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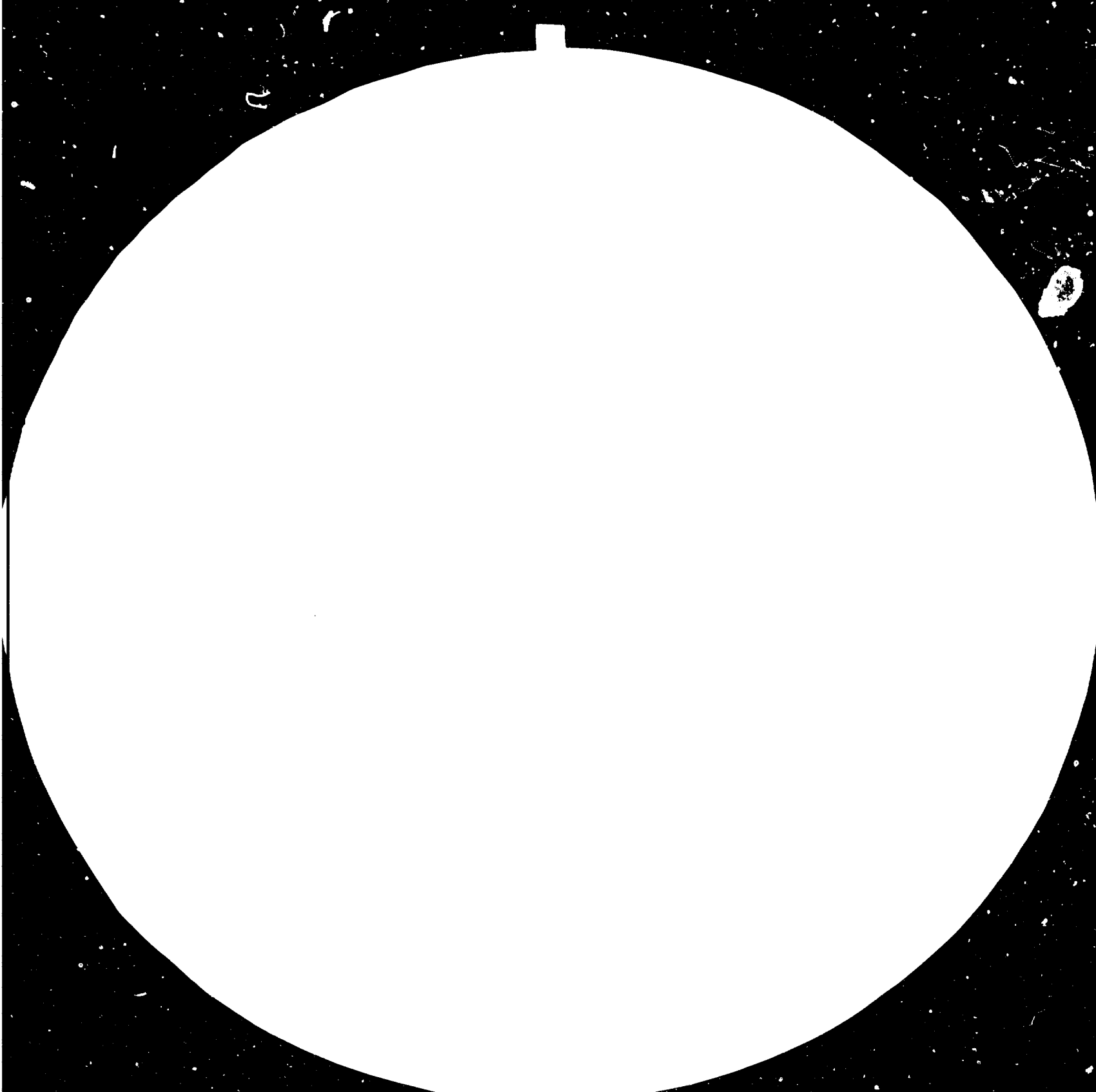
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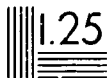
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WORLD REGIONAL INPUT-OUTPUT TABLES \*

Prepared by the  
Global and Conceptual Studies Branch

World Modelling Working Paper

M. Oettl

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## 1. INTRODUCTION

The purpose of this paper is to present input-output tables for geographical regions of the world. In order to prepare such tables, as many national input-output tables for the different countries of the regions as were available and suitable were used, and a process of adjustment was carried out to give an estimate of the input-output tables for the regions as a whole.

The data used and the methods employed to supplement it are described in Sections 2 to 4 of this report. Briefly, the approach adopted is to prepare a so-called "reference" table, for a region. This will be formed from the available existing tables for the countries of a region, but, especially for developing regions, the country coverage will not be complete. The next step is the adjustment of this reference table so that it represents the whole of the region concerned. This is done using national accounts data to obtain the "margins" of the regional table, and adjusting the reference table (by means of a technique known as the RAS method<sup>1/</sup> to make it consistent with the given totals.

The reference tables and the final adjusted tables are given as Annexes I, II, and III, all these being given in order that the extent of change in the internal structure of the tables by the final adjustment can be seen. The tables have been constructed as a step towards updating the UNCTAD Model database<sup>2/</sup> and also for use in improving other models, such as the LIDO Model<sup>3/</sup>. However, they provide in themselves a summary of the relations between different branches of the economy in different regions, and may be of use in comparative analysis of the manufacturing sectors, especially with respect to the input structure of these sectors.

This report was prepared for UNIDO by Dr. M. Oetl of the Wirtschaftsuniversität, Vienna, Austria.

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<sup>1/</sup> See e.g., Bacharach, M. "Biproportional Matrices and Input-Output Change" Cambridge, United Kingdom, 1970

<sup>2/</sup> See "UNCTAD System: 1981 Report", UNIDO/IS.337.

<sup>3/</sup> See UNIDO "Modelling the Attainment of the Lima Target: the LIDO Model", Industry and Development No. 6, 1981.

## 2. DATA SOURCES AND ADJUSTMENT

### 2.1 Data Sources

The main sources of the data are national input-output tables. These tables are the starting point for preparing the regional reference input-output tables. The following national tables were used, grouped in the regions of the UNITAD model:

North America:	Canada	1975
	United States	1972
Western Europe:	Austria	1976
	Denmark	1975
	Finland	1970
	France	1975
	Germany	1975
	Greece	1970
	Israel	1975
	Italy	1975
	Netherlands	1975
	Norway	1975
	Spain	1975
	Sweden	1975
	Turkey	1973
United Kingdom	1975	
Japan:	Japan	1975
Other Developed Countries:	Australia	1974/75
	New Zealand	1971/72
	South Africa	1975
Latin America:	Brazil	1970
	Chile	1977
	Colombia	1970
	Mexico	1970
	Peru	1968
Tropical Africa:	Ghana	1968
	Ivory Coast	1976
	Kenya	1976
	Madagascar	1973
	Rhodesia	1965
North Africa and West Asia:	Algeria	1974
	Egypt	1973
	Iran	1973
	Morocco	1975
	Tunisia	1968

Indian Subcontinent:	India	1973/74
South East Asia:	Indonesia	1975
	Korea	1975
	Papua New Guinea	1972/73
	Philippines	1974
	Singapore	1973
	Thailand	1975

The updating of the regional reference tables was achieved using the World Bank's World Tables<sup>1/</sup> which contain data concerning gross domestic product (GDP) by industrial origin and by expenditure for 1977 and for almost all countries. In fact, the value-added for the following sectors is given:

Agriculture  
Mining  
Manufacturing  
Construction  
Electricity, Gas, Water  
Transport and Communication  
Trade and Finance  
Public Administration and Defense  
Other Branches

and figures for the following expenditure categories:

Imports of Goods and N.F.S.  
Exports of Goods and N.F.S.  
Private Consumption  
General Government Consumption  
Gross Domestic Investment

are listed.

Refinement of the data relied heavily on the UN Yearbook of Industrial Statistics,<sup>2/</sup> which gives gross output, value-added and wages according to the 3-digit ISIC scheme for a number of countries.

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<sup>1/</sup> World Tables. The Second Edition (1980). The Johns Hopkins University Press, Baltimore and London.

<sup>2/</sup> United Nations, Yearbook of Industrial Statistics, 1978 Edition, Vol. I, General Industrial Statistics, New York 1980.

These data cover the industry sector, i.e., Mining and Quarrying, Manufacturing, and Electricity, Gas, Water. The completeness of the data differs, of course, from country to country.

Furthermore a tape could be used, provided by UNIDO, which contains export, import and value-added figures for 1975.

Moreover, the World Bank Atlas<sup>3/</sup> contains data concerning Gross National Product in billions of dollars for each region, and these figures were used as a check for the conversion procedure and as a supplementary data source.

Exchange rates are necessary to convert the values in national currencies into the common denominator, i.e., 100 million US dollars.

For the national input-output tables the exchange rates were taken from the IMF's International Financial Statistics.<sup>4/</sup>

The data used out of the UN Yearbook of Industrial Statistics and of the World Tables were also converted into hundred million US dollars. For this conversion the foreign exchange rates given in the World Tables were taken.

## 2.2 Data Adjustment

The different national input-output tables were aggregated to the 14-sector classification model. This is as follows:

Agriculture  
Agro-Food  
Energy (except petroleum and coal products)  
Petroleum and Coal Products  
Mining and Quarrying (except petroleum and natural gas mining)  
Primary Metallic Production

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<sup>3/</sup> 1977 figures are published in the 1979 World Bank Atlas.

<sup>4/</sup> International Monetary Fund: International Financial Statistics, published monthly. The periods average par rates/market rates were taken. If however the input-output table did not cover a single calendar year, then the end of period rates of the starting year were taken.



Chemical Production  
Textiles  
Metal Products  
Light Manufacturing  
Capital Goods  
Construction  
Trade and Transport  
Other Services

There are also five final demand categories:

Private Consumption  
Government Consumption  
Investment<sup>5/</sup>  
Exports  
Imports

and an overall primary input:

Value-Added<sup>6/</sup>

It cannot be expected, a priori, that the column and row sums of the national input-output tables are balanced. The reasons for divergence include rounding, residuals and, more importantly the use of commodity by industry tables. In order to avoid problematic technology assumptions, the balancing was done simply by adjusting private consumption, or, if this was not reasonable because of negative consumption, from investment, after the aggregation had already taken place.

Obviously, a straightforward fitting of all the different sized national input-output tables into the 14 sectors could not be expected. In many cases a national input-output sector must be allocated to two of the aggregation sectors. The procedure then adopted relies on the concept of reference vectors and of the RAS method.

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<sup>5/</sup> In the reference tables investment is broken down into gross fixed capital formation and change in stocks, but for the updated version of the regional tables there is a single investment column.

<sup>6/</sup> Figures for wages, taxes less subsidies, consumption of fixed capital and operating surplus are available for the reference tables.

The following steps must be executed:

- a) Isolation of the national sector;
- b) Estimation of the gross outputs of each of the two aggregate sectors contained in the national sector;
- c) Choosing two appropriate reference vectors;
- d) Balancing row and column sums by RAS.

The method adopted is therefore as follows: if an output mix is found in an original sector of a national input-output table which requires separation in order to perform a correct allocation to one of the 14 sectors in the standard classification sectors (e.g., Paper and Printing), then this sector must be isolated (a).

From the combined gross output given, two individual gross outputs (e.g., one for Paper and one for Printing) must be estimated, and this is done by the use of value-added figures for 1975. As these figures refer to the 3-digit ISIC categories the correct value added for the national sector under question must be determined first (e.g., ISIC 341 for Paper and 342 for Printing). The disaggregation of the output mix is then performed proportionally according to these 1975 value added (b).

For a further allocation two reference vectors must be found from an unbiased input-output table which also seems relevant to the country in question. These vectors must be calculated separately by estimating vertical and horizontal coefficient vectors after having performed the row (vertical coefficients) and column (horizontal coefficients) aggregation. This results in two vertical and two horizontal coefficient vectors, e.g., a vertical coefficient vector in the aggregate row classification characteristic of the input to "Paper" and a similar one for "Printing" and also a horizontal coefficient vector in the aggregate column classification characteristic of the distribution of "Paper", together with a similar one for "Printing", according to (c).

Now by (b) the two relevant outputs are given, and by (a) the remaining margins are fixed, so that by (d) the RAS method can be applied to allocate the original national sectors according to (c) over the two aggregate sectors (e.g., Paper to "Chemicals" and Printing to "Light Manufacturing").

Such output mixes occur frequently in connexion with Paper and Printing (Chemical Products and Light Manufacturing, respectively), a total Mining sector (Energy Mining and Non-Energy Mining), Ferrous and Non-Ferrous Ores and Metals (Mining and Primary Metallic Products including Quarrying (Chemical and Mining Products, respectively). Provisions were made so that up to three national sectors could be disaggregated and allocated in conformity with the 14-sector classification. Other problems could be solved by a simple cross transfer of the specific items.

The major interventions in the national input-output tables can be summarized as follows:

- a) Separation of petroleum products from crude oil by assuming that the intra-sectoral element in the national sector equals the crude input in refinery. The national tables involved were:

Denmark	Netherlands
France	Singapore
Germany	Spain
Italy	

- b) Separation of crude oil from mining and quarrying by assuming that the mining input in refinery equals the crude input:

Chile	Korea
Ghana	Philippines
Greece	South Africa
Ivory Coast	Sweden

c) Proportional allocation of imports. In some national input-output tables a part of the imports (in most cases the non-competitive imports) are not allocated to the corresponding domestic sectors but directly to the using sectors. In such cases a simple proportional allocation across the rows was adopted, in which the following countries were involved:

Australia	Singapore
Brazil	Tunisia
Canada	United States
Papua New Guinea	

d) Separation of national sectors by means of reference vectors via the RAS method in order to obtain the 14-sector classification sectors. The following national tables and combinations of aggregation sectors were involved:

Algeria	Energy Mining, Chemical Products, Primary Metallic Production, Metal Products <sup>8/</sup>	Petroleum Products Light Manufacturing Capital Goods
Austria	Energy Mining Energy	Non-Energy Mining Petroleum Products
Chile	Chemical Products Petroleum Products Metal Products	Light Manufacturing Chemical Products Capital Goods
Colombia	Primary Metallic Products Textiles Chemical Products	Metal Products Light Manufacturing Light Manufacturing
Denmark	Chemical Products Mining  Mining	Light Manufacturing Primary Metallic Products Chemical Products
Egypt	Petroleum Products Chemical Products Metal Products	Chemical Products Light Manufacturing Capital Goods

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<sup>8/</sup> In the Algerian input-output table all three LIDO sectors are merged into one national sector. We decided for a disaggregation into capital goods and the rest.

France	Chemical Products Mining  Mining	Light Manufacturing Primary Metallic Products Chemical Products
Germany, Federal Republic of	Chemical Products Mining  Mining	Light Manufacturing Primary Metallic Products Chemical Products
Ghana	Chemical Products Primary Metallic Products	Light Manufacturing Metal Products
Greece	Energy Mining	Non-Energy Mining
Indonesia	Energy Mining Textiles Chemical Products	Non-Energy Mining Light Manufacturing Light Manufacturing
Italy	Chemical Products Mining  Mining	Light Manufacturing Primary Metallic Products Chemical Products
Kenya	Chemical Products Metal Products	Light Manufacturing Capital Goods
Madagascar	Energy Chemical Products	Petroleum Products Light Manufacturing
Morocco	Chemical Products	Light Manufacturing
Netherlands	Chemical Products Mining  Mining	Light Manufacturing Primary Metallic Products Chemical Products
Norway	Metal Products Chemical Products	Capital Goods Light Manufacturing
Peru	Trade and Transport	Other Services
Spain	Chemical Products Mining  Mining	Light Manufacturing Primary Metallic Products Chemical Products
United Kingdom	Chemical Products Mining  Mining	Light Manufacturing Primary Metallic Products Chemical Products

Special problems arose for the Iranian table. Due to its preliminary character there are large residuals not allocated in the original table. In order to use this table a "global" RAS method (i.e. applied to all quadrants) was used to achieve a consistent national aggregated input-output table.

The methods therefore result in consistent national input-output tables in accordance with the 14-sector classification. The national table was then converted into hundred millions of US dollars by using the exchange rate prevailing in the base year.

### 3. REFERENCE TABLES

If one looks at the national input-output tables available for the different regions it is obvious that there is a skew distribution in the number and representation of the tables. Whereas some regions are well or nearly completely equipped with recent national input-output tables (North America, Western Europe, Japan, Other Developed Countries, Indian Subcontinent) other regions are inadequately supplied with national tables (Tropical Africa, North Africa and West Asia). For the remaining regions (Latin America, South East Asia) the situation appears satisfactory.

The situation in the poorly represented regions is aggravated by the absence of large and important countries. Nevertheless, the existing national input-output tables in each region, after having been converted into dollars, were summed up to a Regional Reference Table. These tables represent to a greater or lesser extent the true economic structure and interdependence of the different regions, according to the number, representativeness and date of compilation of the underlying national tables.

The coefficient matrices of these regional reference tables are presented in Annex

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9/ The dummy sectors and the residual sector serve as a buffer and are needed as input for those national sectors with mixed output that have to be isolated and then allocated to the 14-sector aggregation scheme. The individual value-added coefficients are not necessarily correct since, to some extent, a reference mechanism had also to be adopted for these.

#### 4. REGIONAL TABLES

The regional tables were estimated by applying an RAS method to a modified reference table for a region. The modifications are to the margins, which had to be updated to 1977, and also special assumptions made for the following:

- a) value-added coefficients;
- b) value-added figures in the energy mining and non-energy mining sectors;
- c) value-added figures in the manufacturing sectors;
- d) value-added figures in the service sectors;
- e) export and import structure.

##### 4.1 Value-Added Coefficients

The World Tables used provided national income data, disaggregated into some sectors, as already mentioned above. But for the construction of input-output tables sectoral gross outputs are needed. These figures can be obtained from the value-added given in the World Tables by assuming appropriate value-added coefficients.

Obviously, the coefficients of the reference table can be used, and this was what was first done.

A second approach was also adopted which takes advantage of the data available for the manufacturing sectors in the United Nations Industrial Statistics.

From this source, gross outputs and value added for the one-digit ISIC categories 2, 3 and 4 are in principle available, but very infrequently for ISIC 2, Mining.

This method therefore was applied only to the manufacturing sectors and even in this case it must be ensured that the regional gross outputs estimated consist of the same country data as the regional value added. This necessity was reached by a large scale search procedure

which guarantees an identical national composition. The sectoral value-added shares in the corresponding gross outputs were then used for the estimation of the different gross outputs in the manufacturing sectors of the aggregation scheme, i.e.,

- Agro-Food
- Petroleum and Coal Products
- Primary Metallic Production
- Chemical Production
- Textiles
- Metal Products
- Light Manufacturing
- Capital goods

The other sectoral gross outputs had to be estimated on the basis of the regional reference tables.

The two versions can differ considerably and there seem to be some evidence that the value-added concept in the United Nations Industrial Statistics is not in line with the one in the input-output tables. This suspicion was increased by the differences appearing in regions for which recent and complete input-output tables are available (Japan, Other Developed Countries).

Therefore both versions of the regional flow and coefficient tables are annexed to this report.<sup>10/</sup> The two versions can be distinguished by the word preceding the year 1977 in the heading of the table under question:

EXIM indicates that all value-added coefficients were taken from the corresponding reference table;

EXIMV indicates that the value-added coefficients for the manufacturing sectors were recalculated with the help of the United Nations Industrial Statistics.

For the region "Other Developed Countries" only the first version was meaningful, since in the second version a high value-added coefficient estimated for one sector yielded a negative element in the column margin after the imports and exports had been considered. This may be

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<sup>10/</sup> These are Annex II and III.



also due to the fact that data for South Africa are missing, whereas a recent input-output table for this country is available. On the other hand, for the region North Africa and West Asia only the second version could be applied, for the same reasons.

#### 4.2 Value-Added Figures for Energy and Non-Energy Mining

In the World Tables there is no disaggregation into energy and non-energy mining. Therefore the reference tables had to be used again for a proportional allocation to the two mining sectors of the total value-added given. Due to lack of data the United Nations Industrial Statistics could not be used for this purpose.

The separately given value added in the electricity and gas industry were added to the aggregated energy sector.

#### 4.3 Value-Added Figures for the Manufacturing Sectors

The national income concept in the World Tables contains only one aggregated manufacturing sector, and this lump sum has to be allocated to the different manufacturing sectors in the 14-sector scheme. According to the method adopted and described above to get the relevant value-added coefficients, the allocation took place proportionately to the value-added figures given in the reference tables, or else proportionately to those estimated from the United Nations Industrial Statistics.

#### 4.4 Value-Added Figures for the Service Sectors

There is no strict correspondence between the service sectors in the World Tables and those in the aggregation scheme. "Transport and Communication" and "Public Administration" in the World Tables could be uniquely allocated, but not the sectors "Trade and Finance" and "Other Branches". The difficulties must be solved pragmatically, so "Trade and Finance" was allocated to the sector "Trade and Transport" and "Other Branches" to the sector "Other Services".

#### 4.5 Exports and Imports

It is possible at least in principle, to use the RAS method on the full range of the regional reference table, including the total final demand side. But problems would arise, and indeed did so in test runs, because of the negative sign of imports, resulting in implausible values. On the other hand SITC (Standard Industrial Trade Classification) export and import figures were available for the year 1975, and hence the following approach was adopted.

Bearing in mind that service exports and imports are not in the SITC, the total export and import figures from the World Tables were used to estimate the service (and also the construction) exports and imports according to the coefficients of the reference table. The total of the remaining exports and imports was allocated in proportion to the previously calculated structure of the exports and imports for 1975 in the 14-sector classification.

So let us summarize the data situation before the RAS method was applied. The margins (gross outputs) of the 14 intermediate sectors were estimated, by an appropriate allocation mechanism from the regional gross domestic product by industrial origin, given in the World Tables. This calculation used assumed value-added coefficients. The totals for private and government consumption and for investment were also given in the World Tables, and could be used for the corresponding margins. The total foreign trade figures (exports and imports) were allocated to the 14 sectors in the final demand quadrant of the input-output table according to the 1975 SITC commodity structure and taking service trade into consideration. Therefore, the intermediate transactions margins could be obtained simply by deducting the sectoral value-added from the corresponding gross outputs and the sectoral net exports (exports minus imports) from the corresponding total demands. These margins, together with the reference table, were then used as input into the RAS procedure, resulting in a consistent regional input-output table.

In the following the data situation in the different regions is briefly summarized. If not otherwise stated, then the data are in billions of US dollars and refer to the year 1977.

North America

The reference table for this region consists of input-output tables for Canada 1975 and the United States 1972. The World Tables contain GDP data for the following countries:

Canada                      United States

which yield a regional GDP of 2078.395 billions, compared with the 2099.3 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table has a GDP of 1345.907 billions.

Western Europe

The reference table for this region consists of input-output tables for Austria 1976, Denmark 1975, Finland 1970, France 1975, Germany 1975, Greece 1970, Israel 1975, Italy 1975, the Netherlands 1975, Norway 1975, Spain 1975, Sweden 1975, Turkey 1973 and the United Kingdom 1975. The World Tables contain GDP data for the following countries:

Austria	Iceland	Portugal
Belgium	Ireland	Spain, 1975
Cyprus	Israel	Sweden
Denmark, 1973	Italy, 1976	Switzerland
Finland	Luxembourg, 1975	Turkey
France	Malta	United Kingdom, 1975
Germany	Netherlands, 1975	Yugoslavia, 1976
Greece	Norway	

which yield a regional GDP of 1995.258 billions, compared with the 2160.81 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table displays a GDP of 1470.792 billions.

Japan

The reference table for this region consists of an input-output table for Japan 1975. The World Tables contain data for Japan 1976 which yield a regional GDP of 546.041 billions, compared with the 737.18 billions GNP obtained by the World Bank Atlas for 1977. The reference table has a GDP of 521.768 billions.

Other Developed Countries

The reference table for this region consists of input-output tables for Australia 1974:75, New Zealand 1971/72 and South Africa 1975. The World Tables contain GDP data for the following countries:

Australia, 1975      New Zealand      South Africa, 1976

which yield a regional GDP of 142.928 billions, compared with the 154.32 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table has a GDP of 135.801 billions.

Latin America

The reference table for this region consists of input-output tables for Brazil 1970, Chile 1977, Colombia 1970, Mexico 1970 and Peru 1968. The World Tables contain GDP data for the following countries:

Argentina	Ecuador	Nicaragua
Barbados, 1976	El Salvador	Panama, 1975
Bolivia	Guatemala	Paraguay
Brazil	Guyana	Peru, 1976
Belize	Haiti	Surinam
Chile	Honduras	Trinidad and Tobago
Colombia	Jamaica	Uruguay
Costa Rica	Mexico	Venezuela
Dominican Republic		

which yield a regional GDP of 421.343 billions, compared with the 420.84 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table has a GDP of 105.717 billions.

Tropical Africa

The reference table for this region consists of input-output tables for Ghana 1968, Ivory Coast 1976, Kenya 1976, Madagascar 1973 and Rhodesia (Zimbabwe) 1965. The World Tables contain GDP data for the following countries:

Botswana	Ghana	Nigeria
Burundi	Guinea	Rwanda
Cameroon	Ivory Coast	Senegal
Central African Republic	Kenya	Sierra Leone
Chad	Lesotho	Somalia
Congo	Liberia	Zimbabwe
Zaire	Madagascar	Swaziland
Dahomey (Benin)	Malawi	Togo
Ethiopia	Mali	Uganda
Gabon	Mauritania	Tanzania
Gambia	Mauritius	Upper Volta
	Niger	Zambia

which yield a regional GDP of 108.372 billions, compared with the 99.37 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table has a GDP of 12.092 billions.

#### North Africa and West Asia

The reference table for this region consists of input-output tables for Algeria 1974, Egypt 1973, Iran 1973, Morocco 1975 and Tunisia 1968. The World Tables contain GDP data for the following countries:

Algeria	Libya	Syria
Iran	Morocco	Tunisia
Iraq, 1975	Oman	Egypt
Jordan	Saudi Arabia	Yemen, 1976
Kuwait, 1975	Sudan	

which yield a regional GDP of 242.700 billions, compared with the 188.34 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table has a GDP of 58.190 billions.

#### Indian Subcontinent

The reference table for this region consists of an Indian input-output table for 1973:74. The World Tables contain GDP data for the following countries:

Afghanistan, 1975	Sri Lanka	Nepal
Bangladesh	India	Pakistan
Burma		

which yield a regional GDP of 131.179 billions, compared with the 133.12 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table has a GDP of 72.684 billions.

South East Asia

The reference table for this region consists of input-output tables for Indonesia 1975, Korea 1975, Papua New Guinea 1972:73, the Philippines 1974, Singapore 1973 and Thailand 1975. The World Tables contain GDP data for the following countries:

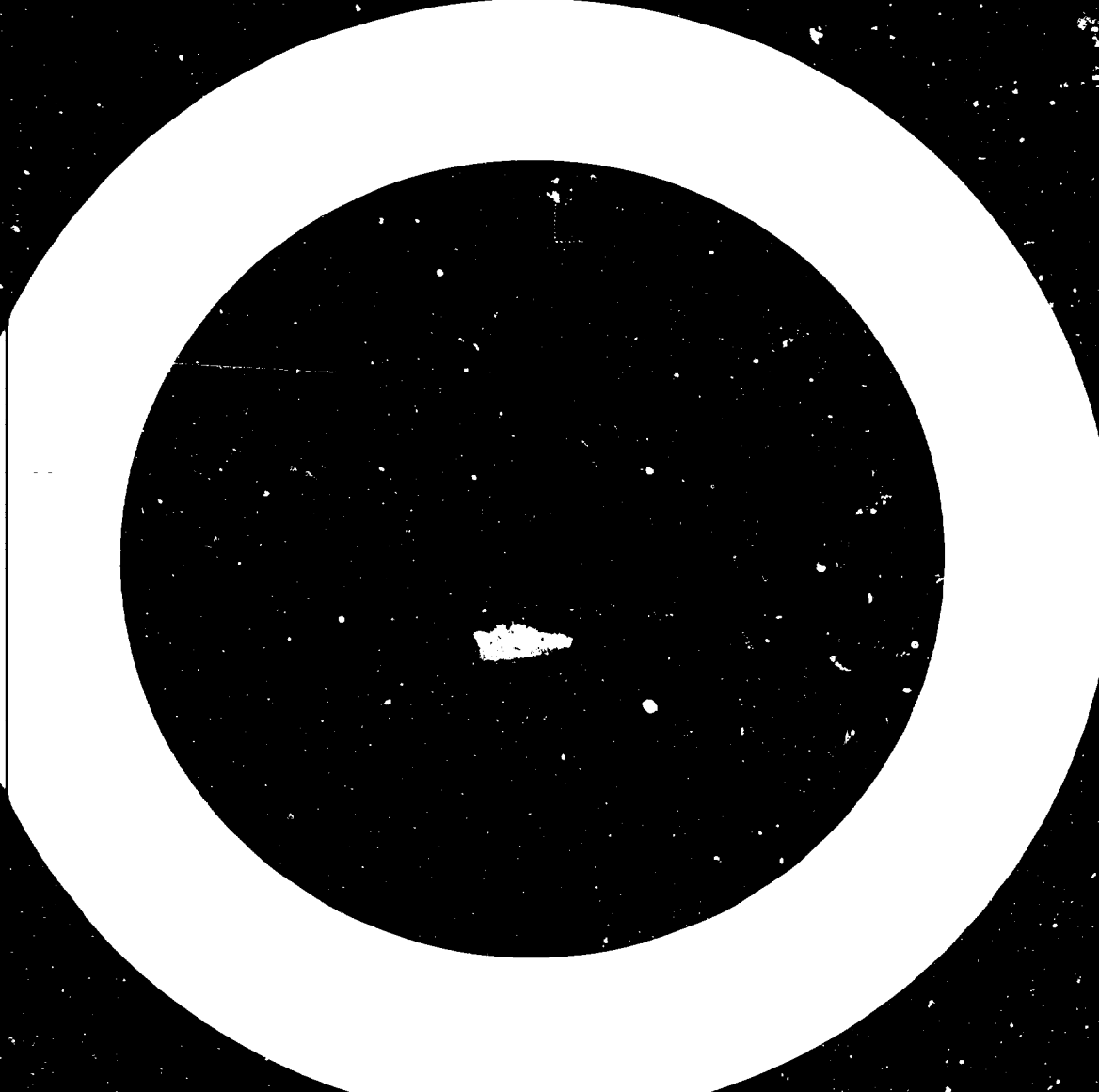
Taiwan	Korea	Philippines
Fiji, 1973	Malaysia	Singapore
Hong Kong	Papua New Guinea	Thailand
Indonesia		

which yield a regional GDP of 173.625 billions, compared with the 174.32 billions GNP obtained by summing up the relevant country figures in the World Bank Atlas. The reference table has a GDP of 90.400 billions.

Differences between the regional GNP stemming from the World Bank Atlas and the regional GDP stemming from the World Tables can be due to different exchange rates used, the better and more recent data situation in the World Bank Atlas, errors and omissions (e.g. no Iranian GNP and an error either in the GDP figure for Ghana or in its indicated exchange rate), and also, of course, the different national income concepts used.

A N N E X I

REGIONAL REFERENCE COEFFICIENT TABLES















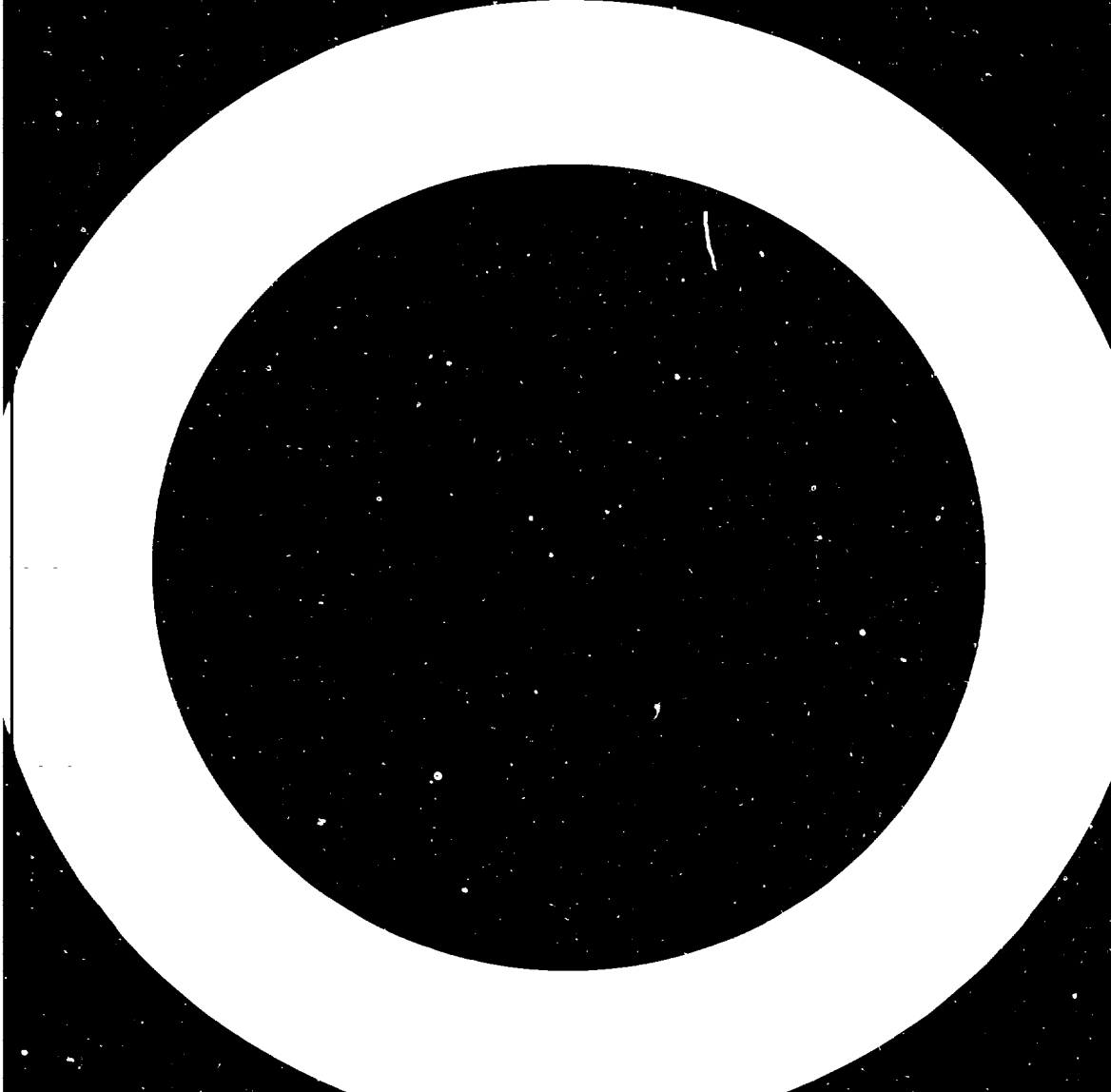








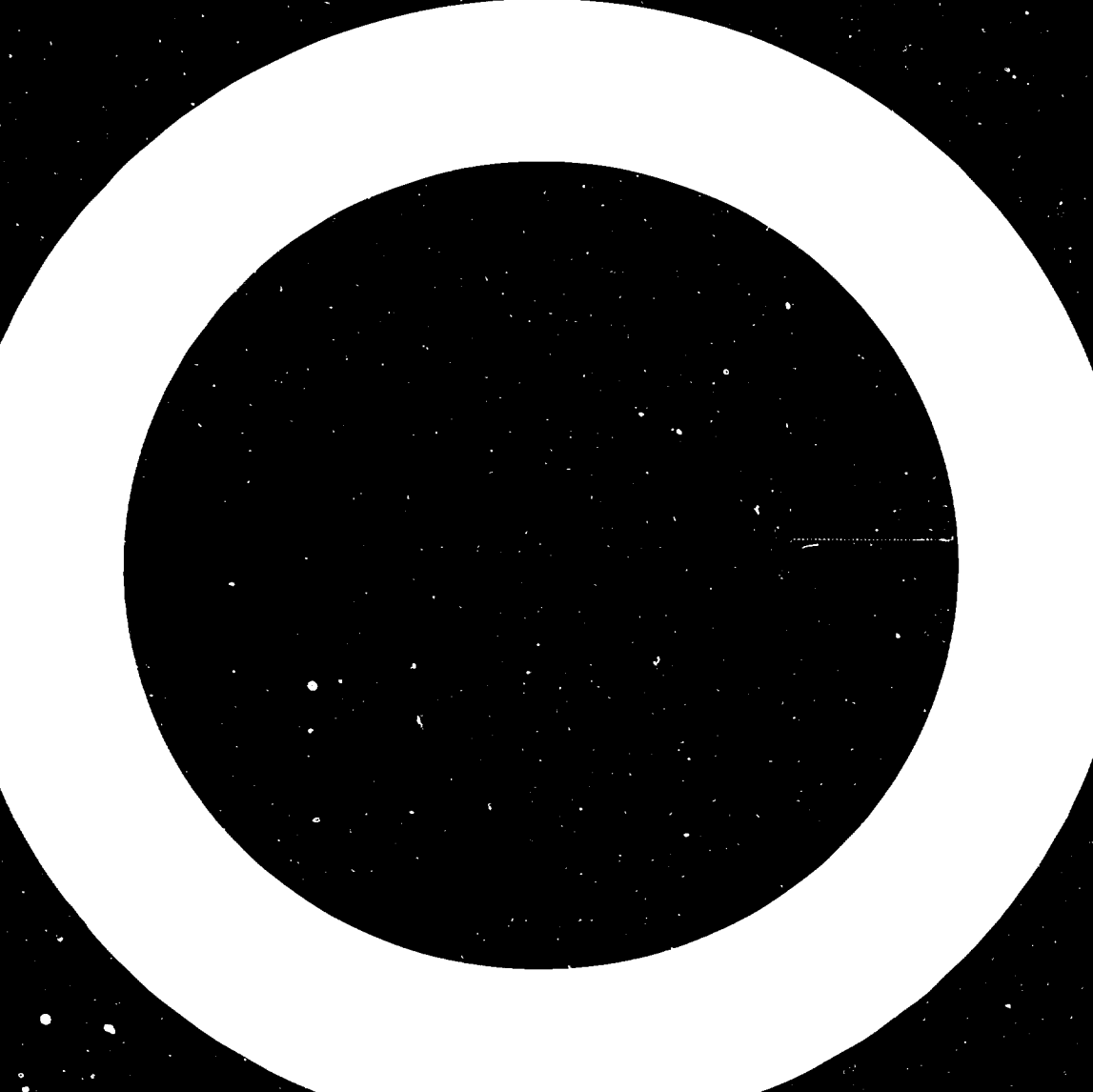




A N N E X    I I

REGIONAL FLOW AND COEFFICIENT TABLES 1977

VERSION EXIM













EXIM 1977

JAPAN

AGRO-FOOD

US DOLLAR

	AGRICULTURE	AGRO-FOOD	ENERGY	PETR-& COAL PRD	MINING& QUARRY- ALLIC PR	CHEMICAL PRODUCT.	TEXTILES	METAL PRODUCTS	LIGHT MA MUFCTNG	CAPITAL GOODS	CONSTRUC TION	TRADE& TRANSPRT	OTHER SERVICES
AGRICULTURE	50.62	256.47	0.15	0.28	0.04	2.11	19.41	1.27	63.42	0.0	1.26	0.03	20.92
AGRO-FOOD	38.55	64.56	0.0	0.0	0.0	3.29	0.29	0.20	2.17	0.0	0.0	1.11	31.50
ENERGY	1.12	64.56	40.88	0.0	0.34	20.99	2.51	5.01	3.81	12.09	6.45	35.45	25.29
PETR-& COAL PRODUCTS	6.36	1.93	32.79	11.70	0.94	20.99	0.44	2.32	0.59	3.31	4.45	178.47	6.34
MINING & QUARRYING	0.0	0.0	0.0	0.48	0.04	27.95	0.07	0.17	0.02	0.29	25.60	0.0	0.51
PRIM-METALLIC PRD.	0.06	0.33	0.64	0.01	0.02	2.84	0.09	41.79	2.15	115.96	35.54	0.01	3.13
CHEMICAL PRODUCTION	26.35	17.09	1.77	2.16	0.34	200.41	21.34	37.17	51.09	32.15	103.64	24.58	71.30
TEXTILES	3.54	0.42	0.28	0.05	0.05	0.77	79.92	2.02	5.93	2.91	7.53	10.00	5.71
METAL PRODUCTS	1.19	3.84	1.97	0.32	0.40	4.75	2.54	21.75	12.27	40.60	87.49	16.94	14.92
LIGHT MANUFACTURING	5.96	1.84	4.30	1.69	0.26	27.09	5.75	11.17	81.67	425.72	106.28	27.55	56.47
CAPITAL GOODS	0.64	0.30	5.58	0.25	0.04	0.77	0.30	0.16	0.21	0.91	0.20	6.20	32.31
CONSTRUCTION	39.66	64.74	22.05	13.86	17.84	68.00	31.28	46.71	6.43	175.14	183.72	701.02	197.45
TRADE AND TRANSPORT	13.71	13.71	10.91	5.56	1.17	28.50	11.99	9.66	11.44	47.95	26.80	169.81	68.22
OTHER SERVICES	187.21	437.92	121.85	237.23	21.88	407.92	176.98	180.72	297.83	911.64	615.41	1354.26	552.39
IMP-& RES-TO BE ALL.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WAGES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES LESS SUBSIDIES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CURS-OF FXD CAPITAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET OPERAT. SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROSS OPERAT. SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VALUE ADDED	294.66	167.23	126.06	27.95	24.54	282.34	115.17	142.61	221.45	572.64	473.85	2037.01	1014.47
GROSS OUTPUT	481.86	605.15	247.91	265.18	46.42	690.25	292.15	323.33	519.29	1486.28	1089.26	3391.29	1566.85
DUMMY 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUMMY 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AGRICULTURE	416.00	0.0	148.19	0.0	140.10	0.0	22.52	4.30	-109.05	65.87	481.87	0.0	0.0
AGRO-FOOD	141.72	0.0	487.21	0.0	487.21	0.0	0.0	6.44	-30.22	463.43	605.15	0.0	0.0
ENERGY	374.69	0.0	62.71	37.14	99.84	0.0	0.0	0.01	-226.63	-126.77	247.92	0.0	0.0
PETR-& COAL PRODUCTS	301.45	0.0	12.41	0.0	12.41	0.0	1.35	2.44	-52.68	-36.27	265.18	0.0	0.0
MINING & QUARRYING	98.35	0.0	0.0	0.0	0.0	0.0	0.0	0.97	-51.93	-51.93	46.42	0.0	0.0
PRIM-METALLIC PRD.	413.19	0.0	0.0	0.0	0.0	0.0	0.0	117.15	-20.98	96.17	509.35	0.0	0.0
CHEMICAL PRODUCTION	599.01	0.0	60.20	0.0	60.20	0.0	0.0	61.64	-30.60	91.24	690.25	0.0	0.0
TEXTILES	119.00	0.0	160.80	0.0	160.80	0.0	7.27	33.85	-30.77	173.15	292.15	0.0	0.0
METAL PRODUCTS	217.36	0.0	59.78	0.0	59.78	0.0	28.39	20.04	-2.23	105.97	323.33	0.0	0.0
LIGHT MANUFACTURING	380.34	0.0	101.92	0.0	101.92	0.0	423.33	22.43	-24.66	138.95	519.29	0.0	0.0
CAPITAL GOODS	681.70	0.0	106.60	0.0	106.60	0.0	1040.71	318.88	-66.23	802.58	1484.28	0.0	0.0
CONSTRUCTION	40.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1040.71	1089.24	0.0	0.0
TRADE AND TRANSPORT	1660.50	0.0	142.80	0.0	142.80	0.0	216.08	125.00	-53.09	1730.79	3391.29	0.0	0.0
OTHER SERVICES	420.34	0.0	627.30	514.61	1141.91	0.0	4.69	36.35	-36.43	1146.52	1566.86	0.0	0.0
INTERM. INPUTS ALLOC.	5872.18	0.0	3270.04	551.75	3821.79	0.0	1773.60	761.49	-716.47	5640.41	11512.59	0.0	0.0
IMP-& RES-TO BE ALL.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WAGES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES LESS SUBSIDIES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CURS-OF FXD CAPITAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET OPERAT. SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROSS OPERAT. SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VALUE ADDED	5640.41	0.0	3270.04	551.75	3821.79	0.0	1773.60	761.49	-716.47	5640.41	11512.59	0.0	0.0
GROSS OUTPUT	11512.59	0.0	3270.04	551.75	3821.79	0.0	1773.60	761.49	-716.47	5640.41	11512.59	0.0	0.0
DUMMY 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUMMY 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DUMMY 1 DUMMY 2

TOTAL DEMAND

FINAL DEMAND

IMPORTS (LESS)

EXPORTS

TOT. IN VESTMENT

CHANGE IN STOCK

GR. FXD. CAP. FORM

TOT. CON SUMPTION

GOV. CON SUMPTION

PRIV. CON SUMPTION

RES. TO BE ALLOC

INFORM. DEMAND





















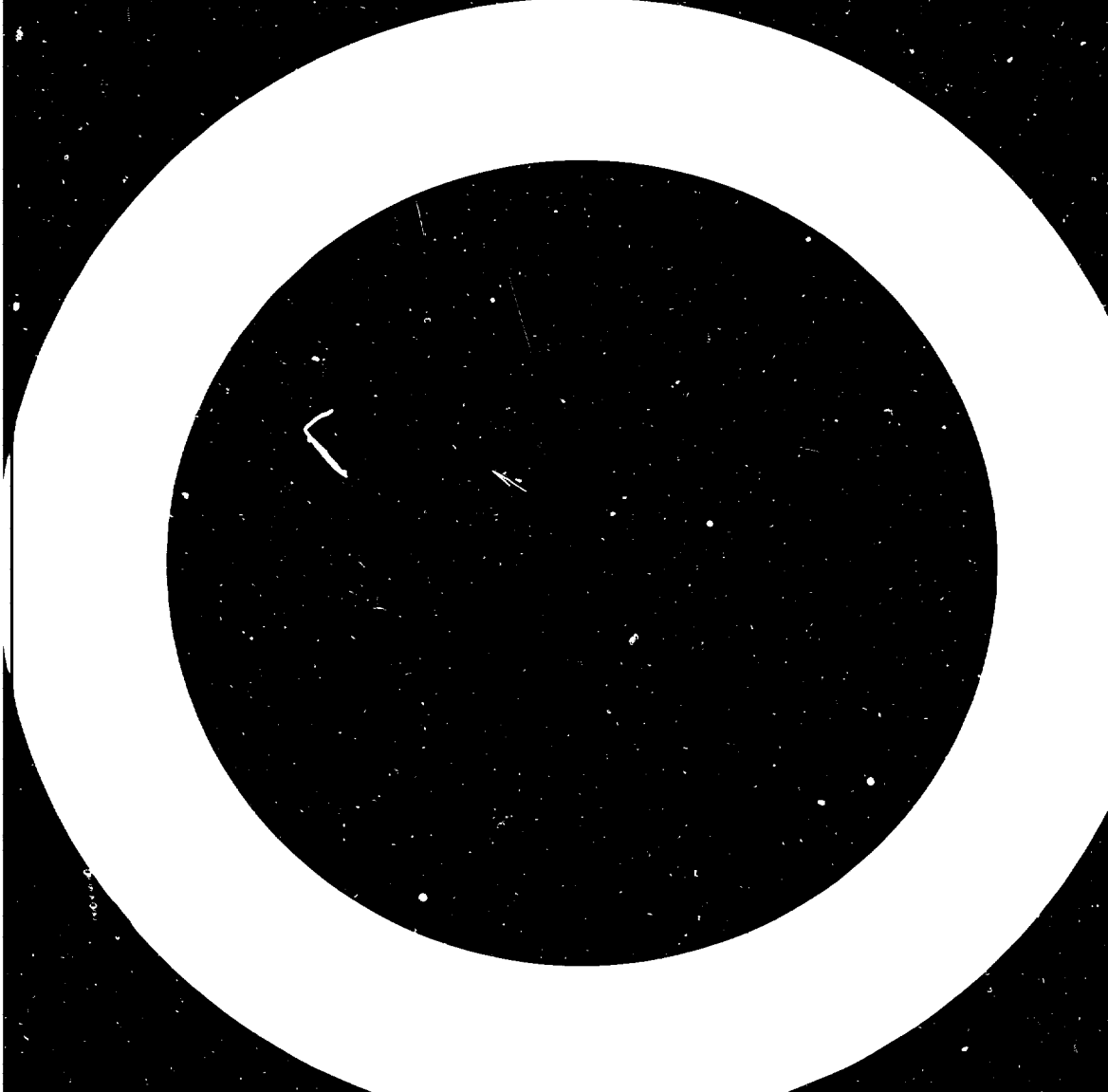




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REGIONAL FLOW AND COEFFICIENT TABLES 1977

VERSION EXIMV























REGIONAL COEFFICIENT TABLE

LATIN AMERICA EXIMV 1977

	AGRICULTURE	AGRO-FOOD	ENERGY	PETRO-COAL PRD	MINING & QUARRY	PRIM-MET ALLIC PR	CHEMICAL PRODUCT	TEXTILES	METAL PRODUCTS	LIGHT MANUFACTURING	CAPITAL GOODS	CONSTRUCTION	TRADE TRANSPORT	OTHER SERVICES
AGRICULTURE	0.099	0.348	0.000	0.000	0.001	0.005	0.009	0.073	0.003	0.052	0.000	0.004	0.000	0.006
AGRO-FOOD	0.044	0.173	0.000	0.000	0.000	0.000	0.018	0.008	0.001	0.016	0.000	0.000	0.002	0.002
ENERGY	0.002	0.006	0.064	0.396	0.023	0.023	0.016	0.010	0.008	0.008	0.006	0.002	0.004	0.007
PETRO-COAL PRODUCTS	0.005	0.004	0.005	0.040	0.015	0.011	0.013	0.003	0.005	0.004	0.002	0.008	0.016	0.001
MINING & QUARRYING	0.005	0.004	0.033	0.010	0.236	0.189	0.094	0.001	0.041	0.001	0.011	0.027	0.001	0.001
PRIM-METALLIC PRD.	0.001	0.002	0.014	0.004	0.022	0.221	0.008	0.001	0.239	0.009	0.133	0.100	0.002	0.002
CHEMICAL PRODUCTION	0.046	0.027	0.009	0.032	0.029	0.011	0.233	0.093	0.031	0.140	0.024	0.141	0.014	0.026
TEXTILES	0.005	0.010	0.001	0.001	0.002	0.000	0.006	0.256	0.005	0.016	0.003	0.001	0.002	0.001
METAL PRODUCTS	0.002	0.011	0.008	0.005	0.007	0.011	0.006	0.004	0.043	0.012	0.044	0.050	0.004	0.013
LIGHT MANUFACTURING	0.003	0.005	0.003	0.001	0.003	0.004	0.016	0.010	0.018	0.132	0.028	0.053	0.012	0.011
CAPITAL GOODS	0.005	0.003	0.028	0.003	0.030	0.006	0.002	0.004	0.006	0.002	0.185	0.011	0.016	0.019
CONSTRUCTION	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.002	0.006
TRADE AND TRANSPORT	0.063	0.087	0.019	0.129	0.036	0.061	0.085	0.110	0.068	0.087	0.077	0.083	0.048	0.030
OTHER SERVICES	0.015	0.024	0.032	0.041	0.022	0.027	0.039	0.031	0.028	0.032	0.038	0.016	0.050	0.071
INTERM-INPUTS ALLOC.	0.296	0.703	0.237	0.661	0.431	0.670	0.546	0.603	0.495	0.510	0.551	0.497	0.174	0.225
IMP. & RES. TO BE ALL.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WAGES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES LESS SUBSIDIES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CUNS-OF EXD CAPITAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET OPERAT. SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROSS OPERAT-SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VALUE ADDED	0.704	0.297	0.763	0.339	0.569	0.330	0.454	0.397	0.505	0.490	0.449	0.503	0.826	0.775
GROSS OUTPUT	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DUMMY 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUMMY 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	INTERM. DEMAND	RES. TO BE ALLOC	PRIV. CON SUMPTION	GOV. CON SUMPTION	TOT. CON SUMPTION	GR. FMO. CAP. FORM	CHANGE IN STOCK	TOT. IM VESTMENT	EXPORTS	IMPORTS (LESS)	FINAL DEMAND	TOTAL DEMAND	DUMMY 1	DUMMY 2
AGRICULTURE	0.064	0.0	0.077	0.003	0.068	0.0	0.0	0.047	0.195	0.061	0.082	0.071	0.0	0.0
AGRO-FOOD	0.034	0.0	0.218	0.012	0.193	0.0	0.0	0.0	0.084	0.026	0.159	0.081	0.0	0.0
ENERGY	0.017	0.0	0.010	0.017	0.011	0.0	0.0	0.000	0.192	0.162	0.012	0.015	0.0	0.0
PETRO-COAL PRODUCTS	0.009	0.0	0.007	0.009	0.007	0.0	0.0	0.000	0.153	0.036	0.022	0.014	0.0	0.0
MINING & QUARRYING	0.023	0.0	0.001	0.001	0.001	0.0	0.0	0.018	0.041	0.011	0.009	0.018	0.0	0.0
PRIM-METALLIC PRD.	0.031	0.0	0.004	0.001	0.004	0.0	0.0	0.018	0.012	0.100	-0.008	0.017	0.0	0.0
CHEMICAL PRODUCTION	0.053	0.0	0.040	0.026	0.039	0.0	0.0	0.015	0.033	0.156	0.016	0.039	0.0	0.0
TEXTILES	0.016	0.0	0.062	0.009	0.055	0.0	0.0	0.013	0.047	0.050	0.021	0.029	0.0	0.0
METAL PRODUCTS	0.013	0.0	0.016	0.017	0.016	0.0	0.0	0.045	0.005	0.019	0.021	0.016	0.0	0.0
LIGHT MANUFACTURING	0.020	0.0	0.040	0.020	0.038	0.0	0.0	0.015	0.029	0.027	0.033	0.023	0.0	0.0
CAPITAL GOODS	0.002	0.0	0.043	0.020	0.040	0.0	0.0	0.262	0.045	0.312	0.051	0.031	0.0	0.0
CONSTRUCTION	0.002	0.0	0.003	0.0	0.003	0.0	0.0	0.453	0.000	0.001	0.103	0.040	0.0	0.0
TRADE AND TRANSPORT	0.064	0.0	0.303	0.048	0.272	0.0	0.0	0.102	0.147	0.033	0.252	0.134	0.0	0.0
OTHER SERVICES	0.038	0.0	0.175	0.018	0.252	0.0	0.0	0.011	0.018	0.037	0.197	0.098	0.0	0.0
INTERM-INPUTS ALLOC.	0.400	0.0	1.000	1.000	1.000	0.0	0.0	1.000	1.000	1.000	1.000	0.625	0.0	0.0
IMP. & RES. TO BE ALL.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WAGES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TAXES LESS SUBSIDIES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CUNS-OF EXD CAPITAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET OPERAT. SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROSS OPERAT-SURPLUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VALUE ADDED	0.600	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.375	0.0	0.0
GROSS OUTPUT	1.000	0.0	1.000	1.000	1.000	0.0	0.0	1.000	1.000	1.000	1.000	1.000	0.0	0.0
DUMMY 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUMMY 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0















