THE GOVERNMENT OF MALAYSIA
THE STATE OF SARAWAK

MIRI-BINTULU

REGIONAL PLANNING STUDY

SUPPORTING REPORT

No. 9

ECONOMY AND FINANCE

—1974—

HUNTING TECHNICAL SERVICES LTD. LONDON

HOFF AND OVERGAARD COPENHAGEN

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CHAPTER 1

This report is divided into two parts, Economy and Finance. The former provides an overall description of relationships in the society between production, consumption, savings, investments, imports and exports The latter is concerned with the allocation of scarce capital resources to various desirable projects, and with identifying the gap between investment requirements

The economic analysis has been carried out both at the micro- and the macro- economic level. The micro-analysis has been used in the collection and evaluation of statistical data concerning manpower, raw materials and manufacturing industries, while the application of the macro-analysis has been carried out in planning and forecasting of the general economic development. To evaluate the data collected and forecast in total social economic context a series of economic models have been worked out. The models mentioned in this report describe a situation for each of the years 1970, 1980 and 1990. This situation is one out of several possible; it is the result of considerations which were commenced during Phase I of the Study - where alternative models were presented-, and which were continued during Phase II. The assumptions applied in the chosen model include population growth, increase in production and the labour force's ability to accept new situations and techniques.

In selecting suitable projects for development, both economic and social criteria are relevant. The final selection in the light of these two criteria is then a practical and political matter. It must be recognised that development of less developed and often "remote" areas - whether considered in a global context, "developing countries", or in a national context, "underdeveloped regions" - will often have to emphasize the social criteria

To some extent Sarawak is remote in relation both to the main part of its nation, Malaysia, and to the global economic points of gravitation. It also still has a large part of its population living under simple production conditions. In order to achieve further development the Government of Sarawak must be prepared to accept development projects which are fundamentally of an educational or social benefit to the people rather than contributing from a commercial view point to the economy.

PART I

ECONOMY

CHAPTER 2

THE STUDY AREA IN THE STATE AND FEDERAL ECONOMY

2.1 MALAYSIA

In an Asian context the Malaysian economy must be considered as prosperous having a National Product of more than US$375 per capita. 1) This figure places the country at an extraordinary economic level for non-industrialised nations; it is on a parr with some Mediterranean countries and more prosperous than any African or Asian country apart from Japan, Hong Kong and Singapore.

Malaysia's geographical location and its physical resources have been the main factors behind the development of the country. Malaysia entered the world market for agricultural and mineral products early in its history. The pattern of subsistence farming was modified and supplemented by more effective and economic means of production. This efficiency and prosperity, however, did not affect all groups in the society equally. Certain groups, particularly the Malays and other indigeneous peoples, were left behind in the general development.

The export orientation of the Malaysian economy is still reflected in the foreign trade of the country. Together with Japan, Malaysia is the only large country in Asia with a positive trade balance. The surplus has not been out of proportion with the total trade, and the country has therefore been able to maintain a stable economy during the last decade. This stability up to 1970, characterised among other things by small changes only in normal prices, has been maintained together with a steady growth of the national product.

The fact that the export trade contributes approximately 50 per cent of the GNP emphasises the importance to Malaysia of its terms of trade. In particular, the international market prices of the major export goods such as tin, rubber and timber are crucial for the economy, as these products account for two-thirds of total exports.

A main feature of the Malaysian economy is that its development until recently, has only involved moderate changes in the production structure. The

1) Calculation of the 'gross national product' GNP has been carried out by IBRD, FAO, ECAFE, the Malaysian Department of Statistics and other agencies. The results, however, do not quite correspond. The Malaysian estimates seem the more modest ones with approximately US$375 per capita (rate of exchange - $US/$Malaysian: 1/3.05) while the revised FAO estimates amount to more than US$400 per capita in 1970. The IBRD estimate for 1970 is US$380.

growth in the National Product per capita has consequently been a growth of productivity within the existing pattern of production rather than introduction of new industries. This has been mainly due to the agricultural origin of the traditional export products. However, as increasing productivity cannot be expected forever within these fields, a change in the production structure will be necessary if general economic growth is to continue.

A comparison of the sector contributions to the GNO within different GNP categories of developing countries is illustrated in Table 2.1

TABLE 2.1 AVERAGE PERCENTAGE CONTRIBUTIONS TO THE GNP BY SECTORS

Sector	GNP per capita in US dollars		
	US$ 350 - 400 (1)	US$ 200 - 350 (2)	US$ 350 - 575 (2)
	MALAYSIA	SELECTED COUNTRIES	
	%	%	%
Agriculture	32	34	15
Mining	6	2	11
Manufacturing	13	15	16
Construction	4	5	5
Public utilities	2	1	2
Transport	4	6	6
Services	39	37	45
	100	100	100

Note (1) Kuznets "Modern Econimic Growth", New York, 1966.
(2) Malaysian economy estimates

Table 2.1 indicates that the structure of the Malaysian economy is similar to the low-income example. However, a few reservations should be made; the quoted examples of income per capita are not very recent, and the agricultural sector in Malaysia cannot be regard as purely agricultural in this context.

2.2 SARAWAK

Due to its geographical character and its production structure, Malaysia has been characterised as a regionalised-economy nation. Sarawak is a typical region in this sense; bounded by the South China Sea, Indonesia and Brunei and with inaccessible borders towards Sabah. In recent time only the changed political structure has tied together the eastern and western parts of the Malaysian economies.

Sarawak's economy has not yet reached a level of development corresponding to that of Malaysia. This is, for example, reflected in the fact that the proportion of the total population living in the rural areas is much higher in Sarawak than in Peninsular Malaysia; see Table 2.2 A major difference in the product per capita between the rural and the urban populations could be expected because the per capita contribution of rural populations to the National or Regional Product is usually considerably smaller than that of urban populations.

TABLE 2.2 DISTRIBUTION OF URBAN AND RURAL POPULATION IN SARAWAK AND PENINSULAR MALAYSIA (1970 POPULATION CENSUS)

	Sarawak		Peninsular Malaysia	
	Thousands	Per cent	Thousands	Per cent
Large towns	150	15	2 530	29
Small towns	54	6	1 152	13
Rural areas	772	79	5 128	58
Total	976	100	8 810	100

The urban/rural ratio is reflected also in the distribution of the different sectors of production as shown in Table 2.3

It is, however, remarkable that the per capita Gross Regional Product (GRP = GNP calculated at regional level) of Sarawak is only slightly affected by the lower industrialisation and service level compared with Peninsular Malaysia. The GNP/GRP per capita in 1970 was estimated at $996 in Peninsular Malaysia and $906 in Sarawak. This unexpected equality is due to the importance to Sarawak's economy of the forestry industry. The contribution to the GRP of agricultural production per employed person was much less in Sarawak than in Peninsular Malaysia.

Sarawak's manufacturing sector in general is less important than the GRP figures indicate because a considerable part of the value-added is created by the oil refining industry which has a special structure with respect to capital supply and labour demand.

The apparent balance between the contribution of the service-sector in Peninsular Malaysia and in Sarawak is due partly to the extended value-added in the transport sector caused by higher transport costs in Sarawak. These in turn are the consequences of a less developed communication system in this State.

TABLE 2.3 GROSS REGIONAL PRODUCT 1970

	Sarawak		Peninsular Malaysia	
	Mn dollars	Per cent	Mn dollars	Per cent
Agriculture, forestry, fishing	349	40	2 607	31
Mining	32	4	556	6
Manufacturing and construction	129	14	1 447	17
Services	374	42	3 900	46

The growth of the GRP in Sarawak has developed along lines different from those in Peninsular Malaysia, although the total growth per capita has occured at almost the same rate. Based on current prices the growth in GRP 1967-1970 was 5.4 per cent annually per capita in Peninsular Malaysia and 6.2 per cent in Sarawak.

The main part of Sarawak's agricultural population still largely depends on traditional cultivation patterns and only a minor growth has been registered in this sector. It has been compensated for, however, by a considerable growth in the output of the forestry sector which, since the beginning of the 1960's has played an important part in the Sarawak economy. In monetary terms it has contributed more than any other industry in 1970 to the earning of foreign exchange, and its share of the GRP in more than 15 per cent compared with 1.8 per cent in Peninsular Malaysia. The Sarawak forestry sector's Regional Product has increased at an annual growth rate of approximately 17 per cent.

The oil industry has an important and special position in Sarawak's economy. In 1970 crude oil production was still of minor importance, less than 20 000 barrels a day; on-shore exploitation was declining while off-shore production was not yet fully developed. However, during 1974 the output from the Miri off-shore fields is expected to exceed 100 000 barrels a day and the importance of crude oil production to the regional economy will increase greatly.

The present economic influence of the oil industry on the regional economy is mostly due to the established refining industry which is the dominant manufacturing enterprise in Sarawak. In 1970 the value-added by the Lutong refinery accounted for approximately 70 per cent of the manufacturing and construction sector's contribution to the Sarawak GRP. In addition it is the largest single employer in Sarawak apart from the Government. However in this context the refineries effect on the local and State economy is less than indicated by the amount of value-added, because the greatest part of this accrues to foreign capital and to expatriate staff, who consume only part of their income in the State. Yet the oil industry, and accordingly the mining sector, has been the fastest expanding sector of all with an annual growth rate of more than 100 per cent during the period 1967 to 1970.

Sarawak has, in common with Peninsular Malaysia, a strongly trade oriented economy, in which export products contribute about 50 per cent of the total GRP. Primary products form an overwhelming proportion of the Sarawak's exported goods. This means that foreign trade, and thereby the GRP, is particularly affected by changes in the market trends for these goods. These even minor changes in international price trends has a serious impact on the local economy. Similar problems apply to the timber trade although the more diversified market reduces the effects to a certain extent. No problems of this kind are expected for oil products.

2.3 THE STUDY AREA

Were it not for the oil extraction and the petro-chemical industry the Study Area would be considered as one of the less developed regions in Sarawak. An extended shifting agriculture and a forestry industry which, until recently has been concentrated on log export, have been the dominant activities in the local economy. The specific economic pattern for the Study Area is illustrated in Table 2.4. It appears that, although the majority of the population of the Study Area is employed in the agricultural sector, its impact on the economy is only limited. The GRP per capita of the Study Area is still larger than in Sarawak as a whole, mainly on account of the prosperous forestry sector.

Table 2.4 shows the GRP of the Study Area to be approximately 20 per cent of the whole of Sarawak. When oil is ignored the percentage falls to 17, which is larger than the share of population living in the Study Area, namely 12 per cent. When including oil production, the per capita GRP in the Study Area is about Ø1 700 or roughly twice the per capita GRP in the rest of Sarawak; excluding oil production, the per capita GRP is around Ø1 200 which would be 1.6 times that of the rest of Sarawak.

A short economic characteristic of the single sectors provides the background for an understanding of the economic structure of the Study Area as it is shown in Table 2.4

TABLE 2.4 TOTAL GROSS REGIONAL PRODUCT (1970)

Sector	Sarawak		Study Area		Study Area as a percentage of total Sarawak
	Mn dollars	Per cent	Mn dollars	Per cent	Per cent
Agriculture	180	20.4	17.470	8.9	9.7
Forestry	148	16.7	62.000	31.5	41.9
Fishing	21	2.4	2.405	1.2	11.5
Mining including oil	32	3.6	30.680	15.6	95.9
Mining excluding oil	2	-	0.440	-	22.0
Manufacturing including refinery	81	9.2	32.170	16.3	39.7
Manufacturing excluding refinery	56	-	6.955	-	12.4
Construction	48	5.4	1.925	1.0	4.0
Electricity plus water	11	1.2	4.235	2.1	38.5
Transport	52	5.9	7.165	3.6	13.8
Trade	116	13.1	14.560	7.4	12.6
Banking plus insurance	9	1.0	2.790	1.4	31.0
Ownership of dwelling	45	5.1	8.100	4.1	18.0
Public administration	50	5.7	3.570	1.8	7.1
Services	91	10.3	10.095	5.1	11.1
Gross domestic product at factor cost	884	100.0	197.165	100.0	22.3
Gross domestic product at factor cost excluding oil	829	-	* 146.710	-	17.1

*) The figure excludes the value of the oil production, but includes local wages and salaries paid in the oil industries, as this amount will have an impact on the consumption and savings in the Study Area.

2.3.1 Agriculture

The calculation of the agricultural contribution to the GRP has been based on two kinds of information: trade and stock statistics, and estimated average yields. The trade statistics are insufficient for the purpose because internal trade is not registered. This implies that whenever Sibu or Kuching merchants buy rubber or pepper, for example, for export, these goods are not registered as exports from the Study Area but only from the export port (Kuching or Sibu). Consequently it is necessary to supplement the trade statistics with estimates of total production based on average yields and acreages in production.

Transport costs were estimated on the average distance from production site to trade centre. As a major part of this transport is carried on trucks and large vessels a ton/mile price of $0.15 has been considered reasonable. This transport includes pepper, while rubber transport has been calculated on a $0.30 ton/mile basis because a higher percentage is carried by launch the fares of which are higher than lorry rates.

The estimates for the GRP 1970 for the agricultural sector is divided into the contribution made to the total production value by the main products.

Rubber

The estimated area of low yielding rubber was 15 000 acres with an average yield of 300 pounds per acre. Of this acreage it was estimated that only one-third was actually tapped. Mature high yielding rubber was estimated to cover 20 000 acres and have a potential average yield of about 600 pounds per acre. Of this acreage it was estimated that only 25 per cent was tapped. The total production was thus approximately 2 000 tons.

In addition, the production value of planting and replanting rubber trees has been calculated. This amount has, in accordance with Peninsular Malaysian experience, been reduced by 25 per cent to arrive at the net value added.

Pepper

The acreage bearing pepper in the Study Area was estimated at 600 acres and the production from this area amounted to 1 070 tons black and white pepper based on the assumption that the average yield was 100 piculs (5.95 tons) of berries per acre. The total berry production was assumed to be processed into 60 per cent black and 40 per cent white pepper. The total fob value was $2 506 000 based on an average fob price of $2 340 per ton (for black/white pepper).

Rice

The value of rice production is based on estimates of acreages of hill and wet padi in the area in 1970. Areas bearing hill padi were estimated at 22 000 acres and wet padi at 16 500 acres. Assumed average yields were 1 300 per acre and 1 900 pounds per acre for hill and wet padi respectively (based on sample cuttings done by the Economics Branch of the Department of Agriculture in Kuching). Total production was calculated to be approximately 26 700 tons. The total revenue was approximately $8 074 000, based on an average price for both hill and wet padi of $18 per picul ($302 per ton).

Coconuts

The area under commercial coconuts in 1970 was estimated at 2 000 acres, of which approximately 500 acres were immature. With a calculated yield of 0.5 tons per acre, the estimated production was 750 tons. The revenue was $260 000 at an average price of $20.50 per picul ($345 per ton).

Palm oil

Production of palm oil has not yet begun and estimates of economic activity in this sector are therefore based on planting activities only.

Sago

Calculation of the value of sago production is limited to the sago included in the manufacturing of sago flour. The local production and consumption of sago is considered to be negligible. Most sago consumers in the Fourth Division reside outside the Study Area.

Animal Production

There are no statistics on livestock and poultry and an assessment of the value of these enterprises is complicated by almost all agricultural households and many urban families having their own subsistence production of these animals. Consequently the value of production must be calculated partly from registered slaughterings and estimated stock increases and partly from estimates of subsistence production. The total estimate of animal production amounts to $6.7 mn of which a substantial part (estimated at $2.6 mn) is considered reared and consumed by the households themselves.

Other Agricultural Products

This group comprises products not specified above including subsistence farming other than padi and livestock the growing of vegetables as cash crops and income from the collection of illipe-nuts. The value of the illipe-nut production can be taken as the entire recorded exports because no nuts are processed locally, but problems concerning the port of exit complicate the calculations. Other products from the agricultural sector are estimated on market reports and consumption surveys.

2.3.2 Forestry

The forestry industry, the most important in the Study Area, is estimated to contribute almost 35 per cent to the GRP though certain inconsistencies exist between different statistical sources. The calculated production value in the forestry sector was limited to the logging industry while further processing has been treated under manufacturing industries. The value of production was estimated for locally processed timber and for export logs; only 10 to 15 per cent is processed locally while the rest is exported. The transport costs for exported logs were calculated on the basis of estimated standard costs for rafting, towing etc. Deductions were made from the production value of costs of tractors, machinery, fuel and construction, which inputs do not originate in forestry.

2.3.3 Fishery

Fresh Water

The production value of the fresh water fish is based on the estimated number and size of fish ponds in the Study Area and estimates of the rural population employed in full or part-time river fishery. The estimated total number of ponds was 1 292, covering 110.5 acres. With an average output of 2 000 katis per acre per year and a price of $2.00 per kati, the value of production was estimated at $440 000. The value of river fishery was estimated at $160 000. The costs of pond-construction were calculated by using several cost analyses for specific ponds in Sarawak.

Sea

The economic estimates of sea fisheries were based on the reports for fish landed at Miri and Bintulu (the figures are not considered reliable, but are the only ones available), and sale price data (which are extremely detailed and thus considerably facilitate the calculation). Inputs have been estimated at 30 per cent of product value following investigations of the raw materials used including nets, fuel etc.

2.3.4 Mining

Glass Sand

The value of production of glass sand in 1970 has been estimated at $30 000. However, since the mining licence was issued in 1969 no regular production has taken place and only a minor part of the production has actually been traded.

Quarrying

The production of stone from quarries in the Study Area has been a major input in the local road construction work. The value of the production has been calculated based on information on output from the quarries and the price accepted by Public Works Department for local road material. The production input is mainly fuel and machinery for the quarry equipment.

Oil

The economic role of oil production in the Study Area is divided between the mining sector and the manufacturing sector. Consequently only the exploitation part of the oil-industry is included here while the refining is under "manufacturing industries". The value of oil exploitation was based on official production and trade statistics. It is well known that costs and prices within the oil trade are settled as internal accounting units, hence the value quoted does not necessarily reflect real economic values.

However, this was the only information available, and the production value estimates have been calculated accordingly.

The input/output ratio in the oil exploitation process is hard to estimate, but an overwhelming part of the input is imported, hence a deduction of 20 per cent from production value has been made. This corresponds to experiences in other oil producing countries but might be a slight under-estimate here because of off-shore drilling is normally considered to be more costly in both exploration and exploitation phases than corresponding on-shore operations.

2.3.5 Manufacturing

The analysis of the manufacturing sector is mainly based on information from the Statistical Department's survey of manufacturing industries 1968, 1969 and 1970. Complementary information from other sources has been obtained for the Study Area,

In 1970 there were 58 manufacturing establishments with more than five workers in the Study Area and 236 with less than five workers. Although the registration of industries may be incomplete, it has been the sole basis for evaluation in this sector. Amounting to a total of $188 860 000. The total input amounts to $156 690 000, and the net output value is thus $32 170 000 which is considered equal to the production value. Of this the petro-chemical industry accounts for 78 per cent and wood manufacturing for almost 12 per cent. Details of output and labour for the specific industries are shown in Appendix I.

2.3.6 Construction

Calculations for the production value of the building and construction sector were based on the Construction Survey (1970) carried out by the Department of Statistics in Kuching. The value-added in this sector consists partly of the value of work done by principal contractors and partly of work done by sub-contractors. In 1970, 52 establishments were registered as construction industries, but the present production value estimates are based on the output of only 37 firms, because the remainder did not carry out any contract work in 1970.

The value of production is calculated on the assumption that all raw materials are created outside the construction sector and that these would be either imported or accounted for in other sub-sectors. Of the total production in the construction sector only 18 per cent was carried out for the public sector, while the remaining 82 per cent was privately contracted work. PWD work has been included under the public sector.

2.3.7 Public Utilities

Electricity and drinking water were supplied by both public and the private sector in the Study Area. The Public Works Department is responsible for both construction and operation of water works and the distribution system, while electricity is supplied by the semi-public Sarawak Electricity Supply Corporation (SESCO). At the same time, Sarawak Shell Berhad (SSB) has its own water and electricity supplies which also supplies certain parts of Miri. These double distribution networks have to some extent prevented an optimal utilisation of the public plants in the past.

Gas is supplied to Miri District Council (MDC) by SSB at a reasonably low price, and the SSB production for public use has been accounted at the price which SSB sells to MDC. Input calculations were based on SESCO figures and a general 15 per cent reduction of the value of production.

2.3.8 Transport and Communication

Only river, sea and land transport are considered here. Regional air traffic is not considered relevant in this connection. While the value of production has been calculated for all river traffic, sea-traffic has nad to be largely omitted because statistics on the subject are extremely unreliable or non-existent. However, this is not particularly serious because a major part of the inter-regional sea trade is carried out by non-Study Area enterprises. The information on river and road transport is also unreliable but production value has been calculated using sample surveys of total trade as well as the Transport Survey undertaken by the Consultants in June 1972 and the calculated operating costs.

The calculations were divided into timber transport and other transport because information on the heavy log traffic can be obtained with greater accuracy; the sources and outflow of timber are known and the quantities recorded by both the Forestry and Statistical Departments.

The production value of communication is difficult to evaluate but the salaries and wages paid to communication personnel within the Study Area have been used as a basis for calculation. According to Peninsular Malaysian experiences the ratio between wages and total production value is 1:1.65 and this ratio has been applied in the calculations.

2.3.9 Trade

There is usually considerable uncertainty in the calculation of the value of production in the trade sector, because the different statistical sources are either not comparable or are incomplete; and trade in the Study

Area is no exception. However, the present calculations of the value of trade were carried out in accordance with the methods prescribed by the Economic Planning Unit (EPU) for Peninsular Malaysia using information obtained from foreign trade statistics, custom duties and interviews with informed persons on trade margins. Often the quality of the information was not good and the figures should be treated with caution.

The calculations of production value were divided between foreign and domestic trade. Foreign trade is easily evaluated from the external trade statistics. There are, however, still problems of estimating the true amounts of imports and exports to/from the Study Area because a part of these amounts are passing through domestic ports outside the Study Area; these movements of goods are not locally recorded and estimates have had to be made A further division in the production value calculations was made to separate the wholesale and wholesale-retail trades because trade margins vary considerably between the two kinds of trade. Margins have been assessed partly on EPU estimates and partly on local surveys, but the figures used were themselves averaged estimates because the variations even within specific trade lines are substantial.

Domestic trade was estimated on the basis of production within all primary sectors of the economy reduced by the estimated subsistence consumption. The quantities of goods traded were estimated but retrading through several middlemen has not been evaluated. The problems concerning the specific 'Chinese-launch-trade' are difficult to assess because trade margins might cover both trade, transport and financing aspects of the "launch-economy".

2.3.10 Banking and Insurance

Only rough calculations of the production value in the financial sector can be undertaken because data are usually not accessible, and the method of calculation must vary with the sources available. The production value could perhaps be estimated from the sum of wages and other income generated in the sector, but to calculate this would require detailed information and the knowledge of the ratio between production value and the wage-plus-service amount in the sector. Another method has been used because the are difficult to obtain.

The basis for this production value estimate was the interest margins in the financial sector. This information was collected from relevant companies in the sector regarding outstanding loans, advances, investments and deposits. It was then adjusted, after comparison with the existing interest structure, to obtain a final production value figure. An alternative calculation was applied to funds placed by the local financial institutions outside the Study

Area because the total deposits in all the financial institutions studied greatly exceeded the loans and overdrafts. These were included with a reduced amount, as the interest on the external placings is assumed lower than local advances.

2.3.11 Ownership of Dwellings

Local data were not available to calculate the value of dwelling ownership. For this reason the production value of this sector has been estimated on the basis of the GNP - calculations carried out by the Department of Statistics in Kuala Lumpur. To obtain an estimate for the Study Area the all Sarawak figure for ownership of dwellings has been related to:-

a) the population; and

b) the GRP of all other sectors than that mentioned.

The production value of dwelling ownership is estimated on the basis of those for Sarawak as a whole (1970 = $45 mn). The Sutdy Area (SA) estimates are:- The ratio of total population in SA to total population in Sarawak ($\frac{115}{975}$ = 0.12) modified by the ratio ("O of D" of SA/GRP) ("O of D" of Sarawak/GNP) = ($\frac{190}{839}$ = 0.23);

That is, total production value of "O of D" = $8 100.

2.3.12 Public Administration

Calculation of the production value of the public administration sector is based on the amount of personal emoluments paid to civil servants and other public employees in the Study Area. From this calculation civil servants employed with education, health, and post and telecommunication have been excluded as they are accounted for elsewhere. The assessed production value on the wage-ratio was adopted from the EPU estimates for Peninsular Malaysia.

2.3.13 Other Services

The ratios between production value and wages and/or expenses in this group have been based on EPU estimates. The information has been obtained locally and can be considered reliable as far as education, health and welfare are concerned.

CHAPTER 3

THE APPLICATION OF THE GRP

The calculated Gross Regional Product indicates the value of the production in the Study Area in 1970. It is, however of major importance to know how the GRP is distributed among different uses, as the rate of consumption and investment is decisive for the future development of income in the Region. At the same time the rate of consumption and the growth in the amount available for consumption is an immediate indicator of the welfare of the inhabitants of the area, provided the income is distributed reasonably evenly. Although the statistical information available for calculating the application of the GRP is limited, it is important to make estimates in order to analyse the present and future economic development of these fundamental items in the macro-economic accounting. The application of GRP to the different sectors in Table 3.1 has been worked out from statistical information covering Government income and expenditures, private savings and lending, private sector investments and consumption. The private consumption figures were partly deduced from foreign comparisons and local consumption analyses and partly estimated as the residual between the local GRP and other applications.

TABLE 3.1 APPLICATION OF GRP 1970

	$ mn	$/capita	per cent
Private consumption (Cp)	103.0	396	70.0
Public consumption (Cg)	15.5	135	10.0
Total consumption (C)	118.5	1030	80.0
Private investments (Ip)	6.5	55	4.5
Public investments (Ig)	10.5	90	7.0
Total investments (I)	16.5	145	11.5
Total saving (S)	29.0	250	20.0
Financial gap (S-I)	12.5	105	8.5
Total GRP (Y)	147.0	1280	100.0

(Note: The Petro-chemical industry is not included)

Private consumption covers all expenditures in the Region on commodities and services that do not constitute part of production; it is the final use of commodities such as food, clothing and housing and services such as transport and entertainment. Private consumption has been calculated partly from a limited statistical base consisting of household surveys and trade statistics and partly as a residual derived from more reliable information on other sectors.

Public consumption covers all expenditures by the Government for activities that cannot be classified as investments; it includes salaries and wages, repairs, maintenance and purchase of non investment commodities for final use in the public sector. All items in the accounts for recurrent expenditures have been checked for their relevance to this consumption.

Private investments cover all investments in the private sector; that is the purchase and production of goods and services for future use in the production process. The account of private investments is based on available statistics on the agricultural, forestry, manufacturing and construction sectors. Comparisons with overall figures for Penisular Malaysia and Sarawak have served as a check on the calculations.

Public investments cover all public expenditures of developing character and investments in projects which expand the present public service level and thus adds to the existing institutions.

Total savings have been estimated on information acquired from the financial institutions in the Study Area. Besides money deposited in banks and finance institutions, gold savings have also been considered. Public sector savings have been estimated as the difference between taxes, duties and royalties collected in the Region and total public expenditures on consumption and investments. Public savings, which appear as a consequense of an over budgetting policy, add to the positive financial gap.

Public revenues collected per year within the Study Area have in the years 1969 and 1970 been around $30-31 mn, or approximately 20 per cent of the GRP. Of the $31 mn, 43 per cent was collected by the Federal Government. 35 per cent by the State Government and three per cent by the Local Governments. This does not include oil and timber royalties, which together would far outweigh the amounts mentioned above. The expenditures of Federal, Stata and Local Governments in the Region in 1970 shown in Table 3.2 are divided into the ordinary and development expenditures the former being characterised by consumption, the latter usually by investment.

TABLE 3.2 PUBLIC SECTOR EXPENDITURES IN THE REGION 1970

$ mn	1970		
	Ordinary	Development	Total
Federal Gov.	6.4	1.5	7.9
State Gov.	7.4	6.5	13.9
Local Gov.	3.5	0.3	3.8
Total per centof total	17.3 68%	8.3 32%	25.6 100%

The total amount, $25.6 mn, was the total expenditure of the public sector in 1970. As the revenues amounted to $31 mn the Region has contributed more than $5mn in 1970 to State and Federal Governments. This indicates that only about 80 per cent of the total amount collected within the Region remained in the Region in 1970 - ignoring oil and timber royalties.

As shown in Table 3.1 there has in the past been a positive financial gap in the economy of the Study Area, and an outflow of capital has taken place. Generally it must be considered unfortunate that a developing economy is a net capital exporter, however, it is not an unusual situation. The same feature is known from developed countries where more developed regions absorb savings from the less industrialised ones, thus widening the gap between the different regional economies. The reason for this would usually be that the less developed regions offer fewer immediately attractive investment possibilities for the private small and medium scale entrepreneur. That is why building of infrastructure and initiating appropriate pioneer enterprises in these areas are so important to get the economic machinery started.

A concentrated effort to develop the Study Area would not only stop the outflow of capital but would increase the number of projects to be implemented and consequently the demand for investment funds. The Study Area would therefore in the near future become a net capital importer.

In spite of the fact that only a third of the population is gainfully employed in the labour force, the GRP of the Region is above average for developing countries. The average production per employed person amounts to more than $3 700 per year which may be one of the reasons why the ratio between consumption and total income has already come down to a level which could be reduced only marginally in the future.

CHAPTER 4

ECONOMIC FACTORS IN THE STUDY AREA

4.1 CAPITAL AND INTEREST

The capital available for present production and future development in the Study Area is difficult to assess. The term capital is generally conceived as the stock of goods, property, money etc. which exists at a certain time. If we try to limit the above definition to a more narrow economic one, capital involves the sum of money applied in whatever form to yield a revenue.

The supply of capital to the Study Area and the possible existing and future sources of capital are treated specifically in the chapters on Finance in this report, but the cost of attracting and applying money for investment and production will only to a certain extent reflect the supply and demand situation in the local market.

The Study Area, being a part of Sarawak and the Malaysian Federation, is in a situation where it must compete for capital along with other applicants. Consequently, capital for proje ts in the Study Area will be subject to the same claim of interest as other similar investments as long as the capital supply attracted from the open market. It is, however, questionable whether projects, which are supposed to support and initiate the development in retarded areas, should compete for capital on free market terms, as it is a declared government policy to promote and support for all regions such reasonable plans and projects.

If Government subsidisation implies that interest criteria are to be considered for Study Area projects other than for those outside, this would only seem reasonable. But at the same time it should be made clear to what extent the recompense for employed capital includes a subsidy, and therefore an assessment of the actual interest level made.

In order to estimate an opportunity cost of capital based on Sarawak rates, the following varying interest information was obtained:

INTEREST ON ADVANCES (December, 1973)

BANK-rates (interest on loans)

7.5 per cent - share holding customers, full security;

8 per cent - other big customers, 60 per cent security; short term planting loans;

9-10 per cent - reliable customers, good traders with security in stocks; trade-credits.

10-12 per cent - ordinary customers with reasonable security;

12-15 per cent - loans and advances without sufficient security.

FINANCING CORPORATION RATES

10 per cent - hire-purchase-loans with security in articles purchased.

12 per cent - housing loans up to 60 per cent of value; full security; loan-period 6-10 years.

12-13 per cent - land loans, mortgages over 2-3 years.

GOVERNMENT AND STATUTORY BODIES' RATES

These include very low civil-servant housing loans at four per cent, planting scheme financing, and other recognised projects, but rates vary considerably. The Borneo Development Corporation housing rates at eight per cent are considered to be above average.

The interest rates for deposits are lower on advances although the margin has been reduced considerably during the last year. The interest on deposits ranges from 5 to 8.5 per cent depending on the depositing period, which varies from 0 to 24 months. The rates for deposits have been increased in spite of the existing gap between deposits and advances (deposits are often 60 to 100 per cent bigger than advances). It could thus be taken for granted that a demand for capital exists outside the Study Area on similar or more expensive terms than inside. There is therefore hardly reason to believe that the opportunity cost of capital would be lower in other parts of Malaysia than in Sarawak. The opportunity cost of capital has for projects in the Study Area, based on the above information, been assessed at ten per cent per year. This corresponds to the rate estimated for several development projects in Peninsular Malaysia.

The question is, however, whether it is sensible to operate with an opportunity cost of capital, which could be estimated at ten per cent, if foreign capital can be obtained at a lower rate. The projects worked out under this Study would, for the majority, probably qualify for foreign development funds which rarely operate on interest rates higher than eight per cent. Furthermore it could be maintained that the recent price-developments would justify an opportunity cost of capital in real terms instead of nominal ones. This would imply a reduction of the above opportunity cost with the rate of inflation. Such a reduction of the interest rate is even more justified as all econimic calculations in our report are based on a fixed price principle. Consequently a rate of inflation of three per cent would reduce the opportunity cost of capital to seven per cent. A higher inflation rate would naturally reduce it correspondingly.

4.2 THE GENERAL PRICE LEVEL

Prices in Sarawak do, in spite of the economic ties to Peninsular Malaysia, vary independently. Thus a direct transfer to Peninsular Malaysian price trends to Sarawak is not possible.

Prices in Sarawak on international commodities are of course deperendant on world market prices but freight rates, which are to be added to all export and import goods, induce another source of variation. Transport costs within, to and from Sarawak are quite considerable compared to the rest of Malaysia, therefore they tend to create a certain isolation of the Sarawak economy.

The present and future level and structure of prices and wages are important elements in the economic state of the Study Area. Variations in these may be of both internal and external origin. The Study Area, however, is such a limited unit that only some of the problems concerning variations of prices and wages are touched upon here. The economic influence of external prices can only be controlled to a limited degree depending on the possibility of substitution between supply of different foreign goods and services.

In the past the price level has been rather stable in Malaysia, not least in Sarawak. Apparently the general price level increased by less than one per cent per year in the years 1967-71, at a time when most Organisation for Economic Cooperation and Development countries recorded an annual rate of inflation of three to four per cent. As no actual price index exists in Sarawak, an intermediary cost-of-living index has been worked out by the Consultants. According to this, prices were virtually constant from 1967 to 1971.

The general price level is higher in the Study Area than for instance in First Division in Sarawak due to special market conditions, local trade monopolies, relatively high purchasing power and a difficult transport situation. but trends seem to be practically identical in Kuching and Miri.

Future developments in the general price level are difficult to forecast. Two opposite effects may operate in the Study Area. Improved transport facilities and a resulting decline in freight costs would tend to reduce the general price level. Increased economic activity would tend to pull the other way. At present many resources in the Study Area have only been employed on a limited scale. Future demand for capital, labour and goods will reduce any under-utilisation in the Region.

The changes in the relative prices of different commodities and factors are equally difficult to forecast. World market prices and currency relations can cause unpredictable variations in relative prices, which again can have a spin-off effect on prices generally. The above considerations make it difficult to introduce price changes into the computations of the economic implications of the planned development. Studies of trends up to 1971 do not indicate any significant price changes, but 1972 introduced for the first time in a long period substantial general price increases. This trend was continued and even strengthened in 1973.

The general local price increase in supposed to originate in international inflationary trends but a certain part of the increases are probably created in local anticipation of future stronger cost rises on imported commodities.

Figure 4.1 illustrates price tendencies in goods included in the consumer's basket, and as such it expresses the trend in the cost-of-living. Table 4.1 gives the details of the price basis for the graph. Price development for quoted export goods such as RSS/SMR rubber and Sarawak pepper have followed their own path, directed by external factors.

4.3 IMPORTS AND EXPORT PRICES

A special problem has to be faced in connection with the development of prices on external trade goods. For Sarawak, as well as Malaysia as a whole, exports and imports constitute a very significant proportion of the total National Product and changes in price relationships between imported and exported goods can have a very important impact on the real economic situation of the country.

Table 4. 2 FOREIGN TRADE AND GNP IN 1970 MILLION DOLLAR

	GNP	EXPORT	IMPORT
Malaysia	11 630	5 635	4 515
Sarawak	980	670	660

It is sufficient to point to the importance of rubber prices, which between the commencement of this Study in April 1972 and the beginning of 1974 have risen to a level three times the original; and crude oil prices being doubled from one day to the next. Such fluctuations in the terms of trade have a real impact on Malaysia's economy. Higher rubber prices increase the total GNP even if production and productivity per worker have been constant. However, for use in long term planning price forecasts have to be made which ignore such short term fluctuations.

TABLE 4.1 PRICE INDEX CALCULATIONS - MIRI

ITEM	INCOME LEVEL $475: Consum 1968 in $	Price in $ per unit 1968	Consum Basis 1967/68 in $	Consum 1969 in $	Consum 1970 in $	Consum 1971 in $	INCOME LEVEL $750: Consum 1968 in $	Price in $ per unit 1968	Consum Basis 1967/68 in $	Consum 1969 in $	Consum 1970 in $	Consum 1971 in $	Price in $ per unit 1967	1968	1969	1970	1971
RICE AVERAGE	40.95	0.47	35.72	37.46	34.85	30.49	48.70	0.47	42.48	44.55	41.45	36.27	0.41	0.47	0.43	0.40	0.35
1. SIAM													0.47	0.52	0.46	0.43	0.40
2. CHINESE													0.35	0.42	0.40	0.38	0.31
3. WHEAT FLOUR	1.20	0.30	1.20	1.20	1.20	1.20	0.76	0.30	0.76	0.76	0.76	0.76	0.30	0.30	0.30	0.30	0.30
4. BREAD LARGE	5.17	0.40	5.16	5.42	5.16	5.16	5.91	0.40	5.91	6.20	5.91	5.91	0.40	0.40	0.42	0.40	0.40
TOTAL INDEX	47.32		42.08	44.08	41.21	36.85	55.37		49.15	51.51	48.12	42.94					
TOTAL C-BASIS	55.36						65.06										
5. MUTTON	0.12	1.85	0.12	0.09	0.11	0.10	0.19	1.85	0.19	0.16	0.18	0.17	(1.85)	(1.85)	1.65	1.80	1.74
6. BEEF	5.59	3.83	5.36	5.58	5.75	5.81	3.42	3.83	3.29	3.43	3.53	3.57	3.70	3.83	3.85	3.97	4.01
7. BUFFALO	1.75	3.84	1.66	1.88	1.84	1.94	3.84	3.84	3.70	4.19	4.11	4.30	3.70	3.84	4.19	4.11	4.30
- PORK AVERAGE	22.30	3.45	20.93	21.51	20.28	18.80	37.27	3.45	34.99	35.96	33.91	31.43	3.24	3.45	3.33	3.14	2.91
8. LEAN NO. 1													4.14	3.92	4.35	3.94	3.86
9. LEAN NO. 2													2.35	2.98	2.31	2.35	1.96
- CHICKEN AVERAGE	5.41	2.03	5.58	5.42	5.42	5.77	10.27	2.03	10.60	10.30	10.30	10.96	2.10	2.03	2.04	2.04	2.17
10. CHICKEN, FEMALE YOUNG													2.25	2.18	2.15	2.19	2.32
11. COCKBIRDS(YOUNG)													1.95	1.88	1.93	1.90	2.02
12. DUCK	0.75	1.52	0.77	0.69	0.67	0.73	2.60	1.52	2.70	2.42	2.34	2.53	1.58	1.52	1.42	1.37	1.48
- FRESH FISH (AVERAGE)	13.81	1.10	14.18	16.06	18.57	16.94	16.69	1.10	17.14	19.41	22.45	20.47	1.13	1.10	1.28	1.48	1.35
13. TEMGIRI													1.39	1.37	1.34	1.64	1.57
14. SENANGIN													1.20	1.75	1.67	1.83	1.65
15. KEMBONG													0.80	0.78	0.85	0.97	0.83
- DRIED/SALTED FISH	1.72		1.63	2.37	2.83	3.82	1.52		1.44	2.09	2.49	3.36					
16. SOTONG		1.57						1.57					1.50	1.57	2.18	2.60	3.50
PRAWNS (FRESH)	1.32	1.52	1.29	1.41	1.20	1.08	3.87	1.52	3.83	4.16	3.56	3.18	1.51	1.52	1.64	1.40	1.25
17. RED PRAWNS													1.55	1.65	1.75	(1.45)	1.18
18. WHITE PRAWNS													1.47	1.40	1.53	(1.35)	1.33
EGGS																	
19. HENS	7.33	0.17	6.46	6.46	6.46	6.46	10.04	0.17	8.85	8.85	8.85	8.85	0.15	0.17	0.15	0.15	0.15
20. DUCK FRESH	0.11	0.15	0.10	0.10	0.10	0.10	0.27	0.15	0.27	0.27	0.27	0.27	0.15	0.15	0.15	0.15	0.15
TOTAL INDEX	60.21		58.08	61.57	63.23	61.55	89.98		87.00	91.24	91.99	89.09					
TOTAL C-BASIS	65.66						97.47										

TABLE 4.1 (CONT'D)

ITEM	INCOME LEVEL $475: Consum 1968 in $	Price in $ per unit 1968	Consum Basis 1967/68 in $	Consum 1969 in $	Consum 1970 in $	Consum 1971 in $	INCOME LEVEL $750: Consum 1968 in $	Price in $ per unit 1968	Consum Basis 1967/68 in $	Consum 1969 in $	Consum 1970 in $	Consum 1971 in $	Price in $ per unit: 1967	1968	1969	1970	1971
22. POTATO	0.59	0.50	0.59	0.55	0.66	0.61	1.07	0.50	1.07	1.00	1.19	1.11	0.50	0.50	0.47	0.56	0.52
23. TOMATO	0.38	0.80	0.38	0.35	0.46	0.38	1.09	0.80	1.09	1.03	1.34	1.12	0.80	0.80	0.76	0.99	0.82
24. LADY'S FINGERS	0.41	0.61	0.63	0.21	0.27	0.42	0.72	0.61	1.12	0.54	0.68	0.74	0.95	0.61	0.46	0.58	0.63
25. CABBAGE	1.32	0.81	1.29	1.42	1.32	1.32	2.53	0.81	2.49	2.74	2.53	2.53	0.80	0.81	0.88	0.81	0.81
26. BEAN SPROUTS	0.70	0.25	0.70	0.84	0.84	0.89	0.68	0.25	0.68	0.81	0.81	0.87	0.25	0.25	0.30	0.30	0.32
27. BRINJAL (TRONG)	0.65	0.50	0.65	0.55	0.71	0.70	0.73	0.50	0.73	0.62	0.80	0.79	0.50	0.50	0.43	0.55	0.54
28. CUCUMBER	1.38	0.33	1.54	1.12	1.25	1.29	1.52	0.33	1.70	1.24	1.38	1.42	0.37	0.33	0.27	0.30	0.31
29. KACHANG PANJANG	1.21	0.38	1.39	1.17	1.52	1.24	1.61	0.38	1.86	1.56	2.03	1.65	0.44	0.38	0.37	0.48	0.39
30. FRENCH BEAN	0.58	0.91	0.65	0.44	0.43	0.42	0.91	0.91	1.04	0.71	0.69	0.67	1.04	0.91	0.71	0.69	0.67
TOTAL INDEX	7.22		7.82	6.65	7.46		10.86		11.78	10.25	11.45						
TOTAL C-BASIS	14.40					7.27	20.22					10.90					
31. BANANA (EMBUN)	1.56	0.32	1.60	1.65	1.65	1.56	2.28	0.32	2.34	2.42	2.42	2.28	0.33	0.32	0.34	0.34	0.32
32. PINEAPPLE	0.12	0.94	0.12	0.13	0.10	0.13	0.45	0.94	0.47	0.50	0.39	0.49	1.00	0.94	1.08	0.84	1.05
33. PAPAYA	0.11	0.21	0.10	0.11	0.11	0.11	0.27	0.21	0.25	0.27	0.28	0.27	0.20	0.21	0.21	0.22	0.21
TOTAL INDEX	1.79		1.82	1.89	1.86	1.80	3.00		3.06	3.19	3.09	3.04					
TOTAL C-BASIS	5.65						9.91										
34. SALT (COOKING)	0.36	0.15	0.36	0.36	0.36	0.46	0.41	0.15	0.41	0.41	0.41	0.52	0.15	0.15	0.15	0.15	0.19
35. CHILLIES (DRIED)	0.07	1.35	0.06	0.07	0.08	0.08	0.01	1.35	0.01	0.01	0.01	0.02	1.35	1.35	1.40	1.54	1.56
36. GARLIC	1.16	1.11	0.94	1.47	1.69	1.54	1.60	1.11	1.29	2.28	2.34	2.13	0.90	1.11	1.59	1.63	1.48
37. ONION SMALL	0.61	0.69	0.62	0.61	0.66	0.59	0.71	0.69	0.71	0.71	0.76	0.68	0.70	0.69	0.69	0.75	0.67
38. ONION BOMBAY	0.56	0.41	0.54	0.64	0.77	0.72	0.68	0.41	0.66	0.78	0.94	0.88	0.40	0.41	0.47	0.57	0.53
TOTAL INDEX	2.76		2.52	3.15	3.56	3.39	3.41		3.08	4.19	4.46	4.23					
TOTAL C-BASIS	5.19						6.94										
- MILK (CONDENSED)	8.10	0.62	8.10	8.23	7.96	8.36	10.04	0.62	10.04	10.19	9.87	10.36	0.62	0.62	0.63	0.61	0.64
39. MILKMAID													0.70	0.70	0.70	0.66	0.68
40. IDEAL													0.55	0.55	0.56	0.56	0.60
41. BUTTER	1.15	1.72	1.14	1.10	1.12	1.15	1.82	1.72	1.81	1.76	1.79	1.82	1.73	1.72	1.68	1.71	1.72
TOTAL INDEX	9.25		9.24	9.33	9.08	9.51	11.86		11.85	11.95	11.66	12.18					
TOTAL C-BASIS	14.81						19.06										
42. SUGAR (WHITE)	4.96	0.29	4.45	5.64	6.15	7.69	5.87	0.29	5.26	6.67	7.28	9.11	0.26	0.29	0.33	0.36	0.45
TOTAL INDEX	4.96		4.45	5.64	6.15	7.69	5.87		5.26	6.67	7.28	9.11					
TOTAL C-BASIS	5.05						6.04										

TABLE 4.1 (CONT'D)

ITEM	INCOME LEVEL $475: Consum 1968 in $	Price in $ per unit 1968	Consum Basis 1967/68 in $	Consum 1969 in $	Consum 1970 in $	Consum 1971 in $	INCOME LEVEL $750: Consum 1968 in $	Price in $ per unit 1968	Consum Basis 1967/68 in $	Consum 1969 in $	Consum 1970 in $	Consum 1971 in $	Price in $ per unit: 1967	1968	1969	1970	1971
43. SOYA BEAN SAUCE	1.43	0.70	1.02	1.24	1.08	1.16	1.66	0.70	1.18	1.44	1.25	1.35	0.50	0.70	0.61	0.53	0.57
TOTAL INDEX	1.43		1.02	1.24	1.08	1.16	1.66		1.18	1.44	1.25	1.35					
TOTAL C-BASIS	2.68						3.67										
- TEA (AVERAGE)	0.92	1.70	0.87	0.85	0.92	0.91	1.57	1.70	1.53	1.45	1.56	1.55	1.67	1.70	1.58	1.70	1.69
44. CEYLON													2.45	2.50	2.37	2.46	2.44
45. CHINESE													0.90	0.90	0.80	(0.95)	(0.95)
COFFEE	0.25	1.75	0.24	0.22	0.24	0.26	0.45	1.75	0.44	0.42	0.44	0.48					
46. COFFEE SEEDS													1.70	1.75	1.62	1.71	1.86
47. (LOCAL) COFFEE POWDER	4.72	2.58	4.75	4.70	4.39	4.68	5.10	2.58	5.12	5.06	4.73	5.04	2.60	2.58	2.57	2.40	2.56
TOTAL INDEX	5.89		5.86	5.77	4.59	5.85	7.12		7.19	6.93	6.73	7.07					
TOTAL C-BASIS	10.40						13.55										
48. KEROSENE (TIN)	1.97	5.40	1.81	2.01	2.02	2.05	1.35	5.40	1.26	1.40	1.40	1.43	5.03	5.40	5.61	5.61	5.71
49. CHARCOAL	0.14	20.00	0.14	0.10	0.11	0.11	0.55	20.00	0.55	0.39	0.41	0.43	20.00	20.00	14.49	15.32	15.83
50. ELECTRICITY	6.76	0.30	7.88	7.88	7.88	7.88	10.97	0.30	12.79	12.79	12.79	12.79	0.35	0.30	0.35	0.35	0.35
TOTAL INDEX	8.87		9.83	9.99	10.01	10.04	12.87		14.60	14.58	14.60	14.65					
TOTAL C-BASIS	15.40						21.39										
51. SOAP																	
52. LOCAL (WASHING SOAP)	1.41	0.60	1.64	1.83	1.64	1.64	1.83	0.60	2.12	2.36	2.12	2.12	0.70	0.60	0.78	(0.70)	0.70
53. IMPORT (WASHING SOAP)	3.82	1.30	3.82	4.14	4.15	4.14	4.82	1.30	4.82	5.23	5.23	5.23	1.30	1.30	1.41	1.41	1.41
TOTAL INDEX	5.23		5.46	5.97	5.79	5.78	6.65		6.94	7.59	7.35	7.35					
TOTAL C-BASIS	6.10						11.85										
- LARD (AVERAGE)	2.13		2.11	2.24	2.24	2.29	3.71		3.68	3.91	3.91	4.00					
54. LARD (26 oz)		1.61						1.61					1.60	1.61	1.70	1.70	1.74
55. VEGETABLE OIL	3.17	2.80	3.00	3.08	3.29	3.40	2.79	2.80	2.62	2.70	2.88	2.98	(2.65)	2.80	2.73	2.91	3.01
TOTAL INDEX	5.30		5.11	5.32	5.53	5.69	6.50		6.30	6.61	6.79	6.98					
TOTAL C-BASIS	7.17						10.97										
CIGARETTES	13.08	0.46	13.36	11.37	11.37	11.37	18.27	0.46	18.66	15.88	15.88	15.88	0.47	0.46	0.40	0.40	0.40
56. PLAYERS													0.50	0.49	0.40	0.40	0.40
57. MATTERHORN													0.45	0.44	0.40	0.40	0.40
TOTAL INDEX	13.08		13.36	11.37	11.37	11.37	18.27		18.66	15.88	15.88	15.88					
TOTAL C-BASIS	13.90						18.52										
A. TOTAL INDEX	173.31		166.65	171.97	170.92	167.95	233.42		225.95	232.03	230.65	224.77					
B. TOTAL C-BASIS	221.77						304.65										
INDEX - $\frac{C71}{C67}$	103.90		100.00	103.10	102.50	100.70	103.30		100.00	102.60	102.00	99.40					

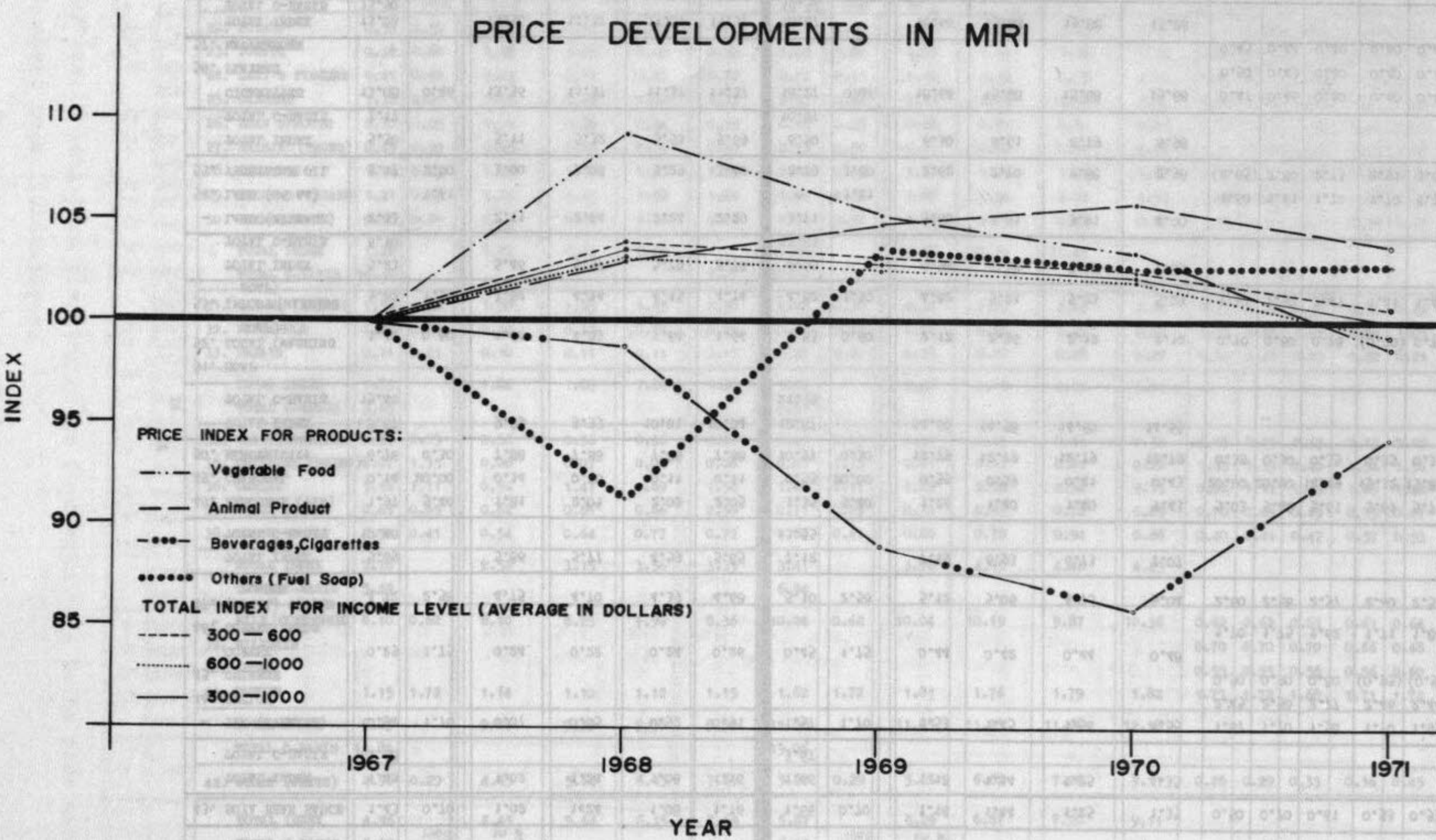

PRICE DEVELOPMENTS IN MIRI
110
105
100
95
90
85
INDEX
PRICE INDEX FOR PRODUCTS:
Vegetable Food
Animal Product
Beverages,Cigarettes
Others (Fuel Soap)
TOTAL INDEX FOR INCOME LEVEL (AVERAGE IN DOLLARS)
300 — 600
600 —1000
300—1000
1967
1968
1969
1970
1971
YEAR

FIGURE 4·1

4.4 WAGES

The wage bill in organisations operating with ordinary paid labour should be an indicator of the actual labour cost. Wages are, however, only paid within certain sectors of the economy. Where production is carried out as a family or community enterprise no wages are paid, such as in a traditional agricultural community where sharing of labour and output within the family or household is common and where a money economy is virtually unknown.

As a result of differences in wage levels between the economic sectors of the Study Area, a proper assessment of the general wage levels is extremely difficult. As statistical information in this field also is scarce the levels and changes in labour costs can only be approximately indicated.

The private commercial sector is thus the only one on which knowledge of the labour cost in Sarawak can be based. In this sector the market wage should be an approximation to the marginal product of labour if a perfect competition situation existed. This does not exactly apply but the relation between product and wages is at least closer than in the rest of the economy, where the income of the agricultural family is not determined by the hours of work performed but on a division of common income based on rules of status.

It would be incorrect to transfer capitalist labour cost measures to the rest of the economy, as no actual measure of labour cost exists in the non capitalist economy and as it is assumed that the surplus of labour is not registered. Consequently a calculation or 'shadow wage has been introduced for certain calculations of the socio-economic effects of agricultural projects to which labour is supplied from the traditional rural sector.

The wage structure is different for the private and the public sector, due to the fact that wages in the public sector follow fixed patterns, while the wage system of the private sector is more flexible. Furthermore there seems to be quite a considerable difference in development between the two sectors.

4.4.1 Private Sector

The basis data for the estimated average wage figures are derived from a "Survey of Construction" and a Survey of Manufacturing Industries (Dept. of Statistics), and files made available to the Consultants by the Labour Departments Offices in Miri and Kuching. Besides, a local survey carried out in Miri by the Consultants has served as a check on the average wage groups.

The wage structure has been analysed according to two criteria:-

(a) the employing industry, and

(b) the employment level.

(a) The employing industry has been specified according to the classification used in the economic and transport sections of the study. In cases where detailed information has not been available, the industries in question have either been left out or accommodated in related groups.

(b) The occupation level is described according to the traditional groups used in occupational classification. However, some modifications have been considered necessary as the local labour market hardly contains all the specified groups that appear in this classification.

In order to describe the occupation level, the following groups have been defined: non-skilled, semi-skilled, skilled clerks and shop assistants. As a clear formal distinction between the groups is not possible, more criteria have been applied to specify the skill of the employed. The classification criteria are mentioned in order of priority:-

Non-skilled:-

- ordinary labourer, paid according to work carried out
- labourers with basic monthly salaries at the $90-160 level;
- labourers, whose title indicates this level of occupation, e.g. junior assistant;

Semi-skilled:-

- labourers whose jobs depend on type of employment, type of enterprises, permanent character of engagement;
- labourers with basic monthly salaries at the $160-250 level;
- labourers whose title indicates this level of occupation e.g. senior assistant;

Skilled:-

- labourers whose jobs demand formal or practical education of a certain (unspecified length), type of employment, type of enterprise;
- labourers with basic monthly salaries above $250;

Clerks and Shop Assistants

- employed whose jobs are characterised by the trade, e.g. office, retail, wholesale etc.

The average wage increase over the period 1969-72 has been around 3.3 per cent. The registered development in wages corresponds with earlier estimates on price trends and increase in GRP.

Thus with almost constant prices and a growth of production per capita of four to five per cent, a 3.3 per cent wage increase signifies a roughly unchanged ratio in the distribution of income.

No important change in the structure of wages has been registered either. A lower growth rate for clerks could indicate that certain branches have had less growth than others. This impression, is emphasised when the index figures for the single sectors are considered. (cf. Table 4.2) Actually it seems that the growth in the agricultural sector's wages (due to the major schemes implemented) pushes the index above the average for other industries. The average wage for the unskilled workers appears to have increased approximately from \$125 to \$145 per month in the years analysed, but here again a single industry (construction) has a significant wight in the computation.

According to the information collected, an average wage for unskilled labourers in 1972 could be estimated at \$4.50 per day. The employers contribution to the Employees Provident Fund (EPF) amounts to five per cent and other benefits are estimated at about three per cent, in total eight per cent. However, the present Labour Ordinance (Sarawak) does not contain as many benefits for the employed as the Malaysian Labour Ordinance and changes in the minimum requests in the Sarawak Labour Ordinance is therefore to be expected. As a consequence of this a 10 to 12 per cent addition to the 1972 gross year wage level should be considered as a minimum requirement when labour costs to the enterprises are considered.

4.4.2 Public Sector

The wage structure in the public sector is completely different from the private labour market. The scales and categories for the public sector employed form an elaborate system which cannot be explained in this context, but as a recent revision has been carried out in the wages for public servants, a comparison of old and new wages has been shown in Table 4.3

The **implementation** of the new Suffian Salary Scale represents for many groups of employed an extraordinary wage increase. The reclassification of employed and the changed scales has resulted in a wage increase from the Watson Scheme (the old one) to the Suffian Scheme of 15 to 45 per cent (on scales A to G). The average increase is estimated at around 35 per cent.

Besides this one time salary leap, which was supposed to even out a gap between private and public wages, an annual wage increase of 3.3 per cent (average on the total salary sum) is provided for in the Suffian Scale Fringe benefits such as house finances at interest below the market rates, supplied to many civil servants, are not taken into consideration here.

TABLE 4.2 AVERAGE MONTHLY WAGES ACCORDING TO EMPLOYING INDUSTRY AND EMPLOYMENT IN $ AND INDEX 1969 = 100

		Un-skilled	index	S-skilled	index	skilled	index	clerks	index	total	index
Agri-culture	1969	100	100	120	100	-	-	-	-	110	100
	1970	110	110	125	104	-	-	-	-	118	107
	1971	105	105	185	154	-	-	-	-	145	132
	1972	100	100	200	167	-	-	-	-	150	136
Fores-try	1969	170	100	310	100	470	100	200	100	288	
	1970	180	106	360	116	535	114	220	110	324	113
	1971	190	112	370	119	520	111	240	120	330	115
	1972	185	109	360	116	565	120	220	110	333	116
Manu-facturing	1969	134	100	243	100	359	100	-	-	245	100
	1970	139	104	247	102	348	97	-	-	245	100
	1971	180	157	210	114	425	115	200	100	254	117
	1972	-	-	-	-	-	-	-	-	-	-
Trade	1969	145	100	250	100	485	100	200	100	270	100
	1970	145	100	245	98	470	97	190	95	263	97
	1971	150	103	250	100	535	110	200	100	284	105
	1972	150	103	245	98	530	109	190	95	279	103
Bank	1969	115	100	270	100	530	100	210	100	281	100
	1970	125	109	280	104	540	102	225	107	293	107
	1971	130	113	270	100	570	108	230	110	300	107
	1972	140	122	265	98	620	117	260	124	321	117
Other Services	1969	100	100	210	100	325	100	160	100	199	100
	1970	100	100	210	100	325	100	160	100	199	100
	1971	105	105	210	100	335	104	160	100	203	102
	1972	105	105	200	95	345	106	160	100	203	102
Total	1969	126	100	227	100	423	100	194	100	243	100
	1970	136	108	240	106	436	103	199	103	253	104
	1971	142	113	249	110	454	107	206	106	263	108
	x) 1972	143	113	247	109	474	112	206	106	268	110

x) construction assumed 1971 = 1972

NOTE: total columns and rows are arithemetic averages - no weights included.

TABLE 4.4

PUBLIC SECTOR WAGES
COMPARISON BETWEEN THE PERCENTAGE ANNUAL INCREASE (COMPOUND RATE) IN THE WATSON SCHEME AND SUFFIAN SCHEME OF THE PUBLIC SERVICES FOR THE PERIOD SHOWN

Year / Scale	1		2		3		4		5		Accumulated Increase		Per Cent Increase		Average Annual % Increase (Compound Rate)	
	Watson	Suffian	Watson	Suffian	Watson	Suffian	Watson	Suffian	Watson	Suffian	Watson	Suffian	Watson	Suffian	Watson	Suffian
A(lower)	750	750	780	800	810	850	830	900	870	950	120	200	16.00	26.67	3.0	4.9
C1	250	300	270	325	290	350	310	375	-	-	60	75	24.00	25.00	5.5	5.7
2	330	460	352	490	274	420	396	440	418	480	188	120	26.67	26.08	4.8	4.7
3	535	740	460	780	585	820	610	860	635	900	100	160	18.69	21.62	3.5	4.0
4	690	940	720	980	750	1020	780	1060	810	1100	120	160	17.39	17.02	3.2	3.2
5	930	1150	960	1200	990	1250	-	-	-	-	60	100	6.45	8.69	2.1	2.8
6	1080	1300	1110	1350	1140	1500	-	-	-	-	60	200	5.55	15.38	1.8	4.9
D1A	135	180	140	185	145	190	150	195	155	200	20	20	14.81	11.11	2.8	2.1
1	180	220	180	235	190	250	-	-	-	-	10	30	5.55	13.63	1.8	4.4
2	210	260	225	280	240	300	255	320	270	340	60	80	28.57	30.76	5.2	5.5
3	300	425	315	450	330	475	350	500	370	525	70	100	23.33	23.52	4.3	4.3
4	430	625	450	650	470	675	490	700	-	-	60	75	13.95	12.00	3.3	2.9
5	520	725	545	750	570	775	595	800	-	-	75	75	14.42	10.34	3.4	2.5
F1A	100	140	105	145	110	150	-	-	-	-	10	10	10.00	7.14	3.2	2.3
1	125	175	130	180	135	185	140	190	745	195	20	20	16.00	11.42	3.0	2.2
2	150	210	160	220	170	230	190	240	200	250	50	40	33.33	19.04	5.9	3.5
3	220	285	230	295	240	305	250	315	260	325	40	40	18.18	14.03	3.4	2.7
4	275	350	290	365	310	380	330	395	350	410	75	60	27.27	17.14	4.9	3.2
G1A (1)	85	-	86	-	87	-	88	-	89	-	4	-	4.7	-	0.9	-
1	100	140	100	145	100	150	105	155	110	160	10	20	10.00	14.28	1.9	2.7
2	135	175	140	185	145	195	150	205	155	215	20	40	14.81	22.85	2.8	4.2
3	165	235	170	245	180	255	190	265	200	275	35	40	21.21	17.02	3.9	3.2

NOTE (1) No Provision in Suffian Scheme

4.43 Shadow Wages

A shadow price is a calculation unit which is often applied in cost benefit analyses; the shadow price deviates from the actual price, which can be observed in the market. Shadow pricing can be applied for production factors, on which one might want to stress the social importance in either negative or positive direction. For instance imported goods are often given shadow prices above market prices, when terms of trade or the balance of foreign payment are unsatisfactory. Likewise a shadow-wage structure may be constructed if certain employment goals are favoured.

The ways and means to decide the level of the shadow wage depend on the following factors: the opportunity cost of labour and political goals such as income re-distribution and increase of employment. The opportunity cost of labour covers the marginal product of the labour employed but it might be regulated in such a way that, for example, skilled labourors in strong demand are estimated at a higher cost than the marginal product of their labour input.

In the classical economic theory the wage-rates were decided by the marginal product of labour and the marginal discomfort of the labour effort. In real life the marginal productivity and consequently the opportunity cost of labour is less easy to quantify than in theory. It could be maintained that in an economy with considerable unemployment and under-employment the unskilled labour absorbed by new projects should be evaluated at an opportunity cost equal to zero. The shadow wage for especially skilled labour should then on the other hand be assessed above the actual wage level, as this production factor often constitutes a bottleneck for development.

In order not to introduce too many complications with a doubtfull effect this study has chosen a shadow wage alternative to the actual market wages of $3 per day for the following reasons:-

- the agricultural production value, being reflected in the consumption estimates of the input-output analysis, indicates a wage figure within that range.
- 'value added' in the agricultural sector has been estimated at a $3 wage rate, thus complying with the estimated labour input ratio in the agricultural GRP.
- the $3 wage is estimated at about half of the general nominal wage rate (cf. below), and it thereby gives a reasonable calculation alternative if the labour intensity of a project is of much concern in the evaluation.

It must, however, be born in mind that whenever a shadow wage below the market wage is applied to a calculation of project feasibility, the necessity of financing the gap between market and shadow-wage must be considered and solved. The actual aims of the public sector (the probable financier) and the resources available must therefore be taken into account if an economic analysis is carried through at labour costs below the market wage level.

4.5 RECENT AND FUTURE TRENDS

The last year (1973) has not been included in the analysis of prices and wages as statistical information has been insufficient. Many circumstances however, indicate that the stable development in prices and wages over the past years has been substituted by an inflationary tendency with nominal increases in the costs of all production factors. It is yet uncertain how far this recent trend originates in local or in external circumstances, and it is also not possible to decide whether the recent price development has had any impact on relative prices or on the terms of trade.

Calculations of the economic consequences of the planned development are all based on constant prices. It is consequently of no importance to the feasibility of the planned projects that limited inflationary tendency is registered, as long as the relation between the economic factors are not seriously distorted.

In the planned economy, however, the wage-rates were decided by the marginal product ... the ... discomfort of the labour ... In such ... and consequently the shadow wage ... in theory. It ... be ... that ... with ... unemployment and under-employment ... by new projects should be evaluated at an ... The shadow wage for especially skilled labour ... above the actual wage level ... a bottleneck for development.

It would ... many complications with a doubtful effect ... a shadow wage alternative to the actual market wage of [illegible] per day for the following reasons:-

- the agricultural production value, being reflected in the ... estimates of the input-output analysis, indicates a wage figure within that range.
- "value added" in the agricultural sector has been estimated at a [illegible] wage rate, thus comparing with the estimated labour input in the agricultural ...
- the [illegible] wage is estimated at about half of the general nominal wage rate (cf. below), and it thereby gives a reasonable calculation alternative if the labour intensity of a project is of much concern in the evaluation.

It must, however, be born in mind that whenever a shadow wage below the market wage is applied to a calculation of project feasibility, the

CHAPTER 5

A POSSIBLE FUTURE ECONOMIC SITUATION

5.1 PROJECTIONS

One of the main objectives of developing a country or a region is to create an improvement in the state of welfare to the citizens. But welfare is difficult to define and, even if an acceptable theoretical definition of improved welfare could be made, the physical measures and the economic means necessary **to** attain the target would present new problems. In general terms a basic welfafe-improvement and a main target for development, would be the elimination of poverty but, again, in a country where food shortage is not prevailing and where climatic conditions reduce housing and clothing needs the elimination of poverty might not be a sufficiently clear and detailed target for the development policy.

Instead it might be useful just to aim for an economic growth that with a reasonable income distribution, would finance such activities and undertakings which are normally considered relevant factors in the welfare function.

Economic growth is often taken to be identical with the growth in the National (or Regional) Income. If growth of the Regional Income is a major policy objective of the Government this objective should be supplemented by additional objectives relating the rate of growth to the distribution of wealth, consumption, employment, and the political determination to make the development stable.

The distribution of income is important not only for welfare in terms of greater equality but also because a more even income distribution will influence consumption, savings and other economic determinants. Consumption and its relative growth is an exponent of the development of the standard of living and, no matter whether this consumption originates in the private or public sector, its growth is a fundamental goal for planning. This means that in a general perspective a certain growth of aggregate consumption per capita in the Region must be provided for even though a smaller growth in the long run would increase the GRP at a faster rate because a larger share of GRP could then be allocated for investment. In accordance with this a positive increase in consumption per capita has been assumed in the projections of the future distribution of the GRP.

The forecast work has been carried out by means of a model describing the present state; a model for the future; specified development plans presented in the Action Programme; and selected economic growth factors. The forecast of the future economic situation is in this way a macro-economic projection with aggregated micro budgets based on the Action Programme.

For practical reasons the Study Area has been treated as a separate economy, considering all services and products going into and out of the Region as external products irrespective of whether they come from or go to foreign countries, other parts of Sarawak or other parts of Malaysia. It could be considered at a later date on, how the Region's priorities in distribution of imports and exports between Malaysia and foreign countries should be settled.

The macro-economic growth factors are based on primary and secondary growth rates. Employment is a primary growth factor as it is an important production factor and at the same time the major action parameter in this planning work. The process of increasing employment (i.e. creating new jobs) automatically involves the other primary growth factor and major action parameter, investment. The employment assumptions have been described in Supporting Report 5, and the projections in that report constitute the basis for the primary growth factors, which are shown in Table 5.1.

TABLE 5.1 EMPLOYMENT BY SECTORS 1970, 1980 and 1990

	1970 Employed	%	1980 Employed	%	1990 Employed	%
Agriculture	21 000	54	32 000	53	50 000	50
Forestry	4 000	10	5 500	9	6 000	6
Manufacturing	4 500	12	8 500	14	21 000	21
Services	9 000	24	14 000	24	23 000	23
Total	39 000	100	60 000	100	100 000	100

Secondary growth factors include productivity per person employed in the various sectors, determined by training, innovations and investment. Export and import quota have been excluded from the projections as the impact of future oil and LNG exploitation, if introduced, would distort the effects of the foreign sector on the rest of the economy.

The secondary growth factors are:

	Agriculture	Forestry	Manufacture	Services
		per cent per annum.		
Growth in productivity per employed 1970-90	6	2.5	5.5	2.5

The productivity growth factors shown above have been worked out on the basis of a production mix within the relevant sectors. Thus the major productivity growth which is expected within the new agricultural development area has been modified by the limited growth within traditional agriculture which will continue to exist throughout the planning period.

The productivity growth in forestry is based on experiences in Peninsular Malaysia and, though the actual logging operations might only be marginally improved a certain improvement could result from changed skidding techniques. The improvement of saw milling, which is included in the forestry sector, will contribute to an increased production per employed. The fact that most circular saws will be replaced by modern rigs in the next few years indicates that the 2.5 per cent annual growth in labour productivity could be an underestimate.

The growth of the manufacturing sector is calculated as the weighted average of the present small manufacturing sector and the expected future major industrial expansion in the Study Area, which towards the end of the planning period will have outweighted the existing manufacturers completely. The increased productivity is consequently close to the growth rates experienced in an expanding industrial sector.

The growth rate of the production per employed person in the service sector is a complex figure which is based on more general observations in developing countries.

The estimates of total future employment and production by sectors are presented below. It is, however, difficult to project development on the micro level up to 1990. The imagination is usally too limited to cover all possibilities for industries and activities over a 15 year period. Furthermore to attempt planning such detail would generally be valueless because uncertainties would far outweigh probabilities. This means that, while the overwhelming part of the projections to 1980 is based on rather detailed planned development, the forecasts for the period 1980 to 1990 are more general projections. The main results are shown in Table 5.2.

5.2 AGRICULTURE

The assumed annual growth of labour productivity in agriculture of six per cent is rather high, but the agricultural sector must expect a higher growth than other sectors because the present level of productivity per person is so low. Growth in agricultural productivity is considered technically possible and it is also socially necessary because a considerable increase of individual incomes would be needed if future employment in the agricultural sector were to be considered an attractive alternative to other employment.

Besides the development of new agricultural land and better production techniques, the changed structure in the agricultural employment will also increase the labour productivity in this sector. The expected transition

TABLE 5.2 ANNUAL PRODUCTION AND INVESTMENT 1970, 1980 and 1990

PRODUCTION	TOTAL 1970 $	%	1980 $	%	1990 $	%		GROWTH (PERCENTAGE) 1970-80	1980-90	1970-90
AGRICULTURE	17,500	12	47,700	16	133,450	19		10.5	10.8	10.7
FORESTRY	65,500	44	114,125	37	159,350	23		5.7	3.4	4.6
MANUFACTURING*	14,500	10	46,775	15	197,425	28		12.4	15.5	13.9
SERVICES	50,500	34	95,750	32	200,325	30		6.6	7.7	7.1
TOTAL	148,000	100	304,350	100	690,550	100	AVERAGE	7.5	8.6	8.1

INVESTMENTS	TOTAL 1970 $	%	ANNUAL AVERAGE 1975 - 80 $	%	1980 - 90 $	%		GROWTH (PERCENTAGE) 1970-80	1980-90	1970-90
AGRICULTURE	200	1	20,800	19	17,500	18		>20	-	>20
FORESTRY	4,500	24	8,300	8	5,000	5		6.3	-	0.5
MANUFACTURING*	700	4	12,500	12	28,000	28		>20	8.4	>20
SERVICES	11,000	58	57,500	53	39,000	40		18.0	-	6.5
HOUSING	2,500	13	8,500	8	9,000	9		13.0	0.6	6.6
TOTAL	18,900	100	107,600	100	98,500	100	AVERAGE	14.0	-	8.6

*excl. petro-chem industry

of traditional farmers into modern agriculture will cause a change in the output from these people's labour which will increase the total productivity per employed person considerably. The change from traditional farming will mainly be caused by two actions; the creation of new large scale development of virgin land and the establishment of an Agricultural Development Unit (ADU) as described in Supporting Report 2. This together with the usual activities of the Department of Agriculture will gradually improve existing farming by introducing new crops and cultivation methods.

5.3 FORESTRY

The assumed development of the forest industry is based on the recommendations of the FAO, Forest Industries Development Project. At present these recommendations are still provisional. To create a reliable and economic foundation for the wood-based industries it is recommended by the FAO Team to introduce a new concept of logging operation and to establish a number of major timber complexes including new sawmills and remanufacturing industries to which the logging operation should be closely tied.

The forest harvesting has been drafted by the FAO team, which has carried out a logging/sawmill study for certain areas, named the Forest Inventory Units 2 and 6. A broad outline of the economic implications of the in-and output is given below. The detailed planning of the future forestry industry has now been taken over by the Sarawak Timber Industry Development Corporation (STIDC), and the first steps towards the implementation have already been taken.

In 1980 there could be four timber industry complexes in operation in the Study Area. It is assumed that each complex will need an annual log throughput of approximately eight million cubic feet equivalent to 150 000 tons (hoppus). The operations per complex (including internal transport) would require a net investment of about $40 mn over 20 years. The annual production would, at estimated world market prices, amount to about $15 mn to $20 mn.

It is assumed that more than 75 per cent of all production in the forestry sector will be allocated to the planned integrated wood industry complexes, when they are fully operational.

5.4 MANUFACTURING

The development of the manufacturing industry in the Study Area is expected to follow two lines; a continued development of existing trends, mainly of small-scale industries; and the establishment of new comparatively large industies based initially on resources available in the Region.

Although the petro-chemical industry is expected to carry out large investments and production within the next decade, only rather few new jobs will be created in this industry - probably less than 2 000 will be employed in 1990, compared to 1 200 persons at present.

The wood-based industries would represent a considerable contribution to the regional development. The timber complexes, when operating at full capacity, will each create 800 to 900 jobs at an initial investment of approximately $ 20 mn. **Approximately** three-quarters of the total quantity of logs coming from forestry operations would be processed locally, the resultant products being sawn timber, plywood and re-manufactured goods such as furniture parts and mouldings. Other related industries are also expected to emerge, for example, furniture making and the pre-fabrication of houses. A special opportunity can be seen in starting a standardised module-based industry of prefabricated houses and house-elements because a considerable renewal of present housing is envisaged within the next decades, and future urban and agricultural schemes will accentuate the requirements for more houses and new ways in construction. The Asian market, in this context, seems relatively unexplored and an early start could give the Sarawak industries an advantage which they might be able to maintain, especially, if a very careful technical and architechtural design could be assured.

Food industries would presumably develop along the present pattern possibly with a few new major enterprises established. Although at present it is difficult to state the actual resources of crustacea and fish along the coast line of the Study Area it seems possible that these could be the basis for an expanded fish products industry, aiming at both fish for human consumption and fish protein production for animal feed. The size of such plants would depend on the outcome of research on sea fish resources and guidance of future fishing activity.

Factories for extracting palm oil and processing rubber latex are recommended by the consultants and included in the plan according to the relevant acreages established in the agricultural sector. Slaughter houses orientated towards both domestic and export markets should be considered in accordance with the developments in livestock production. Increase in agricultural activities could possibly justify the establishment of a feed mix plant and a fertiliser mixing factory. The construction of agricultural and fishing industries is dealt with in the Supporting Report 2.

The resources in the Bintulu area of silica sand could justify the establishment of a glass factory. Although the glass sand is reputed to be of high quality a future glass factory would probably concentrate on glass containers and pane glass. A factory with basic tools for bottle manufacture, for example would, if established, probably require a net investment of

$4.5 mn, and provide jobs for about 75 workers. In connection with, and as a basic market for the container products, a bottling plant or brewery might be established in Bintulu. Market considerations and present capacity limits on breweries in Peninsular Malaysia would probably justify a bottling brewery unit with an initial capacity of 50 000 bottles.

The availability of limestone and clays for cement production could from a technical point of view justify the establishment of a cement industry in the Study Area. However, the domestic market will be completely satisfied by the planned new cement factory in Kuching. The export market is also at present most unattractive, because capacity reserves are available in neighbouring countries; an entry into an obscure market is not advisable.

Other industries that could be developed in the Study Area are mostly footloose industries. This means that the enterprises in question do not establish themselves because of availability of raw materials or an isolated local market; they base their production entirely on competitiveness (or protection) of domestic and foreign markets. The main requirements to attract footloose industries are a reliable labour force with sufficient skill competitive wage levels, effective production and reliable transport at reasonable costs. Furthermore it has proved an effective measure to create industrial free zones within which industries are exempt from duties and custom formalities for export goods as far as labour and raw materials are concerned. The clothing industry is an example of a footloose industry and there are possibilities here for establishing one or two medium sized enterprises for ready made clothes.

The demand for containers and disposalable wrappings will increase in the future and the manufacturing of such plastic goods could be carried out locally by a couple of medium sized enterprises. If for example, two plastic goods factories of an average size of 40 to 50 workers were established, the local market and export potentials could be covered by net investments of less than $1.5 mn, yet jobs for about 100 unskilled workers would be created.

Further into the future more specialised industries could be based in the Study Area only when the labour force has been educated to meet the demand for labour of a diversified and specialised industrial community. At the latest this should be possible in the second decade of the planning period. The provision of a deep water port, and thus good transport facilities, could make the Region attractive for component based industries.

The projections for the manufacturing industries include the building and construction sector. During the Action Programme period the construction activity is expected to increase considerably. The requirements for improved transport network and the need for houses will make a strong expansion necessary, but following this period of extraordinary activity a certain slow down must be anticipated.

5.5 SERVICES

This sector consists of a number of heterogeneous activities which make the application of a common growth factor rather problematic, as changes in emphasis between the different subsectors will automatically lead to different rates in growth.

The service sector includes transport services, commerce, banking, specialised services, doctors, dentists etc. ownership and hiring out of dwellings, public administration and utilities.

The considerable overall growth in the turn-out of the service sector is due to the expectation that higher service levels will be offered to the population when the general income level in the Region is increased. The public services in particular are assumed to grow at an above-average rate. Better education and health standards are the main reasons for the increase in specialised services. Administration will also according to the forecast organisational development, account for an increased part of the GRP.

Public utilities will be supplied either by public authorities or by special bodies. With rising demands for higher standards in power, water, sewerage and possibly also public transport, this sector will necessarily take up an increased part of the total GRP.

Transport as a separate industry is expected to expand at the same rate as the other service sub-sectors because its present relatively high contribution to the regional product is due to the imperfect transport network. By improved roads and port facilities the relative importance of this sector should be reduced somewhat.

CHAPTER 6

THE APPLICATION OF GRP IN 1980 AND 1990

The distribution of GRP in 1970 did not indicate an economy of an expanding developing region. The investment level was below average for developing countries and the net export of capital also led to a limitation of the multiplier effects of consumption.

The basis for the future application of the GRP in the Study Area is partly the Input-Output Matrix and its technical coefficients and partly the requirements presented in Action Programme. In addition the welfare aspect has been introduced to secure a growth in the per-capita amounts allocated for consumption, in spite of the heavy requirements for investment funds. The result of these assumptions is the macro-economic structure shown in Table 6.1.

TABLE 6.1 THE APPLICATION OF GRP IN 1970. 1980 and 1990

	1970 $mn	%	1980 $mn	%	1990 $mn	%
Private consumption	103.0	70	202.0	66	449.0	65
Public consumption	15.5	10	41.0	13	93.0	13
Total consumption	118.5	80	243.0	79	542.0	78
Private investment	6.5	5	58.0	19	62.0	9
Public investment	10.5	7	42.0	17	43.0	7
Total investment	17.0	12	100.0	33	105.0	15
Total Saving	29.0	20	63.0	21	149.0	22
Financial gap	12.5	8	-37.0	12	44.0	6
Gross Regional Product	147.0	100	306.0	100	691.0	100

The estimated growth factors for the different expenditures are difficult to evaluate when no basis of comparison is available. The production, capital and income structure varies between countries and even within the same country. A future growth in private consumption of for example 2.5 per cent per annum may be regarded as satisfactory in one situation yet almost be a reflection of stagnation in another.

To establish a comparative basis two countries have been selected. The countries are Iran and the Ivory Coast and, although both climatic and structural differences are great, they have been selected for the annual GNP per capita, the growth factors and their position as countries experiencing rapid agricultual development.

The agricultural development is in one country carried out in an environment of a dominant traditional agricultural sector, in the other the agricultural development is partly based on an extension of the existing farming sector by the opening up of new arable lands. The petro-chemical and the forestry sectors are both represented in the selected countries.

The main growth factors are shown in the Table 6.2

TABLE 6.2 THE APPLICATION OF GRP IN SELECTED COUNTRIES

	Country 1 (Ivory Coast)	Country 2 (Iran)
GNP/capita 1970	US$390.00	US$380.00
GNP/capita growth 1967-69	9% per year	10% per year
Percentage of GNP:		
Private consumption	63%	61%
Public consumption	14%	15%
Investment	17%	20%
Financial gap	+ 6%	+ 4%

The table shows that a relatively small part of the GNP was used for private consumption compared to the present level in the Study Area. However, public consumption was much higher in the selected countries. The 14-15 per cent which in 1970 was monopolised by public sector consumption, will not be reached in the Study Area before 1980. By international standards therefore it can hardly be maintained that an over-development of the public sector will be a consequence of the economic development and the improvement of the general service level included in the present plan.

The economies of the selected countries apparently have a higher investment rate than the Study Area but still these countries appear to be net capital exporters as in Sarawak.

The minimum requirements for future private consumption in the Consultants' Plan have been assessed at the present level with an annual growth rate of 2.5 per cent per capita. Public consumption has been determined by planned investments in public services. Investments, both private and public, have been determined through the Action Programme and the estimated extension of this up through 1990. Savings have been estimated as the difference between total GRP and estimated total consumption. The growth factors applied to the different applications of the GRP/per capita is shown in table 6.3.

TABLE 6.3 GROWTH FACTORS FOR GRP COMPONENTS

Per Capita	1970/80 Growth % p.a.	1980 Index (1970-100)	1980 Growth % p.a.	1990 Index (1970-100)
Private consumption	2.6	131	3.3	181
Public consumption	5.6	175	3.6	250
Private investment	18.4	542	-	367
Public investment	12.0	312	-	194
Total savings	4.3	154	3.9	218
GRP	3.4	140	3.5	196

In spite of a considerable expansion of private and public investments and of public consumption, a reasonable increase in private consumption has been maintained. The heaviest strain on economic resources are estimated for the years 1975 to 1985 in which considerable outside financial support will be needed. Part of the financial gap in these years should be sought through foreign loans for financing investments in imported capital goods. However, the total regional balance of payments will always remain positive as income from oil, wood and agricultural export products would always outweight import expenditures.

The amount allocated for consumption will be determined to some extent by income distribution since the marginal propensity to consume varies considerably among the different income groups. The present consumption-pattern in the high income groups does not indicate that a future growth in average income will lead to significant changes in the ways of spending. Moreover a successful policy of income distribution should justify the assumed tendencies of consumption and savings.

The macro-economic analysis of the expected application of the GRP on different uses is thus related to the expected development in personal income in the society. Based on computations of employment, GRP and private consumption surveys, income distributions for 1970 and 1990 have been estimated, as shown in Table 6.4.

The distribution shown reflects the declared policy of creating, at the same time, higher incomes and a more equitable income distribution. Thus the distribution mentioned also serves as a guideline for considerations concerning changes in standards of housing, services, financing of public expenditures etc.

TABLE 6.4 DISTRIBUTION OF PERSONAL INCOMES

Income group	1970 Income $ per year	Average	Income distribution URBAN	RURAL
Low	0 - 3 500	2 500	50%	90%
Lower Middle	3 500 - 7 000	5 500	35%	10%
Higher Middle	7 000 - 12 000	9 000	10%	-
High	12 000 - -	20 000	5%	-

1990 Average income $ per year	Income distribution URBAN	RURAL
4 500	40%	70%
9 500	35%	30%
15 000	20%	-
30 000	5%	-

CHAPTER 7

FINANCE

This chapter does not set out to draw up detailed financial programmes for the planning period or to discuss and recommend special financial policies to be adopted by the Government. It attempts to give a general picture of the total requirements for outside capital and some examples of how debt servicing could be arranged. By these examples an attempt is made to measure the debt burden and thus to evaluate the viability of the Plan. Besides, a short discussion is included regarding the financing of the Plan and the consequences for the economy of the Study Area if the assumptions behind the calculations become realities.

The financial requirements for investments included in the Action Programme are as follows:-

	$ mn	
- Public Agencies	285	(1)
- Private and Semi-private Agencies	260	
- Statutory Bodies	120	
	665	

Provided that;taxation is increased the net contribution by the Study Area to overall State and Federal purposes is zero; and that private regional savings are also invested locally, the regional sources for finance in the same period would be:-

	$ mn	
- for public investments	178	(2)
- for private investments	150	
	325	

The subsequent financial gap divided by budget-responsible groups will then amount to:-

	$ mn
- Public Agencies (exclusive of contributions to Statutory Bodies)	110
- Private and Semi-private Agencies	110
- Statutory Bodies	120
	340

Notes (1) Amounts invested in the oil and petro-chemical industry are excluded.

(2) This figure does not include oil and timber royalties.

In the second period, 1981 to 1990, the financial requirements and possible requirements are estimated at $925 mn and $1 025 mn respectively leaving a surplus of $100 mn. In fact, deficits or financial gaps are foreseen up to 1985, amounting to $80 mn in the period 1981 to 1984, but they are more than counter-balanced by estimated surpluses from 1985 to 1990, totalling $180 mn.

The financial gap, which is equal to the loan requirements of the Study Area, is computed in current annual values. That is, the loan requirements year by year without any interest added. If repayment does not begin until 1985 compound interest would have to be added to this amount. Assuming an eight per cent annual interest rate, the total financial gap in 1985 would be increased to approximately $700 mn. This amount, including an interest of eight per cent per year on the amount owing, could be repaid over 20 years - from 1985 to 2005 - provided that the surplus in 1985 to 1990 would be equal to the estimated $180 mn, that an annual growth of six per cent in the GRP is achieved in 1991 to 2005 and that ten per cent of the GRP in the same period is used for servicing the debt.

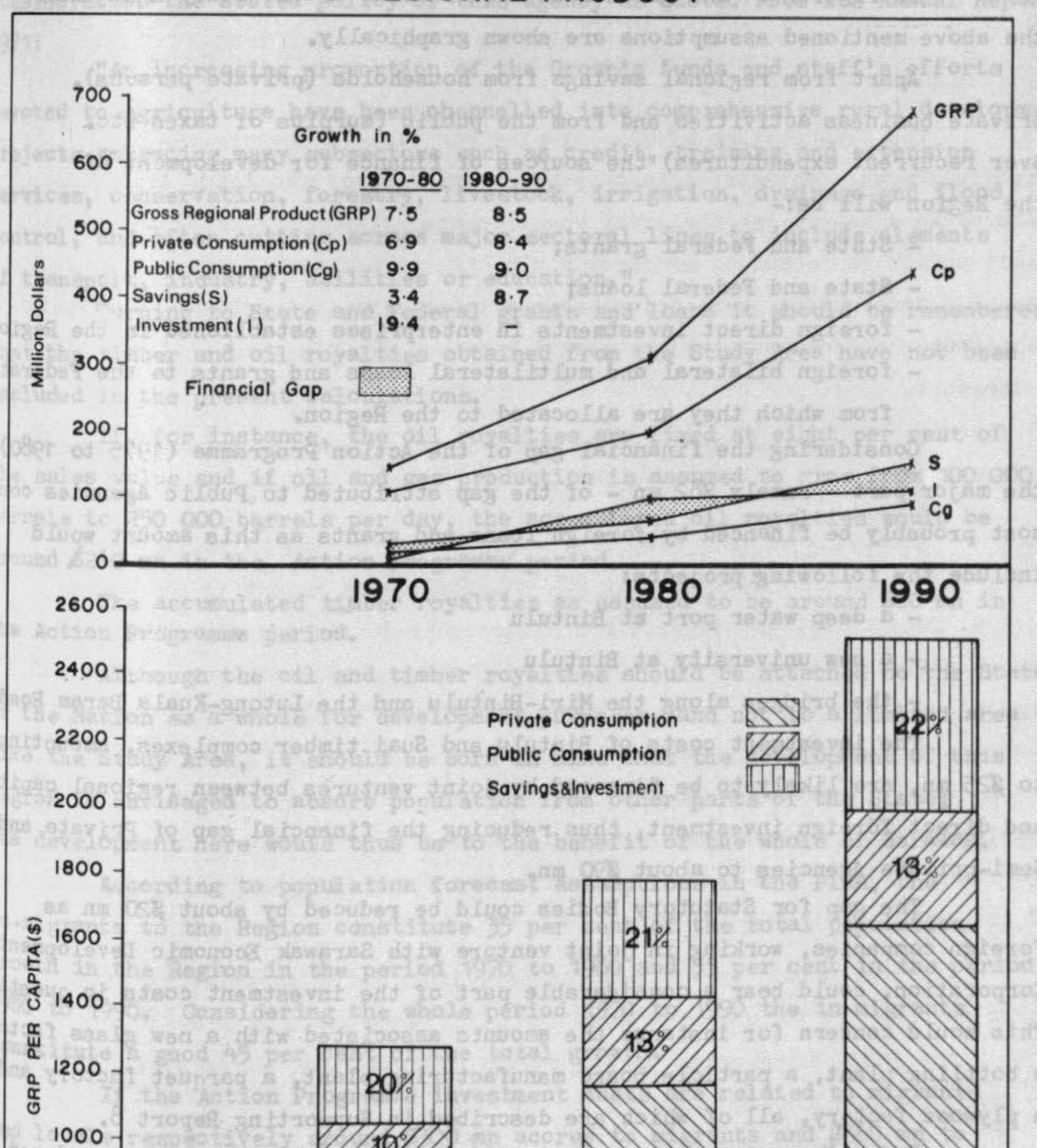
In order to evaluate the economic impact of this debt burden, it must be examined in the context of the total annual regional savings, which for 1990 have been assumed at 22 per cent of the GRP. This amount is considered to be the maximum regional contribution to the annual investments if a reasonable growth of public and private consumption is allowed for. If, in the period 1990 to year 2 005, ten per cent of the GRP were for servicing the debt, the amount left for gross investments would be 12 per cent of the GRP. This does not appear to be unreasonable, but it would involve a period of decreased development activity, which is only natural after a period of such concentrated capital input as would result from the Plan. The investment industries, particularly building and construction, might face some transitional difficulties. The adverse effects could possibly be mitigated by:-

- certain (but decreasing) capital import (borrowing),
- a transfer of investment industries to other parts of Sarawak.

Inflation is another factor which can change the basis on which the above calculations have been made. Constant prices have been assumed in all Plan calculations and the eight per cent interest rate applied represents the present possibilities for international loans. If the annual rate of inflation is assumed to be three per cent, then the real interest rate would in fact be reduced from eight to five per cent. With this interest rate the repayment period would be 13 years. However, if a 20 years repayment period - 1985 to 2005 - is maintained at three per cent inflation only five per cent of the GRP in the period 1991 to 2005 is necessary for servicing the de[bt]

FIGURE 7·1

USE OF GROSS REGIONAL PRODUCT



This would leave a rather large amount for investment in further development of the Region.

In Figure 7.1 the gross loan requirements of the Study Area under the above mentioned assumptions are shown graphically.

Apart from regional savings from households (private persons), private business activities and from the public (surplus of taxes etc. over recurrent expenditures) the sources of finance for development of the Region will be:-

- State and Federal grants;
- State and Federal loans;
- foreign direct investments in enterprises established in the Region;
- foreign bilateral and multilateral loans and grants to the Federation from which they are allocated to the Region.

Considering the financial gap of the Action Programme (1975 to 1980) the major part - namely $82 mn - of the gap attributed to Public Agencies could most probably be financed by foreign loans and grants as this amount would include the following projects:

- a deep water port at Bintulu
- a new university at Bintulu
- the bridges along the Miri-Bintulu and the Lutong-Kuala Baram Road.

The investment costs of Bintulu and Suai timber complexes, amounting to $25 mn, are likely to be financed by joint ventures between regional capital and direct foreign investment, thus reducing the financial gap of Private and Semi-private Agencies to about $90 mn.

The gap for Statutory Bodies could be reduced by about $20 mn as foreign companies, working in joint venture with Sarawak Economic Development Corporation, could bear a considerable part of the investment costs in question. This would concern for instance the amounts associated with a new glass factory, a bottling plant, a particle board manufacturing plant, a parquet factory and a plywood factory, all of which are described in Supporting Report 8.

Under these assumptions the residual financial gap would be reduced to a total of $220 mn - being $30 mn for Public Agencies, $90 mn for Private and Semi-private Agencies and $100 mn for Statutory Bodies - to be financed either by Malaysia (outside the Study Area) itself or by international lending agencies.

The major part of the investments attributed to Statutory Bodies and Private and Semi-private Agencies arises from rural development. This includes agricultural production and processing facilities as well as rural infrastructure taken in a broader sense, such as housing, public services and utilities, roads and agricultural extension services (ADU). It would be reasonable to expect a World Bank interest in financing such a development, taking into consideration the stated policy of this agency as quoted from its Annual Report 1971:

"An increasing proportion of the Group's funds and staff's efforts devoted to agriculture have been channelled into comprehensive rural development projects embracing many subsectors such as credit, training and extension services, conservation, forestry, livestock, irrigation, drainage and flood control, and often cutting across major sectoral lines to include elements of transport, industry, utilities or education."

Turning to State and Federal grants and loans it should be remembered that the timber and oil royalties obtained from the Study Area have not been included in the present calculations.

If, for instance, the oil royalties are fixed at eight per cent of the sales value and if oil and gas production is assumed to grow from 100 000 barrels to 250 000 barrels per day, the accumulated oil royalties would be around $240 mn in the Action Programme period.

The accumulated timber royalties as assumed to be around $60 mn in the Action Programme period.

Although the oil and timber royalties should be attached to the State or the Nation as a whole for development purposes, and not to a limited area like the Study Area, it should be born in mind that the development of this Region is envisaged to absorb population from other parts of the State; the development here would thus be to the benefit of the whole of Sarawak.

According to population forecast assumptions in the Plan, the in-migrants to the Region constitute 35 per cent of the total population growth in the Region in the period 1970 to 1980 and 55 per cent in the period 1980 to 1990. Considering the whole period 1970 to 1990 the in-migrants constitute a good 45 per cent of the total growth.

If the Action Programme investment costs are related to migrants and locals respectively around $300 mn accrue to migrants and $360 mn to locals. In fact these figures show that the regional sources for finance in the Action Programme period - $324 mn - correspond rather closely to the proportion which could be allocated to the local population growth.

Finally it should be recalled that the private sector in the Study Area in the 1960's and the early 1970's has been a net exporter of capital to other parts of Malaysia and probably to other countries, for instance Hong Kong and Singapore. In 1970 the estimated net export amounted to $7 mn and an estimate at $50 mn to $75 mn for the whole period (1960 to 1973) is probably not unrealistic. A part of this amount has been exported because of insufficient investment possibilities within the Study Area. The accelerated development which is laid down in the Action Programme could very well result in some of the outstanding amounts being brought back into the Study Area economy.

The main purpose of this chapter has been to measure the financial requirements in terms of payment capacity of the Study Area. Measured in this way the financial requirements, although considerable, do not appear to be out of proportion with the economic ability of the Area. If development proceeds as assumed in the Plan it would be possible to liquidate the necessary loans within a reasonable time and still continue development.

The financial requirements could also be measured in the following way:-

According to the "Mid-Term Review of the Second Malaysia Plan" (p 47) the total in investments in all Malaysia would amount to $3 662 mn by 1975. The annual growth rate for investments during the Second Malaysia Plan is estimated at 12 to 13 per cent. If this growth rate were maintained through the following 10 years up through 1985 the total investments would amount to approximate $65 000 mn. In this same period the Study Area will need a total investment of $ 1 000 mn to $1 100 mn corresponding to 1.7 per cent of Malaysia's total investments. This does not seem unreasonable, taking into consideration that the population of the Study Area by 1990 would also be 1.7 per cent.

If the annual growth rate of Malaysia's total investments would amount to only six to seven per cent the Study Area would absorb two per cent of the total investments in the period 1976 to 1985, which still does not seem unreasonable considering:

- the concentrated development effort in this period, and
- the fact that the Study Area from 1985 could produce sufficient savings to sustain its own investments.

The overall conclusion, therefore, if that financially and economically the Plan is sound and viable and that domestic and international capital together can be attracted in sufficient quantity to meet the need.

PART II

FINANCE

CHAPTER 8

SAVINGS AND FINANCING INSTITUTIONS IN SARAWAK

In the Main Report Volume II Chapter 4 and in Supporting Report 8, the commercial credit system in Sarawak is considered from the service point of view, that is its relationships to private households and individual persons, and to the business world. The traditional trade-credit system, which has had a thorough impact on the present retail and wholesale structure, has received special attention. The system is on the decline being pressed by modern credit and savings institutions which usually follow in the wake of economic and monetary development, such as the change from subsistence farming to cash crop enterprises. With this change of structure in mind this chapter concentrates on describing the objectives and abilities of the actual finance and savings institutions in Sarawak.

8.1 INSTITUTIONAL FINANCING IN SARAWAK

Institutional financing in Sarawak is mainly carried out by:

- commercial banks,
- public banks,
- co-operative banks,
- insurance companies,
- private finance corporations,
- private and semi-private industrial development finance institution
- private and semi-private housing credit institutions and
- statutory bodies.

8.1.1 Commercial Banks

The characteristics of commercial banks in Sarawak are:

- they are located in the major urban centres only,
- they mainly operate with the community groups they primarily represent,
- they generally extend short term loans,
- their lending activity is based on collaterals, principally land and fixtures.

The location of banks and other savings and finance institutions in the major towns only implies that a majority of Sarawak's population is unable to make regular use of this kind of service. Generally people living in the rural areas of Sarawak are not very prosperous, and it could therefore be expected that they do not need banking services. However, nothing could be more wrong. A fact stated in several investigations on the subject is that even very poor people try to save a part of their income. Having few or very limited opportunities to save in bank accounts or security papers, rural populations normally save in cash or kind, such as gold beads, livestock and timber. The amounts of money bound in these savings are often surprisingly high.

With regard to the lending aspect of the banking business, it is generally agreed that the lack of financing capital could be one of the reasons for the backwardness of the rural areas. However, this is only partly true. Banking services alone would probably not initiate any development in backward rural areas. A broad spectrum of activities comprising infrastructure, public services, extension service credit arrangements, etc., has to be applied to the area in question in order to create initiative and promote development (the objectives of the ADU are described in Main Report Volume II Chapter 1 and in Supporting Report 2,)

The following example attempts to estimate the order of magnitude of the savings potential of Sarawak's rural population.

Example:

In 1970, 75 per cent or 730 000 of the population of Sarawak were living in the rural areas. Converting all labour efforts into full time workers - one full time worker corresponding to 2 000 work hours per year - the number of full time workers in the rural areas in 1970 could be estimated at 260 000. Spot-tests indicate an average yearly income per full time worker of around \$1 000. Assuming an average savings rate of ten per cent, the savings of the rural population in Sarawak amounted to about \$25 mn in 1970. The amount is considerable and probably growing concurrently with the real income.

The importance of the problem is recognised by State and Federal Governments and it is their policy to encourage the geographical spreading of banking activities. It is a difficult task and only small steps forward possible. This is first and foremost due to the profit considerations of commercial banks. Realistically they expect a smaller return for investments in the rural areas than they normally require. Commercial banks also are often rather reluctant to address themselves to people outside their normal groups. European based banks deal with European companies and companies with a considerable foreign trade, in which the banking services of internationally operating banks is necessary. Likewise the "Chinese-capital" banks tend to deal with Chinese and the Bumiputra ones with Bumiputras (natives of non-Chinese, non-Indian and non-European origin) and with the public and semi-public bodies. It can be concluded that the profit making attitude and the traditions of the banking business will have to be altered in order to create a competing, geographically widespread banking system.

Turning to the lending policy of the commercial banks, as mentioned they mainly grant short term loans, most often on the basis of collateral - normally being either land or fixtures. Loans are granted for a wide spectrum of objectives within industry building and construction, commerce, private consumption, etc. The only major exception seems to be agriculture. In 1971 the commercial banks of Sarawak only supplied the agricultural sector with $1.5 mn (see also Volume II Chapter 4 of the Main Report).

The practice of claiming collateral is not a special phenomenon of Sarawak but prevails all over the world. The banking collateral syndrome is described very clearly in the World Bank's periodical, "Finance and Development" September 1973. .... "- attitudes and procedures of lending institutions are often based on a rigid insistence on approved securities as collateral, rather than on an evaluation of the viability of the project and the character of the borrower. This naturally inhibits the extension of credit to many deserving borrowers in economies deficient in assets that can qualify as collateral for bank loans. Often, it is the rigid insistence on collateral requirements rather than the prevailing rates of interest, that curtails availability of credit. This has the effect of converting commercial banks into glorified pawnshops instead of genuine creators of productive credit. The endeavour should be to move away from conventional philosophies and procedures of lending and thus to circumvent the shortage of bankable assets which has hampered extension of credit to key areas such as cottage and small-scale industries, trade, agriculture, housing and educational loans. Financial policies should be geared to growth potential rather than being determined by pre-existing collateral. Too stringent a rationing of credit on a narrow interpretation of risk criteria involves substantial social costs in the form of forgone economic opportunities and activities. Equally, it is a fallacy to believe that the "no collateral" loan is necessarily more risky than a fully secured loan, or, conversely, that the latter is always more productive."

The Federal and State Governments are aware of the problem and it is their policy to change the attitude of the banking system. A serious attempt has been made by establishing, in 1972, the Credit Guarantee Corporation to prvide guarantee cover to the commercial banks, when they grant loans to small-scale enterpirses. Although this has caused an improvement in the volume of credit provided to these kinds of activities, the scope for expansion has not been exploited to the full by the commercial bank and the potential borrowers.

8.1.2 Public Banks

Two public banks should be mentioned, the Agricultural Bank of Malaysia - Bank Pertainian - and the Post Office Savings Banks. The former has no branches in Sarawak at the mement, but an office is expected to be opened in Kuching in the near future. Thebank addresses itself totally to the agricultural sector. In Peninsular Malaysia it is working closely with Farmers Organisations (FO) and in Sarawak close ties are expected to connect the bank, the FO's and the Agricultural Development Units respectively, the latter operating as credit intermediaries between the bank and the farmers.

The Post Office Savings Banks at the moment play a minor role in the economic life of Sarawak. However, the number of depositors and total deposits are increasing rapidly, mainly due to the increasing number of post offices providing savings bank facilities. These banks have their special importance in providing the rural population with savings facilities.

8.1.3 Co-operative Banks

Only one co-operative bank is operating in Sarawak, namely the Sarawak Co-operative Central Bank. It was established in order to create loans to the mainly agricultural co-operatives in Sarawak. However, the 1971 balance sheet showed a balance of only $1.7 mn, representing less than one per cent of the total balance of the commercial banks in Sarawak. It is remarkable that the total advances and loans of the Co-operative constitute only 20 per cent of the total assets or 340 000. Members' deposits amount to more than $1.1 mn and the deposit/loan ratio is consequently about 3/1 which is unsatisfying for a bank that aims at agricultural development. The low activity of the Co-operative Bank is not necessarily a result of inefficient operation; it could as well or more likely be due to lacking demands for loans. The introduction of an effective agricultural extension service would probably increase the credit requirements in the agricultural sector.

8.1.4 Insurance Companies

The insurance companies in Sarawak are all agents of non-Sarawak companies, and the capital inflow of these enterprises is mainly invested outside the State.

8.1.5 Private Finance Corporations

The most important private finance corporation in Sarawak are:

- Hook Thai Finance Corporation,
- Malaysian Borneo Finance Corporation (MBF),
- Credit Capital of Malaysia (CCM),
- Malaysia Australia Finance (MAF),
- Delta Finance Company Berhad,
- Chew Ceok Lin Finance Berhad,
- Kong Ming Finance Corporation Berhad,
- Malaysian Industrial Development Finance Berhad (MIDF),
- Malaysian Industrial Estate Limited (MIEL).

Besides these there are finance corporations which are joint ventures between private companies and the public, namely:

- Borneo Development Corporation (BDC),
- Borneo Housing Mortgage Finance Berhad (BHMF).

The private finance companies have become an increasingly important group of financial institutions. The finance of hire-purchase transactions primarily of durable consumer goods are the main activity of the companies but the amount of credit extended for the purchase of capital goods, such as agricultural and industrial machinery and equipment is increasing. This is, among other things, a result of the policy of State and Federal Governments emphasising that the finance companies adopt a more development oriented approach in their business operations. They should expand their lending activities by responding with greater vigour to the demand for medium and longer term credits from the agricultural, industrial and other sectors in the country.

Along with the commercial banks that generally only operate as short term financing institutions, the finance corporations cover the long term market. Some of the corporations appear to get their capital from banking sources and the two sectors are consequently related through the deposits.

MIDF is the major source of medium and long term industrial finance in Malaysia as a whole. However its activities in Sarawak are modest, but they are expected to expand in the coming years. The subsidiary of MIDF, MIEL, gives special attention to those investors wanting to establish industries, in particular medium and small-scale, in the less developed States by offering them mortgage loans on rather soft terms.

BDC divides its activities equally between Sarawak and Sabah. It grants loans to finance industrial and commercial enterprises and to develop industrial and housing estates. During 1972 approximately 500 houses and 50 factory units and warehouses were financed by BDC and it is still expanding its activities.

Besides BDC, BHMF is operating in the housing finance field. In 1972 BHMF approved approximately 1 000 loans in Sarawak as a whole.

8.1.6 Statutory Bodies

A number of Statutory Bodies are operating in Sarawak, but only few of them are involved in lending activities. Sarawak Economic Development Corporation (SEDC) is the most important. It was established at the beginning of 1972 and up till now its activities have been centered on providing loans for agricultural and marine enterprises. The value of loans granted in 1972 was $2.3 mn, a modest amount, but this expected to expand year by year. SEDC is still a very young organisation and has not yet found its final placing in the development machinery. However, it is proposed by the consultants that SEDC should be the core around which to develop industrial and commercial enterprises, not necessarily by supplying capital from its own funds but by the arrangement of loans from commercial banks and other financial institutions and by arranging joint ventures between local and foreign investors.

Sarawak Housing and Development Commission (HDC) is at the moment of minor importance. It is mainly providing dwellings for people enforced to move because of slum clearance or Government expropriation (see also Chapter 7 Volume II of the Main Report).

Sarawak Timber Industry Development Corporation (STIDC) was established in January 1973. The main object of the Corporation is to act as an instrument for the Government in the effective control, co-ordination and development of the timber industry and trade in Sarawak. Through active participation with investors in the timber industry and the provision of services to strengthen the effectiveness of the industry, it also acts as, and forms, an essential link between the public and private sectors in the development of all types of timber industry and would assist in the modernisation and improvement of existing industry.

8.2 CONCLUSIONS

There is a great variety of savings and finance institutions operating in Sarawak. According to the objectives of these institutions all spectra of economic activity are covered. However, in certain fields there is a difference between objectives and reality. The rural areas of Sarawak are still under-supplied with savings and finance institutions and the possibilities of financing agricultural development and minor agricultural and industrial enterprises are at the moment rather few. Obviously implementation of plans aiming at agricultural and industrial development will increase the need for this type of financing.

The problem of financing agricultural development will be discussed first. It is recommended to establish a branch of Bank Pertanian in Sarawak aiming at working closely with the ADU's and FO's, and also to change the policy of the Sarawak Co-operative Central Bank in order to bring it more actively into the financing of agricultural development.

The financing of minor agricultural and industrial enterprises could be improved by altering the loan worthiness criteria of the commercial banks from the collateral approach to the viability approach and by putting emphasis on the active co-operation of SEDC in the development and financing of these activities.

Turning to the problem of the paucity, in the rural areas, of savings and finance institutions, it is expected that, even if pressures are put on commercial banks and finance institutions, it will be very difficult to make them move into areas and environments which differ too much from those they are used to. The migration of these institutions the rural areas will be slow and is expected to follow the development of the larger towns envisaged in the Plan.

The Post Office Savings Banks appear to be a better solution to the problem, and within a few years will have spread into the country-side. However, it has, as a bank institution, a serious brawback by having no direct lending activity. In other words it cannot totally substitute for a so called area bank which integrates in the economic life and acts as the finance centre of an area.

On the whole it is expected that the existing savings and finance institutions, after certain adjustments, would be able to manage the credit arrangement task in the planning period, but in view of the conclusion stated above it is recommended that the Government considers the establishment of one new institution.

This proposal aims with others at creating area banks . Besides, it introduces types of savings and loans which are outside the present scope of existing savings and finance institutions. The new institution is presented in chapter 9 under the title, "Sarawak's Savings and Development Fund".

Figure 9.1 shows how the Study Area could be divided into a number of savings districts. The partition of the area is carried out on the basis of estimated 1975 population figures. In order to create viable SSDF branches the minimum size of the population has been set at 5 000. The calculation basis for this figure, however, is insufficient and should be repeated more carefully at a later stage. Thirteen savings districts are identified. Table 9.1 shows in rounded figures, the number of people in each district in 1975. The district gets its name after the central town.

TABLE 9.1 THE STUDY AREA DIVIDED INTO "SAVINGS DISTRICTS"

Name of the savings districts	Population 1975
Lutong	10 000
Miri	30 000
Lambir	5 000
Bekenu	6 000
Tun Openg	7 000
Beluru	6 000
Subis	10 000
Batu Niah	7 000
Marudi	12 000
Long Lama	10 000
Bintulu	20 000
Sebauh	10 000
Labang	7 000
Total	140 000

As mentioned the creation of a stable value image for savings based on money deposits is a crucial point when aiming at increasing this kind of savings.

Securing the real value of money deposits could be obtained by some kind of price based index regulation of the amount saved. Index regulation implies that the savings maintain their purchasing power over time - that is, keep their value measured in real terms. If for instance the index increased by three per cent a year, the deposits would be regulated accordingly, which means that their nominal amount would increase by three per cent per year. Repayment to the saver would correspond to the increased amount and the annual interest would similarly be calculated on the increased amount. In other words the index regulation means that it would be possible to buy the same quantity of commodities for the amount saved in the future as the day when it was deposited, despite of price increases on commodites and services.

In addition to the index regulation the sum deposited should also be attributed an annual interest, but as the real value of the deposit has already been secured by the index regulation the savers interest requirement could be expected to be considerably lower than under a traditional savings system working under inflationary conditions. For many people the stable value of their deposits in fact seems more important than the opportunity to earn interest on the deposit.

Guarantee against losses encountered by the investment of the amounts deposited could be based on:-

- the provision of a surplus on lending activities of SSDF to be collected in a central guarantee fund;
- a general guarantee given by the Government.

In order to educate people and make them familiar with banking business they should participate, to a certain degree, in the administration of SSDF. This could be effected, for instance, by establishing a General Assembly at a local level consisting of those persons in a savings district who have been depositors in SSDF for a certain length of time and saved a certain amount of money. The tasks of the General Assembly could be follow the savings and loan activity of the local SSDF branch and to work out recommendations for the activities of the branch.

9.3 CREATION OF CREDIT FOR DEVELOPMENT PURPOSES

Another aspect of the SSDF is its lending activity. SSDF has the propensity to create low-interest, long-term credit which will be in all respects secure for the development of the State. It will extend the pay back period of investments and thus lower the burden of debt servicing, whereby more stable business conditions can be created. The need for low-interest, long-term credit is already present and there is little likelihood of obtaining such loans.

The principal of the loan should be index-regulated to meet the corresponding requirements of the depositors. The local SSDF branches should first and foremost lend money for local housing and development activities, but also joint ventures between two or more local branches in order to finance larger, non-local activities would be a natural occurrence. A close co-ordination with the Agricultural Development Units would be desirable in both the savings and the loan activities.

Index regulation could be worked out on the basis of several different types of price indeces. In this connection however a consumer price index is preferable as it, best of all, would reflect the nominal increase in the general cost level of an average household.

The assumptions for the elaboration of a consumer price index are:-

a) that investigations be carried out to explain how the consumption of households of different size and income is composed;
b) that price indices for those commodities and services which are found relevant are worked out.

Given (a) and (b) the consumer price index appears as a weighted average of the price indices of the commodites and services. New investigations into the composition of consumption must be carried out at intervals, e.g. every five years, so that the selection of commodities and services is constantly kept up to date. A consumer price index for Sarawak has already been prepared.

9.6 THE ADMINISTRATION OF SSDF

SSDF should be established as a Statutory Body. It is recommended that administration of SSDF is carried out at two levels; State level and local level.

At the State level an SSDF Council should be set up. The members of the Council would be appointed by the Parliament after recommendation from the Government. Persons from Housing Department, Sarawak Economic Development Corporation, Sarawak Land Development Board, Borneo Development Corporation and Bank Negara should be among the members.

The Council should work out general guidelines for the activities of SSDF, control the local offices, act as coordinator in cases where two or more local branches would be involved in the same business and constitute the deciding body for settling disputes within SSDF, Finally it should be the task of the Council to approve or reject lending proposals from the local SSDF branches.

Under supervision by the Council the central guarantee fund should be built up. The local branches may contribute in proportion to their liabilities.

At the local level the SSDF branch should be managed by an officer appointed by the Council. This officer would have to be a well educated person with a good knowledge of banking business and with a good ability to communicate with the general public. Besides being the branch manager, the officer would also be the chairman of the local SSDF Board. The Board would consist of depositors in the local branch elected by the General Assembly from amongst its qualified depositors. A depositor would have access to the General Assembly after a certain period of admission, provided that he had deposited a certain minimum amount of money.

The General Assembly would be the highest local authority. Besides electing members for the Board it would resolve fundamental questions. The Board should control the administration, and have proposals at hand for lending activities. Loan objects must be carefully described before they are sent to the Council for approval.

9.7 IMPLEMENTATION OF SSDF

If the ideas behind SSDF are found acceptable and it is decided to implement the system, a considerable amount of work would be involved in elaborating the sketch presented in this chapter into a detailed scheme. This task will require persons with technical and professional knowledge of the subject. However, the scheme has a character, which makes the attainment of foreign aid probable either on a multilateral basis through UNDP or as bilateral technical aid.

According to Article 112 B in the Federal Constitution of Malaysia a scheme like SSDF can be implemented by a Borneo State after the approval of the Central Bank of the Federation (Bank Negara). SSDF should be established through enactment owing to its far reaching character and purpose, and because of the Government's financial participation, firstly as a guarantor against losses encountered by the investment of the amounts deposited in SSDF and secondly as the payer of the initial expenditures, which among other things include SSDF's basic fund.

The rules should be prescribed by the Minister responsible and might imply that the Parliament sets up the SSDF Council after recommendation from the Government. The composition and the task of the Council are described in section 9.6. After the political approval of the proposals of the council, a number of persons would be trained for the job of local SSDF branch administrative managers.

A publication should be prepared informing the Sarawak of the new Fund and the newly aducated administrative managers would travel in their respective areas delivering lectures and promoting the principles of SSDF.

From a special date, e.g. the National Day, the 31st August, SSDF should start to receive deposits. After for instance a year the depositors, who are admitted to the General Assembly, should elect the local SSDF Board, whereupon the lending business could commence.

CHAPTER 10
PREMIUM BONDS

10.1 INTRODUCTION

Within the Government and society there are differing opinions on gambling. Some accept gambling provided it will not expand into a hazard; others regard gambling as immoral, harmfull to the people and a waste of money and therefore to be discouraged. Others consider that, since it exists and probably will continue to do so, an attempt should be made to divert some of the money thus used into more acceptable channels.

If this latter attitude predominates, the introduction of Premium Bonds could satisfy these requirements providing an acceptable outlet which would be beneficial to the Government while at the same time proving the speculator with an opportunity for financial grain without loss of initial investment. Premium Bonds are securities, being bonds and lottery tickets at the same time, thus combining the charactoristics of both. Like ordinary bonds they may be transferable interest yielding and redeemable after a certain number of years, and like ordinary lottery tickets they give the chance of winning a prize.

By introducing this system it is hoped to instil a desire to save by diverting money from ordinary gambling. The savings thus invested would be available to use as loans for development purposes. In the following paragraph a short description of the Premium Bond system is given together with recommendations on implementations.

10.2 THE PREMIUM BOND SYSTEM

The pool of funds available would naturally be paid by the speculators themselves, and as the bonds would be redeemed at par after a certain number of years, the prize money must not exceed the interest yield accruing by lending the money obtained by the sale of the bonds. The bigger the investment in Bonds the bigger the sum available for loans would be. This in turn would result in a larger amount accruing as interest on the sum loaned and therefore the prizes offered could be proportionally increased. Usually the whole amount of interest, after deduction of administrative expenses, would be used as prize money.

The system could then be as follows:

a) Premium Bonds would be issued every half year up to an amount which would cover the demand. The bonds would be sold at par. The demand will probably fluctuate over time, being high just before a draw and low just after. To turn the high demand to account and to prevent this demand resulting in a surplus quotation for the Bonds on the free marker, the half yearly issue could take place in the months preceding a draw.

b) All the bonds could have the same denomination, for example $10.

c) The Bonds could be for a fixed term, for instance 10 years, after which they could be redeemed at par.

d) Interests could be paid twice a year, but instead of being distributed proportionately, they would be pooled and divided into prizes, which would be drawn every half year.

e) The Bond could be freely transferable.

10.3 THE APPLICATION OF ACCRUED CAPITAL

As in the case of "Sarawak's Savings and Development Fund" the capital accrued may be used for development purposes. Statutory bodies such as the Sarawak Land Development Board, Sarawak Economic Development Corporation and Borneo Development Corporation, other development organisations, local councils and local associations with common purposes would be the main absorbers of the Premium Bond money.

To avoid accumulation of a new large credit institution, the money should be transfered to the organisations mentioned above with fixed conditions as regards the amount of interest and the length of the redemption period. Fields would be specified within which the organisations could lend the money or use it themselves, the only additional requirement being that special accounts should be kept of the use of the Premium Bond money

10.4 IMPLEMENTATION AND ADMINISTRATION

According to IX Schedule, List I, Article 4 (1) of the Federal Constitution of Malaysia, legislation on betting and lotteries is a Federal matter. Consequently the Premium Bond System would have to be introduced in Malaysia as a whole and be administered entirely by a public authority. The Federal Ministry of Finance could form the administrative core of the arrangement, issuing the bonds and managing the draws. The sale of Bonds could take place from any public office and from banks, private finance corporations, stockbroker's offices, etc. Special offices, set up under the Ministry of Finance and the State Financial Secretaries, could administer the account between the Premium Bond fund and the development organisations in question. As an essential part of the implementation of the arrangement a large promotion campaign should be carried through, emphasizing that:

a) the bonds are redeemed at par after a certain period - all to win, nothing to lose

b) the accrued capital is lent for development purposes.

CHAPTER 11

LAND RENT

11.1 INTRODUCTION

In considering the economic and social problems of agricultural development of State Lands, one plan examined was the imposition of a flexible Land Rent System, summarised below. It is appreciated that such a system would necessitate amendment to present land policy and legislation and, touching as it does upon fundamental principles of Government, it would normally be considered outside the scope of a regional planning study. However, this system also provides answers to many other problems met with by the Consultants during planning, and therefore it was felt that, the system should at least be brought to Government's notice.

Land Rent is a periodic - for instance annual - amount to be paid by a person for the right to utilise a defined piece of land according to regulations laid down for its use. The idea of introducing the Land Rent System occurred to the Consultants after working over a period of time with agronomic, economic and social problems in connection with developing new land, including:-

- the cost of development;
- the type of persons to be attracted to the schemes;
- the type of organisation of production, that is estates, private independent farms and small-holdings;
- the arrangement of payment for taking over land and the social consequences of this arrangement; and
- the economic and social implications of fluctuating prices on sales products originating in the farms.

In transferring State Land, developed for farming, to individual users the State could not and should not give the land away free of charge, for both constitutional and financial reasons. On the other hand, sociological studies undertaken by the Consultants in the Lambir Land Development Scheme illustrated the difficulties met by the settlers and by the State due to fluctuating prices of rubber. Instead of reducing their debts over time the settlers were faced with the fact that debts increased because interest was added faster than they could reduce the amount owing.

Other problems have been:-

- that settlers did not attend to their holdings which thus deteriorated, there being no legal reason for the authorities to evict the owner;
- that settlers in areas that benifitted from public improvements, for instance a road, sold part of their property - usually illegally -

to other persons, and moved away from the areas with the improved access. In this way the improvement for the original beneficiaries were a short one - the amount gained by selling - instead of a long term one.

The economic relation between the State and individuals taking over farm land developed by and belonging to the State could be arranged as:-

- a cash payment sale, where the selling price should cover the costs of clearing and developing the land and of building up the necessary infrastructure; or
- a fixed annual payment over for instance 20 to 25 years; the amount should be sufficient to cover repayment of the full investment cost with additional payment of interest on the amount owing.

The first arrangement would obviously not apply to the vast majority of the people whom the State wishes to attract to the new schemes as small holders, because they would not have the necessary capital. The seond arrangement which could be considered the normal one, would also pose some essential problems:-

a) Failure to maintain regular payments, due to periodic falling farm product prices would, in consequence increase the yearly debt.

b) generation of unearned income in periods of rising prices (i.e. income generated not by work but as a result of possesion of certain assets, for instance land). This in turn could lead to higher sales prices for the land, which would be to the benefit of the 'present' owner when he sells the land, but would be a burden for the new buyer who, in case of subsequent falling prices would run into the difficulties mentioned under (a). If numerous farmers faced such problems Government support might become necessary.

If the Government sells the land it would be difficult to insure that in the future, the land would be put to proper uses; that all available land resorces are fully utilised and that those people, whom the Government wishes to help and educate to become modern farmers, remain in the scheme. Therefore, the Consultants came to the conclusion that a system where State Land was handed over to users on a 'usufructuary right' basis instead of on a 'proper ownership right' basis, would solve the problems mentioned here. The State would continue to maintain a fundamental control over the land and through a Land Rent system, obtain permanent although flexible revenues from this land as is further explained.

In the period of the Study such issues as inflation and land speculation have been frequently mentioned and discussed in public. The Land Rent would be an essential instrument in fighting the adverse effects of these phenomena. For that reason considerations have been given to an extention of the Land Rent system to cover improvements carried out on Native Customary Land and to cover urban land. As these lands may often be under some kind of private ownership already, the Land Rent system for these areas would have to be modified to an Incremental Land Value Rent System.

It is a known fact, observed over most of the world, that the buying of land as a means of security against inflation and in the hope of gaining a profit is a corollary of development and fast economic growth. As this tends to raise the price of land further, and thus to put an extra and unnecessary burden on production, it is desirable to avoid these effects. Furthermore land speculation is usually to the benefit of rather few people who are already well off, while to the great majority of poor people, land speculation is a disadvantage. A limitation on land speculation would thus be in accordance with stated Government preferences to improve the economic situation of the lower income groups.

The Consultants have only presented the Land Rent System for further consideration. There has been no time, within the scope of the Study to look into the implementation of such a system. There is no doubt that considerable practical problems would have to be solved before it could become operational. This however, must be seen in the light of the expanded administration which under all circumstances will be the result of modernisation of agriculture and parcelling land out to small holders. It is expected that a large part of the information necessary for the implementation of the system would be available any way. Organisation of this material and its up-dating could most appropriately be done by means of electronic computers, which could also calculate the annual Land Rent for each plot of land and for each person working under the Land Rent system.

112 ALIENATION OF STATE LAND UNDER THE PRESENT LAND CODE

The Sarawak Land Code in force is based on the principle that all land in Sarawak belongs to the State. Nobody can obtain proper ownership in the traditional sense of the word, but it is possible to lease land from the State in a certain Term of years by paying a Premium when the land is alienated, and a yearly Rent in the lease period. Native Customary Land which is land occupied traditionally by the Natives, in practice constitutes an exception. When the land is re-designated as Native Area Land or Mixed Zone

An example may clarify the idea:

A standard rubber growing farmer has in year 1 a total output from his land equal to $5 000 (the value of the yield from the rubber trees), and in year 2 - because of price reduction on rubber - a total output equal to $4 700. His costs for materials, equipment, etc., in both years equal $700 and the reasonable earnings for his and his family's work on the land are evaluated at $2 500 in year 1 and $2 600 in year 2. The $ 100 increase in year 2 is due to a general increase in the real wages in the society from year 1 to year 2. The Land Rent corresponding to the value of the services of the land should then be $5 000 less $700 less $2 500 equal to $1 800 in year 1, and $4 700 less $700 less $2 600 equal to $1 400 in year 2.

If rubber prices had gone up from year 1 to year 2 by say 10 per cent the value of the output would have been $5 500. Provided the same costs: S700 + $2 600 = $3 300, the Land Rent would amount to $2 200. This would mean a considerable increase in State revenues, thus enabling the State to finance further development or increase public services to the benefit of the entire population.

The Land Rent will, as shown, fluctuate with the world market and local market prices of the produce growing on the land, thus reducing or removing any rigidity in payment terms, which in periods of very low prices might lead to specially established release provisions. In other words the system would help stablise farmers' income in spite of price fluctuations. This quality of the system would render superfluous price stabilisation or price equalisation schemes, which have proved very difficult to handle. It would at the same time allow for a periodic assessment of farmers' income in relation to workers in industries and services and thus contribute to the removal of imbalances between rural and urban life.

11.5 DIRECT CONSEQUENCES OF THE PROPOSED LAND RENT SYSTEM

The right of the leaseholder does not include the right to dispose of land by selling it to a third party. The land belongs to the State and the State will decide who is to take over the land when the former leaseholder wants to dispose of it. However, the usufructuary right of the leaseholder should include the right to leave by will the land to his intestate successors on similar conditions as he enjoyed himself. In cases where the leaseholder wants to move away from the land, but a member of his household wants to stay, the member in question should have the option to take over the land, provided he meets certain criteria. This would give the farmer, for himself and his family, the security which is so important an item in the attitude of most rural people in Sarawak.

As the leaseholder can only transfer the land to the State, with the exception of the special cases mentioned, it should be obligatory for the State to buy his real property (residential house, store buildings, houses and sheds for livestock, etc.) when he wants to dispose of the land and move. The price should be assessed by impartial persons and should generally be of a size which enables the seller to buy real property of the same standard elsewhere in the country. The evaluation should be based on some fixed criteria such as floor space, building materials used, technical and sanitary installations age, standard of maintenance, etc.

If the leaseholder has improved the land (drainage, irrigation, levelling, terraccing, etc.) he should be paid a bonus from the State. On the other hand if the land had deteriorated due to negligence by the leaseholder a damage payment should be claimed from him.

Within the Land and Survey Department the establishment of a special office to manage the distribution of land and the buying and selling of real properties would be necessary. Participating in all transactions of land, this office would acquire a complete knowledge of the demand and supply situation. This knowledge would be useful when the Land Rent is reviewed once a year, because surplus demand or supply might indicate that the present Land Rent is too low or high respectively. This statement is derived from the economic theory of perfect competition. Assuming perfect competition, the demand for land will only exceed the supply if the production value of the land, less costs of material, less Land Rent, constitutes a larger amount than that which can be obtained elsewhere in the society by the same effort.

It is obvious that perfect competition does not prevail in Sarawak, or in any other country,,but the imbalance of demand and supply can be used as one of the indicators for changing the Land Rent. The quality and location of the land, the kind of crop, its yield and its price would be other indicators of Land Rent amounts. Valuable information about qualities and crops could be obtained from the soil survey work, which under all circumstances, must precede any large scale development or improvement scheme, and from the running work done by SLDB and Agricultural Development Units.

The central and divisional registers of land should be extended to contain detailed information about the quality, location and use of every plot of land recorded. Changes in these factors should be carefully reported in order to keep the registers up to date. Proper statistics of yields and prices of the main crops would also be necessary in the work of adjusting the rates of Land Rent. All information could be processed by means of electronic computers. The resulting Land Rents could be presented in two matrices (tables), one for agricultural land and one for urban and suburban land:-

BASIC RATES OF LAND RENT *) PER ACRE FOR AGRICULTURAL LAND

ACTIVITY	QUALITY OF LAND				
	1	2	3	4	5
Palm oil					
Rubber					
Wet padi					
Hill padi					
Pepper	Rates of Land Rent				
Cocoa					
Pineapples					
Cattle					
Other					

*) The basic rates of Land Rent should be adjusted according to the location of the land. In practice it could be done by multiplying the basic rates of Land Rent by factors reflecting the value of different locations. If for instance the basic rates of Land Rent reflects the Rents payable in the most remote areas (location 1) the multipliers could be shown below:

Location	Land Rent multipliers
1	1.00
2	1.25
3	1.50
4	1.75
5	2.00

Location 5 is areas closest to the final markets (towns) or central places for collection of goods for sale or export.

BASIC RATES OF LAND RENT *) PER ACRE FOR URBAN AND SUBURBAN LAND

ACTIVITY	LOCATION				
	1	2	3	4	5
Commercial					
Industrial					
Residential	Rates of Land Rent				
Others **)					

*) The basic rates of Land Rent should be adjusted according to the quality of the land i.e. its physical ability to bear buildings. As in the case of agricultural country land a set of multipliers could be set up.

**) The term "Others" in the last column means land for agricultural/horticultural purposes in urban and suburban land.

In some areas the Government might, for social reasons, lower the Land Rent i.e. assess the Rent below that stated in the matrix. If for instance some public infrastructural investments increases the value of land in a residential area for agricultural labourers, Government can choose not to increase the Land Rent accordingly. In such cases, however, it must be guaranteed, that the persons benefited will not be able to convert the benefit into unearned income, by letting their houses at a price which reflects the increased land value.

11.6 EXTENSION OF THE LAND RENT SYSTEM TO COMPRISE ALL LAND IN SARAWAK

One of the objectives of the Land Rent System is to prevent individual persons from obtaining unearned incomes by land speculation. Considering all land in Sarawak, the system would constitute an effective tool for the Government in its attempt to prevent its investment, aids, and subsidies becoming capitalised in high land prices which would be to the benefit of just a few luckily chosen persons, instead of improving the lot of the bulk of the people.

The emergence and effects of incremental land values are described in Appendix II Land Value and Land Price.

Until now land speculation has not been an overwhelming problem in Sawawak. The number of individual landowners has been modest and their collection of unearned incomes has been low, apart from the urban areas. The Sarawak society is, however, on its way into modern development, promoted by the Government, by its investments and by general policy. This means that the production value of the land in some areas in the near future will increase rapidly, because improvements of, for instance, infrastructure and public utilities will make it possible either to operate the land more rationally or to convert the use of the land to more profitable production. As the market value of land grows with the production value, a situation will soon emerge, where land speculation and the collection of unearned income by private persons are no longer marginal matter, but a significant social problem. The change of income and wealth distribution, in favour of the landowners, may create social problems and the increased purchasing power emerging from the realisation of the incremental land values may set off inflation and adversely affect the balance of payments. By extending the Land Rent System to Native Customary Land and alienated State Land, special problems arise.

Native Customary Land and State Land already alienated are land held by individual persons or groups of persons. Some have paid a Premium for the land while others without payment have a prescriptive right to the land. The present value of these areas of land is rightly looked upon by the occupiers as their lawful property. Encroaching on these values without compensation would be confiscation of private property and as such incompatible with the Constitution. This value must therefore stay untouched as private property. However, future increases in this value due to the general development of the society and to improved market conditions could legally be absorbed by the Government through an Incremental Land Value Rent. The consequence of this approach is, that the collection of Land Rent in the first years will mainly concentrate upon State Land and Land sited in developing areas. Large parts of Native Customary Land and already Titled Land outside the development areas would be exempt from paying Land Rent, as the incremental land value in these areas in the future would probably be zero or only moderate.

All Native Customary Land and State Land already alienated should be assessed by the Land and Survey Department, in order to state the present or the basic land values, that is the land values on the date from which a revised Land Code could come into force.

For State Land alienated on terms below 100 years, the future land values should be assessed too. As the Government has a contractual right to take over the land when the lease expires, the assessed values should decline year by year until they reach zero the last year of the term. The assessed decrease in the land values could be progressive, digressive or linear over the remaining lease period. For State Land alienated on terms exceeding

100 years - a grant of land the basic value should be valid for the future.

After the assessment, the Land Rent System, which has been outlined for State Land, could in principle be imposed on Native Customary Land and State Land already alienated. The amount claimed as Incremental Land Value Rent should be such to keep the market value constant equal to the assessed value. For State Land alienated on terms below 100 years this means that the yearly payment of Incremental Land Value Rent increases correspondingly to the decrease in the assessed value of the land.

However, the market value could fall below the assessed value indicating that the land fails to pay the full amount for labour on the land, materials and interest on the invested capital. This situation could emerge if some crop prices fell which would then require a subsidy to be paid in order to sustain the market value of the land. If the price-drop is considered to be of short duration, this could be a reasonable action, but it it is estimated to be of a more permanent character, measures should be taken to change the use of the land or to gradually transfer people to other areas of the country where more prosperous productions could be started.

If the owner wished to sell his land it could only be to the Government through the special Land and Survey office which would manage the distribution of land and the buying and selling of real property. As in the case of State Land, the occupier would get an amount, fixed by impartial persons, for his real property, but, beyond this he would also be paid an amount for the land equal to the assessed value, index regulated.

If economical, the Government can choose not to resell land bought from private persons, but instead to give it status as original State Land and hand it over on a pure Land Rent basis.

11.7 EXAMPLES

In this sub-section a number of examples are presented in order to illustrate how the proposed system would work in different situations.

Private contractor building dwellings to let out:

- the contractor applies to the Land and Survey Department for permission to build dwellings to let out;
- having received permission and built the dwellings he is allowed to let them out at a rent, which he fixes himself. The rent charged would cover the annual capital and running costs of the house and the Land Rent.

Private contractor building dwellings to sell:

- the contractor applies to the Land and Survey Department for permission to build dwellings to sell;
- he received permission if Land and Survey Department judges that there is a need for dwellings in the area in question;
- having received permission and built the dwellings he is allowed to sell them at a price, which he fixed himself. The Land Rent would be adjusted according to the new utilisation of the land, thus preventing the contractor from collecting an unearned income by selling the land.

Comparison of Land Rent payable for improved and unimproved State Land

For State Land improved by the Government before alienation, the output from the land has to cover:-

- Payment for labour inputs provided by the leaseholder, his family and possible hired labour;
- Payment for inputs other than labour;
- Land Rent.

For land which is alienated unimproved the output from the land has to cover:-

- Payment for labour inputs provided by the leaseholder, his family and possible hired labour;
- Payment for inputs other than labour;
- Repayment of and interest on capital inputs necessary for developing the land;
- Land Rent.

Consequently the Land Rent amount payable in the latter case would be smaller than in the former.

Incremental Land Value Rent for Native Customary Land and State Land already alienated:

- If the possibility arises to change the use of an area of land from a lower to a more profitable production, the value of the land will increase. Following the rules outlined above, the Government should impose an Incremental Land Value Rent on the land in question. The Incremental Land Value Rent is calculated by means of the rates of Rent given in the Land Rent matrices for State Land and a pears as the difference between the Rent payable on the present and the future use. If, for example the use of an area of Native Customary Land could change from agricultural to residential, and the Land Rent matrices shows, for the land in question, a Rent equal to $1 and $4 per acre respectively for the two purposes, the

Incremental Land Value Rent should be $3 per acre.

- Changes in other indicators on Land Rent, for example, the price of a main crop has increased thus increasing the value of the land, the same procedure indicated above would be used to calculate the Land Value Rent increment.

Two examples serve to illustrate the Incremental Land Value Rent approach to Native Customary Land and already alienated urban land respectively.

Example One: On Native Customary Land

In year 0, that is the year when the revised Land Code is carried through, the value of the piece of land is assessed. under shifting cultivation the land has a low quality evaluated as group 1. The remoteness of the area places it in location category 1.

After some years the Government builds a road through the area and extension service work is started. By drainage, levelling, terraceing and fertilising the land the padi area is extended and the rest of the land made useable for rubber.

In year 10 a revaluation of the land is carried out. The improvement of the land quality and the road linking the area to the outside world mean the quality is now assessed as 3 and the location as 2. The Incremental Land Value Rent to be paid is then the difference between the quality 3, location 2 and the quality 1, location 1 Rents, less the repayment of and interest on capital inputs paid by the people themselves.

Example Two: Urban land

In year 0 the land in the new residential areas is evaluated as grade 2 as it lies on the margin of the urban area. The town continues to expand by year 10 the residential area is no longer marginally situated. Reassessment in year 10 puts the area into grade 5. The Incremental Land Value Rent to be paid is then the difference between the grade 5 and the grade 2 Rents.

11.8 RENT TAX AND DUTIES

The Land Rent is not a tax but a transfer to the State of that part of the output from the land, which is due to the land itself. The landuser's income from the land is certainly not affected by the Rent as the Land Rent amount emerges as the difference between the total output and the payment for materials, transport and labour necessary to obtain this output. When the landuser's total income reaches a certain level taxes should be imposed on him as on any other member of the society.

If an export duty is charged on agricultural products the Land Rent should be reduced accordingly in order to maintain the agreed level of the income for the farmers in question.

11.9. SUMMARY - Consequences of the Proposed Land Rent System

- As no land would be traded directly among private persons, but always with the State as an intermediary, the system will effectively prevent speculation in land;
- For farming land, the system would allow the standard farmer to earn a reasonable amount for himself and his family, regardless of fluctuations in crop prices, and by reducing the gap between the incomes obtainable in the rural and in the urban areas the system would contribute to the reduction of urban migration;
- As the system implies that an initial sum is not claimed from the leaseholder when land is alienated to him, future liquidity problems in connection with re-alienation of land from one person to another will be avoided. The new leaseholder will simply take over the obligation to pay the annual Land Rent;
- There is no economic reason for time limited lease terms, when land speculation is made impossible, and it is not necessary as a means by which the Government can acquire land. The present provisions for State redemption of land would be sufficient to secure for Government the land which is needed for public purposes;
- The system will allow a considerable flexibility in the resource allocation of the society. Firstly, because the mobility of the population will increase, as the collection of all information in connection with the supply and demand of land and real property by one authority - the Land and Survey Department - will give the population a quick and clear picture of the possibilities available for acquiring land for agriculture, residential housing, industries, etc. Secondly, because the Governemtn can impose Rent on land in accordance with its most appropriate utilisation - 'optimum land use'. The latter means th t the Government could alter the productive use of the land, so that a maximum output could be ensured to the simultaneous benefit of the users and the society;
- The system would help in the selection of farmers, as persons who were not able to produce the surplus necessary to pay the Land Rent, would have to forfeit the land, which could then be utilised by more able persons;
- The systmm constitutes a tool which would enable Government to

influence, rather effectively, the distribution of land between different ethnic groups and clasees of population in the State, thus avoiding any adverse social effects from restricted access to land;

- The Land Rent would at the same time assure that farmers taking over State Land would not unduly benefit, at the expense of the rest of the society, and that they, within their ability, would contribute to payment for the services of the land they use and for the investments undertaken by the State in improvement of the land.

  In this way the farmers would also contribute to the recurrent revenues of the State and thus to its continuous development;
- The system would in time contribute essentially to the public revenues and could become one of the main solutions to future financial problems of the State Government envisaged in connection with the Mid-Term Review of the Second Malaysia Plan. It could also be considered an appropriate arrangement by international financing organisations as an economic basis for their lending;
- The system would give the farmer, for himself and his family, the security which is so important to most rural people in Sarawak.

11.10 CONCLUSIONS

The Land Rent System outlined above appears to give positive answers and solutions to a number of important social, ethnic, financial and political problems. The present chapter, however, has not dealt with the implementation of the system but it appears that much of the information necessary for its implementation and operation is already available. Further information will automatically be produced through the rational development of modern agriculture.

The system would be quite easy to handle and the immediate additional staff requirement modest, firstly as the Land and Survey Department already has a staff at its disposal, administering the present Land Rent System, secondly because the number of land-transactions in Sarawak at present is rather small-from the ffice of Lands and surveys in Kuching it has been reported that the number of land-transactions in 1972 was just above 7 000 - and thirdly, because the system could be efficiently adapted to electronic processing, thus reducing the administrative work considerably.

Finally it must be emphasised that within the system, the only reduction in the landusers' freedom of action is that they are not allowed to sell their land and real property to anyone they choose, but only to the State.

As long as the landuser pays his Rent he can do what he likes with his land within the restrictions imposed by other legislation, or any agreement made at the time of alienation, for instance on delivery of fresh-fruit-bunches to a palm oil plant. He still has the right to let the land descend to his intestate successors in accordance with the statutes valid in the State. In Table 11.1 the main similarities and differences between the present Land Code and the proposed Land Rent System are presented.

TABLE 11.1 COMPARISON OF EXISTING LAND CODE AND PROPOSED LAND RENT SYSTEMS

Main Principles	The Present Land Code	Proposed Land Rent System
Basic Ownership	The State	The State
Alienation		
- Term	60 years - 99 years	Lifetime, Intestate successors
- Premium	ø market value	0 <
- Rent	Nominal order	Varyaccording to output value
Right of Disposal	Free (restricted)	Restricted

If the introduction of the proposed Land Rent System is considered, a commission would need to be set up with the objective of establishing the practical and administrative consequences. It is expected that either that United Nation Development Project or bilateral aid can be obtained if it is found necessary.

APPENDIX I

APPENDIX I

INPUT-OUTPUT MODEL FOR THE STUDY AREA

I.1 INTRODUCTION

In order to describe the economic development in the Study Area and to analyse the impact of the different production sectors, an economic model has been formulated. The model must be considered a tool for analyses of economic resources and flows rather than a verified registration of all economic movements within the Study Area. The present-state model is at the same time a basis for forecasting and checking of future relations between the different sectors within the economy.

The method chosen for this analysis is an input-output model, in which the major economic factors and their intra - and extra-regional influences are described in monetary terms. The factors comprise:

- supply of goods and services;
- wages (labour factor income);
- other factor incomes (interest, profit, proprietors' surplus etc);
- product value;
- import;
- export;
- investment (including stock-changes);
- consumption.

All the mentioned factors are treated sector-wise, thereby making it possible to determine the interrelation between the in - and output in the different sectors.

I.2 THE INPUT-OUTPUT MATRIX

The fundamental element in the model is the input-output matrix, in which the present-state economy and its interrelations are described. On the basis of the input-output matrix, the technical coefficients are calculated. The technical coefficients illustrate the direct proportions from the different sectors to each sector's production.

The concept of the input-output matrix assumes the following correlations within the regional economy:

The total product value:

A: $({}_i a_i + M_i) = {}_i({}_j a_{ij} + X_i + I_i + C_i)$

The total 'value added' or production value:

B: ${}_i g_i = {}_i (a_i - {}_j a_{ij} - M_i)$

The symbols and expressions used are the following:

a_i = Total product value of goods and services produced within sector 'i' in the Study Area. The product value is calculated as price multiplied by quantity of the output.

M_i = Total product value of goods and services imported to sector 'i' from outside the Study Area.

a_{ij} = Product value of goods and services supplied to sector 'i' in the Study Area from sector 'j' enterprises in the Study Area.

X_i = Product value of goods and services exported from sector 'i' from the Study Area.

I_i = Product value of sector 'i' goods and services for investment and stock-changes in the Study Area.

C_i = Product value of sector 'i' goods and services for private and public consumption in the Study Area.

g_i = Production value or the value added in sector 'i' in the Study Area.

raw materials = input in the production process e.g. actual raw semi-manufactured goods, fuel etc.

Thus the two equations A and B mean :

A: The total supply of locally manufactured and imported goods and services in the Study Area is equal to the sum of expenditures on raw-materials, the value of export, investment and consumption in the Study Area.

B: The production value or value added is equal to the total product value less the expenditures on raw materials and imported goods and services.

The qualities of an input-output matrix are illustrated in the Table I.1

TABLE I.1 SCHEMATIC INPUT-OUTPUT TABLE WITH TWO SECTORS (MILLION DOLLARS)

From \ To	Sector 1	Sectors 2	Total	Investments	Consumption	Export	Total
Sector 1	30	50	80	10	130	80	300
Sector 2	40	80	120	120	240	70	550
Import	30	70	100	20	30	-	150
Total	100	200	300	150	400	150	1 000
G R P	200	350	550				
Total Production	300	550	850				

Each of the two sector columns (vertical) show the amount (in mn. dollars) of raw-materials necessary to produce the regional product. Furthermore, they show how the increase of the production in one sector will influence the production in the other. In the example the product value in sector 1 totals $300 mn. This product value can be divided into the regional product (GRP) of $200 mn and the contents of raw-materials (including imports) of $100 mn. The amount spent on raw materials is distributed as shown in the table with $30 mn received from the sector itself, $40 mn from sector 2 and $30 mn from abroad.

In the first row (horizontal) the product value of sector 1 is registered once more. But it is considered here from another viewpoint namely its usage. Thus it is shown that of the total sector product of $300 mn, $80 mn is allocated to raw-materials, $10 mn to investment, $130 mn to consumption and $80 mn to export. The main contents of the table can, if restructured in account form, again illustrate the usual connection between supply and use (or employment) of goods and services.

TABLE I. 2 SUPPLY AND USE OF GOODS AND SERVICES
(MILLION DOLLARS)

Production value	850	Raw materials	300
Import	150	Investments	150
		Consumption	400
		Export	150
Total	1 000	Total	1 000

The lay-out of the matrix implies that the application of the production value can be shown for different relevant items (e.g. exports, consumption, investments etc.)

I.3 RELATIONS BETWEEN THE ECONOMIC SECTORS

By means of the input-output matrix it is possible to illustrate the economic structure and the economic relations between the sectors at the same time, and consequently this part of the matrix is central in the theoretical system, which is based on the total input-output model.

Based on the input-output matrix for the Study Area in 1970, (Table I.3) Table I.4 shows how the relative product values for each sector are composed of raw materials from other regional sectors, imported raw materials, factor incomes and duties. These calculated figures indicate the average input of different kinds which have been necessary to produce one unit of each single sector product in 1970; they are usually called

TABLE I.3: INPUT-OUTPUT STUDY AREA 1970 THOUSAND DOLLARS

FROM: \ TO:	AGRICULTURE	FORESTRY	FISHING	MINING	OIL INDUSTRY	MANUFACTURING	food	clothing	wood	furniture	rubber	non-metal	metal	transport	other	CONSTRUCTION	PUBLIC UTILITIES	TRANSPORT	TRADE	BANKING	OWNERSHIP OF DWELLINGS	ADMINISTRATION	SERVICE TRADES	TOTAL	INVESTMENT	CONSUMPTION	EXPORTS	PRODUCTION PLUS EXPORTS
AGRICULTURE	50	–	110	–	–	1660	1650	–	–	–	–	–	–	–	10	–	–	–	10	–	–	–	1275	3055	150	14140	4875	22220
FORESTRY	–	–	–	–	–	3715	–	–	3670	5	20	10	–	–	10	–	–	–	–	–	–	–	–	3765	4250	435	84000	92450
FISHING	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	–	–	–	520	525	200	2910	70	3705
MINING	–	200	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	200	10	–	–	210
OIL INDUSTRY	60	2800	370	25	–	55	–	–	25	–	–	10	5	10	5	75	160	4090	–	–	–	–	–	7635	27000	3920	172725	211280
MANUFACTURING	95	390	85	15	290	445	5	10	90	240	–	25	10	20	45	495	15	340	230	10	20	–	145	2575	665	8135	5110	16485
food	5	–	35	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	185	–	–	–	120	345	15	1605	750	2715
clothing	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	70	630	10	710
wood	30	–	–	–	100	285	–	–	–	230	–	15	–	10	30	400	–	–	–	–	–	–	–	815	420	3385	3600	8220
furniture	–	–	–	–	–	40	–	10	30	–	–	–	–	–	–	–	–	–	–	10	20	–	15	85	5	400	50	540
rubber	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	70	–	70
non-metal	20	–	15	5	20	–	–	–	–	–	–	–	–	–	–	10	–	–	20	–	–	–	–	90	10	65	5	170
metal	20	40	–	–	70	60	–	–	45	–	–	–	–	5	10	45	15	–	–	–	–	–	–	250	15	5	5	275
transport	–	350	35	10	100	25	–	–	10	–	–	5	5	–	5	25	–	300	25	–	–	–	–	870	30	300	680	1880
other	20	–	–	–	–	35	5	–	5	10	–	5	5	5	–	15	–	40	–	–	–	–	10	120	100	1675	10	1905
CONSTRUCTION	–	300	60	–	300	210	–	–	35	10	–	5	15	95	–	–	–	–	–	10	20	–	–	900	25	3330	–	4255
PUBLIC UTILITIES	–	–	–	–	–	420	105	20	200	20		10	10	20	35	20	–	50	910	50	240	–	650	2340	150	2120	–	4610
TRANSPORT	110	5875	15	–	100	170	10	–	80	5	–	10	5	35	25	75	–	–	3495	–	–	–	–	9840	920	2245	–	13005
TRADE	1765	8885	405	–	1200	70	55	–	–	–	–	5	–	–	10	–	–	–	–	–	–	–	–	12325	–	47650	–	59975
BANKING	45	240	–	–	50	240	10	5	130	–	5	–	5	25	60	215	–	100	1050	–	100	–	90	2130	–	835	–	2965
OWN. of D.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8480	–	8480
ADMINISTRATION	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3570	–	3570
SERVICE TRADES	70	420	40		1420	425	10	45	245	5	5	5	5	35	70	95		10	200	55	20	–	–	2755	–	10910	–	13665
IMPORTS	2285	6890	215	5	150930	2120	55	250	65	15	15	15	120	805	780	1355	200	1250	34485	–	–	–	890	200625	–	–	–	–
GOODS & SERVICES	4480	26000	1300	45	154290	9530	1900	330	4540	300	45	95	175	1045	1100	2330	375	5840	40385	125	400	–	3570	(48045) 248670	33220	102990	266780	456875
WAGES	9000	7500	1195	45	5550	3690	325	85	2130	145	10	40	60	580	315	1125	450	2365	2835	490	100	2925	5390	42660	–	–	–	–
OTHER GRP	8370	54500	1210	395	50340	3265	485	295	1550	95	15	35	45	255	490	800	3785	4800	11725	2300	8000	645	4705	154840	–	–	–	–
GRP	17370	62000	2405	440	55890	6955	810	380	3680	240	25	75	105	835	805	1925	4235	7165	14560	2790	8100	3570	10095	197500	–	–	–	–
PRODUCT VALUE	22220	92450	3705	485	211280	16485	2710	710	8220	540	70	170	280	1880	1905	4255	4610	13005	54945	2915	8500	3570	13665	452090	–	–	–	–
+ Duty etc. − Subsidies	370	4450			1100																			5920				

TABLE I.4: TECHNICAL COEFFICIENTS STUDY AREA 1990

FROM: ↓ / TO: →	AGRICULTURE	FORESTRY	FISHING	MINING	OIL INDUSTRY	MANUFACT-URING	food	clothing	wood	furniture	rubber	non-metal	metal	transport	other	CONSTRUCTION	PUBLIC UTILITIES	TRANSPORT	TRADE	BANKING	OWNERSHIP OF DWELLINGS	ADMINIST-RATION	SERVICE TRADES	TOTAL	INVESTMENT	CONSUMPTION	EXPORTS	PRODUCTION PLUS EXPORTS
AGRICULTURE	–	–	4.3	–	–	–	28.8	0.9	–	–	28.0	2.0	–	–	2.5	–	–	–	0.1	–	–	–	5.0	–	–	–	–	–
FORESTRY	0.2	–	–	–	–	–	–	–	25.0	0.9	28.57	5.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
FISHING	0.1	–	–	–	–	–	22.0	0.9	–	–	–	1.0	–	–	–	–	–	–	0.1	–	–	–	2.5	–	–	–	–	–
MINING	–	0.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
OIL INDUSTRY	0.5	4.0	15.0	5.2	–	–	–	–	2.5	–	–	6.0	1.8	0.6	0.5	1.8	4.0	32.4	–	–	–	–	–	–	–	–	–	–
MANUFACT-URING	1.1	0.8	5.1	3.1	0.4	–	0.6	1.6	4.5	44.5	–	10.0	3.6	1.1	2.5	16.2	0.5	2.9	0.6	0.3	0.5	–	3.2	–	–	–	–	–
food	0.7	0.3	0.9	–	–	–	–	–	–	–	–	0.2	–	–	–	–	–	–	0.4	–	–	–	0.9	–	–	–	–	–
clothing																												
wood	0.2	–	2.0	–	0.1	–	0.2	–	–	42.6	–	4.8	–	0.5	1.6	12.0	–	–	–	–	–	–	–	–	–	–	–	–
furniture	–	–	–	–	–	–	–	1.4	0.4	–	–	–	–	–	–	–	–	–	–	0.3	0.5	–	2.1	–	–	–	–	–
rubber																												
non-metal	0.1	–	0.5	1.0	0.1	–	0.1	0.1	–	–	–	–	–	–	–	–	0.1	–	0.1	–	–	–	0.2	–	–	–	–	–
metal	0.1	–	0.1	–	0.1	–	0.1	0.1	2.0	–	–	–	–	0.3	0.6	3.00	0.4	–	–	–	–	–	–	–	–	–	–	–
transport	–	0.4	1.7	2.1	0.1	–	–	–	2.0	–	–	2.5	1.8	–	0.3	0.8	–	2.5	0.1	–	–	–	–	–	–	–	–	–
other	0.1	–	–	–	–	–	0.2	–	0.1	1.9	–	2.5	1.8	0.3	–	0.4	–	0.4	–	–	–	–	2.0	–	–	–	–	–
CONSTRUCTION	–	0.4	1.8	–	0.2	–	–	–	0.6	1.9	–	2.5	5.4	5.1	2.5	–	–	–	–	0.2	0.5	–	–	–	–	–	–	–
PUBLIC UTILITIES	1.0	–	0.5	–	–	–	4.8	2.8	3.5	3.7	–	4.0	3.6	1.1	2.0	0.6	–	0.5	1.9	2.0	2.9	–	4.8	–	–	–	–	–
TRANSPORT	0.5	5.0	0.6	–	0.1	–	0.5	–	4.2	1.0	–	4.0	1.8	1.9	1.4	2.4	–	–	6.4	–	–	–	1.0	–	–	–	–	–
TRADE	5.00	4.0	10.9	–	0.6	–	2.0	–	–	–	–	3.0	–	–	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–
BANKING	0.5	0.9	1.5	–	0.1	–	0.4	0.4	1.8	–	6.0	–	1.9	1.4	3.0	5.1	–	0.8	1.9	–	1.5	–	0.8	–	–	–	–	–
OWN. of D.																												
ADMINIST-RATION																												
SERVICE TRADES	0.4	1.0	3.8	–	0.7	–	0.4	5.3	3.9	1.0	7.1	3.8	1.7	1.9	3.8	2.2	–	0.2	0.8	2.0	0.5	–	–	–	–	–	–	–
IMPORT	18.00	10.0	15.00	1.0	70.0	–	9.2	41.2	6.7	2.8	21.4	25.8	42.0	42.8	40.9	28.8	4.3	10.0	60.0	–	–	–	6.0	–	–	–	–	–
GOODS & SERVICES	27.4	26.5	58.5	9.3	72.1	–	68.9	52.2	52.8	57.7	62.5	68.0	63.6	55.9	59.7	57.1	9.8	43.9	71.8	4.5	5.4	–	25.3	–	–	–	–	–
WAGES	30.00	8.1	25.9	9.3	3.5	–	12.3	12.9	25.8	23.8	14.9	15.0	18.2	25.8	16.6	22.6	9.7	20.0	8.0	18.5	1.6	85.0	35.9	–	–	–	–	–
OTHER GRP	42.6	65.4	32.6	81.4	24.4		18.8	34.9	21.4	18.5	22.6	17.0	18.0	18.3	23.7	20.3	80.5	36.1	20.2	77.0	93.0	15.0	38.8	–	–	–	–	–
GRP	72.6	73.5	41.5	90.7	27.9	–	31.1	47.8	47.2	42.3	37.5	32.0	36.4	44.1	40.3	42.9	90.2	56.1	28.2	95.5	94.6	100	74.7	–	–	–	–	–
PRODUCT VALUE	100	100	100	100	100		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	–	–	–	–	–

+ Duty etc. }
– Subsidies }

'Technical Coefficients' as they reflect the estimation of the technical production conditions in the Region (the inverted matrix has not been worked out).

Besides the many sources of errors which must be considered when constructing an input-output matrix, further uncertainty is introduced by the calculation of the technical coefficients. Changes in price relations (including wages) and technical innovations can be important to the development within the aggregated sectors (the sum of all different enterprises within a sector)that consitute the input-output model. However, at the same time sector aggregation will naturally imply greater stability, because the substitution, which might be caused by changed price and production relations, will often be evened out within the frames of the aggregated sectors.

APPENDIX II

APPENDIX II

MAIN FEATURES OF THE SARAWAK LAND CODE

The Sarawak Land Code is based on the principle that all land in Sarawak belongs to the State. No-one can obtain proper ownership in the traditional sense of the word but it is possible to lease a piece of land from the State in a certain Term of years by paying a Premium when the land is alienated and a yearly Rent in the lease period. Native Customary Land which is land occupied traditionally by the Natives, in practice constitutes an exception. When the land is re-designated as Native Area Land or Mixed Zone Land, it is surveyed and recorded by the Land and Survey Department and the State formally takes over the ownership of the land. After designation continued occupation of the land is based on a lease contract. The conditions - Term, Premium, Rent - on which State Land has been and is alienated vary considerably.

II.1 TERM OF LEASE

With regard to the Term of lease, a range is found from five years up to an infinite number. Perpetual leases are not very common and are only found in Kuching. Leases of 999 years and 900 years are also found but, like the perpetual ones not in large numbers. Most of these long term leases - often called grants - were issued under the Brooke regime. The majority of leases are issued for a Term of 60 or 99 years. The present provisions for Terms of leases are given in the Land Code under Section 213 as rule No.13. This rule states:

"The maximum Term for which any lease of State Land may be issued without the sanction of the Director, except on replacing an existing title, shall be as follows:

a) for agricultural land	60 years
b) for residential purposes	60 years
c) for shop lots, factory sites and sites for buildings other than residential:	
1) for permanent buildings of brick or concrete, or for wooden buildings of a type and specification approved by local authority to warrant the grant of a 60 years lease	60 years
2) other wooden buildings	25 years
d) burial grounds	99 years
e) for a lease replacing customary tenure	99 years
f) for cattle grazing	5 years

II.2 PREMIUM

When State Land is alienated, the Premium to be paid ranges from nil to the current market value of the land. The present rules which are found in Section 213 in the Land Code, are as follows:-

"1) In urban development schemes sponsored by Government the amount of Premium payable on alienation would be the cost of the land (including the cost of any acquisition) plus the cost of development, but, where this exceeds the market value, Superintendents are required to make recommendations for the reduction in the Premium to be charged.

2) The amount of Premium payable on any other alienation of State Land outside an urban development scheme (but not including the alienation of agricultural country land) should be left to the discretion of the Superintendents, but in no case should it exceed 25 per cent of the market value at the time of alienation.

3) The amount of enhanced Premium, payable for conversion of the conditions of title from a lower to a higher and better use, should be left to the discretion of the Superintendents, but in no case should it exceed 25 per cent of the difference of the two market values at the time of alienation or realienation.

4) The Premium to be charged for alienation of country land for agricultural purposes under Block Alienation Schemes should be $3 per acre.

5) In residential Block Alienation Schemes where services such as roads, water and electricity supplies are provided by Government, the amount of Premium payable on alienation would be the cost of the land (including the costs of acquisition if any) plus the cost of development, but, where this exceeds the market value, Superintendents are required to make recommendations for the reduction in the Premium to be charged. In cases where no services are provided by Government, the amount of Premium to be charged should be left to the discretion of the Superintendents but in no case should it exceed 25 per cent of the market value at the time of alienation.

6) The Premium is nil for land alienated for the following purposes:

   a) educational purposes;
   b) health clinics;
   c) burial grounds;
   d) charitable institutions, benevolent and other welfare societies;
   e) civil service, youth clubs and cultural societies."

Section 18 of the Land Code deals with Native Customary Land, saying:

"Native Customary Land can be titled by issuing a lease not exceeding 99 years free of Premium, Rent and other charges. The land shall be used for agricultural purposes only.

Where land leased under this section is transferred or sub-leased to a person other than intestate successors or the use of the land is changed from agricultural purposes to any other purpose, the appropriate Premium, if any, Rent and other changes under this ordinance shall be payable as if the land has been first alienated on the date of transfer or sub-lease or change of use, as the case may be."

II.3 RENT

In the lease period a yearly Rent is to be paid. The provisions for this are as those of Terms and Premiums stated in section 213 in the Land Code. They are as follows:

1) Town or suburban land and country land used for other than agricultural purposes.
   The rates stated in table II.1 stipulate the maximum amount of Land Rent to be charged per year for each grade of land and for each particular purpose, i.e. commercial, industrial, residential or other purposes. It is recognised that some parcels of land on the outskirts of a town in the high grade may be of less value than parcels of land in the centre of towns in the lower grade. Hence, it is considered that it is inappropriate and enequitable to fix a minimum rate of Rent. The land valuer can then fix the Rent for land within each grade without being restricted by having to adhere to a fixed minimum set of values.

TABLE II.1 RATES OF LAND RENT

Cent per square foot	Commercial	Industrial	Residential	Others [1)]
Special grade (Kuching)	8	2	1	1/2
Grade I	6	7/4	7/8	7/6
Grade II	4	3/2	3/4	3/8
Grade III	2	1	1/2	1/4
Grade IV	1	1/2	1/4	1/8

1) The term "others" means land for agricultural purposes in town and sub-urban land.

In order to give a indication of how the different grades in this grouping apply within the Study Area some examples are given in the following:-

	Towns and Bazaars.	Grade
1.	Bekenu	III
2.	Beluru	IV
3.	Bintulu	II
4.	Kuala Baram	IV
5.	Labang	IV
6.	Lutong	III
7.	Marudi	II
8.	Miri	I
9.	Niah	IV
10.	Batu Niah	IV
11.	Pandan	IV
12.	Sebauh	III
13.	Suai	IV
14.	Tubau	IV
15.	Fifth mile Riam Road Bazaar	IV
16.	Lambir	IV
17.	Krokop	III
18.	Lubok Nibong	IV
19.	Long Teru	IV
20.	Long Lama	IV
21.	Long Linei	IV
22.	Bakam	IV
23.	Brighton	III
24.	Kuala Sibuti	IV

2) Agricultural country land

The yearly Rent for land used exclusively for padi cultivation or cattle grazing is 20 cents per acre. For land used for any other agricultural purposes $1/- per acre.

Up to and including the first day of January 1973 the Land Rent payable for town or suburban land, or country land used for other than agricultural purposes was two per cent of the assessed market value of the land. The market value was assessed at intervals of ten years from the date of registration of the lease. This system was found to have three serious drawbacks. Firstly, the procedure of revising the assessed market value of the land at fixed intervals resulted ih inequitability in the charging of Land Rent. For example, two more or less similar parcels of land in the same locality might bear different Land Rent if they were revised at different times. Secondly the revisions of assessed market values appeared to have a spiralling effect on the land values and thirdly the rapidly increasing land values led to an excessively high level of Land Rent on alienation and on revision, thus rendering it difficult or impossible for people to remain on the land.

Country land used for agricultural purposes was valued at a Land Rent of 20 cents per acre if used exclusvely for cattle grazing purposes,

$1/- per acre for land used exclusively for padi cultivation; and $3/- per acre for land used for any other agricultural purposes.

It is evident that the Rents to be charged according to the provisions of the new system are very low in comparison with those assessed in accordance with the former rules.

II.4 OTHER PROVISIONS

Besides the provisions for Terms of leases, Premium and Rent the following statements of the Land Code should be cited to complete the picture of the present policy on land.

Section 17 of the Land Code:

"In the absence of any special conditions to the contrary contained in the document of title Government may re-enter and resume possession of lots of suburban land which remain unoccupied and unimproved for two years from the date of registration of the document of title and no claims shall lie for the refund of any premium, rent or other considerations, which may have been furnished."

Section 33:

"In any case where the land has been abondoned for at least three consecutive years or in case of a breach of or a default in the observance of any of the conditions of the said document of title the Superintendent declare the estate or interest secured by that document of title to be forfeited and re-enter the land."

Section 26:

"No person claiming under document of title shall, in absence of contrary provision contained in that document of title, have any right, upon the expiration of the term secured thereunder, to any renewal, whether upon the same conditions or otherwise."

The proviso of section 26 allows the Director to exercise his discretion but in fact, it is the policy to renew a lease at the request of the former registered proprietor.

The Government, then has a legal right to take over land, when the Term expires, without any compensation to the former occupier. In this connection it is of importance to know how land is defined. A definition is found in the Land Code Part II saying that land includes things attached to the earth or permanently fastened to anything attached to the earth. Land is then interpreted as including every type of ground, soil or earth under whatever use and including houses and other buildings on it.

In short it could be said that section 26 entitles the Government to take over land and fixtures when the term of lease expires without any economic compensation to the former registered proprietor.

Section 27:

"No outgoing proprietor or other person shall have any right or claim against the Government in respect of the value of any improvements that may be in existence on the land at the date of the expiration of the estate or interest under which that land was held."

Section 39 contains general provisions relating to the cultivation of land. These provisions are most important in securing the proper development of agricultural land. They are as a matter of policy as far as possible vigorously enforced.

Section 46 deals with the provisions of resumption. They are very comprehensive allowing resumption for all public purposes, and it appears that public purposes are given a very broad interpretation.

Section 47 allows the Government to freeze the value of land which will, or may, be required in a process of resumtpion, this frozen value becoming valid only in the case of resumption. Private dealings on land can still be valued on the basis of their current market value.

According to the Land Code Directions stated under section 38 the following special condition of the lease may be imposed: "This land may not be transferred, subleased, charged or otherwise dealt in without the approval in writing of the said Superintendent during the initial period of 10 years from the date of registration of this lease." In some cases the period can be extended to 15 years or even to cover the whole lease-period.

Zonation: As a pears above, the State of Sarawak is divided into four land categories, namely;

1) town land,
2) suburban land,
3) country land used for other than agricultural purposes,
4) country land used for agricultural purposes.

Within each land category the Director of Land and Survey Department can restrict the use of the land to certain purposes. The categories (1) to (3) could be restricted to either commercial, industrial, residential or agricultural purposes and the category (4) to some closer defined types of crops or to cattle grazing.

As mentioned above, if the conditions of the lease are converted allowing the land to be used for more profitable purposes, an enhanced

Premium and Rent are to be paid. However, the amounts which are charged do not necessarily correspond to the Incremental Land Value.

In summary it must be stated that the provisions of the Land Code do not prevent private persons from collecting unearned incomes by holding and selling land. The rules of Premium and Rent are in fact to give considerable subsidies to people leasing land from the State. The Premium which is charged in the first alienation of a piece of land is often below the current market value, and in the following re-alienations the Premium never exceed 25 per cent of the current market value. As the leaseholder in question is normally allowed to sell the land at the current market value within the lease period he can obtain an unearned income equal to the capitalised value of the subsidy. Thus the subsidy is not transferred to the new leaseholder or to the State, but to the person who happened to be the first leaseholder.

A subsidy which enables people to acquire a piece of land for agricultural, residential, commercial or industrial purpose would be a good and socially reasonable provision. On the other hand leaving the same people the possibility of capitalising on this subsidy by making unearned income by selling the piece of land is hardly desirable and most likely unintended. This seems to be widely agreed in Sarawak, and attempts to cope with the problem have been made by the passing of some of the rules and provisions of the Land Code mentioned above. It concerns for instance the rule allowing the Government to freeze land value, the rule allowing the Government to take over free of charge land and fixtures by the end of the lease term, the provision forbidding people to sell the land within a certain initial period and the directive allowing the Land and Survey Department to zone the land, i.e. to restrict the use of the land to certain purposes. These provisions restrain land speculation, but they certainly do not remove it.

APPENDIX III

APPENDIX III

LAND VALUE AND LAND PRICE

The emergence of land value can be illustrated by the following formula:

If

v = market value of the land

r_t = revenues from the land in year t,

c_t = cost* in year t by obtaining r_t and

i = rate of interest corresponding to the oportunity cost of capital,

*) c_t includes the amount which the landowner should be paid for the work on the land done by himself and his family.

we have

$$v = \sum_{t=1} \frac{r_t - c_t}{(1+i)^t} \qquad (1)$$

If $r_t - c_t$ is a constant amount equal to x in all years the calculations become as simple as

$$v = \frac{x}{i} \qquad (2)$$

If for instance X = ∅ 1 000 and i = 0.10 corresponding to an opportunity cost of capital equal to 10 per cent we have

$$V = ∅\frac{1000}{0.10} = ∅\ 10\ 000$$

- or the land value of a certain piece of land is the surplus - above labour and material costs - obtained from this piece of land, divided by the interest rate.

The amount "x" constitutes a surplus, which can be bigger or smaller according to the quality of the land and its location in relation to the activities of the society. More fertile land and land sited in urban development areas earn a bigger surplus than less fertile land and land sited in rural areas respectively.

A potential buyer is ready to pay ∅ "v" (∅10 000) for the land because the annual surplus ∅ "x" (∅1 000) obtained from the utilisation of this land corresponds to the expected - and required - interest payment (e.g. ten per cent) on an amount of ∅ "v".

It is seen from equation (2) that if "x" is zero the land has no market value. If "x" is positive the Government can affect the market value in falling direction by imposing a rent on the land. This will increase the annual cost of utilizing the land "c_t" and thus lower "x". "x" will become zero if the rent is sufficiently high, i.e. Land Rent + $c_t = r_t$.

In a dynamic society, however, "x" could not be expected to be a stable quantity; "x" is not only dependent on the quality of the land but also on the Government's distribution of the resources of the country - its investments, aid and subsidies - and the general economic situation in the country, which in turn is influenced by the policy of the Government.

If "x" increases, the owner of the land can obtain an unearned income, either by selling his land for a higher price - measured in real terms - than his buying price, or by using the land for that production, which cuased the increased "x". This can be illustrated by the following example:

A piece of land near the coast is used by the owners for rice growing. The land is poor and "x" is small. The value of the land is calculated at, say $10 per acre. One day, however, the Government decides to build a port at the coast near the land in question. The land formerly used for rice growing is now demanded for other purposes, such as housing and storage facilities. These activities yield a larger surplus than rice growing, and "x" increases.

Some of the farmers sell their land at a price reflecting the larger "x". The value of the land is for instance increased to $100 per acre and the farmers collect $90 per acre as unearned income because of the Government's investment in the port. Another group of farmers change from rice production to production of services. They build houses, storage facilities and the like on the land and let out the facilities. The rent reflects the increased value of the land and the farmers collect an unearned income equal to the difference between the new and the old "x".

By building the port the Government have caused an altered income distribution in the society in favour of the landowners in question. This however, was not the purpose and from a general point of view it could be considered unjust.

The injustice becomes even more pronounced in cases where the Government itself wants to place some public facilities on the land and has to pay the new high price to acquire the land. Under these circumstances all tax payers in the country contribute to the payment of unearned incomes for a few fortuitous people. The collection of this income is made possible solely by the public investment in the port.

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