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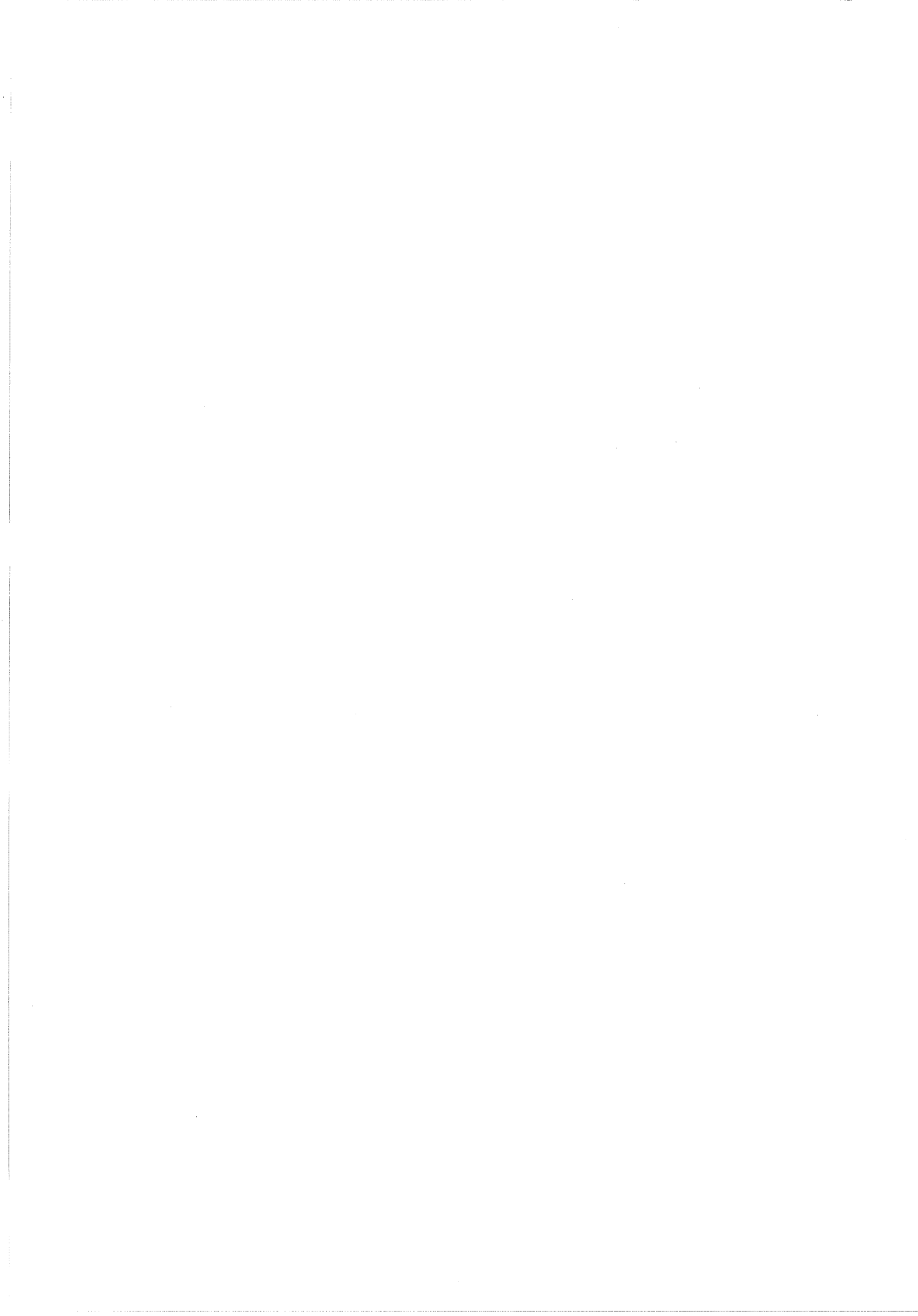
The Changing Structure of the Irish Economy: As Reflected in the 1985 Input-Output Table

by

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1 Introduction

One of the most detailed sources of information on the structure of the Irish economy is provided by the input-output tables prepared by the CSO. The extensive range of data needed to construct the tables means that they are only prepared at infrequent intervals and the process of building the table can only begin after all other sources of information have been published. The latest table, for 1985, was only published in 1992. Earlier tables prepared by the CSO are available for 1964, 1969, and 1975. While more up to date tables would be an advantage, the relatively slow pace of change in the structure of the economy means that the 1985 table can still tell us much of value about the economy and the relation between different industries and sectors.

The tables in this paper show a picture of the Irish economy at a point in time. They give details of the structure of inputs into each sector and they also show the immediate destination within the economy of the output of each sector. These data provide guidance on the extent of import penetration and the linkage between different sectors. The data are presented as a series of tables and the categorisation used for the 1969, the 1975, and the 1985 tables allows direct comparisons between them (Murphy, 1984). The methodology used in constructing the tables is described in Green and Le Grontec (1976) & CSO (1992) and is used in the construction of input-output tables for all other EC members. This facilitates international comparisons of industrial structure.

Analysis of the tables allows one to identify not only the structure of the inputs directly into a particular sector but also the indirect flows. For example, while in 1985 0.93% of the input

directly into farming consisted of electricity gas and water, some of the other inputs used in that sector had themselves required electricity in their manufacture. On certain restrictive assumptions, when this is taken into account it turns out that 2.84% of the inputs used in agriculture in 1985 came, directly or indirectly, from the electricity, gas and water sector. The results of the full analysis of the 1985 input-output tables are described in subsequent sections of this paper.

In this paper we analyse the table for 1985 to see how the structure of the economy has changed between 1975 and 1985, the period immediately after Ireland's entry into the European Community. In Section 2 we examine the structure of inputs from the different sectors of the economy into final demand; in particular, what proportion of consumption and the other components of final demand came directly or indirectly from imports. In Section 3 we consider the structure of inputs into each of the major production sectors of the Irish economy. In Section 4 we discuss the destination of the output from the different sectors of the economy - how dependent were they on domestic demand and what proportion of their output was exported. Finally, in Section 5, we draw some conclusions. Appendix 1 gives details of the derivation of the data presented in this paper and Appendix 2 presents a full set of tables.

2 The Structure of Final Demand

One of the key features of the opening up of the Irish economy over the last thirty years has been the increased penetration of imports. Whereas the economy in 1960 was very closed with many of the goods consumed in the country being produced by domestic firms, the situation in 1985,

as reflected in Table 1, was very different. This table shows the direct and indirect import contents of final demand and its components for the four years for which input-output tables are available - 1964, 1969, 1975, and 1985.

Table 1
The Import Content of Final Demand

| | 1964 | 1969 | 1975 | 1985 | |
|--|----------------------|----------------------|----------------------|----------------------|----------|
| | Direct & Indirect | Direct & Indirect | Direct & Indirect | Direct & Indirect | Indirect |
| Consumption | 27.7 | 29.5 | 34.5 | 35.7 | 11.7 |
| Food | NA | 26.7 | 36.4 | 38.6 | 20.2 |
| Drink | NA | 9.0 | 11.9 | 12.8 | 8.0 |
| Tobacco | NA | 12.4 | 17.1 | 9.0 | 5.2 |
| Clothing & Footwear | NA | 45.4 | 59.7 | 65.2 | 9.7 |
| Fuel | NA | 29.2 | 45.1 | 34.8 | 16.8 |
| Petrol | NA | 38.9 | 39.6 | 41.6 | 8.1 |
| Durables | NA | 45.5 | 57.2 | 57.4 | 9.4 |
| Transport Equipment | NA | 47.4 | 45.2 | 39.3 | 0.8 |
| Other Goods | NA | NA | 65.0 | 58.7 | 12.5 |
| Other Services | NA | NA | 10.5 | 11.7 | 11.7 |
| Tourism Imports | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 |
| Govt. current exp. on goods & services | 8.0 | 9.0 | 10.4 | 8.1 | 8.1 |
| Building Investment | 25.5 | 23.9 | 26.3 | 23.4 | 23.4 |
| Machinery & Equipment Investment | 73.2 | 73.6 | 70.9 | 69.0 | 6.6 |
| Agricultural exports | 18.6 | 22.0 | 19.0 | 31.1 | 30.3 |
| Industrial exports | 44.7 | 40.0 | 46.5 | 49.8 | 40.5 |
| Invisible Exports | 24.0 | NA | NA | 28.7 | 24.2 |
| Final Demand | NA | NA | 33.9 | 37.2 | 21.4 |

The input-output tables available for the Irish economy cover the period 1964 to 1985. This period roughly coincides with the opening up of the economy to free trade; the Anglo-Irish Free Trade Agreement was signed in 1965 and Ireland entered the EC in 1973. Comparison of the tables, as shown in Table 1, indicates that change was most rapid in the period 1964 to 1975. Over that period there was a major increase in import penetration, reflected in the rise in the import content of a unit of consumption from just under 28% in 1964 to nearly 35% in 1975. This increase in import penetration occurred across most categories of consumer goods.

However, in the ten years between 1975 and 1985 the import content of consumption showed very little change at an aggregate level. While there was some further increase in the import content of consumption of clothing and footwear, the import content of consumption of tobacco actually fell due to an increase in the tax content. This result for aggregate consumption, while not surprising (Fitz Gerald, 1987), is important suggesting that the effects of free trade on industry supplying the domestic market were felt relatively rapidly after joining the EC.

Table 1 also shows the indirect import content separately for 1985. In the case of total personal consumption only 11.7 per cent of final consumption was accounted for by imports embodied in goods or services produced domestically. The bulk of the import content occurred through consumption of goods which underwent no further processing in the economy. For instance, in the case of clothing and footwear the total import content of final demand is 65%, of which 55% is accounted for by goods imported directly and less than 10% by imported raw materials used in goods manufactured domestically.

In the case of both components of investment, building and non-building, the import content in 1985 was lower than it had been in 1964. A significant factor in the fall in the import content of investment has been the increase in the indirect tax content, discussed later in this Section. For building investment the import content remains low at 23 per cent in 1985. By contrast, 69 per cent of non building investment was imported reflecting the fact that Irish industry is not a major producer of capital goods.

All components of exports have shown an increase in import content since 1964. In the case of agricultural exports the figures are a little misleading as an ever increasing share of the value of such exports came directly from the EC as subsidies (see Table 2 below). If, in calculating the proportion of the exports accounted for by imports, the value of the exports is treated exclusive of the subsidies, the pattern would be very different. In that case the import content of agricultural exports, valued at producer prices, would be around 20% in 1985, a relatively small increase compared to 1975. It is probably more informative to look at the import content of the output of the agricultural and food processing sectors directly, as is done in Section 3, to identify whether there were any significant changes in structure.

For industrial exports there was a rise in import content between 1975 and 1985 from 46.5 per cent to 50 per cent. However, this rise is deceptive. Underlying the change there was a huge increase in the proportion of industrial goods which passed through the Irish economy without any processing. For 1985 this is shown in Table 1 as the difference between the indirect and the total import content of industrial exports, 9.3 per cent of the value of total exports. In 1975 the proportion was around 0.6 per cent. Whether this change is due to a reclassification of exports in

1985 or represents a genuine large increase in imports of goods for re-export is unclear. When these re-exports are excluded there was a significant fall in the indirect import content of industrial exports.

The growing importance of industrial exports in final demand, with their high import content, reflects the extreme openness of the Irish economy. While the import content of final demand continued to rise between 1975 and 1985 it is clear that this was due more to the shifting composition of final demand, in particular the increasing share of industrial exports, than to any increase in import penetration.

From table 2 we can observe that the net indirect tax content of nearly all components of final demand has increased substantially between 1975 and 1985. The one exception is agricultural exports where indirect taxes less subsidies has fallen from -10% to -37% of total exports reflecting the huge increase in EC subsidies which appears as a negative item reducing the price of the exports to foreign consumers.

The second notable area where net indirect taxes changed over the period is investment. In the case of both building and non-building investment the tax content rose between 1975 and 1985. As discussed above it helped reduce the observed share of imports in the after tax value of investment.

The final area where indirect taxes have increased their share of final demand is personal consumption. However, while the increase is relatively small at an aggregate level it masks

contradictory trends within individual components of consumption. For consumption of other services the indirect tax content fell drastically reflecting the abolition of household rates after 1977. In the case of food the abolition of subsidies contributed to the turnaround in the net tax content. The substantial rise in excise taxes also affected the tax content of drink, and tobacco consumption. In the case of other services the subsidy on transport services and on housing services results in the net of tax content being negative in 1985.

Table 2

The Indirect Tax and Subsidy Content of Final Demand

| | 1975 | 1985 |
|---------------------------------------|-------|-------|
| | Total | Total |
| Consumption | 16.4 | 17.7 |
| Food | -3.8 | 4.3 |
| Drink | 41.1 | 55.7 |
| Tobacco | 64.5 | 72.7 |
| Clothing & Footwear | 9.8 | 11.2 |
| Fuel | 5.9 | 6.0 |
| Petrol | 48.9 | 41.9 |
| Durables | 17.4 | 19.3 |
| Transport Equipment | 36.3 | 46.6 |
| Other Goods | 16.1 | 12.2 |
| Other Services | 11.4 | -1.9 |
| Tourism Imports | 0.0 | 0.0 |
| Govt. current exp.on goods & services | 1.0 | 3.5 |
| Building Investment | 2.4 | 8.9 |
| Machinery & Equipment Investment | 6.8 | 11.3 |
| Agricultural exports | -10.1 | -37.0 |
| Industrial exports | -1.5 | 0.8 |
| Invisible Exports | 8.1 | 7.0 |
| Final Demand | 6.8 | 6.5 |

Tables 1 and 2 give the import and net indirect tax content of final demand. Value added, shown in Table 3, makes up the balance of final demand. In the case of personal consumption it is

striking that only 8% of total expenditure in 1985 was accounted for by value added arising in the manufacturing sector, reflecting the fact that the economy is very open with the bulk of goods consumed being imported. In so far as personal consumption contributed to demand for domestic production it was primarily through the services sector with value added in that sector accounting for over 27% of total expenditure.

Table 3

The Domestic Value-Added Content of Final Demand

| | Consumption | | Services | Exports | | Investment | | Final Demand |
|----------------------------|-------------|-------|----------|---------|------------|------------|-------|--------------|
| | Personal | Govt. | | Agric. | Industrial | Building | Other | |
| Agriculture | 5.1 | 0.2 | 1.2 | 62.2 | 1.1 | 0.1 | 0.6 | 6.0 |
| Traditional Manufacturing | 4.7 | 2.3 | 4.5 | 2.1 | 12.6 | 8.5 | 4.4 | 6.7 |
| Food Processing | 2.3 | 0.2 | 0.7 | 15.1 | 2.7 | 0.0 | 0.1 | 2.6 |
| High-Tech Manufacturing | 1.0 | 0.5 | 0.3 | 4.1 | 19.8 | 0.9 | 1.1 | 6.4 |
| Utilities | 3.3 | 1.5 | 2.1 | 3.0 | 1.8 | 1.4 | 0.5 | 2.3 |
| Building | 1.0 | 2.8 | 1.3 | 1.3 | 0.4 | 39.5 | 0.3 | 3.5 |
| Distribution | 8.9 | 3.2 | 16.6 | 11.6 | 5.2 | 8.6 | 8.8 | 7.6 |
| Transport & Communications | 1.2 | 2.5 | 16.8 | 2.2 | 1.6 | 2.7 | 1.2 | 3.1 |
| Other Market Services | 12.4 | 5.6 | 15.2 | 5.1 | 2.8 | 3.5 | 2.3 | 7.4 |
| Non Market Services | 4.6 | 69.6 | 5.5 | 1.1 | 1.6 | 2.3 | 0.4 | 10.8 |
| Total | 46.6 | 88.3 | 64.3 | 108.0 | 49.5 | 67.6 | 19.8 | 56.3 |

In government current expenditure on goods and services value added accounted directly and indirectly for 88% of total expenditure, the vast bulk of it arising in the non market services sector. In the case of exports we find a high domestic value added content in both agricultural and services exports. As discussed above, the figures for agricultural exports are affected by the importance of subsidies on exports. In the case of invisible (services) exports we find that over two thirds of the total flow is accounted for by value added in the domestic economy, the bulk of

it in the services sector. This reflects the significance of tourism exports and their importance for demand for domestically produced goods and services.

In the case of Industrial exports we find the manufacturing sectors dominate, especially Traditional and High-Tech Manufacturing. Of the total value of such exports only just over a third resulted in value added in manufacturing. There was also a significant effect on value added in services. However, when profit repatriations are allowed for, which are here included under value added, it can be seen that the bulk of the benefits accruing from the value of industrial exports flowed back out of the economy as imports or profit repatriations.

The value added content of Building Investment is large at 68%, primarily accounted for by the building sector itself (just under 40%). Of the residue nearly 9% of the value of total investment in buildings resulted in value added in both the traditional manufacturing sector and in the distribution sector. For other investment the domestic value added was very low because of the high import content. The distribution sector accounted for almost half of the domestic value added content of a unit of this category of investment.

3 The Input Structure of the Productive Sectors

To understand more fully the changing structure of the economy it is important to look at the breakdown of inputs between the individual productive sectors of the economy. An examination of these data can throw light on a number of issues concerning the structure of the productive sector. There has been much discussion of the possibility that industry may be contracting out

transport and other services. There have also been efforts over the 1980s to increase the linkage between the high technology sector and the other sectors of the economy. The years 1975 to 1985 cover a period of major change in the energy sector. These issues, together with the importance of imported inputs, are considered here.

Table 4 outlines the source of inputs into each sector of the economy. For the agricultural sector domestic value added is high. Of the inputs of goods and services into the sector a relatively small proportion comes from imports. The rather anomalous input from the high-technology manufacturing sector is a purchase of fertilisers.¹

Table 4
Composition of Inputs Into Each Sector of the Economy

| | Agric. | Trad. | Food | H.Tec. | Util. | Buil. | Dist. | Tr.&C | Oth. Mar. S | Non Market |
|--------------------|--------|-------|------|--------|-------|-------|-------|-------|-------------|------------|
| Agriculture | 17.9 | 1.0 | 44.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Traditional | 0.6 | 7.9 | 1.6 | 1.6 | 4.8 | 19.0 | 3.1 | 5.1 | 1.7 | 3.3 |
| Food Processing | 11.7 | 1.7 | 11.6 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 | 0.6 |
| High Tech | 6.2 | 0.8 | 0.2 | 2.2 | 0.2 | 1.8 | 0.8 | 0.1 | 0.9 | 0.8 |
| Utilities | 1.4 | 3.4 | 1.8 | 1.8 | 19.0 | 1.8 | 3.2 | 1.7 | 1.1 | 1.7 |
| Building | 1.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 3.8 | 7.2 | 2.8 | 1.4 |
| Distribution | 6.2 | 5.2 | 7.3 | 2.7 | 0.6 | 12.5 | 2.8 | 5.5 | 3.8 | 3.5 |
| Transp. & Com. | 0.6 | 1.5 | 0.9 | 1.0 | 0.6 | 3.3 | 5.5 | 3.4 | 3.7 | 3.3 |
| Other Market | 1.3 | 2.0 | 0.9 | 2.1 | 1.6 | 1.2 | 16.7 | 9.4 | 29.9 | 5.2 |
| Non Market | 0.0 | 1.4 | 0.4 | 2.8 | 0.1 | 2.6 | 0.3 | 0.0 | 4.2 | 0.5 |
| Total Intra | 47.3 | 25.1 | 69.3 | 14.5 | 27.0 | 42.2 | 36.4 | 32.7 | 48.4 | 20.3 |
| Energy Imports | 1.4 | 1.8 | 1.4 | 1.5 | 23.6 | 2.9 | 0.7 | 2.3 | 0.4 | 0.7 |
| Total Imports | 7.3 | 32.9 | 13.8 | 44.6 | 25.2 | 14.2 | 4.4 | 15.8 | 4.8 | 2.9 |
| Net Indirect Taxes | -3.9 | 2.8 | 2.6 | 1.5 | 2.3 | 2.3 | 1.5 | 2.8 | -2.0 | 1.1 |
| Value Added | 49.2 | 39.3 | 14.4 | 39.4 | 45.5 | 41.3 | 57.7 | 48.6 | 48.8 | 75.8 |

¹ Because of the level of aggregation used in the input-output table all the output of the chemicals sector has been classified as high technology.

The traditional manufacturing sector used a fairly high proportion of imported inputs, around a third of the value of gross output. The sector shows relatively little linkage to the manufacturing sector, drawing only 10% of its gross output as inputs from domestic manufacturing. The purchase of domestic services is of a similar order of magnitude. This shows a relatively low degree of linkage with the rest of the domestic productive sector.

Food processing draws a high proportion of its inputs from within the domestic economy. As Table 4 shows, in 1985 over 44% of its inputs came from agriculture. It also drew around 10% of its inputs from domestic services. Imported inputs accounted for only 14% of gross output.

The high technology manufacturing sector shows relatively little linkage to the rest of the economy. It draws under 4% of its gross output as inputs from the domestic manufacturing sector. Its purchase of inputs from the domestic market services sector, at around 8.6% of total turnover, is similar to that for the other sectors of manufacturing. The vast bulk of the inputs used in this sector are imported.

For the building sector the linkages to the rest of the economy are quite extensive. Of total turnover 19% was spent on purchase of goods, such as cement, from the traditional manufacturing sector. It also made extensive use of the services of the distribution sector; these services accounted for one eighth of turnover. This sector also spent a higher proportion of its turnover on the purchase of transport and communications services than any other sector of industry.

The services sectors generally had much more extensive links to other sectors of the economy, including other services sectors. The distribution sector buys extensive services from the other market services sector. It also spent 5.5% of gross output on the purchase of transport and communications services. The other market services sector itself spent nearly 42% of gross output on purchases of services. All the services sectors spent over 3% of their gross output on transport services. The non market services sector showed relatively little linkage to other sectors in the economy with the bulk of the inputs being wage costs.

Outlined in table 5 below is a comparison of the importance for each sector of transport costs, market services costs and energy costs for 1975 and 1985. This table provides evidence on the extent to which contracting out has occurred over the ten year period. As a proportion of total inputs, Transport & Communication costs have risen in only two sectors, namely the Building and Non-Market Services sectors (by 1 percentage point each). While it has remained constant as a proportion of total input in some sectors it has declined considerably in others. The most noticeable of these are the Transport & Communications sector (4 percentage points) itself and the High-Tech (a 5 percentage points decline) and Traditional Manufacturing (a 2 percentage points decline) sectors. Evidence of contracting out of Transport & Communications costs is not apparent.

However, there are a number of problems with these data (Durkan and Reynolds-Feighan, 1992). Firstly, the input-output table does not allow one to separate out the cost of in house transport services. Secondly, there is a considerable transport input into exports of services and some of this input is directly related to the cost of exporting goods from Ireland. Thirdly, there has been an increase in the input from the distribution sector into many other sectors of the

economy. The distribution sector, in turn, is a significant purchaser of transport services so that the importance of transport costs for industry may be underestimated when looking at the direct input alone. Finally, where inputs have been imported the cost of transport of those inputs will, generally, be bundled with the cost of the imports themselves. This is particularly true where the transport cost has arisen outside of the country.

Table 5

Change in Structure of Inputs Between 1975 and 1985

| | | Agric. | Trad. | Food | H.Tec. | Util. | Buil. | Dist. | Tr.&C | Oth. Mar. S | Non Market |
|----------------------------|------|--------|-------|------|--------|-------|-------|-------|-------|-------------|------------|
| Distribution | 1985 | 6.2 | 5.2 | 7.3 | 2.7 | 0.6 | 12.5 | 2.8 | 5.5 | 3.8 | 3.5 |
| | 1975 | 4.4 | 1.2 | 1.3 | 0.9 | 0.3 | 8.3 | 1.4 | 2.9 | 1.5 | 0.6 |
| Transport & Communications | 1985 | 0.6 | 1.5 | 0.9 | 1.0 | 0.6 | 3.3 | 5.5 | 3.4 | 3.7 | 3.3 |
| | 1975 | 0.9 | 4.0 | 1.8 | 5.6 | 1.0 | 2.1 | 8.3 | 6.7 | 3.9 | 1.8 |
| Other Market Services | 1985 | 1.3 | 2.0 | 0.9 | 2.1 | 1.6 | 1.2 | 16.7 | 9.4 | 29.9 | 5.2 |
| | 1975 | 1.1 | 4.9 | 2.0 | 6.2 | 1.1 | 5.3 | 11.5 | 3.0 | 22.4 | 2.5 |
| Total Market Services | 1985 | 8.2 | 10.1 | 9.5 | 8.6 | 2.9 | 19.5 | 25.3 | 18.3 | 41.6 | 12.5 |
| | 1975 | 6.4 | 10.1 | 5.0 | 12.7 | 2.5 | 15.7 | 21.2 | 12.7 | 27.8 | 4.9 |
| Total Energy | 1985 | 2.8 | 5.1 | 3.2 | 3.3 | 42.6 | 4.8 | 3.9 | 4.1 | 1.6 | 2.4 |
| | 1975 | 2.0 | 4.5 | 2.1 | 4.7 | 57.5 | 3.1 | 3.7 | 5.0 | 1.2 | 2.3 |

A striking feature of Table 5 is the increase in the role of inputs from the distribution sector in all sectors of the economy. The increase is very noticeable in traditional manufacturing, food processing, and building. However, all other sectors also show an increase in dependence on such inputs. This suggests a significant contracting out by industry of the distribution function in the case of manufacturing. It is somewhat more surprising in the case of building where there was already a substantial input from the distribution sector and where the distribution sector would have limited involvement in the sale of the output of the sector.

When the other market services inputs for 1975 and 1985 are compared there appears to have been a significant drop in building, traditional and high technology manufacturing. This drop tends to counterbalance the increase in distribution services input. Whether or not this change reflects a real change in economic behaviour or merely changes in classification is not clear. Within the services sector the role of inputs from the other market services sector unambiguously increased between 1975 and 1985.

Taken together the services input into the manufacturing sector actually declined between 1975 and 1985 running counter to the expected trend if contracting out had increased. In the services sector the reverse is the case.

It is more difficult to use input-output tables to examine the effects of the energy shocks of the 1970s because of the fact that they involved major changes in relative prices; the input-output tables merely present flows between sectors at current prices at a point in time. In spite of any changes in relative prices that occurred over the ten years the input-output tables do not suggest that there was a major change in the dependence of the Irish productive sector on energy. Three of the sectors showed a decrease in dependence on energy, calculated as a share of gross output: utilities, high technology manufacturing, and transport and communications.

In the case of utilities a major factor in the change was the increase in financing costs of electricity generation. This is reflected in an increase in the share of profits and depreciation in that sector from 13% of turnover in 1975 to 33% in 1985. For high technology manufacturing

the reduction reflects a change in the structure of the sector with a growth in importance of computers and electronics at the expense of energy intensive manufacture of chemicals.

4 The Destination of Output

In section 3 we considered the input structure of individual sectors within the economy. We found that there were varying degrees of linkage between sectors in terms of inputs sourced in the domestic economy. For example, the High-Tech Manufacturing sector only sourced 15% of its total input from the domestic economy. Another way of considering the isolation of specific sectors is to look at the dependence of these sectors on domestic demand. To do this we will briefly look at the destination of each sector's output.

The output of the agricultural sector has three main destinations. It uses 18% of its output as further input into itself and 68% goes to industry, predominantly food processing. Of the 14% of output which goes into final demand 11% is exported with the remainder going into consumption. The Agricultural sector is therefore dependent directly on domestic industry as a market for its output. Relatively little output is exported without at least basic processing. This pattern is almost identical to the situation in 1975.

The three manufacturing sectors are less dependent on domestic industry to buy their output. In the case of the Traditional Manufacturing sector only 31% of its output is used as an input elsewhere in the productive sector of the domestic economy. While this 31% goes into all sectors the sectors which are most important are the Building sector and the Traditional Manufacturing

sector itself. For the traditional manufacturing sector 69% of output goes into final demand. Of this 18 percentage points goes into consumption, mainly drink, tobacco, clothes & footwear and other goods. Industrial exports accounts directly for almost half of the gross output of the traditional sector (47%). If the indirect flows through other productive sectors were taken into account the percentage would rise to over half. Thus domestic demand, other than building, is relatively unimportant for even the traditional manufacturing sector.

Table 6

The Destination of Output from Each Sector

| | Agric. | Industry | | | Services | | Intra Industry | Cons. | Exports | | Invest. Total | Final Demand |
|---------------------------|--------|----------|-------|--------|----------|---------|----------------|-------|---------|-------|---------------|--------------|
| | | Manuf. | Util. | Build. | Mar. | Non-Mar | | | Serv. | Goods | | |
| Agriculture | 17.9 | 67.8 | 0.0 | 0.0 | 0.0 | 0.1 | 85.8 | 3.8 | 0.0 | 10.8 | 0.4 | 14.2 |
| Traditional Manufacturing | 0.4 | 11.2 | 1.4 | 9.5 | 5.9 | 2.7 | 31.1 | 17.7 | 1.5 | 46.9 | 3.1 | 68.9 |
| Food Processing | 7.8 | 13.2 | 0.0 | 0.0 | 0.4 | 0.5 | 21.9 | 25.9 | 0.8 | 50.5 | 0.0 | 78.1 |
| High-Tech Manufacturing | 4.6 | 3.3 | 0.1 | 0.9 | 1.5 | 0.7 | 11.0 | 2.0 | 0.0 | 85.6 | 0.9 | 89.0 |
| Utilities | 3.4 | 26.5 | 19.0 | 3.1 | 13.8 | 4.7 | 67.8 | 25.4 | 1.2 | 5.7 | 0.0 | 32.2 |
| Building | 1.9 | 1.2 | 0.0 | 0.0 | 16.4 | 2.3 | 21.8 | 0.0 | 0.0 | 0.0 | 72.0 | 78.2 |
| Distribution | 5.7 | 20.3 | 0.2 | 8.0 | 9.9 | 3.8 | 47.7 | 30.4 | 7.7 | 8.7 | 5.5 | 52.3 |
| Transport & Comm. | 1.1 | 9.3 | 0.5 | 4.3 | 23.7 | 7.4 | 46.3 | 24.2 | 25.5 | 3.3 | 0.8 | 53.7 |
| Other Market Services | 1.1 | 5.6 | 0.5 | 0.7 | 48.3 | 4.9 | 61.1 | 34.5 | 3.4 | 0.0 | 0.0 | 38.9 |
| Non Market Services | 0.0 | 5.4 | 0.0 | 1.5 | 4.8 | 0.5 | 12.2 | 10.5 | 1.6 | 0.0 | 0.0 | 87.8 |
| Total | 4.5 | 15.4 | 1.1 | 2.8 | 11.3 | 2.3 | 37.3 | 17.5 | 3.0 | 27.0 | 6.0 | 62.7 |

A very small proportion of the output of the food processing sector is used as an input by other sectors of the domestic economy. Approximately a quarter of the sector's output goes directly into personal consumption and over half goes directly into exports.

The high-tech manufacturing sector is even less dependent on the domestic productive sector to buy its output. Thus there was little forward as well as backward linkage between this sector and

the rest of the economy in 1985. A remarkable 86% of the output of the high tech. sector was exported in 1985.

A large proportion (68%) of the Utilities sector's output is used as an input in other sectors. Only a quarter is used by domestic consumers. Nearly a quarter of the output of the utilities sector was used in manufacturing industry and 19% was used by the utilities sector itself. The detailed data in the input-output table indicates that the Irish industrial sector has very few energy intensive industries. Those that are there are sufficiently small that they are swamped by the bulk of industry which uses relatively little energy.

It is not surprising that most of the Building sector's output goes into the investment component of final demand. Output from this sector is also used as an input into other sectors within the economy. The Building sector disposed of 22% of its output in 1985 in this way. This output mainly went to the Agricultural and Services sectors.

The Distribution sector has a broad based demand for its output within the economy; 48% of its output is further processed within the economy. This is markedly different from the situation in 1975 when only 28% of distribution sector output was used as an input by other productive sectors. This sharp change raises questions as to whether there has been a change in classification in the 1985 table. The bulk of the distribution sector output entering final demand goes to personal consumption (30%).

The destination of output of the Transport & Communications sector is also relatively evenly divided between final demand (54%) and intra-industry inputs (46%). Roughly half of output going into final demand is consumed by households (24% of output) and the rest (26%) enters as invisible exports.

Output of the other market Services sector is divided between final demand, 39%, and other sectors, 61%. Its output is used in all sectors. Most of the output which goes into final demand is consumed by households. Output of the Non-Market Services sector goes mainly into final demand (88%). Government current expenditure accounts for seventy-six percentage points of this and consumption accounts for most of the remainder.

5 Conclusions

From our examination of the 1985 input-output tables and comparison with tables for earlier years we can say that import penetration, which rose rapidly in the period 1964-1975, stabilised at the 1975 level in the subsequent decade. While the share of imports in final demand showed some further increase in the period to 1985, this was due to the rapid growth in the share of industrial exports in final demand rather than to any change in the structure of the productive sector of the economy.

The analysis of the input-output tables described above demonstrates the extreme openness of the Irish economy. A very high proportion of all goods consumed or purchased for investment purposes are imported. For domestic industry imported inputs account for a substantial

percentage of total output and a very high proportion of that output is exported. There are two exceptions to this pattern: the forward linkage between the traditional manufacturing sector and the building industry (building materials); the backward linkage between food processing and the agricultural sector. Otherwise, in spite of efforts to the contrary, there is no great sign of increased linkage between individual manufacturing industries and other sectors of the economy, though changes may have occurred since 1985.

There has been some discussion of the importance of contracting out of business services by manufacturing industry. While the role of the distribution sector in providing services to the domestic productive sector grew over the period 1975-1985, the overall share of market services inputs in total manufacturing output showed relatively little change. In particular, the measured value of transport services as a share of manufacturing turnover or output actually fell over the period. This latter change may be due to problems in classification of data and may disguise changes which have taken place in the transport sector generally.

The insensitivity of the domestic economy to domestic demand is explained by the high level of dependence of the manufacturing sector on exports. Domestic consumption has a much bigger impact on demand for services than for domestically produced goods. The building industry and tourism exports are the two categories of domestic demand which stand out as having a disproportionate effect on the demand for domestically produced goods and services.

Finally, it should be noted that while the input-output table gives a picture of the underlying structure of the economy at a point in time, it does not tell us how output or employment will react to marginal changes in demand.

6 References

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APPENDIX 1

DERIVATION OF THE DATA

The data shown in this paper have been derived from the input-output tables published by the CSO for 1985. The basic table used is Table A1 in the CSO publication. Final demand is further disaggregated using additional data from the CSO on net indirect taxes and subsidies and on the distribution margin. The productive sectors have been aggregated as shown below where the numbers are the NACE codes for the sectors shown in the CSO table:

- Agriculture: S01,
- Traditional Manufacturing: S03, S05, S13, S15, S19, S21, S27, S29, S37, S39, S41 to S51
- Food Processing: S31, S33, S35
- High Technology Manufacturing: S17, S23, S25
- Utilities: S07, S09, S11
- Building: S53
- Distribution: S55, S57, S59
- Transport & Communications: S61 to S69
- Other Market Services: S71, S73, S79
- Non Market Services: S81, S89, S93

The imported primary inputs have been disaggregated using the data in Table A4 in the CSO publication.

The matrix of flows between sectors is called the "a" matrix. The total input into any sector is the flow from other sectors plus imports, indirect taxes, wages & salaries, profits, depreciation and less subsidies. Matrix A is "a" in coefficient form, derived by dividing through by the total input into each sector. This table is equal to table A2, CSO (1992). The flows of output into final demand, shown in CSO Table A.1, are disaggregated, as discussed above, and they are divided by the total for each component of final demand to give matrix F.

Derivation of the P matrix, the primary inputs per unit of output in each sector, and the Z matrix, inputs per unit of final demand, is similar to that of A and F but some initial manipulation of the raw data is required. This manipulation involves the aggregation of merchandise imports into SITC categories 0-1, 3, (2, 4-9). The disaggregated imports are given in Table A4, CSO (1992).

To compute the Z matrix, the matrix of primary inputs direct into final demand, net indirect taxes have to be broken between the disaggregated categories in final demand². The elements of the matrix are divided by the total of each component of final demand (or column total).

At this stage we have four matrices.

| | |
|---|---|
| A | F |
| P | Z |

A gives the intra-industry flows coefficient matrix.

F gives the final demand coefficient matrix.

P gives the primary inputs per unit of output.

Z gives the primary inputs, direct, per unit of final demand.

Where I is the identity matrix the primary inputs per unit of final demand, direct and indirect, are derived as:

$$P (I-A)^{-1} F + Z$$

² This information was provided separately by the CSO.

| A | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
|----|---|---|---|-------------|------------|-----------|-----------|-----------|----------|--------------|-----------|------------|------------|------------|-----------|----------|------------|-----------|----------|-------|
| 1 | Inter-Industry Flows Coefficients Matrix - The A Matrix | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | Agriculture | Traditions | Food Proc | High Tech | Utilities | Building | Distribution | Transport | Other Mark | Health & E | Public Adm | Manufactu | Industry | Market Ser | Non Marke | Services | Total |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | |
| 6 | Agriculture | | | 0.18 | 0.01 | 0.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | 0.13 | 0.00 | 0.00 | 0.00 | 0.08 |
| 7 | Traditional - Manufacturing | | | 0.01 | 0.08 | 0.02 | 0.02 | 0.05 | 0.19 | 0.03 | 0.05 | 0.02 | 0.03 | 0.04 | 0.04 | 0.06 | 0.03 | 0.03 | 0.03 | 0.04 |
| 8 | Food Processing - Manufacturing | | | 0.12 | 0.02 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.05 | 0.04 | 0.00 | 0.01 | 0.00 | 0.03 |
| 9 | High Tech - Manufacturing | | | 0.06 | 0.01 | 0.00 | 0.02 | 0.00 | 0.02 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 10 | Utilities | | | 0.01 | 0.03 | 0.02 | 0.02 | 0.19 | 0.02 | 0.03 | 0.02 | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.02 | 0.02 | 0.02 | 0.03 |
| 11 | Building | | | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.07 | 0.03 | 0.01 | 0.02 | 0.00 | 0.00 | 0.04 | 0.01 | 0.03 | 0.01 |
| 12 | Distribution | | | 0.06 | 0.05 | 0.07 | 0.03 | 0.01 | 0.13 | 0.03 | 0.06 | 0.04 | 0.03 | 0.04 | 0.05 | 0.06 | 0.04 | 0.03 | 0.04 | 0.05 |
| 13 | Transport & Communications | | | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.03 | 0.06 | 0.03 | 0.04 | 0.01 | 0.06 | 0.01 | 0.01 | 0.04 | 0.03 | 0.04 | 0.02 |
| 14 | Other Market Services | | | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 | 0.17 | 0.09 | 0.30 | 0.04 | 0.07 | 0.02 | 0.02 | 0.21 | 0.05 | 0.16 | 0.07 |
| 15 | Health & Education | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.02 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | |
| 16 | Public Administration | | | 0.00 | 0.01 | 0.00 | 0.02 | 0.00 | 0.02 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | |
| 17 | Manufacturing | | | 0.19 | 0.10 | 0.13 | 0.04 | 0.05 | 0.21 | 0.04 | 0.05 | 0.03 | 0.05 | 0.04 | 0.09 | 0.11 | 0.04 | 0.05 | 0.04 | 0.09 |
| 18 | Industry | | | 0.21 | 0.14 | 0.15 | 0.06 | 0.24 | 0.23 | 0.11 | 0.14 | 0.07 | 0.07 | 0.09 | 0.12 | 0.14 | 0.10 | 0.08 | 0.09 | 0.13 |
| 19 | Market Services | | | 0.08 | 0.09 | 0.09 | 0.06 | 0.03 | 0.17 | 0.25 | 0.18 | 0.37 | 0.09 | 0.16 | 0.08 | 0.09 | 0.29 | 0.12 | 0.24 | 0.15 |
| 20 | Non Market Services | | | 0.00 | 0.01 | 0.00 | 0.03 | 0.00 | 0.03 | 0.00 | 0.00 | 0.04 | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 | 0.00 | 0.02 | 0.01 |
| 21 | Services | | | 0.08 | 0.10 | 0.10 | 0.09 | 0.03 | 0.20 | 0.25 | 0.18 | 0.42 | 0.09 | 0.17 | 0.09 | 0.10 | 0.31 | 0.12 | 0.26 | 0.16 |
| 22 | Total | | | 0.47 | 0.25 | 0.69 | 0.15 | 0.27 | 0.42 | 0.36 | 0.33 | 0.48 | 0.16 | 0.26 | 0.37 | 0.37 | 0.41 | 0.20 | 0.35 | 0.37 |
| 23 | | | | | | | | | | | | | | | | | | | | |

| A | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ | AR |
|----|---------------------------------|---|----|----|-------------------|------|-------|---------|-----------|-------|----------|----------|-----------|---------|---------|---------|---------|-------------|--------------|-----------------|
| 1 | Final Demand Matrix - F | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | Total Consumption | | | | | | | | | | | | | | | Invisible Total |
| 4 | | | | | Consumption | Food | Drink | Tobacco | Clothes | Fuel | Petrol | Durables | Transport | Other | Other | Tourism | Exports | Merchandise | Agricultural | Industrial |
| 5 | | | | | & Footwear | | | | Equipment | Goods | Services | Imports | | Exports | Exports | Exports | Current | (NET) | Absolute | Absolute |
| 6 | Agriculture | | | | 0.01 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.21 | 0.00 |
| 7 | Traditional - Manufacturing | | | | 0.08 | 0.00 | 0.27 | 0.15 | 0.15 | 0.00 | 0.00 | 0.07 | 0.01 | 0.23 | 0.00 | 0.00 | 0.06 | 0.23 | 0.00 | 0.29 |
| 8 | Food Processing - Manufacturing | | | | 0.13 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.27 | 1.08 | 0.09 |
| 9 | High Tech. - Manufacturing | | | | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.41 | 0.00 | 0.50 |
| 10 | Utilities | | | | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.78 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 |
| 11 | Building | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12 | Distribution | | | | 0.11 | 0.12 | 0.14 | 0.08 | 0.19 | 0.02 | 0.17 | 0.15 | 0.13 | 0.16 | 0.04 | 0.00 | 0.24 | 0.03 | 0.05 | 0.03 |
| 13 | Transport & Communications | | | | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.38 | 0.01 | 0.01 | 0.01 |
| 14 | Other Market Services | | | | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.63 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 |
| 15 | Health & Education | | | | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| 16 | Public Administration | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 |
| 17 | Manufacturing | | | | 0.22 | 0.60 | 0.27 | 0.15 | 0.15 | 0.00 | 0.00 | 0.18 | 0.01 | 0.27 | 0.00 | 0.00 | 0.09 | 0.91 | 1.08 | 0.87 |
| 18 | Industry | | | | 0.25 | 0.60 | 0.27 | 0.15 | 0.15 | 0.78 | 0.07 | 0.18 | 0.01 | 0.27 | 0.00 | 0.00 | 0.11 | 0.92 | 1.08 | 0.89 |
| 19 | Market Services | | | | 0.29 | 0.12 | 0.14 | 0.08 | 0.19 | 0.02 | 0.17 | 0.15 | 0.13 | 0.16 | 0.85 | 0.00 | 0.73 | 0.04 | 0.06 | 0.04 |
| 20 | Non Market Services | | | | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 |
| 21 | Services | | | | 0.33 | 0.12 | 0.14 | 0.08 | 0.19 | 0.02 | 0.17 | 0.15 | 0.13 | 0.16 | 1.03 | 0.00 | 0.79 | 0.04 | 0.06 | 0.04 |
| 22 | Total | | | | 0.59 | 0.78 | 0.41 | 0.24 | 0.34 | 0.80 | 0.25 | 0.33 | 0.15 | 0.43 | 1.03 | 0.00 | 0.89 | 1.00 | 1.35 | 0.92 |

| A | Y | Z | AA | AB | AS | AT | AU | AV | AW | AX | AY | AZ | BA |
|----|---------------------------------|---|----|----|------------|-------------------|----------|----------|--------------|------------|------------|------------|--------|
| 1 | Final Demand Matrix - F | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | |
| 3 | | | | | Government | Change in Stocks: | | | Total | | | | TOTAL |
| 4 | | | | | Net | Total | Agri. | NonAgri | Intervention | Investment | Building | Other | FINAL |
| 5 | | | | | Current | (NET) | Absolute | Absolute | Absolute | Investment | Investment | Investment | DEMAND |
| 6 | Agriculture | | | | 0.00 | -0.15 | 1.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.01 | 0.02 |
| 7 | Traditional - Manufacturing | | | | 0.00 | -0.10 | 0.00 | 0.11 | 0.00 | 0.04 | 0.00 | 0.10 | 0.12 |
| 8 | Food Processing - Manufacturing | | | | 0.00 | 0.27 | 0.00 | 0.22 | 0.98 | 0.00 | 0.00 | 0.00 | 0.14 |
| 9 | High Tech. - Manufacturing | | | | 0.00 | 0.11 | 0.00 | 0.18 | 0.00 | 0.01 | 0.00 | 0.03 | 0.15 |
| 10 | Utilities | | | | 0.00 | -0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |
| 11 | Building | | | | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.94 | 0.00 | 0.07 |
| 12 | Distribution | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.13 | 0.07 |
| 13 | Transport & Communications | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 |
| 14 | Other Market Services | | | | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 |
| 15 | Health & Education | | | | 0.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 |
| 16 | Public Administration | | | | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 |
| 17 | Manufacturing | | | | 0.00 | 0.28 | 0.00 | 0.51 | 0.98 | 0.06 | 0.00 | 0.12 | 0.40 |
| 18 | Industry | | | | 0.05 | 0.27 | 0.00 | 0.52 | 0.98 | 0.56 | 0.94 | 0.12 | 0.49 |
| 19 | Market Services | | | | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.14 | 0.16 |
| 20 | Non Market Services | | | | 0.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 |
| 21 | Services | | | | 0.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.14 | 0.29 |
| 22 | Total | | | | 0.98 | 0.12 | 1.00 | 0.52 | 1.00 | 0.63 | 0.94 | 0.27 | 0.79 |

| A | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
|----|--|---|---|---|-------------------|-------|-------|---------|-----------|-------|----------|----------|-----------|---------|---------|---------|---------|-----------------|--------------|------------|
| 53 | Primary inputs per unit of Final Demand - Indirect | | | | | | | | | | | | | | | | | | | |
| 54 | Matrix P(1-A)-1 F | | | | | | | | | | | | | | | | | | | |
| 55 | | | | | Total Consumption | | | | | | | | | | | | | Invisible Total | | |
| 56 | | | | | Consumption | Food | Drink | Tobacco | Clothes | Fuel | Petrol | Durables | Transport | Other | Other | Tourism | Exports | Exports | Exports | Exports |
| 57 | | | | | & Footware | | | | Equipment | Goods | Services | Imports | | Exports | Exports | Exports | Current | Merchandise | Agricultural | Industrial |
| 58 | | | | | | | | | | | | | | | | | | (NET) | Absolute | Absolute |
| 60 | SITC 0-1 | | | | 0.02 | 0.08 | 0.02 | 0.03 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 | 0.09 | 0.03 |
| 61 | SITC 3 | | | | 0.02 | 0.03 | 0.01 | 0.00 | 0.00 | 0.13 | 0.08 | 0.00 | 0.00 | 0.01 | 0.02 | 0.00 | 0.04 | 0.04 | 0.06 | 0.03 |
| 62 | SITC 2, 4-9 | | | | 0.06 | 0.07 | 0.04 | 0.02 | 0.08 | 0.04 | 0.00 | 0.09 | 0.01 | 0.11 | 0.06 | 0.00 | 0.06 | 0.29 | 0.13 | 0.33 |
| 63 | TOTAL MERCHANDISE IMPORTS | | | | 0.10 | 0.19 | 0.07 | 0.05 | 0.09 | 0.16 | 0.08 | 0.09 | 0.01 | 0.12 | 0.08 | 0.00 | 0.11 | 0.37 | 0.27 | 0.39 |
| 64 | SERVICES IMPORTS | | | | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 | 0.00 | 0.13 | 0.02 | 0.03 | 0.02 |
| 65 | TOTAL IMPORTS | | | | 0.12 | 0.20 | 0.08 | 0.05 | 0.10 | 0.17 | 0.08 | 0.09 | 0.01 | 0.12 | 0.12 | 0.00 | 0.24 | 0.39 | 0.30 | 0.41 |
| 66 | Indirect Taxes | | | | 0.03 | 0.05 | 0.02 | 0.01 | 0.01 | 0.04 | 0.00 | 0.01 | 0.00 | 0.01 | 0.03 | 0.00 | 0.03 | 0.04 | 0.08 | 0.03 |
| 67 | Less Subsidies | | | | -0.02 | -0.04 | -0.00 | -0.00 | -0.00 | -0.01 | -0.00 | -0.00 | -0.00 | -0.00 | -0.02 | 0.00 | -0.02 | -0.02 | -0.10 | -0.01 |
| 68 | Taxes less subsidies | | | | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.02 | -0.01 | 0.02 |
| 69 | Wages & Salaries | | | | 0.25 | 0.19 | 0.11 | 0.08 | 0.07 | 0.24 | 0.00 | 0.07 | 0.01 | 0.13 | 0.53 | 0.00 | 0.47 | 0.27 | 0.34 | 0.26 |
| 70 | Profits | | | | 0.14 | 0.27 | 0.08 | 0.02 | 0.01 | 0.43 | 0.00 | 0.04 | 0.00 | 0.05 | 0.18 | 0.00 | 0.09 | 0.27 | 0.58 | 0.20 |
| 71 | Agricultural Profits | | | | 0.04 | 0.19 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.09 | 0.46 | 0.01 |
| 72 | AGRICULTURAL DEPRECIAT | | | | 0.01 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.11 | 0.00 |
| 73 | Non-Agri Profits | | | | 0.10 | 0.08 | 0.07 | 0.02 | 0.01 | 0.43 | 0.00 | 0.04 | 0.00 | 0.04 | 0.18 | 0.00 | 0.08 | 0.18 | 0.12 | 0.19 |
| 74 | NON-AGRI-Depreciation | | | | 0.07 | 0.03 | 0.03 | 0.01 | 0.00 | 0.10 | 0.00 | 0.01 | 0.00 | 0.01 | 0.16 | 0.00 | 0.08 | 0.04 | 0.05 | 0.04 |

| A | A | B | C | D | U | V | W | X | Y | Z | AA | AB | AC | |
|----|--|---|---|---|------------|-------------------|----------|----------|--------------|------------|------------|------------|------------|--------|
| 53 | Primary inputs per unit of Final Demand - Indirect | | | | | | | | | | | | | |
| 54 | Matrix P(1-A)-1 F | | | | | | | | | | | | | |
| 55 | | | | | Government | Change in Stocks: | | | | | | | TOTAL | |
| 56 | | | | | Net | Total | Agri. | NonAgri | Intervention | Total | Investment | Building | Other | FINAL |
| 57 | | | | | Current | (NET) | Absolute | Absolute | Absolute | Investment | Investment | Investment | Investment | DEMAND |
| 58 | | | | | | | | | | | | | | |
| 60 | SITC 0-1 | | | | 0.00 | 0.01 | 0.06 | 0.01 | 0.07 | 0.00 | 0.00 | 0.00 | 0.02 | |
| 61 | SITC 3 | | | | 0.02 | -0.01 | 0.04 | 0.03 | 0.04 | 0.03 | 0.06 | 0.01 | 0.03 | |
| 62 | SITC 2, 4-9 | | | | 0.05 | -0.01 | 0.09 | 0.13 | 0.09 | 0.11 | 0.17 | 0.05 | 0.14 | |
| 63 | TOTAL MERCHANDISE IMPORTS | | | | 0.07 | -0.01 | 0.19 | 0.17 | 0.20 | 0.15 | 0.22 | 0.06 | 0.19 | |
| 64 | SERVICES IMPORTS | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | |
| 65 | TOTAL IMPORTS | | | | 0.08 | -0.00 | 0.20 | 0.18 | 0.22 | 0.16 | 0.23 | 0.07 | 0.21 | |
| 66 | Indirect Taxes | | | | 0.02 | 0.00 | 0.06 | 0.01 | 0.06 | 0.03 | 0.04 | 0.01 | 0.03 | |
| 67 | Less Subsidies | | | | -0.01 | -0.01 | -0.09 | -0.00 | -0.07 | -0.01 | -0.01 | -0.01 | -0.02 | |
| 68 | Taxes less subsidies | | | | 0.01 | -0.00 | -0.04 | 0.01 | -0.01 | 0.02 | 0.03 | 0.00 | 0.01 | |
| 69 | Wages & Salaries | | | | 0.78 | 0.02 | 0.17 | 0.10 | 0.27 | 0.33 | 0.51 | 0.12 | 0.34 | |
| 70 | Profits | | | | 0.05 | 0.08 | 0.53 | 0.10 | 0.41 | 0.10 | 0.13 | 0.06 | 0.16 | |
| 71 | Agricultural Profits | | | | 0.00 | 0.03 | 0.46 | 0.00 | 0.32 | 0.00 | 0.00 | 0.00 | 0.04 | |
| 72 | AGRICULTURAL DEPRECIAT | | | | 0.00 | 0.01 | 0.11 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.01 | |
| 73 | Non-Agri Profits | | | | 0.05 | 0.06 | 0.07 | 0.09 | 0.09 | 0.09 | 0.13 | 0.05 | 0.12 | |
| 74 | NON-AGRI-Depreciation | | | | 0.05 | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.05 | |

| A | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | |
|----|---|---|---|---|-------------------|-------------|-------|---------|-----------|-------|----------|----------|-----------|---------|---------|---------|-------|-----------|-------------|--------------|------------|
| 78 | Primary inputs per unit of Final Demand - Direct & Indirect | | | | | | | | | | | | | | | | | | | | |
| 79 | | | | | | | | | | | | | | | | | | | | | |
| 80 | Matrix P(1-A)-1 F + Z | | | | Total Consumption | Consumption | | | | | | | | | | | | Invisible | Total | | |
| 81 | | | | | Consumption | Food | Drink | Tobacco | Clothes | Fuel | Petrol | Durables | Transport | Other | Other | Tourism | | Exports | Merchandise | Agricultural | Industrial |
| 82 | | | | | & Footwear | | | | Equipment | Goods | Services | Imports | | Exports | Exports | Exports | | Current | (NET) | Absolute | Absolute |
| 83 | | | | | | | | | | | | | | | | | | | | | |
| 85 | SITC 0-1 | | | | 0.07 | 0.27 | 0.07 | 0.06 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 0.10 | 0.03 | |
| 86 | SITC 3 | | | | 0.05 | 0.03 | 0.01 | 0.00 | 0.00 | 0.31 | 0.41 | 0.00 | 0.00 | 0.01 | 0.02 | 0.00 | 0.05 | 0.04 | 0.06 | 0.03 | |
| 87 | SITC 2, 4-9 | | | | 0.19 | 0.07 | 0.04 | 0.02 | 0.63 | 0.04 | 0.00 | 0.57 | 0.39 | 0.57 | 0.06 | 0.00 | 0.09 | 0.37 | 0.13 | 0.42 | |
| 88 | TOTAL MERCHANDISE IMPORTS | | | | 0.30 | 0.37 | 0.12 | 0.09 | 0.65 | 0.34 | 0.42 | 0.57 | 0.39 | 0.58 | 0.08 | 0.00 | 0.15 | 0.45 | 0.28 | 0.48 | |
| 89 | SERVICES IMPORTS | | | | 0.06 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 | 1.00 | 0.00 | 0.13 | 0.02 | 0.03 | 0.02 | |
| 90 | TOTAL IMPORTS | | | | 0.36 | 0.39 | 0.13 | 0.09 | 0.65 | 0.35 | 0.42 | 0.57 | 0.39 | 0.59 | 0.12 | 1.00 | 0.29 | 0.46 | 0.31 | 0.50 | |
| 91 | Indirect Taxes | | | | 0.03 | 0.05 | 0.02 | 0.01 | 0.01 | 0.04 | 0.00 | 0.01 | 0.00 | 0.01 | 0.03 | 0.00 | 0.03 | 0.04 | 0.08 | 0.03 | |
| 92 | Less Subsidies | | | | -0.02 | -0.04 | -0.00 | -0.00 | -0.00 | -0.01 | -0.00 | -0.00 | -0.00 | -0.00 | -0.02 | 0.00 | -0.02 | -0.02 | -0.10 | -0.01 | |
| 93 | Taxes less subsidies | | | | 0.18 | 0.04 | 0.55 | 0.73 | 0.11 | 0.06 | 0.42 | 0.19 | 0.47 | 0.12 | -0.02 | 0.00 | 0.07 | -0.06 | -0.37 | 0.01 | |
| 94 | Wages & Salaries | | | | 0.25 | 0.19 | 0.11 | 0.08 | 0.07 | 0.24 | 0.00 | 0.07 | 0.01 | 0.13 | 0.53 | 0.00 | 0.47 | 0.27 | 0.34 | 0.26 | |
| 95 | Profits | | | | 0.14 | 0.27 | 0.08 | 0.02 | 0.01 | 0.43 | 0.00 | 0.04 | 0.00 | 0.05 | 0.18 | 0.00 | 0.09 | 0.27 | 0.58 | 0.20 | |
| 96 | Agricultural Profits | | | | 0.04 | 0.19 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.09 | 0.46 | 0.01 | |
| 97 | AGRICULTURAL DEPRECIAT | | | | 0.01 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.11 | 0.00 | |
| 98 | Non-Agri Profits | | | | 0.10 | 0.08 | 0.07 | 0.02 | 0.01 | 0.43 | 0.00 | 0.04 | 0.00 | 0.04 | 0.18 | 0.00 | 0.08 | 0.18 | 0.12 | 0.19 | |
| 99 | NON-AGRI-Depreciation | | | | 0.07 | 0.03 | 0.03 | 0.01 | 0.00 | 0.10 | 0.00 | 0.01 | 0.00 | 0.01 | 0.16 | 0.00 | 0.08 | 0.04 | 0.05 | 0.04 | |

| A | A | B | C | D | U | V | W | X | Y | Z | AA | AB | AC | |
|----|---|---|---|---|------------|-------------------|----------|----------|--------------|------------|------------|------------|--------|-------|
| 78 | Primary inputs per unit of Final Demand - Direct & Indirect | | | | | | | | | | | | | |
| 79 | | | | | | | | | | | | | | |
| 80 | Matrix P(1-A)-1 F + Z | | | | Government | Change In Stocks: | | | | | | | TOTAL | |
| 81 | | | | | Net | Total | Agri. | NonAgri | Intervention | Total | Investment | Building | Other | TOTAL |
| 82 | | | | | Current | (NET) | Absolute | Absolute | Absolute | Investment | Investment | Investment | DEMAND | |
| 83 | | | | | | | | | | | | | | |
| 85 | SITC 0-1 | | | | 0.00 | 0.15 | 0.06 | 0.08 | 0.07 | 0.02 | 0.00 | 0.05 | 0.04 | |
| 86 | SITC 3 | | | | 0.02 | 0.17 | 0.04 | 0.11 | 0.04 | 0.03 | 0.06 | 0.01 | 0.04 | |
| 87 | SITC 2, 4-9 | | | | 0.05 | 0.56 | 0.09 | 0.45 | 0.09 | 0.37 | 0.17 | 0.62 | 0.25 | |
| 88 | TOTAL MERCHANDISE IMPORTS | | | | 0.07 | 0.87 | 0.19 | 0.64 | 0.20 | 0.43 | 0.22 | 0.67 | 0.34 | |
| 89 | SERVICES IMPORTS | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.02 | 0.04 | |
| 90 | TOTAL IMPORTS | | | | 0.08 | 0.88 | 0.20 | 0.65 | 0.22 | 0.45 | 0.23 | 0.69 | 0.37 | |
| 91 | Indirect Taxes | | | | 0.02 | 0.00 | 0.06 | 0.01 | 0.06 | 0.03 | 0.04 | 0.01 | 0.03 | |
| 92 | Less Subsidies | | | | -0.01 | -0.01 | -0.09 | -0.00 | -0.07 | -0.01 | -0.01 | -0.01 | -0.02 | |
| 93 | Taxes less subsidies | | | | 0.04 | -0.00 | -0.04 | 0.01 | -0.01 | 0.10 | 0.09 | 0.11 | 0.06 | |
| 94 | Wages & Salaries | | | | 0.78 | 0.02 | 0.17 | 0.10 | 0.27 | 0.33 | 0.51 | 0.12 | 0.34 | |
| 95 | Profits | | | | 0.05 | 0.08 | 0.53 | 0.10 | 0.41 | 0.10 | 0.13 | 0.06 | 0.16 | |
| 96 | Agricultural Profits | | | | 0.00 | 0.03 | 0.46 | 0.00 | 0.32 | 0.00 | 0.00 | 0.00 | 0.04 | |
| 97 | AGRICULTURAL DEPRECIAT | | | | 0.00 | 0.01 | 0.11 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.01 | |
| 98 | Non-Agri Profits | | | | 0.05 | 0.06 | 0.07 | 0.09 | 0.09 | 0.09 | 0.13 | 0.05 | 0.12 | |
| 99 | NON-AGRI-Depreciation | | | | 0.05 | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.05 | |