

**AUSTRALIAN NATIONAL ACCOUNTS
INPUT-OUTPUT TABLES
1978-79**

**FINAL RESULTS — DATA ON MAGNETIC TAPE
INFORMATION PAPER**

INQUIRIES

If you have any queries about the data on the magnetic tape files ring Mr G. Wyld on Canberra (062) 52 6642 or our State Office, or write to Input-Output Section, ABS, P.O. Box 10, Belconnen, A.C.T. 2616

For copies of this publication contact Information Services, Canberra (062) 52 6627 or State Offices.

INTRODUCTION

This information paper provides:

- details of the tables contained on the magnetic tape (paragraphs 2-10),
- details of tape data structures (paragraphs 11 and 12),
- details of purchase arrangements (paragraphs 13-16); and
- an order form.

TABLES

2. The magnetic tape contains tables 1 to 18 due to be released shortly in *Australian National Accounts, Input-Output Tables, 1978-79* (5209.0) and nine margin matrices which are only released on the magnetic tape. The publication (5209.0) will contain a detailed description of tables 1 to 18, and of the compilation methodology used for 1978-79. The publication also contains useful additional material relating to the data contained on the magnetic tape. Until the release of that publication, users are referred to the final release for 1977-78 (5209.0) for a description of the input-output tables, and to the advance release of final 1978-79 data (5214.0) for a description of the 1978-79 compilation methodology. The changes between 1977-78 and 1978-79 are relatively small. However, before using the magnetic tape you should refer to paragraphs 12 to 15 of the latter publication (5214.0) or the relevant parts of the final publication (5209.0) when it is released in respect of 1978-79. The margins matrices are described in paragraphs 4 to 10 below.

3. The following tables are recorded on the magnetic tape:

Basic Tables

- 1 Make matrix—output by commodity group by industry
- 2 Input by industry and final demand category and supply by commodity group (Absorption matrix)
- 3 Imports matrix—supply by commodity group and inputs by industry and final demand category
- 4 Reconciliation of flows at basic values and at purchasers' prices by commodity group

Industry By Industry Tables (Basic Values, Recording Intra-Industry Flows)

Disaggregated (108) industry classification

Direct allocation of competing imports

- 5 Flow matrix
- 6 Direct requirements coefficients from Table 5
- 7 Total requirements coefficients from Table 6

Indirect allocation of competing imports

- 8 Flow matrix
- 9 Direct requirements coefficients from Table 8
- 10 Total requirements coefficients from Table 9

Aggregated (28) industry classification

Direct allocation of competing imports

- 11 Flow matrix
- 12 Direct requirements coefficients from Table 11
- 13 Total requirements coefficients from Table 12

Indirect allocation of competing imports

- 14 Flow matrix
- 15 Direct requirements coefficients from Table 14
- 16 Total requirements coefficients from Table 15

Primary Input Tables

- 17 Primary input content (total requirements) of \$100 final demand by industry
- 18 Primary input content (total requirements) by industry of each category of final demand

Margin Matrices

Supply of margin by commodity group to which the margin applies and input of margin by industry and final demand category (see paragraphs 4-10 below).

- 19 Wholesale trade (47.01, part)
- 20 Retail trade (48.01, part)
- 21 Road transport (51.01, part)
- 22 Rail and other transport (52.01, part)
- 23 Water transport (53.01, part)
- 24 Air transport (54.01, part)
- 25 Marine insurance (61.04, part)
- 26 Restaurants, hotels and clubs (92.01, part)
- 27 Commodity taxes (net).

4. Tables 19 to 27 show for each commodity group, sales by final buyers, complementary imports and re-exports, the usage of each margin by industry and final demand category. These tables are commonly referred to as *margin matrices*. They are subject to significant limitations. Users of the tables should take particular note of the qualifications referred to in paragraph 5 below.

5. The availability of information from which estimates of margin flows can be made, both in total and by component, is severely limited. These limitations cannot be overcome by methodological developments and require that the margin data supplied on magnetic tape be significantly qualified: the margin matrices do not conform to the usual standards of accuracy set by the ABS in its publications.

6. They are being made available because of their importance to some uses of input-output tables. For example, many applications of input-output analysis involve postulating a change in the level of final demand and analysing the effect of this change on the level of output of industries and on the level of imports. The information available about final demand is generally expressed in terms of *purchasers' prices*; however, the flow and coefficient tables used to analyse this demand are valued at *basic values*. Therefore, in order to enable the change to be analysed, information enabling the postulated level of final demand to be adjusted from purchasers' prices to basic values is required. A summary reconciliation of flows valued at purchasers' prices and at basic values is given in Table 4 and details of the margin flows shown in this table are provided in the margin matrices.

7. In Table 4, data about the usage of margin by all industries is aggregated into the column *Intermediate Usage*, while each final demand category is shown separately. The commodity taxes (net) margin is shown separately and the other margins are shown in aggregate in the column *Margin*.

8. The margin matrices provide additional details about the margin flows summarised in Table 4. The matrices follow the general structure of Table 2 *Input by industry and final demand category and supply by commodity group* (Absorption matrix), and each cell in each margin matrix relates to a cell in Table 2. A cell in Table 2 shows the usage at basic values of a commodity group by an industry or a final demand category (for example, usage of *milk products* (21.02) by the industry *confectionery and cocoa products* (21.07) or in private final consumption expenditure); the comparable cell in each of the margin matrices shows the margin applying to that basic value flow.

9. Estimation of the margin matrices involved two broad steps. First, for each margin type, the value of the margin flow relating to each non-margin commodity in the input-output system (there are approximately 1500 such commodities) was estimated. Secondly, each of these values, generally, was allocated to each final

demand category and to each industry in proportion to the sector's estimated usage of the non-margin commodity. The results of the application of this mechanical procedure were modified. For example, retail margin was allocated predominantly to private final consumption expenditure and no commodity taxes (net) were associated with the usage of commodities by the industry to which they are primary (that is flows shown in the cells on the diagonal of Table 2).

10. The total usage of each margin by each industry and final demand category shown in the margin matrices (that is, the column totals of each margin matrix) are incorporated in Table 2. It should be noted that the values in the rows of the published commodity groups containing the margin commodities (47.01, 48.01, 51.01, etc) are generally greater than the corresponding column total in the margin matrices. This difference occurs because non-margin commodities are included in each of the commodity groups (for example, a *storage* commodity is included in the commodity group *railway transport, other transport and storage* (52.01)).

TAPE DATA STRUCTURES

11. The following are the tape characteristics:

- fixed block size of 1356 characters (char.);
- tables are stored one column per block with zero fill if necessary (the last three characters of all blocks are zero);
- each cell of the flow tables is stored as an 11 character BCD field of the form +nnnnnnnn.n with an implied decimal point as shown and with the leftmost character containing the sign. A cell represents a value in thousands of dollars rounded to one decimal place;
- cells of the direct requirement coefficients tables and the total requirements coefficients tables have been multiplied by a factor of 10^6 . The cells are stored as an 11 character BCD field of the form +nnn.nnnnnnn with an implied decimal point as shown and with the leftmost character containing the sign; and
- a separator block is a block with +9999999999 in the first 11 characters and the remaining values all plus zero, is used to separate tables.

12. The tape format (2640 blocks) is set out below:

Separator block

Table 1 (110x110) 110 blocks of 1210 char. data
146 char. fillers

Separator block

Table 2 (121x119) 119 blocks of 1331 char. data
25 char. fillers

Separator block

Table 3 (119x337) 337 blocks of 1309 char. data
47 char. fillers

Separator block
Table 4 (121x40) 40 blocks of 1331 char. data
25 char. fillers

Separator block
Table 5 (120x119) 119 blocks of 1320 char. data
36 char. fillers

Separator block
Table 6 (120x119) 119 blocks of 1320 char. data
36 char. fillers

Separator block
Table 7 (109x109) 109 blocks of 1199 char. data
157 char. fillers

Separator block
Table 8 (121x119) 119 blocks of 1331 char. data
25 char. fillers

Separator block
Table 9 (118x119) 119 blocks of 1298 char. data
58 char. fillers

Separator block
Table 10 (109x109) 109 blocks of 1199 char. data
157 char. fillers

Separator block
Table 11 (40x39) 39 blocks of 440 char. data
916 char. fillers

Separator block
Table 12 (40x39) 39 blocks of 440 char. data
916 char. fillers

Separator block
Table 13 (29x29) 29 blocks of 319 char. data
1037 char. fillers

Separator block
Table 14 (41x39) 39 blocks of 451 char. data
905 char. fillers

Separator block
Table 15 (38x39) 39 blocks of 418 char. data
938 char. fillers

Separator block
Table 16 (29x29) 29 blocks of 319 char. data
1037 char. fillers

Separator block
Table 17 (110x10) 10 blocks of 1210 char. data
146 char. fillers

Separator block
Table 18 (117x17) 17 blocks of 1287 char. data
69 char. fillers

Separator block
Table 19 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 20 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 21 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 22 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 23 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 24 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 25 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 26 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Table 27 (113x119) 119 blocks of 1243 char. data
113 char. fillers

Separator block
Double tape mark

PURCHASE ARRANGEMENTS

13. Tapes can be made available according to several specifications. Normally a standard recording specification is used viz:

9 track, phase encoded, 63 RPmm, odd parity, subset of the Australian standard 8-bit coded character set (equivalent to ASCII), Australian standard label (equivalent to ANSI).

If the standard recording specifications cannot be accepted by your computer installation, see attached Order Form IOPDF1 for details of the alternative specifications that can be met.

14. The tape provided is a new reel of 12.7 mm high quality magnetic tape 730 metres long. The price which includes tape, recording to specification and air mail charges is set out below:

Zone	Country of Destination	Price* (including air mail charges) \$ Aust.
0	Australia	65.00
1	New Zealand, Papua New Guinea	65.90
2	Indonesia, Malaysia, Singapore	69.10
3	India, Japan, Philippines	73.10
4	USA, Canada, Israel	77.19
5	Europe (including the United Kingdom)	81.10

* These charges are at May 1984, and are subject to change.

15. Purchase of these packages implies acceptance by the purchaser of the following conditions:

- (a) Payment in advance. Purchase orders are not acceptable.
- (b) While the utmost care will be taken in preparing and handling each tape, deterioration may occur between the time of copying and receipt of the tape by you. Accordingly, if the tape is unreadable on receipt and this is reported to the ABS within 28 days of its dispatch it will be recopied free of charge. *(As an added precaution you are advised to take at least one security copy of the tape on receipt.)*
- (c) If the data are further disseminated the customer will:
 - (i) indicate that the ABS is the source of the data used,
 - (ii) not, however, attribute any analysis or transformation of the data to the ABS,
 - (iii) use the terminology currently used by the ABS for describing data, and
 - (iv) should the data be sold, inform the buyer that the same data are available on magnetic tape direct from the ABS.

16. To order a tape, forward the Order Form IOPDF1 with your crossed cheque (payable to the Collector of Public Moneys) for the appropriate amount to:

Collector of Public Moneys
Information Services
Australian Bureau of Statistics
P.O. Box 10
BELCONNEN. A.C.T. 2616

If you have any queries about the data on magnetic tape files, telephone or write to:

Input-Output Section
Australian Bureau of Statistics
P.O. Box 10
BELCONNEN. A.C.T. 2616

Telephone (062)52 6642

For inquiries about processing of orders and dispatch details for completed orders, telephone or write to:

Information Services
Australian Bureau of Statistics
P.O. Box 10
BELCONNEN. A.C.T. 2616

Telephone (062)52 6133

When you write or telephone with queries on the processing of orders, please quote the name of your organisation and the information on the Order Form IOPDF1.

R. J. CAMERON
Australian Statistician

**AUSTRALIAN BUREAU OF STATISTICS
1978-79 INPUT-OUTPUT TABLES
DATA ON MAGNETIC TAPE
ORDER FORM**

TO The Collector of Public Moneys
Information Services
Australian Bureau of Statistics
P.O. Box 10
BELCONNEN, A.C.T. 2616

<i>Office use only</i>
<i>Customer No.</i>

1. I wish to purchase the 1978-79 Input-Output data on magnetic tape to be sent to (please tick appropriate box):

<i>Country of Destination</i>	<i>Price* (including air mail charges) \$ Aust.</i>	
Australia	65.00	<input type="checkbox"/>
New Zealand, Papua New Guinea	65.90	<input type="checkbox"/>
Indonesia, Malaysia, Singapore	69.10	<input type="checkbox"/>
India, Japan, Philippines	73.10	<input type="checkbox"/>
USA, Canada, Israel	77.10	<input type="checkbox"/>
Europe (including the United Kingdom)	81.10	<input type="checkbox"/>

*These prices are at May 1984 and are subject to change.

2. My crossed cheque (No.) for \$ payable to the Collector of Public Moneys, is attached. (Note: orders will not be processed until cheque is received.)
3. (It is strongly recommended that you consult an appropriate technical person in your organisation before completing this section.)

I will accept the standard tape characteristics:

A : 9-track, phase encoded, 63 RPmm, ASCII code-set, ANSI label

OR (Please tick appropriate box)

I require the following non-standard tape characteristics:

B : 9-track, phase encoded, 63 RPmm, EBCDIC code-set, ANSI label

C : 9-track, phase encoded, 63 RPmm, ASCII code-set, unlabelled

D : 9-track, phase encoded, 63 RPmm, EBCDIC code-set, unlabelled

E : 9-track, NRZI, 32 RPmm, EBCDIC code-set, unlabelled

F : 9-track, NRZI, 32 RPmm, ASCII code-set, unlabelled

G : 7-track, NRZI, 32 RPmm, external 6-bit code-set, unlabelled

4. Please send the Package to: (Block letters please)

Name _____

Organisation _____

Address _____

Postcode _____

OR the Package will be collected by:

Name _____ Telephone _____

5. In case of queries about my order please contact:

Name _____ Telephone _____

Designation _____

6. I/my organisation agree to the following conditions of sale.

- * I understand that, while the utmost care will be taken in preparing and handling each tape, deterioration may occur between the time of copying and receipt of the tape by me. Accordingly, if the tape is unreadable on receipt and this is reported to the ABS within 28 days of its dispatch it will be recopied free of charge. (As an added precaution I am advised to take at least one security copy of the tape on receipt.)
- * If the data are further disseminated I/my organisation will:
 - . indicate that the ABS is the source of the data used,
 - . not, however, attribute any analysis or transformation of the data to the ABS,
 - . use the terminology currently used by the ABS for describing data, and
 - . should the data be sold, inform the buyer that the data supplied by the ABS are available directly from the ABS.

Signature _____ Date / /

Designation _____

ABS USE ONLY

Collector of Public Moneys	
Cheque from	/ /
Cheque No. Amount	
Receipt No.	
Signature	

Processing			
Customer No.	Date tape received	ABS Tape identification	
		Tape No.	Ident. No.