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Indicative Planning of the West Malaysian Economy Using an Input-Output Projection Model

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ABSTRAK

Kertas ini membincangkan satu model unjuran input-output yang telah digunakan untuk perancangan penunjuk ekonomi Malaysia Barat ke tahun 1985. Model ini mengunjurkan struktur ekonomi termasuk output, pelaburan dan buruh dalam tahun 1985 berasaskan satu paras penggunaan dalam negeri agregat yang kemungkinan digunakan dalam tahun matlamat. Unjuran asas menunjukkan bahawa kadar pertumbuhan penggunaan swasta per kapita sebanyak 4 peratus setahun yang diandaikan dalam model ini tidak tercapai, terutamanya dari segi keperluan pelaburan dan tenaga buruh. Terdapatnya perubahan-perubahan teknologi menghasilkan pengurangan besar ke atas keperluan-keperluan pelaburan, buruh dan eksport, dengan itu meningkatkan nisbah penggunaan dalam Keluaran Dalam Negeri Kasar pada tahun matlamat. Kenaikan harga-harga eksport juga mengurangkan paras pembentukan modal, eksport dan buruh yang dikehendaki untuk menampung kadar pertumbuhan penggunaan yang diunjurkan. Analisis implikasi-implikasi dasar penggantian import menunjukkan bahawa penggantian import barang-barang perkilangan mengurangkan beban ke atas ekonomi. Namun, penggantian import adalah menguntungkan hanya ke titik apabila harga barang-barang perkilangan tempatan adalah 10 peratus lebih tinggi daripada harga seberang laut.

ABSTRACT

This paper discusses an input-output projection model which has been used for indicative planning of the West Malaysian economy into 1985. The model projects the structure of the economy including output, investment and labour in 1985 given a level of aggregate domestic consumption likely to be utilised in the target year. The basic projection indicates that the growth rate in per capita private consumption of 4 per cent per annum assumed in the model appears infeasible, particularly in terms of investment and labour requirements. The advent of technological changes, however, results in substantial reduction in investment, labour and export requirements, thus increasing the proportion of consumption in Gross Domestic Product in the target year. An increase in export prices also reduces the level of capital formation, exports and labour required to sustain the projected growth rate in consumption. The analysis of implications of an import replacement policy shows that import substitution of manufactured goods reduces the strain on the economy. However, import-substitution is beneficial only up to a point where the price of domestically-produced manufactures is 10 per cent higher than the overseas prices.

INTRODUCTION

The application of input-output projection models for indicative planning of the national economy has been widely described and such models are used extensively in the United Kingdom, the United States and France. The outstanding feature of input-output projection models is that they account for structural interdependence between the sectors of the economy, and show in detail how variations in one or more sectors, or changes in economic variables, will affect the overall economy.

This paper describes an input-output projection model which has been used to project the shape of the West Malaysian economy in 1985. The model is designed to provide an analytical tool for indicating the impact of perspective economic policies on growth and a framework for national projections which would include sufficient disaggregation in the principal sectors of the economy.

The projections of the structure of the economy in 1985 set out below do not purport to be anything other than the end result of adopting a specific model and a specific set of assumptions. Nonetheless, given the acceptability of the model and the assumptions, the results provide some indication of what the economy could look like in 1985. For each set of assumptions the model will provide a national outcome. In turn, this outcome can be scrutinised from the point of view of consistency and feasibility.

Several modifications to the model are required before meaningful longer term forecasts can be derived. The assumption that the input-output and capital-output coefficients remain unchanged in many of the projections is too rigid, but it may be relaxed if sufficient information is available. Changes in the physical input mix to be expected in the future should also be incorporated in the model. However, the prediction of future changes in physical inputs is difficult and may only be achieved via an intensive analysis of the future technological change and price relationships.

PROJECTION METHOD AND MODEL

The Economic Planning Unit of the Prime Minister's Department has prepared, for the Outline Perspective Plan of the New Economic Policy (Third Malaysia Plan, Chapter IV), projections of the growth and structural changes for the economy for the period 1970 – 1990. In addition, it has developed projections of the main macro variables based on a model incorporating relationships between these broad aggregates. One major outcome of these undertakings was a projection of growth in consumption per capita of 4 percent per annum between 1970 and 1990. Also, public consumption was projected to grow by 9 percent per annum over the same period.

The projection model described below aims at providing a picture of the West Malaysian economy in the target year which would result from some sustained target growth rate for consumption and government expenditure [1]. It is programmed to provide estimates of each sector's output, exports, imports, investment and labour required to satisfy the target growth rate, given the set of current and capital input-output coefficients and import-output coefficients. The sector outputs required also satisfy the conditions that sufficient capital of the right type and origin is produced to sustain the required sectoral growth rates, and there are sufficient exports forthcoming to finance the imports required given the permissible level of overseas borrowing.

Basic Data and Relationships

i. The basis for the projection analysis is a 39-sector set of current and capital intersector tables and coefficients for 1970 [2].

[1]To an extent, this study attempts to further explore some of the issues which have been investigated in the Outline Perspective Plan.

[2]The compilation of the respective intersector tables, undertaken as part of this projection study, was based on the 1970 input-output tables for Peninsular Malaysia published by the Department of Statistics (1975a).

ii. In using the model for projections the current input-output coefficients are based on those for 1970. However, for some of the projections, these coefficients have been varied.

iii. The set of incremental sectoral capital-output coefficients are as for 1970 [3].

iv. The import-output coefficients are basically those ruling in 1970. In the examination of the implications of import-substitution, the import-output coefficient of each sector has been reduced, a corresponding upward adjustment being made to the coefficients representing purchases from the domestic manufacturing sectors.

v. The estimates of output per worker in 1985 are as projected by the Outline Perspective Plan.

vi. The patterns of sectoral contributions to consumption and exports in 1985 are as specified by the Economic Planning Unit.

vii. The macro aggregates including re-exports, purchases by residents abroad and domestic purchases by non-residents for computing the Gross Domestic Product components in 1985 are as projected by the Economic Planning Unit.

viii. All projections are in 1970 prices but allowance is made for assumed changes in the terms of trade.

The Working of the Model

i. The target level of total private consumption for 1985 (in 1970 prices), disaggregated into sector constituents, was inserted in the model.

ii. The projected 1985-level of government current expenditure (at 1970 prices), broken up into sector components, was also included.

iii. Given the target levels of private consumption and government expenditure for 1985, the model was then solved to give, for each sector, new equilibrium levels of total output, exports, imports, sales and direct imports of capital goods, investment and labour force.

The solution is secured subject to the conditions that:

a. Total exports equal total imports.

b. The level of gross investment, and its allocation between sectors, is adequate to maintain the target growth rate in consumption.

c. All intersector demands for goods and services are satisfied.

Basic Projection

Table 1 below gives the picture of the West Malaysia economy in 1985 which emerges from the model incorporating the assumptions as discussed above.

The ratios of consumption, capital formation, exports and imports to GDP [4], and labour force to population (participation rate), viewed in the light of historical experience, are probably the most useful simple indicators of the feasibility of this representative projection. For the 1960 – 1975 period, consumption and capital formation averaged 79.41 percent and 14.39 percent respectively of GDP. Also, over the same period, per capita consumption grew at 2 percent per annum. For 1985, the proportion of consumption and capital formation in GDP are 72.73 percent and 23.95 percent respectively. Therefore, if the consumption ratio alone were to be the guide, the past experience would indicate that the basic projection appears infeasible. It is apparent that the faster rate of growth envisaged for 1970 – 1985 requires a larger

[3] The estimation of these coefficients was also carried out as part of the projection study.

[4] The corresponding ratios relating to the 1960 – 1970 period are computed based on data given in the National Accounts of Peninsular Malaysia 1960 – 1971 (Department of Statistics 1975b); those for subsequent years are estimated using various data given in Khor (1983).

TABLE 1
Basic projection to 1985
($ mn)

	Sector	Consumption 1	Stock change 2	Capital formation 3	Exports 4	Taxes 5	Final demand 6	Total output 7	Gross investment 8	Imports 9	Labour[a] 1970 mn	1970 $	1985 mn	1985 $
1	Other agriculture	1 250	68	2	201		1 521	4 005	416	276	.59	21	1.27	23
2	Rubber		10	87	11		108	1 683	181	53	.64	23	.61	11
3	Oil palm		1	173	12		186	1 506	438	25	.03	1	.11	2
4	Forestry	64	2		79	80	225	711	73	34	.02	1	.03	1
5	Fishing	457			79		536	792	101	16	.06	2	.10	2
6	Mining	6			50	232	288	1 162	74	62	.09	3	.08	1
7	Processed foods	1 017	7		341	2	1 367	1 477	122	173	.01		.03	1
8	Oils and fats	163	178		2 432		2 733	3 156	502	131	.01		.03	1
9	Other foods	1 639	10		796	17	2 462	3 355	351	777	.03	1	.03	1
10	Beverage and tobacco	1 012	16		600	21	1 649	1 681	230	263			.03	1
11	Textile	520	29	21	315		885	1 207	93	399	.01		.09	2
12	Wearing apparel	330	11		381		720	757	99	339	.03	1	.16	3
13	Sawmills etc	79	18	71	562		730	1 223	153	77	.06	2	12	2
14	Paper products	194			61		255	670	83	236	.01		0.4	1
15	Rubber processing		79		2 369		2 448	2 542	49	35	.06	2	.06	1
16	Rubber products	226	10		122	8	366	566	17	121	.01		.03	1
17	Industrial chemicals	29	21	44	151		245	498	17	170				
18	Chemical products	708	15		316	8	1 047	1 234	17	408	.01		.04	1
19	Petroleum	752	10		154	246	1 162	1 372	283	554				
20	Cement				6		6	235	7	27				
21	Non-metals	95	5	1	30		131	388	8	77	.01		.02	
22	Basic metals	6	177	2	762		947	1 180	10	125				
23	Fabricated metals	171	19	81	60		331	718	94	316	.01		.03	1
24	Non-electric machinery	101	7	83	239		430	652	89	222			.02	
25	Electrical machinery	405	38	9	702		1 154	1 244	103	567			.05	1
26	Transport equipment	771	148	518	404	93	1 934	1 978	181	1 246	.05	2	.10	2
27	Other manufacturing	295	5	25	92		417	500	59	196			.03	1
28	Utilities	273			4		277	918	371	61	.02	1	.03	1
29	Construction			2 477	7		2 484	4 459	668	537	.08	3	.20	4
30	Trade	1 773		897	687		3 357	5 557	516	200	.32	12	.63	12
31	Transport	749		34	302		1 085	2 077	245	135	.12	4	.18	3
32	Business services	143		124	69		336	1 351	154	100	.04	1	.11	2
33	Dwellings	1 505					1 505	1 757	442					

TABLE 1 — (*Cont.*)
Basic projection to 1985
($ mn)

		Consumption 1	Stock change 2	Capital formation 3	Exports 4	Taxes 5	Final demand 6	Total output 7	Gross investment 8	Imports 9	Labour[a] 1970 mn	1970 $	1985 mn	1985 $
34	Education	46					46	46	29	2	.02	1	.05	1
35	Health	128					128	163	86	32	.03	1	.06	1
36	Personal services	809			1		810	968	117	167	.14	5	.28	5
37	Public administration	1 257					1 257	1 302	306	264	.08	3	.08	1
38	Community services	1 532					1 532	1 551	105	50	.14	5	.21	3
39	Other services	3 313					3 313	3 391	628	247	.05	2	.49	9
	Labour (mn)										2.78	97	5.43	102
	Imports	693	307	2 677	167									
	Commodity taxes	155	25	191										
	TOTAL (1970 prices)	22 666	1 215	7 517	12 563				7 517	8 720				

[a]Employment figures for 1970 are from Labour and Household Survey 1970 (Department of Statistics, 1974).

diversion of total output to fixed capital formation, and the proportion of GDP devoted to consumption is thus reduced.

Nonetheless, economic planners looking forward to 1985 may well be advised to opt for a growth rate which involves lowering the share of GDP devoted to consumption. A sufficiently fast growth of GDP renders an increase in consumption feasible at the same time as the share of GDP being devoted to fixed capital formation is increasing. As has been noted by Lewis (1955), economic growth requires incentives, and these will not be seen to be present unless consumption is permitted to rise. Concomitantly, the faster the rate of GDP growth, the more rapidly the ratio of consumption to GDP may be reduced. Thus, if the rate of consumption per capita were to rise above the 2 percent achieved in the past, it appears that this could be accompanied by an acceptance within the economy of a reduction in the proportionate share of GDP attributed to private consumption expenditure. If this premise is accepted, then, the 4 percent per capita consumption growth envisaged by the Outline Perspective Plan seems to be feasible.

The proportions of exports and imports to GDP given by the basic projection do not differ significantly from those recorded for 1960 – 1975 [5], and are therefore feasible. From the viewpoint of labour force requirements, the basic projection does not seem to be feasible. The participation rate in 1985 is estimated to be 40.25 percent compared with 33.22 percent in 1970 and 34.55 percent in 1975. Also, the Outline Perspective Plan's forecast of the participation rate in 1985 is 36.10 percent. However, although the participation rate projected for 1985 falls beyond the range of that observed in the past, it may still be achieved. In recent years there have been substantial increases in labour force participation for women, and with the rate rising steadily there is no reason to suppose that by 1985 the increased involvement of women would have been taken as far as it could go. The basic projection involves a comparatively fast rate of per capita consumption growth and the high labour requirements generated by such growth would produce a wide range of employment opportunities.

Projected shifts in the distribution of the labour force can also be seen in Table 1. A decline in labour requirements are recorded by rubber, mining, rubber processing and public administration. In comparison an increase in labour needs are recorded by Oil palm, Textile, Wearing apparel, Construction, Personal services and Other services.

Technological Change

The analysis of technological implications is confined specifically to agriculture and manufacturing. The procedure adopted is to reduce both capital-output and current input coefficients of agricultural and manufacturing sectors by 10 percent or 20 percent, either separately or in combination. The results are shown in Table 2.

All projections provide for the same total consumption as for basic projection (a). In all cases the projection indicates lower capital formation values than the base projection. Since lower input coefficients imply reduced purchases from other sectors, overall production in those sectors will concomitantly decrease and their capital needs in turn will be reduced accordingly. Also, a decrease in demand for intermediate and capital imports reduces the level of production for exports to maintain the trade balance, and this in turn reduces the investment requirements of exporting sectors. Overall, the decreased investment needs have necessitated lower estimates of GDP in the target year to sustain the same total consumption compared with the GDP given by the basic projection.

There is clearly a larger response, in terms of capital formation, that is achieved when technological change occurs in both agriculture and manufacturing. For 10 percent technological

[5]The average exports/GDP and imports/GDP ratios for 1960 – 1975 are 44.22 per cent and 40.62 per cent, respectively.

TABLE 2
Projections to 1985 with technological changes

Projections	Consumption $mn	Stock changes $mn	Capital formation $mn	Exports $mn	Imports $mn	Gross Domestic Product $mn	Labour mn
(a) Basic	22 666	1 215	7 517	12 730	12 747	31 381	5.43
(b) 10% technological improvement in agriculture	22 666	1 204	7 298	12 581	12 598	31 151	5.37
(c) 20% technological improvement in agriculture	22 666	1 194	7 088	12 436	12 453	30 931	5.30
(d) 10% technological improvement in agriculture and manufacturing	22 666	1 136	6 315	11 728	11 745	30 100	4.66
(e) 20% technological improvement in agriculture and manufacturing	22 666	1 072	5 359	10 909	10 926	29 080	4.56

PERCENTAGE SHARE OF GDP

	Consumption	Stock changes	Capital formation	Exports	Imports	Participation rate (%)
(a)	72.73	3.87	23.95	40.57	40.62	40.25
(b)	72.76	3.87	23.43	40.39	40.44	39.81
(c)	73.28	3.86	22.92	40.21	40.26	39.29
(d)	75.30	3.77	20.98	38.96	39.01	34.54
(e)	77.94	3.69	18.43	37.51	37.57	33.80

change in agriculture, as in projection (b), the investment needs are reduced by 2.9 percent when compared with the base projection (a). In comparison, a similar technological improvement in both agriculture and manufacturing as shown by projection (d) reduces investment requirements by 16.0 percent.

In West Malaysia, progress towards improving input use and labour productivity is occuring all the time. The agriculture sector has been, and is still, undergoing significant modernisation. Similarly, the manufacturing sector is experiencing rapid technical development. To an extent that the continuation of such progress is almost certain, the basic projection (a) somewhat overstates the investment requirements in the target year.

Terms of Trade

Assumptions made about the terms of trade are likely to affect significantly the result of any projection, thus it appears desirable to gain some indication of the effects of alternative assumptions on the levels of overseas prices for West Malaysian exports and imports.

The results relating to projections in which the terms of trade assumptions are 10 percent and 20 percent rise in either export or import prices are presented in Table 3.

If during the projection period export prices were to increase while import prices remained unaltered, any given level of consumption may be supported by a smaller volume of exports, and it is from this viewpoint that the impact of higher export prices are analysed. In basic projection (c), exports are roughly equal to imports. The increase in export prices in projections (a) and (b) allows the volume of exports to be reduced while preserving the same consumption level. This is because the lower volume of required exports results in lower capital formation requirements, which in turn lowers the volume of imports necessary to support investment.

In addition, in both projections (a) and (b) the decline in exports is greater than the fall in imports. In projection (a) exports decrease by 23 percent compared with the base projection whereas imports fall by only 9 percent. Thus, the overall effect of the rise in the terms of trade is to reduce the strain to which the economy is subjected in reaching a given level of consumption in the target year.

A fall in the terms of trade would affect the economy as much as an increase, but in the opposite direction. Thus, a 10 percent rise in import prices as in projection (d) raises the required margin of exports over imports to $1,299 mn whereas a 20 percent increase in import prices as in projection (e) raises the margin to $2,790 mn.

The results also indicate that as import prices rise, the attainment of a given level of consumption will require a substantially greater volume of imports. For instance, when import prices rise by 10 percent, as in projection (d), the target year imports (in 1970 prices), rise by $769 mn compared with the import requirements of $12,747 mn given by the basic projection (a). This is equivalent to an increase of 6 percent in the volume of imports. In comparison, with a 20 percent increase in import prices as given in projection (e) the volume of imports is 14 percent higher than the basic projection. This phenomenon, which is brought about by the higher current and capital import requirements of increased export production coupled with greater required margin in constant prices of exports over imports, puts a severe strain on the economy in a situation of rising import prices.

The effects of changes in external prices may also be observed in the changes which occur in the proportionate share of GDP represented by the unchanged level of consumption. In basic projection (c) consumption accounts for 72.73 percent of GDP, but when exports prices rise by 20 percent, the consumption/GDP ratio rises to 79.76 percent. On the other hand, a 10 percent increase in import prices reduces the consumption proportion to 67.75 percent while a 20 percent rise in import prices pushes the consumption share down to 63.31 percent of GDP.

TABLE 3
Projections to 1985 with different terms of trade

Projection	Consumption $mn	Stock changes $mn	Capital formation $mn	Exports $mn	Imports $mn	Gross Domestic Product $mn	Labour mn
(a) 20% rise in export prices	22 666	1 074	6 576	9 748	11 648	28 476	4.89
(b) 10% rise in export prices	22 666	1 135	6 983	11 035	12 122	29 697	5.24
(c) Basic	22 666	1 215	7 517	12 730	12 747	31 381	5.43
(d) 10% rise in import prices	22 666	1 314	8 176	14 815	13 516	33 455	5.78
(e) 20% rise in import prices	22 666	1 426	8 921	17 176	14 386	35 803	6.18

PERCENTAGE SHARE OF GDP

	Consumption	Stock changes	Capital formation	Exports	Imports	Participation rate (%)
(a)	79.76	3.78	23.14	34.30	40.99	36.25
(b)	76.32	3.82	23.51	37.16	40.81	38.84
(c)	72.73	3.87	23.95	40.57	40.62	40.25
(d)	67.75	3.93	24.44	44.28	40.40	42.85
(e)	63.31	3.98	24.92	47.97	40.18	45.81

Import Substitution

In the Outline Perspective Plan, the manufacturing sectors have been specially singled out as being amenable for rapid import-substitution programme. Accordingly, import-substitution is analysed by assuming that imports will be displaced by increased purchases from the local manufacturing sectors. Thus, all import coefficients are reduced by a given proportion, and the domestic manufacturing input coefficients for each sector, or vector of final demand, are increased proportionately so as to be aggregatively consistent with the absolute amount of the reduction in import coefficient. This procedure is applied to both the current and capital matrices as well as to final purchases.

The projections obtained are given in Table 4. Projection (b) in this table represents a projection run as for the base, but with 10 percent import-substitution assumed. Compared with the basic projection (a) the import-substitution policy seems to reduce the strain on the economy's resources. The same level of consumption is achieved with a substantial reduction in external trade, investment and labour requirements. Thus on a $1 for $1 basis, import-substitution is favourable to export promotion, and there would be fewer constraints to growth by adopting this policy.

However, the process of import-substitution in West Malaysia in the past has almost inevitably been accompanied by high costs of the locally-produced substitutes. It is therefore useful to explore the effect that higher cost of locally-produced substitutes may have on the economy. Projections (c) and (d) of Table 4 incorporate the same 10 percent of import substitution as projection (b) but show the effects of assuming that the extra production from the local manufacturing sectors is respectively 10 percent and 20 percent more expensive from the imported equivalent. The projections show that if the domestically-produced goods are only 10 percent more expensive than the imports they replace then import-substitution is beneficial to the economy. However, with 20 percent price differential the investment advantage is lost, and the total labour requirement is greater than that of basic projection (a), although it may be seen that in this case the relative importance of external trade in the economy has been reduced compared with the basic projection.

Projection (c) provides the best illustration of the effects on the economy of increased import-substitution. Given the average capital and labour intensities of manufacturing sectors in the country, the economy will benefit from a policy to produce the manufactured goods up to the point where the cost is 10 percent higher than the overseas cost. Once the price differentials exceed 10 percent, little benefit would be achieved via import-substitution, and the population would in fact enjoy a higher level of real income if the goods are purchased from abroad and paid for with, say, additional primary exports.

SUMMARY AND CONCLUSIONS

The form of an input-output model for projecting the structure of the West Malaysian economy into 1985 has been described. The model provides an analytical tool for examining the shape of the economy in the target year based on the growth rate in per capita private consumption and government expenditure of 4 percent per annum and 9 percent per annum respectively over the 1970 – 1985 period.

The result of the representative projection indicates that in the absence of any off-setting gains such as economies of scale, and using constant base year technology, the economy will be stretched in the target year. The capital formation/GDP ratio has been found to be substantially higher than the historical trend. However, given the comparatively rapid per capita consumption growth envisaged during the projection period, it appears feasible to increase consumption at the same time as the share of GDP being devoted to fixed capital formation is increased.

The potential gains that may be achieved through technological advance have clearly been

TABLE 4
Import substitution to 1985

Projections	Consumption $mn	Stock changes $mn	Capital formation $mn	Exports $mn	Imports $mn	Gross Domestic Product $mn	Labour mn
(a) Basic	22 666	1 215	7 517	12 730	12 747	31 381	5.43
(b) 10% subtitution no price increase	22 666	1 175	7 278	11 489	11 506	31 102	5.27
(c) 10% substitution 10% price increase	22 704	1 184	7 399	11 761	11 778	31 247	5.31
(d) 10% substitution 20% price increase	22 743	1 272	8 102	12 567	12 584	32 100	5.60

PERCENTAGE SHARE OF GDP

	Consumption	Stock changes	Capital formation	Exports	Imports	Participation rate (%)
(a)	72.73	3.87	23.95	40.57	40.62	40.25
(b)	72.74	3.78	23.48	36.94	36.99	39.07
(c)	71.72	3.78	23.62	37.64	37.69	39.36
(d)	70.68	3.96	25.24	39.15	39.20	41.51

spelled out in the alternative projections. The use of lower current and capital inputs results in a decrease in investment and export requirements. The projections also indicate the bigger response, particularly in terms of capital formation requirements, that is achieved when rechnological change occurs in both agriculture and manufacturing sectors.

The analysis of the effects of variations in West Malaysia's export and import prices reveals that an increase in export prices reduces the levels of imports and investment that would be required, and vice versa. Also, as export prices increase, the reduction in exports is much more substantial than the fall in imports. In comparison, as import prices increase, the attainment of a given level of consumption will require a substantially greater volume of imports.

Import substitution of manufactured goods seems to reduce the strain on the economy's resources in the target year; compared with the basic projection, the same level of consumption is achieved with a substantial reduction in external trade, investment and labour requirements. However, such policy appears to be beneficial only if the locally-produced manufactured goods are 10 percent more expensive than the imports they replace. With a higher price differential the investment advantage is lost and the labour requirement is greater than the basic projection.

The projections of the shape of the economy set out above are no more than reflections of the assumptions and the type of model adopted. It should be noted that no mention has been made as to whether the individual projections of the most likely shape of the economy for 1985 are the best or optimal. The choice of the optimum shape of the economy inevitably requires some form of linear or mathematical programming. Nonetheless, these projections are valuable in that they are able to indicate to policy-makers the likely effect of certain assumptions, or changes in assumptions, on the economy.

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