



**THE ECONOMIC AND SOCIAL  
RESEARCH INSTITUTE**

**Memorandum Series No. 182.**

**PRICE STRUCTURE AND INPUT-OUTPUT RELATIONSHIPS: THE CAUSES  
OF DIFFERING PRICE PATTERNS - AN IRISH EXAMPLE**

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(Paper presented during Seminar of 12-16 June 1989 at the  
Institute of Price Studies, University of Wales)

April 1989

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**ABSTRACT:**

A 15-year period is spanned by three available 13-sector Irish input-output tables, one for 1968, one for 1978, and one for 1982. This period included Irish entry to the EEC in 1973, and major price inflation partly related to oil imports. Considerable GNP growth occurred during 1968-1978, with stagnation following through 1979-1982.

The 1968 and 1978 tables (at approximate basic values) are repriced so as to be at estimated 1982 prices, thus one set of results derives from comparisons of the three annual structures at 1982 prices. The "causality" of price changes is through imports and GDP components treated as primary inputs. The price inflators are taken from National Accounts' final demand categories such as Personal Expenditure. These repriced structures can be interpreted in terms of constant 1982 purchasing power and relative prices. The 1968 table is also repriced at 1978 prices, for comparison with the 1978 table at 1978 prices.

The results are interesting and indicative, but also tentative because of the small number of sectors and the preliminary nature of the 1982 table. One result shows how 1978 prices applied to 1968 cost structures move "Terms of Trade" against Households and in favour of Government, and against Exports in favour of Imports. A major policy objective has been achieved, through growth of exports. But resulting 55 per cent growth of Gross National Disposable Income (at 1982 prices) between 1968 and 1978 has been accompanied by only 4 per cent growth of total employment, a 27 per cent reduction in Agricultural employment, a doubling of the volume of imports and outflows, a large increase in the Balance of Payments' deficit, and major Government borrowing on current account. Thus, several undesirable features have accompanied economic expansion.

## 1. INTRODUCTION

The author wishes to thank Professor Mathur for his invitation to attend the Seminar and to present a paper. The subject matter addresses Irish economic structure and growth through the period 1968-1982 as an illustration of a methodology of repricing input-output (I-O) structures within a consistent system of "Purchasing Power". This period included Irish entry to the EEC in 1973, and severe price inflation partly related to oil imports. Considerable GNP growth occurred during 1968-1978, with stagnation following during 1979-1982.

The Irish economy is small and open, and in many ways it resembles a region of a larger economic structure. The total population was some 2.9 million in 1966 and about 3.4 million in 1981, with roughly 1 million employed throughout the period. Imports of goods and services were about 6% per cent of GNP in 1982; this indicates a very open economy. For the year 1982 the Irish currency unit, the £ (Punt), had an average Exchange Rate of being worth Sterling £0.81 and US \$1.42, having been at par with Sterling up to the end of 1978. The 1982 GNP per capita was about US \$5,000, which would place Ireland in the middle-income range of countries throughout the world.

The 15-year period 1968-1982 is spanned by three available 13-sector Irish I-O tables, one for 1968, one for 1978, and one for 1982. All values are expressed in terms of the Irish £ (Punt). The 1968 and 1978 tables (at approximate basic values) are repriced so as to be at estimated 1982 prices, thus one set of results derives from comparisons of the three annual structures at 1982 prices. The 1968 table is also repriced at 1978 prices, for comparison with the 1978 table at 1978 prices.

The "causality" of price changes is through imports and GDP components treated as primary inputs and undergoing price inflation (or deflation). The price inflators are taken from National Accounts' final demand categories such as Personal Expenditure. The 1968 and 1978 I-O structures, repriced at 1982 prices, along with the 1982 structure itself, can be interpreted in terms of constant 1982 purchasing power and relative prices.

The author regards the methodology explained below as of more value than the numerical results, which comprise illustration rather than definitive outcomes. Clarity of treatment needs plentiful tabular illustration, to give adequate description of the complex real-world system being modelled. But textual comment on numerical results is minimal, to keep the bulk of the paper reasonably small. The basic tabular material and methodology draws heavily on the Henry (1986) report.

Part 2 of the paper describes the I-O model and repricing method, with some explanation of economic meaning, and of the reworking of GDP primary input rows as required. Part 3 summarises the repricing experiments carried out on the three Irish I-O tables referred to above, with specific reference to volume aspects as distinct from price effects. Part 4 provides concluding comments. The I-O transactions tables, before and after repricing, are given as Appendix material, as is a table of descriptive detail of kinds of activities included in the 13 sectors.

## 2. MODEL AND METHODOLOGY

This section of the paper deals briefly with three related factors of the repricing process: (a) the I-O accounting structure used; (b) the algebraic statement of the repricing model, (c) how this applies to (a) and what it means. Background detailed description appears in Henry (1986, Part 5).

### (a) *The Input-Output Accounting Structure Used*

A fairly aggregate 13-sector structure has been used as the inter-industry part of the I-O transactions of 1968, 1978 and 1982, which are fully reconciled with the official National Accounts. Appendix Table A1 gives descriptive detail of the activities included in each sector. Valuation is at *basic prices* (same as pricing at *approximate basic values*). This means indirect taxes (including non-deductible VAT) and negative subsidies are distributed to purchasers *separately* from the commodities to which they relate, likewise for any trade and transport margins.

Appendix Table A2 (for Irish 1968 transactions) shows that Total output of each row is matched by an equal value of Total input of each corresponding column, for sectors (1) to (13). These rows have domestic output only; as all imports are combined in an import row. But equalities of rows and columns can be applied also for a further four sets of item-pairs, as follows.

- (1) All imports and outflows of profits, etc., are combined into a single row, shown as row (17) of Table A2; the matching column (17) shows exports of goods and services and all inflows on current account. The Savings row entry of column (17) shows a positive entry (deficit on Balance of Payments current account) if imports, etc., exceed exports, etc., but a negative entry if the opposite is true.
- (2) Household (or Personal) disposable income from all sources has its own row, matched by an Expenditure and

Savings column, shown as row and column (14) of Table A2. The row includes "take-home pay" from employment in the various sectors, as well as current transfers from Government, pensions, and so on.

- (3) Government disposable income (gross income net of subsidies) likewise has a row, matched by a column of outgoings on current account, as per row and column (15) of Table A2. Disposable income includes net current transfers from EEC, and so on; outgoings include current transfers to households and payments on the National Debt, with a negative Savings entry if positive outgoings exceed income, and vice versa.
- (4) A row for Savings is matched by a column for Gross Physical Capital Formation. Savings include depreciation allowance, savings of persons and of corporations, and the entry in the Savings row of the Export column shows positive for a Balance of Payments current deficit, and negative for a surplus.

It is clear that this treatment shows the National Accounts' items reworked to be of the nature of Gross National Product (GNP) extended to include Gross National Disposable Income (GNDI). The lower portion of Table 9 shows how GNDI can be obtained from the entries in rows and columns (14) to (17), if required. This approach is a kind of rudimentary Social Accounting Matrix (SAM) system, whereby income is matched with spending and saving, savings are matched by capital formation, and costs of all imports and outflows are matched by income from all exports and inflows and a balancing item.

It is also clear that several Household rows and columns are possible, given sufficient information.

*(b) The Algebraic Model of Repricing such I-O Structures*

The model used is the well-known traditional linear model (see Henry, 1986, pp. 104-105). This assumes that annual flow-rates of transactions (such as those comprising Table A2), and coefficients derived from these, are adequate to propagate price disturbances arising in the factor costs and imports and distributed as a constant ratio along each row. There is no change in volume anywhere (meaning no price elasticity reaction) from the structures of the base-year transactions, and all cost increases are ultimately passed on to final output (meaning no reduced profits or wage-cuts).

Let  $x_{ij}^d$  be the domestic output transaction (as shown in Table A2) in row  $i$  of column  $j$ ,  $i=1, \dots, 13$ ,  $j=1, \dots, 13$ ,

$x_j^d$  be total input of column  $j$ ,  $j=1, \dots, 13$ ,

- $a_{ij}^d$  be element  $a_{ij}$  of the  $A^d$  matrix, domestic flows only, given by  $x_{ij}^d/x_j^d$ ,
- $\pi'$  be the row vector of the sum of repriced (to 1982 prices) entries in primary input rows (14) to (17), imports here being call "primary", with the sum in each column divided by its respective  $x_j^d$ , so  $\pi'$  has 13 elements,
- $p'$  be the row vector of sector price indices, each based on 1.0 for 1968 (re. Table A2) resulting from the unitary primary input price disturbances  $\pi'$ ; so  $p'$  also has 13 elements, for each sector.

There must be consistency in repricing the unitary (1968) base-year coefficients in each column, thus

$$p' A^d + \pi' = p' \tag{2.1}$$

$$p' (I - A^d) = \pi' \tag{2.2}$$

where  $I$  is the unit matrix having 13 values of 1 in its principal diagonal,

$$p' = \pi' (I - A^d)^{-1} \tag{2.3}$$

So, given  $\pi'$  and  $A^d$ , one can compute  $p'$ .

*(c) Real-World and Economic Meaning and Application of (b)*

In order to reprice the original values of imports and primary inputs, deflators (or inflators) are required, in more or less detail. The Henry (March 1988) paper discusses the rationale of using major National Accounts' implicit price indices derived from GNP Expenditure components, and Imports. This approach has been used to provide the following 1978 "Purchasing Power" inflators of 1968 values:

- (a) for the Household Income row (14) of 1968 Table A2, apply the implicit price index of Personal Expenditure on Goods and Services in 1968 at 1978 prices;
- (b) for the Government Income row use Net Govt. Current Expenditure implicit inflator, to give 1978 equivalent "Purchasing Power" of Government income;
- (c) for the Savings row, use the National Accounts' implicit Capital Formation inflator;
- (d) for Imports, use several implicit (or per tonne) inflators, to allow for severe price inflation of energy products, and so on. Each such inflator will require its own sub-row of import values. However, the implicit inflator of aggregate 1968 Imports of Goods and Services

(to be at 1978 prices) should be identical with that of the National Accounts.

The repricing model of Equation (2.3) above is now applied to the repriced primary inputs and imports, to give vector  $p'$  of price indices, one element for each of rows (1) to (13). The row totals, after multiplication by these price indices, will coincide exactly with corresponding column totals, because the repricing system is consistent.

All elements of rows (14) to (17) have been inflated by the National Accounts' selected price inflators. We now apply the principle that column (14) repriced aggregate must equal that of row (14). Thus Household Savings emerge as a residual. This occurs also for Government Savings. We may next do the same for the Exports column, whereby the Savings residual shows the Balance of Payments current deficit (or surplus) at the consistent 1978 values of 1968 exports versus imports. The arithmetic consistency will ensure that the Savings row aggregate is equal to the Capital Formation column aggregate. In fact, whichever three Final Demand columns are equalised with corresponding rows doesn't matter; the fourth pair will be equated, through the arithmetic consistency of the system.

The economic meaning of the repricing outcome is clear. For the repriced GNP and import inputs, the vector  $p'$  distributes the "Purchasing Power" effects consistently (meaning "equitably") throughout the system. If commodities cost more in real terms, Household savings will be reduced as a percentage of Household income. If the "Terms of Trade" have moved in favour of Imports, the Export column will show a larger "Savings" component, meaning a larger gap (deficit) in the Balance of Payments' current account.

Several refinements or developments of these calculations suggest themselves. A larger number of sectors would improve the detail of the weighting patterns which use the relative price inflators  $p'$ . Several household rows and columns could be included. Any row deflators may be applied, such as changing Terms of Trade of import sub-rows. Any row and matching column may be treated as "primary input" and matching "final demand", if we have "pre-set" values for such a sector. In all such cases the "Final Demand" repriced columns must have at least one residual component, to ensure that the column aggregate is equated with the corresponding "pre-set" row aggregate. So, if we treated the Agriculture sector in this way, after repricing of rows (1) to (13) at least one revision of values of GNDI rows (14) to (16) would be required, to keep the column total equal to the "pre-set" row total.

Table 1: Price indices for and from Irish 13-sector calculations, 1968-1978 and 1978-1982, with some indices derived from official sources

Item	Price indices re. 13-sector		Annual average (geometric) growth rates of price indices		Indices derived from official sources†	
	1968-1978 based on 1.0 for 1968	1978-1982 based on* 1.0 for 1978	1968-1978 per cent	1978-1982 per cent	1968-1978 based on 1.0 for 1968	1978-1982 based on 1.0 for 1978
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Exogenous price indices used with primary inputs</i>						
Imported coal	5.151	2.014	17.8	19.1		
Imported crude oil	6.869	3.379	21.3	35.6		
Imported refined oil	6.207	2.985	20.0	31.4		
Rest of imports	3.391	1.600	13.0	12.5		
Household income	3.1603	1.8563	12.2	16.7		
Government income	3.7465	1.8795	14.1	17.1		
Savings	3.5890	1.7004	13.6	14.2		
<i>Derived (computed) price indices:</i>						
(1) Energy	4.2990	2.4590	15.7	25.2		
(2) Agriculture	3.2804	1.8253	12.6	16.2	3.7640	1.3593
(3) Food	3.3172	1.7941	12.7	15.7	3.5593	1.5470
(4) Clothing	3.3877	1.7235	13.0	14.6	2.3188	1.4806
(5) Wood	3.3917	1.7716	13.0	15.4	3.0692	1.6817
(6) Chemicals	3.4146	1.7269	13.1	14.6	2.6906	1.6798
(7) Clay	3.4686	1.8239	13.2	16.2	4.8076	1.7127
(8) Engineering	3.4243	1.7127	13.1	14.4	3.1688	1.5014
(9) Construction	3.3765	1.8172	12.9	16.1		
(10) Transport	3.4330	1.9399	13.1	18.0		
(11) Commerce	3.4238	1.8284	13.1	16.3		
(12) Public & Professional	3.3141	1.8501	12.7	16.6		
(13) Artificial	3.4634	1.7806	13.2	15.5		

\*Note that these 1978-1982 price indices are based on a 13-sector 1978 SAM transaction table quite distinct from that of 1968 used for Column (1) results.

†Sources The indices for (2) agriculture are the implicit index derived from the values and volumes published annually as the Agricultural Output in June issues of *Irish Statistical Bulletin*. The indices for manufacturing sectors are derived from Wholesale Price Index series published over the years in the *Irish Statistical Bulletin*, and weighted with 1978 Census of Industry gross outputs for 1968-1978 and those of 1981 for 1978-1982.



### 3. THE INPUT-OUTPUT REPRICING EXPERIMENTS

Three 13-sector Irish I-O transactions tables have been used for the repricing exercises. Only a very brief discussion appears below. Some five aspects are addressed:

- (a) the I-O data, the price inflators, the repriced I-O transactions (Table 1 and Appendix Tables A2-A7);
- (b) purchasing power effects of changes in relative prices, through repricing (Tables 2-3);
- (c) final output volume growth (Tables 4-7);
- (d) GNDI and import volume growth (Tables 8-10);
- (e) changes in productivity and employment (Tables 11-12).

#### (a) I-O Transactions and Inflators

The 13-sector SAM structure used has further activity details shown in Appendix Table A1. The three original transactions tables comprise that of 1968 shown as Appendix Table A2, that of 1978 as Table A5, and that of 1982 as Table A7. Repriced tables comprise that of 1968 at 1978 prices shown as Appendix Table A3, that of 1968 at 1982 prices as Table A4, and that of 1978 at 1982 prices as Table A6. The original 1982 Table A7 is more rough and preliminary than the other two; minor discrepancies appear in comparisons shown below in Tables 2-12. Some description of price system and reworking of rows and columns (14) to (17) has been given already in Section 2 above. Extracts from Appendix Tables A2-A7 are used directly or in percentage or ratio form as the basic material of Tables 2 to 12 below.

The price index inflators appear in Table 1, one set for 1978 compared with unit 1968 levels, the other set for 1982 based on 1978. Columns (1) and (2) are of main interest. The 1968-1978 price movements appear in column (1). We see imported coal and oil indices in the range 5-7, compared with 3.4 for the rest of imports. The GNP rows show similar inflation, in the range 3.16 for Household income to 3.75 for Government income. Thus high inflation is apparent, between 1968 and 1978. The GNP inflators come from National Accounts' Expenditure, as explained in Section 2(c) above.

Application of Equation (2.3) gives derived price indices for each of the 13 sector rows. Column (1) shows 1978 inflators, the energy inflator of value 4.3 being the largest, in keeping with large input of imported coal and oil. The other sectors show relatively uniform price inflator values, in the range 3.3 - 3.5, based on unity for 1968.

Table 2: Irish 1968 Final Output Columns at 1968 prices and at 1978 prices: percentage distribution of column aggregates among row values

Sector or Item Row	Household expend. and savings		Govt. current outgoings and savings		Capital formation		Exports and inflows	
	at 1968 prices	at 1978 prices	at 1968 prices	at 1978 prices	at 1968 prices	at 1978 prices	at 1968 prices	at 1978 prices
(1) Energy	3.3	4.5			0.2	0.3	0.1	0.2
(2) Agriculture	4.9	5.1	0.2	0.2	3.9	3.8	9.5	8.7
(3) Food	16.1	16.9			1.8	1.8	24.2	22.4
(4) Clothing	4.6	4.9			1.1	1.1	9.5	9.0
(5) Wood	1.2	1.3			1.5	1.5	1.8	1.7
(6) Chemicals	1.0	1.1			1.2	1.2	9.2	8.8
(7) Clay	0.3	0.4			0.5	0.5	2.8	2.7
(8) Engineering	3.3	3.6			9.8	9.8	6.5	6.3
(9) Construction			4.8	4.3	50.3	49.8		
(10) Transport	1.5	1.7			1.9	1.9	7.1	6.8
(11) Commerce	25.7	27.8	2.0	1.8	2.0	2.0	7.7	7.3
(12) Public + prof.	5.4	5.7	42.4	37.5			0.5	0.5
(13) Artificial	0.1	0.1			-5.6*	-5.7*	2.5	2.5
(14) Household income			42.8	36.1			7.6	6.7
(15) Govt. income	11.4	13.5			2.4	2.6	1.8	1.9
(16) Savings	10.4	1.6	7.5	19.8			5.5**	11.1**
(17) Imports + outflows	10.8	11.9	0.4	0.4	29.0	29.4	3.4	3.4
TOTAL	100-	100-	100-	100-	100-	100-	100-	100-

\* Sales by Final Buyers

\*\* Balance of Payments Deficit on Current Account

Table 3: Irish 1978 Final Output Columns at 1978 prices and at 1982 prices: percentage distribution of column aggregates among row values

Sector or Item Row	Household expend. and savings		Govt. current outgoings and savings		Capital formation		Exports and inflows	
	at 1978 prices	at 1982 prices	at 1978 prices	at 1982 prices	at 1978 prices	at 1982 prices	at 1978 prices	at 1982 prices
(1) Energy	3.4	4.5			0.2	0.3	0.3	0.5
(2) Agriculture	2.6	2.6			-0.3	-0.3	7.6	8.0
(3) Food	12.2	11.8			0.5	0.5	31.7	33.0
(4) Clothing	2.0	1.8			0.1	0.1	8.7	8.7
(5) Wood	3.0	2.9			1.3	1.3	3.1	3.1
(6) Chemicals	0.3	0.3			0.0	0.0	10.6	10.6
(7) Clay	0.6	0.6			0.0	0.1	2.4	2.5
(8) Engineering	1.9	1.8			9.9	9.7	12.8	12.8
(9) Construction	0.3	0.3	3.1	3.0	46.7	48.5		
(10) Transport	2.1	2.1			1.5	1.7	4.9	5.5
(11) Commerce	21.5	21.2	14.0	13.6	3.0	3.2	3.4	3.7
(12) Public + prof.	4.5	4.5	41.2	40.6			0.2	0.3
(13) Artificial	0.1	0.1			-0.4*	-0.4*	0.2	0.2
(14) Household Income			58.8	58.1			9.1	9.8
(15) Govt. income	5.9	5.9			4.2	4.5	-0.8	-0.9
(16) Savings	22.4	24.1	-17.0	-15.2			6.1**	2.4**
(17) Imports + outflows	17.1	15.5			33.3	31.0	-0.3	-0.2
TOTAL	100-	100-	100-	100-	100-	100-	100-	100-

\* Sales by Final Buyers

\*\* Balance of Payments Deficit on Current Account

Table 4: *Irish Household Expenditure and Savings at 1982 Prices: Values and Volumes for 1968, 1978, 1982*

<i>Sector or Item Row</i>	<i>Value, £ million</i>			<i>Volume, to base 100 for 1968</i>		
	<i>1968</i>	<i>1978</i>	<i>1982</i>	<i>1968</i>	<i>1978</i>	<i>1982</i>
(1) Energy	348.04	431.63	361.0	100-	124.0	103.7
(2) Agriculture	292.45	249.19	378.7	100-	85.2	129.5
(3) Food	955.96	1,133.73	1,091.8	100-	118.6	114.2
(4) Clothing	271.65	177.57	109.1	100-	65.4	40.2
(5) Wood	75.18	277.08	280.9	100-	368.6	373.6
(6) Chemicals	58.04	27.22	22.0	100-	46.9	37.9
(7) Clay	21.83	60.48	49.0	100-	277.0	224.5
(8) Engineering	196.76	172.59	131.4	100-	87.7	66.8
(9) Construction		32.42	48.9			
(10) Transport	96.48	207.26	204.0	100-	214.8	211.4
(11) Commerce	1,609.26	2,046.56	2,125.0	100-	127.2	132.0
(12) Public + prof.	330.67	436.54	124.0	100-	132.0	37.5
(13) Artificial	5.12	5.61	1.0			
(14) Household income						
(15) Govt. income	793.96	572.88	837.0	100-	72.2	105.4
(16) Savings	132.69	2,321.20	1,977.5	100-	1,749.3	1,490.3
(17) Imports + outflows	622.44	1,490.49	2,295.9	100-	239.5	368.9
TOTAL, same as disposable Household Income	5,810.53	9,642.45	10,037.2	100-	165.9	172.7
Household Expenditure (Total, less Savings)	5,677.84	7,321.25	8,059.7	100-	128.9	142.0

Table 5: *Irish Government Current Outgoing and Savings at 1982 Prices: Values and Volumes for 1968, 1978, 1982*

<i>Sector or Item Row</i>	<i>Value, £ million</i>			<i>Volume, to base 100 for 1968</i>		
	<i>1968</i>	<i>1978</i>	<i>1982</i>	<i>1968</i>	<i>1978</i>	<i>1982</i>
(1) Energy						
(2) Agriculture	3.76					
(3) Food						
(4) Clothing						
(5) Wood						
(6) Chemicals						
(7) Clay						
(8) Engineering						
(9) Construction	95.93	111.39	141.0	100-	116.1	147.0
(10) Transport						
(11) Commerce	41.56	512.51	381.0	100-	1,233.1	916.7
(12) Public + prof.	859.25	1,530.73	2,160.0	100-	178.1	251.4
(13) Artificial						
(14) Household income	823.64	2,189.85	2,642.0	100-	265.9	320.8
(15) Govt. income						
(16) Savings	480.02	-573.12	-1,146.6			
(17) Imports + outflows	7.06		345.0			
TOTAL, same as Disposable Government Income	2,311.22	3,771.36	4,522.4	100-	163.2	195.7
Govt. Net Current Expenditure, rows (1) to (12)	1,000.50	2,154.63	2,682.0	100-	215.4	268.1

Table 6: *Irish Gross Physical Capital Formation at 1982 Prices: Values and Volumes for 1968, 1978, 1982*

<i>Sector or Item Row</i>	<i>Value, £ million</i>			<i>Volume, to base 100 for 1968</i>		
	<i>1968</i>	<i>1978</i>	<i>1982</i>	<i>1968</i>	<i>1978</i>	<i>1982</i>
(1) Energy	6.41	8.16		100-	127.3	
(2) Agriculture	67.67	-10.99	33.0	100-	-16.2	48.8
(3) Food	31.28	17.04		100	54.5	
(4) Clothing	18.80	3.79		100-	20.2	
(5) Wood	25.96	40.82	15.0	100-	157.2	57.8
(6) Chemicals	20.30	1.04		100-	5.1	
(7) Clay	9.10	1.64		100-	18.0	
(8) Engineering	166.92	304.63	197.0	100-	182.5	118.0
(9) Construction	881.65	1,530.98	1,792.0	100-	173.8	203.5
(10) Transport	34.06	52.80	31.0	100-	155.0	91.0
(11) Commerce	36.30	99.54	94.0	100-	274.2	259.0
(12) Public + prof.						
(13) Artificial	-100.71	-13.52				
(14) Household income						
(15) Govt. income	47.70	142.00	85.0	100-	297.7	178.2
(16) Savings						
(17) Imports + outflows	467.04	978.35	924.0	100-	209.5	197.8
TOTAL same as Savings	1,712.48	3,156.28	3,171.0	100-	184.3	185.2

Table 7: Irish Exports and Inflows at 1982 Prices: Values and Volumes for 1968, 1978, 1982

Sector or Item Row	Value, £ million			Volume, to base 100 for 1968		
	1968	1978	1982	1968	1978	1982
(1) Energy	7.78	32.90	43.0			
(2) Agriculture	326.54	582.84	301.0	100-	178.5	92.2
(3) Food	825.96	2,392.99	1,930.0	100-	289.7	233.7
(4) Clothing	321.78	633.15	476.0	100-	196.8	147.9
(5) Wood	63.60	228.02	246.0	100-	358.5	386.8
(6) Chemicals	311.58	768.92	924.0	100-	246.8	296.6
(7) Clay	102.95	184.46	177.0	100-	179.2	171.9
(8) Engineering	223.12	925.42	1,952.0	100-	414.8	874.9
(9) Construction						
(10) Transport	254.93	396.61	412.0	100-	155.6	161.6
(11) Commerce	276.30	264.87	257.0	100-	95.9	93.0
(12) Public + prof.	19.25	19.17		100-	99.6	
(13) Artificial	91.49	12.40				
(14) Household income	254.25	710.49	948.5	100-	279.4	373.1
(15) Govt. income	71.04	-65.24	-12.0			
(16) Savings	326.62*	172.19*	1,428.6*	100-	52.7	437.4
(17) Imports + outflows	124.06	-16.11	27.0			
TOTAL same as Imports plus Outflows	3,601.25	7,243.08	9,110.1	100-	201.1	253.0
Aggregate Inflows = Total less Savings	3,274.63	7,070.89	7,681.5	100-	215.9	234.6
Goods and Services = (1) to (13) plus (17)	2,949.34	6,425.64	6,745.0	100-	217.9	228.7
Mining & Manufacturing = (1) plus (3) to (8)	1,856.77	5,165.86	5,748.0	100-	278.2	309.6

\* Balance of Payments Deficit on Current Account

For 1978-1982, price inflation is still severe, as shown in column (2). Crude oil imports show 3.4, and refined oil imports 3.0, with imported coal at 2.0, and other imports at 1.6, which is slightly lower than the range 1.7 - 1.9 of the GNP rows. Among the derived price indices (to base 1.0 for 1978) energy is again the largest, of value 2.5; and other sectors show values of some 1.8 - 1.9.

*(b) Effects of Changes in Relative Prices*

Table 2 compares Final Output 1968 expenditure patterns at 1968 prices with patterns of expenditure repriced at 1978 prices. The patterns are in percentages of column totals, as shown in Appendix Tables A2 and A3. Table 2 Household columns show valuation at 1978 prices generally drawing purchasing power away from Savings, which are reduced from 10.4 per cent of 1968 actual Income to 1.6 per cent at supposed 1978 prices. The Government columns show the opposite effect, with Savings increasing from 7.5 per cent actual to 19.8 per cent of Income at 1978 prices. The Capital Formation columns show little change. The Export columns show 1968 Exports at 1978 prices generally smaller percentages of Aggregate Imports and Outflows than occurred at 1968 prices. Thus the Savings share (meaning Import surplus or deficit on Balance of Payments current account) increases from 5.5 per cent actual to 11.1 per cent at 1978 prices.

These observed changes in purchasing power shares make sense, in the content of Table 1 price inflators. We have seen very high inflator values for energy imports, and a relatively high inflator value for Government Income compared with Household Income.

Table 3 shows little evidence of changes in purchasing power shares, between 1978 and 1982. Energy does show an increase in the Household column, from 3.4 to 4.5 per cent. We see slight increases in Household Savings shares. The Government have a debt or deficit of 17 per cent of Income. But a slightly favourable Terms of Trade result shows the Import surplus (Export Savings) reduced from 6.1 to 2.4 per cent. Thus, the general outcome of 1982 prices was favourable to Household Income and Export purchasing power, by comparison with 1978 prices.

*(c) Final Output (Final Demand) Growth at 1982 Prices*

Tables 4 to 7 show sectoral details of Final Demand changes at 1982 prices, extracted from the Appendix tables, with volume growth based on 100 for 1968. Table 4 Household Expenditure shows a 29 per cent growth for 1978 and a 42 per cent growth for 1982; the Expenditure plus Savings shows 66 and 73 per cent, respectively, this being also the growth of Household Disposable Income. Major growth is evident for Savings in both years, and for expenditure on Imports. Some



Table 8: *Irish Household Income at 1982 Prices: Values and Volumes for 1968, 1978, 1982*

Sector Column	Value, £ million			Volume, to base 100 for 1968		
	1968	1978	1982	1968	1978	1982
(1) Energy	162.87	124.32	171.7	100-	76.3	105.4
(2) Agriculture	1,084.61	1,479.20	842.0	100-	136.4	77.6
(3) Food	292.90	377.12	507.8	100-	128.8	173.4
(4) Clothing	180.50	173.86	132.4	100-	96.3	73.4
(5) Wood	115.26	341.31	307.9	100-	296.1	267.1
(6) Chemicals	97.96	133.71	197.4	100-	136.5	201.5
(7) Clay	92.33	148.86	147.8	100-	161.2	160.1
(8) Engineering	189.10	339.61	500.1	100-	179.6	264.5
(9) Construction	388.67	603.10	573.6	100-	155.2	147.6
(10) Transport	199.36	273.93	281.0	100-	137.4	141.0
(11) Commerce	1,147.96	1,726.14	1,417.0	100-	150.4	123.4
(12) Public + prof.	781.12	1,020.95	1,368.0	100-	130.7	175.1
(13) Artificial						
(14) Househ. expend., etc.						
(15) Govt. curr. outgoings, etc.	823.64*	2,189.85*	2,642.0*	100-	265.9	320.8
(16) Capital formation						
(17) Exports + inflows	254.25	710.49	948.5	100-	279.4	373.1
TOTAL	5,810.53	9,642.45	10,037.2	100-	165.9	172.7
Total for Sectors (1) to (12), Economic Activities	4,732.64	6,742.11	6,446.7	100-	142.5	136.2

\* Includes Interest on the National Debt paid to Irish residents, as follows (at 1982 prices):  
£241m. in 1968, £483m. in 1978, £674m. in 1982.

Table 9: Irish Gross National Disposable Income (GNDI) at 1982 Prices: Values and Volumes for 1968, 1978, 1982

<i>Sector of Origin or Final Output ;</i>	<i>Value, £ million</i>			<i>Volume, to base 100 for 1968</i>		
	<i>1968</i>	<i>1978</i>	<i>1982</i>	<i>1968</i>	<i>1978</i>	<i>1982</i>
<i>Sector of Origin</i>						
(1) Energy	247.39	233.40	435.6	100-	94.3	176.1
(2) Agriculture	1,235.00	1,742.83	1,080.0	100-	141.1	87.4
(3) Food	293.25	526.16	600.8	100-	179.4	204.9
(4) Clothing	263.42	253.29	184.6	100-	96.2	70.1
(5) Wood	165.80	465.05	415.9	100-	280.5	250.8
(6) Chemicals	169.37	248.82	316.5	100-	146.9	186.9
(7) Clay	162.37	237.48	222.9	100-	146.3	137.3
(8) Engineering	322.95	552.25	854.0	100-	171.0	264.4
(9) Construction	525.09	840.02	851.6	100-	160.0	162.2
(10) Transport	311.17	442.95	477.1	100-	142.3	153.3
(11) Commerce	2,194.40	3,448.49	2,817.0	100-	157.1	128.4
(12) Public + prof.	967.47	1,707.85	2,276.5	100-	176.5	235.3
(13) Artificial	46.63	392.25	438.1			
TOTAL, Sectors (1) to (13)	6,904.31	11,090.84	10,970.6	100-	160.6	158.9
Manufacturing and Mining (ex. Peat): (3) to (8)	1,377.16	2,283.05	2,594.7	100-	165.8	188.4
<i>Final Output:</i>						
(A) Household Expend. (Table 4)	5,677.84	7,321.25	8,059.7	100-	128.9	142.0
(B) Govt. Net Curr. Exp. (Table 5)	1,000.50	2,154.63	2,682.0	100-	215.4	268.1
(C) Capital Format. (Table 6)	1,712.48	3,156.28	3,171.0	100-	184.3	185.2
Total Final ex. Exports (A) + (B) + (C)	8,390.82	12,632.16	13,912.7	100-	150.5	165.8
<i>Less</i> Bal. of Payments Deficit (Savings entry in Export Column)	-326.62	-172.19	-1,428.6			
TOTAL GNDI	8,064.20	12,459.97	12,484.1	100-	154.5	154.8

Table 10: *Irish Imports plus Outflows at 1982 Prices: Values and Volumes for 1968, 1978, 1982*

Sector Column	Value, £ million			Volume, to base 100 for 1968		
	1968	1978	1982	1968	1978	1982
(1) Energy	483.85	650.40	267.1	100-	134.4	55.2
(2) Agriculture	76.30	131.54	226.0	100-	172.4	296.2
(3) Food	276.25	588.32	546.9	100-	213.0	198.0
(4) Clothing	221.98	394.16	241.0	100-	177.6	108.6
(5) Wood	71.00	270.06	268.5	100-	380.4	378.2
(6) Chemicals	238.61	430.84	469.8	100-	180.6	196.9
(7) Clay	30.83	114.10	108.5	100-	370.1	351.9
(8) Engineering	408.73	873.66	1,264.5	100-	213.7	309.4
(9) Construction	151.98	153.48	358.0	100-	101.0	235.6
(10) Transport	121.76	137.84	223.9	100-	113.2	183.9
(11) Commerce	72.40	219.88	839.6	100-	303.7	1,159.7
(12) Public + prof.	54.14	154.52	11.9	100-	285.4	22.0
(13) Artificial	172.82	671.55	692.5	100-	388.6	400.7
(14) Househ. expend., etc.	622.44	1,490.49	2,295.9	100-	239.5	368.9
(15) Govt. curr. outgoings, etc.	7.06		345.0			
(16) Capital formation	467.04	978.35	924.0	100-	209.5	197.8
(17) Exports + inflows	124.06	-16.11	27.0			
TOTAL	3,601.25	7,243.08	9,110.1	100-	201.1	253.0
Total for Sectors (1) to (13) Intermediate Demand	2,380.65	4,790.35	5,518.2	100-	201.2	231.8
Total for Sectors (14) to (17) Final Demand	1,220.60	2,452.73	3,591.9	100-	200.9	294.3

of the growth of imports has meant reduced volumes of home-produced Clothing and Engineering products. Extended Government funding of Education and Health could explain the decreased volume of Household expenditure on Public + professional between 1978 and 1982.

Table 5 gives results for Government current outgoings and savings; only meaningful percentages are shown. Disposable income has grown by 63 per cent for 1978 and 96 per cent for 1982, whereas net current expenditure has grown by 115 and 168 per cent, respectively, with further growth of transfers, shown as Household Income. The large deficits, shown as negative Savings, result from Income failing to match Outgoings.

Gross Physical Capital Formation details appear in Table 6. Some 85 per cent volume growth is apparent, for both 1978 and 1982. Somewhat similar growth-rates appear for major items Construction and Imports.

Exports and Inflows are detailed in Table 7. The Mining and Manufacturing aggregate shows impressive growth, some 180 per cent in 1978 and 210 per cent in 1982. Goods and Services show 118 and 129 per cent growth, respectively. Aggregate Inflows show 116 per cent growth (over 1968) in 1978 and 135 per cent in 1982. But Imports and Outflows are greater, in all three years, as shown by the Savings entries, which record a Balance of Payments deficit of some £1,400m. for 1982.

*(d) Gross National Disposable Income (GNDI) and Imports*

Tables 8 to 10 cover these items of the I-O structure, taken from the rows of the Appendix tables. Household Income by sector, at 1982 prices, appears in Table 8. Aggregate growth from 1968 shows 66 per cent for 1978 and 73 per cent for 1982, with lower percentages of 43 and 36, respectively, for income arising in sectors (1) to (12) economic activity. Major growth of current transfers from Government, row (15), is apparent: this includes some £500m. for 1978 and £700m. for 1982 by way of Interest on the National Debt. The 1982 recession in Agriculture is apparent, and the decline of the Clothing sector.

The GNDI by sector of origin is shown in Table 9. Its derivation from the Final Demand columns appears at the bottom of the table. Impressive growth since 1968 is evidenced by the 55 per cent for 1978, with no change for 1982. The lack of growth of the aggregate between 1978 and 1982 results from increases and decreases at sector level; Engineering grew strongly, from 171 per cent (of 1968 volume) to 264 per cent, whereas Commerce decreased, from 157 to 128 per cent. Public and professional volume grew from 177 per cent of the 1968 level to 235 per cent, although the total of

Table 11: *Irish GNDI per Employee at 1982 Prices: Values and Volumes for 1968, 1978, 1982*

Sector	Value, in £.000 per employee			Volume, to base 100 for 1968		
	1968	1978	1982	1968	1978	1982
(1) Energy	10.80	12.22	20.94	100-	113.1	193.9
(2) Agriculture	4.04	7.84	5.62	100-	194.1	139.1
(3) Food	5.12	9.40	11.69	100-	183.6	228.3
(4) Clothing	5.36	5.67	5.11	100-	105.8	95.3
(5) Wood	6.97	11.96	11.33	100-	171.6	162.6
(6) Chemicals	11.29	13.38	17.11	100-	118.5	151.6
(7) Clay	12.79	11.58	10.98	100-	90.5	85.8
(8) Engineering	8.39	10.06	14.02	100-	119.9	167.1
(9) Construction	5.74	8.48	8.82	100-	147.7	153.7
(10) Transport	8.48	11.21	11.23	100-	132.2	132.4
(11) Commerce	7.98	11.84	8.99	100-	148.4	112.7
(12) Public + prof.	6.75	8.32	8.86	100-	123.3	131.3
Aggregates for Sectors (1) to (12), GNDI/Total No. of Employees	6.40	9.64	9.19	100-	150.6	143.6
Manufacturing and Mining (ex. Peat): (3) to (8)	7.01	9.77	11.59	100-	139.4	165.3

Table 12: *Irish April Employment in 12 Sectors: Numbers and Volumes for 1968, 1978, 1982*

Sector	Employment, in thousands			Volume, to base 100 for 1968		
	1968	1978	1982	1968	1978	1982
(1) Energy	22.9	19.1	20.8	100-	83.4	90.8
(2) Agriculture	305.9	222.2	192.2	100-	72.9	63.0
(3) Food	57.3	56.0	51.4	100-	97.7	89.7
(4) Clothing	49.1	44.7	36.1	100-	91.0	73.5
(5) Wood	23.8	38.9	36.7	100-	163.4	154.2
(6) Chemicals	15.0	18.6	18.5	100-	124.0	123.3
(7) Clay	12.7	20.5	20.3	100-	161.4	159.8
(8) Engineering	38.5	54.9	60.9	100-	142.6	158.2
(9) Construction	91.4	99.1	96.6	100-	108.4	105.7
(10) Transport	36.7	39.5	42.5	100-	107.6	115.8
(11) Commerce	275.0	291.3	313.2	100-	105.9	113.9
(12) Public + prof.	143.4	205.2	256.9	100-	143.1	179.1
TOTAL EMPLOYMENT	1,071.7	1,110.0	1,146.1	100-	103.6	106.9
Manufacturing and Mining (ex. Peat): (3) to (8)	196.4	233.6	223.9	100-	118.9	114.0

sectors (1) to (13) stayed at above 16%.

Imports plus Outflows are shown in Table 10, by sector of purchase or payment. The aggregate volume for 1978 is about twice that of 1968, and for 1982 is 253 per cent of it. A similar doubling of 1968 volume occurs for 1978 Total Intermediate and Total Final. The 1982 Total Final volume, however, almost trebles the 1968 corresponding volume. Thus, against Table 9 GNDI 1982 aggregate 55 per cent growth, the import growth shows a major increase in intensity. Again for 1982, Household Expenditure grew by 42 per cent over the 1968 level (Table 4), but here in Table 10 we see an import growth of 269 per cent. And 1982 Capital Formation grew by 85 per cent over its 1968 level (Table 6), whereas Table 10 import growth is 98 per cent. In spite of the 13 per cent 1982 decrease in GNDI of Agriculture (Table 9) below that of 1968, we see in Table 10 a trebling of the 1968 volume of imports occurring in 1982 purchases by Agriculture.

The most aggregate Final Demand comprises Household plus Government Expenditures plus Capital Formation plus Exports and Inflows. These values at 1982 prices appear at the bottom of Tables 7 and 9, to give 1968 value £11,665m., 1978 £19,703m. and 1982 £21,594m., with related volumes 100, 169, and 185, respectively. When compared with total Imports plus Outflows volumes of 100, 201, and 253, respectively, the increase in import (plus outflow) intensity is apparent, for 1978 and 1982 compared with 1968, being some 19 per cent for 1978 and 37 per cent for 1982.

*(e) Changes in Productivity and Employment*

A final brief consideration of productivity (meaning purchasing power per man-year) and employment is covered by Tables 11 and 12. Employment details appear in Table 12; these April figures are taken as representing average full-time employment. The GNDI Table 9 values (at 1982 prices) divided by Table 12 employment numbers give the GNDI per employee values shown in Table 11. Manufacturing and Mining show some £7,000 per employee in 1968 increasing to £11,600 in 1982, with smaller values occurring for sectors (1) to (12) in aggregate. Agriculture and Clothing show by far the smallest 1982 values, only some \$5,000-£6,000 per employee.

The Table 11 volume figures (based on 100 for 1968) can be interpreted as productivity growth per man-year. Sectors (1) to (12) in aggregate show an average 51 per cent growth for 1978, reduced to 44 per cent for 1982. Manufacturing and Mining show 39 per cent growth for 1978 increasing to 65 per cent for 1982. All sectors except Clay show some growth of purchasing power per man-year for 1978 compared with 1968; both Clay and Clothing show decreases for 1982 compared with 1968.

April employment in the 12 sectors appears in Table 12. Total employment has been stable at about 1.1 million, showing 1978 growth of only 4 per cent over 1968 and a 1982 growth of 7 per cent. Manufacturing and Mining have shown some 200,000 employed, with a 1978 growth of 19 per cent over 1968 and a 1982 reduced growth of 14 per cent. The three major employment sectors are Agriculture, Commerce, Public and professional, apart from aggregate Manufacturing and Mining.

Agricultural employment has decreased greatly from its 1968 level of 306,000, to reach 222,000 in 1978 (73 per cent of 1968 level) and 192,000 in 1982 (63 per cent). This experience is common, in developing economies.

Commerce has wholesale and retail trade as a major component. From 275,000 employed in 1968, a 6 per cent growth (for 291,000 employed) appears in 1978, and a 12 per cent growth (for 313,000 employed) in 1982, for the Commerce sector as a whole.

Public and professional employment has shown considerable growth between 1968 and 1982. From 143,000 in 1968, it grew to 205,000 in 1978 (an increase of 43 per cent over 1968), and it grew again to 257,000 in 1982 (an increase of 79 per cent over 1968). The 1978-1982 growth of the employment of this sector is clearly an outcome of Government policy (as distinct from economic realities) in view of the failure of GNDI growth since about 1978.

#### 4. CONCLUSIONS

Five concluding comments are offered:

- (1) The paper has outlined and illustrated the methodology of applying price inflation to a given I-O structure so as to produce a consistent outcome. The repriced structure may be validly compared with the original structure, to show changes in relative prices and changes in "Terms-of-Trade" between major Final Demand categories or aggregates. The structure of year (a), repriced in terms of year (b), may also be compared with the actual structure of year (b), to measure volume changes.
- (2) The basic human and economic causes or origins of price changes are not within the scope of the present paper. Such causes are part of the dynamics of political and market forces, competition in trading, limitation of supply, and so on. The "causality" of price change described and illustrated by the present discussion is "Purchasing Power" price inflation (or deflation)



applied through the I-O system of primary inputs (Value Added) and imports. The "Purchasing Power" inflators themselves may be implicit price indices derived from National Accounts' final demand aggregates such as Personal Expenditure, or they might be hypothetical.

- (3) We may have as many primary input rows as we wish, but each such row must have a corresponding Final Output (Final Demand) column, with row and column aggregate values the same, at original prices. The whole system is best, if valued at Basic Prices. Each such row is viewed as "Income", matched by a column of "Expenditure plus Savings". Each such row needs a specific "Purchasing Power" price index, to value it at the new prices. The model finds a consistent price-index system, for the sector output rows. The repriced Final Output entries are aggregated by column, and a residual "Savings" entry equates the repriced column aggregate with the repriced corresponding row aggregate.
- (4) A special design of the GNP primary input rows is required, to show, for example, Disposable Household Income. This implies problems of estimation, for PAYE income tax not known by sector, and so on. However, this aspect could be improved, if Revenue data were classified by sector.
- (5) Irish data have been used for illustration. The results are tentative, because of the small numbers of sectors and the preliminary nature of the 1982 transactions table, as well as the kind of data problems referred to in point (4) above. However, the results are indicative and interesting. One result shows how 1978 prices applied to 1968 cost structures move "Terms of Trade" against Households and in favour of Government, and against Exports in favour of Imports. A major policy objective has been achieved, through growth of Exports. But the resulting 55 per cent growth of GNDI (at 1982 prices) between 1968 and 1978 has been accompanied by many undesirable features. These include a mere 4 per cent growth of total employment, with 27 per cent reduction in Agricultural employment. Other unfavourable aspects comprise a doubling of the volume of imports and outflows, a large increase in the Balance of Payments deficit on current account, and major Government borrowing on current account.

5. REFERENCES

CENTRAL STATISTICS OFFICE. *Irish Statistical Bulletin*, various quarterly issues, Dublin: Stationery Office.

HENRY, E. W., 1986. *Multisector Modelling of the Irish Economy with Special Reference to Employment Projections*, General Research Series, Paper No. 128, Dublin: The Economic and Social Research Institute.

HENRY, E. W., March 1988. *An Experiment in Deflating Input-Output Transactions and in Estimating Terms-of-Trade Effects*. Paper presented at 2nd International Meeting on Problems of Compilation of Input-Output Tables, 13-19 March 1988, Baden near Vienna. Included in Proceedings Volume, to appear in 1989.

Appendix Table A1: Aggregation of Irish 1968 and 1978 1-0 transactions sectors to give 13-sector transactions used in present report

1968 33-sector list (1)	1978 and 1982 22-sector list (2)	Present 13-sector list (3)	Abbreviated sector name for 13-sector transactions (4)
5. solid fuel 16. other manufacturing (part) oil refining 19. electricity, gas, water	1. solid fuel 2. oil refining 3. gas 4. electricity	1. energy	energy (1)
1. agriculture livestock 2. agriculture crops 3. forestry 4. fishing	6. agriculture, forestry, fishing	2. agriculture, forestry, fishing	agriculture (2)
7. food 8. drink & tobacco	7. food 8. drink & tobacco	3. food, drink, tobacco	food (5)
9. textiles (ex. hosiery) 10. clothing, hosiery, shoes, leather,	9. textiles 10. clothing & footwear	4. clothing, textiles	clothing (4)
11. wood, furniture 12. paper, printing	11. wood & furniture 12. paper & printing 16. other manufact.	5. wood, paper, other	wood (5)
13. chemicals 16. (rest) mostly rubber and plastics	13. chemicals, rubber, plastics	6. chemicals	chemicals (6)
6. stone, ores, gravel 14. clay, cement, glass	5. stone, ores, gravel 14. clay, cement, glass	7. clay and mining	clay (7)
15. metal, engineering, vehicles	15. metal, engineering, vehicles	8. engineering	engineering (8)
17. new construction 18. repair construction	17. construction	9. construction	construction (9)
21. transport	18. transport	10. transport	transport (10)
20. trade margin 22. banking, insurance 23. other financial 24. communications 27. rent of dwellings 28. personal services (part) 29. hotel & catering margin 30. sport 31. domestic service	19. trade margin and services (part)	11. commerce, personal and recreational services	commerce (11)
25. medical services, private 26. education 28. personal services (rest) 32. Government services	19. (rest)	12. public and professional services	public & profess. (12)
33. artificial sectors n.e.s.	20. materials for repair 21. packaging 22. residual business current expenditure	13. artificial sectors	artificial (13)

Appendix Table A2: Ireland, 1968 13-sector transactions at 1968 basic prices  
£m

Sectors	Energy	Agriculture	Food	Clothing	Wood	Chemicals	Clay	Engineering	Construction	Transport	Commerce	Public and Professional	Artificial	Household expend. & savings	Govt. current outgoings & savings	Capital formation	Exports	Total Output	Sectors
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		
(1) Energy	8.421	2.588	2.916	1.894	1.441	1.230	2.474	5.047	2.704	.755	7.141	3.823	7.489	32.730		.603	.753	81.991	(1)
(2) Agriculture		4.039	186.110		.402					.228	.346	1.501		48.564	.626	11.238	54.223	307.277	(2)
(3) Food		33.863	39.085	2.494	.006	.426				.233	.291	2.451		139.567		5.221	137.866	381.505	(3)
(4) Clothing		1.299		17.363	.377	.374	.043	.118	.371		.908	.334	.345	45.550		3.134	33.951	124.587	(4)
(5) Wood	.010		.374	.543	12.524	.180	.318	.292	2.281	.073	11.014	1.927	9.453	12.294		4.243	10.404	65.932	(5)
(6) Chemicals	.478	14.756	2.424	.271	.954	2.982	.327	2.032	2.110	.158	1.322	2.219	1.815	9.797		3.426	52.589	97.680	(6)
(7) Clay	.026	1.293	.039	.041	.031	.092	5.416	.516	17.519		.331	.020	3.622	3.373		1.406	15.912	49.637	(7)
(8) Engineering	.089	4.746		.632	.572	.233	.220	.681	9.276	8.955	2.626	.933	25.783	32.830		27.854	37.228	152.660	(8)
(9) Construction							.381		29.326	2.342	6.833	3.805			15.623	143.532		201.892	(9)
(10) Transport	.371	3.699						.112	4.500	.956	11.684	2.950	4.000	15.299		5.400	40.423	89.394	(10)
(11) Commerce	1.605	20.307	4.213	.706	.205	.164	.499	.893	7.378	2.482	44.009	12.765	69.599	254.124	6.563	3.734	43.634	474.882	(11)
(12) Public & Profess.										.114	.815	10.460	9.011	33.573	139.217		3.121	216.311	(12)
(13) Artificial	5.548	.080	45.422	16.732	9.377	20.773	8.825	16.019	12.667	4.461	25.799	4.421		.811		-15.978*	14.491	169.448	(13)
(14) Household income	27.763	184.884	49.929	30.769	19.646	16.699	13.740	32.235	66.253	33.983	195.685	133.151			140.398		43.341	990.476	(14)
(15) Government income	6.021	10.071	-10.325	6.330	4.213	3.897	4.139	13.763	14.323	9.734	104.564	25.141	6.622	112.750		6.774	10.089	328.228	(15)
(16) Savings	6.903	13.023	12.200	6.052	3.421	7.207	6.678	6.031	5.828	7.090	50.707	1.527		102.700	24.500		31.520	285.407	(16)
(17) Imports	24.756	12.629	49.318	40.560	12.763	43.423	4.537	74.877	27.156	17.828	10.707	8.679	31.707	106.514	1.301	82.750	19.133	568.678	(17)
Total input	81.991	307.277	381.505	124.587	65.932	97.680	49.637	152.660	201.892	89.394	474.882	216.311	169.448	990.476	328.228	285.407	568.678	Total	
Sectors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		Sectors
Employment ('000)	22.9	305.9	57.3	49.1	23.8	15.0	12.7	38.5	91.4	36.7	275.0	143.4						1071.7	Employ.
Imported coal (£m)	.690		.230	.010	.034	.020	.060	.010	.027		.275	.163		3.679		3.128	.025	8.951	Coal
Imported crude oil	18.539																	18.539	Crude
Imported refined oil & LPG (ex. lubricat.)	1.251	.593	.374	.143	.121	.224	.443	.136	.343	1.911	.989	.477	.060	2.011		.200	1.529	11.057	Refined
Rest of imports	4.276	12.036	48.514	40.407	12.608	43.179	4.054	74.681	26.784	15.917	9.443	8.039	31.647	100.824	1.301	79.422	17.599	530.731	Rest

\*Sales by final buyers

Appendix Table A3: Ireland, 1968 13-Sector transactions at 1978 estimated basic prices  
£million

Sectors	energy	agriculture	food	clothing	wood	chemicals	clay	engineering	construction	transport	commerce	public and professional	artificial	household expend. & savings	govt. current outgoings + savings	capital formation	exports	TOTAL OUTPUT	Sectors
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		
(1) energy	36.20	11.13	12.54	8.14	6.19	5.29	10.64	21.70	11.62	3.25	30.70	16.44	32.20	140.70		2.59	3.15	352.48	(1)
(2) agriculture		13.25	610.51		1.32					.75	1.14	4.92		159.31	2.05	36.86	177.87	1007.98	(2)
(3) food		112.33	125.65	8.27	.02	1.41				.78	.97	8.13		529.31		17.32	457.33	1265.52	(3)
(4) clothing		4.40		58.82	1.28	1.27	.15	.40	1.93		3.08	1.81	1.17	154.30		10.68	182.77	422.06	(4)
(5) wood	.03		1.27	1.84	42.48	.61	1.08	.99	7.74	.25	37.36	6.54	32.06	41.70		14.39	35.28	223.62	(5)
(6) chemicals	1.63	50.39	8.23	.93	3.26	10.18	1.12	7.01	7.20	.54	4.51	7.58	6.20	33.45		11.70	179.56	333.54	(6)
(7) clay	.09	4.48	14	.14	.11	.32	18.78	1.79	60.76		1.15	.07	12.56	11.70		4.88	55.19	172.16	(7)
(8) engineering	.30	16.25		2.16	1.96	.80	.75	2.33	31.76	30.66	8.99	3.20	88.29	112.43		95.38	127.49	522.75	(8)
(9) construction							1.29		99.02	7.91	23.07	12.85		52.75	484.80			681.69	(9)
(10) transport	1.27	12.70						.38	15.45	3.28	40.11	10.13	13.73	52.52		18.54	138.78	306.89	(10)
(11) commerce	5.50	69.53	14.42	2.42	.70	.56	1.71	3.06	25.26	8.50	150.69	43.70	238.29	870.08	22.47	19.63	149.39	1625.91	(11)
(12) public & profess.										.38	2.70	34.67	29.86	177.55	461.37		10.34	716.87	(12)
(13) artificial	19.23	.26	157.30	57.95	32.47	71.96	30.54	55.48	43.89	15.43	89.34	15.30		2.81		-55.28	50.19	586.87	(13)
(14) household income	87.74	584.29	157.79	97.24	62.09	52.77	49.74	101.87	209.38	107.40	618.42	420.80			443.70		136.97	3130.20	(14)
(15) govt. income	22.56	37.73	-39.43	24.47	15.78	14.60	15.58	51.57	53.66	36.47	392.12	94.19	24.81	422.42		25.38	37.80	1229.71	(15)
(16) savings	24.77	46.74	43.79	21.72	12.28	25.86	23.97	21.72	20.92	25.45	181.99	5.48		48.60	242.96		227.29	973.54	(16)
(17) imports	153.16	44.50	169.26	137.96	43.68	147.91	16.81	254.45	93.10	65.84	39.57	31.06	107.70	373.32	4.41	286.67	69.30	2038.70	(17)
TOTAL INPUT	352.48	1007.98	1265.52	422.06	223.62	333.54	172.16	522.75	681.69	306.89	1625.91	716.87	586.87	3130.20	1229.71	973.54	2038.70		TOTAL
Sectors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	TOTAL	Sectors
Employment (000)	22.9	305.9	57.3	49.1	23.8	15.0	12.7	38.5	91.4	36.7	275.0	143.4						1071.7	Employ
Imported coal (fm)	3.55		1.19	.05	.18	.10	.31	.05	.14		1.42	.84		18.95		16.11	.13	43.02	coal
crude oil	127.34																	127.34	crude
refined oil + LPG (ex. lubricating)	7.77	3.68	3.56	.89	.75	1.39	2.75	1.16	2.14	11.86	8.14	2.96	.37	12.48		1.24	9.49	68.63	refined
Rest of imports	14.50	40.82	164.51	137.02	42.75	146.42	13.75	253.24	90.92	53.98	32.01	27.26	107.33	341.89	4.41	269.32	59.68	1799.71	rest

Appendix Table A4: Ireland, 1968 13-sector transactions at 1982 estimated basic prices  
£m

Sectors	Energy	Agriculture	Food	Clothing	Wood	Chemicals	Clay	Engineering	Construction	Transport	Commerce	Public and Professional	Artificial	Household expend. & savings	Govt. current outgoings & savings	Capital formation	Exports	Total Output	Sectors
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		
(1) Energy	89.54	27.55	31.02	20.14	15.31	15.09	26.32	55.68	28.74	8.04	75.94	40.67	79.65	348.04		6.41	7.78	871.90	(1)
(2) Agriculture		24.32	1120.74		2.42					1.38	2.09	9.03		292.45	3.76	67.67	326.54	1850.40	(2)
(3) Food		202.87	254.15	14.94	.04	2.55				1.41	1.75	14.68		955.96		31.23	825.96	2285.59	(3)
(4) Clothing		7.75		103.55	2.25	2.24	.26	.70	3.40		5.42	3.19	2.06	271.65		18.80	321.78	749.05	(4)
(5) Wood	.05		2.29	3.32	76.58	1.10	1.95	1.78	13.95	.45	67.35	11.79	57.80	75.18		25.96	63.60	463.15	(5)
(6) Chemicals	2.83	87.43	14.57	1.61	5.66	17.66	1.94	12.16	12.49	.94	7.83	13.15	10.76	58.04		20.30	311.58	578.75	(6)
(7) Clay	.17	8.36	.26	.26	.21	.60	35.03	3.34	115.35		2.15	.13	25.43	21.83		9.10	102.95	321.17	(7)
(8) Engineering	.53	28.44		3.78	3.43	1.40	1.31	4.08	55.58	53.66	15.73	5.60	154.52	196.76		166.92	223.12	914.86	(8)
(9) Construction							2.35		180.08	14.39	41.96	23.37			95.93	881.65		1239.73	(9)
(10) Transport	2.33	23.33						.70	28.38	6.03	73.68	18.61	25.22	95.48		34.06	254.93	563.75	(10)
(11) Commerce	10.17	128.60	26.67	4.48	1.29	1.04	3.16	5.66	46.72	15.72	278.71	80.83	440.73	1609.26	41.56	36.90	276.30	3007.20	(11)
(12) Public & Profess.										.71	5.03	64.57	35.61	330.67	839.25		19.25	1335.09	(12)
(13) Artificial	35.04	.47	286.59	105.57	59.16	151.09	55.65	101.08	79.97	28.09	162.76	27.86		5.12		-100.71	91.49	1069.23	(13)
(14) Household income	162.87	1084.61	292.90	180.30	115.26	97.96	92.33	189.10	388.67	199.36	1147.96	781.12			823.64		254.25	5810.53	(14)
(15) Government income	42.40	70.91	-74.11	45.99	29.66	27.44	29.28	96.92	100.85	68.54	736.98	177.05	46.63	793.96		47.70	71.04	2311.22	(15)
(16) Savings	42.12	79.48	74.46	36.93	20.88	45.97	40.76	36.93	35.57	43.27	509.46	9.32		152.69	430.02		326.52	1712.48	(16)
(17) Imports	483.85	76.30	276.25	221.98	71.00	238.61	30.83	408.73	151.98	121.76	72.40	54.14	172.82	622.44	7.06	467.04	124.06	3601.25	(17)
Total input	871.90	1850.40	2285.59	743.05	405.15	578.75	321.17	914.86	1239.73	563.75	3007.20	1335.09	1069.23	5810.53	2311.22	1712.48	3601.25	Total	
Sectors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		Sectors
Employment ('000) in 1968, actual	22.9	305.9	57.3	49.1	23.8	13.0	12.7	38.5	91.4	36.7	273.0	143.4						1071.7	1968 employ
Employment in 1978 manyears	15.36	138.91	27.77	38.65	16.92	10.43	8.60	28.15	60.80	26.79	224.48	135.16						732.22	1978 employ
Employment in 1982 manyears	19.74	161.30	28.38	44.05	16.68	9.25	9.56	20.48	50.66	28.80	245.85	143.20						777.95	1982 employ
Imported coal (£m)	7.15		2.40	.10	.36	.20	.62	.10	.28		2.86	1.69		38.18		32.44	.26	86.64	coal
Imported crude oil	430.31																	430.31	crude
Imported refined oil + LPG (ex. lubricating)	23.19	10.99	10.63	2.66	2.24	4.15	8.21	3.46	6.59	35.40	18.53	8.84	1.10	57.26		3.70	28.32	204.87	refined
Rest of imports	23.20	65.31	263.22	219.22	68.40	234.46	22.00	405.17	145.31	86.36	51.21	43.61	171.72	547.00	7.06	430.90	95.48	2879.43	rest

Appendix Table A5: Ireland, 1978 13-Sector transactions at 1978  
 million

basic prices

Sectors	energy	agriculture	food	clothing	wood	chemicals	clay	engineering	construction	transport	commerc	public and professional	artificial	household expend. & savings	govt. current outgoings + savings	capital formation	exports	TOTAL OUTPUT	Sectors
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		
(1) energy	51.69	20.15	21.61	7.57	7.06	10.96	15.92	9.95	5.12	17.74	22.46	15.82	36.89	175.53		3.32	13.38	435.17	(1)
(2) agriculture	.02	17.78	1150.64		2.50						.47	.33		136.52		-6.02	319.31	1621.55	(2)
(3) food		221.50	342.45	20.02							5.69	4.01		631.93		9.50	1333.83	2568.93	(3)
(4) clothing				15.82	.69						.06	.04	9.42	103.03		2.20	367.37	498.63	(4)
(5) wood	.13				18.11				20.71		12.56	8.85	154.65	156.41		23.04	128.71	523.17	(5)
(6) chemicals		61.59	2.68	2.39		.46		1.71			2.80	2.05	62.45	15.76		.60	445.26	597.35	(6)
(7) clay		6.43	.16				74.87			153.53	1.82	1.29	46.45	33.16		.90	101.13	419.74	(7)
(8) engineering	.82	34.40		3.02	2.46	3.51	4.57	7.38	56.22	53.67	6.99	4.92	44.88	100.77		177.86	540.31	1041.48	(8)
(9) construction	2.74		10.36				1.93		147.44	8.67	11.23	7.91			61.30	842.50	1111.92	(9)	
(10) transport		25.11							34.07		5.13	3.61	22.13	106.84		27.22	204.45	428.56	(10)
(11) commerce	1.88	161.44	61.87	7.97	16.18	5.82	35.40	4.42	73.05	1.54	10.36	6.40	148.80	1119.30	280.30	54.44	144.86	2134.13	(11)
(12) public & profess.										.08	1.00	1.60	19.27	235.96	827.40		10.36	1075.67	(12)
(13) artificial	27.57	42.78	331.18	59.67	57.69	173.19	91.11	174.24	75.10	53.98	41.37	29.14	36.42	3.15		-7.59*	7.01	1196.01	(13)
(14) household income	66.97	796.86	203.16	93.66	183.87	72.03	80.19	182.95	324.90	147.57	929.89	550.09			1179.70		382.75	5196.50	(14)
(15) govt. income	29.99	37.63	35.22	32.79	55.18	32.63	32.35	82.37	110.01	59.81	592.96	351.90	208.70	304.81		75.56	-34.71	2006.60	(15)
(16) savings	31.00	119.40	48.72	10.47	11.78	31.63	16.36	34.01	17.74	33.29	357.50	15.00		1163.60	-342.10		256.90	1805.30	(16)
(17) imports	222.36	77.08	360.88	245.25	167.65	267.62	67.04	544.75	94.03	52.11	131.74	92.80	405.95	689.89		601.77	-10.92	4210.00	(17)
TOTAL INPUT	435.17	1621.55	2568.93	498.63	523.17	597.85	419.74	1041.78	1111.92	428.56	2134.13	1095.67	1196.01	5194.50	2006.60	1805.30	4210.00		TOTAL
Sectors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	TOTAL	Sectors
Employment (000)	19.1	222.2	56.0	44.7	38.9	18.6	20.5	54.9	99.1	39.5	291.3	205.2						1110.0	Employ
Imported coal (€m)	1.36		.42	.03	.03	.01	.44	.20	.05		1.58	1.04	.69	20.82			3.28	29.35	coal
crude oil	112.92																	112.92	crude
refined oil + LPG																			refined
(ex. lubricating)	67.25	5.93	7.76	1.27	1.31	1.92	4.80	1.45	2.18	39.32	6.10	4.06	15.90	41.94		11.24		212.43	
Rest of imports	40.83	71.15	352.70	243.95	166.31	265.69	61.90	543.10	91.86	12.79	124.05	87.70	389.96	827.13		590.53	-14.20	3855.20	rest

\* Sales by final buyers

Appendix Table A6: Ireland, 1978 13-sector transactions at 1982 estimated basic prices (£m)

Sectors	Energy	Agriculture	Food	Clothing	Wood	Chemicals	Clay	Engineering	Construction	Transport	Commerce	Public and Professional	Artificial	Household expend. & savings	Govt. current outgoings & savings	Capital formation	Exports	Total Output	Sectors
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		
(1) Energy	127.11	49.55	53.14	18.61	17.36	26.95	39.15	24.47	12.59	43.62	55.23	38.90	90.71	431.63		8.16	32.90	1070.08	(1)
(2) Agriculture	.04	32.45	2100.27		4.56						.86	.60		249.19		-10.99	582.84	2959.82	(2)
(5) Food		397.59	614.58	35.92							10.21	7.19		1155.73		17.04	2392.99	4603.85	(3)
(4) Clothing				27.27	1.19						.10	.07	16.23	177.57		3.79	653.15	859.37	(4)
(5) Wood	.23				32.08				36.69		22.25	15.68	273.97	277.08		40.82	228.07	926.82	(5)
(6) Chemicals		106.36	4.63	4.13		.79		2.95			3.01	3.54	107.85	27.22		1.04	768.92	1032.44	(6)
(7) Clay		11.73	.29				136.56		280.03		3.32	2.35	84.72	60.48		1.64	184.45	765.58	(7)
(8) Engineering	1.40	58.92		5.17	4.21	6.01	7.85	12.64	96.29	91.92	11.97	8.43	76.87	172.59		304.63	925.42	1724.30	(8)
(9) Construction	4.98		18.33				3.51		267.93	15.76	20.41	14.37		32.42	111.59	1350.98		2020.33	(9)
(10) Transport		48.71							66.09		9.95	7.00	42.93	207.26		32.80	596.61	831.35	(10)
(11) Commerce	3.44	295.18	115.13	14.57	29.58	10.64	64.73	8.08	133.57	3.00	18.94	11.70	272.07	2046.56	312.51	99.54	264.87	3902.11	(11)
(12) Public & Profess.										.15	1.85	2.96	35.65	436.54	1530.73		19.17	2027.05	(12)
(15) Artificial	49.08	76.16	589.70	106.25	102.73	308.39	162.22	310.25	133.89	96.11	73.64	51.89	64.86	5.61		-13.52	12.40	2129.66	(13)
(14) Household income	124.32	1479.20	377.12	173.86	341.31	133.71	148.86	339.61	603.10	273.93	1726.14	1020.95			2189.85		710.49	9642.45	(14)
(15) Government income	56.57	60.60	66.20	61.63	103.71	61.33	60.80	154.81	206.76	112.41	1114.46	661.39	392.25	372.88		142.00	-65.24	3771.36	(15)
(16) Savings	52.71	203.03	82.84	17.80	20.03	53.78	27.82	57.83	30.16	56.61	607.89	25.31		2521.20	-573.12		172.19	3156.28	(16)
(17) Imports	650.40	131.54	588.32	394.16	270.06	430.84	114.10	873.66	153.48	137.84	219.88	154.52	671.55	1490.49		378.33	-16.11	7243.03	(17)
Total input	1070.08	2959.82	4608.85	859.37	926.82	1032.44	755.58	1784.30	2020.58	851.35	3902.11	2027.05	2129.66	9642.45	3771.36	3156.28	7243.08	Total	
Sectors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		Sectors
Employment ('000) in 1978 actual	19.1	222.2	56.0	44.7	38.9	18.6	20.5	54.9	99.1	39.5	291.3	205.2						1110.0	Employ. 1978 ac.
Employment in 1982 manyears	24.23	258.00	57.24	50.94	38.35	16.49	22.79	39.94	82.57	42.47	319.01	217.42						1169.45	in 1982 m.y.
Imported coal (£m)	2.74		.85	.06	.06	.02	.89	.40	.10		3.18	2.09	.18	41.93			5.61	59.11	coal
Imported crude oil	381.58																	381.58	crude
Imported refined oil + LPG (ex. lubricating)	200.75	17.70	23.17	3.79	3.91	5.73	14.33	4.33	6.51	117.38	18.21	12.12	47.46	125.20		33.55		634.14	refined
Rest of imports	65.33	113.84	564.30	390.31	266.09	425.09	98.88	868.93	146.87	20.46	198.49	140.31	623.91	1323.36		944.80	-22.72	6168.25	rest



Appendix Table A7: Ireland, 1982 13-Sector transactions at 1982 basic prices (£m)

Sectors	Energy	Agriculture	Food	Clothing	Wood	Chemicals	Clay	Engineering	Construction	Transport	Commerce	Public and Professional	Artificial	Household expend. & savings	Govt. current outgoings & savings	Capital formation	Exports	Total Output	Sectors
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		
(1) Energy	155.5	46.0	39.0	11.0	15.0	26.0	32.0	31.0	10.0	11.0	42.3	34.7	65.0	361.0			43.0	918.5	(1)
(2) Agriculture		24.0	1464.2		2.1						1.1	0.9		378.7		33.0	301.0	2205.0	(2)
(3) Food		247.0	824.0	28.2							9.8	3.2		1091.8			1930.0	4159.0	(3)
(4) Clothing				23.2	.7									109.1			476.0	609.0	(4)
(5) Wood					92.1				29.0		10.9	9.1	204.0	280.9		15.0	246.0	387.0	(5)
(6) Chemicals		58.0	5.6	2.5		56.8		43.3			2.8	2.2	42.8	22.0			924.0	1158.0	(6)
(7) Clay		9.0					98.6		332.9		1.1	0.9	15.5	49.0			177.0	7682.0	(7)
(8) Engineering	2.0	51.0		5.7	2.3	9.2	5.5	128.9	116.0	50.0	12.6	10.4	47.0	151.4		197.0	1952.0	2721.0	(8)
(9) Construction	7.0		17.0				4.0		317.1	17.0	10.9	9.1		48.9	141.0	1792.0		2364.0	(9)
(10) Transport		44.0							109.0		15.3	3.7	15.0	204.0		31.0	412.0	832.0	(10)
(11) Commerce	4.6	292.3	88.0	39.4	21.3	47.6	61.1	175.1	135.6	2.7	25.4	9.7	71.0	2125.0	381.0	94.0	257.0	5851.0	(11)
(12) Public & Prof.	0.4	33.7	10.0	4.6	2.5	5.4	6.9	19.9	15.4	0.5	2.1	1.8	8.0	124.0	2160.0			2395.0	(12)
(13) Artificial	46.3	94.0	545.5	68.8	68.4	226.7	142.5	204.3	89.4	50.0	42.1	15.9		1.0				1594.9	(13)
(14) Household income	171.7	842.0	507.8	132.4	307.9	197.4	147.8	500.1	575.6	281.0	1417.0	1368.0			2642.0		948.5	10037.2	(14)
(15) Government income	155.2	31.0	59.0	42.0	102.1	65.0	61.0	273.0	262.0	162.0	1081.1	880.9	438.1	837.0		35.0	-12.0	4522.4	(15)
(16) Savings	108.7	207.0	34.0	10.2	5.9	54.1	14.1	80.9	16.0	34.1	318.9	27.6		1977.5	-1146.6		1428.6	3171.0	(16)
(17) Imports	267.1	226.0	346.9	241.0	268.5	469.8	108.5	1264.5	358.0	223.9	839.6	11.9	692.5	2295.9	345.0	924.0	27.0	9110.1	(17)
Total input	918.5	2205.0	4189.0	609.0	887.0	1158.0	682.0	2721.0	2364.0	832.6	5851.6	2395.0	1594.9	10037.2	4532.4	3171.0	9110.1	Total	
Sectors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		Sectors
Employment ('000)	20.8	192.2	31.4	36.1	36.7	18.5	20.3	60.9	96.6	42.5	313.2	256.9						1146.1	Employ.
Imported coal (£m)			1.0				1.0	1.0			2.5	2.5		80.0				88.0	coal
Imported crude oil	92.0																	92.0	crude
Imported refined oil + LPG (ex. lubricating)	139.0	14.0	31.0	2.0	4.0	10.0	19.0	10.0	71.0	146.0	14.0	6.0	103.0	255.0		-36.0		763.0	refined
Rest of imports	36.1	212.0	514.9	239.0	264.3	459.8	88.5	1253.5	287.0	77.9	823.1	3.4	589.5	1960.9	345.0	960.0	27.0	8142.1	rest