

SOUTH EAST JOHORE PROJECT

WORKING PAPERS.

ECONOMIC FRAMEWORK
AND

CRITERIA

(CBE, March, '70)

WOSSAC: 24133

631.47

(595)

Economic Framework and Criteria

Contents

1. Introduction
2. Summary
3. A more detailed assessment
 - 3.1. The Theory
 - 3.2. Problems in West Malaysia and especially South East-Johor
 - 3.2.1 Foreign Exchange
 - 3.2.2 Discount Rate
 - 3.2.3 Land
 - 3.2.4 Labour - 1. The Present
2. The Future
 - 3.2.5 Private Sector or Public Sector

Chris Edwards
March '70

Notes on Economic Framework and Criteria.

1. INTRODUCTION.

The average incomes of people settled in the S.E.J. areas could grow at a very rapid rate if:-

- (a) resources (labour, capital) were to be ploughed at a very high rate into the land in the areas under study, and
- (b) a special organisation, staffed with highly paid managers and administrators were to be set up to implement the Master Plan and to keep a watching brief over its revision.

The contention of this and a paper to follow on organisation is that the development of SEJ must be fitted into a national framework - this is implied in the Scope of Work which states that 'The optimum pattern of land use for the region and the regional master plan will be drawn up so as to maximise the net present value of the benefits to the Malaysian economy, subject to policy constraints set by both Central and State Governments.' (see page 7 of the Scope of Work)

This paper deals with the criteria to be used in the evaluation of projects. It develops some of the arguments set out in the paper on methodology produced in November.

The paper of November reproduced a quotation by Tun Razak (Development Circular No. 1/69) which ran as follows: "In line with the new economic policy, the overriding objective of the Second Malaysia Plan will be the promotion of national unity among the various races in the country and at all levels of society through far-reaching development and widespread prosperity. All major plan objectives shall contribute to this end. Special emphasis will be placed on redressing imbalances in incomes and opportunities and on job creation for Malaysians in less favourable positions". But this is insufficiently precise to be used in our study. The statement contains a number of objectives which in certain situations may conflict;

- (a) job creation
- (b) national unity among races (preferences to ethnic groups?)
- (c) development and widespread prosperity (growth in incomes?)
- (d) redressing imbalances in incomes and opportunities (the distribution or redistribution of incomes between individuals regardless of ethnic group?)

The purpose of this paper is to attempt to specify the weights which might be attached to the various costs and benefits attributable to or arising from a particular project. The paper is split into 3 sections:

- 1) an introduction
- 2) a summary of the criteria to be used
- and, 3) a more detailed assessment.

The summary sets out the approach which should (initially) be used in the evaluation of projects and identifies **some** of the policy questions on which at some stage we will require guidance from the Government. The third section sets out the theoretical background and some of the detailed information on which the recommended criteria have been based.

It is envisaged that the discussion of this paper will be **divided** into 4 stages:-

- a) a discussion at the staff meeting on Monday 9th March;
- b) a discussion with the EPU about the theoretical consistency of the methods and the policy issues involved;
- c) a further discussion within the Consortium;
- d) a consideration of some of the policy issues involved by the Steering Committee (at the Sixth meeting in May) or by smaller working group(s).

2. SUMMARY

Pages 7 and 8 of the Scope of Work set out the objectives of the Socio-Economic work. The overall Master Planning process is divided into 3 parts,

namely:-

- a) an outline of the broad development of the regions to 1990;
- b) a detailed identification of projects to be implemented during the period 1971/75;
- c) identification of the guidelines for the revision of the Master Plan (for the period 1976 to 1990) in the light of changing economic circumstances.

a) and b) require recommendations on projects to be developed and strategies to be adopted. c) requires recommendations on the methods to be used in revising the Plan and the sort of organisation needed for such a revision.

a) and b) further require:-

- i) methods for our own use but which can preferably be adopted to meet the revision needs;
- ii) recommendations on the organisations required for implementing the projects.

As far as i) is concerned, I have at this stage been most concerned with the methods which meet our needs and which will be discussed with the EPU. These are not necessarily the ways in which the recommendations will be presented to the Government either to justify the projects included in the Plan or to use

in revising the Plan during its implementation.

It is suggested that, in evaluating the projects, the following stages be followed:-

- 1) The Cash flows of the project, at market prices based on existing tariff structures but excluding capital charges (i.e. interest) should be fed in to the Cost Benefit Evaluation Program (COBE) together with the **probabilities** attached to each cash flow in order to:
 - (a) arrive at the present values, using a discount rate of 10% p.a., of each the major cost and benefit categories as well as the net present value of the project as a whole;
 - (b) arrive at the Internal Rate of Return of the project (on the basis of market prices); and,
 - (c) obtain a picture of the uncertainty attached to the project (particularly important in view of the uncertainties associated with crop prices, yields, etc).

The Computer program will need to be used (the cost is allowed for in the Agreement) because, if there are two possible prices for say, rubber, there are two sets of discounting calculations needed to work out the **profitability** of rubber; if there are two prices and two yields, there are 4 sets of calculations required; and so on, until, with a realistic project, the calculations become too numerous to handle by manual methods. The COBE program is easy and cheap (about 15/- per project) to use and will produce, given sets of probabilities about prices, yields, etc., a probability distribution of the Net Present Value of a project at a specified discount

rate. This will give the consultants (and the Government) a picture of the uncertainty attached to any particular project.

The discounting process is the most rational method of either taking into account society's preference for jam today vis-a-vis jam tomorrow, (Social Rate of Discount - S.R.D.), or for taking account of the fact that if the capital were not invested in this project but elsewhere, it would earn jam in the future at a rate of 10% (or whatever the Rate of Return elsewhere) on the money invested, (the Social Opportunity Cost of Capital - S.O.C.). The combined use of these two separate concepts (SRD and SOC) has been advocated by some economists (see Section 3), but in this paper it is assumed that they have the same value.

However one question immediately arises: Given that projects using all the land available and which give a return of more than 10% p.a. can be identified, do we develop the whole of the area in one year and if not, what rate of development do we assume? In other words, what level of public and private sector expenditure do we assume to be available to the area? Do we assume that the net expenditure of the public sector in the South East Johor area grows at the same rate as public sector expenditure in West Malaysia in general, and if so, at what level of expenditure do we start? In other words, we must know the public sector budget in order to decide where the cut-off rate for expenditure comes. Preferably we should know the budget for each public sector agency in order to know where the cut-off rate from each agency comes; but we will not probably have time to go into this sort of detail since even for the public sector, as a whole, it will be difficult to discover the detailed revenue and expenditure year by

year.

The possible rates of capital expenditure by the private sector will be limited by restrictions imposed by government as well as by the desire of private capital to enter (or stay in) these areas.

2. The CORE Program will give us the present value for each of the average cash flows of each Cost and Benefit category using a discount rate of 10% p.a. - (the 'justification' for using a 10% discount rate is given in Section 3). Having obtained the present values of each Cost and Benefit, we will then be able to get a pretty quick idea of the significance of changes in particular costs or benefits. This applies particularly to the valuation of labour inputs to the project. There is a detailed discussion of this in the third section of this paper, but the basic assumption is that the market price of labour is not necessarily identical with its social value. For example, the market price of 'unskilled labour' is likely to be greater than its social value because of institutional support for wages and the fiscal structure. (Generally there are taxes on the use of labour - payroll tax and EPF contributions - and subsidies to capital in the form of exemption of capital goods from import duty, etc). Skilled labour may, on the other hand, be undervalued, especially in the public sector. Therefore corrections are needed to the market prices in order to reflect the real value of labour to the community. However there are problems in making these corrections;

- a) If a project is to be implemented by the private sector, the company implementing the project will have to be paid a subsidy (or charged a tax) in order to bring the market price in line with the social value of labour. and,
- b) although the same problem may not arise in the public sector, if investment is considered to be more valuable than consumption (that is, if the Social Opportunity Cost of Capital is greater than the Social Rate of Discount) consumption will be 'subsidised' and the actual rate of growth of the economy will be slower than the desired rate of growth as reflected in the Social Rate of Discount.

It is possible that the problem of the payment of subsidies to the private sector will arise, but as far as public sector agencies are concerned, the problem of 'subsidising' consumption will not arise because we have assumed that investment is no more valuable than consumption.

Given this, then, what correction do we apply to labour inputs?

There are 2 aspects to this problem:

- a) the difficulty of classifying labour skills; and,
- b) the difficulty of identifying the shortages or surpluses of various types of labour once the skills have been classified.

More work needs to be done on these problems, but the following approach is suggested.

- (a) For those people earning a market wage (gross of taxes, EPF and all other deductions) of up to \$200 p.m., a shadow wage reflecting the value of the output they would have produced elsewhere had they not been employed by this project should be used.
- (b) For those people earning above \$200 p.m., no adjustment will be made to the market prices.

One problem in determining the shadow wage to be applied to 'unskilled labour' is that the shadow wage may be lower should settlers be 'taken' from Kelantan (or even Malacca) than if the settlers come solely from Johor. Further discussion of this is contained in Section 3.

As far as (b) is concerned, that is the valuation of skilled labour inputs - the overriding problem is one of classifying skills. For example, livestock managers are probably non-existent in West Malaysia and yet, rubber plantation managers are probably not in such short supply. Thus the valuation applied to these two types of labour will be different even though they possibly require the same amount of formal education. A further problem is that shortages might be alleviated by 'importing' skilled labour, through say Technical Assistance programmes. The common assumption made is that in order to attract skilled labour from overseas, the private sector must be encouraged to develop, but there seems little reason why the skilled labour could not be imported separately from the capital.

3. The third stage in the calculation of the social return from the project should be to make corrections for the taxes and other transfer payments included in the costs and benefits in order to reflect the real resource values tied up in the project. The possible objection to this is that investment is more valuable than consumption and since a high proportion of tax receipts may be reinvested, then the project giving rise to greater public revenue should be preferred to any other project with lower reinvestment - other things being equal. In other words, one should follow the entire effects of the project through the economy and arrive at an optimum allocation of resources by an iterative process applied by a Central Projects Agency. This is not possible in Malaysia (or in any other country?) because of 'real time' and data problems and therefore a second best approach is needed.

This adjustment for taxes and other transfer payments does not need to be done in great detail and a look at the present value of each of the costs and benefits in a project should give a quick picture of whether this sort of correction is likely to affect significantly the social profitability of the project.

Thus the approach advocated above, namely, to:-

- 1) value at market prices all cash flows and attach probabilities to the various values within each cost and benefit category;
- 2) discount at 10% p.a. in order to arrive at the distribution of the Net Present Value of the project in order to obtain a picture of the uncertainty attached to the project;

- 3) correct the costs of unskilled labour by using the shadow wage - this can quickly be done by working out the shadow wage as a percentage of the market wage and by applying this percentage to the cost of the 'unskilled labour' input; and,
- 4) correct for transfer payments in order to reflect real resource values.

No allowance should be made for so-called secondary benefits such as inducements to investment through forward or backward linkages or for external economies such as the generating of skills by industrial development.

As far as the identification of inputs is concerned, only those additional costs which the project imposes on the economy should be taken into account. For example, would housing applicable to the project have to be provided elsewhere? If so there is no additional cost to the project. This sort of problem may be of particular significance in this study because of its colonization nature and because the more labour intensive schemes or projects will require more housing. Road access to the project should however be charged since this will not have to be provided elsewhere in the absence of this project. Similarly, for water supply, but not for schools. In other words, the question should always be: What would have happened in the absence of this project?

A series of tables might be useful to summarise the implications of each investment showing for each 5 year period the following:-

Zone (soil type, location.)

Acres

Agency recommended

Crop or activity

Net public expenditure required

Profitability

NPV at 10% p.a. at market prices

NPV at 10% p.a. at social prices

IRR at market prices

Employment per acre by wage groups:

- Up to \$200 p.m.

- Above \$200 p.m.

Organisational or special problems including risk attached
to the project

Sensitive or important items.

(The present values, using a discount rate of 10% p.a. of the major
cost and benefit categories valued at market prices).

Some problems still however remain;

- (1) Does one give a special premium to employment per se to reflect the fact that in the absence of this employment social costs may be incurred through increasing urbanisation, unemployment riots, etc?
- (2) Does one give special weights to employment or income created for particular ethnic groups (e.g. to Indians and Malays?)

(3) What preference (if any) is given to the development of projects by the public sector vis-a-vis the private sector? We have already seen that the private sector may have to be paid a subsidy in order to employ a 'socially desirable' number of people. There are of course further factors to be considered when comparing private and public sector investments. If the private sector is more efficient in the sense that it gives rise to a greater growth in incomes, does this advantage overcome the disadvantage of unequal distribution of incomes which may result?

(4) How should land be valued? If the above approach is used, the implication is that there is no shortage of land for agricultural development. On the other hand, there may well be a shortage of particular types of land (eg. Class 1). If there are two projects one of which gives a higher internal rate of return but which uses a larger acreage, the one with a higher IRR will be preferred because we will be using a zero shadow price for land. Since land is an absolute constraint to our area it is somewhat similar to public finance in as much as those projects should be implemented which maximise the total Net Present Value in the region over the period under consideration.

The paragraphs above have set out the sort of approach that should be used to identify the projects in the development of the regions over the next 20 years. There will of course be some non-quantifiable factors (eg. the organisation or settlement type best suited to the development of a particular activity)

but calculations on the above lines should clarify the comparison.

We will also have to give guidelines to the Government as to how the plan should be revised in the light of changing circumstances. Probably the best way of doing this is to work out graphs showing the profitability of various crops on various price and yield assessments. The Government will still have to make its own price forecasts, but given these forecasts, the graphs could give quick guidance on decisions such as;

- 1) do we replant an area or not and when does replanting take place?
- 2) should a new crop be planted or not?

3. A MORE DETAILED ASSESSMENT.

3.1 The Theory

"Practitioners"..... are frustrated by the absence of the data that the sophisticated techniques require. Promoters of projects do not want to see them rejected for failure to meet economic criteria and they usually have enough wit to adjust the 'facts' to ensure that they pass scrutiny.... Many potential investment alternatives are never investigated by anyone" (Papanek).

We must not fall into this error; namely one of using such sophisticated techniques that we cannot investigate many alternatives. On the other hand, we should be able to justify and defend the approach in front of the EPU.

But what does theory say? Cost - Benefit analysis was developed formally in the United States in the 1950's and the opportunity cost concept was developed explicitly in the late 1950's by Tinbergen and others. The latest prominent branches of the theory are those developed by Marglin in the United States and I.M.D. Little in the UK (I do not have time to go into the methods developed in the Centrally Planned Economies but these are in any case either less defensible or less applicable.)

Marglin adopts the following approach;-

- (a) inputs and outputs are separated into foreign and domestic, **both** being valued at opportunity cost.
- (b) unskilled labour is valued at somewhere between the market price and its marginal productivity depending upon the

relative value of investment and consumption;

- (c) capital inputs are valued at their social opportunity cost taking into account the displacement of investment from more profitable sectors and the varying potential for re-investment. The relationship between the social opportunity cost of capital and its market price is given by the relationship between the marginal social rate of return and the social rate of discount;
- (d) all costs and benefits are discounted at the social rate of discount.

Little adopts the following approach:-

- (a) all inputs and outputs are valued at their import/export value equivalent;
- (b) all inputs and outputs are **discounted** at an 'accounting' rate of interest;
- (c) unskilled labour is valued at somewhere between the market wage and worker's marginal productivity depending upon the increased consumption, the marginal return on capital and the social rate of discount (a similar approach to Marglin's but giving slightly different values to the shadow wage - Little's method generally gives a shadow wage of between 60 and 100% of the market wage).

Marglin's approach attempts to follow the effects of the investment through the economy but is fairly complex. One particular criticism of his method, which is made by Little in particular, is that it is generally unrealistic to separate

inputs and outputs into foreign and domestic since foreign inputs can always be substituted at some cost and most domestic inputs can be substituted by foreign inputs.

Little's method can be summarised as a sort of partial equilibrium approach; and a number of criticisms can be made of his approach. He assumes no capital rationing. In other words, capital is assumed to be homogeneous. He does not follow through the reinvestment implications. His approach to the social rate of discount is unsatisfactory. If a high cost domestic industry is set up he states that this should be ignored when valuing the inputs to an industry using the output of the high cost domestic industry. He is not explicit on the methods used to arrive at the rate of exchange and the "accounting" rate of interest to be used.

3.2 Problems in West Malaysia and especially S.E.J.

The theory is therefore somewhat unsatisfactory. Inevitably so, since given the time available for project assessment, given the lack of data regardless of whether the country is developed or developing, given the limited expert staff; planning authorities and given the decentralisation of the economy, it is inevitable that some approximations have to be made. The problem is really one of deciding whether one is going towards or away from a better allocation of resources. It is thought that the approach outlined in Section 2 moves towards a better allocation without being complex and unwieldy. The "justification" for the methods recommended earlier, in Part 2 (Summary), is contained below.

3.2.1 Foreign exchange. - The Malaysian foreign exchange situation seems good (gold ^{and} foreign exchange reserves at the end of '69 represented almost 6 months average imports.) The balance of payments prospects, assuming a likely attainable growth rate of 6-7% a year, also seem good. We should try to get EPU's ideas on this after doing more work ourselves.

3.2.2 Discount rate The method recommended in section 2 implies either:-
i) that we are discounting at a social rate of discount of 10% p.a. and using a factor for the social opportunity cost of capital of 1;

or ii) that we are stating there is no such thing as a social rate of discount.

I suggest that we are following the first approach. The social rate of discount is conceptually awkward; e.g. whose rate of discount are we considering? Is it that adopted by the Government since this is supposed to be representative of the people? If so, the Government presumably decides on an 'investment' budget on the basis of a cut-off rate which represents both the opportunity cost of capital and the social rate of discount. The cut-off rate used by the Malaysian government (EPU) is 10% p.a. and there seems no valid reason why we should not use the same cut-off rate. But do we implement all projects in the first year of the Master Plan giving a rate of return of above 10% p.a.? This again is another problem on which we need to tackle the EPU.

3.2.3 Land Land and "unskilled" labour are the factors supposed to be abundant in Malaysia. As far as land is concerned, however, there

are different categories and some are more productive than others. It is difficult to know how to value these various categories until one knows the differences in productivity between them. Thus the answer to this problem will have to await further research.

3.2.4

Labour. A similar problem arises in valuing labour; namely that there are various skills available in the country and one has to identify the shortages and surpluses of the various skills before one can value the labour inputs.

We will have to try to identify the shortages and surpluses of the various types of labour available to South East Johor but it seems reasonable to value all unskilled labour (labour whose market wage is less than \$200 p.m.?) at its marginal productivity. Since we have assumed that the social rate of discount is equal to the opportunity cost of capital, investment is no more valuable than consumption and we are therefore concerned with the additional output to the economy resulting from the employment of the labour. In other words, what we are saying is that the Government does not want to use projects in S.E.Johor specifically to induce a higher level of savings in the economy.

But what is the marginal productivity of unskilled labour as defined? We have little information on regional incomes and the distribution of incomes within the region. I do however think that we should be concerned with the income of households, since, in what is essentially a colonisation scheme, we are concerned with the migration of whole households. There seem to be two aspects to the problem:

- (i) what is the marginal productivity of labour now; and
- (ii) what will the marginal productivity be in the future and possible more importantly, what will the level of unemployment be in the future? The latter question is relevant to the problem as to whether we attach a premium to the creation of employment per se.

1. The present.

The average income in Johor seems to be slightly below the average for West Malaysia - that in Malacca seems somewhat lower still (see Table 1).

On incomes in Johor we have virtually nothing. The Socio-Economic Survey was undertaken in 1967/68 but no information is yet available from this. For this survey, West Malaysia was split into 5,600 Primary Sampling Units (PSU's) each containing 200 households. The PSU's therefore contain about 1.12 million households. For the sample, 30% of the PSUs were chosen and then 10% of the households in each PSU were sampled. Therefore the sampling proportion was 3% of the West Malaysian population.

The 1970 census will not be carried out until June or July of this year and the information is unlikely to be available on a regional basis until after the end of the Project.

TABLE 1 - SOME BACKGROUND FIGURES

States	M. Acres of cult. Land	Popn. (m/1967)	Area (000 sq. miles)	Pop. (rounded 000/sq. mil.)	Cultivable Land per capita	GPD per cap. (\$000)
Kelantan	1.3	0.7	5.8	0.1	2	0.4
Trengganu	1.7	0.4	5.0	0.1	4	0.4
Perlis	0.2	0.1	0.3	0.3	2	0.5
Kedah	1.3	0.9	3.7	0.3	1	0.5
M. Penang	0.2	0.8	0.4	2.0	1/2	0.9
Perak	2.1	1.7	8.0	0.2	1	0.9
Selangor	1.4	1.4	3.2	0.4	1	1.5
M. Sembilan	1.1	0.5	2.6	0.2	2	0.9
South Malacca	0.4	0.4	0.6	0.7	1	0.6
Pahang	4.1	0.4	13.9	0.03	10	1.0
Johor	3.5	1.3	7.4	0.2	3	0.7
Total/avo. (Malaysia)	17.3	8.7*	50.9	0.17	2	0.9

* Does not add due to rounding

For Cultivable Land per head; see MGS App. G. (p.65)

For 1967 pop. ests. see Department of Statistics Publications.

For Ave. Income per cap. see Treng. Study ests, and Regional paper.

produced by E.P.U.

As far as Johor is concerned there are some limited statistics on e.g. the incomes of pineapple farmers at Api Api; this showed that the average income per farm household was just over \$200 per month, but there was considerable variation in income by ethnic groups; this is an average and not a marginal income; on the other hand, it excludes the imputed income from food grown on the farm.

Information on incomes in West Malaysia as a whole is a little fuller. A paper by the EPU in 1967 suggested that the average annual income of families in padi cultivation was about \$35 per month, the average income of families in smallholder rubber was about \$60 per month and the average incomes of families in the estate sector was about \$80 per month. But these figures exclude incomes not obtained from the main crop and exclude the value of crops grown for own consumption. On the other hand these are again averages and there are presumably considerable variations about the averages.

A paper by Jim Goering of EPU in November 1969 suggests an average income to smallholder rubber workers of \$85 a month. But this includes returns to capital, is again an average, but again excludes non-cash incomes and non-rubber incomes.

Studies on incomes from padi in Province Wellesley and Kerubu in Kelantan suggest average incomes of \$50 to \$80 a month, but again these ignore non-cash incomes and are again averages.

It is hoped that the sociological field studies will give more information both on the average and distribution of real income.

2. The Future.

We need to consider the likely movements in the marginal productivity of labour. There will almost certainly be a rise in average incomes in the country, but will there also be an increase in under-employment and therefore possibly no rise in the marginal productivity of labour in agriculture?

An equally important question is; do we attach a premium to the creation of employment per se? In order to answer this we need to look at the prospects for unemployment.

There is little information available on employment and unemployment on a regional basis. The main sources on a national basis are the 1962 Manpower Survey and 1967 Socio-Economic Survey. Additional various papers have been produced by EPU but these are the most part use these sources.

The crucial point in considering the future prospects for unemployment in West Malaysia is the peculiar structure of the Malaysian population (see the paper by Caldwell in Population Review, July 1963). The main points are that the population in the 25 years to 1957 grew by 78% but that the population, between the years 1957 and 1982, is likely to grow by 141%.

That is, the population in 1982 will be $2\frac{1}{2}$ times what it was in 1957. There are 2 factors making for the rapid increase:-

- (i) the equalising of sex ratios;
- (ii) the marked decline in mortality which was particularly spectacular between 1947 and 1957.

From 1931 to 1957 the population rose by 2.2% p.a. whereas the labour force grew by only 0.4% p.a. because of Chinese and Indian emigration. The male labour force (aged 15-54) as a percentage of the total population has been as follows:-

1921	-	42%
1947	-	29%
1957	-	26%

Table 2 shows the changing growth in labour force more vividly. Caldwell's paper, written in 1963, states: 'The real test of the Malayan (sic) economy's ability to cope with its rapid increase will not occur during the currency of the present five-year plans but during the course of their successors, notably during the 1966-1970 and 1971-1975 periods'.

To cut a long story short, unemployment is now running at something like 6-10% of the labour force (it seems to be greater in the non-metropolitan towns and in the rural areas). The prospects however are bleak. The statistics of registered unemployed are, to say the

TABLE 2 - Quinquennial Percentage Increase in Male Labour Force* and total Population

Period	Labour force	Total Population
1921-31 (average quinquennial rate)	11.2	14.2
1931-1947 (average quinquennial rate)	-1.2**	9.4
1947-1957 (average quinquennial rate)	8.0	14.9
1957-1962	10.3	18.6
1962-1967	17.2	18.8
1967-1972	18.0	19.3
1972-1977	20.8	19.6
1977-1982	21.1	19.8

* = males, 15-54 years of age.
 ** = minus denotes a decrease.

least, not a very good guide, but for what they are worth they are given in table 3 below:

Table 3.

	No. of unemployed registered (n.v.) Malaysia (000)	Labour Force (n)	% registered unemployed to Labour Force
1957	10.3	2.3	0.5
1962	56.0	2.6	2.2
1966	113.8	2.9	3.9
1969			
Jan -	124.2	3.2	3.9
Nov.	164.6		5.1

SOURCES: No. of Unemployed Registered:-
 1957-65 - Malaysian Year Book 1968/69 -- P.208
 No. of Unemployed Registered:- 1969 - Monthly Newsletter No. 9 Nov. 1969 -
 Min. of Labour.
 Labour Force from 'The Employment Problem in W. Malaysia 1962-75' - EPU,
 July 1969.

As can be seen from the table, the growth in number of registered unemployed has been increasingly rapid in the last year but this may be due to a better coverage by the employment service over the period.

However, other indicators paint an equally pessimistic picture. The first Malaysian Plan aimed at the creation of 75,000 jobs p.a. and even if this were achieved, unemployment of something like 14% would exist by 1972. However, on the basis of the 1962/67 performance, unemployment looks like being something like 21% by 1972. Furthermore in addition to the slow rate of creation of new jobs, there are additional unfavourable factors:-

- a) the British pullout - there are 36,000 Malaysians (in Malaysia?) employed by the British forces - in JB, probably something like 6,000.
- b) the continuing decline of employment on estates; -
 - i) because of increased productivity (a fall in employees per 100 acres tapped from 22 in 1962 to 18 in 1967); and
 - ii) a switch from rubber to oil palm - i.e. to a less labour intensive crop.

There are something like 100-120,000 people looking for new jobs each year. What are their qualifications? Table 4 below sets out the level of education of school leavers as some guide.

Table 4. School leavers (000) in West Malaysia by level of Education

	<u>1964/65</u>	<u>1967/68</u>
Primary	64	54
Secondary: Form I & Remove	19	59
Forms II, III, IV	29	42
Form V, VI, Upper VI	<u>21</u>	<u>30</u>
Total	<u>133</u>	<u>185</u>

By level of education it seems clear that those with relatively large amounts of education are increasingly becoming affected. Increasingly there is a surplus of the 'half-educated' - those with some secondary education and generally no vocational specialisation. Table 5 below illustrates this trend:-

Table 5.
Unemployment by Level of Education,
1962 and 1967 (1) (thousands)

Level of education	1962	1967
No formal education	38	30
Primary	72	126
Some secondary (Forms 1-IV) but no School Certificate	29	67
School Certificate and above	8	12

(1) The 1967 data are from the first round of the SES and include passive as well as active unemployment. (For definition of 'passive' unemployment, see footnote 2 of Table 7 below).

What are the implications of all this for the S.E.Johor project? We will obviously have to make every attempt to define the skills likely to be available in Johor and to discover unemployment in Johor by levels of education. At present we have virtually no information apart from various isolated bits and pieces (see .e.g. M.H.'s notes on Unemployment in Klang of 13th November 1969).

But several questions need to be asked. Do we put a premium on

employment? Will the premium be different for various ethnic groups? What can our area achieve in terms of the alleviation of unemployment either in terms of the numbers involved or because of the attitudes of Johor State to taking settlers from other states. For example, the needs of people in Malacca are likely to be greater than the needs of people in Johor. And yet there is a constraint on taking in settlers from other states: e.g. FIDA, which is likely to be the major developer in S.E.J. (see the Consortium papers on the Perspective Plan), can only take up to 50% of its settlers from other states once the backlog of applicants from Johor is worked out. The backlog seems sufficient to fill 3 more schemes despite the closing of applications in December 1969 (see MNH's notes).

Our area is unlikely to be able to alleviate unemployment very much. The population of Johor Tengah in 1967 was anything from 10,000 to 100,000 depending on whether towns on the borders of the region are included. The population of the Tanjung Ponggerang area is anything from 15,000 to 30,000 (see MNH's notes on Population of 8th December 1969). The area of S.E. Johor totals 700,000 acres. The cultivable area (Soil Classes 1, 2 & 3) is about 420,000 acres. On the basis of one household per 13 acres (FLDA works on the basis of 1 household per 10 acres which with reserve land comes to 1 for every 12/13 acres) the number of settlers/families in the areas would be around 30,000 or something like 160,000 people when the area is finally developed (assuming an average household size of 5.4 - see MNH's Population paper). Furthermore, on the assumption of 1 job in industry, services, etc. for every job in agriculture (this is probably optimistic), the areas will, when they are developed, have between 4 and

$\frac{1}{2}$ million people in them. If they are developed by 1990 (18,000 acres p.a. developed over 20 years - some of the areas are already developed) this would be the population, in 1990, of the South East Johor area. The population of Johor State in that year will probably be somewhere between 2 $\frac{1}{4}$ and 2 $\frac{1}{2}$ million. The areas would therefore represent between 10 and 15% of Johor State's population and about 14% of the total area.

One problem remaining, of course, is: What priority is attached to employment by ethnic groups; e.g. in 1967/68 the lowest rates of unemployment in West Malaysia were found among the Malays and by far the highest rate among Indians (see Table 7). Malays however are less urbanised than the other two races and suffer more from passive unemployment. Counting both kinds of unemployment, the Malay rates are higher than Chinese but still well below that of Indians, as the table shows. The rates of unemployment in 1967/68 (including passive unemployment) were as follows:-

Malays: 8.3%	Chinese: 7.5%	Indians: 12.3%
--------------	---------------	----------------

FLDA has a preference for Malays on its schemes but in Johor Tengah over half the population in 1957 was Chinese (see table 6 below):

TABLE 7 - Unemployment Rates by Ethnic Group (% of Labour force)

Ethnic Group	1962 (1)		1967/68I (1)		1967/68II (2)	
	Male	Female	Male	Female	Male	Female
All ethnic groups	6.0	7.9	7.0	8.5	8.9	12.4
Malays	6.1	6.0	6.0	6.0	8.3	6.8
Chinese	6.0	4.7	7.0	5.5	7.5	5.6
Indians	6.0	8.8	10.5	9.9	12.3	10.8
	5.2	8.1	9.8	12.2	10.7	16.0
	8.1	8.1	12.2	12.2	16.0	16.0

NOTES: (1) Calculated on the standard definition of unemployment: did not work in the previous week, desired work and actively sought work.

(2) Also includes the passively unemployed, i.e. those who did not work in the previous week and would accept a job if offered one, but did not actively seek work.

Source:

"The Employment Problem in West Malaysia, 1962-1975 - Manpower Section, EPU - 25th July, 1969."

Table 6. Percentage of total population in each area

	<u>Malays</u>	<u>Chinese</u>	<u>Indians & Others</u>	<u>Total</u>
Johor Tengah 1957	28	51	21	100
Tg. Pengerang 1957	50	41	9	100
S.E.J.P. Regions 1957	32	50	18	100
Johor State 1965	50	40	10	100
W.Malaysia 1965	50	36	14	100

To what extent are the Chinese in Johor Tengah in need? This is again a question that cannot be answered until the Socio-Economic Survey data is available and /or the Sociological field studies have been completed.

3.2.5 Private sector or Public sector?

We ought to look more closely at the advantages and disadvantages of the private and public sectors in developing land.. One of the problems is: what do we mean by the private sector? The implications of investment by the domestic private sector may be different from those of investment by the foreign private sector. However there can be implications arising from development by the private sector whether domestic or foreign. Employment may be smaller; and income distribution may be worse than if the land is developed by the public sector (a tentative analysis by myself seems to suggest that the FIDA settler is better off

than the foreign private estate labourer at a yield which is about 30-40% lower than that on the private estates - but this is based on a ridiculously small sample).

On the other hand, foreign private estates may give rise to greater yields which may be considered to compensate for the (probable) redistribution of income which may result. If so, what is this greater yield due to? Better management? If so, could the skills be imported and combined with public sector capital? More to follow....

(C. B. EDWARDS)

CEE/EM/RI/8/3/70.