to males.

(v) Finally, it is worth recording that the percentage M/NAG is higher in all cases for females (except for the Chinese in 1970). In the Malay case in 1980, the percentage is 32.8 for females, and just 16.8% for males, and the contrast for the Chinese is almost as sharp. Also, in neither year are there any significant differences between Malay and Chinese females. This feature points out an important new element in the structural transformation of the rural Malaysian labour force.

4. Non-Farm Activities of Agriculturists

As significant as the NFA profils which emerges as being from the occupational and the industrial profiles of the labour force may be, a few qualifications are necessary for a correct interpretation of the figures. Firstly, in terms of employment, they are probably underestimated, since they are likely to be based on the primary occupation, or activity of the worker concerned. This does not cause problems in the specialised urban sector, but in the rural sector, there could be significant additional numbers of workers who, while answering the description of being agriculturalists, engage in part-time non-agricultural work. This is an important qualification. Secondly, with respect to income generation, these percentages are likely to be gross over-estimates, since the productivity per worker of rural NFA is likely to be a small fraction of the overall national average. Given the weak nature of

production data for this range of activities in Malaysia, estimates of a macro nature are likely to be too imprecise to be worth pursuing.

To fill in some illustrative information on the first point, data are used from a field study (Purcal, 1975) of four padi cultivating villages located in the coastal plain between the Muda and the Prai rivers. These data also permit a quick comparison between double-cropped and single-cropped padi areas, since one of the villages was unirrigated, and so single-cropped.
The activities are not defined precisely for the present purpose: in the case of women, NFA is restricted to the time spent on mat and basket making, and therefore might be an underestimate of actual involvement in NFA; for the men, though work on rubber farms is excluded, and all relevant categories of NFA included, there is a possibility that some hired labour performed on other people's padi land might have been included, though this is unlikely to be a significant percentage. As such, for males, the proxy NFA figures could be marginal overestimates.

(i) For the single- cropped village, the time spent on NFA formed 17.4% of total labour time (=245 hours per year) devoted to economic activities in the case of the males, and 27.6% (=311 hours) for the females. Males here spent 36.2% (=508 hours) of their time on padi; women 20.3% (=229 hours). For the double-cropped villages, NFA for males was higher at 28.5% (=417 hours) but lower for women, at 13.3% (=95 hours). Here, women spent 67.6% (=482 hours) of their labour time (defined to exclude minding buffaloes and domestic work) on padi, and the men 43.3% (=634 hours). The patterns are explicable only in terms of local conditions, e.g., availability of marketing outlets for mats and baskets, but are consistent with the single-cropping village women having to make up for the missing crop through intensive work on basket weaving. The lower NFA hours for men in this village could possibly be due to a shortage of local demand for NFA employment in a relatively poorer sub-region. In any

event, the numerical and strategic significance of NFA incomes for agriculturist households is clearly evidenced.

(ii) The other point of relevance is that particularly in such agriculturist households, these activities take a strong seasonal pattern which is usually a mirror image of the seasonal labour utilisation pattern in the crop activities. The implication is that NFA planning for poor agriculturists would either have to provide a sufficiently productive alternative to cultivation such that cultivation is replaced by NFA, or, where this is impossible, only such NFAs which permit the combination of the two types of income-earning activities would become feasible. This point is applicable: in these villages, as, among women, mat and basket weaving is done in the low padi-labour seasons and the pattern for men is similar, though less pronounced. In both cases, the patterns dovetail into the single, or double padi-labour monthly peaks.

5. NFA, Rural Poverty, and Inequality

What is the relationship between NFA and the incidence of rural poverty and inequality? Do NFAs perform the function of reducing inequality, or of exacerbating it the micro level, say within a village? Since NFAs are important for poor rural households for supplementing meagre agricultural or farm incomes, they are likely, other things being the same, to reduce the poverty of the household concerned. But such activities are known to be important for all strata of rural households; this raises the question of whether NFA incomes tend to reduce or to worsen inequality, and the effect that any such worsening might have on processes of agrarian differentiation. These questions are again important, but unanswerable with the present data base. Once more, some partial evidence is available, and will be used in an illustrative manner.

(i) With respect to the issue of poverty, some direct macro evidence is provided by data from various - though not always

strictly compatible - socio-economic surveys conducted on a nationwide basis. The findings (reported in Fifth Malaysia Plan 1986:86) reveal some interesting patterns in this regard. While the incidence of rural poverty declined from 58.7% for the entire rural sector in 1970, to 47.8% in 1976, and to 24.7% in 1984, the composition of the rural poor remained remarkably stable over the period. Comparing all rural poor in 1970 and 1984, small holders formed 52.6% in 1970, and 57.9% in 1984. For padi farmers, the figures are 17.5% and 16.7%; for estate workers, 8.4% and 2.4%; and for fishermen, 4.0% and 2.4%, respectively. The last group is rural sector industries, and here the percentage was 17.5% in 1970 and 19.0% in 1984. The reduction in the overall incidence of poverty has therefore taken place in part through a decline in the internal incidence of poverty within each group, and partly through a redistribution of the rural population from groups which had a high incidence of poverty in favour of groups which had low rates. In this regard, the poverty alleviating role of the rural industries group was very powerful. In 1970 the incidence of poverty in this group was the lowest at 35.2%; in 1984, it was down to 10.0%. But alongside this, its share of the rural population had increased dramatically from 29.1% to 46.9% (which is in keeping with the previous findings on the changes in the occupational and industrial profile of the rural labour force). Thus, the processes of rural industrialisation which have been operative in the rural sector in Malaysia have contributed in both ways towards the overall reduction in poverty.

(ii) With respect to the impact of NFA on rural income inequality, one frequently encountered hypothesis is that such incomes tend to be redistributive in nature since the poorer sections of the population have higher participation levels forced upon them by their poverty. Such a hypothesis could be defended using the experience of the East Asian countries described earlier. However, where initial rural inequalities are very high, such relationships might become inoperative, as the rural rich might manage to gain disproportionately from such lucrative NFA opportunities as exist.

This could be especially so when access to these activities is interfaced with the local rural bureaucracy.

Some evidence for rejecting this hypothesis in the Malaysian rural context is provided by a recent field study (Shand,1985) carried out on a stratified random sample of 600 farmers within the Kemubu irrigation project in Kelantan, and a second control sample of 300 farmers from adjacent areas outside the irrigation project. The relevant findings may be summarised briefly. Firstly, non-farm incomes were not evenly distributed between households. For 1980, a normal year, 40% of the households in the project sample had no non-farm income; another 33% had non-farm incomes of up to $1,000 per household; and the remaining 27% had non-farm incomes in excess of $1,000. The corresponding percentages for the control (non-project) sample were: 33%, 36% and 31%. This indicates that there was a high degree of inequality in the distribution of non-farm incomes. Secondly, concentration coefficients estimated for different sources of income showed that net paddy income had relatively low inequality, since inequalities in land ownership had been moderated by an inverse relationship between farm size and productivity. The ratios were 0.17 and 0.18 for the project and the control samples, respectively. Other farm income tended to be more unequally distributed, with coefficients of 0.37 and 0.26, respectively. This yielded, on the whole, low inequalities in the distribution of total net farm income with coefficients of 0.21 and 0.23. However, in sharp contrast, the concentration coefficients for the distribution of non-farm income were extremely high, at 0.56 and 0.55 respectively, which had the effect then of raising the degree of inequality in the distribution of total household income to high levels, with coefficients of 0.35 and 0.39.

One explanation for this could be that the poorer households would lack the ability to initiate a non- farm enterprise on their own, while the richer and better connected ones would not. Thus, the former group would have to generate their non-farm incomes through operations in the local labour markets, which in a depressed region

like Kelantan, might not be buoyant enough to provide any significant income earning opportunities. Indeed, the study cites the local shortage of demand for unskilled and skilled labour as one contributing factor in explaining this negative impact of non-farm incomes.

6. Rural NFA Enterprises and Entrepreneurs

Within the heterogeneity of the rural NFA sector, this element stands at the other end of the spectrum from the one occupied by the rural NFA labour force, and the petty agriculturists who combine cultivation with part-time NFA activities, often organised within the household. But even within these enterprises and entrepreneurs, there is considerable internal variation. The field is dominated by the giant institutional entrepreneurs, e.g., the RDAs and FELDA; and by the firms, frequently quite large-scale, in the industrial estates in the rural and the semi-urban areas. Such firms usually have strong links with their institutional, or private sector parents and/or partners. The discussion of the rural industrial estates will be held in abeyance when it will be dealt with in a relatively detailed manner in an analysis of the linkages of such enterprises. Here, attention is therefore focused on the other component: that constituted by small-time, relatively independent private sector rural entrepreneurs who operate usually on a tiny scale. The subject of the discussion will be rural NFA Bumiputera entrepreneurs. This topic is especially important. As was seen, rural industry makes a positive contribution to poverty alleviation, and if rural Bumiputera entrepreneurs, functioning on a small scale, were found to be the agents of this rural industrialisation, the process would make a second contribution to the objective of "restructuring" society. Therefore from the government or planning vantage point, the experience of such entrepreneurs and enterprises is of special interest. However, there is virtually no systematic data that are available on this theme, and exclusive reliance will

be placed upon a recent, 1983, field survey of 387 rural Bumiputera entrepreneurs operating in the NFA sector (Lim, C.P.,1985c).

This was not a scientifically selected sample and, as such, the findings based upon it cannot be used for making any wider generalisations. But even so, it does yield very useful insights; in any event, the sample size is quite large. The findings are used here to elicit important characteristics of the entrepreneurs and their experience. How successful were they? And if they were not, why not?

(i) In terms of the economic characteristics of the enterprises, the large majority are tiny, employing less than 5 workers; very few employ more than 20 workers. For all manufacturing enterprises, the Census of Manufacturing for 1981 shows an average of 28.3 workers per enterprise. The value of fixed assets employed per enterprise in rural enterprises is under $50,000 for nearly 90% of them while the average figure for the entire manufacturing sector is 10 times as large. The value of fixed assets per worker in 70% of the rural enterprises was under $5,000; but the figure in the entire manufacturing sector was 3.6 times that. Finally, the value of sales for 56% of the rural units was under $5,000. Thus, the rural enterprises were tiny on all counts, though there was some variation internally. More than half of them were in the food manufacturing sector. But in a significant number of cases (30.3%), the enterprise had subsequently diversified into new product lines.

(ii) Data on the year of establishment of these 387 enterprises provide some very useful indirect information. Seen per quinquennium since 1950, it turns out that until 1969, the average number of starts per year was about 2 only. But since then there has been a clear trend of acceleration: between 1970-74, the number of starts was about 5 per year; for 1975-79, it jumped to 25, and in the years 1980-83, it rose further to 37. To the extent that this index and its trend can be read as proxies for the overall buoyancy of the rural NFA sector, it indicates a remarkably favourable period of

rapid expansion. This trend is also consistent with the very sharp changes discussed earlier on the structure of the rural labour force in terms of both the occupational as well as the industrial profiles. They also correspond, of course, with a period of rapid economic growth in both the agricultural as well as the industrial sectors, and as such appear to be plausible.

(iii) What are the origins of the rural entrepreneurs? Are they "rural" simply by virtue of their enterprises being categorised as "rural", or do they have genuine rural social origins? This is an important question with significant social and economic implications. The survey shows that as many as 200, or 53.6%, had fathers who were either farmers or fishermen by occupation; another 7.5% had fathers who were labourers, or craftsmen. Indeed, as many as 42.9% of the entrepreneurs themselves had these occupations prior to starting the enterprise. Thus, there is evidence that the majority are genuinely rural; and is also indicative of considerable occupational mobility.

(iv) How did they perform? Data on the monthly income per entrepreneur reveal that 53.9% earned less than $500. Assuming a family size of 5, and a dependency ratio of 2.5, this implies a per capita income of just $200, which does not compare favourably with the median household income of $581 per month for Bumiputera households in Malaysia in 1984 (Fifth Plan,1986:99). Even if the income per entrepreneur is conjecturally treated as family per capita income it does not appear to be an indicator of success as an entrepreneur. On the other hand, such "quick" surveys almost invariably underestimate this variable, which is in the interests of the entrepreneur to understate. However, at the top end, 71 entrepreneurs, or 19.0%, had incomes between $1,000 and $3,000; and another 28 (or 7.5%), above $3,000. This is one clear criterion for measuring success, but the study added three others to separate the "very successful" and the "unsuccessful" cases from the full sample: the age of the enterprise; the development of new product lines, etc.; and the entrepreneur's own perceptions. A composite

index based on these considerationsthen classified 38 as being very successful, and 107 as being failures.

(v) What accounts for the failures and successes, and is there a recognizable pattern? Some very useful conclusions emerge. Firstly, it turns out that being rural in social origin does not necessarily help in being successful. Ninety-three, or 86.9%, of the 107 failures had grown up in villages as compared to 50.0% of the very successful ones. As many as 80, or 74.8%, of the failures had fathers who were farmers or fishermen, as against 31.6% of the very successful group. It also turns out that the failures were concentrated in the smaller size groups: 94, or 87.9%, owned enterprises with fixed assets under $10,000 in value, whereas 33, or 86.8%, of the very successful enterprises were above this level; 102 or 95.3% of the failures employed less than 5 workers, as against 17, or 44.7%, for the very successful cases. The enterprises which failed were also much more specialised in food production alone. Considering the cited causes of success, 80 (or 21.4%, the largest single figure) replied "good market"; while this cause and/or "hard work" accounted for 40.5% of the cases; "luck, timing, opportunity, and God's help" brought up the rear, and were together worth just 1.3 cases! Other variables positively associated with success were education to a mild extent, though the role performed by the knowledge of a second language, especially English, was particularly important. Interestingly, but perhaps not surprisingly, "specialized training received by the entrepreneur" was quite unrelated to failure or to success.

(vi) The role of government assistance does not appear to have been powerful in helping these enterprises in the initial years. As many as 60.3% of the total sample of 387 had had to rely exclusively on their own resources for the seed capital. At the same time, 316, or 82.1%, cited lack of capital as the "main problem in getting started"; and 266 or 71.3% had no government assistance in the first three years of operation. Furthermore, at the time of the survey, 284, or 76.1%, made no sales at all to government agencies. This

must not be read to imply that linkages to government agencies could have had no role to play in the highly successful cases. It is possible that it was the same small group of entrepreneurs who did rely on loans from government agencies, and who made substantial sales to them. Indeed, a priori reasoning coupled with some casual observation of this type of industrial enterprise supports the idea that this argument could have a great deal of validity.

The general conclusion which emerges is then one which discounts the deduction of high dynamism made from the age profile of these rural enterprises. The acceleration does testify to buoyant and rapid expansion. In part this could be explained by the direct support programmes of the various large- scale institutional entrepreneurs under whose umbrella such small-scale rural entrepreneurs might have been nourished. But the evidence suggests that while this might account for a small minority of them having been very successful, it had few linkages with the rest,or the majority of them. The majority, it is argued, saw the economic opportunity - generated by the high economic growth of the economy coupled with the extremely favourable terms of access to government bureaucracy and development agencies created for the Bumiputera community by the restructuring policies - but because of limitations associated with their social origins, were unable to make the most of them. The implications of these findings are not entirely optimistic with respect to using the small-scale rural bumiputra entrepreneur as the prime mover in any rural industrialisation policy. It might be argued that when underwritten by government agencies, they appeared to have had noticeable success; but that can hardly form the main plank of a replicable prototype.

IV. PERSPECTIVES ON MALAYSIAN RURAL INDUSTRIALISATION

It will be apparent from the eclectic nature of the previous section that any attempt at formulating strategies for rural industrialisation in Malaysia has to contend with an extreme paucity of data. This being unavoidable, the discussion in this section will use the diverse information assembled from mixed sources as the basis for developing skeletal arguments about some rural industrialisation policies implicit in the Fifth Plan. It will be prefaced by two groups of observations: the first concerns recent past and likely future trends in labour absorption in the economy; the second culls from the Fifth Plan document the scattered references to rural industrialisation, or to allied themes, and highlights some pivotal features of the Plan strategy. This is followed by a closer look at these identified features, dealing sequentially with themes related to migration, to linkages (especially rural) of urban industrial enterprises, and, subsequently, with selected policy aspects of the programme of rural urbanisation which constitutes a special "development thrust" for accelerating rural development in the Fifth Plan period.

1. Labour Absorption Prognoses

The macro-employment prognosis in the Fifth Plan is pessimistic. Even in the Fourth Plan period, 1981-85, the annual growth rate of the labour force was higher, at 3.0%, than that of employment, at 2.6%, leading to a rise in the rate of unemployment in the economy from 5.7% in 1980 to 7.6% in 1985. The Fifth Plan forecasts these trends to continue, with the labour force growth, employment growth, and the unemployment rates being 2.8%: 2.3% over the 1986-90 period, and 10.1% by 1990.

It is arguable that even these sober forecasts are themselves too optimistic. Firstly, the rate of increase of the labour force might

have been under-estimated. While the age pyramid of the population would imply a reduced rate of increase of the population in the working-age group, there are grounds for expecting that a continuation of the rising trend in labour force participation rates, especially for rural women, could more than compensate for this reduction. Also, the impact of the international recession does not seem to have been taken into account. Already, 40,000 retrenched Malaysian migrant workers have apparently returned from Singapore, and further such inflows are to be expected over the period. It is questionable whether these inflows will be more than matched by the exit of Thai and Indonesian migrant workers from Malaysia. (The net impact is unlikely to have a symmetrical sectoral pattern.) Secondly, on the other side of the equation, it is unlikely that jobs will be created at the rate assumed. The forecast growth rate of GDP appears unattainable in the present international economic scenario; indeed, the growth rate was down to 2.8% in 1985, and could well be even lower in 1986. Thirdly, the implicit sectoral output elasticities of employment are unlikely to remain - as they are assumed - as high as the levels applicable to the Fourth Plan, bearing in mind the operation of some structural, technological and institutional factors. In the agricultural sector, the main employer, the elasticity is assumed to rise from 0.12 to 0.19. But it is known that increasing mechanisation and accompanying processes of agrarian differentiation are reducing labour absorptive capacities in irrigated rice areas, while the reduction of padi lands to the planned eight granary areas through a revised subsidisation policy could also reduce the aggregate labour absorptive capacity. The announced intentions of accelerating rationalisation, consolidation and estatisation in the small holder sector would have a similar effect, and in other sectors such as, fisheries, increasing mechanisation is likely to lower the elasticity below earlier levels. In the industrial and the government sectors, similar tendencies are likely to prevail in the wake of rationalisation and privatisation policies being implemented.

In such circumstances, a special premium attaches to activities which raise the labour absorptive capacity of the economy without negatively influencing some other policy objectives. Rural industrialisation has been found to be one such policy option in many economies in a similar employment impasse. In the current Malaysian context, the potential for employment generation at low resource cost must be regarded as one prime justification for the development of the rural industrial sector. This is clearly recognised in the Fifth Plan document which observes that "village industries will continue to be actively promoted during the Fifth Plan period, especially in view of the difficult years ahead that are expected to adversely affect the livelihood of rural households that are largely dependent on agricultural commodities" (Fifth Plan,1986:355).

But there could be other specific roles as will become apparent in the following discussion of the revised spatial/regional resource-use strategy enunciated in the Fifth Plan.

2. Rural Industrialisation in the Revised Spatial Strategy

The re-oriented spatial strategy takes cognisance of the weaknesses inherent in the previous one. There was excessive industrial and infrastructural dispersal within the federal planning framework where state governments were perhaps more enthusiastic than prudent in the proliferation of townships and industrial estates within their boundaries. Such regional dispersal strategies therefore had but a "marginal impact" (ibid.:354), and in effect wasted national resources. The revised strategy can be summarised in terms of its two guiding principles and three operative elements.

Looking at the underlying principles, or premises, the first could appropriately be labeled Regions over States.

> Planning and programming on the state basis...have limitations since this approach fails to capture the benefits of any

> large-scale project in a particular state that spread to adjoining states, and neither does it recognise the fact that metropolitan areas provide specialized services to spatial units far beyond their state boundaries....Planning programmes on a multi-state basis can lead to a reduction in overlapping investments and duplication of infrastructural projects. Besides, it can also widen the scope for the sharing of state resources as well as interstate cooperation in joint projects ...In this respect, [the Fifth Plan will] emphasize regions as a framework for analysis, both inter and intraregionally, rather than states, as was adopted in previous Plans. (ibid.:166)

Sabah and Sarawak are to be treated as single-state regions.

The second guiding principle can be summarised in the phrase People-prosperity over Place-prosperity.

> One of the strategies for reducing regional disparities is to move people to where the jobs are or the people-prosperity strategy. This is carried out by accelerating growth in the leading areas, either within or outside the region, which enjoy some measure of comparative advantage and economies of scale, while, at the same time, facilitating the smooth operation of the labour market to encourage workers to move so that they are able to reap higher returns from their labour inputs. The other strategy is to move jobs to where the people are or the place-prosperity strategy. Programmes implemented under this strategy are designed to provide employment to the population living at particular location, and population movements into these areas, if any, constitute a minor element. Both these approaches have advantages as well as trade-offs. In the past, programmes to reduce interstate disparities placed heavy emphasis on the place-prosperity strategy to the extent that too many locations with limited resources were developed. Consequently, growth was dispersed over too many centres in the country to reap the benefits emanating from economies of scale." (ibid.:200)

In the future, the balance between the two principles is to be redressed in clear favour of the people-prosperity one.

This new strategy is enunciated best through specifying its three constituent operative elements. The first is the policy of controlled concentration of industrial location:

> on existing growth centres enjoying agglomeration economies so that existing infrastructure, communications, ancillary services and skilled manpower can be more fully utilized. Such a strategy, based on market forces and efficiency criteria, is necessary in the light of the recession, structural adjustment, and financial prudence (ibid.:358)

While dispersed townships and industrial estates are to be de-emphasised, reliance is placed on the development of a Western Industrial Corridor. Weak spots along the length of the Corridor are to be further developed, with further lateral sub-arteries of spontaneous and planned development to follow in due course. Six regional centres are to receive concentrated attention; of the four in Peninsular Malaysia, three are in this Corridor.

The second policy element is that of facilitating migration on an intra-regional basis though not on an inter-regional one.

> One or several centres in a region will be developed to attract the rural-urban migrants as well as those who move from smaller to larger towns, thereby reducing the inter-regional flow of migrants from the less to the more developed regions of the country (ibid.:201).

The rationale underlying this is that migrants have been found to display stronger economic attributes than the average members of the sending areas, so that discouraging inter-regional movement would prevent a deterioration in inter-regional disparities.

The first two elements, viz, industrial locational concentration and migration are complementary in nature, and form the cutting edge of the new people-prosperity strategy. The development needs of the residual population, mostly in rural areas, are then addressed by the third constitutive element - the policy of rural urbanization. As such, this element would appear to form a sub-place-prosperity strategy incorporating in-situ development. But this would be misleading, since unpackaging the rural urbanisation policy reveals a strong dose of controlled population movements at local level.

Rural urbanisation itself has three sub-policies:

(i) "estatisation", involving agricultural development based on a new emphasis on estate-type management for small-holders. The basic objective is to rationalise this sector and make it more competitive. For this, various support and institutional policies come into play, including the development of co-operatives, group farming, consolidation of uneconomic holdings, etc.

(ii) "Industrialisation"; implying the promotion of village or other small-scale industries or non-agricultural economic activities; and:

(iii) "villagisation", or the regrouping of traditional villages to foster the development of rural growth centres (ibid.:318). Here, the intention is to move rural populations in low density areas into clusters with a critical minimum size of 2,500 persons. The fresh site would be a newly constructed township, complete with new housing, infrastructural and welfare facilities. However, with regard to the third component, viz., rural industry, which is of immediate concern, it is difficult to identify any new initiatives or re-orientations; the implicit policy would appear to be one of continuity, with the added expectation that the formation of the rural urban centres with concentrated infrastructural facilities would provide the necessary boost to generate some extra buoyancy to this traditionally marginalised sector.

With the background provided by the empirical observations in Section III, it is appropriate at this stage, to relate the analytical regional framework of the Fifth Plan to the two definitional approaches discussed earlier with respect to rural industrialisation, viz, their locational and linkage aspects. It was argued that from the policy point of view, location per se was not crucial. What mattered was whether the industrial enterprise generated significant economic and development linkages with the rural sector, regardless of whether it was actually situated within

designated rural areas or not. What has to be established in the Malaysian context is whether the industrial location policy proposed - including the position of village industry within it - is likely to create such linkages in adequate measure. To investigate this vital issue, the impact of past industrial development in both sectors would have to be analysed with reference to its linkages, and against that experience, the likely impact of the new people-prosperity type industrial location policies on future trends will have to be assessed. Unfortunately, the data base is far from adequate for forming any hard conclusions, but piece meal information from scattered sources can be juxtaposed to sketch the outline of a picture which arguably captures some important features faithfully.

Three specific areas will be discussed. The first is migration, and its likely impact within the framework of the new strategy. The second is concerned with the economic linkages generated by specific categories of industry, e.g., those in free trade zones, industrial estates, etc. which are not directly located in villages or prime rural areas. The third concerns some aspects of the proposed rural urbanisation programme.

3. Migration Linkages and Regional Disparity

The objectives here are to investigate the likely effects of rural out-migration , on the position of the migrants; and on the economy of the sending region. Available data do not permit a separation of in-migrants into urban areas with respect to their sector of origin or other variables which would assist in arriving at any precise conclusion. Gaps therefore have to be filled in occasionally by a priori reasoning. From the perspective of the people-prosperity strategy, the nature of this rural impact on migration is significant.

The 1980 Census data show the Malaysian population to have been a highly mobile one. In 1980, 10.0% of the population were found to be intra-district migrants, while another 8.4% were inter-district migrants, yielding a total intra-state migration of 18.4%. In addition, 11.7% of all Malaysian were inter-state migrants, so that about 30% of the total population could be classified as migrants (Census,1980; Vol.I:75). The corresponding figures for 1970 show marginally higher intra-state migration, but somewhat lower inter-state migration, producing a total percentage of 26.4%. Over the 1970-80 period, lifetime inter-state migrants rose from 96/1000 to 143/1000.

The two major types of inter-state flows first involved heavy influxes, mostly from the poorer states firstly into the highly industrialised urbanised areas e.g., Selangor, Federal Territory, Penang; and then into the rural land development schemes in Pahang. The Census figures unexpectedly show that rural-urban migrants formed the weakest of the four inter-sectoral streams, forming just 16% of the total, as against 18% (puzzlingly) for urban-rural, 21% for urban-urban, and as much as 45% for rural-rural streams. The R-U figure is undoubtedly low on account of genuine R-U migrants being classed as R-R ones when they settle down in the peripheral areas bordering urban centres, and then commute on a daily basis to the town. The true R-R figure is therefore likely to be lower than 45%. The U-R figure would also have such an element when migrants from small towns move towards large urban centres, but initially settle in peripheral rural designated areas (perhaps until they move in later, or until a suitable urban boundary change absorbs them into the formal urban population).

What are the effects of such migrations? Consider the aggregate level first. It turns out that the rates of growth of population by state over the 1970-80 period are inversely related to the state profile of per capita GDP. The rank correlation coefficient turned out to be -0.55. This was unexpected since the poorer states are known to have much higher concentrations of Malay Muslims (Sabah and

Sarawak were excluded from the calculation) who have distinctly higher rates of natural increase at 29.3/1000 against 24.6/1000 for Indians and 21.1/1000 for Chinese populations. The explanation would lie in the heavy out-migrations from the poorer states. Thus, in the Malaysian context, migration seems to be a sufficiently powerful factor to overcome the opposing influence of natural increase rates. At an aggregate level, this would certainly have a static redistributive manifestation, since the share of the poorer states in the overall population would decline. Also, if one considered the original population cohort for the sending (poor) state, and compared its position after the migration in terms of income, there would be an improvement so long as the migration lead to a net increase in the income of the cohort. Here, it is necessary to consider the impact in dynamic terms at two levels: on the migrant and his/her family, and, on the income of the sending region. The letter, in turn, involves both the effects of migrants' remittances to the sending region's population, and the effects of the withdrawal of the migrant (and subsequent followers) from the sending region's economy.

A few characteristics of migrants may be listed. They are predominantly young adults: 30% of all internal migrants in the 1970-80 period were aged 20-29 years, as against 14% of non-migrants (Urban Development Policy and Programme Study, Discussion Paper 5,1986). They are also better educated than the population of the receiving region. This applies to both rural- urban migrants and rural-rural migrants, although the contrast is much sharper for the former stream.

> This is particularly marked for the younger adults, with 17% of Malay males moving to Kuala Lumpur aged 20-24 having a tertiary qualification, and even 10% of Indian females, as against 3% of Malay males moving to rural Pahang and only 0.1% of Indian females." (ibid.)

In terms of communities, Malays dominate rural-rural as well as rural-urban flows. The sexual balance is approximately even. However, even within these rural-urban flows, there are important

sub-streams. The labour force of the electronics and the textiles Free Trade Zones (FTZs) and Licensed Manufacturing Warehouses (LMW), which have accounted for a significant proportion of the expansion of industrial employment in the past decade, comprises mostly young women within which rural-urban migrants apparently dominate. In the Subang-Sungai FTZ in March 1980, 90% of the 14,000 electronics workers were female, of which 70% were rural-urban migrants (Ariffin,1983:78). A later survey of a number of firms operating in a few FTZs indicates that while the origin of the majority of the female labour force might indeed have been rural at the point of recruitment, they were residing in urban areas. (Datta-Chaudhuri,1982). This implies a step-wise migration pattern. By implication, the flows into the domestic non-FTZ urban sector must have been correspondingly biased in favour of male rural-urban migrants.

Another type of segmentation that is relevant - though again little statistical information is available with respect to it - is between the permanent, semi-permanent and commuting migrants, which would generate rather different linkages with the sending region. Though several short studies are available on migration in Malaysia, they mostly tend to focus on comparisons based on the the two Population Censuses of 1970 and 1980, which do not provide information on variables which would identify these linkages. A recent study on industrial estates in Malaysia (Government of Malaysia, The Development of Industrial Estates - An Evaluation and Impact Study,1983; henceforth,DIES,1983) covering estates sited in urban, semi-urban as well as rural locations, provides some useful indicative information. Of the 59 estates, 13 were urban (UIEs), 23 were semi-urban (SIEs), and another 23 were rural (RIEs). Of the total employment of 222,809 in 1981, 66.4% was in the UIEs, 28.4% in the SIEs, and just 5.2%, or 11,640, in RIEs. However, through migration, the rural population gains a higher share of employment when the classification is done with respect to the sector of residence of the employee rather than the sector of location of the estate. This aspect is Particularly Relevance in the context of

the people-prosperity strategy. It turns out that rural residents account for 13.3% of the total employment, the share of semi-urban residents rises marginally to 31.4%, and that of urban residents drops to 55.3%, implying that proportionately more rural residents enter employment in UIEs than urban residents in RIEs. (DIES,1983:6-9). The total employment in all estates constituted 24.9% of the total manufacturing sector employment in 1981 - having increased its share from 15.9% in 1968 - (ibid.:2-38) and means that employment in RIEs formed but 1.3% of the overall total. The share of SIEs and RIEs together came to 8.4%. Thus as instruments of industrial dispersal, industrial estates had not gotten too far in terms of employment, and their impact was little more than marginal in terms of their generation of direct employment in the rural sector. In 1981, the share of manufacturing sector employment in the total employed labour force was approximately 16%. This, coupled with the fact that only a part of the rural employment effect would be accounted for by rural migrants, places the role of this policy instrument into an appropriate macro-perspective.

In the UIEs, 45.5% were migrants; the percentages were 35.0 and 30.2 for the SIEs and the RIEs, respectively. For each category, between 40% and 50% reside more than 10 kms. from their workplace. Of the commuting workers,about 95% of those working in RIEs reside in rural areas, while 20% of those working in SIEs and 4% in the case of UIEs reside in rural areas. As an index of the mobility of industrial estate workers, it is relevant that about 44% of them (and 49% in the case of workers in RIEs) use their own transport for reaching the workplace. Another partial index could be the turnover rate as more than one-third of the firms had serious turnover and absenteeism problems.

In terms of remittances to the rural sector, the first important factor is the low earnings of workers in these estates, especially in the SIEs and the RIEs. In the latter, 78% received under $3600 per annum. The median wage of $224 per month, was approximately 75% of the median monthly income of the average

Malaysian worker in 1981 (adjusting figures for household income by a dependency ratio of 2) (Fifth Malaysia Plan:99) and would not leave much margin for savings and remittances. For workers in SIEs and UIEs, DIES,(1983) cites an average of about $60 per month as remittances, but median average monthly earnings are, respectively, $54 and $92 more than those of the RIE workers. The capacity to remit is also reduced in the case of workers who have to pay rent for their housing. For UIE, SIE and RIE workers, the percentages of workers living in rented accomodations were 41%, 33% and 25% respectively. Some data are also available for the frequency with which workers remit money to their kampung. Only 36% (UIE), (SIE), 25% and 33% (RIE) declare that they "always" send money home. In the order, 20%, 13% and 12% answer "sometimes"; 21%, 20% and 13% reply "never", while the rest - a substantial percentage - do not provide an answer. If one assumes, with some justification, that most of those who do send money would admit doing so, the conclusion emerges that remittances do not constitute anything beyond a trickle in favour of the residual population. Of course, it must be remembered that those who work in industrial estates while residing "at home" take home more or less their entire earnings. These do not form net inflows, since these workers could be assumed to have commanded some earning power even within the rural sector in the event of non-migration.

Obviously, to the extent that migrant earnings are remitted, the receiving household would share whatever benefits the migrant's employment creates. But in these households, as in the sending economy in general, the dynamic economic impact depends upon the pattern of utilisation of such remittances. Here, evidence is even more scanty. One line of reasoning would emphasise the positive dimensions of this symbiotic inter-sectoral linkage. In the Malaysian context, the migration of a worker from the small holding sector into an industrial estate alongside a significant return flow of cash could provide both the necessity as well as the opportunity to modernise the holding through labour saving mechanisation supplemented by input intensification. Such an assumption would be

compatible with the new planned strategy, and might be tempting to accept too uncritically in the absence of hard data to test it. This would be hazardous. One reason is that remittance flows are not likely to be substantial, as seen above. Secondly, agricultural modernisation, especially in the small holding sector, is constrained by a variety of structural and other institutional features which lie outside the sphere of control of the small holders themselves. Some factors fall within the domain of the government, but other crucial ones, such as the behaviour of international prices for the smallholding sector's export crops, are embedded in the international economy. Where holdings are small, fragmented and demonstrate low productivity, several complementary factors have to be combined for successful transformation. In this process, the petty remittances from the migrant worker are unlikely to wield much influence, and it would be optimistic to ascribe to this migration such a hypothetical dynamising function.

Plausible counter-arguments could be made however. The migrants, as mentioned, are drawn from the strongest strata of the rural workforce. They are generally young, and better educated than the rest. Migrants are also regarded as persons who are dynamic in terms of searching and exploiting scarce economic opportunities (though the role of necessity and deprivation as a force underlying migration could apply to the destitute end of the rural poor in Malaysia). The loss of such rural residents could be treated as a drain of human skill resources, thus reducing the possibilities of internal boot-strap development. A field study of three villages in Negeri Sembilan provides some insights. The three villages were purposively selected as representatives of three types of migrant streams: permanent; semi-permanent, i.e., where the migrants intend to return to the village upon retirement and hence maintain connections there; and commuting migrants. Hadi (1983) finds that remittance flows are low in the first village. In the second, flows are irregular, and variable. Poor migrants' remittances constitute up to 50% of earnings since they had left their families behind,

while among rich migrants, the amount remitted was 5. The low percentage for the latter group was attributed to the fact that since the family had also migrated, the remittances were made to other kin. In the case of commuters the entire pay packet was brought home. More significant, however, is the description of the pattern of utilisation of the remittances by the receiving households. While mentioning the cases of the school-teacher who managed to accumulate money for buying 20 hectares of rubber land and the ex-serviceman who managed successfully to start a mini-bus service, the general findings are pessimistic.

> Viewing the role of remittances from the general welfare of the village community, these positive gains are no more than a water drop in a bucket. A majority of households in the village used the in-remittances for the consumption of conspicuous goods, building or improving their houses. Most often the money was spent in the urban centre nearby. The village households shopped for their consumer durable goods in Kuala Pilah town or even in the state capital at Seremban town in some cases. In this case the money remitted from the town is spent again in the town for the growth of the town. Further, housebuilding or repairing in the survey villages has been taken over mostly by contractors and builders from the town. The village tukang kayu we found in 1978 to be able to command only secondary work in the village....The remittances do not really lead to the accumulation of capital which can be invested into productive activities in the village. Consequently, the economic base of the village population remains ... rubber tapping and rice growing for household consumption (Hadi,1983:68-9).

It should also be noted that the main type of migration is one where an individual worker leaves first, and if successful in his/her job search, is followed subsequently by the rest of the family. In the search phase, it is indeed not uncommon for the migrant to be the recipient of remittances from the villages. In the second phase, the flow of remittances is reversed, with the employed migrant sharing the burdens of the village household. In the final phase, after the family also moves to the migrant, it is usual for the remittances to dry up more or less completely. Hence, the impact of remittances, such as it is, has to be related to the flow of new migrants, not to the level of life-time migrants.

Finally, a comment on the rural-rural migrant streams might be in order here. The major part of this stream is formed by rural migrants into the FELDA land development schemes in Pahang. These were, and are, viewed as productive alternatives to such rural-urban migration. But field studies reveal that the population of settlers is also subject to very heavy second-generation out-migration of the rural-urban type (Blair & Noor,1983:45-7;Table 7). That this should happen in agricultural areas which produce well above per capita incomes reflects the weakness of the insufficiently diversified design of these schemes. This dries up dynamic opportunities for the settler households beyond agricultural intensification, and thus sets up a strong push factor with regard to the second generation. A recent study on the FELDA schemes in Pahang notes that it "is really a sorry state of affairs". This observation is made in relation to the lack of any complementarity between the agricultural schemes and local industrial development, though it is noted that there are several FELDA-owned agricultural processing plants in the region.

In general, the argument is valid that in the absence of viable local economic opportunities for investment, migration is likely to be a manifestation, as well as an accelerator, of rural economic atrophy. Through raising the per capita productivities in a very sharp manner, this process might simply have been postponed for the FELDA settlers until an increase in household size and local population, unmatched by additional local opportunities, would erode the barrier against such migration. How such atrophy of peripheral low productivity agriculture is regarded depends upon the strategy of development as well as the performance of the economy. If the receiving high productivity sector can expand fast enough in relation to its initial relative size, then such a process could legitimately be regarded as an integral part of development. If it cannot, then the widening productivity differentials - which are also a feature of recent Malaysian economic growth (the ratio of industrial:agricultural productivity widened from 3.7 in 1965 to 5.2 in 1983) - could generate the rural-urban exodus so familiar in

economies less successful than Malaysia's. Secondly, even if the inflows can be absorbed productively, this might not be a sufficiently rapid or powerful agent of structural transformation: i.e., under this scheme, the poorer rural population might have to wait rather a long time in the queue.

In this section, certain arguments have been presented which tend to suggest that even under the previous policy regime of industrial dispersal, the dynamic role of migration was rather weak at best, and quite negligible, at worst. There is a need within the context of the new strategy of relative industrial concentration to demonstrate that a weaker policy (in this regard) than before, will turn out to yield stronger results than before. In short, too much must not be expected of migration as a developer of rural areas; the implication for appropriate in situ rural development policies is obvious.

4. Economic Linkages of Industrial Enterprise

The question concerning the economic linkages generated by the manufacturing sector is directed at the spread effects of the main operative element of the revised spatial strategy. Migration acts as the instrument which links labour, including rural labour, to the concentrated centres of industrial activity. We have argued that the backward development linkages of migration with the sending region and sector are likely to be weak. But the wage bill of the workforce forms the minor fraction of the total value added by the sector, so it remains possible for the sector to generate powerful spread effects through the direct and indirect impact of the production of the rest of the value added. Indeed, the rationale as well as the justification of the reorientation of regional and industrial dispersal policies was predicated upon the existence of precisely such effects. Much depends upon the extent to which this stipulation is realistic. One indication of this might be provided by a review of the experience of the past in this respect. The

usual disclaimer about statistical limitations has to be invoked and once again, the treatment will be eclectic, and draw its materials from three prime sources: DIES,1983, which is focused on the economic impact of the industrial estates; UNIDO, 1985, which includes a study on the analysis of the linkage effects of the Malaysian manufacturing sector; and MIPS,1984, for information about the operation of FTZs and LMWs. The discussion in this section will centre on the strength and pattern of these spread effects. These cover the direct and indirect multiplier effects on income and on employment of the growth in the manufacturing sector, as specified by its recent technological and industrial profile. The pattern of sourcing raw material purchases will be noted. Three basic constituencies to which these spread effects - or conversely, leakages - will be identified are:

(i) the domestic economy in relation to the rest of the world;

(ii) the different states, and indirectly through this, the regional groupings of states according to per capita income strata;

(iii) the sectors of origin of regional GDP, again at the state level.

In itself, such information is relevant for anticipating the likely impact of industrialisation along the lines of the recent past. While these are constituencies of obvious interest, with respect to the objectives of generating spread effects in favour of both the rural sector, and towards the bumiputra community, deductions will have to be made in an indirect manner, though some direct information will become available.

First consider, the national level. Data on the estimated final demand multipliers, and on the backward and forward linkages of the different sectors of the economy point to a leakage of about

one-third to the rest of the world. The analysis of direct and indirect inter-industry linkages for eleven industrial groups suggests that for most cases, the total multipliers were lower for the Malaysian economy (using the 1975 input-output matrix) than for Korea (and Japan and the USA), but were also below those of most in other ASEAN economies. This also held true when the multipliers were netted for import leakages. The conclusion is that inter-industrial linkages were more weakly developed in the Malaysian economy, and import leakages were correspondingly higher than elsewhere. The comparison with the Korean economy, at a similar level of per capita GNP is sharp in every case, except in some natural resource based sectors.

The point about the import-leakage propensity is especially important in relation to the leading growth sectors of recent Malaysian industrial growth, viz., in the electronics and textiles industries located in the Free Trade Zones (FTZs) and the Licensed Manufacturing Warehouses (LMWs). Data for 1982 - which are consistent with trends in the previous decade - reveal the following characteristics.

(i) Both FTZs and LMWs are dominated by the (electronics + electricals) and the (textiles + garments) industries, and exports account for, respectively, 97.2% and 96.5% of their total sales. Extreme specialisation is combined with extreme export orientation.

(ii) Domestic linkages through material purchases are remarkably weak. Local raw materials as a share of all raw material purchases account for 3.6% and 10.6%, respectively, while local shares of capital equipment perchases were 8.3% and 24.0%; in these manufacturing sectors. The combined weighted percentages were 3,9% for FTZs and a relatively higher 12.2% for LMWs. Before endorsing the "superior" linkages of the latter, it should be compared with the figures for the domestic sector which would undoubtedly show an extreme contrast.

(iii) FTZ firms have an average employment of 830 workers, while LMWs average 381, making them quite large sized. They are skill extensive, and can therefore rely on a relatively under-skilled workforce. As such, production skill formation could not be said to be an external effect created by FTZ or LMW employment.

(iv) In terms of linkages generated through employment, the contribution of the sector is substantial. The labour force is overwhelmingly female, young, and un-, or semi-skilled and is drawn primarily from direct or indirect rural migrants. It is also underpaid. While the share of wages in value added (at 37.1% and 34.3%, respectively) is boosted by the low capital intensity of operations (in FTZ firms, the cumulative wage bill during 1972-82 was 18% greater than the cumulative expenditures on local and imported capital equipment for the same period, reckoned without adjusting for changes in relative prices), average wages are relatively low. In 1982, they averaged $4983 and $3515 in FTZ and LMW firms, respectively, The corresponding figures for 1971 were 85% and 67% of the average wages in the manufacturing sector of the country. The true difference would be somewhat higher, since the FTZs and the LMWs account for about 25% of the employment of the aggregate manufacturing sector. The inescapable conclusion is inescapable that the FTZ enclaves have been grafted onto the economy with negligible domestic linkages, except through the employment side. LMWs show marginally stronger material linkages than the FTZs, but this advantage is negated through lower wages. The dispersed location of the LMWs does not seem to have had any impact on the magnitude of domestic linkages.

The pattern of linkages of industrial development on the second constituency, viz., states, stratified according to their income status - including that in the rural industrial estates - is based on the materials provided by DIES,1983. As such, the analysis is restricted to the industrial estate sector, though given its internal diversification and regional and sectoral dispersal, the picture which emerges should have considerable general validity.

Four sets of observations will be made covering: the sectoral profile; inter-state pattern of linkages generated; the inter-sectoral pattern of linkages profiled by state; and the share of Bumiputeras.

Sectoral Profile

(i) Over the 1968-81 period, the total number of estates rose from 11 to 88. In 1968, there were no rural estates, but between 1979 and 1981, they improved their share from 36.9% to 46.6% (ibid.:2-15). However, in 1981, their share of the total planned area declined to 24.2%; while their share of the developed area, was lower still at 21.3%; and the actually occupied area was just 14.2%. Just 32% of the developed area of the RIEs was occupied, while the SIE and the UIE the percentages were higher at 44 and 65, respectively.

(ii) While the RIEs had 14.2% of the occupied area, their share in employment generated was even lower, at 5.2%, with UIEs and SIEs taking up 66.4% and 28.4%, respectively.

(iii) With respect to employee income generated, the RIEs performance was again further down the relative scale. They generated just 3.7% of the total employee income, as against 68.8% and 27.5% for the UIEs and the SIEs, respectively. Thus, RIEs, while making up 46.6% of the number of estates, generated a mere 3.7% of the total employee income - a telling statistic.

(iv) The internal industrial profile is summarised by industrial diversification coefficients. These estimate the divergence of the weighted share of the different industries within any estate with respect to the overall pattern in all the estates put together. The index varies between zero and unity. A higher value implies a higher divergence from the overall industry-mix, and hence is indicative of a higher degree of specialisation. The UIEs are highly diversified, with an index of 0.28, while the index for the SIEs and the RIEs, 0.58 and 0.82, respectively, suggests an

increasing specialisation as estates move away from the urban areas. These indices exclude the FTZs which, of course, are highly specialised, and would transform the comparison. The low diversification of the RIEs is due to their heavy concentration on resource based industries.

(v) There is also a clear pattern with respect to the economic profitability of the different categories of the industrial estates. Using commercial prices for the land rather than the official (artificially low) prices at which land allocations were made, DIES,1983 survey data indicate that of a total of 59 cases, 9 of the 12 UIEs showed internal rates of return (IRR) in excess of 100%, while only one had IRR < 0. Of the 23 RIEs, on the other hand, only 2 had IRR > 100%, while as many as 6 had negative IRRs. (The SIEs occupied an intermediate position).

Linkage Impact at State Level

Three types of linkages will be mentioned: those pertaining to the gross output value of the state; household income (defined as wages & salaries) generated by the industries; and employment created by the estates. Both direct, and indirect effects induced through the appropriate multiplier will be noted at the state level. (In order to derive these, DIES,1983 converts the national input-output matrix into separate state-level matrices through the use of industrial location quotients, derived from the Census of Manufacturing data.)

(i) The "high income group" of states (HIG) comprises only Selangor, and involves 14, 16.1%, of the 87 industrial estates used in the analysis, but accounts for 48.4% of the direct gross value added (DGVA) by all 87 estates. (Perlis, with one estate, and belonging to the "low income" group, is excluded). The "middle income group" of states (MIG), consisting of Penang, Perak, Negeri Sembilan, Malacca, Johore and Pahang, accounts for 46, or 52.9%, of the estates and 46.7% of the DGVA effect. The "low income group", (LIG) viz, Kedah, Kelantan and Trengganu, have 18, or 20.7%, of the

estates and 3.1% of DGVA. The shares of the Eastern States, Sabah and Sarawak (ESG) are 10.3% and 1.8%, respectively. It is clear then that the poorer states, which are also the ones with dominating rural sectors, are losers with respect to the generation of DGVA. The position is somewhat worse if both the DGVA and the indirect, or induced gross value added (IGVA), is also included. The HIG share in IGVA is 53.9%, While the LIG share is reduced to only 1.8%. The reason for this disparity is that the more articulated state economy of HIG can internalise much more of the IGVA than can the weakly developed economies of LIG states. The IGVA:DGVA ratio is 1.01 for HIG but just 0.54 for LIG.

(ii) With respect to the impact on household incomes (HY) within the state, the HIG share of the total effect (THY) is 48.5%, and the ratio of IHY:DHY is 0.57. The corresponding figures for LIG are 3.5% and 0.36, respectively. In terms of the overall impact of such HY generation on the total value added in the state, the industrial estates, share accounted for 5.9% for HIG, 4.1% for MIG, and 1.2% for LIG.

(iii) Turning to the employment effects, HIG is responsible for 34.1% of the direct employment effect (DE), MIG for 58.3%, LIG for only 4.9% and ESG for a mere 2.7% of the total employment generated by the industrial estates. Comparisons with respect to employee income generated - which is related to the HY effect, are somewhat more favourable for the HIG states. The ratio of IE:DE was 1.60 for HIG and 1.39 for LIG, implying that for every worker directly employed in the industrial estates, additional employment of 1.60 and 1.39 workers was induced through indirect effects elsewhere in the state. Once again, when considering the total employment effect as a percentage of the total employment in the state, the share was highest for HIG at 22.6%, compared to just 2.8% in LIG, and a negligible 1.8% in the ESG states. Clearly, the poorer agricultural states could hardly have felt the direct and indirect employment generation impact of industrial estates.

It should be noted that a significant number of the establishments in industrial estates are not new establishments but ones which have relocated from elsewhere in the economy. Thus, of the 82 establishments in the estates in LIG, 30 (or, 36.6%) had been relocated, while 41 of the total of 230 HIG (or, 17.8%) were in this category. Thus relocations, at least in terms of numbers, appear to have moved in favour of the poorer states, suggesting that relocations could be designed to take advantage of the significantly lower wages there.

Intra-state Sectoral Linkages

The methodology also allows the gross value added and the employment effects to be subdivided within each state according to the sector to which they accrue. Thus, the extent to which an expansion of final demand, i.e., production in the industrial estates, generates GVA and E linkages in agriculture, mining & quarrying, manufacturing, trade, transport & storage, and the services sectors can be estimated separately. Special interest would attach, in the present context, to the impact of industrial estates on the agricultural sector, and, in particular, of the impact of rural industrial estates in poor states on their general economy. Unfortunately, the effects cannot be separated by source, i.e., with respect to UIEs as against RIEs. As an approximate proxy, however, it might be noted that the RIEs are located mostly in the poorer agriculturally biased states, whereas the UIEs tend to the other end of the economic spectrum; in other words, the relative incidence of RIEs within all estates in any state is likely to be positively correlated with its income status. This proxy variable is neither entirely satisfactory, nor entirely unrealistic. (Unfortunately, DIES,1983 did not also estimate the linkage effects for different states with respect to the different types of industrial estates.)

(i) How was the indirectly generated gross value added shared between the different sectors of the economy? The state-wise

pattern is interesting and can be summarised in a few points. Firstly, taking the country as a whole, of the $3.8 billion of IGVA generated, only 7.0% accrued to agriculture. Mining & quarrying accounted for just 0.9%, and manufacturing for 22.1%. Thus the three commodity sectors together are beneficiaries of only 30% of the IGVA. The remaining 70% goes to trade, transport & storage and to services. This overall pattern suggests that the linkages of the industrial estates with the commodity sectors are weak, especially with respect to agriculture. Secondly, if HIG and LIG states are compared, some striking variations emerge. Thus, in Kedah, the share of agriculture was 0.8%; manufacturing, 8.2%; and the commodity sectors together, 9.2%. Having received only 1.4% of the total IGVA in the first place, Kedah state found that a staggering 90.8% of this amount accrued to the non-commodity, "soft" sectors. For Kelantan, the share of the commodity sectors was a negligible 2.1% of its 0.2% share of the total IGVA. By comparison, the commodity sector accounted for 38.8% in IGVA of Selangor state, a percentage which was related to its fat 53.9% of total IGVA at the country level. Thirdly, looking at the distribution of the IGVA generated for the entire manufacturing sector (which formed 7.0% of the total IGVA, as seen), Selangor alone accounted for as much as 63.7% of it, while the share of LIG was 0.6%!

(ii) The pattern of distribution of the indirect employment effect - estimated at 318,590 for the country - follows a parallel pattern. Of this number, agriculture accounts for 12.3%; mining & quarrying, 0.8%; and manufacturing, 11.5%. The commodity sectors together take up 24.6% which the remainder goes to the trade, transport and services sectors. Once again, the poorer and non-industrial states display high percentages - sometimes over 90% - for the share of the non-commodity sectors. As before, of the total IE-effect jobs estimated for the manufacturing sector, viz.,36,619, 49.4% are in HIG and only 1.1% in LIG. The corresponding figures for the agricultural sector are: 39126; 74.7% and 1.5%, respectively.

(iii) Pertinent to the question of linkages is the issue of the sourcing of raw materials purchases by industrial estates, i.e. what is the share of intra-state sources in sourcing? Survey data reveal a few important features and also permit a contrast with the FTZ estates. UIEs (excluding FTZs) purchase 21.7% of their material inputs from within the state, 22.7% from other states, and 55.6% from overseas. The corresponding figures for SIEs and RIEs are 17.4%, 35.8% and 46.8%; and 9.1%, 32.0% and 58.8%, respectively, and reveal the very high import leakages of the industrial estates. But the rates are even higher for the FTZs, at 11.3%, 3.0% and 85.7%, respectively, for the three sources.

Impact on Restructuring

Some brief comments might be in order about the contribution of this form of industrialisation to the restructuring of Malaysian society. The index is the degree of participation of the Malay population in employment with respect to the ownership of establishments, as well as their suppliers.

(i) With respect to direct employment generated, Malays constitute 56.6% of the work-force, suggesting that the objective was met. However, with respect to the indirect employment effects, the share of Malays is lower at 33.7%, and yields a share of 43.2% in the total (direct and indirect) employment effect.

(ii) Malays are also underrepresented in the ownership structure of paid-up capital for a sample survey of firms. Their share in UIEs is 14.9%, as opposed to 30.7% for non-Bumiputeras, and 54.4% for foreign owners. For SIEs and RIEs, the corresponding percentages are: 29.1%, 34.8% and 36.1%; and 12.5%, 36.0% and 51.5%, respectively. Within the UIEs, FTZ firms obviously display a pattern skewed even further in favour of foreigners. What is startling is the remarkably low share of Bumiputera owners at the rural level where their population shares are the highest.

(iii) Considering the ownership of various supplier firms linked to the firms in the industrial estates, the data again reveal an Malay underrepresentation of Malays. For suppliers of parts and components, and repair and maintenance services, their shares are about 10% or less. For suppliers of raw materials, and providers of transport and other miscellaneous services, the Malays shares are somewhat higher, though they only approach come near their shares in the state population in a few states - notably in Trengganu and Kelantan.

The overall thrust of the analysis of linkages seems to be that the present structure of the Malaysian economy has powerful leakages. These exist at the national level, but also very clearly with respect to the weaker regions of the domestic economy. Here, there are direct leakages to the overseas sector, but more significantly, the internal economic centre of gravity is such that it appears to suck in most of the additional value added from industrialisation towards this industrialised heartland. Another aspect worth noting in this context is the relative lack of integration between the industrial and agricultural sectors, at least at the level of the state economies. This is evidenced by the lack of any correlation between states when ranked by their state per capita GDPs generated by the agricultural sector, as against the manufacturing sector. The rank correlation coefficient is -0.39. Mining & quarrying and manufacturing per capita income profiles were similarly unrelated - the rank correlation coefficient here being -0.12. Agricultural and mining profiles were themselves unrelated (r=0.22), while the block of manufacturing, construction, trade and transport, utilities and services were all strongly related to one another. This implies a segmented economic structure where there exist very weak linkages between the agricultural, mining, and manufacturing (and allied) sectors. In such a framework, a growth impulse imparted to the manufacturing industry is unlikely to spill over in any significant manner to the agricultural sector. The various findings based on the data drawn from diverse sources in this section corroborate this argument. When there is such

structural separation at the sectoral level, industrial policies of spatial dispersal can only have, at best, very limited value as generators of linkages for the local, agricultural sub-economies in which they are embedded by policy choice. The weak, if not dismal, performance of the industrial estates programme in this regard, is explicable in these terms. On the whole, it is arguable that it failed to meet any of its stated objectives to any significant extent.

5. Rural Urbanisation: Some Policy Oriented Remarks

The topic is approached from a strategic vantage point. Does the preceding analysis of the context of planned rural urbanisation underwrite the role that the revised spatial (and implicit inter-sectoral) development strategy, i.e., the new people-oriented approach, assigns to it? And even if the answer is affirmative, are the policy instruments assigned to the programme of rural urbanisation sufficient, and sufficiently strong, to deliver the goods? Do these instruments clash in a serious manner with others directed at other development objectives of the Plan? And, are adequate resources identified for implementing these policies; and where this involves private sector investment, do appropriate institutional and market instruments exist for coaxing such investments to flow in the desired magnitude and direction? These are all essential questions. This final section will restrict itself, however, to a small set of related observations on these themes. The analysis of the domestic linkage effects of industrialisation supported the view that under the policy of industrial dispersal to industrially underdeveloped and rural regions, very few dynamic linkages were generated which benefited the local, especially rural, populations of such regions. This could be seen as justifying the revision in favour of regrouping over-dispersed industrialisation in higher order urban centres, in order to make the industrialisation process more efficient. But it would be fallacious to argue on the basis of the relative failure of

the lapsed "place-prosperity" policy - of which industrial dispersal was a prime component - that the new "people-prosperity" policy would achieve superior results with respect to the generation of positive linkages with the poorer regions, and with the rural poor. Indeed, given also the conclusions of the analysis of the linkage effects of migration on the rural sector, the net impact of the revision could well imply a net loss in the performance relative to these objectives. The crucial conclusion to be drawn must be that so long as the agricultural and the industrial sectors remain as structurally delinked as at present, an exclusively spatial, or locational policy of dispersal will not work; but then neither will one of spatial concentration.

This has the immediate implication that strong emphasis must continue to be placed in the short and medium terms upon other policies which orient themselves directly to the target variables, viz., rural poverty incidence, inter-regional disparities etc., as well as on medium and long term policies which create the preconditions for the achievement of these objectives through the linkages which are at present too weak. Indeed, these two should be treated as different dimensions of a single, coherent long term policy.

This introduces some imponderable factors. The nature of this long term policy, or rather strategy, could vary quite radically depending upon the assumptions made about the external economic environment. Consider two alternative scenarios. In the rosy world where, as is assumed implicitly with regard to the Fifth Plan targets, economic growth picks up as, hypothetically, the world economic demand and prices for Malaysia's primary sector exports return to their previous upward trajectory, the present people-prosperity strategy could transform the agricultural sector in the space of perhaps 15-20 years. Migration would draw off the agricultural population working in structural conditions with low productivity, Labour market scarcities, which were beginning to emerge in several regions of the economy in the recent past, would

encourage mechanisation and re-structuring, thus raising agricultural productivity further. In such a scenario, at the end of another successful run of national economic growth, there would still remain pockets in agriculture where low absolute or relative productivity would call for explicit subsidisation policies for the residual rural producers. But the per capita incomes of the rural poor would in the main have been lifted through absorption into a high productivity industrial work force. If the basic premises underlying such a strategy were found plausible, it could legitimately be argued that rural industrialisation of the kind which required rural location would be largely irrelevant, since the necessary linkages would be generated through the structural transformation engineered through inter-sectoral migration. It could be argued, at least with some justification, that this is perhaps the main scenario which underpins the new strategy.

However, there are three major difficulties with this approach. Firstly, the international economy might not recover sufficiently, or soon enough, and then perhaps for not long enough. As such, the policy might not be sufficiently risk averse. Secondly, the required transformation of the economy might take much longer under Malaysian conditions where the growth linkages are restricted, as well as also concentrated, and this would raise the issue of whether in this long transition, something more should not be done about those at the far end of the queue. Thirdly, even if successful, it might only exacerbate the inter-regional and inter-state disparities in the economy, and this might not be acceptable beyond a point in the federal system.

There is much to be said, therefore, for strengthening the "place-prosperity", and "in-situ" elements in the strategic framework to a very substantial extent. In this frame of reference, the potential role of rural industrialisation would need to be looked at afresh. Such a programme, if successful, could provide insurance for the possibility that the revised "people-oriented" policy might encounter some of the difficulties listed

above, by generating an alternative source for raising the productivity and the labour absorptive capacity of the rural sector. More important, if it were linked to a programme of agricultural development within an appropriate macro, but also micro-level institutional framework, it could create the preconditions under which subsequent polices of industrial dispersal could succeed in developing local intra-regional as well as local inter-sectoral linkages.

This raises issues concerning the conditions necessary for rural industrialisation to succeed in terms of these objectives, especially in the poorer regions. At this juncture, the role assigned to rural industrialisation within the Fifth Malaysia Plan, as well as in the new underlying strategy, needs to be examined. In the present ex ante context, such a consideration is constrained to general and qualified observations which will also draw in, where appropriate, pointers from the East Asian experiences summarised earlier. These remarks will be directed at the three elements of the programme of rural urbanisation, viz., smallholder agricultural commercialisation, villagisation, and village industry.

(i) Certain important choices exist with regard to the development of the smallholder agricultural sector. Thus far, significant part of the agricultural sector's growth has been generated by the estates which have highly concentrated spatial patterns. The spread effects of such growth has been relatively weak. Both major governmental interventions in agricultural development - large irrigation schemes for rice, and the FELDA land development schemes - have been extremely expensive options in terms of rural income generation and labour absorption. There is bound to exist a sharp trade-off with smaller scale, more dispersed, schemes of the in situ type which rely on local participation and resources for construction, maintenance and management. It is worth noting that the development cost for settling one family in FELDA schemes has risen to approximately three times the value of fixed assets per worker on average in the manufacturing sector of the country, while

the annual returns to the settler are no higher on a per capita basis from those accruing to the industrial worker in the form of wages, even excluding the non-wage component of value added. Similarly, the remarkably high rice subsidies could not only have a high opportunity cost, but could also raise the supply price of labour artificially with negative effects for local rural industrial possibilities. Employment could be created more cheaply, and through more dynamic processes.

The other aspect worth mentioning is the institutional one. The experience of the successful major East Asian countries strongly suggests that land reform could have a very powerful growth-inducing impact on the rural sector. It would greatly raise the absorptive capacity of agriculture with respect to inputs; at the same time, through incorporating marginalised sections of the rural population into the land owning structure, it would ease the problems of labour absorption. At present there is a strong tendency, which will be accelerated by the estatisation policies, for increased mechanisation and labour displacement. The objective of encouraging competitiveness through this method of raising productivity could conflict with those of widening the base of the rural growth process. Cooperative and group farming solutions could provide a compromise, though their effects could be inegalitarian if not preceded by some type of land reform. Such a reform, could also obviate the need for agricultural subsidies in certain sectors, to the extent that these subsidies were designed to support the incomes of poor farmers. Taiwan, with its effective land reform and agricultural development policies oriented towards what was essentially a small holding peasantry, did without subsidies, and, indeed, drew substantial surplus out of agriculture for industrial development. The Malaysian situation at present is more like the contrasting Korean one as far as the present <u>policy-mix</u> is concerned. But structurally, other policies might prove both desirable and feasible.

(ii) On the element of villagisation and local infrastructure provision in small rural growth centres, there is a risk of making a mistake born out of optimism about the role of infrastructural developmentin inducing economic growth in unfavourable economic circumstances. One could accept the argument that current population densities do not allow for the easy provision of services, or provide a concentrated enough source of demand for rural industrial products, and that rural industries, which would usually depend upon the availability of labour, would not find high enough concentrations of population to draw upon. However, it is preferable to proceed with caution, if past experience in Malaysia - as, for instance, with the Village Rehabilitation Scheme - and elsewhere is any guide. The programme is likely to be inordinately expensive, and subject to the standard, lengthy list of possible reasons for the scheme to go wrong. The experience of settlements illustrates this almost universally. There also could be real trade-offs. An alternative could be to place resources into developing micro-level infrastructure without interfering with the settlement patterns, except in obviously necessary cases. This might be prudent in the initial phase because of uncertainty with regard to the strata of rural or semi-urban settlement which is likely to become the focal point of local economic growth. The assumption that such focal points can automatically be induced through the prior placement of "infrastructure" has been falsified, almost universally. Furthermore, given the expense involved, it is doubtful if this scheme could be considered a cost effective replicable prototype. Finally, it is the type of scheme that inherently precludes popular local participation, which any viable strategy of rural development needs.

One important aspect of infrastructure is that it could facilitate the out-migration of local resources - both skilled and unskilled labour, as well as raw materials - as easily as the process of local development. When it is viewed as it should be, as an enabling, but passive factor in promoting local development, the focus of attention shifts to other necessary, but missing, factors.

Thus, in Taiwan, a spatially dispersed infrastructure generated a wide spatial spread in rural growth partly because of the absence of a strong gravitational pull exerted by an overdeveloped central economic core. The opposite was illustrated in the Korean case, where none of the policies of regional dispersal made any serious impact in the face of pulls exerted by Seoul and Pusan. In Malaysia, infrastructural provision in the absence of successful local development could well lead to a process closer to the Korean case.

(iii) What is clear is the need to integrate the three elements of the rural urbanisation policy within a consistent economic rather than a bureaucratic framework. This integrated policy then has to be articulated through state, or regional policies. Without this, the third element, village industry, is unlikely to be successful. There is a danger of repeating the thinking which was implicit in the policy of dispersing rural industrial estates earlier at a higher level. That, coupled with the township development programme, could be repeated in some respects at the lower level of aggregation of the planned rural growth centres.

Some of the elements of a hypothetical policy framework might be tentatively mentioned. In a poor agricultural region, the process starts with agricultural development. The initial steps in rural industry would then be to take advantage of the backward and forward linkages generated by this growth. The same would also apply to other natural resource based growth. One crucial area in this is the agricultural processing industry, which could provide substantial linkages to the local economy. This industry should be organised, wherever possible, on a small scale basis, since this has the advantage of starting a growth process at a dispersed level based on the internally generated surpluses of agricultural development. In this regard, while the small scale rice milling sector has shown dynamism, government policies towards it have been negative on the whole. Fiscal incentives have generally favoured large-scale firms. In rice milling, part of the motivation seems to

have been to protect the capacity utilisation of the already functioning large-scale plants under public ownership, even though the small scale sector was at least as efficient in economic terms (Vokes et.al.,1982).

In this process of internalising the linkages of local growth through the small-scale sector, the institutional framework is of great import. Interesting models are provided, for instance, by the RDA-owned industrial company of KEDA, and the parallel company of the MUDA. Both allow for considerable internal diversification, but also vertical integration so as to minimise the leakage of local value added to sources outside the constituency. This is particularly true of KEDA. The danger here is of over-centralisation and a lack of participation of the rural poor, whose status could be reduced to that of the working poor. Here, there are possibilities of generating lower level participative groupings of workers who could provide a collective entrepreneurship for rural enterprises. MUDA's industrial company is mostly owned by its farmers through the agricultural cooperatives, though the degree of farmers' control over decision-making might still be rather limited. Yet equity ownership, unlike the KEDA case, gives the farmers some dividends from the profits of the company. Within such a company, there could be further possibilities of effecting an agriculture-industry link, so difficult to establish under the institutional framework of private ownership. Another possibility could be to use farmers' cooperatives, and group farms envisaged as part of the rural urbanisation scheme, as the basic institutional units for the initiation of non-farm activities and rural industrial enterprises. This arrangement would also generate dynamic linkages between agriculture and industry which they could not achieve by themselves.

The next stage is the diversification of the region's industrial sector specifically into those groups of industries which are connected through backward linkages with the extant production

pattern of the region. Clearly, there would be limits beyond which such efforts could become inefficient.

To a certain extent, this sequential pattern of development assists in solving the fundamental problem of demand. The development of the agricultural sector is of crucial importance, since in a poor agricultural region, the additional demands generated could create further possibilities of industrial self-provisioning with the region. This could be rationalised through local government purchase policies for a wide range of products which could be internally produced. In the Malaysian context, where the share of the government sector is substantial, significant multipliers could be generated in this manner.

The role of rural sector exports, other than those through the FTZ type of connection, is likely to come up against the two gaps, viz, the positive wage and negative skill, which would restrict competitiveness in the traditional labour intensive types of products. In the present situation the generation of rural exports on any significant scale is likely to remain a difficult proposition.

For the poor agricultural region in Malaysia, there is no short cut to industrialisation. Indeed, the danger frequently comes from impatient attempts at short-circuiting the process and grafting on to the underdeveloped economy of the state a range of relatively advanced industries which generate multiplier effects which the local economy does not have within its economic strength to internalise. There is only slender evidence in the present Fifth Malaysia Plan document of any systematic and articulated policy towards rural industry. On the basis of the analysis of this paper, this is an important lacuna, since in the Malaysian situation the rural industrial sector could perform a crucial linking function in an inter-sectorally and inter-regionally articulated, balanced process of development.

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