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HOW TO COMPUTE REGIONAL RESULTS

WITH THE MELBOURNE VERSION OF

ORANI

by

Peter J. Higgs and Russell J. Rimmer

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HOW TO COMPUTE REGIONAL RESULTS WITH THE MELBOURNE VERSION OF ORANI 78

by

Peter J. Higgs and Russell J. Rimmer*

I. Introduction

This manual is designed as a supplement to the paper by Higgs and Parmenter (1982) entitled "How to compute a Johansen-style solution with the Melbourne version of ORANI 78" (IMPACT Computing Document No. C3-02) - hereafter HP. HP describes a set of instructions which enable users to compute solutions of the ORANI model at the economy-wide level. Here we explain the restrictions on the economy-wide ORANI run which must be observed if regional results are required and the additional programs which must be run in order to obtain the regional (State level) results. We have assumed that the user is sufficiently familiar with the ORANI theory and the ORANI regional theory[1] to be able to specify an experiment in terms of the ORANI notation.

At present the regional computing package is not sufficiently flexible to obtain regional results from all possible economy-wide ORANI simulations. Specifically, regional results can only be obtained for ORANI simulations in which:

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* The authors are indebted to Brian Parmenter for his assistance with the preparation of this document, and to John Sutton who willingly made his programs for the regional computations available to us. We are grateful to John Madden, Tony Meagher and John Sutton who carefully read and criticized an earlier version of the manual.

(i) the consumer price index is endogenous;

(ii) wages are uniformly indexed, across occupations and industries, to the consumer price index;

(iii) the occupation- and industry-specific wage shift terms (i.e., $f^{(1)}_{(g+1,1)j}$, $f^{(1)}_{(g+1,1,m)}$ and $f^{(1)}_{(g+1,1,m)j}$) are all zero;

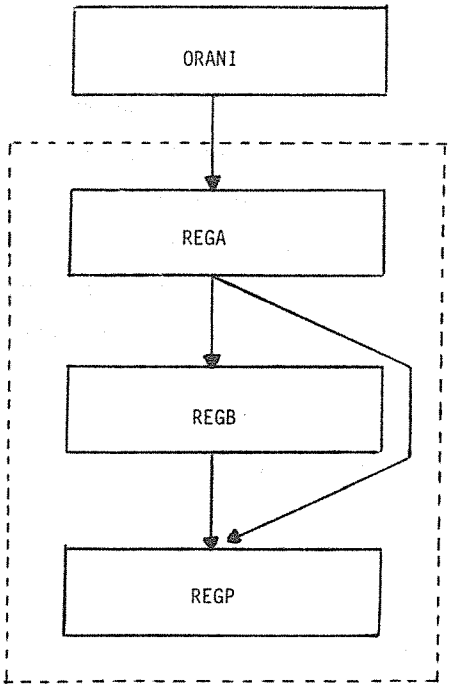
(iv) the shift terms for "other" demands for domestic commodities (i.e., $f^{(5)}_{(i1)}$) are equal across all commodities; and

(v) if the percentage change in aggregate real consumption (i.e., c_R) is exogenous and set to zero, then the shift terms for "other" demands for domestic commodities are also set to zero.

In addition to the economy-wide specification of the ORANI simulation (see Section II of HP), the user requiring regional results must also choose a value for the γ (gamma) parameter, which reflects the dependence of aggregate regional consumption on regional income.[2] Then, if the ORANI simulation conforms with restrictions (i) to (v) above and if the standard ORANI regional data base is acceptable,[3] this document can be used to obtain ORANI results at the State level.

To obtain regional ORANI results the user must run the following computer programs (these are depicted in Figure I.1):

Figure I . 1 : Computer Programs Required to Obtain Regional ORANI Results



(i) the ORANI program. When regional results are required it is essential that:

(a) data files which ensure consistent regional results are used; and

(b) the back solutions required by the regional package are computed.

(ii) the ORANI regional package. This consists of three programs, namely REGA, REGB and REGP. These are run sequentially after the ORANI simulation and do not feed back to it. The REGA program takes the ORANI basic solution and appropriate back solutions and writes them onto one file. The REGB program reads information from REGA and from an ORANI data file, then computes the regional outputs of local commodities according to equation 39.29 in section 39.3 of DPSV. Finally, the REGP program prints the regional results.

The rest of this document is organized as follows. In section II we set out the details of an ORANI experiment which we will use as an example for our computing instructions. In section III we describe the special features of the economy-wide ORANI computation which are necessary when regional results are required. In sections IV - VI we show how to compute REGA, REGB, and REGP. Brief concluding remarks are offered in section VII. An appendix explains the input formats required in preparing the card decks.

II. Details of an Illustrative Simulation

In explaining how to compute regional results with ORANI we will work through an illustrative simulation, namely the computation of the effects of a 10 per cent increase in the powers of the ad valorem export subsidies on selected commodities. In Table II.1 we have set out the details of the ORANI experiment. Note that the illustrative simulation conforms to the five restrictions listed on pages 1 and 2. Apart from the values given to the exogenous variables and from the specification of the γ parameter (which is not required for economy-wide simulations), Table II.1 is identical to Table II.1 in HP.

Table II.1 Specification of an Illustrative ORANI Experiment

The Exogenous variables

$p^{m}_{(i2)}$; t(i2,0); v(i2,0); t(is,jk); v(is,jk); t(is,3); v(is,3);

$v(\ell 1,4)$;[a] $x^{(4)}_{(r1)}$; t(il,4);[a] $k_j(o)$; c_R;[b] i_R; n_j; $f^{(1)}_{(g+1,1)}$;[c] $f^{(1)}_{(g+1,1,m)}$;[c]

$f^{(1)}_{(g+1,1)j}$;[c] $f^{(1)}_{(g+1,1,m)j}$;[c] $f^{(5)}_{(is)}$;[b] $f^{(2)}_{n}$; $f^{e}_{(il)}$; $f^{(1)}_{g+2,j}$; q; ϕ[d] and

all a's except a(j); (for i = 1, ..., g; s = 1,2; j = 1, ...,h;

k = 1,2; $\ell \in G$; $r \notin G$, m = 1, ... , M and $n \notin J$).

Values for the exogenous variables

All zeros except the $[T(\ell 1,4)/(1+T(\ell 1,4))]t(\ell 1,4)$[a] for ℓ = 11, 12, 13, 30, 63, 64.[e] These are all equal to 10.0.

Values for user-specified parameters (the h's)[f]

$h^{(5)}_{(is)}$, $h^{(1)}_{g+2,j}$, $h^{(1)}_{(g+1,1,m)j}$,[g] $h^{(2)}_{\ell}$, $h_2(i2,0)$, $h_2(il,4)$,

$h_1(is,jk)$, $h_3(is,jk)$, $h_1(is,3)$ and $h_3(is,3)$

all equal to 1, and

$h_1(i2,0)$, $h_3(i2,0)$, $h_1(il,4)$, $h_3(il,4)$, $h_2(is,jk)$ and $h_2(is,3)$

all equal to 0;

(for i = 1, ..., g; s = 1,2; j = 1, ..., h; k = 1,2;

m = 1, ... , M; and $\ell \notin J$).

Table II.1 (continued)

The export commodities

G = {A1, A3, A4, A5, 11, 12, 13, 14, 18, 25, 30, 63, 64}

The exogenous-investment industries

{j|j ∉ J} = {17, 84, 85, 86, 103, 104, 105, 106, 107, 108, 112, 113}

Variables for which projections are to be printed

All endogenous variables in the final system and all backsolution variables.

Value for the user-specified regional consumption parameter

$\gamma = 1.0$

(a) One respect in which there is minor variation between the ORANI 78 computer system and the description of the model given in DPSV is that in the computer system export subsidies can be specified only in an ad valorem form. The variables v(il,4) and t(il,4) do not appear in the computer system. In their place appear the variables [T(il,4)/(1+T(il,4))]t(il,4) the percentage changes in the powers of the ad valorem export subsidies.

(b) If c_R is exogenous and set to zero in your ORANI simulation then the $f^{(5)}_{(il)}$'s must also be exogenous and set to zero if you wish to use the regional package to obtain results at the State level.

(c) These variables must be exogenous and set to zero in your ORANI simulation if you wish to use the regional package.

(d) ϕ must be exogenous in your ORANI simulation if you wish to use the regional package.

(e) These numbers identify commodities according to the DPSV commodity codes (see HP, Table III.3).

(f) In the current version of the program, only the values of the $h^{(1)}_{g+2,j}$ and the $h^{(1)}_{(g+1,1,m)j}$ can be varied by users. All the other h's must take their default values, i.e., the values listed in the table.

(g) There must be uniform wage indexation across occupations and industries, i.e., $h^{(1)}_{(g+1,1,m)j} = h^{(1)}_{(g+1,1)}$ in your ORANI simulation if you wish to use the regional package.

III. The ORANI Simulation

In order to ensure consistency between the economy-wide and regional results, the elasticities of substitution between domestic and imported sources of local commodities must be set equal to zero in the data input for the ORANI program.[4] The standard ORANI data base for economy-wide simulations does not observe this restriction.[5] In subsection III.1 we explain the modifications to the instructions given in HP which are necessary to implement this data modification. In subsection III.2 we list the back solutions which must be generated in the ORANI run if regional results are required.

First we list the computer identification codes used for our illustrative simulation (see HP, p.10, items (i) - (vii)).

(i) Account code: fictional ABCDEF, as in HP.

(ii) Personal user identification code: DIAXPH.

(iii) Personal password: fictional PEDRO, as in HP.

(iv) Node identifier: MK.

(v) Program name: EXPSUB.

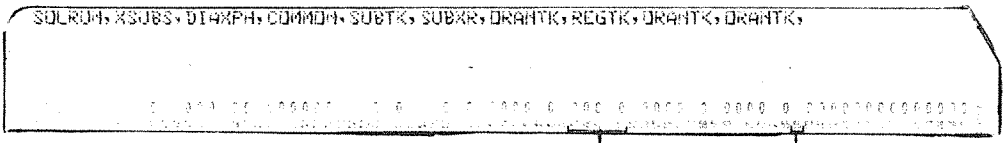
(vi) Label prefix: XSUBS.

(vii) File passwords: SUBTK, SUBXR.

III.1 Attaching the appropriate data

To attach the appropriate data, replace control cards 9 and 10 of HP, as follows:

Card 9 of HP

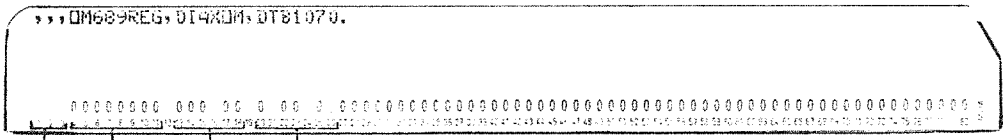


Except for the following instructions, punch this card as shown in HP.

Here enter REGTK, which is the turnkey password for the ORANI data file including zero values for the import-domestic substitution elasticities for local commodities.

Punch a comma here as additional information concerning control card 9 will follow on the next card.

Continuation of Card 9 of HP



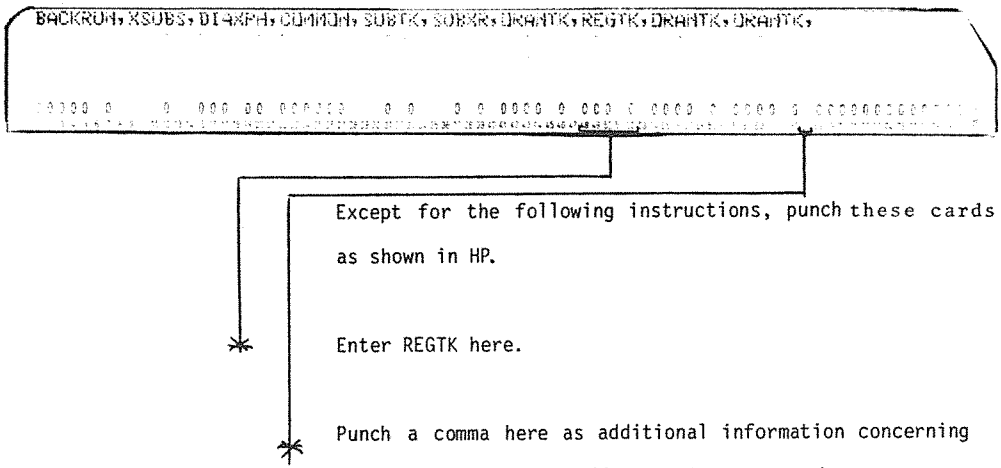
Punch commas in the first 3 columns.

Here enter OM689REG which is the prefix for the required data file.

Here enter DIAXOM which is the identification code attached to the required data file.

Here enter DTB1070 which is the storage location of the required data file.

Card 10 of HP

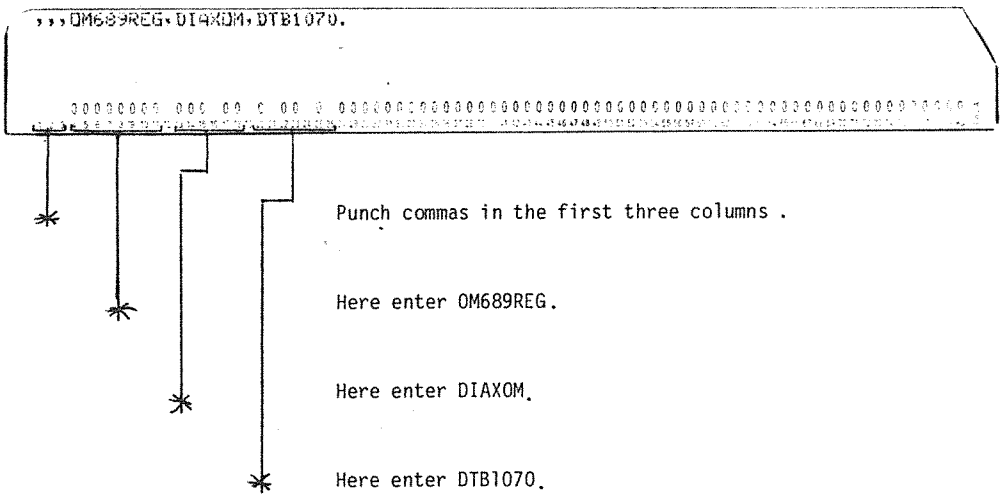


Except for the following instructions, punch these cards as shown in HP.

Enter REGTK here.

Punch a comma here as additional information concerning control card 10 will follow on the next card.

Continuation of Card 10 of HP



Punch commas in the first three columns .

Here enter OM689REG.

Here enter DIAXOM.

Here enter DTB1070.

III.2 Back solutions required by the ORANI regional package

To compute the regional balance equations for local commodities (see DPSV subsection 39.2) the ORANI regional package requires as data inputs the back solutions listed in Table III.1. Therefore as part of the ORANI run these back solutions must be computed and printed (see HP subsections III.3.2 and III.4.1). Of course other back solutions can be computed as well if desired.

TABLE III.1 Back Solutions Required by the ORANI Regional Package

Code No.	Computer Mnemonic	Description	Typical Element (DPSV Notation)	Standard No. Of Components
73	XN	endogenous commodity exports	$x^{(4)}_{(i1),\ i\in G^{(a)}}$	13
76	X3	consumption of domestic commodities	$x^{(3)}_{(i1)}$	115
77	$Y_{\Lambda}{}^{(b)}$	investment by industry	y_j	113
79	LI	employment by industry	$x^{(1)}_{(g+1,1)j}$	113
84	XM	consumption of imports	$x^{(3)}_{(i2)}$	115

(a) Note that G is the set of commodities for which exports are to be set endogenously. The selection of such commodities is user-determined but in most ORANI applications the set G has been composed of the 13 commodities listed in the relevant part of Table II.1 in HP. To conform with this we have given "13" as the standard number of components for G.

(b) the symbol "Λ" denotes a blank space.

IV. The REGA Program

The function of REGA is to copy the basic solution and the back solutions listed in Table III.1 from the ORANI output onto a single file. A schematic summary of the REGA deck is set out in Table IV.1. The table contains three columns, the first identifying the card (or block of cards) under consideration, the second indicating the subsections in which the content of the card is explained, and the third referencing the position of the card in our illustrative deck. Cards (or blocks of cards) for which the descriptions are not enclosed in brackets in Table IV.1 are compulsory in all REGA decks. Cards (or blocks) which are enclosed in brackets may not be required depending on what options were selected in the ORANI simulation.

IV.1 REGA control cards

Before the REGA control cards can be set up, the seven pieces of information listed on p.8 are required together with the following four items:

(viii) a storage location for all files created. The files from our illustrative simulation were stored on COMMON, i.e., generally available as opposed to user-specific storage.

(ix) a REGA program name which may be up to six characters long. It must commence with an alphabetic character but the remaining characters may be alphabetic and/or numeric. (We chose REGONA in the example.)

TABLE IV.1 Schematic Representation of the REGA Computing Deck

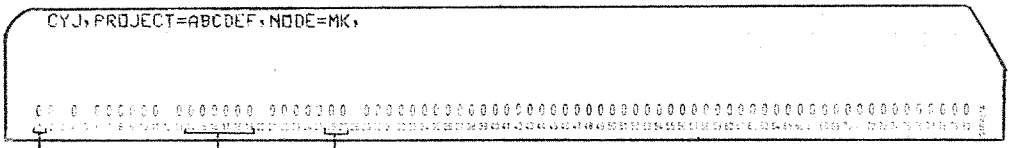
Description of Card(s)	Subsection in which Punching is Described	Card Numbers in Illustrative Deck
CONTROL SECTION		
Control cards	IV.1	A1-A15
End of section	IV.1	A16
COMPILE SECTION		
Compile card	IV.2.1	A17
End of section	IV.2.2	A18
COPYING SECTION		
REGA steering card for the 1st set of components of the 1st non-zero exogenous vector variable	IV.3 (a)	A19
(Values of the 1st set of components of the 1st non-zero exogenous vector variable)	IV.3 (b)	A20, A21
(Tariff rate cards)	IV.3 (c)	
⋮		
REGA steering card for the last set of components of the 1st non-zero exogenous vector variable	IV.3 (a)	A22
(Values of the last set of components of the 1st non-zero exogenous vector variable)	IV.3 (b)	A23, A24
(Tariff rate cards)	IV.3 (c)	
⋮		
REGA steering card for the last set of components of the last non-zero exogenous vector variable	IV.3.1 (a)	
(Values of the last set of components of the last non-zero exogenous vector variable)	IV.3 (b)	
(Tariff rate cards)	IV.3 (c)	
Blank card	IV.3	A25
End of information	IV.4	A26

(x) a REGA prefix which will be attached to any files which are created in the course of the job. This may be up to nine characters long, it must commence with an alphabetic character, but the remaining characters may be alphabetic and/or numeric. (For the job in our example we chose SUBA.)

(xi) two REGA file passwords, one to allow you to read files which are created in the course of the job, and a second to allow you to modify the files after they have been created, should this be necessary. These may be up to six characters long, they must commence with an alphabetic character but the remaining characters may be alphabetic and/or numeric. (We chose REGATK and REGAXR for these. The first type of password is known as a turnkey password and the second as an except read password.)

Using this information proceed to punch the REGA control cards as follows:

Card A1



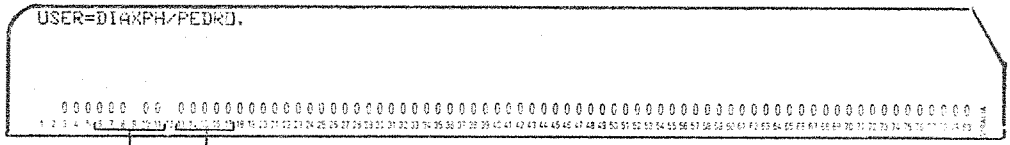
In the first column multipunch 6, 7, 8, 9.

Enter your account code here (see item (i) page 8).

Enter the node identifier here (see item (iv) page 8).

You may find it convenient to use a pink card for the first card of your deck.

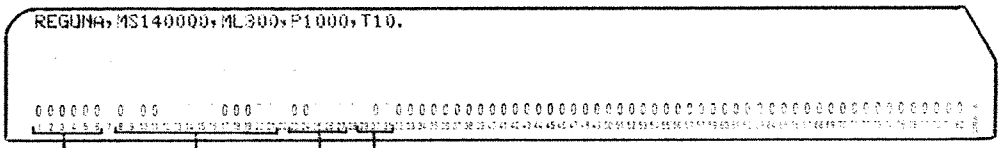
Card A2



Enter your user identification code here (see item (ii) page 8).

Enter your personal password here (see item (iii) page 8).

Card A3



* Enter the REGA program name here (see item (ix) page 12).

* These entries specify how much computer-memory space is available to you. For a REGA job use the values shown here.

* This entry determines the priority which your job will receive in the computer. The REGA program is a considerably smaller job than an ORANI simulation. Therefore a higher priority could be assigned without incurring a large computing bill. P1000 should ensure a same-day turnaround for your job. Higher priorities are available but also more costly. Check with the node manager if you think you need a higher priority.

* This entry puts a time limit on your job. T10 allows plenty of time for a REGA run.

Card A4

```
COMMON.
```

This card directs the computer to give you access to COMMON storage space. If you used user-specific space to store your ORANI-simulation (see HP control cards 9, 10 and 11) then consult your node manager.

Cards A5 - A10

```
GETSET,DTB3006.
```

A5

```
ATTACH,OMLIB,OMORANI78LIB,ID=DIAKOM,SN=DTB3006,PW=ORANTK.
```

A6

```
LIBRARY,OMLIB,*.
```

A7

```
ATTACH,OLDPL,DM78REGUPDATE,ID=DIAXOM,SN=DTB3006,PW=DRAMTK.
```

A8

```
UPDATE,Q,L=A12,D.
```

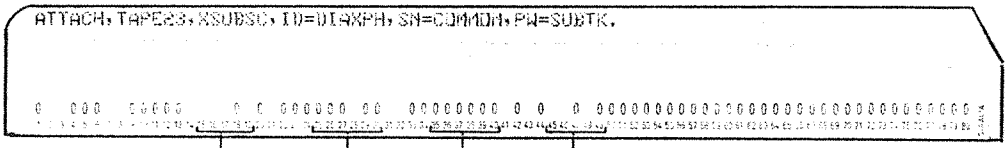
A9

```
REQUEST,TAPE10,*PF,SN=COMMON.
```

A10

You should never have to vary these cards. They activate the disc which stores the REGA program libraries and assemble these for later use.

Card A11



This card attaches the basic solution file from your ORANI simulation.

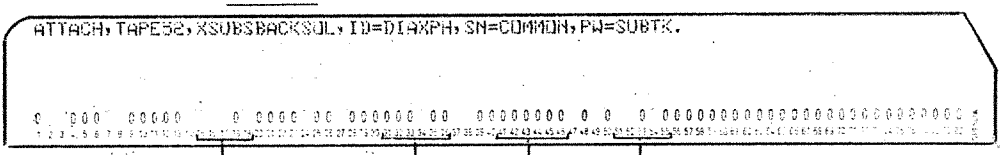
* Enter the file prefix from your ORANI simulation here (see item (vi) on page 8).

* Enter the personal user identification code used when computing your ORANI simulation here (see item (v) on page 8).

* Enter COMMON here if your ORANI simulation is stored on generally available storage space (see item (viii) on page 12). If it is stored on user-specific space consult your node manager.

* Enter the turnkey file password used in your ORANI simulation here (see item (vii) on page 8).

Card A12



This card attaches the back solutions file from your ORANI simulation.

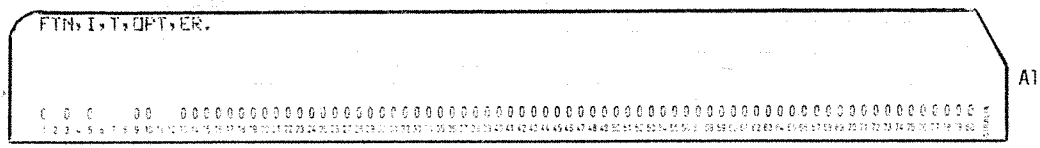
* Enter the file prefix from your ORANI simulation here (see item (iv) on page 8).

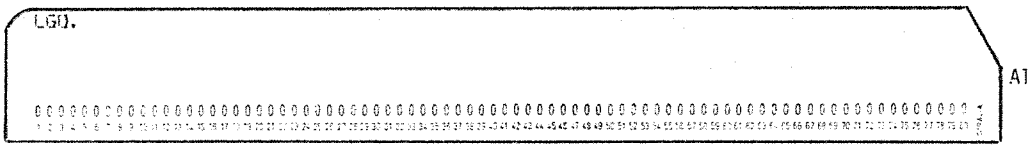
* Enter the personal user identification code used when computing your ORANI simulation here (see item (v) on page 8).

* Enter COMMON here if your ORANI simulation is stored on generally available storage space (see item (viii) on page 12). If it is stored on user-specific space consult your node manager.

* Enter the turnkey file password used in your ORANI simulation here (see item (vii) on page 8).

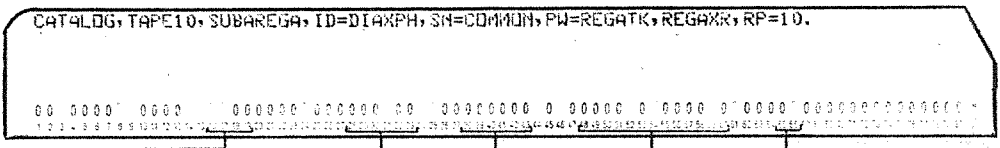
Cards A13 - A14





You should never have to vary these cards. They compile and execute your program.

Card A15



This card instructs the computer to catalogue the REGA file you are about to create.

* Enter the REGA prefix for your files here (see item (x) on page 14). It will distinguish your REGA files from those which may be created by other users.

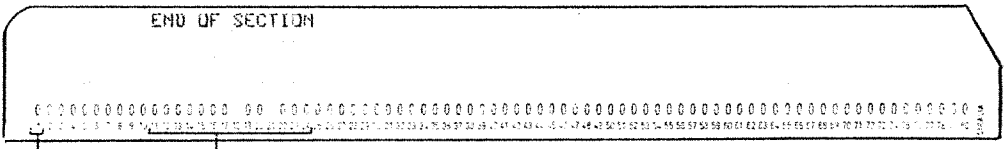
* Your user identification code (see item (ii) on page 8).

* This entry instructs the computer to use COMMON, i.e. generally available (as opposed to user-specific), space to store your job. If you intend to store your job on user-specific space then consult your node manager.

* Your REGA file passwords (see item (xi) on page 14).

* This entry specifies the number of days you desire your REGA files to be stored on COMMON, if applicable. Note that COMMON is subject to a demand-sensitive-purging system which may flush your files prior to the specified storage time. If you require your REGA files to be stored longer than 10 days then consult your node manager on how to copy your files onto a disc.

Card A16



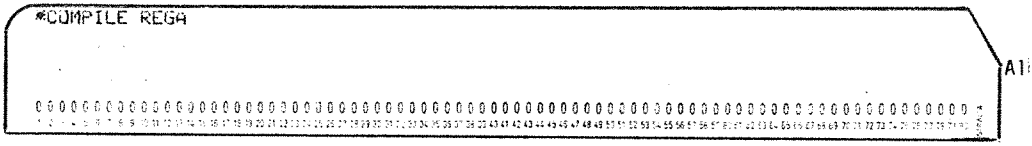
Multi-punch 7, 8, 9 in column 1.

Punch "END OF SECTION" anywhere within the field of columns 2 to 80.

This card concludes the control cards. A card like this is used at the end of each section of the deck. You may find it convenient to use blue cards to divide the deck.

IV.2 Compile section

IV.2.1 Compile card

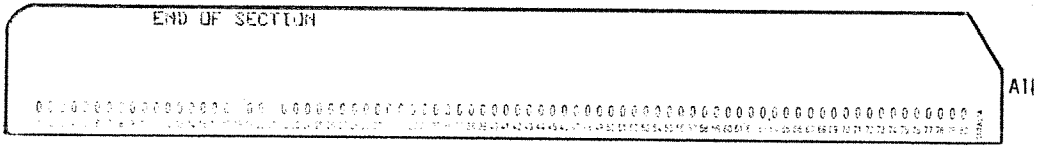


This card prepares the REGA program held in the computer for compilation.

IV.2.2 End of section

Conclude the compile section of the deck with a (blue)

"END OF SECTION" card multi-punched 7, 8, 9 in column 1 [e.g., Card A18].



IV.3 Copying section

The regional package treats the effects of shocks to each exogenous vector variable separately. In its present form the package cannot provide a composite result for shocks to a combination of exogenous vector variables. Results are obtainable for a shock to a single component of an exogenous vector or for a combination of shocks to any number of components of a single exogenous vector. Runs of the regional package for shocks to different exogenous vector variables can be combined in a single deck but the results of each shock will be computed and printed out separately.[6]

For each set of regional results which you require (remember that these are limited to the effects of shocks to some or all components of single exogenous vector variables) you must punch a block of cards identifying the relevant exogenous vector and the values for the non-zero components. Note that the REGA program only has the capacity to store up to 20 such blocks of cards. Blocks referring to different vector variables should be entered in the order in which the variables are listed in HP, Table III.2.

The blocks are structured as follows :

(a) a REGA steering card in format 2I5,F10.3,2I5,3F10.3[7]

(i) In columns 1-5 ending in column 5, punch the code number (see HP, Table III.2 part A) of the vector variable.

(ii) In columns 6-10 ending in column 10, punch a first

command number

- punch "1" if the set of components contains all exogenous components of the vector variable and each component is to be assigned the same value. Then specify this value as in (iii) below.

- otherwise punch the number of exogenous components of the vector variable (see HP, the last column of Table III.2 part A). Then specify in order the individual values of the components, including any zeros, as in (b) below.

(iii) If "1" was punched in column 10 then punch in columns 11-20, the non-zero value to be assigned to all exogenous components of the vector variable [N.B. if "1" was not punched in column 10 then leave columns 11 to 20 blank.]

(iv) In column 25 punch a second command number

- punch "0" if the vector variable has only one component.
- punch "1" if the vector variable has more than one component.

(v) In column 30 punch a third command number

- punch "0" if the vector variable is <u>not</u> ad valorem tariff rates.
- punch "1" if the vector variable is ad valorem tariff rates. Then specify the base period values of the ad valorem tariff rates as in (c) below.

(vi) In columns 31-40 punch the value of the wage indexation parameter used in your ORANI simulation. Note that regional results can only be obtained for ORANI simulations where this parameter is uniform across occupations and industries (i.e. $h^{(1)}_{(g+1,1,m)j} = h^{(1)}_{(g+1,1)}$).

(vii) In columns 41-50 punch a fourth command number

- punch "0.0" if the vector variable is <u>not</u> aggregate real consumption, (i.e., c_R).
- punch "1.0" if the vector variable is aggregate real consumption.

(viii) In columns 51-60 punch a fifth command number

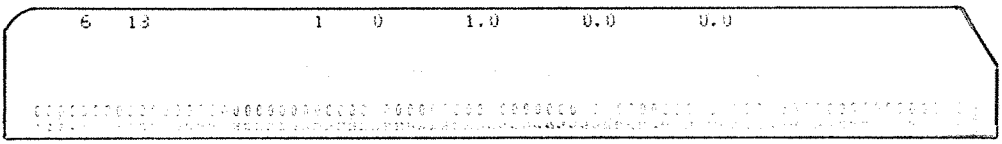
- if aggregate real consumption was a non-zero exogenous variable in your ORANI simulation and if the shift terms for other usage (domestic) (i.e., the $f^{(5)}_{(il)}$'s[8]) were also set as <u>non-zero</u>, then punch the value of the ratio $f^{(5)}_{(.1)}/c_R$
- otherwise punch "0.0".

(b) cards containing the individual values (including zero values) to be assigned to the components of the relevant exogenous vector. (N.B. these cards are not required if "1" was punched in column 10 of the REGA steering card.) Punch a card (or cards) containing the individual values in order of their identification number (see HP, Tables III.3 and III.4) and in format 10F8.3.[9]

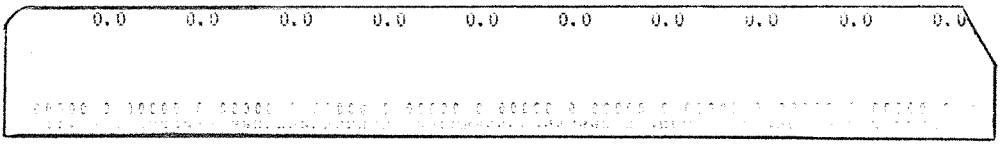
(c) cards containing base-period tariff rates. (N.B. not required if "0" was punched in column 30 of the REGA steering card.) Punch cards, in format 10F5.2.[9] containing the same 115 ad valorem tariff rates as were used in your ORANI simulation. The rates must be punched as proportions, not percentages.

Conclude the set of these card blocks with a blank card.

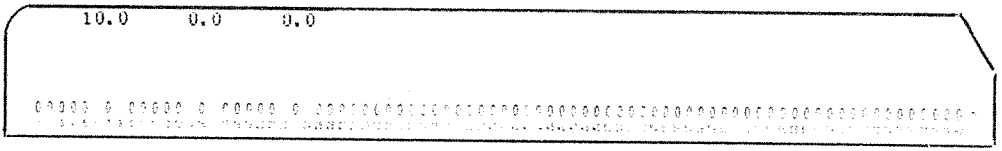
[For the illustrative simulation we computed two sets of regional results: (i) the effects of a 10 per cent increase in the power of the subsidy on the exports of commodity 30; and (ii) the total effect of a 10 per cent increase in the powers of the export subsidies on commodities 11-13, 30, 63 and 64 (see the second section of Table II.1). Two blocks of cards are therefore required, cards A19-A21 and A22-A24. Card A19 is the REGA steering card for experiment (i) above. The "6" in column 5 is the code number for the exogenous-export-subsidy vector variable. The "13" punched in columns 9 and 10 is the total number of exogenous export subsidies. Columns 11-20 are blank. There is a "1" in column 25 as the vector variable has more than one component. There was 100 per cent wage indexation in our ORANI simulation, thus a "1.0" is punched in columns 31-40. On the next two cards (A20 and A21) are the individual values of the exogenous export subsidies for experiment (i). Note that prepared fibres, in the order of lowest identification numbers to highest, is the eleventh exogenous export commodity in ORANI, thus the only non-zero value appears on card A21 in columns 1-8. Card A22 is the REGA steering card for experiment (ii). Cards A23 and A24 assign a 10 per cent increase to each of the selected subsidies. Card A25 is the concluding blank.]



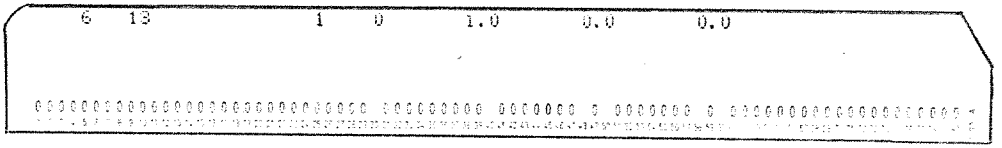
A19



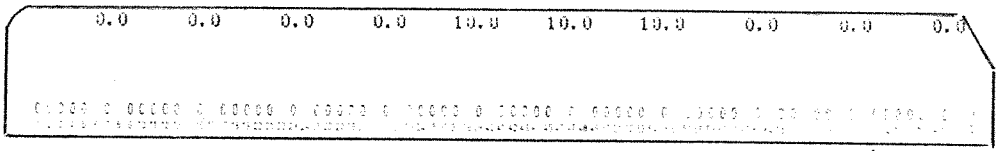
A20



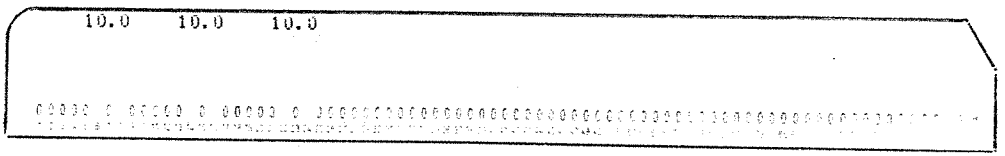
A21



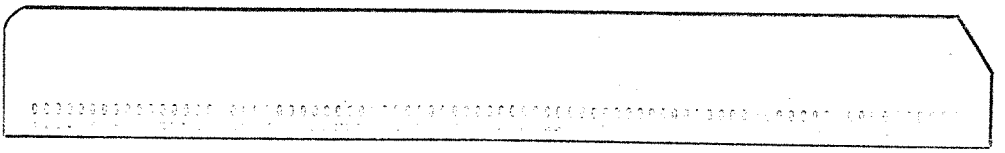
A22



A23



A24

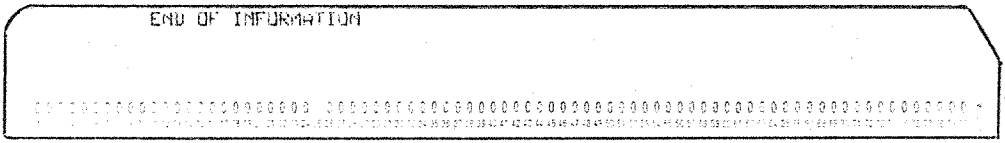


A25

IV. 4 End of information

The deck concludes with a (yellow) "END OF INFORMATION" card multi-punched 6, 7, 8, 9 in column 1.

[This final card in our illustrative REGA deck is Card A26.]



IV.5 The REGA printout

Extracts from the printout for our illustrative REGA run are given in Figure IV.1. The job is identified in the first line of the printout. It contains the node identifier (entered on Card A1 of the illustrative REGA deck; see subsection IV.1), the user identification code (entered on Card A2), and the program name (entered on Card A3).

The first section of the printout (see Figure IV.1 page 31) documents the progress of the job in the computer. Note that control cards A3-A15 are reproduced as part of the documentation (we have underlined these in Figure IV.1). Information on the time taken by the computer to run your job and on the bulk of computing costs are also printed out in this section. The second section of the REGA printout contains some diagnostics on the REGA program; however this section has been omitted from Figure IV.1 to conserve space.

The next section of the printout echoes the card blocks from the copying section of the program (see cards A19-A24 and Figure IV.1 page 32).

The last section of the printout reproduces the results copied from the ORANI simulation. Notice that there are two columns of results in Figure IV.1. The first column gives the results of the 10 per cent increase in the power of the subsidy on exports of commodity 30, i.e., experiment (i) from the illustrative simulation (see p. 27) and the second column gives the results of the 10 per cent increase in powers of subsidies on commodities 11-13, 30, 63 and 64, i.e., experiment (ii). The industry-output results from the ORANI basic solution and all the back solutions listed in Table III.1 are included. You should check that your REGA run copies the correct ORANI files by comparing the final section of the REGA printout with the ORANI printout.

Figure IV.1 : A Subset of the Illustrative REGA Printout

```
0452  LP  1328  MK  DIAXPH  REGONA    LPMK* PR 1P      1324 28/02/83 CAC 2222222222222222222222222

** 7000 SCOPE 2.1.5-569 MOD 16/02/83  10.10.14.** 18/02/83      83049

        *-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*

HH.MM.SS CPU SECOND ORIGIN
         16.42.02.CYI.        ED VERSION 15/10/82
16.42.02 00000.004 CYJ.      -REGONA,MS140000,ML300,P1000,T10.
16.42.03 00000.007 LOD.      -COMMON.
16.42.03 00000.057 LOD.      -GETSET,DTB3006.
16.42.03 00000.059 CYJ.        RP223 - MNTMACRO-  MOUNT  - SN=DTB3006          VSN=
16.42.03 00000.061 CYJ.        SET PARAMETERS SUBSTITUTED
16.42.03 00000.061 CYJ.        RP320 -  EST   6  ASSIGNED
16.42.03 00000.085 CYJ.        RP570 - VSN ADUN06 OF SET EMUS06  MOUNTED
16.42.03 00000.086 JOB.      -ATTACH,OMLIB,OMORANI78LIB,ID=DIAXOM,SN=DTB3006,PW=*****.
16.42.04 00000.090 CYJ.        PF254 - CYCLE     3 ATTACHED FROM SN=EMUS06
16.42.04 00000.091 JOB.      -LIBRARY,OMLIB,*.
16.42.04 00000.091 CYJ.        RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
16.42.04 00000.099 JOB.      -ATTACH,OLDPL,OM78REGUPDATE,ID=DIAXOM,SN=DTB3006,PW=*****.
16.42.04 00000.103 CYJ.        PF254 - CYCLE     1 ATTACHED FROM SN=EMUS06
16.42.04 00000.103 LOD.      -UPDATE,Q,L=A12,D.
16.42.04 00000.119 CYJ.        RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
16.42.05 00000.174 USR.       UPDATE COMPLETE.
16.42.05 00000.176 JOB.      -REQUEST,TAPE10,*PF,SN=COMMON.
16.42.05 00000.177 JOB.      -ATTACH,TAPE23,XSUBSC,ID=DIAXPH,SN=COMMON,PW=*****.
16.42.05 00000.181 CYJ.        PF254 - CYCLE     1 ATTACHED FROM SN=COMMON
16.42.05 00000.182 JOB.      -ATTACH,TAPE52,XSUBSBACKSOL,ID=DIAXPH,SN=COMMON,PW=*****.
16.42.05 00000.186 CYJ.        PF254 - CYCLE     2 ATTACHED FROM SN=COMMON
16.42.05 00000.187 LOD.      -FTN,I,T,OPT,ER.
16.42.18 00001.135 USR.            .942 CP SECONDS COMPILATION TIME
16.42.18 00001.136 LOD.      -LGO.
16.42.19 00001.304 CYJ.        LD610 -       6 TABLE MOVES, FLS REQUIRED TO LOAD - 0013151 OU.COG
16.42.19 00001.306 CYJ.        LD603 - EXECUTION INITIATED OS.EXP
16.42.19 00001.306 USR.       FORTRAN LIBRARY 552            13/07/82
16.42.19 00001.308 CYJ.        RP727 - VSN ADUN21 OF SET COMMON  MOUNTED
16.42.19 00001.313 CYJ.        RP1034- VSN ADUN20 OF SET COMMON  MOUNTED
16.42.20 00001.384 CYJ.        RP727 - VSN ADUN21 OF SET COMMON  MOUNTED
16.42.21 00001.536 USR.           END  REGA
16.42.21 00001.536 USR.         116400   FINAL EXECUTION FL.
16.42.21 00001.537 USR.           0.229 CP SECONDS EXECUTION TIME.
16.42.21 00001.538 JOB.      -CATALOG,TAPE10,SUBAREGA,ID=DIAXPH,SN=COMMON,PW=*****,*****,RP=10.
16.42.21 00001.540 CYJ.      FILE SIZE=       1391 WORDS.
16.42.21 00001.542 CYJ.        PF060 - CYCLE     1 CATALOGED ON SN=COMMON
16.42.21 00001.548 CYJ.        RDIAXPH                5.120  KCHAR
16.42.21 00001.549 CYJ.        DFILEAS                3.550  KCHAR
16.42.21 00001.549 CYJ.        OUTPUT                31.180  KCHAR
16.42.21 00001.549 CYJ.        SC050 - 000124 SC/LC SWAPS
16.42.21 00001.550 CYJ.
16.42.21 00001.550 CYJ.        USR-TIME               0.751  SEC
16.42.21 00001.550 CYJ.        CPU-TIME               1.551  SEC            1.126  $
16.42.21 00001.550 CYJ.        SCM.TIME               0.346  MCSEC          0.502  $
16.42.21 00001.551 CYJ.        LCM.TIME               0.174  MCSEC          0.125  $
16.42.21 00001.551 CYJ.        FILE-IO                0.514  MCHAR          0.149  $
16.42.21 00001.551 CYJ.        CENT-IO                0.040  MCHAR          0.011  $
16.42.21 00001.552 CYJ.        RATE                  72.616  CENTS/UNIT
16.42.21 00001.552 CYJ.        SUBTOTAL               2.634  RU             1.913  $
16.42.21 00001.552 CYJ.        FLAGFALL                                     0.133  $
16.42.21 00001.552 CYJ.        PRIORITY                1000  B
16.42.21 00001.553 CYJ.        CHARGE                                       2.04   $
```

```
6   13      0.000     1     0      1.000      0.000      0.000
 0.000    0.000    0.000   0.000    0.000    0.000    0.000    0.000    0.000    0.000
10.000    0.000    0.000

      961         963         265         114      .14009    0.00000


6   13      0.000     1     0      1.000      0.000      0.000
 0.000    0.000    0.000   0.000   10.000   10.000   10.000    0.000    0.000    0.000
10.000   10.000   10.000

      961         963         265         114      .14009     .97604
```

INDUSTRY OUTPUTS

	1	2
1	.1366	-.1742
2	.0191	-.3006
3	.1397	-.4754
4	-.0515	-.5339
5	-.0316	-.2335
6	-.1464	-.8857
7	.9452	.7906
8	-.0012	-.1709
9	.1505	-.2728
10	-.0466	-.0954
11	-.1434	10.0528
12	-.0167	1.1210
13	-.1072	7.3673
14	-.2187	-1.6320
15	.0156	.2219
16	-.0087	-.0776
17	-.0143	.3988
18	-.0040	-.5466
19	-.0035	-.0122
20	-.0407	-.1039
21	-.0999	.4025
22	-.0085	-.0334
23	.0008	.0135
24	-.0127	-.0882
25	-.2698	-1.8549
26	.0029	-.0025
27	-.0030	-.0051
28	-.0110	-.1441
29	-.0782	-.0784
30	12.7131	12.0062
31	-.0602	-.6575
32	-.2673	-.8193
33	.0061	-.0807
34	-.0260	-.2300
35	-.1062	-.2833
36	-.0192	.0769
37	-.0281	-.0979
38	-.0238	-.0835
39	-.0487	-.3841
40	-.0284	-.3563
41	-.0281	-.4316
42	-.0102	.1856
43	-.0083	-.6583
44	-.0257	-.2389
45	.0289	.0385
46	-.0044	-.0279
47	-.0096	.0171
48	-.0043	.0749
49	.0935	-.3279
50	-.0563	-.0415
51	-.0107	-.3323
52	-.0199	-.2648
53	.0080	.0350
54	-.0047	-.0502
55	-.0475	-.1931
56	.0156	.2219
57	-.0336	-.4676

58	-.0184	.5167
59	.0028	.0036
60	.0221	-.7748
61	.0155	-.6367
62	-.0089	-.1058
63	-.1431	9.9998
64	-.1371	9.4921
65	-.0012	.0260
66	-.0267	-.6185
67	-.0357	-.6165
68	-.0512	-1.9752
69	-.1186	6.2904
70	-.1016	1.5598
71	-.0110	-.4817
72	-.0232	.2103
73	-.0600	-.7190
74	-.0132	-.9416
75	-.0325	-.2860
76	.2470	-3.2861
77	-.1166	3.5280
78	-.0560	1.3899
79	-.0352	-.3399
80	-.0220	-.0451
81	-.0314	-.3362
82	-.0248	.0346
83	-.0158	.2129
84	-.0017	.4876
85	-.0011	.2275
86	.0045	.0885
87	0.0000	0.0000
88	.0312	-1.0097
89	.0185	.5421
90	.0007	-.0966
91	.0104	.0801
92	.0151	-.0175
93	.0093	.4817
94	-.0241	.6289
95	-.0186	1.3121
96	.0115	.0476
97	-.0079	.3002
98	.0054	.1682
99	-.0004	.0308
100	.0018	.1380
101	.0026	.0540
102	.0081	.0260
103	0.0000	0.0000
104	.0003	.0046
105	0.0000	0.0000
106	-.0005	.0119
107	-.0003	.0022
108	.0008	.0378
109	.0036	.0582
110	-.0004	.0078
111	.0003	.0182
112	.0067	.1925
113	0.0000	0.0000

INVESTMENT

	1	2
1	.7839	-3.5497
2	.1023	-4.4759
3	.7005	-5.3748
4	-1.0041	-17.0045
5	-.2480	-4.6937
6	-2.1566	-19.2790
7	5.5866	2.0260
8	-.0475	-4.1881
9	.2263	-3.4042
10	-.1777	-3.5214
11	-1.2616	82.0360
12	-.3317	13.8842
13	-.5117	26.2528
14	-.7674	-10.2159
15	.0040	-3.9041
16	-.0922	-5.2928
17	0.0000	0.0000
18	-.0094	-2.3047
19	-.0165	-2.0574
20	-.1023	-2.8661
21	-.4106	-3.3478
22	-.0466	-3.3765
23	-.0087	-1.6198
24	-.0273	-1.7200
25	-.5105	-5.5570
26	-.0115	-3.6932
27	-.0397	-2.9660
28	-.0626	-3.2420
29	-.0589	-.9797
30	24.2215	20.2459
31	-.2099	-5.9423
32	-.7796	-6.0654
33	-.0208	-4.0572
34	-.0326	-1.6751
35	-.0962	-1.5244
36	-.0331	-1.4368
37	-.0352	-1.5316
38	-.0361	-1.6312
39	-.0470	-1.6021
40	-.0328	-1.4929
41	-.0369	-1.7655
42	-.0468	-2.5691
43	-.0404	-3.3428
44	-.0505	-2.4989
45	.0242	-2.1181
46	-.0300	-2.2355
47	-.0283	-1.9460
48	-.0221	-1.8747
49	.4615	-5.5585
50	-.2905	-4.3501
51	-.0305	-2.2421
52	-.0401	-2.0570
53	.0001	-1.6693
54	-.0220	-1.6306
55	-.1820	-4.7604
56	.1238	-2.0421
57	-.0861	-3.5103
58	-.0487	-1.5271
59	-.0044	-1.6558
60	.0360	-3.1423
61	.0120	-2.4941

62	-.0229	-1.8305
63	-.4650	28.7336
64	-.5434	33.4314
65	-.0126	-1.6940
66	-.0409	-2.5462
67	-.0584	-2.5811
68	-.0469	-2.6454
69	-.2568	10.2468
70	-.2041	.1511
71	-.0448	-3.6870
72	-.0383	-1.6865
73	-.1254	-4.3220
74	-.0415	-4.5443
75	-.0550	-2.3223
76	.2225	-4.6507
77	-.1413	2.1873
78	-.0629	-.2019
79	-.0492	-1.9731
80	-.0459	-2.4443
81	-.0399	-1.8523
82	-.0412	-1.9280
83	-.0370	-1.7479
84	0.0000	0.0000
85	0.0000	0.0000
86	0.0000	0.0000
87	-.0295	-2.7844
88	.0138	-4.0859
89	-.0058	-2.3503
90	-.0344	-3.0102
91	-.0211	-2.7204
92	-.0257	-4.1772
93	-.0145	-2.3817
94	-.0947	-3.1015
95	-.0736	-1.8548
96	.0134	-3.3611
97	-.0573	-2.8322
98	-.0425	-3.9961
99	-.0653	-4.2376
100	-.0495	-4.1026
101	-.0626	-4.3559
102	-.0319	-4.2493
103	0.0000	0.0000
104	0.0000	0.0000
105	0.0000	0.0000
106	0.0000	0.0000
107	0.0000	0.0000
108	0.0000	0.0000
109	-.0319	-2.5054
110	-.0758	-6.6363
111	-.0333	-2.4176
112	0.0000	0.0000
113	0.0000	0.0000

HOUSEHOLD CONSUMPTION (DOMESTICALLY PRODUCED GOODS)

	1	2
1	-.5834	-.0550
2	.1777	.6967
3	.0902	.8049

4	.0998	.8187
5	.1484	.9286
6	.0288	.4977
7	-.0007	.0097
8	.0387	.2437
9	-.4248	-.3478
10	.0003	.0025
11	-.0493	.0928
12	.0160	.0034
13	.0219	-1.6019
14	.1044	-7.2132
15	.0921	-6.3469
16	.0697	.3746
17	-.0208	-.3371
18	-.0226	-.2655
19	.0107	-.2959
20	.0265	.1993
21	-.0020	-.0042
22	-.0505	-.1187
23	-.0311	-.0050
24	.0048	.0312
25	.0007	.0121
26	-.0033	-.0161
27	.0167	.1367
28	.0028	-.0127
29	-.0023	-.0076
30	-.0104	-.1472
31	-.0817	-.0896
32	-.1350	-.0908
33	-.0488	-.2838
34	-.1435	-.3830
35	-.0466	-.0353
36	.0038	.0285
37	-.1168	-.1291
38	-.0069	-.0511
39	-.0166	-.0388
40	-.0229	-.0965
41	-.0488	-.3933
42	-.0010	-.0462
43	.0027	-.0589
44	-.0046	-.2128
45	.0019	-.2126
46	.0027	-.0167
47	.0080	.0568
48	.0048	.0144
49	-.0176	-.1413
50	-.0020	-.0817
51	-.0027	.0616
52	.0216	-.0572
53	.0151	-.0702
54	-.0085	-.0867
55	.0026	-.0044
56	-.0030	-.0323
57	-.0016	-.2521
58	.0123	.0486
59	-.0066	-.0890
60	-.0174	-.4857
61	.0037	-.1304
62	-.0003	.0073
63	.0037	-.1168
64	.0016	-.0968
65	.0467	-2.9816

66	.0686	-4.3584
67	.0238	-1.3824
68	.0171	-1.1849
69	-.0076	-1.4724
70	-.0042	-.1709
71	.0166	-.9145
72	.0086	-.3918
73	.0228	-.1126
74	.0141	-.1325
75	.0006	-.2998
76	.0081	-.8970
77	.0156	-1.0260
78	-.0012	-.3665
79	.0244	-.8047
80	.0183	-.5969
81	-.0198	-.1699
82	.0047	.0142
83	.0076	-.0549
84	-.0202	-.4304
85	-.0033	-.5099
86	.0047	-.7703
87	.0088	-.0694
88	-.0048	-.1866
89	.0070	-.1730
90	.0062	-.2667
91	-.0075	-.1451
92	-.0031	.0245
93	.0061	.0367
94	.0048	-.1233
95	-.0003	-.0237
96	.0015	-.0611
97	-.1889	-2.5428
98	.0158	.1164
99	.0113	-.2190
100	-.0074	-.0536
101	-.0051	.0003
102	-.0041	-.0168
103	.0169	.1410
104	-.0048	-.0003
105	-.0000	-.0000
106	.0033	.0003
107	.0187	.0388
108	-.0013	.0183
109	-.0019	.0057
110	-.0022	.0021
111	.0036	.0174
112	-.0020	-.0268
113	-.0009	-.0126
114	.0039	-.0057
115	.0861	.6617

HOUSEHOLD CONSUMPTION OF IMPORTED GOODS

	1	2
1	-.0904	.4926
2	-.7657	-1.9934
3	.0731	.5797
4	.0740	.5809
5	.0783	.5908

6	.0934	-.8430
7	.3158	1.2848
8	-.0592	-.2001
9	-.4232	-.3460
10	.1146	.8145
11	-.0493	.0928
12	.1342	1.2179
13	.0186	1.0595
14	.0925	-1.3912
15	.0869	-1.1858
16	.0589	.3680
17	-.0208	-.3371
18	.1139	.8414
19	.2316	2.8102
20	.0282	.2250
21	.2136	1.2109
22	.2017	.8963
23	.3219	1.2466
24	.0701	.6338
25	.0007	.0121
26	.1351	1.0195
27	.0305	.2267
28	.0028	-.0127
29	-.0023	-.0076
30	.0346	.3180
31	.2855	.7036
32	.3059	.4465
33	.0729	.4635
34	.1998	.6611
35	.1083	.2802
36	.1145	.9039
37	.1952	1.0811
38	.1348	1.0625
39	.2872	1.3772
40	.2918	1.6398
41	.4539	3.6366
42	.1317	1.0265
43	.1211	.9820
44	.1150	1.0788
45	.1426	1.3645
46	.0418	.3432
47	.0892	.7000
48	.0760	.6097
49	.1008	.7975
50	.1543	1.3156
51	.1001	.6742
52	.0847	.9711
53	.1365	1.3759
54	.0799	.6530
55	.0680	.5628
56	.1129	.9251
57	.1139	1.1862
58	.0217	.1469
59	.0634	.5154
60	.0731	.6219
61	.0551	.3318
62	-.0003	.0073
63	.1119	.9758
64	.0881	.7635
65	.0553	-.4267
66	.0728	-.5099
67	.1277	2.5262

68	.0841	1.4826
69	.0920	1.6035
70	.1742	1.8580
71	.0427	-.1127
72	.0391	.1930
73	.0696	.4671
74	.0341	.2220
75	.1074	1.1291
76	.1327	2.0475
77	.0775	1.1216
78	.0317	.0896
79	.0474	-.0425
80	.0447	.0714
81	.0949	.7880
82	.0742	.6062
83	.0819	.6885
84	.0700	.7721
85	.0590	.6059
86	.0047	-.7703
87	.0088	-.0694
88	-.0048	-.1866
89	.0070	-.1730
90	.0062	-.2667
91	-.0075	-.1451
92	-.0031	.0245
93	.0061	.0367
94	.0048	-.1233
95	.2645	2.4123
96	.2485	2.5007
97	.0371	.3656
98	.2152	1.6812
99	.0113	-.2190
100	-.0074	-.0536
101	-.0051	.0003
102	-.0041	-.0168
103	.0169	.1410
104	-.0048	-.0003
105	-.0000	-.0000
106	.2536	2.0283
107	.2105	1.9266
108	-.0013	.0183
109	-.0019	.0057
110	-.0022	.0021
111	.0036	.0174
112	-.0020	-.0268
113	-.0009	-.0126
114	.0039	-.0057
115	.0861	.6617

EXPORTS

	1	2
1	-1.1236	-1.4471
2	0.0000	0.0000
3	-.1652	-.5557
4	-.0146	-.5307
5	1.2402	2.3113
6	0.0000	0.0000
7	0.0000	0.0000

8	0.0000	0.0000
9	0.0000	0.0000
10	0.0000	0.0000
11	0.0000	0.0000
12	0.0000	0.0000
13	-.2522	21.5242
14	.0569	-3.9909
15	-.0196	2.1500
16	-.5444	-9.2449
17	0.0000	0.0000
18	0.0000	0.0000
19	0.0000	0.0000
20	-.2080	-2.2743
21	0.0000	0.0000
22	0.0000	0.0000
23	0.0000	0.0000
24	0.0000	0.0000
25	0.0000	0.0000
26	0.0000	0.0000
27	-.8927	-6.0939
28	0.0000	0.0000
29	0.0000	0.0000
30	0.0000	0.0000
31	0.0000	0.0000
32	22.0147	20.9826
33	0.0000	0.0000
34	0.0000	0.0000
35	0.0000	0.0000
36	0.0000	0.0000
37	0.0000	0.0000
38	0.0000	0.0000
39	0.0000	0.0000
40	0.0000	0.0000
41	0.0000	0.0000
42	0.0000	0.0000
43	0.0000	0.0000
44	0.0000	0.0000
45	0.0000	0.0000
46	0.0000	0.0000
47	0.0000	0.0000
48	0.0000	0.0000
49	0.0000	0.0000
50	0.0000	0.0000
51	0.0000	0.0000
52	0.0000	0.0000
53	0.0000	0.0000
54	0.0000	0.0000
55	0.0000	0.0000
56	0.0000	0.0000
57	0.0000	0.0000
58	0.0000	0.0000
59	0.0000	0.0000
60	0.0000	0.0000
61	0.0000	0.0000
62	0.0000	0.0000
63	0.0000	0.0000
64	0.0000	0.0000
65	-.7289	62.0270
66	-.3108	24.6983
67	0.0000	0.0000
68	0.0000	0.0000
69	0.0000	0.0000

70	0.0000	0.0000
71	0.0000	0.0000
72	0.0000	0.0000
73	0.0000	0.0000
74	0.0000	0.0000
75	0.0000	0.0000
76	0.0000	0.0000
77	0.0000	0.0000
78	0.0000	0.0000
79	0.0000	0.0000
80	0.0000	0.0000
81	0.0000	0.0000
82	0.0000	0.0000
93	0.0000	0.0000
84	0.0000	0.0000
85	0.0000	0.0000
86	0.0000	0.0000
87	0.0000	0.0000
88	0.0000	0.0000
89	0.0000	0.0000
90	0.0000	0.0000
91	0.0000	0.0000
92	0.0000	0.0000
93	0.0000	0.0000
94	0.0000	0.0000
95	0.0000	0.0000
96	0.0000	0.0000
97	0.0000	0.0000
98	0.0000	0.0000
99	0.0000	0.0000
100	0.0000	0.0000
101	0.0000	0.0000
102	0.0000	0.0000
103	0.0000	0.0000
104	0.0000	0.0000
105	0.0000	0.0000
106	0.0000	0.0000
107	0.0000	0.0000
108	0.0000	0.0000
109	0.0000	0.0000
110	0.0000	0.0000
111	0.0000	0.0000
112	0.0000	0.0000
113	0.0000	0.0000
114	0.0000	0.0000
115	0.0000	0.0000

EMPLOYMENT BY INDUSTRY (PERSON HOURS)

	1	2
1	.5213	-.6650
2	.0722	-1.1381
3	.3499	-1.1910
4	-.1756	-1.8189
5	-.1069	-.7892
6	-.3387	-2.0492
7	3.1498	2.6345
8	-.0022	-.3110
9	.1996	-.3617

10	-.0793	-.1623
11	-.2728	19.1265
12	-.1313	8.8352
13	-.2215	15.2229
14	-.3538	-2.6400
15	.0340	.4848
16	-.0204	-.1827
17	-.0200	.5586
18	-.0051	-.6912
19	-.0055	-.0195
20	-.0509	-.1299
21	-.1342	.5410
22	-.0125	-.0491
23	.0010	.0179
24	-.0165	-.1142
25	-.3972	-2.7308
26	.0042	-.0036
27	-.0065	-.0111
28	-.0218	-.2864
29	-.1066	-.1068
30	15.9350	15.0489
31	-.0874	-.9546
32	-.3344	-1.0251
33	.0071	-.0941
34	-.0311	-.2750
35	-.1315	-.3507
36	-.0263	.1054
37	-.0341	-.1189
38	-.0259	-.0911
39	-.0528	-.4163
40	-.0369	-.4627
41	-.0317	-.4880
42	-.0130	.2350
43	-.0100	-.7904
44	-.0329	-.3057
45	.0423	.0564
46	-.0075	-.0481
47	-.0128	.0229
48	-.0053	.0924
49	.1722	-.6043
50	-.1008	-.0742
51	-.0143	-.4447
52	-.0326	-.4340
53	.0116	.0505
54	-.0077	-.0828
55	-.0607	-.2469
56	.0543	.7737
57	-.0469	-.6524
58	-.0277	.7747
59	.0065	.0086
60	.0459	-1.6083
61	.0219	-.9019
62	-.0139	-.1650
63	-.2288	15.9877
64	-.2640	18.2694
65	-.0015	.0314
66	-.0335	-.7760
67	-.0457	-.7881
68	-.0741	-2.8582
69	-.1397	7.4119
70	-.1081	1.6593
71	-.0121	-.5271

	NSW	VIC	QLD	SA	WA	TAS	AUST
9	76.0284	47.2620	41.2870	23.3190	24.6482	8.2643	220.8089
23	122.3757	93.2316	36.3042	30.1058	26.9539	9.1367	318.1078
26	47.9441	36.5283	14.2664	11.7917	10.5425	3.5798	124.6528
27	82.4840	63.3394	24.6742	20.2654	18.0760	6.2186	215.0575
60	44.6225	32.2632	14.7468	11.2054	11.4127	3.5424	117.7930
84	291.3253	212.6322	92.7949	70.2831	64.5933	24.4543	756.0831
85	41.0286	30.9233	11.6113	9.9952	8.5653	2.8724	104.9961
86	111.3788	83.6515	38.2534	27.5408	25.7054	9.6386	296.1684
87	524.8060	399.1501	155.8460	129.0015	115.4898	39.1064	1363.3997
88	1337.1362	961.0806	443.2902	341.7682	360.3449	109.6717	3553.2920
89	1166.0007	875.3428	363.0056	291.8957	278.7883	89.7591	3064.7923
90	930.9804	699.9720	278.7981	228.6522	206.4141	69.5257	2414.3425
91	194.3468	145.3411	57.9103	48.2613	45.8703	15.4893	507.2191
92	75.9730	55.8239	24.9167	19.6432	20.0282	5.9907	202.3757
97	296.7113	225.9617	93.1003	72.8476	63.3967	22.9066	774.9242
98	237.9176	181.6056	73.9222	58.3684	51.0440	17.7188	620.5766
99	150.3168	112.7084	44.5043	36.5658	32.6164	11.0884	387.8002
100	128.5148	97.9668	39.4337	31.6096	27.8796	9.5584	334.9628
101	286.9296	226.6882	84.9694	70.8627	63.5124	21.1746	754.1368
102	332.0343	252.0460	104.2275	81.9322	73.9530	24.9070	869.1000
103	785.9426	598.1279	232.9201	193.3328	173.1688	58.6249	2042.1171
106	389.1530	275.8524	124.5398	97.4667	96.0622	32.6524	1015.7264
107	306.4807	253.1376	106.6365	88.5911	76.4285	30.3541	861.6284
108	114.8994	87.8004	40.5616	31.2018	27.1397	9.7224	311.3254
109	206.3363	156.1726	64.3321	52.6500	45.9706	17.2523	542.7139
110	347.1025	264.0247	103.2945	85.2687	76.2070	25.8350	901.7323
111	94.3098	71.7774	28.1786	23.1624	20.6653	7.0069	245.1004
112	1292.6340	993.1715	405.3975	318.0239	277.4662	96.4349	3383.1280

0456 LP 1341 DIAXPH FILE OUTPUT CHARGE $3.15

V. The REGB Program

The main function of the REGB program is to compute regional output changes for local commodities according to equation 39.29 of DPSV. It must first read the parts of the ORANI basic solution and back solutions which are collated by REGA.

A schematic summary of the REGB deck is set out in Table V.1 which has a similar format to Table IV.1.

V.1 The REGB control cards

Before the REGB card deck can be set up you will require, in addition to the eleven pieces of information listed on pages 8, 12 and 14;

(xii) a REGB program name which may be up to six characters long. It must commence with an alphabetic character but the remaing characters may be alphabetic and/or numeric. (We have chosen REGONB in the example.)

(xiii) a REGB prefix which will be attached to any files which are created in the course of your job. This may be up to nine characters long, it must commence with an alphabetic character, but the remaining characters may be alphabetic and/or numeric. (For the job in our example we have chosen SUBB.)

Table V.1 Schematic Representation of the REGB Computing Deck

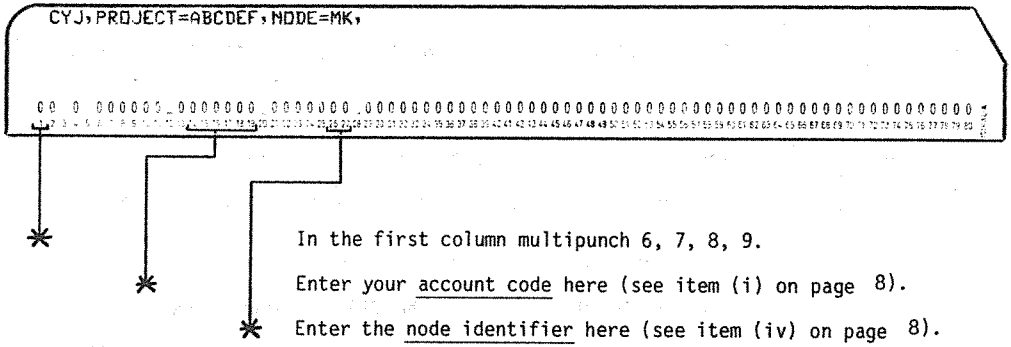
Description of card(s)	Subsection in which punching is described	Card numbers in illustrative deck
CONTROL SECTION		
Control cards	V.1	B1-B20
End of section	V.1	B21
COMPILE SECTION	V.2	
Identification card	V.2	B22
Compile card	V.2	B23
Deletion cards	V.2	B24-B29
End of section	V.2	B30
REGIONAL SOLUTION SECTION	V.3	
Data identification card	V.3.1	B31
Compile data card	V.3.2	B32
Data deletion card one	V.3.3	B33
Dimension card	V.3.4	B34
Data deletion card two	V.3.5	B35
Gamma parameter card	V.3.6	B36
End of information	V.4	B37

(xiv) turnkey and except read file passwords for REGB. These may be up to six characters long, they must commence with an alphabetic character, but the remaining characters may be alphabetic and/or numeric. (We have chosen REGBTK and REGBXR for these.)

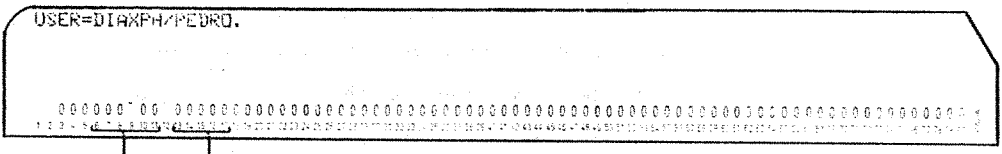
(xv) a REGB card image identifier. This may be up to six characters long, it must commence with an alphabetic character, but the remaining characters may be alphabetic or numerical. (We have chosen IDSUBS.)

Then proceed to punch your REGB control cards as follows:

Card B1 (pink)



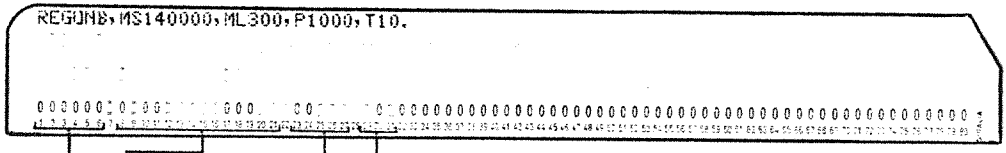
Card B2



Enter your user identification code here (see item (ii) on page 8).

Enter your personal password here (see item (iii) on page 8).

Card B3



Enter the REGB program name here (see item (xii) on page 45).

These entries specify how much computer-memory space is available to you. For a REGB job use the values shown here.

This entry determines the priority which your job will receive in the computer. The REGB program, like the REGA program, is considerably less computer-time consuming than an ORANI simulation. P1000 should ensure a same-day turnaround for your job. Higher priorities are available but are more costly. Check with the node manager if you think you need a higher priority.

This entry puts a time limit on your job. T10 allows plenty of time for a REGB run.

Card B4

```
COMMON.
```

This card directs the computer to give you access to COMMON storage space. If you used user-specific space to store your REGA run (see item (viii) on page 12) then consult your node manager.

Cards B5 - B10

```
GETSET,DTB1070.                                                    B5
```

```
GETSET,DTB3006.                                                    B6
```

```
ATTACH,UMLIB,UMURANI70LIB,ID=DIAXUM,SN=DTB3006,PW=URANTK.          B7
```

```
LIBRARY,UMLIB,*.                                                   B8
```

```
ATTACH,TAPE2,DM78STDIOTABLES,SN=DT83006,ID=DIAXOM,PW=ORANTK.
```

B9

```
ATTACH,TAPE3,DM78STDMARGINS,ID=DIAXOM,SN=DT83006,PW=ORANTK.
```

B10

These cards activate the required program libraries and attach the appropriate ORANI data files.

Card B11

```
ATTACH,TAPE7,UM68$REGPARAMS,ID=DIAXOM,SN=DTB1070,PW=REGTK.
```

This card attaches parts of the ORANI data which are required by REGB. You will recognize various file parameters as those listed on the cards in subsection III.1.

Card B12

```
ATTACH,TAPE10,SUBAREGA,ID=DIAXPH,SN=COMMON,PW=REGATK.
```

This card attaches your REGA file.

* Enter your REGA file prefix here (see item (x) on page 14).

* Enter the user identification code used when computing the REGA program (see item (ii) on page 8).

* Enter COMMON here if your REGA run is stored on generally available storage space (see item (viii) on page 12). If it is stored on user-specific space consult your node manager.

* Enter your REGA turnkey password here (see item (xi) on page 14).

Cards B13 - B19

```
REQUEST,TAPE11,*PF,SN=COMMON.
```

B13

```
ATTACH,OLDPL,UM78REGUPDATE,ID=DIAKOM,SN=DT83006,PW=DRANTK.
```

B14

```
UPDATE(Q,L=A12,D)
```

B15

```
FTN,I,T,OPT,ER.
```

B16

```
RETURN,COMPILE.
```

B17

```
UPDATE(Q,L=A12,D)
```

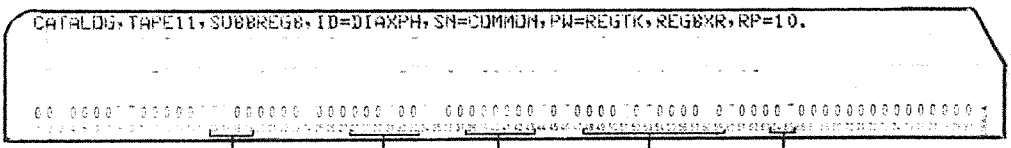
B18

```
LGO,COMPILE.
```

B19

You should never need to vary these cards. They attach and compile the REGB program.

Card B20



This card instructs the computer to catalogue the REGB file you are about to create.

Enter the REGB prefix for your files here (see item (xiii) on page 45). It will distinguish your REGB files from those which may be created by other users.

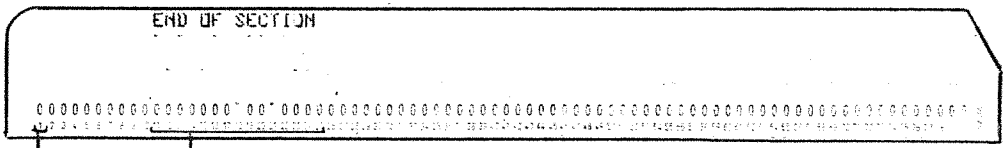
Your user identification code (see item (ii) on page 8).

This entry instructs the computer to use COMMON, i.e. generally available (as opposed to user-specific), space to store your job. If you intend to store your job on user-specific space then consult your node manager.

Your REGB file passwords (see item (xiv) on page 47).

This entry specifies the number of days you desire your REGB files to be stored on COMMON, if applicable. Note that COMMON is subject to a demand-sensitive-purging system which may flush your files prior to the specified storage time. If you require your REGB files to be stored longer than 10 days then consult your node manager on how to copy your files onto a disc.

Card B21 (blue)



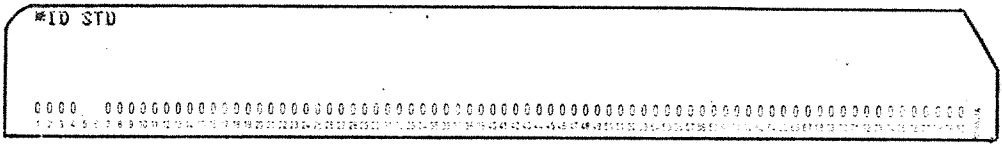
* Multi-punch 7, 8, 9, in column 1.

* Punch "END OF SECTION" anywhere within the field of columns 2 to 80.

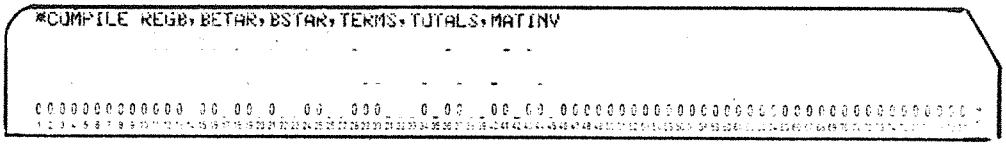
This card concludes the control section.

V.2 Compile section

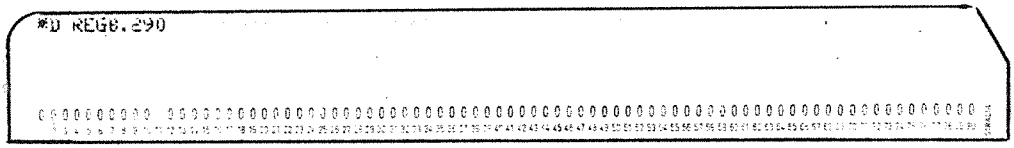
In this section of the deck your REGB program is compiled and some card images are deleted. You should never have to vary the cards in this section of the deck.

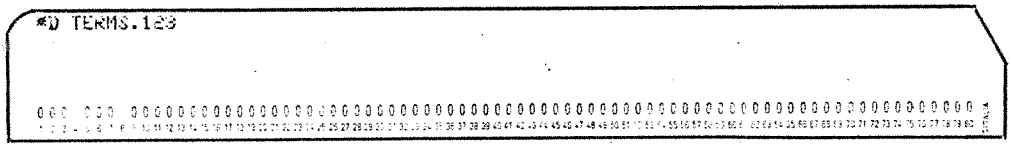


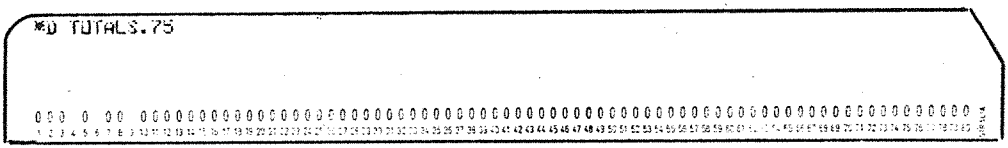
B22

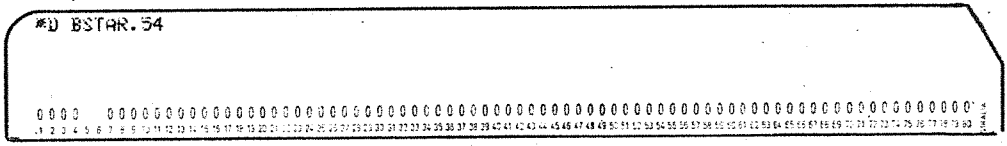


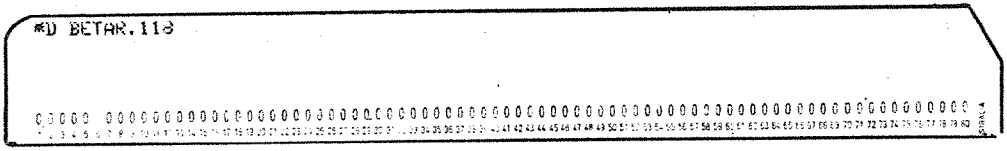
B23

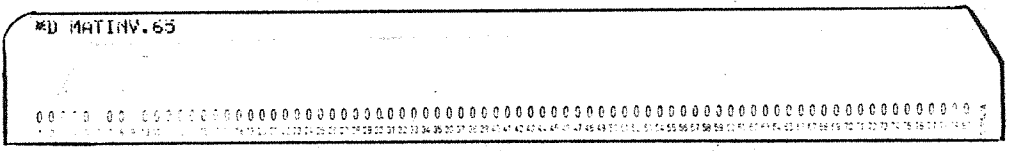

*D REGB.290
B2


*D TERMS.123
B2

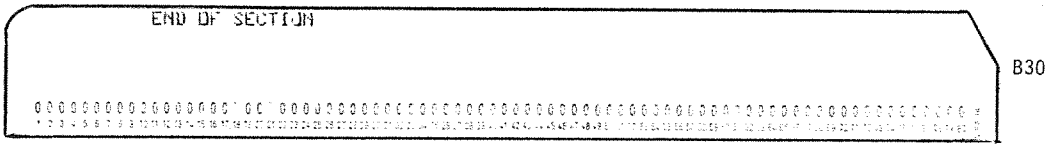

*D TOTALS.75
B26


*D BSTAR.54
B27


*D BETAR.118
B28


*D MATINV.65
B29

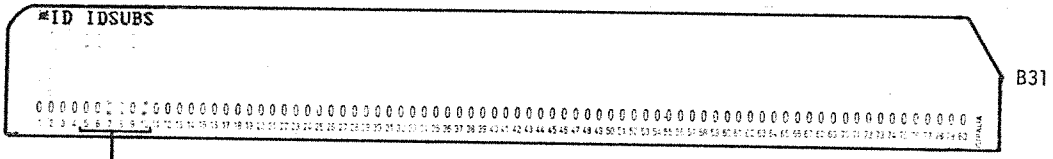
Conclude the compile section of the deck with a (blue) "END OF SECTION" card multi-punched 7, 8, 9 in column 1 [e.g., card 30].



V.3 Regional solution section

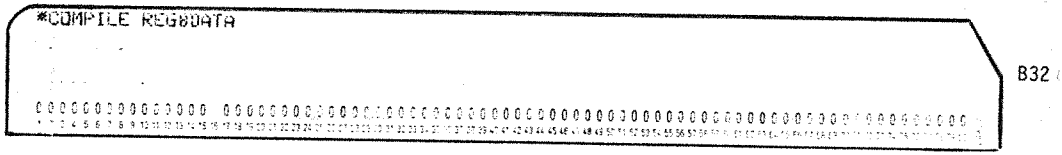
In this section of the deck the user-specified data inputs to the REGB program are read.

V.3.1 Data identification card



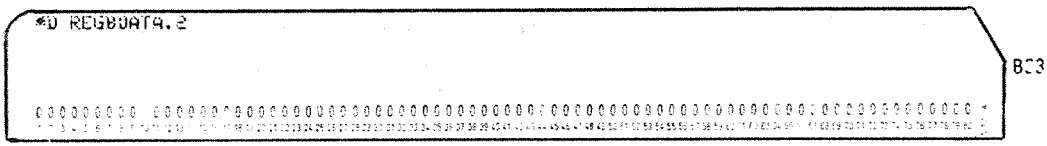
* Enter your REGB card image identifier here (see item (xv), p.47)

V.3.2 Compile data card



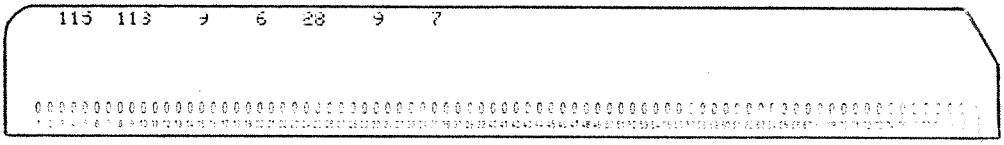
This card instructs the computer to prepare the standard REGB data inputs. You should never have to vary this card.

V.3.3 Data deletion card one



This card deletes the image of the data dimension card stored in the computer. Thus allowing you to impose your own data dimensions, which you specify on the following card. You should never have to vary this card.

V.3.4 Dimension card



On this card you must punch 7 numbers (in format $7I5^{10}$) representing the values of the following items for your experiment. Note that you must punch the numbers in the order shown.

(i) the number of commodities (115) ,

(ii) the number of industries (113) ,

(iii) the number of occupations (9) ,

(iv) the number of regions (6), (Note that for standard ORANI regional calculations six regions are distinguished, namely New South Wales (including the Australian Capital Territory), Victoria, Queensland, South Australia (including the Northern Territory), Western Australia and Tasmania.)

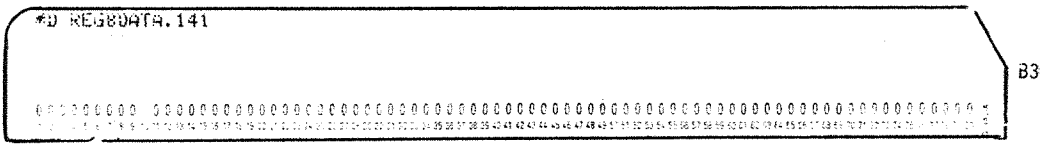
(v) the number of local industries (28) ,

(vi) the number of agricultural commodities (9) ,

(vii) the number of agricultural industries (7) .

For standard regional runs of ORANI your card should be identical to card B34.

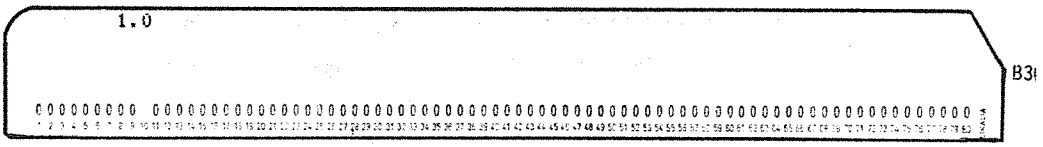
V.3.5 Data deletion card two



This card deletes the image of the gamma parameter card stored in the computer. Thus allowing you to impose your own value of the gamma parameter, which you specify on the following card. You should never have to vary this card.

V.3.6 Gamma parameter card

On this card punch (in format 2X,F10.3[11]) the value of your γ parameter. [For the illustrative simulation we selected γ to be unity, see Table II.1.]



V.4 End of information

The deck concludes with a (yellow) "END OF INFORMATION" card multi-punched 6, 7, 8, 9 in column 1.

V.5 Interpreting the REGB printout

This section contains some notes to explain the REGB printout. An abridged version of the printout for the illustrative simulation is given in Figure V.1. The first section of the printout (see Figure V.1 pages 64-65) documents the progress of the job in the computer. The first line contains the node identifier (entered on Card B1 of the illustrative REGB deck; see subsection V.1), your user identification code (entered on card B2), and your programme name (entered on card B3). Control cards B3-B20 (underlined in Figure V.1) are reproduced as part of the documentation. Information on the time taken by the computer to run your job and on the bulk of the computing costs are also printed out (see Figure V.1 page 65). The second section of the REGB printout, containing some diagnostics on the REGB program, has been omitted from Figure V.1 to conserve space.

The next section of the printout (Figure V.1, pp.66-76 reproduces part of the database for the ORANI regional package. It commences with an echo of the dimension card (card B34) and then lists:

(a) estimates of the 1968-69 value of output by industry and region (the $\bar{Z}_f^r$ from DPSV, equation 40.1),

(b) estimate of the 1968-69 value of output by commodity and region (the $\bar{X}_{(el)}^{(o)r}$ from DPSV, equation 40.1),

(c) estimates of the 1968-69 wage bills by industry and region (the $\bar{U}_k^r$ from DPSV, equation 40.9),

(d) the shares of industries in the total wage bills of the regions (the $\bar{W}_k^r$ from DPSV, equation 40.10),

(e) the shares of the regions in economy-wide aggregate household spending (used to generate the $\bar{X}^{(3)r}$ in DPSV, equation 40.4),

(f) estimates of the shares of each region in total government spending on each commodity,

(g) the user-specified value of the regional consumption parameter (γ),

(h) the economy-wide household-expenditure elasticities, and

(i) the list of local commodities and industries.

Next in the printout appears, for each region, a set of matrices which list the B* coefficients from the regional solution equations (DPSV, equations 39.29 and 39.30) and give decompositions of the regional solutions for each simulation. In Figure V.1 (pp.77-80) we have reproduced this matrix set for region 1 (NSW). Pages 77 and 78 contain the B* coefficients. The columns labelled "INTER", "INVEST" and "EMARG" are generated, in turn, via equations 40.1, 40.2 and 40.6 of DPSV. Equation 40.4 in DPSV generates the sum of the columns labelled "CONSUMPTION" and "CMARG", and equation 40.7 the sum of the columns labelled "GOVT" and "GMARG". The final column (labelled "TOTAL BETA") sums these first seven columns. Alternatively it contains the ratios of our estimates of total usage of each commodity in the region to our estimates of the region's total production of the commodities. These two

estimates are given in the columns labelled "TU(I)" and "X(I)R" respectively. A value less than (greater than) unity in the "TOTAL BETA" column indicates that the region is a net exporter (importer) of the commodity. The local commodities have values very close to unity reflecting the absence of interregional trade.

Pages 79 and 80 of Figure V.1 give, for our two illustrative simulations listed on page 27, the solutions (via DPSV, equation 39.29) for the percentage changes in the outputs in region 1 of the 28 local commodities. The column labelled "SUM" is the vector enclosed by curly brackets on the RHS of the equation. The preceding 8 columns decompose "SUM" into its constituents. These columns are, in turn the vectors

(i) $B_{LN}^{(1)r*} z_N$,

(ii) $-B_{LM}^{(2)r*} z_M$,

(iii) $-B_{L(US)}^{(3)r*} \epsilon_{(US)} W_M^{r'} z_M$,

(iv) $B_{LN}^{(2)r*} y_N + B_{LM}^{(2)r*} y_M$,

(v) $B_{L(U1)}^{(4)r*} x_{(U1)}^{(4)}$,

(vi) $B_{L(US)}^{(3)r*} x_{(US)}^{(3)}$,

(vii) $\gamma B_{L(US)}^{(3)r*} \epsilon_{(US)} [W_k^{r'} - \hat{W}_k] [p_{(g+1,1)k}^{(1)} + x_{(g+1,1)k}^{(1)}]$, and

(viii) $B_{L(US)}^{(5)r*} (x_{(US)}^{(5)} + q_{(US)}^{(5)r})$,

all of which appear in the RHS of equation 39.29 in DPSV.

Following the 6 sets (one for each region) of regional data and solution matrices, the printout then provides a solution summary for each regional experiment computed. Page 81 of Figure V.1 is the summary table for our first experiment. It contains the projected percentage changes in the outputs of each of the local industries in each of the regions.

The final section of the REGB printout (pp. 82-84 of Figure V.1) contains some data and a summary of the B* totals for each commodity across the six regions. On pages 82 and 83, of following a list of the ORANI commodity identification numbers (note that "L's" appear next to the commodities designated as local) and three columns of data,[12] columns 5 to 10 reproduce the total B*'s for each commodity across the six regions. The total B*'s provide a useful check on the selection of local commodities. If a commodity is chosen as local then its total B*'s should be approximately unity across the regions, suggesting that demand for the commodity within regions is met by production in those regions and thus implying little trade in that commodity between regions. Column 11 gives a weighted average of the total B*'s across the regions. Finally on page 84, data are presented on the local-industry activity levels across the six regions and for Australia as a whole.

```
 0456  LP   1336  MK   DIAXPH  REGONB    LPMK* PR 1P       1327 28/02/83 CAC 6666666666666666666666666666666666666666666666666666666666666666

** 7000 SCOPE 2.1.5-569 MOD 16/02/83  10.10.14.** 18/02/83       83049

          *-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*

HH.MM.SS CPU SECOND ORIGIN
         17.24.49.CYI.      ED VERSION 15/10/82
17.26.41 00000.004 CYJ.    -REGONB,MS140000,ML300,P1000,T10.
17.26.41 00000.007 LOD.    -COMMON.
17.26.42 00000.057 LOD.    -GETSET,DTB1070.
17.26.42 00000.059 CYJ.       RP223 - MNTMACRO-  MOUNT  - SN=DTB1070           VSN=
17.26.42 00000.061 CYJ.       SET PARAMETERS SUBSTITUTED
17.26.42 00000.061 CYJ.       RP1034- VSN ADUN02 OF SET EMUS02  MOUNTED
17.26.42 00000.062 LOD.    -GETSET,DTB3006.
17.26.42 00000.064 CYJ.       RP223 - MNTMACRO-  MOUNT  - SN=DTB3006           VSN=
17.26.42 00000.066 CYJ.       SET PARAMETERS SUBSTITUTED
17.26.42 00000.066 CYJ.       RP1034- VSN ADUN06 OF SET EMUS06  MOUNTED
17.26.42 00000.068 JOB.    -ATTACH,OMLIB,OMORANI78LIB,ID=DIAXOM,SN=DTB3006,PW=******.
17.26.42 00000.071 CYJ.       PF254 - CYCLE     3 ATTACHED FROM SN=EMUS06
17.26.42 00000.072 JOB.    -LIBRARY,OMLIB,*.
17.26.42 00000.073 CYJ.       RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
17.26.42 00000.080 JOB.    -ATTACH,TAPE2,OM78STDIOTABLES,SN=DTB3006,ID=DIAXOM,PW=******.
17.26.42 00000.084 CYJ.       PF254 - CYCLE     1 ATTACHED FROM SN=EMUS06
17.26.42 00000.085 JOB.    -ATTACH,TAPE3,OM78STDMARGINS,ID=DIAXOM,SN=DTB3006,PW=******.
17.26.42 00000.089 CYJ.       PF254 - CYCLE     1 ATTACHED FROM SN=EMUS06
17.26.42 00000.090 JOB.    -ATTACH,TAPE7,OM689REGPARAMS,ID=DIAXOM,SN=DTB1070,PW=******.
17.26.43 00000.094 CYJ.       PF254 - CYCLE     1 ATTACHED FROM SN=EMUS02
17.26.43 00000.095 JOB.    -ATTACH,TAPE10,SUBAREGA,ID=DIAXPH,SN=COMMON,PW=******.
17.26.43 00000.099 CYJ.       PF254 - CYCLE     1 ATTACHED FROM SN=COMMON
17.26.43 00000.099 JOB.    -REQUEST,TAPE11,*PF,SN=COMMON.
17.26.43 00000.101 JOB.    -ATTACH,OLDPL,OM78REGUPDATE,ID=DIAXOM,SN=DTB3006,PW=******.
17.26.43 00000.105 CYJ.       PF254 - CYCLE     1 ATTACHED FROM SN=EMUS06
17.26.43 00000.106 LOD.    -UPDATE(O,L=A12,D)
17.26.54 00000.121 CYJ.       RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
17.26.54 00000.280 USR.      UPDATE COMPLETE.
17.26.54 00000.281 LOD.    -FTN,I,T,OPT,ER.
17.27.26 00003.319 USR.           3.032 CP SECONDS COMPILATION TIME
17.27.26 00003.320 LOD.    -RETURN,COMPILE.
17.27.26 00003.327 LOD.    -UPDATE(O,L=A12,D)
17.27.29 00003.387 USR.      UPDATE COMPLETE.
17.27.29 00003.389 LOD.    -LGO,COMPILE.
17.27.57 00003.593 CYJ.       LD610 -      11 TABLE MOVES, FLS REQUIRED TO LOAD = 0014533 OU.COC
17.27.57 00003.595 CYJ.       LD603 - EXECUTION INITIATED OS.EXP
17.27.57 00003.595 USR.      FORTRAN LIBRARY 552          13/07/82
17.27.57 00003.599 CYJ.       RP727 - VSN ADUN21 OF SET COMMON  MOUNTED
17.27.57 00003.602 CYJ.       RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
17.27.57 00003.610 CYJ.       RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
17.28.24 00004.487 CYJ.       RP727 - VSN ADUN02 OF SET EMUS02  MOUNTED
17.28.31 00004.657 CYJ.       RP727 - VSN ADUN21 OF SET COMMON  MOUNTED
17.28.40 00005.914 USR.         END  REGB
17.28.40 00005.914 USR.        135400   FINAL EXECUTION FL.
17.28.40 00005.915 USR.         2.318 CP SECONDS EXECUTION TIME.
17.28.40 00005.916 JOB.    -CATALOG,TAPE11,SUBBREGB,ID=DIAXPH,SN=COMMON,PW=******,*****,RP=10.
17.28.40 00005.917 CYJ.       FILE SIZE=      2790 WORDS.
17.28.40 00005.920 CYJ.       PF060 - CYCLE     1 CATALOGED ON SN=COMMON
17.28.40 00005.928 CYJ.       RDIAXPH              5.120  KCHAR
17.28.40 00005.928 CYJ.       DFILEAS              4.740  KCHAR
17.28.40 00005.929 CYJ.       OUTPUT             238.410  KCHAR
17.28.40 00005.929 CYJ.       SC050 - 000446 SC/LC SWAPS
17.28.40 00005.929 CYJ.
```

Figure V.1 : A Subset of the Illustrative REGB Printout

```
17.28.40 00005.929 CYJ.        USR-TIME          3.926  SEC
17.28.40 00005.930 CYJ.        CPU-TIME          5.931  SEC            4.306  $
17.28.40 00005.930 CYJ.        SCM.TIME          1.902  MCSEC          2.761  $
17.28.40 00005.930 CYJ.        LCM.TIME          1.295  MCSEC          0.939  $
17.28.40 00005.931 CYJ.        FILE-IO           4.402  MCHAR          1.278  $
17.28.40 00005.931 CYJ.        CENT-IO           0.249  MCHAR          0.072  $
17.28.40 00005.931 CYJ.        RATE             72.616  CENTS/UNIT
17.28.40 00005.931 CYJ.        SUBTOTAL         12.884  RU             9.356  $
17.28.40 00005.932 CYJ.        FLAGFALL                                0.133  $
17.28.40 00005.932 CYJ.        PRIORITY          1000   B
17.28.40 00005.932 CYJ.        CHARGE                                  9.48   $
```

115 113 9 6 28 9 7

OUTPUT BY ACTIVITY ($M)

	NSW	VIC	QLD	SA	WA	TAS	AUST
1	113.5027	0.0000	103.9396	16.6255	17.4934	0.0000	251.5612
2	597.6918	200.7876	29.3285	150.8337	230.5892	0.0000	1209.2309
3	159.8381	207.2730	0.0000	67.7908	69.2590	50.7333	554.8943
4	0.0000	0.0000	87.0280	23.5140	10.6660	0.0000	121.2080
5	101.9741	236.7162	68.2631	25.9300	27.3700	34.0680	494.3214
6	54.2091	43.4261	143.1012	29.1450	10.2010	11.3660	291.4484
7	58.5420	73.7200	50.8330	24.0920	18.0690	15.6590	240.9150
8	71.3840	44.4369	21.1613	10.5169	12.9970	6.0354	166.5315
9	76.0283	47.2622	41.2872	23.3191	24.6481	8.2640	220.8089
10	38.1654	33.1811	15.1136	9.7904	14.1253	15.0530	125.4288
11	13.4223	8.6356	9.0502	8.8798	24.3301	4.4269	68.7449
12	.0389	.0010	.1856	13.3097	164.7342	3.4023	181.6717
13	88.2869	.1065	134.0881	36.1272	92.8835	38.2360	389.7282
14	131.4864	12.9844	109.6616	1.2184	3.1934	.1982	258.7423
15	0.0000	35.3155	.2556	1.1358	3.2930	0.0000	39.9999
16	46.4950	36.3916	23.5163	13.5518	17.8559	2.6833	140.4940
17	16.1201	17.5352	33.5590	50.0803	138.9645	8.2429	264.5020
18	370.4979	438.0724	278.8566	95.0448	147.1377	26.6760	1356.2855
19	159.3237	372.0483	79.2275	46.7832	35.6484	33.1029	726.1341
20	58.9810	115.0939	29.6063	18.3477	4.0552	16.5083	242.5924
21	38.8813	28.7973	5.7304	1.4959	1.3910	0.0000	76.2960
22	138.0231	57.7096	25.8051	16.6719	11.4169	4.3074	253.9339
23	122.3945	93.1876	36.3849	30.0879	26.9239	9.1290	318.1078
24	35.8311	47.4135	14.4054	3.5447	2.2280	1.2005	104.6232
25	129.3744	98.9710	307.5424	20.9590	18.3809	17.9622	593.1899
26	47.9523	36.5102	14.3001	11.7841	10.5301	3.5760	124.6528
27	82.4992	63.3041	24.7391	20.2510	18.0520	6.2120	215.0575
28	19.0474	13.7805	.6890	33.8984	.6373	.1182	68.1709
29	77.3372	77.3372	16.7564	0.0000	0.0000	0.0000	171.4308
30	59.0502	40.7233	6.6148	20.8771	7.9462	21.1983	156.4099
31	37.7678	104.6641	0.0000	0.0000	0.0000	12.0661	154.4981
32	62.3493	60.3476	0.0000	6.9144	3.4566	9.2209	142.2888
33	24.0725	61.6672	3.9944	22.9141	1.3471	3.5950	117.5904
34	24.9662	30.1213	10.1559	1.5569	.6094	1.6249	69.0346
35	20.3399	45.9076	1.5468	1.3105	.2191	.5844	69.9083
36	38.0568	38.3536	4.3857	3.7154	.5474	1.4597	86.5186
37	53.8283	153.4156	.6796	.9476	.2806	.0918	209.2436
38	223.4008	248.6338	23.2761	21.9028	5.6718	.4679	523.3532
39	40.5848	99.0578	9.3462	16.6566	3.8622	1.2619	170.7694
40	102.1225	68.0913	45.9627	41.0842	26.5364	18.4122	302.2093
41	31.4448	10.8271	12.4893	11.5455	7.2105	5.9552	79.4723
42	67.6605	64.7285	22.6783	24.0309	18.6434	21.1761	218.9178
43	96.3896	71.8277	29.5420	22.7235	20.6906	4.1633	245.3367
44	46.9971	62.3012	6.6444	15.4157	7.1610	60.5535	199.0728
45	79.1331	73.8412	22.7804	16.5805	7.5275	2.7336	202.5963
46	27.3488	36.6654	3.9215	9.0634	1.6787	1.0225	79.7003
47	164.3411	86.2624	37.4648	21.8316	20.1752	6.0426	336.1177
48	154.2218	134.3096	19.0425	20.4855	14.6102	4.0963	346.7657
49	32.3416	22.2941	47.8650	39.1335	18.1162	3.3441	163.0945
50	159.7423	136.4788	10.9387	8.5519	3.9586	15.4038	335.0741
51	56.5975	38.0599	14.2162	8.7463	6.3673	.3498	124.3370
52	125.4267	46.2993	4.0179	2.4736	1.8345	0.0000	180.0520
53	74.4383	27.2989	4.6323	2.8388	2.4993	.3483	112.0558
54	53.0136	16.7585	0.0000	0.0000	0.0000	0.0000	69.7721

55	57.6643	45.6330	9.4802	5.8360	4.3281	.3420	123.2836
56	178.5182	112.0078	147.8164	90.9947	67.5363	2.0639	598.9374
57	47.3610	37.0154	6.5758	7.4530	6.2262	.4437	105.0750
58	70.1157	44.8164	12.7504	13.8922	12.0714	1.0570	154.7031
59	24.5731	12.2407	17.6203	9.5790	11.1842	3.0410	78.2383
60	44.6344	32.2363	14.7971	11.1941	11.3941	3.5370	117.7930
61	49.8925	42.8668	27.6862	15.6122	17.8021	3.9251	157.7851
62	38.6708	30.6720	6.0145	10.6584	10.5042	.7500	97.2700
63	763.0062	155.6048	37.4038	134.9336	86.0576	36.0975	1213.1035
64	267.3474	93.5488	213.2992	64.5383	143.1816	60.0590	841.9744
65	152.2169	102.2809	43.4666	51.8815	57.5964	10.1298	417.5720
66	139.6178	136.8868	29.6933	37.1181	23.6404	3.0174	369.9739
67	197.8510	188.9919	49.9704	33.7643	22.9161	3.4922	496.9859
68	312.1712	771.1056	117.3049	287.8086	12.0362	3.5985	1504.0251
69	76.2927	32.3936	20.8434	29.0673	15.6421	1.7415	175.9806
70	58.1577	34.5705	33.1759	19.4218	20.4493	6.4589	172.2341
71	47.4932	51.5587	0.0000	1.6023	2.2907	0.0000	102.9450
72	19.9727	34.619	1.3305	2.7585	1.3926	.0769	60.1503
73	172.2419	80.7992	4.8841	20.0279	1.7466	.1765	279.8761
74	169.2315	96.3482	19.0064	76.4256	5.2432	.6866	366.9415
75	253.4970	185.9310	22.0399	32.4420	13.6122	.7967	508.3188
76	17.7686	66.5211	24.0527	17.8981	18.7875	1.7576	146.7856
77	77.0350	59.4851	9.7875	20.7338	7.1168	0.0000	174.1582
78	232.2751	239.7230	43.5698	30.2861	27.6873	3.1565	576.6978
79	39.8051	21.7667	8.7073	6.3450	2.6703	0.0000	79.2944
80	71.1079	123.9226	14.5969	19.0947	1.2280	.0283	229.9785
81	120.5320	167.4923	13.3222	18.2694	8.6423	.1493	328.4075
82	24.1169	21.3835	1.0647	2.6460	2.8054	.2660	52.2826
83	34.6461	21.1769	6.0740	8.9217	3.5164	1.4625	75.7976
84	291.3627	212.5447	92.9559	70.2479	64.5339	24.4380	756.0831
85	41.0340	30.9100	11.6360	9.9900	8.5560	2.8700	104.9961
86	111.4042	83.5941	38.3591	27.5170	25.6660	9.6280	296.1684
87	524.9539	398.8069	156.4800	128.8620	115.2550	39.0420	1363.3997
88	1337.3816	960.5077	444.3459	341.5349	359.9559	109.5660	3553.2920
89	1166.1601	874.9721	363.6890	291.7440	278.5370	89.6900	3064.7923
90	931.1142	699.6611	279.3711	228.5250	206.2030	69.4680	2414.3425
91	194.3737	145.2787	58.0249	48.2359	45.8279	15.4780	507.2191
92	75.9863	55.7932	24.9731	19.6311	20.0071	5.9850	202.3757
93	478.0123	319.1189	87.2207	108.4765	112.4826	36.9594	1142.2705
94	269.2402	170.6943	45.1321	78.6618	76.4416	16.9172	657.0872
95	185.8489	115.8446	41.5106	55.3287	59.5880	21.5917	479.7126
96	170.8949	100.9733	32.9582	31.9384	31.0664	7.6705	375.5017
97	296.7847	225.7908	93.4149	72.7779	63.2809	22.8750	774.9242
98	237.9878	181.4429	74.2230	58.3020	50.9330	17.6880	620.5766
99	150.3491	112.6331	44.6440	36.5350	32.5650	11.0740	387.8002
100	128.5469	97.8929	39.5700	31.5790	27.8290	9.5450	334.9628
101	286.9929	226.5419	85.2390	70.8030	63.4130	21.1470	754.1368
102	332.1290	251.8270	104.6310	81.8430	73.8040	24.8660	869.1000
103	786.0610	597.8520	233.4280	193.2200	172.9820	58.5740	2042.1171
104	415.1611	250.1934	97.7560	105.5791	95.8855	37.3209	1001.8960
105	541.8889	300.6361	84.3902	62.8126	51.9213	6.6652	1048.3143
106	389.1905	275.7654	124.7002	97.4311	96.0031	32.6360	1015.7264
107	306.4901	253.1171	106.6750	88.5820	76.4140	30.3500	861.6284
108	114.9121	87.7721	40.6141	31.1900	27.1200	9.7170	311.3254
109	206.3756	156.0817	64.4999	52.6129	45.9089	17.2350	542.7139
110	347.1603	263.8895	103.5438	85.2138	76.1149	25.8100	901.7323
111	94.3264	71.7385	28.2498	23.1468	20.6389	7.0000	245.1004
112	1292.8616	992.6417	406.3749	317.8079	277.1049	96.3370	3383.1280
113	.0008	.0006	.0003	.0002	.0002	.0001	.0020

	NSW	VIC	QLD	SA	WA	TAS	AUST
1	278,5190	142.5440	83.6690	78.0940	115.5600	17.7140	716.1000
2	103.0790	49.0350	7.3160	22.4050	22.9480	6.6160	211.3990
3	272.9150	101.4510	12.8630	72.0020	116.9790	1.2900	577.5000
4	16.2710	3.9460	.4090	17.2550	6.5000	2.5190	46.9000
5	22.6530	20.2810	.9980	7.6460	16.7870	1.0730	69.4380
6	150.3800	120.7210	127.3700	44.7170	44.8700	16.9740	505.0320
7	105.8000	196.6840	53.2290	32.8900	23.5900	32.9420	445.1350
8	69.0990	51.4040	143.4230	35.6970	17.3450	17.0320	334.0000
9	67.0180	75.8230	53.2250	27.2140	19.0560	15.6590	257.9950
10	71.4811	44.4974	21.1901	10.5312	13.0147	6.0436	166.7580
11	76.0287	47.2624	41.2874	23.3192	24.6482	8.2641	220.8100
12	37.9691	33.0103	15.0358	9.7400	14.0526	14.9756	124.7834
13	13.1591	8.4662	8.8727	8.7056	23.8530	4.3401	67.3968
14	.0386	.0010	.1841	13.2026	163.4083	3.3749	180.2095
15	87.5607	.1057	132.9851	35.8300	92.1194	37.9214	386.5223
16	128.8435	12.7234	107.4574	1.1939	3.1292	.1942	253.5417
17	0.0000	35.3167	.2556	1.1358	3.2931	0.0000	40.0011
18	45.5512	35.6529	23.0389	13.2767	17.4935	2.6289	137.6421
19	16.1205	17.5357	33.5598	50.0816	138.9681	8.2431	264.5088
20	365.3458	431.9806	274.9789	93.7232	145.0916	26.3051	1337.4252
21	158.7736	370.7637	78.9539	46.6217	35.5253	32.9886	723.6268
22	57.9886	113.1573	29.1082	18.0390	3.9870	16.2306	238.5106
23	39.3925	29.1760	5.8057	1.5156	1.4093	0.0000	77.2991
24	135.9063	56.8245	25.4093	16.4162	11.2418	4.2413	250.0394
25	122.2854	93.1045	36.3524	30.0611	26.8999	9.1208	317.8241
26	35.2021	46.5812	14.1525	3.4825	2.1889	1.1794	102.7866
27	128.6962	98.4521	305.9302	20.8491	18.2846	17.8680	590.0803
28	47.1740	35.9177	14.0680	11.5928	10.3592	3.5180	122.6297
29	78.2523	60.0454	23.4655	19.2086	17.1228	5.8922	203.9867
30	18.0786	13.0796	.6540	32.1742	.6049	.1122	64.7035
31	76.6911	76.6911	16.6164	0.0000	0.0000	0.0000	169.9986
32	55.3030	38.1391	6.1951	19.5523	7.4419	19.8531	146.4845
33	36.6694	101.6201	0.0000	0.0000	0.0000	11.7152	150.0047
34	61.1449	59.1818	0.0000	6.7808	3.3898	9.0428	139.5401
35	25.1774	64.4976	4.1778	23.9658	1.4090	3.7600	122.9876
36	24.5206	29.5837	9.9746	1.5291	.5985	1.5959	67.8025
37	19.7205	44.5094	1.4997	1.2706	.2125	.5666	67.7792
38	36.3752	36.6589	4.1919	3.5513	.5232	1.3952	82.6955
39	52.7973	150.4772	.6666	.9295	.2753	.0900	205.2359
40	220.2052	245.0773	22.9432	21.5895	5.5907	.4612	515.8671
41	40.6565	99.2328	9.3627	16.6860	3.8690	1.2641	171.0711
42	102.3044	68.2127	46.0446	41.1574	26.5837	18.4450	302.7478
43	30.6159	10.5417	12.1601	11.2411	7.0204	5.7982	77.3775
44	66.5945	63.7087	22.3210	23.6523	18.3497	20.8425	215.4687
45	94.6338	70.5193	29.0039	22.3095	20.3137	4.0875	240.8678
46	46.0070	60.9886	6.5044	15.0910	7.0101	59.2777	194.8788
47	78.5586	73.3051	22.6150	16.4601	7.4729	2.7138	201.1255
48	27.0303	36.2384	3.8759	8.9578	1.6591	1.0106	78.7721
49	163.0410	85.5800	37.1684	21.6588	20.0155	5.9948	333.4585
50	152.3792	132.7049	18.8150	20.2407	14.4356	4.0473	342.6228
51	32.4604	22.3760	48.0408	39.2772	18.1828	3.3564	163.6936
52	154.1303	131.6841	10.5544	8.2515	3.8195	14.8626	323.3024
53	55.3591	37.2271	13.9052	8.5549	6.2280	.3422	121.6165
54	126.2333	46.5971	4.0438	2.4895	1.8463	0.0000	181.2100
55	73.1648	26.8318	4.5530	2.7902	2.4565	.3423	110.1387
56	51.5809	16.3056	0.0000	0.0000	0.0000	0.0000	67.8865
57	55.0123	43.5343	9.0442	5.5676	4.1290	.3262	117.6137
58	176.8086	110.9351	146.4009	90.1233	66.8896	2.0442	593.2016
59	45.6094	35.6464	6.3326	7.1774	5.9959	.4273	101.1889

60	72.4328	46.2974	13.1718	14.3513	12.4704	1.0919	159.8155
61	24.4383	12.1735	17.5236	9.5265	11.1229	3.0243	77.8091
62	44.9821	32.4874	14.9124	11.2813	11.4829	3.5646	118.7106
63	49.5010	42.5305	27.4690	15.4898	17.6625	3.8943	156.5471
64	38.2470	30.3360	5.9486	10.5417	10.3891	.7418	96.2042
65	749.3689	152.8237	36.7352	132.5219	84.5195	35.4523	1191.4216
66	264.0546	92.3966	210.6721	63.7434	141.4181	59.3193	831.6040
67	150.1397	100.8852	42.8734	51.1735	56.8104	9.9916	411.8738
68	138.2635	135.5590	29.4053	36.7581	23.4111	2.9881	366.3851
69	196.6469	187.8418	49.6663	33.5588	22.7767	3.4709	493.9614
70	305.7189	755.1674	114.8803	281.8598	11.7874	3.5242	1472.9380
71	74.9635	31.8292	20.4803	28.5609	15.3696	1.7112	172.9146
72	60.5950	36.0193	34.5663	20.2357	21.3063	6.7295	179.4520
73	47.6413	51.7195	0.0000	1.6073	2.2979	0.0000	103.2659
74	19.6060	33.9835	1.3061	2.7079	1.3670	.0755	59.0459
75	169.6290	79.5735	4.8100	19.7241	1.7201	.1738	275.6305
76	162.5635	92.5519	18.2575	73.4143	5.0366	.6596	352.4833
77	247.6611	181.6506	21.5325	31.6952	13.2988	.7784	496.6165
78	17.0759	63.9278	23.1150	17.2004	18.0551	1.6891	141.0632
79	74.7414	57.7140	9.4961	20.1165	6.9049	0.0000	168.9729
80	227.6576	234.9574	42.7037	29.6840	27.1369	3.0938	565.2334
81	39.5569	21.6310	8.6530	6.3055	2.6536	0.0000	78.8000
82	68.8154	119.9272	14.1263	18.4791	1.1884	.0274	222.5638
83	118.9665	165.3168	13.1491	18.0321	8.5301	.1474	324.1420
84	23.8578	21.1537	1.0533	2.6176	2.7752	.2632	51.7208
85	33.2668	20.3338	5.8322	8.5665	3.3764	1.4043	72.7800
86	291.3566	212.5404	92.9540	70.2465	64.5326	24.4375	756.0675
87	40.7782	30.7173	11.5635	9.9277	8.5027	2.8521	104.3415
88	111.4044	83.5943	38.3591	27.5171	25.6661	9.6280	296.1690
89	524.9544	398.8073	156.4801	128.8621	115.2551	39.0420	1363.4010
90	1337.3822	960.5081	444.3461	341.5350	359.9560	109.5660	3553.2934
91	1164.0539	873.3918	363.0322	291.2171	278.0340	89.5280	3059.2570
92	931.1144	699.6613	279.3711	228.5251	206.2031	69.4680	2414.3430
93	194.3739	145.2789	58.0250	48.2360	45.8280	15.4780	507.2197
94	75.9868	55.7936	24.9732	19.6312	20.0072	5.9851	202.3770
95	477.4285	318.7292	87.1142	108.3440	112.3453	36.9143	1140.8755
96	268.9075	170.4834	45.0763	78.5646	76.3471	16.8963	656.2751
97	185.6643	115.7295	41.4694	55.2738	59.5289	21.5703	479.2361
98	170.8827	100.9661	32.9558	31.9361	31.0642	7.6700	375.4750
99	296.7850	225.7910	93.4150	72.7780	63.2810	22.8750	774.9251
100	237.9884	181.4433	74.2231	58.3021	50.9331	17.6880	620.5780
101	150.3494	112.6333	44.6441	36.5351	32.5651	11.0740	387.8010
102	128.5328	97.8822	39.5656	31.5755	27.8259	9.5439	334.9260
103	286.9893	226.5391	85.2379	70.8021	63.4122	21.1467	754.1274
104	332.1294	251.8273	104.6311	81.8431	73.8041	24.8660	869.1010
105	786.0614	597.8523	233.4281	193.2201	172.9821	58.5740	2042.1180
106	415.1600	250.1927	97.7557	105.5788	95.8852	37.3208	1001.8933
107	541.8892	300.6363	84.3902	62.8127	51.9213	6.6652	1048.3150
108	389.1908	275.7655	124.7002	97.4312	96.0032	32.6361	1015.7270
109	306.4904	253.1173	106.6751	88.5821	76.4141	30.3500	861.6290
110	114.9124	87.7723	40.6141	31.1901	27.1201	9.7170	311.3260
111	206.3744	156.0808	64.4995	52.6126	45.9086	17.2349	542.7107
112	347.1587	263.8882	103.5433	85.2134	76.1145	25.8098	901.7280
113	94.3258	71.7381	28.2496	23.1467	20.6387	6.9999	245.0988
114	1292.8620	992.6420	406.3750	317.8080	277.1050	96.3370	3383.1290
115	.0012	.0008	.0004	.0003	.0002	.0001	.0030

WAGE BILLS BY ACTIVITY ($M)

NSW	VIC	QLD	SA	WA	TAS	AUST

1	16.7307	0.0000	15.3211	2.4507	2.5786	0.0000	37.0810
2	101.2737	34.0217	4.9695	25.5575	39.0713	0.0000	204.9937
3	36.1173	46.8357	0.0000	15.3181	15.6499	11.4638	125.3847
4	0.0000	0.0000	16.9830	4.5886	2.0814	0.0000	23.6530
5	18.3485	42.5930	12.2828	4.6657	4.9248	6.1300	88.9447
6	13.7648	11.0268	36.3363	7.4005	2.5902	2.8861	74.0047
7	9.8200	12.3660	8.5269	4.0413	3.0309	2.6267	40.4118
8	8.5827	5.3428	2.5443	1.2645	1.5627	.7257	20.0226
9	48.0506	29.8701	26.0939	14.7379	15.5778	5.2229	139.5533
10	11.4409	9.9467	4.5306	2.9349	4.2344	4.5125	37.6000
11	3.6649	2.3579	2.4711	2.4246	6.6433	1.2088	18.7707
12	.0034	.0001	.0161	1.1575	14.3269	.2959	15.8000
13	25.5531	.0308	38.8095	10.4564	26.8835	11.0667	112.8000
14	45.1947	4.4630	37.6930	.4188	1.0976	.0681	88.9352
15	0.0000	11.6231	.0841	.3738	1.0838	0.0000	13.1648
16	11.1858	8.7551	5.6575	3.2603	4.2958	.6456	33.8000
17	3.3703	3.6661	7.0162	10.4704	29.0536	1.7234	55.3000
18	39.3022	46.4705	29.5810	10.0823	15.6083	2.8298	143.8740
19	16.1197	37.6422	8.0159	4.7333	3.6067	3.3492	73.4670
20	10.7956	21.0663	5.4190	3.3583	.7422	3.0216	44.4030
21	4.8337	3.5800	.7124	.1860	.1729	0.0000	9.4850
22	15.0392	6.2881	2.8118	1.8166	1.2440	.4693	27.6690
23	34.9337	26.5975	10.3849	8.5877	7.6846	2.6056	90.7940
24	7.9417	10.5089	3.1929	.7857	.4938	.2661	23.1890
25	14.9409	11.4297	35.5168	2.4205	2.1227	2.0744	68.5050
26	9.5679	7.2849	2.8533	2.3513	2.1011	.7135	24.8720
27	12.1606	9.3312	3.6466	2.9851	2.6609	.9157	31.7000
28	2.4825	1.7961	.0898	4.4181	.0831	.0154	8.8850
29	8.4595	8.4595	1.8329	0.0000	0.0000	0.0000	18.7520
30	4.9755	3.4313	.5574	1.7591	.6695	1.7862	13.1790
31	7.8653	21.7968	0.0000	0.0000	0.0000	2.5128	32.1750
32	16.7962	16.2570	0.0000	1.8627	.9312	2.4840	38.3310
33	7.0606	18.0874	1.1716	6.7209	.3951	1.0544	34.4900
34	4.2287	5.1019	1.7202	.2637	.1032	.2752	11.6930
35	4.4693	10.0873	.3399	.2880	.0482	.1284	15.3610
36	9.1092	9.1803	1.0497	.8893	.1310	.3494	20.7090
37	12.0245	34.2708	.1518	.2117	.0627	.0205	46.7420
38	71.2599	79.3086	7.4246	6.9865	1.8092	.1492	166.9380
39	13.1083	31.9942	3.0187	5.3798	1.2474	.4076	55.1560
40	26.2618	17.5103	11.8197	10.5652	6.8241	4.7349	77.7160
41	8.8943	3.0625	3.5326	3.2657	2.0395	1.6844	22.4790
42	18.1615	17.3745	6.0873	6.4504	5.0043	5.6841	58.7620
43	27.4828	20.4797	8.4231	6.4790	5.8994	1.1871	69.9510
44	10.9621	14.5318	1.5498	3.5957	1.6703	14.1242	46.4340
45	16.1839	15.1016	4.6589	3.3910	1.5395	.5591	41.4340
46	5.0425	6.7603	.7230	1.6711	.3095	.1885	14.6950
47	57.8694	30.3756	13.1925	7.6875	7.1043	2.1278	118.3570
48	58.0697	50.5721	7.1701	7.7135	5.5012	1.5424	130.5690
49	4.4411	3.0614	6.5728	5.3738	2.4877	.4592	22.3960
50	29.6044	25.2931	2.0272	1.5849	.7336	2.8547	62.0980
51	11.2897	7.5920	2.8358	1.7447	1.2701	.0698	24.8020
52	21.9886	8.1168	.7044	.4336	.3216	0.0000	31.5650
53	13.2215	4.8487	.8228	.5042	.4439	.0619	19.9030
54	9.4399	2.9841	0.0000	0.0000	0.0000	0.0000	12.4240
55	15.7632	12.4743	2.5915	1.5953	1.1831	.0935	33.7010
56	8.1671	5.1243	6.7625	4.1629	3.0897	.0944	27.4010
57	15.3809	12.0211	2.1355	2.4204	2.0220	.1441	34.1240
58	25.3581	16.2083	4.6113	5.0243	4.3658	.3823	55.9500
59	4.2718	2.1279	3.0631	1.6652	1.9443	.5287	13.6010
60	3.2849	2.3724	1.0890	.8238	.8386	.2603	8.6690
61	14.9018	12.8034	8.2693	4.6630	5.3171	1.1723	47.1270
62	9.0648	7.1898	1.4099	2.4984	2.4623	.1758	22.8010

63	162.4285	33.1251	7.9625	28.7246	18.3199	7.6844	258.2450
64	30.2725	10.5928	24.1524	7.3078	16.2128	6.8006	95.3390
65	42.3611	28.4642	12.0965	14.4383	16.0288	2.8191	116.2080
66	37.1187	36.3926	7.8942	9.8682	6.2850	.8022	98.3610
67	58.0659	55.4660	14.6655	9.9092	6.7255	1.0249	145.8570
68	57.5732	142.2138	21.6344	53.0801	2.2198	.6637	277.3850
69	33.4407	14.1988	9.1361	12.7408	6.8563	.7633	77.1360
70	28.6902	17.0542	16.3662	9.5811	10.0880	3.1863	84.9660
71	23.4954	25.5067	0.0000	.7927	1.1333	0.0000	50.9280
72	8.0803	14.0059	.5383	1.1160	.5634	.0311	24.3350
73	56.3019	26.4114	1.5965	6.5467	.5709	.0577	91.4850
74	41.5758	23.6702	4.6694	16.7758	1.2881	.1687	90.1480
75	67.4163	49.4475	5.8614	8.6278	3.6201	.2119	135.1850
76	5.5392	20.7373	7.4982	5.5796	5.8568	.5479	45.7590
77	19.5195	15.0726	2.4800	5.2536	1.8033	0.0000	44.1290
78	76.5041	78.9572	14.3505	9.9753	9.1193	1.0397	189.9460
79	11.1568	6.1009	2.4405	1.7784	.7484	0.0000	22.2250
80	19.2625	33.5695	3.9542	5.1726	.3327	.0077	62.2990
81	28.7332	39.9279	3.1758	4.3552	2.0602	.0356	78.2880
82	7.3625	6.5280	.3250	.8078	.8564	.0812	15.9610
83	9.9581	6.0867	1.7458	2.5643	1.0107	.4204	21.7860
84	72.0619	52.5681	22.9905	17.3742	15.9610	6.0442	187.0000
85	13.3268	10.0388	3.7791	3.2445	2.7788	.9321	34.1000
86	30.0921	22.5802	10.3614	7.4328	6.9328	2.6007	80.0000
87	133.2145	101.2029	39.7090	32.7006	29.2476	9.9075	345.9820
88	420.4163	301.9431	139.6836	107.3642	113.1549	34.4429	1117.0050
89	414.2440	310.8080	129.1898	103.6335	98.9421	31.8597	1088.6770
90	359.2897	269.9787	107.8011	88.1811	79.5677	26.8057	931.6240
91	72.0765	53.8714	21.5165	17.8866	16.9936	5.7395	188.0840
92	26.5789	19.5156	8.7352	6.8667	6.9982	2.0935	70.7880
93	138.3443	92.3580	25.2430	31.3948	32.5542	10.6966	330.5910
94	120.0943	76.1380	20.1311	35.0870	34.0967	7.5459	293.0930
95	65.3185	40.7148	14.5893	19.4459	20.9428	7.5886	168.6000
96	38.6621	22.8435	7.4562	7.2255	7.0283	1.7353	84.9510
97	109.4978	83.3048	34.4652	26.8512	23.3473	8.4397	285.9060
98	114.1280	87.0117	35.5939	27.9589	24.4251	8.4823	297.6000
99	56.0223	41.9687	16.6350	13.6135	12.1342	4.1263	144.5000
100	46.7042	35.5668	14.3767	11.4734	10.1109	3.4679	121.7000
101	60.6990	47.9136	18.0281	14.9748	13.4119	4.4726	159.5000
102	121.4099	92.0555	38.2479	29.9178	26.9791	9.0898	317.7000
103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
104	272.6147	164.2890	64.1913	69.3283	62.9630	24.5067	657.8930
105	228.2348	126.6231	35.5438	26.4557	21.8684	2.8073	441.5330
106	246.7204	174.8166	79.0515	61.7647	60.8595	20.6890	643.9017
107	214.3600	177.0307	74.6088	61.9545	53.4442	21.2269	602.6250
108	81.7803	62.4654	28.9041	22.1972	19.3007	6.9154	221.5630
109	43.8028	33.1280	13.6900	11.1670	9.7441	3.6581	115.1900
110	144.9809	110.2054	43.2419	35.5870	31.7870	10.7787	376.5810
111	34.0548	25.8999	10.1991	8.3567	7.4513	2.5272	88.4890
112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	.0004	.0003	.0001	.0001	.0001	.0000	.0010
999	5599.2685	4261.2256	1659.3858	1377.3554	1233.7015	417.660014548.5968	

WITHIN REGION, SHARE OF WAGE BILL IN EACH ACTIVITY

	NSW	VIC	QLD	SA	WA	TAS	AUST
1	.0030	0.0000	.0092	.0018	.0021	0.0000	.0025
2	.0181	.0080	.0030	.0186	.0317	0.0000	.0141
3	.0065	.0110	0.0000	.0111	.0127	.0274	.0086

5	.0033	.0100	.0074	.0034	.0040	.0147	.0061
6	.0025	.0026	.0219	.0054	.0021	.0069	.0051
7	.0018	.0029	.0051	.0029	.0025	.0063	.0028
8	.0015	.0013	.0015	.0009	.0013	.0017	.0014
9	.0086	.0070	.0157	.0107	.0126	.0125	.0096
10	.0020	.0023	.0027	.0021	.0034	.0108	.0026
11	.0007	.0006	.0015	.0018	.0054	.0029	.0013
12	.0000	.0000	.0000	.0008	.0116	.0007	.0011
13	.0046	.0000	.0234	.0076	.0218	.0265	.0078
14	.0081	.0010	.0227	.0003	.0009	.0002	.0061
15	0.0000	.0027	.0001	.0003	.0009	0.0000	.0009
16	.0020	.0021	.0034	.0024	.0035	.0015	.0023
17	.0006	.0009	.0042	.0076	.0235	.0041	.0038
18	.0070	.0109	.0178	.0073	.0127	.0068	.0099
19	.0029	.0088	.0048	.0034	.0029	.0080	.0050
20	.0019	.0049	.0033	.0024	.0006	.0072	.0031
21	.0009	.0008	.0004	.0001	.0001	0.0000	.0007
22	.0027	.0015	.0017	.0013	.0010	.0011	.0019
23	.0062	.0062	.0063	.0062	.0062	.0062	.0062
24	.0014	.0025	.0019	.0006	.0004	.0006	.0016
25	.0027	.0027	.0214	.0018	.0017	.0050	.0047
26	.0017	.0017	.0017	.0017	.0017	.0017	.0017
27	.0022	.0022	.0022	.0022	.0022	.0022	.0022
28	.0004	.0004	.0001	.0032	.0001	.0000	.0006
29	.0015	.0020	.0011	0.0000	0.0000	0.0000	.0013
30	.0009	.0008	.0003	.0013	.0005	.0043	.0009
31	.0014	.0051	0.0000	0.0000	0.0000	.0060	.0022
32	.0030	.0038	0.0000	.0014	.0008	.0059	.0026
33	.0013	.0042	.0007	.0049	.0003	.0025	.0024
34	.0008	.0012	.0010	.0002	.0001	.0007	.0008
35	.0008	.0024	.0002	.0002	.0000	.0003	.0011
36	.0016	.0022	.0006	.0006	.0001	.0008	.0014
37	.0021	.0080	.0001	.0002	.0001	.0000	.0032
38	.0127	.0186	.0045	.0051	.0015	.0004	.0115
39	.0023	.0075	.0018	.0039	.0010	.0010	.0038
40	.0047	.0041	.0071	.0077	.0055	.0113	.0053
41	.0016	.0007	.0021	.0024	.0017	.0040	.0015
42	.0032	.0041	.0037	.0047	.0041	.0136	.0040
43	.0049	.0048	.0051	.0047	.0048	.0028	.0048
44	.0020	.0034	.0009	.0026	.0014	.0338	.0032
45	.0029	.0035	.0028	.0025	.0012	.0013	.0028
46	.0009	.0016	.0004	.0012	.0003	.0005	.0010
47	.0103	.0071	.0080	.0056	.0058	.0051	.0081
48	.0104	.0119	.0043	.0056	.0045	.0037	.0090
49	.0008	.0007	.0040	.0039	.0020	.0011	.0015
50	.0053	.0059	.0012	.0012	.0006	.0068	.0043
51	.0020	.0018	.0017	.0013	.0010	.0002	.0017
52	.0039	.0019	.0004	.0003	.0003	0.0000	.0022
53	.0024	.0011	.0005	.0004	.0004	.0001	.0014
54	.0017	.0007	0.0000	0.0000	0.0000	0.0000	.0009
55	.0028	.0029	.0016	.0012	.0010	.0002	.0023
56	.0015	.0012	.0041	.0030	.0025	.0002	.0019
57	.0027	.0028	.0013	.0018	.0016	.0003	.0023
58	.0045	.0038	.0028	.0036	.0035	.0009	.0038
59	.0008	.0005	.0018	.0012	.0016	.0013	.0009
60	.0006	.0006	.0007	.0006	.0007	.0006	.0006
61	.0027	.0030	.0050	.0034	.0043	.0028	.0032
62	.0016	.0017	.0008	.0018	.0020	.0004	.0016
63	.0290	.0078	.0048	.0209	.0148	.0184	.0178
64	.0054	.0025	.0146	.0053	.0131	.0163	.0066
65	.0076	.0067	.0073	.0105	.0130	.0067	.0080
66	.0066	.0085	.0048	.0072	.0051	.0019	.0068

67	.0104	.0130	.0088	.0072	.0055	.0025	.0100
68	.0103	.0334	.0130	.0385	.0018	.0016	.0191
69	.0060	.0033	.0055	.0093	.0056	.0018	.0053
70	.0051	.0040	.0099	.0070	.0082	.0076	.0058
71	.0042	.0060	0.0000	.0006	.0009	0.0000	.0035
72	.0014	.0033	.0003	.0008	.0005	.0001	.0017
73	.0101	.0062	.0010	.0048	.0005	.0001	.0063
74	.0074	.0056	.0028	.0136	.0010	.0004	.0062
75	.0120	.0116	.0035	.0063	.0029	.0005	.0093
76	.0010	.0049	.0045	.0041	.0047	.0013	.0031
77	.0035	.0035	.0015	.0038	.0015	0.0000	.0030
78	.0137	.0185	.0086	.0072	.0074	.0025	.0131
79	.0020	.0014	.0015	.0013	.0006	0.0000	.0015
80	.0034	.0079	.0024	.0038	.0003	.0000	.0043
81	.0051	.0094	.0019	.0032	.0017	.0001	.0054
82	.0013	.0015	.0002	.0006	.0007	.0002	.0011
83	.0018	.0014	.0011	.0019	.0008	.0010	.0015
84	.0129	.0123	.0139	.0126	.0129	.0145	.0129
85	.0024	.0024	.0023	.0024	.0023	.0022	.0023
86	.0054	.0053	.0062	.0054	.0056	.0062	.0055
87	.0238	.0237	.0239	.0237	.0237	.0237	.0238
88	.0751	.0709	.0842	.0779	.0917	.0825	.0768
89	.0740	.0729	.0779	.0752	.0802	.0763	.0748
90	.0642	.0634	.0650	.0640	.0645	.0642	.0640
91	.0129	.0126	.0130	.0130	.0138	.0137	.0129
92	.0047	.0046	.0053	.0050	.0057	.0050	.0049
93	.0247	.0217	.0152	.0228	.0264	.0256	.0227
94	.0214	.0179	.0121	.0255	.0276	.0181	.0201
95	.0117	.0096	.0088	.0141	.0170	.0182	.0116
96	.0069	.0054	.0045	.0052	.0057	.0042	.0058
97	.0196	.0195	.0208	.0195	.0189	.0202	.0197
98	.0204	.0204	.0215	.0203	.0198	.0203	.0205
99	.0100	.0098	.0100	.0099	.0098	.0099	.0099
100	.0083	.0083	.0087	.0083	.0082	.0083	.0084
101	.0108	.0112	.0109	.0109	.0109	.0107	.0110
102	.0217	.0216	.0230	.0217	.0219	.0218	.0218
103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
104	.0487	.0386	.0387	.0503	.0510	.0587	.0452
105	.0408	.0297	.0214	.0192	.0177	.0067	.0303
106	.0441	.0410	.0476	.0448	.0493	.0495	.0443
107	.0383	.0415	.0450	.0450	.0433	.0508	.0414
108	.0146	.0147	.0174	.0161	.0156	.0166	.0152
109	.0078	.0078	.0083	.0081	.0079	.0088	.0079
110	.0259	.0259	.0261	.0258	.0258	.0258	.0259
111	.0061	.0061	.0061	.0061	.0060	.0061	.0061
112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	.0000	.0000	.0000	.0000	.0000	.0000	.0000

SHARES OF TOTAL CONSUMPTION IN EACH REGION

.38487 .29290 .11406 .09467 .08480 .02871

FOR EACH COMMODITY, SHARE OF GOVERNMENT EXPENDITURE IN EACH REGION

	NSW	VIC	QLD	SA	WA	TAS	AUST
1	.3849	.2929	.1141	.0947	.0848	.0287	.0010
2	.3849	.2929	.1141	.0947	.0848	.0287	.0010

4	.3849	.2929	.1141	.0947	.0848	.0287	.0010
5	.3849	.2929	.1141	.0947	.0848	.0287	.0010
6	.3849	.2929	.1141	.0947	.0848	.0287	.0010
7	.3849	.2929	.1141	.0947	.0848	.0287	.0010
8	.3849	.2929	.1141	.0947	.0848	.0287	.0010
9	.3849	.2929	.1141	.0947	.0848	.0287	.0010
10	.3849	.2929	.1141	.0947	.0848	.0287	.0010
11	.3849	.2929	.1141	.0947	.0848	.0287	.0010
12	.3425	.2192	.2260	.0719	.0890	.0514	12.3540
13	.3849	.2929	.1141	.0947	.0848	.0287	.0010
14	.3849	.2929	.1141	.0947	.0848	.0287	.0010
15	.3091	.1636	.1455	.1273	.2000	.0545	1.9010
16	.3849	.2929	.1141	.0947	.0848	.0287	.0010
17	.3849	.2929	.1141	.0947	.0848	.0287	.0010
18	.3849	.2929	.1141	.0947	.0848	.0287	.0010
19	.0778	.0740	.1285	.1852	.5024	.0321	135.6340
20	.3849	.2929	.1141	.0947	.0848	.0287	.0010
21	.3849	.2929	.1141	.0947	.0848	.0287	.0010
22	.3849	.2929	.1141	.0947	.0848	.0287	.0010
23	.3849	.2929	.1141	.0947	.0848	.0287	.0010
24	.3849	.2929	.1141	.0947	.0848	.0287	.0010
25	.3849	.2929	.1141	.0947	.0848	.0287	.0010
26	.3849	.2929	.1141	.0947	.0848	.0287	.0010
27	.3849	.2929	.1141	.0947	.0848	.0287	.0010
28	.3849	.2929	.1141	.0947	.0848	.0287	.0010
29	.3849	.2929	.1141	.0947	.0848	.0287	.0010
30	.3849	.2929	.1141	.0947	.0848	.0287	.0010
31	.3849	.2929	.1141	.0947	.0848	.0287	.0010
32	.3849	.2929	.1141	.0947	.0848	.0287	.0010
33	.3849	.2929	.1141	.0947	.0848	.0287	.0010
34	.3849	.2929	.1141	.0947	.0848	.0287	.0010
35	.3849	.2929	.1141	.0947	.0848	.0287	.0010
36	.3849	.2929	.1141	.0947	.0848	.0287	.0010
37	.3849	.2929	.1141	.0947	.0848	.0287	.0010
38	.3849	.2929	.1141	.0947	.0848	.0287	.0010
39	.3849	.2929	.1141	.0947	.0848	.0287	.0010
40	.3849	.2929	.1141	.0947	.0848	.0287	.0010
41	.3849	.2929	.1141	.0947	.0848	.0287	.0010
42	.3849	.2929	.1141	.0947	.0848	.0287	.0010
43	.3849	.2929	.1141	.0947	.0848	.0287	.0010
44	.3849	.2929	.1141	.0947	.0848	.0287	.0010
45	.3849	.2929	.1141	.0947	.0848	.0287	.0010
46	.3849	.2929	.1141	.0947	.0848	.0287	.0010
47	.3849	.2929	.1141	.0947	.0848	.0287	.0010
48	.3849	.2929	.1141	.0947	.0848	.0287	.0010
49	.3849	.2929	.1141	.0947	.0848	.0287	.0010
50	.3849	.2929	.1141	.0947	.0848	.0287	.0010
51	.3849	.2929	.1141	.0947	.0848	.0287	.0010
52	.3849	.2929	.1141	.0947	.0848	.0287	.0010
53	.3849	.2929	.1141	.0947	.0848	.0287	.0010
54	.3849	.2929	.1141	.0947	.0848	.0287	.0010
55	.3849	.2929	.1141	.0947	.0848	.0287	.0010
56	.3849	.2929	.1141	.0947	.0848	.0287	.0010
57	.3849	.2929	.1141	.0947	.0848	.0287	.0010
58	.3849	.2929	.1141	.0947	.0848	.0287	.0010
59	.3849	.2929	.1141	.0947	.0848	.0287	.0010
60	.3849	.2929	.1141	.0947	.0848	.0287	.0010
61	.3849	.2929	.1141	.0947	.0848	.0287	.0010
62	.3849	.2929	.1141	.0947	.0848	.0287	.0010
63	.3849	.2929	.1141	.0947	.0848	.0287	.0010
64	.3849	.2929	.1141	.0947	.0848	.0287	.0010
65	.3849	.2929	.1141	.0947	.0848	.0287	.0010

66	.3849	.2929	.1141	.0947	.0848	.0287	.0010
67	.3849	.2929	.1141	.0947	.0848	.0287	.0010
68	.3849	.2929	.1141	.0947	.0848	.0287	.0010
69	.3849	.2929	.1141	.0947	.0848	.0287	.0010
70	.3849	.2929	.1141	.0947	.0848	.0287	.0010
71	.3849	.2929	.1141	.0947	.0848	.0287	.0010
72	.3849	.2929	.1141	.0947	.0848	.0287	.0010
73	.3849	.2929	.1141	.0947	.0848	.0287	.0010
74	.3849	.2929	.1141	.0947	.0848	.0287	.0010
75	.3849	.2929	.1141	.0947	.0848	.0287	.0010
76	.3849	.2929	.1141	.0947	.0848	.0287	.0010
77	.3849	.2929	.1141	.0947	.0848	.0287	.0010
78	.3849	.2929	.1141	.0947	.0848	.0287	.0010
79	.3849	.2929	.1141	.0947	.0848	.0287	.0010
80	.3849	.2929	.1141	.0947	.0848	.0287	.0010
81	.3849	.2929	.1141	.0947	.0848	.0287	.0010
82	.3849	.2929	.1141	.0947	.0848	.0287	.0010
83	.3849	.2929	.1141	.0947	.0848	.0287	.0010
84	.3849	.2929	.1141	.0947	.0848	.0287	.0010
85	.3849	.2929	.1141	.0947	.0848	.0287	.0010
86	.3849	.2929	.1141	.0947	.0848	.0287	.0010
87	.3849	.2929	.1141	.0947	.0848	.0287	.0010
88	.3449	.2294	.2120	.0775	.0854	.0506	25.1440
89	.3849	.2929	.1141	.0947	.0848	.0287	.0010
90	.3849	.2929	.1141	.0947	.0848	.0287	.0010
91	.3689	.2720	.1480	.0979	.0832	.0301	5.5870
92	.3938	.2656	.1388	.0928	.0810	.0281	165.8660
93	.3849	.2929	.1141	.0947	.0848	.0287	.0010
94	.3849	.2929	.1141	.0947	.0848	.0287	.0010
95	.3689	.2720	.1480	.0979	.0832	.0301	.1800
96	.3689	.2720	.1480	.0979	.0832	.0301	.0160
97	.3849	.2929	.1141	.0947	.0848	.0287	.0010
98	.3849	.2929	.1141	.0947	.0848	.0287	.0010
99	.3521	.2789	.1549	.0817	.0761	.0563	13.1530
100	.3849	.2929	.1141	.0947	.0848	.0287	.0010
101	.3849	.2929	.1141	.0947	.0848	.0287	.0010
102	.3849	.2929	.1141	.0947	.0848	.0287	.0010
103	.3849	.2929	.1141	.0947	.0848	.0287	.0010
104	.3849	.2929	.1141	.0947	.0848	.0287	.0010
105	.3849	.2929	.1141	.0947	.0848	.0287	.0010
106	.3728	.2409	.1579	.0954	.0912	.0418	930.5840
107	.3840	.2590	.1410	.1080	.0790	.0290	1014.4150
108	.3805	.2361	.1369	.0981	.1106	.0378	379.6470
109	.3495	.2940	.1258	.1045	.0896	.0366	710.9750
110	.3482	.2743	.1475	.1061	.0901	.0337	148.7910
111	.3643	.2667	.1289	.1077	.0876	.0448	89.8800
112	.3689	.2720	.1480	.0979	.0832	.0301	.0250
113	.3889	.2222	.1667	.1111	.1111	0.0000	.3010
114	.3689	.2720	.1480	.0979	.0832	.0301	568.0010
115	.3849	.2929	.1141	.0947	.0848	.0287	.0030

GAMMA = 1.000 (RELATES REGIONAL CONSUMPTION TO REGIONAL INCOME)

EXPENDITURE ELASTICITIES, BY COMMODITY

1.24020	.53742	1.00000	1.00000	1.00000	.53742	.04682	.56842	.56842	.01757
1.00000	1.23503	.56842	1.23503	1.23503	1.23503	1.23503	1.23503	1.00000	.53781
.06180	.47061	.47334	.16198	.13632	.44414	.54309	.44877	.58393	.58393
.58393	.30075	.30075	.30075	.30075	.30075	1.62880	1.51329	.30075	.30075

1.23503	1.23503	1.31984	1.23503	1.23503	1.23503	1.23503	1.23942	1.62152	1.62880
1.43191	1.00000	1.23503	1.23503	1.23503	1.23503	1.37746	1.62156	1.42311	1.24104
1.62880	1.23503	1.23503	1.39881	1.62880	1.62880	1.53499	1.62880	1.62880	1.62880
.51624	1.24215	1.45954	1.23503	1.27961	1.23503	1.23503	1.23503	1.00000	1.00000
1.23503	1.23503	1.23297	1.23503	.21200	.41710	.31005	2.48010	1.23503	1.23503
1.23503	1.23427	1.23503	1.23503	1.95125	1.23503	1.00000	1.23503	1.23503	1.23503
1.23503	1.23503	1.23503	1.00000	1.48721					

LOCAL COMMODITIES, FOLLOWED BY LOCAL ACTIVITIES

11	25	28	29	62	86	87	88	89	90	91	92	93	94	99	100
101	102	103	104	105	108	109	110	111	112	113	114				
9	23	26	27	60	84	85	86	87	88	89	90	91	92	97	98
99	100	101	102	103	106	107	108	109	110	111	112				

184	1
15	1
18	1
42	1

BETA(K)R TOTALS FOR REGION 1

COMMODITY	INTER	INVEST	CONSUMPTION	GOVT	C MARG	E MARG	G MARG	TU(I)	X(I)R	TOTAL BETA
1	.0970	0.0000	.0091	.0000	0.0000	0.0000	0.0000	29.5670	278.5190	.1062
2	.5303	0.0000	.0224	.0000	0.0000	0.0000	0.0000	56.9689	103.0790	.5527
3	.1429	0.0000	0.0000	.0000	0.0000	0.0000	0.0000	38.9877	272.9150	.1429
4	.7973	0.0000	0.0000	.0000	0.0000	0.0000	0.0000	12.9737	16.2710	.7973
5	.9483	0.0000	0.0000	.0000	0.0000	0.0000	0.0000	21.4824	22.6530	.9483
6	.6941	0.0000	.0148	.0000	0.0000	0.0000	0.0000	106.5996	150.3800	.7089
7	1.2074	0.0000	.0924	.0000	0.0000	0.0000	0.0000	137.5124	105.8000	1.2997
8	.6632	0.0000	.4746	.0000	0.0000	0.0000	0.0000	78.6265	69.0990	1.1379
9	.6678	0.0000	.6794	.0000	0.0000	0.0000	0.0000	90.2871	67.0180	1.3472
10	.2281	0.0000	.5573	.0000	0.0000	0.0000	0.0000	56.1410	71.4811	.7854
11	1.0000	0.0000	0.0000	.0000	0.0000	0.0000	0.0000	76.0288	76.0287	1.0000
12	.9666	0.0000	.0768	.1114	0.0000	0.0000	0.0000	43.8513	37.9691	1.1549
13	.2880	0.0000	.6118	.0000	0.0000	0.0000	0.0000	11.8413	13.1591	.8999
14	1066.8792	.0026	1.0177	.0100	0.0000	0.0000	0.0000	41.2341	.0386	1067.9094
15	.8980	.0317	.0006	.0067	0.0000	0.0000	0.0000	82.0495	87.5607	.9371
16	.5574	.0438	.0217	.0000	0.0000	0.0000	0.0000	80.2641	128.8435	.6230
17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	1.0561	.0037	.0052	.0000	0.0000	0.0000	0.0000	48.5166	45.5512	1.0651
19	.7363	0.0000	0.0000	.6549	0.0000	0.0000	0.0000	22.4278	16.1205	1.3913
20	.2160	.0009	.7665	.0000	0.0000	0.0000	0.0000	359.2728	365.3458	.9834
21	.2815	.0013	1.0992	.0000	0.0000	0.0000	0.0000	219.4199	158.7736	1.3820
22	.1214	.0011	1.1840	.0000	0.0000	0.0000	0.0000	75.7642	57.9886	1.3065
23	.3742	.0014	.4262	.0000	0.0000	0.0000	0.0000	31.5893	39.3925	.8019
24	.3936	.0011	.2111	.0000	0.0000	0.0000	0.0000	82.3317	135.9063	.6058
25	.0147	.0003	.9754	.0000	0.0000	0.0000	0.0000	121.1199	122.2854	.9905
26	.1108	.0013	.9676	.0000	0.0000	0.0000	0.0000	38.0085	35.2021	1.0797
27	.7388	.0041	.4176	.0000	0.0000	0.0000	0.0000	149.3586	128.6962	1.1606
28	.0592	.0004	.9246	.0000	0.0000	0.0000	0.0000	46.4299	47.1740	.9842
29	.1893	.0011	.7771	.0000	0.0000	0.0000	0.0000	75.7092	78.2523	.9675
30	.1898	.0010	.9881	.0000	0.0000	0.0000	0.0000	21.3123	18.0786	1.1789
31	.1265	.0010	.7327	.0000	0.0000	0.0000	0.0000	65.9663	76.6911	.8602
32	.4044	.0001	.0022	.0000	0.0000	0.0000	0.0000	22.4904	55.3030	.4067
33	1.2172	.0006	.0560	.0000	0.0000	0.0000	0.0000	46.7116	36.6694	1.2739
34	.5741	.0038	.2818	.0000	0.0000	0.0000	0.0000	52.5710	61.1449	.8598
35	1.2343	.0010	.4083	.0000	0.0000	0.0000	0.0000	41.3822	25.1774	1.6436
36	.7725	.0002	.2922	.0000	0.0000	0.0000	0.0000	26.1120	24.5206	1.0649
37	.2606	.0021	.8319	.0000	0.0000	0.0000	0.0000	21.5871	19.7205	1.0947
38	.6467	.0089	.1482	.0000	0.0000	0.0000	0.0000	29.2397	36.3752	.8038
39	.5268	0.0000	.9860	.0000	0.0000	0.0000	0.0000	79.8686	52.7973	1.5127
40	.1379	.0010	.7570	.0000	0.0000	0.0000	0.0000	197.2778	220.2052	.8959
41	.1629	.0030	1.3993	.0000	0.0000	0.0000	0.0000	63.6355	40.6565	1.5652
42	1.0559	.0035	.0240	.0000	0.0000	0.0000	0.0000	110.8387	102.3044	1.0834
43	.8188	.0049	.0669	.0000	0.0000	0.0000	0.0000	27.2702	30.6159	.8907
44	.9481	.1305	.1281	.0000	0.0000	0.0000	0.0000	80.3569	66.5945	1.2067
45	.1893	.1466	.6413	.0000	0.0000	0.0000	0.0000	92.4769	94.6338	.9772
46	1.6467	.0031	.0192	.0000	0.0000	0.0000	0.0000	76.7863	46.0070	1.6690
47	.9800	.0006	.0070	.0000	0.0000	0.0000	0.0000	77.5876	78.5586	.9876
48	.7874	.0010	.3122	.0000	0.0000	0.0000	0.0000	29.7505	27.0303	1.1006
49	.5789	.0013	.1962	.0000	0.0000	0.0000	0.0000	126.5726	163.0410	.7763
50	.8127	.0004	.0781	.0000	0.0000	0.0000	0.0000	135.7933	152.3792	.8912
51	1.7412	.0031	.0463	.0000	0.0000	0.0000	0.0000	58.1240	32.4604	1.7906
52	.7942	.0001	.0047	.0000	0.0000	0.0000	0.0000	123.1605	154.1303	.7991
53	.7306	.0023	.0324	.0000	0.0000	0.0000	0.0000	42.3641	55.3591	.7653
54	.3870	.0005	.1906	.0000	0.0000	0.0000	0.0000	72.9791	126.2333	.5781
55	.3394	.0003	.2596	.0000	0.0000	0.0000	0.0000	43.8448	73.1648	.5993
56	.1300	.0009	.3745	.0000	0.0000	0.0000	0.0000	26.0708	51.5809	.5054
57	.6951	.0065	.1051	.0000	0.0000	0.0000	0.0000	44.3798	55.0123	.8067
58	.8809	.0007	.2877	.0000	0.0000	0.0000	0.0000	206.7438	176.8086	1.1693

59	.7436	.0074	.0603	.0000	0.0000	0.0000	0.0000	37.0079	45.6094	.8114
60	.8548	.0027	.0086	.0000	0.0000	0.0000	0.0000	62.7307	72.4328	.8661
61	1.0971	.0049	.0049	.0000	0.0000	0.0000	0.0000	27.0532	24.4383	1.1070
62	.9996	.0001	.0000	.0000	0.0000	0.0000	0.0000	44.9697	44.9821	.9997
63	1.1923	.0017	.0025	.0000	0.0000	0.0000	0.0000	59.2269	49.5010	1.1965
64	.9369	.0029	.0265	.0000	0.0000	0.0000	0.0000	36.9547	38.2470	.9662
65	.6131	.0045	.0005	.0000	0.0000	0.0000	0.0000	463.1661	749.3689	.6181
66	.8587	.0011	.0057	.0000	0.0000	0.0000	0.0000	228.5713	264.0546	.8656
67	.7417	.2603	.0219	.0000	0.0000	0.0000	0.0000	153.7283	150.1397	1.0239
68	.5427	.3338	.0402	.0000	0.0000	0.0000	0.0000	126.7383	138.2635	.9166
69	.8105	.0493	.0621	.0000	0.0000	0.0000	0.0000	181.2900	196.6469	.9219
70	.5785	.6108	.3924	.0000	0.0000	0.0000	0.0000	483.5446	305.7189	1.5817
71	.6305	.2180	.0383	.0000	0.0000	0.0000	0.0000	66.4753	74.9635	.8868
72	.7976	.2882	.0003	.0000	0.0000	0.0000	0.0000	65.8127	60.5950	1.0861
73	.9217	.0630	.0043	.0000	0.0000	0.0000	0.0000	47.1155	47.6413	.9890
74	.4957	.1805	.3195	.0000	0.0000	0.0000	0.0000	19.5221	19.6060	.9957
75	.3975	.0987	.1578	.0000	0.0000	0.0000	0.0000	110.9368	169.6290	.6540
76	.3444	.1397	.3433	.0000	0.0000	0.0000	0.0000	134.5070	162.5635	.8274
77	.5784	.1756	.0326	.0000	0.0000	0.0000	0.0000	194.7998	247.6611	.7866
78	.9582	1.7061	.0103	.0000	0.0000	0.0000	0.0000	45.6716	17.0759	2.6746
79	.1743	.5818	.0042	.0000	0.0000	0.0000	0.0000	56.8235	74.7414	.7603
80	.4389	.4381	.0106	.0000	0.0000	0.0000	0.0000	202.0540	227.6576	.8875
81	.3281	.0025	.3070	.0000	0.0000	0.0000	0.0000	25.2197	39.5569	.6376
82	.7116	.0033	.3773	.0000	0.0000	0.0000	0.0000	75.1587	68.8154	1.0922
83	.8423	.0100	.1822	.0000	0.0000	0.0000	0.0000	123.0642	118.9665	1.0344
84	.6573	.1291	.0380	.0000	0.0000	0.0000	0.0000	19.6687	23.8578	.8244
85	.1992	.0029	.5476	.0000	0.0000	0.0000	0.0000	24.9430	33.2668	.7498
86	.6262	0.0000	.3736	.0000	0.0000	0.0000	0.0000	291.2984	291.3566	.9998
87	.2767	.0285	.6924	.0000	0.0000	0.0000	0.0000	40.6817	40.7782	.9976
88	.8853	0.0000	.0366	.0779	0.0000	0.0000	0.0000	111.3790	111.4044	.9998
89	0.0000	.9997	0.0000	.0000	0.0000	0.0000	0.0000	524.8065	524.9544	.9997
90	.2704	.7294	0.0000	.0000	0.0000	0.0000	0.0000	1337.1365	1337.3822	.9998
91	.4917	.1259	.0054	.0018	.3137	.0614	0.0000	1163.8945	1164.0539	.9999
92	.0627	.0457	.0214	.0701	.7999	0.0000	0.0000	930.9806	931.1144	.9999
93	.3286	0.0000	.6713	.0000	0.0000	0.0000	0.0000	194.3471	194.3739	.9999
94	.6119	0.0000	.3880	.0000	0.0000	0.0000	0.0000	75.9735	75.9868	.9998
95	.4023	.0713	.1872	.0001	.1342	.0940	0.0000	424.5332	477.4285	.8892
96	.5202	.0435	.1694	.0000	.0489	.1606	0.0000	253.4636	268.9075	.9426
97	.4174	.0360	.0103	.0000	.0382	.0198	0.0000	96.8471	185.6643	.5216
98	.3162	.0066	.2362	.0000	.0063	.0016	0.0000	96.8763	170.8827	.5669
99	.5629	.2193	.1892	.0156	0.0000	0.0000	0.0000	292.9309	296.7850	.9870
100	.9174	0.0000	.0823	.0000	0.0000	0.0000	0.0000	237.9181	237.9884	.9997
101	.5365	0.0000	.4633	.0000	0.0000	0.0000	0.0000	150.3171	150.3494	.9998
102	.6253	.0014	.3607	.0000	.0022	.0000	0.0000	127.1962	128.5328	.9896
103	.7273	.1414	.0824	.0000	0.0000	0.0000	0.0000	272.9625	286.9893	.9511
104	.7803	.1406	.0788	.0000	0.0000	0.0000	0.0000	332.0347	332.1294	.9997
105	0.0000	0.0000	.9998	.0000	0.0000	0.0000	0.0000	785.9429	786.0614	.9998
106	.0212	0.0000	.0347	.8356	0.0000	0.0000	0.0000	370.1346	415.1600	.8915
107	0.0000	0.0000	0.0000	.7189	0.0000	0.0000	0.0000	389.5545	541.8892	.7189
108	.0170	0.0000	.6117	.3712	0.0000	0.0000	0.0000	389.1532	389.1908	.9999
109	.0070	0.0000	.1821	.8108	0.0000	0.0000	0.0000	306.4809	306.4904	1.0000
110	.2624	0.0000	.2866	.4509	0.0000	0.0000	0.0000	114.8997	114.9124	.9999
111	.3525	0.0000	.4878	.1587	0.0000	0.0000	0.0000	206.1643	206.3744	.9990
112	.1143	.0000	.4889	.0000	.3967	0.0000	0.0000	347.1005	347.1587	.9998
113	.1659	0.0000	.8327	.0012	0.0000	0.0000	0.0000	94.3092	94.3258	.9998
114	.8378	0.0000	0.0000	.1621	0.0000	0.0000	0.0000	1292.6344	1292.8620	.9998
115	0.0000	0.0000	0.0000	.9883	0.0000	0.0000	0.0000	.0012	.0012	.9883

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REGION 1 EXPERIMENT 1

CUM	XN	XL B(2)	XL B(3)	Y	X4	XL(3)	N4	XL(5)	SUM	RESULT
11	.1311	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.1311	.1311
25	-.0000	-.0000	-.0007	-.0000	0.0000	.0007	-.0006	0.0000	-.0006	-.0004
28	-.0001	-.0000	-.0023	-.0000	0.0000	.0026	-.0018	0.0000	-.0015	-.0009
29	-.0007	.0000	-.0025	-.0000	0.0000	-.0018	-.0020	0.0000	-.0069	-.0077
62	-.0020	-.0000	-.0000	.0000	0.0000	-.0000	-.0000	0.0000	-.0020	.0100
86	-.0095	0.0000	-.0025	0.0000	0.0000	.0018	-.0020	0.0000	-.0122	-.0123
87	-.0098	.0000	-.0047	0.0000	0.0000	.0061	-.0037	0.0000	-.0120	-.0114
88	.0024	0.0000	-.0002	0.0000	0.0000	-.0002	-.0002	0.0000	.0018	-.0078
89	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-.0166
90	.0014	-.0031	0.0000	.0248	0.0000	0.0000	0.0000	0.0000	.0231	.0213
91	.0303	-.0005	-.0014	-.0054	-.0139	-.0001	-.0011	0.0000	.0079	.0092
92	.0003	-.0002	-.0036	.0019	0.0000	-.0021	-.0028	0.0000	-.0064	-.0057
93	.0045	0.0000	-.0045	0.0000	0.0000	.0041	-.0036	0.0000	.0005	.0018
94	.0073	0.0000	-.0026	0.0000	0.0000	.0019	-.0021	0.0000	.0045	.0064
99	0.0000	-.0012	-.0013	-.0176	0.0000	.0021	-.0010	0.0000	-.0189	-.0175
100	.0000	0.0000	-.0006	0.0000	0.0000	-.0006	-.0004	0.0000	-.0016	.0003
101	.0000	0.0000	-.0031	0.0000	0.0000	-.0024	-.0025	0.0000	-.0080	-.0080
102	-.0009	-.0000	-.0024	-.0000	0.0000	-.0015	-.0019	0.0000	-.0067	-.0053
103	-.0044	-.0003	-.0006	.0026	0.0000	.0014	-.0004	0.0000	-.0017	-.0041
104	.0002	-.0003	-.0005	.0026	0.0000	-.0004	-.0004	0.0000	.0011	.0016
105	0.0000	0.0000	-.0106	0.0000	0.0000	-.0000	-.0084	0.0000	-.0191	-.0166
108	.0002	0.0000	-.0041	0.0000	0.0000	-.0008	-.0033	0.0000	-.0080	-.0070
109	0.0000	0.0000	-.0012	0.0000	0.0000	-.0003	-.0010	0.0000	-.0025	-.0022
110	.0001	0.0000	-.0019	0.0000	0.0000	-.0006	-.0015	0.0000	-.0040	-.0032
111	-.0000	0.0000	-.0033	0.0000	0.0000	.0018	-.0026	0.0000	-.0041	-.0035
112	.0001	.0000	-.0045	-.0000	0.0000	-.0011	-.0036	0.0000	-.0092	-.0080
113	-.0000	0.0000	-.0056	0.0000	0.0000	-.0007	-.0045	0.0000	-.0108	-.0093
114	.0017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.0017	.0020

REGION 1 EXPERIMENT 2

COM	XN	XL B(2)	XL B(3)	Y	X4	XL(3)	N4	XL(5)	SUM	RESULT
11	-.2578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-.2578	-.2578
25	-.0000	-.0000	.0030	-.0005	0.0000	.0118	.0179	0.0000	.0322	.0496
28	.0011	.0000	.0094	-.0014	0.0000	-.0117	.0558	0.0000	.0532	.1142
29	.0107	.0000	.0102	-.0034	0.0000	-.0059	.0610	0.0000	.0726	.1507
62	-.0179	.0000	.0000	-.0002	0.0000	.0000	.0000	0.0000	-.0180	-.5275
86	.9710	0.0000	.0104	0.0000	0.0000	-.2878	.0620	0.0000	.7557	.8545
87	.4223	-.0065	.0193	0.0000	0.0000	-.0481	.1149	0.0000	.5020	.6188
88	.1175	0.0000	.0010	0.0000	0.0000	-.0068	.0061	0.0000	.1177	.4196
89	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.5009
90	.0376	-.0805	0.0000	-1.0395	0.0000	0.0000	0.0000	0.0000	-1.0824	-.8384
91	.2066	-.0058	.0058	.3023	.2837	.0028	.0343	0.0000	.8297	.8923
92	.0057	-.0039	.0147	-.0977	0.0000	.0015	.0877	0.0000	.0079	.0937
93	.0536	0.0000	.0187	0.0000	0.0000	.0247	.1112	0.0000	.2082	.3237
94	.0569	0.0000	.0108	0.0000	0.0000	-.0478	.0644	0.0000	.0843	.1859
99	0.0000	-.0189	.0053	.5451	0.0000	-.0414	.0314	0.0000	.5214	.7995
100	.0001	0.0000	.0023	0.0000	0.0000	-.0044	.0137	0.0000	.0116	.3437
101	.0002	0.0000	.0129	0.0000	0.0000	.0001	.0769	0.0000	.0901	.2669
102	.0569	-.0001	.0101	.0029	0.0000	-.0060	.0601	0.0000	.1239	.3752
103	.1497	-.0085	.0023	-.1093	0.0000	.0116	.0137	0.0000	.0595	.2956
104	.0038	-.0084	.0022	-.1087	0.0000	-.0000	.0131	0.0000	-.0981	.2259
105	0.0000	0.0000	.0440	0.0000	0.0000	-.0000	.2622	0.0000	.3062	.5010
108	-.0013	0.0000	.0170	0.0000	0.0000	.0112	.1015	0.0000	.1284	.2082
109	0.0000	0.0000	.0051	0.0000	0.0000	.0010	.0302	0.0000	.0363	.0613
110	.0000	0.0000	.0080	0.0000	0.0000	.0006	.0476	0.0000	.0562	.1635
111	.0012	0.0000	.0136	0.0000	0.0000	.0085	.0810	0.0000	.1042	.2792
112	.0005	-.0000	.0188	-.0000	0.0000	-.0114	.1123	0.0000	.1202	.2410
113	.0002	0.0000	.0232	0.0000	0.0000	-.0105	.1382	0.0000	.1511	.3112
114	.1776	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.1776	.3601

184 2
15 2
18 2
42 2

SUMMARY FOR EXPT 1

IND	NSW	VIC	QLD	SA	WA	TAS		
9	.1311	.2078	.1174	.1437	.1278	.2539	.1505	.1505
23	-.0004	.0022	-.0054	.0041	-.0014	.0224	.0008	.0008
26	-.0009	.0074	-.0172	.0137	-.0042	.0729	.0029	.0029
27	-.0077	.0030	-.0295	.0108	-.0112	.0832	-.0030	-.0030
60	.0100	.0491	-.0411	.0541	-.0195	.2254	.0221	.0221
84	-.0123	.0135	-.0483	.0260	-.0177	.1338	-.0017	-.0017
85	-.0114	.0106	-.0437	.0220	-.0154	.1558	-.0011	-.0011
86	-.0078	.0195	-.0452	.0358	-.0147	.1772	.0045	.0045
87	-.0166	.0197	-.0836	.0450	-.0291	.2945	-.0000	0.0000
88	.0213	.0597	-.0246	.0574	-.0172	.2079	.0312	.0312
89	.0092	.0391	-.0577	.0560	-.0419	.3136	.0185	.0185
90	-.0057	.0091	-.0338	.0179	-.0103	.1161	.0007	.0007
91	.0018	.0214	-.0332	.0337	-.0059	.1556	.0104	.0104
92	.0064	.0278	-.0305	.0385	-.0002	.1693	.0151	.0151
97	-.0175	.0027	-.0443	.0185	-.0250	.1255	-.0079	-.0079
98	.0003	.0118	-.0317	.0264	-.0113	.1431	.0054	.0054
99	-.0080	.0091	-.0433	.0226	-.0163	.1508	-.0004	-.0004
100	-.0053	.0105	-.0392	.0248	-.0151	.1524	.0018	.0018
101	-.0041	.0111	-.0400	.0253	-.0150	.1522	.0026	.0026
102	.0016	.0177	-.0339	.0313	-.0132	.1621	.0081	.0081
103	-.0166	.0197	-.0839	.0450	-.0291	.2940	-.0000	0.0000
106	-.0070	.0076	-.0311	.0169	-.0106	.1023	-.0005	-.0005
107	-.0022	.0019	-.0087	.0043	-.0033	.0260	-.0003	-.0003
108	-.0032	.0056	-.0188	.0119	-.0072	.0718	.0008	.0008
109	-.0035	.0124	-.0342	.0240	-.0108	.1274	.0036	.0036
110	-.0080	.0088	-.0403	.0212	-.0147	.1407	-.0004	-.0004
111	-.0093	.0117	-.0500	.0275	-.0179	.1787	.0003	.0003
112	.0020	.0126	-.0299	.0274	-.0102	.1429	.0067	.0067

COLUMN 2 = AUSTRALIAN PRODUCTION BY COMMODITY(DATA)
COLUMN 3 = SUM OF REGIONAL SALES BY COMMODITY (COMPUTED)
COLUMN 4 = AUSTRALIAN PRODUCTION BY ACTIVITY (ROWS DISPLACED SO THAT SINGLE PRODUCT RESULTS ARE ALLIGNED)

1	716.1000	81.2261	0.0000	.1062	.1622	.0461	.1408	.0354	.5423	.113428
2	211.3990	204.3954	0.0000	.5527	1.3407	5.6426	.6468	.9535	.6098	.966870
3	577.5000	87.4353	251.5612	.1429	.1944	1.1993	.0813	.0463	1.5755	.151403
4	46.9000	33.3914	1209.2309	.7973	2.3072	13.8394	.1462	.3246	.4051	.711971
5	69.4380	46.5565	554.8943	.9483	.5257	8.3021	.3756	.1288	1.0198	.670476
6	505.0320	387.8410	121.2080	.7089	1.0362	.6219	.6110	.9346	.4525	.767953
7	445.1350	560.0620	494.3214	1.2997	1.2434	1.5018	1.1532	1.6936	.6123	1.258185
8	334.0000	284.0989	291.4484	1.1379	1.3186	.6382	.6790	.7435	.5301	.850596
9	257.9950	253.6039	240.9150	1.3472	1.0907	.6255	.7567	.8548	.6670	.982980
10	166.7580	161.2880	166.5315	.7854	1.0990	1.0955	1.3262	1.1444	.6902	.967198
11 L	220.8100	220.8100	220.8089	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000000
12	124.7834	124.5820	125.4288	1.1549	.8063	1.4138	1.3713	.7366	.6110	.998386
13	67.3968	33.5458	68.7449	.8999	1.1465	.6897	.3008	.1008	.1970	.497736
14	180.2095	66.9193	181.6717	1067.9094	8673.4053	11.3290	.5604	.0342	.5835	.371342
15	386.5223	259.5526	389.7282	.9371	265.3719	.4944	.5731	.4840	.4904	.671507
16	253.5417	182.1422	258.7423	.6230	3.0445	.2750	12.2253	4.1718	30.6108	.718391
17	40.0011	27.9405	39.9999	0.0000	.2118	38.6292	5.3505	1.3697	0.0000	.698493
18	137.6421	128.0807	140.4940	1.0651	.9239	.7374	.9545	.7568	1.4177	.930534
19	264.5088	264.3960	264.5020	1.3913	1.0645	1.1074	.9459	.9355	1.0632	.999574
20	1337.4252	974.0038	1356.2855	.9834	.6636	.4784	.9262	.5729	1.0115	.728268
21	723.6268	638.7242	726.1341	1.3820	.5997	.9184	1.1854	1.3553	.6379	.882671
22	238.5106	199.2864	242.5924	1.3065	.5265	.7875	1.0352	4.1106	.3673	.835545
23	77.2991	73.9343	76.2960	.8019	.7664	1.4637	4.0610	3.7843	0.0000	.956471
24	250.0394	211.5802	253.9339	.6058	1.0582	1.1249	1.0940	1.4306	1.5305	.846187
25 L	317.8241	314.8435	318.1078	.9905	.9911	.9884	.9912	.9917	.9915	.990622
26	102.7866	100.0804	104.6232	1.0797	.6590	.8226	2.5814	3.6433	2.3462	.973672
27	590.0803	446.8562	593.1899	1.1606	1.2413	.3312	1.4770	1.5571	.8233	.757280
28 L	122.6297	120.7160	124.6528	.9842	.9849	.9821	.9850	.9856	.9854	.984394
29 L	203.9867	197.3937	215.0575	.9675	.9682	.9651	.9684	.9690	.9687	.967679
30	64.7035	58.0440	68.1709	1.1789	1.2351	8.5663	.2924	6.8731	12.5657	.897077
31	169.9986	136.7993	171.4308	.8602	.6744	1.1503	0.0000	0.0000	0.0000	.804708
32	146.4845	70.4190	156.4099	.4067	.8016	.3567	.4676	.2314	.2157	.480727
33	150.0047	133.0939	154.4981	1.2739	.8172	0.0000	0.0000	0.0000	.2849	.887265
34	139.5401	128.6354	142.2888	.8598	.9911	0.0000	1.2504	1.7234	.3414	.921853
35	122.9876	118.7861	117.5904	1.6436	.9284	1.4305	.2820	2.2840	.4188	.965838
36	67.8025	67.7571	69.0346	1.0649	.9472	.5470	2.7558	4.9499	.6211	.999330
37	67.7792	58.0077	69.9083	1.0947	.4111	4.2151	4.5179	21.0772	2.7956	.855833
38	82.6955	75.7195	86.5186	.8038	.6254	1.9227	1.9368	11.9478	1.6956	.915642
39	205.2359	203.7128	209.2436	1.5127	.4789	28.8887	16.9056	45.7710	46.8341	.992579
40	515.8671	510.3433	523.3532	.8959	.6452	2.4101	2.1249	7.1910	29.4329	.989292
41	171.0711	169.6472	170.7694	1.5652	.5339	1.9956	.9640	3.5292	3.6468	.991677
42	302.7478	299.6855	302.2093	1.0834	1.1991	.8181	.7624	.9841	.6424	.989885
43	77.3775	75.4817	79.4723	.8907	1.9655	.7329	.7108	.9321	.6977	.975499
44	215.4687	211.5826	218.9178	1.2067	.9489	1.1084	.8705	1.0097	.3318	.981964
45	240.8678	236.3246	245.3367	.9772	.9747	.9137	1.0015	.9675	1.6182	.981138
46	194.8788	191.0480	199.0728	1.6690	1.1099	2.4987	.9417	1.1846	.1317	.980343
47	201.1255	200.4573	202.5963	.9876	.8337	1.0682	1.1074	1.8978	1.9109	.996678
48	78.7721	78.3765	79.7003	1.1006	.6684	2.3892	.7708	3.4454	2.4951	.994978
49	333.4585	329.5051	336.1177	.7763	1.1277	1.0472	1.4274	1.3562	1.5747	.988144
50	342.6228	341.3189	346.7657	.8912	.7802	2.0261	1.4547	1.7581	2.2343	.996194
51	163.6936	163.2936	163.0945	1.7906	1.9865	.2848	.4774	1.1803	2.0335	.997556
52	323.3024	297.4539	335.0741	.7991	.8567	2.1198	2.3944	3.2787	.4589	.920049
53	121.6165	113.9205	124.3370	.7653	.9693	.8539	1.4782	1.3183	8.0155	.936719
54	181.2100	161.7900	180.0520	.5781	.9981	4.1373	5.2326	6.7954	0.0000	.892832
55	110.1387	106.5884	112.0558	.5993	1.1470	2.5262	3.3205	3.3563	8.6340	.967765
56	67.8865	45.0792	69.7721	.5054	1.1658	0.0000	0.0000	0.0000	0.0000	.664038
57	117.6137	106.1470	123.2836	.8067	.7191	1.2763	1.4797	2.0337	6.9904	.902505

58		593.2016	552.8429	598.9374	1.1693	1.3303	.4832	.6141	.8458	7.7611	.931965
59		101.1889	97.7879	105.0750	.8114	.9061	1.4688	1.4415	1.0294	6.2306	.966390
60		159.8155	159.0117	154.7031	.8661	.9420	1.4186	1.0455	1.1397	4.3662	.994970
61		77.8091	77.7747	78.2383	1.1070	1.5339	.6918	.7966	.8671	.8900	.999558
62	L	118.7106	118.7095	117.7930	.9997	1.0008	.9966	1.0010	1.0016	1.0015	.999991
63		156.5471	156.0004	157.7851	1.1965	.9899	.7393	.9456	.8478	1.2185	.996508
64		96.2042	94.4787	97.2700	.9662	.8734	1.7764	.8636	.8483	3.4317	.982064
65		1191.4216	1045.0338	1213.1035	.6181	1.8700	2.2528	.8690	.9218	.5714	.877132
66		831.6040	575.8518	841.9744	.8656	1.6776	.3466	.8018	.3596	.2914	.692459
67		411.8738	404.5442	417.5720	1.0239	1.1083	1.1665	.7787	.6591	1.1712	.982204
68		366.3851	347.6927	369.9739	.9166	.7906	1.5490	.8726	1.1156	3.3590	.948982
69		493.9614	475.5968	496.9859	.9219	.7706	1.0499	1.4692	1.6501	3.0297	.962822
70		1472.9380	1418.1977	1504.0251	1.5817	.6471	1.2464	.6137	8.3850	8.7848	.962836
71		172.9146	171.2648	175.9806	.8868	1.3846	.8561	.5918	1.3149	3.5505	.990459
72		179.4520	177.0602	172.2341	1.0861	1.1442	.4838	.9465	1.3209	.8939	.986672
73		103.2659	91.4887	102.9450	.9890	.5592	0.0000	4.7317	3.4139	0.0000	.885953
74		59.0459	51.0921	60.1503	.9957	.4667	4.1448	1.7230	3.1463	17.6010	.865295
75		275.6305	269.2940	279.8761	.6540	.9775	5.8956	1.2296	12.3707	38.4745	.977011
76		352.4833	344.6864	366.9415	.8274	1.0874	2.0608	.4863	5.4318	13.4196	.977880
77		496.6165	485.8398	508.3188	.7866	.7646	2.4909	1.5094	2.9208	15.1866	.978300
78		141.0632	136.7558	146.7856	2.6746	.5894	.8148	.8587	.8839	2.2748	.969465
79		168.9729	156.8859	174.1582	.7603	.6679	2.2304	.7752	3.5827	0.0000	.928468
80		565.2334	538.4456	576.6978	.8875	.6651	1.4585	1.8174	1.8367	4.5431	.952608
81		78.8000	71.6715	79.2944	.6376	1.3733	.7355	1.0535	1.4092	0.0000	.909537
82		222.5638	212.6595	229.9785	1.0922	.5851	1.4970	1.2137	15.8534	179.2783	.955499
83		324.1420	314.5066	328.4075	1.0344	.6487	2.4519	1.4562	2.2096	46.5016	.970274
84		51.7208	51.0149	52.2826	.8244	.7136	5.6191	1.8151	1.4877	5.5208	.986352
85		72.7800	64.9263	75.7976	.7498	.9561	1.2330	.7216	1.5947	1.2707	.892090
86	L	756.0675	756.0131	756.0831	.9998	1.0003	.9982	1.0004	1.0008	1.0006	.999928
87	L	104.3415	104.1085	104.9961	.9976	.9982	.9957	.9983	.9989	.9986	.997767
88	L	296.1690	296.1690	296.1684	.9998	1.0007	.9972	1.0009	1.0015	1.0011	1.000000
89	L	1363.4010	1363.4010	1363.3997	.9997	1.0009	.9959	1.0011	1.0020	1.0016	1.000000
90	L	3553.2934	3553.2929	3553.2920	.9998	1.0006	.9976	1.0007	1.0011	1.0010	1.000000
91	L	3059.2570	3059.2560	3064.7923	.9999	1.0004	.9981	1.0005	1.0009	1.0008	1.000000
92	L	2414.3430	2414.3430	2414.3425	.9999	1.0004	.9979	1.0006	1.0010	1.0008	1.000000
93	L	507.2197	507.2197	507.2191	.9999	1.0004	.9980	1.0005	1.0009	1.0007	1.000000
94	L	202.3770	202.3770	202.3757	.9998	1.0006	.9977	1.0006	1.0011	1.0009	1.000000
95		1140.8755	1140.8718	1142.2705	.8892	.9821	1.7370	.9876	.9895	.9162	.999997
96		656.2751	656.2751	657.0872	.9426	.9467	1.9755	.7796	.9434	1.1299	1.000000
97		479.2361	240.6357	479.7126	.5216	.5234	.6684	.4541	.3911	.3298	.502123
98		375.4750	250.2260	375.5017	.5669	.7259	.8625	.7309	.6851	.9148	.666425
99	L	774.9251	765.0511	774.9242	.9870	.9880	.9839	.9882	.9891	.9886	.987258
100	L	620.5780	620.5780	620.5766	.9997	1.0009	.9959	1.0011	1.0022	1.0017	1.000000
101	L	387.8010	387.8010	387.8002	.9998	1.0007	.9969	1.0008	1.0016	1.0013	1.000000
102	L	334.9260	331.5260	334.9628	.9896	.9906	.9864	.9908	.9916	.9912	.989849
103	L	754.1274	717.4272	754.1368	.9511	.9519	.9483	.9521	.9528	.9526	.951334
104	L	869.1010	869.1010	869.1000	.9997	1.0009	.9961	1.0011	1.0020	1.0016	1.000000
105	L	2042.1180	2042.1180	2042.1171	.9998	1.0005	.9978	1.0006	1.0011	1.0009	1.000000
106		1001.8933	991.0578	1001.8960	.8915	.9668	1.5748	.8952	.9382	1.0884	.989185
107		1048.3150	1014.4150	1048.3143	.7189	.8738	1.6946	1.7445	1.5436	4.4156	.967662
108	L	1015.7270	1015.7270	1015.7264	.9999	1.0003	.9987	1.0004	1.0006	1.0005	1.000000
109	L	861.6290	861.6290	861.6284	1.0000	1.0001	.9996	1.0001	1.0002	1.0001	1.000000
110	L	311.3260	311.3260	311.3254	.9999	1.0003	.9987	1.0004	1.0007	1.0006	1.000000
111	L	542.7107	542.2615	542.7139	.9990	.9998	.9966	.9999	1.0005	1.0002	.999172
112	L	901.7280	901.7272	901.7323	.9998	1.0005	.9976	1.0006	1.0012	1.0010	.999999
113	L	245.0988	245.0987	245.1004	.9998	1.0005	.9975	1.0007	1.0013	1.0010	1.000000
114	L	3383.1290	3383.1290	3383.1280	.9998	1.0005	.9976	1.0007	1.0013	1.0010	1.000000
115		.0030	.0030	.0020	.9883	1.0478	.8424	1.0499	1.0805	1.0631	1.000000

OUTPUT BY ACTIVITY ($M)

72	-.0233	.2117
73	-.0679	-.8130
74	-.0147	-1.0539
75	-.0381	-.3355
76	.2795	-3.7177
77	-.1419	4.2941
78	-.0639	1.5849
79	-.0404	-.3906
80	-.0270	-.0553
81	-.0406	-.4347
82	-.0302	.0421
83	-.0192	.2594
84	-.0046	1.3421
85	-.0016	.3396
86	.0099	.1929
87	-.0000	.0000
88	.0352	-1.1363
89	.0260	.7623
90	.0009	-.1335
91	.0146	.1123
92	.0203	-.0236
93	.0145	.7573
94	-.0265	.6909
95	-.0251	1.7654
96	.0171	.0707
97	-.0133	.5076
98	.0077	.2395
99	-.0006	.0510
100	.0024	.1816
101	.0049	.1002
102	.0107	.0344
103	-.0050	-.0379
104	.0003	.0046
105	-.0000	-.0000
106	-.0006	.0130
107	-.0003	.0023
108	.0008	.0401
109	.0055	.0879
110	-.0005	.0109
111	.0004	.0263
112	.0067	.1925
113	-.0000	.0000

WAGES
OTHER USAGE INCL. GOVT. EXPENDITURE

	1	2
1	.1401	.9760
1	0.0000	0.0000

0452 LP 1330 DIAXPH FILE OUTPUT CHARGE $1.53

VI. The REGP Program

REGP processes the regional results which are computed by REGB and prints out results for regional summary variables. A schematic summary of the REGP deck is set out in Table VI.1, with similar format to Tables IV.1 and V.1.

VI.1 The REGP control cards

Before the REGP deck can be set up you will require, in addition to the fifteen pieces of information listed on pages 8, 12, 14, 45 and 47,

(xvi) the storage location of your REGB files (usually COMMON, see card B20, p. 53),

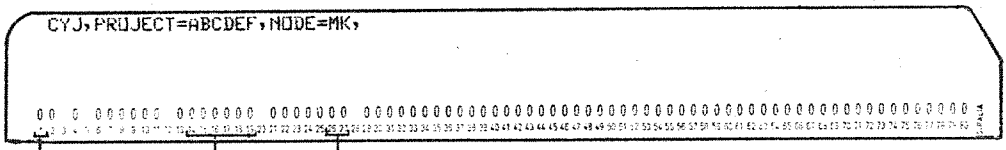
(xvii) a REGP program name. This may be up to six characters long, it must commence with an alphabetic character but the remaining characters may be alphabetic and/or numeric. (We have chosen REGONP in the example.)

Table VI.1 Schematic Representation of the REGP Computing Deck

Description of card(s)	Subsection in which punching is described	Card numbers in illustrative deck
CONTROL SECTION		
Control cards	VI.1	P1-P16
End of section	VI.1	P17
COMPILE SECTION	VI.2	
Compile card	VI.2	P18
End of section	VI.2	P19
PRINT SECTION	VI.3	
Print card	VI.3	P20
End of information	VI.4	P21

Proceed to punch your REGP control cards as follows:

Card P1 (pink)

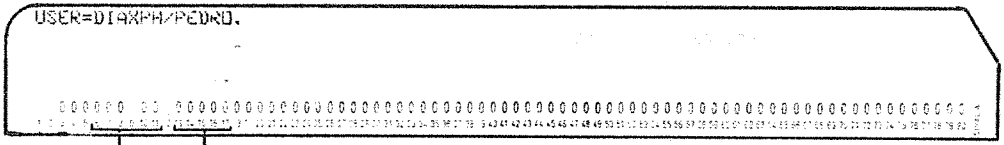


* In the first column multipunch 6, 7, 8, 9.

* Enter your account code here (see item (i) on page 8).

* Enter the node identifier here (see item (iv) on page 8).

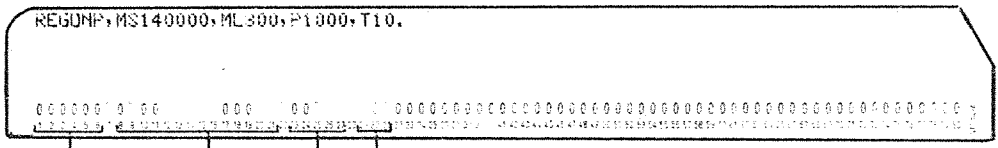
Card P2



* Enter your user identification code here (see item (ii) on page 8).

* Enter your personal password here (see item (iii) on page 8).

Card P3



* Enter the REGP program name here (see item (xvii) on page 85).

* These entries specify how much computer-memory space is available to you. For a REGP job use the values shown here.

* This entry determines the priority which your job will receive in the computer. The REGP program is a very cheap program to run. P1000 should ensure a same day turnaround for your job. Higher priorities are available but are more costly. Check with the node manager if you think you need a higher priority.

* This entry puts a time limit on your job. T10 allows plenty of time for a REGP run.

Card P4

```
COMMON.
```

This card directs the computer to give you access to COMMON storage space. If you used user-specific space to store your REGA run (see item (viii) on page 12) or your REGB run (see item (xvi) on page 85) then consult your node manager.

Cards P5 - P13

```
GETSET,DTB3006.
```

P5

```
ATTACH,OMLIB,OMORANI78LIB,ID=DIAXOM,SN=DTB3006,PW=ORANTK.
```

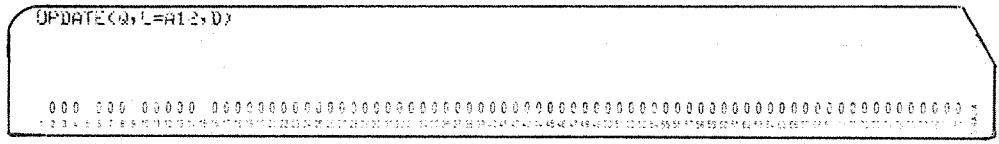
P6

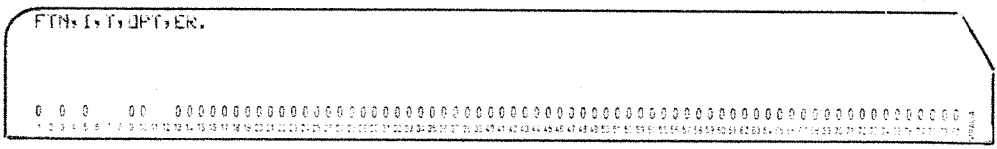
```
LIBRARY,OMLIB,*.
```

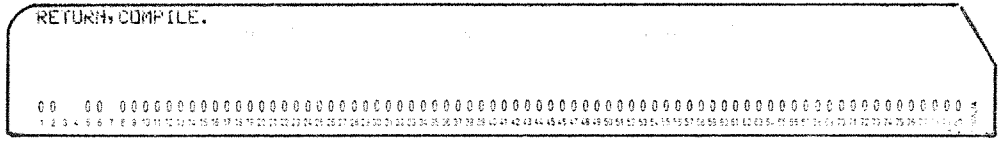
P7

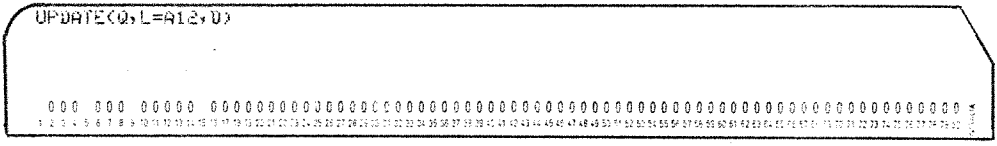
```
ATTACH,OLDPL,OM78REGUPDATE,ID=DIAXOM,SN=DTB3006,PW=ORANTK.
```

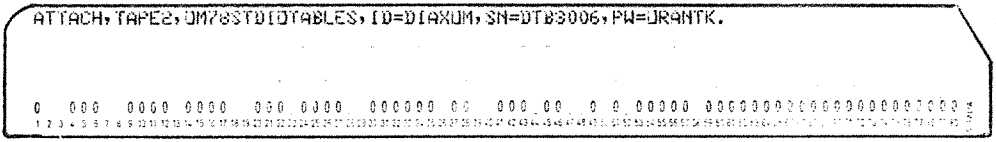
P8





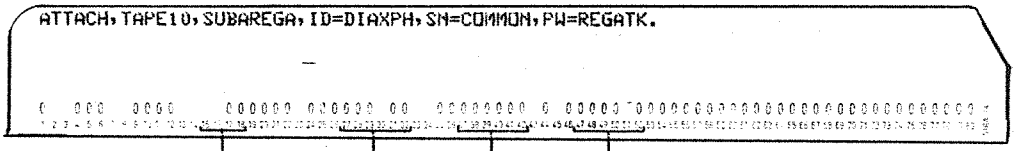






These cards activate the disc which stores the REGP program libraries and attach the appropriate ORANI data files.

Card P14



This card attaches your REGA file.

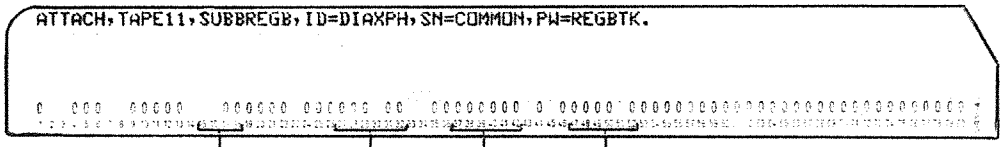
* Enter your REGA file prefix here (see item (x) on page 14).

* Enter the user identification code used when computing the REGA program (see item (ii) on page 8).

* Enter COMMON here if your REGA run is stored on generally available storage space (see item (viii) on page 12). If it is stored on user-specific space consult your node manager.

* Enter the REGA turnkey password here (see item (xi) on page 14).

Card P15



This card attaches your REGB file.

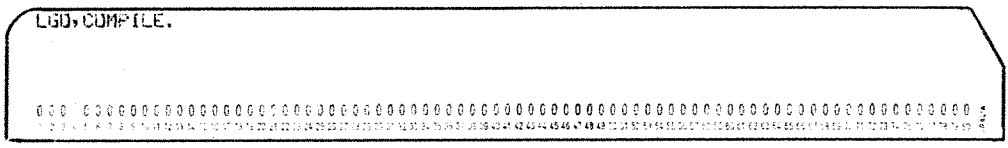
* Enter your REGB file prefix here (see item (xiii) on page 45).

* Enter the user identification code used when computing the REGB program (see item (ii) on page 8).

* Enter COMMON here if your REGB run is stored on generally available storage space (see item (xvi) on page 85). If it is stored on user-specific space consult your node manager.

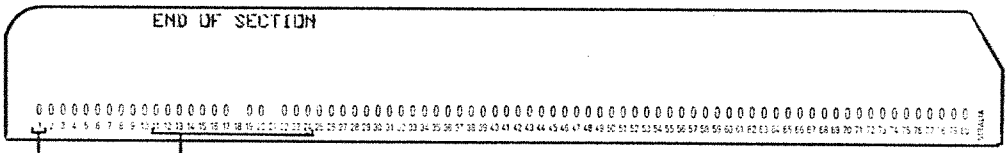
* Enter the REGB turnkey password here (see item (xiv) on page 47).

Card P16



This card compiles the control section of your REGP program. You should never need to vary this card.

Card P17 (blue)



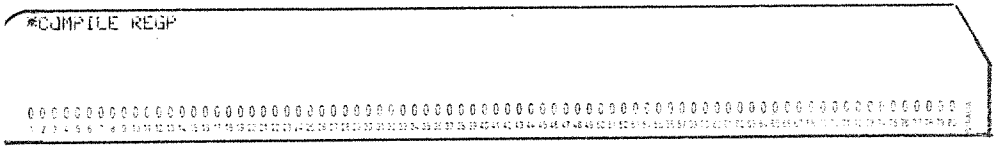
* Multi-punch 7, 8, 9 in column 1.

* Punch "END OF SECTION" anywhere within the field of columns 2 to 80.

This card concludes the control cards.

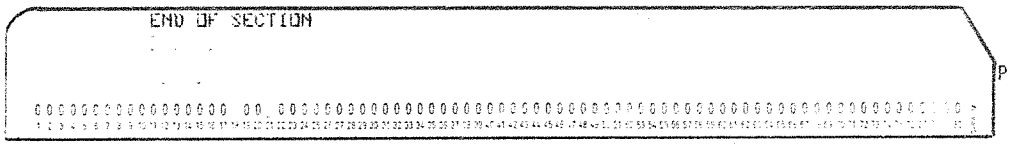
VI.2 Compile section

This section of the deck compiles the REGP program. You should never vary the cards in this section of the deck.



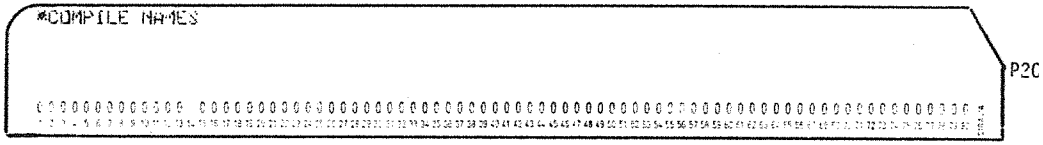
This card instructs the computer to compile the REGP program.

Conclude the compile section of the deck with a (blue) "END OF SECTION" card multi-punched 7, 8, 9 in column 1 [e.g., card P19].



VI.3 Print section

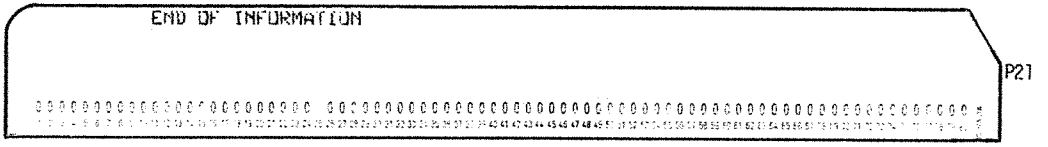
You should never need to change the card in this section of the deck.



This card prepares the ORANI industry and occupation labels for use by the REGP program.

VI.4 End of information

The deck concludes with a (yellow) "END OF INFORMATION" card multi-punched 6, 7, 8, 9 in column 1.



VI.5 The REGP printout

This section contains some brief notes to explain the REGP printout. An abridged version of the REGP printout for the illustrative simulation is given in Figure VI.1.

The first section of the printout (see Figure VI.1 pages 98-104 documents the progress of the job in the computer. Control cards P3-P16 are reproduced as part of the documentation (we have underlined these in Figure VI.1). Information on the time taken by the computer to run your job and on the bulk of the computing costs are also printed out in this section. The second section of the printout contains some diagnostics on the REGP program, however, to conserve space, this section has been omitted from Figure VI.1.

The next section of the printout (headed "PHI MATRIX") contains estimates of industries' shares in total value added in each State (columns 2-7) and for the whole economy (column 8). These are the shares, $(SVA)_j$, equation 45.39 in DPSV. The final row of the matrix gives total base-period value added (in millions of Australian 1968/69 dollars) for each of the six regions and for Australia as a whole.

The fourth section of the printout contains results for experiments with all industries assigned to the national category. Figure VI.1 gives these for only the first of our illustrative experiments (pp. 101-103).

The jr^{th} element of the table labelled "CONTRIBUTION MATRIX"

shows, for r = 1-6 and j = 1-113, the percentage change in value added in region r arising from the change in output in industry j in region r (i.e., it is the j^{th} of the terms in the summation on the RHS of equation 45.37 in DPSV. The column headed "AUSTRALIA" gives the contributions of the changes in industries' outputs to the change in Gross National Product, and the final column lists the industry-output projections from ORANI for the experiment. The Gross State Product projections (calculated according to equation 45.37 in DPSV) and the Gross National Product projection for the experiment are given on page 103 in the "TOTAL" row. The "EMPLOYMENT MATRIX" on page 103 shows the percentage changes in employment by occupation and region for experiment 1 with all industries assigned to the national category. The final row gives the projected percentage changes in the States' and national real wage bills (calculated according to equation 45.38 in DPSV).

The final section of the printout contains projections for the experiments with the standard 28 local industries and the user-specified value (here 1) for the gamma parameter. Again only results for our first illustrative experiment are included in Figure VI.1. First appear the rows of the contribution matrix corresponding to the local industries.[13] The Gross State Product projections and the Gross National Product projection are again given in the final row. Finally, the relevant employment matrix is printed.[14]

```
 0455  LP  1334  MK   DIAXPH  REGONP    LPMK* PR 1P       1329 28/02/83 CAC 555555555555555555555555555555555555555555555555555555555555555

** 7000 SCOPE 2.1.5-569 MOD 16/02/83  10.10.14.** 21/02/83       83052

          *-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*

HH.MM.SS CPU SECOND ORIGIN
         10.48.45.CYI.      ED VERSION 15/10/82
10.49.07 00000.004 CYJ.    -REGONP,MS140000,ML300,P1000,T10.
10.49.07 00000.007 LOD.    -COMMON,
10.49.09 00000.057 LOD.    -GETSET,DTB3006,
10.49.09 00000.058 CYJ.       RP223 - MNTMACRO-  MOUNT  - SN=DTB3006          VSN=
10.49.09 00000.060 CYJ.       SET PARAMETERS SUBSTITUTED
10.49.09 00000.061 CYJ.       RP1034- VSN ADUN06 OF SET EMUS06  MOUNTED
10.49.09 00000.062 JOB.    -ATTACH,OMLIB,OMORAN178LIB,ID=DIAXOM,SN=DTB3006,PW=******.
10.49.09 00000.066 CYJ.       PF254 - CYCLE    3 ATTACHED FROM SN=EMUS06
10.49.09 00000.066 JOB.    -LIBRARY,OMLIB,*.
10.49.09 00000.067 CYJ.       RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
10.49.09 00000.075 JOB.    -ATTACH,OLDPL,OM78REGUPDATE,ID=DIAXOM,SN=DTB3006,PW=******,
10.49.09 00000.078 CYJ.       PF254 - CYCLE    1 ATTACHED FROM SN=EMUS06
10.49.09 00000.079 LOD.    -UPDATE(Q,L=A12,D)
10.49.09 00000.095 CYJ.       RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
10.49.12 00000.146 USR.      UPDATE COMPLETE.
10.49.12 00000.147 LOD.    -FTN,I,T,OPT,ER,
10.49.27 00001.087 USR.           ,933 CP SECONDS COMPILATION TIME
10.49.27 00001.087 LOD.    -RETURN(COMPILE)
10.49.27 00001.094 LOD.    -UPDATE(Q,L=A12,D)
10.49.29 00001.140 USR.      UPDATE COMPLETE.
10.49.29 00001.142 JOB.    -ATTACH,TAPE2,OM78STDIOTABLES,ID=DIAXOM,SN=DTB3006,PW=******,
10.49.29 00001.145 CYJ.       PF254 - CYCLE    1 ATTACHED FROM SN=EMUS06
10.49.29 00001.147 JOB.    -ATTACH,TAPE10,SUBAREGA,ID=DIAXPH,SN=COMMON,PW=******,
10.49.29 00001.150 CYJ.       PF254 - CYCLE    1 ATTACHED FROM SN=COMMON
10.49.29 00001.151 JOB.    -ATTACH,TAPE11,SUBBREGB,ID=DIAXPH,SN=COMMON,PW=******,
10.49.29 00001.155 CYJ.       PF254 - CYCLE    1 ATTACHED FROM SN=COMMON
10.49.29 00001.156 LOD.    -LGO,COMPILE.
10.49.31 00001.272 CYJ.       LD610 -      6 TABLE MOVES, FLS REQUIRED TO LOAD = 0012455 OU,COG
10.49.31 00001.273 CYJ.       LD603 - EXECUTION INITIATED OS,EXP
10.49.31 00001.273 USR.      FORTRAN LIBRARY 552          13/07/82
10.49.31 00001.275 CYJ.       RP727 - VSN ADUN21 OF SET COMMON  MOUNTED
10.49.31 00001.304 CYJ.       RP727 - VSN ADUN06 OF SET EMUS06  MOUNTED
10.49.31 00001.305 CYJ.       RP727 - VSN ADUN21 OF SET COMMON  MOUNTED
10.49.33 00001.720 USR.          END  REGP
10.49.33 00001.721 USR.        035600   FINAL EXECUTION FL.
10.49.33 00001.721 USR.         0.446 CP SECONDS EXECUTION TIME.
10.49.34 00001.726 CYJ.       RDIAXPH              5.120  KCHAR
10.49.34 00001.727 CYJ.       DFILEAS              3.500  KCHAR
10.49.34 00001.727 CYJ.       OUTPUT              63.170  KCHAR
10.49.34 00001.727 CYJ.       SC050 - 000074 SC/LC SWAPS
10.49.34 00001.727 CYJ.
10.49.34 00001.728 CYJ.       USR-TIME             0.958  SEC
10.49.34 00001.728 CYJ.       CPU-TIME             1.729  SEC              1.255  $
10.49.34 00001.728 CYJ.       SCM.TIME             0.322  MCSEC            0.466  $
10.49.34 00001.729 CYJ.       LCM.TIME             0.134  MCSEC            0.097  $
10.49.34 00001.729 CYJ.       FILE-IO              0.463  MCHAR            0.134  $
10.49.34 00001.729 CYJ.       CENT-IO              0.072  MCHAR            0.020  $
10.49.34 00001.729 CYJ.       RATE                72.616  CENTS/UNIT
10.49.34 00001.730 CYJ.       SUBTOTAL             2.715  RU               1.972  $
10.49.34 00001.730 CYJ.       FLAGFALL                                     0.133  $
10.49.34 00001.730 CYJ.       PRIORITY             1000   B
10.49.34 00001.730 CYJ.       CHARGE                                       2.10   $
```

Figure VI.1 : A Subset of the Illustrative REGP Printout

PHI MATRIX

1	.0071	0.0000	.0211	.0042	.0045	0.0000	.0060
2	.0418	.0186	.0066	.0421	.0668	0.0000	.0321
3	.0098	.0169	0.0000	.0166	.0176	.0403	.0129
4	0.0000	0.0000	.0197	.0065	.0031	0.0000	.0032
5	.0066	.0203	.0143	.0067	.0073	.0285	.0121
6	.0036	.0038	.0304	.0076	.0028	.0097	.0073
7	.0037	.0061	.0103	.0060	.0047	.0126	.0057
8	.0020	.0017	.0019	.0012	.0015	.0022	.0018
9	.0068	.0056	.0120	.0084	.0092	.0096	.0075
10	.0023	.0027	.0030	.0024	.0036	.0120	.0029
11	.0008	.0007	.0017	.0020	.0057	.0033	.0015
12	.0000	.0000	.0001	.0045	.0581	.0038	.0059
13	.0061	.0000	.0298	.0099	.0264	.0340	.0102
14	.0082	.0011	.0220	.0003	.0008	.0002	.0061
15	0.0000	.0038	.0001	.0004	.0011	0.0000	.0012
16	.0031	.0032	.0051	.0036	.0049	.0023	.0035
17	.0005	.0007	.0035	.0064	.0183	.0034	.0032
18	.0056	.0088	.0137	.0057	.0092	.0052	.0078
19	.0030	.0093	.0048	.0035	.0028	.0081	.0052
20	.0017	.0043	.0027	.0020	.0005	.0060	.0026
21	.0008	.0007	.0004	.0001	.0001	0.0000	.0006
22	.0025	.0014	.0015	.0012	.0009	.0010	.0018
23	.0051	.0052	.0049	.0050	.0047	.0049	.0050
24	.0012	.0021	.0016	.0005	.0003	.0005	.0013
25	.0027	.0027	.0208	.0017	.0016	.0049	.0047
26	.0016	.0016	.0015	.0015	.0014	.0015	.0015
27	.0033	.0034	.0032	.0032	.0030	.0032	.0033
28	.0006	.0006	.0001	.0042	.0001	.0000	.0008
29	.0022	.0029	.0015	0.0000	0.0000	0.0000	.0018
30	.0008	.0007	.0003	.0011	.0004	.0035	.0008
31	.0015	.0054	0.0000	0.0000	0.0000	.0061	.0023
32	.0025	.0032	0.0000	.0011	.0006	.0048	.0022
33	.0009	.0032	.0005	.0036	.0002	.0018	.0017
34	.0006	.0009	.0008	.0001	.0001	.0005	.0006
35	.0007	.0020	.0002	.0002	.0000	.0002	.0009
36	.0015	.0021	.0006	.0006	.0001	.0008	.0013
37	.0018	.0067	.0001	.0001	.0000	.0000	.0026
38	.0086	.0126	.0029	.0033	.0009	.0002	.0076
39	.0016	.0050	.0012	.0025	.0006	.0006	.0025
40	.0042	.0037	.0062	.0068	.0046	.0099	.0048
41	.0011	.0005	.0015	.0017	.0011	.0028	.0011
42	.0026	.0034	.0029	.0037	.0030	.0107	.0033
43	.0038	.0037	.0037	.0035	.0033	.0021	.0036
44	.0017	.0031	.0008	.0023	.0011	.0291	.0028
45	.0027	.0033	.0025	.0022	.0011	.0012	.0026
46	.0010	.0018	.0005	.0013	.0003	.0005	.0011
47	.0087	.0061	.0064	.0046	.0044	.0041	.0068
48	.0079	.0091	.0031	.0042	.0031	.0027	.0067
49	.0010	.0009	.0048	.0048	.0023	.0013	.0019
50	.0064	.0073	.0014	.0014	.0007	.0080	.0051
51	.0019	.0017	.0015	.0012	.0009	.0002	.0016
52	.0051	.0025	.0005	.0004	.0003	0.0000	.0028
53	.0024	.0012	.0005	.0004	.0003	.0001	.0014
54	.0022	.0009	0.0000	0.0000	0.0000	0.0000	.0011
55	.0025	.0027	.0013	.0010	.0008	.0002	.0021
56	.0032	.0026	.0085	.0064	.0050	.0005	.0040
57	.0025	.0026	.0011	.0016	.0014	.0003	.0021
58	.0041	.0035	.0024	.0033	.0030	.0008	.0035
59	.0012	.0008	.0029	.0019	.0023	.0020	.0015

60	.0008	.0008	.0009	.0008	.0009	.0008	.0008
61	.0024	.0027	.0043	.0030	.0035	.0024	.0028
62	.0016	.0017	.0008	.0018	.0018	.0004	.0015
63	.0299	.0081	.0047	.0211	.0140	.0183	.0181
64	.0085	.0040	.0220	.0082	.0189	.0248	.0102
65	.0059	.0053	.0055	.0080	.0093	.0051	.0062
66	.0056	.0073	.0039	.0060	.0039	.0016	.0057
67	.0089	.0112	.0072	.0060	.0042	.0020	.0084
68	.0106	.0348	.0129	.0391	.0017	.0016	.0195
69	.0042	.0024	.0037	.0064	.0036	.0012	.0037
70	.0032	.0025	.0059	.0042	.0046	.0046	.0036
71	.0027	.0039	0.0000	.0004	.0005	0.0000	.0022
72	.0008	.0019	.0002	.0005	.0002	.0000	.0009
73	.0074	.0046	.0007	.0034	.0003	.0001	.0046
74	.0054	.0041	.0020	.0097	.0007	.0003	.0045
75	.0096	.0093	.0027	.0049	.0021	.0004	.0073
76	.0007	.0036	.0032	.0029	.0032	.0009	.0023
77	.0029	.0030	.0012	.0032	.0011	0.0000	.0025
78	.0103	.0140	.0062	.0053	.0051	.0018	.0097
79	.0015	.0011	.0011	.0010	.0004	0.0000	.0011
80	.0030	.0069	.0020	.0032	.0002	.0000	.0037
81	.0044	.0081	.0016	.0026	.0013	.0001	.0045
82	.0011	.0013	.0002	.0005	.0005	.0002	.0009
83	.0015	.0012	.0009	.0016	.0006	.0008	.0013
84	.0234	.0227	.0242	.0225	.0215	.0254	.0231
85	.0023	.0023	.0021	.0022	.0019	.0020	.0022
86	.0075	.0074	.0083	.0073	.0071	.0083	.0075
87	.0195	.0196	.0188	.0191	.0177	.0187	.0192
88	.0571	.0543	.0613	.0581	.0636	.0605	.0576
89	.0803	.0798	.0810	.0801	.0794	.0799	.0801
90	.0612	.0610	.0594	.0599	.0561	.0591	.0603
91	.0119	.0118	.0115	.0117	.0116	.0122	.0118
92	.0042	.0041	.0044	.0043	.0045	.0042	.0042
93	.0315	.0279	.0186	.0285	.0307	.0315	.0286
94	.0139	.0117	.0075	.0161	.0163	.0113	.0129
95	.0111	.0091	.0080	.0131	.0147	.0166	.0109
96	.0075	.0059	.0047	.0056	.0056	.0043	.0062
97	.0195	.0197	.0199	.0191	.0172	.0195	.0194
98	.0198	.0200	.0199	.0193	.0175	.0190	.0196
99	.0126	.0125	.0121	.0122	.0113	.0120	.0123
100	.0084	.0085	.0083	.0082	.0075	.0081	.0083
101	.0208	.0218	.0200	.0205	.0191	.0199	.0208
102	.0225	.0226	.0229	.0221	.0207	.0218	.0224
103	.0600	.0605	.0576	.0588	.0547	.0578	.0592
104	.0276	.0221	.0210	.0280	.0264	.0321	.0253
105	.0226	.0166	.0114	.0104	.0090	.0036	.0166
106	.0285	.0267	.0295	.0284	.0291	.0309	.0282
107	.0238	.0260	.0268	.0274	.0246	.0305	.0254
108	.0090	.0091	.0103	.0098	.0088	.0099	.0093
109	.0114	.0114	.0115	.0115	.0105	.0123	.0113
110	.0239	.0241	.0231	.0234	.0217	.0230	.0236
111	.0059	.0059	.0057	.0058	.0053	.0057	.0058
112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113	.0000	.0000	.0000	.0000	.0000	.0000	.0000
999	10111.6824	7630.1643	3128.1323	2537.1915	2442.2858	781.675726	631.1320

TABLE 1 : ALL INDUSTRIES ASSIGNED TO THE NATIONAL CATEGORY
EXPERIMENT 1

CONTRIBUTION MATRIX

	REGION : INDUSTRY	NSW (+ACT)	VIC	QLD	SA (+NT)	WA	TAS	AUSTRALIA	NATIONAL RESULTS OUTPUTS
1	PASTORAL ZONE	.0010	0.0000	.0029	.0006	.0006	0.0000	.0008	.1366
2	WHEAT/SHEEP ZONE	.0008	.0004	.0001	.0008	.0013	0.0000	.0006	.0191
3	HIGH RAINFALL ZONE	.0014	.0024	0.0000	.0023	.0025	.0056	.0018	.1397
4	NORTHERN BEEF	0.0000	0.0000	-.0010	-.0003	-.0002	0.0000	-.0002	-.0515
5	MILK CATTLE	-.0002	-.0006	-.0005	-.0002	-.0002	-.0009	-.0004	-.0316
6	OTHER FARMING EXPORT	-.0005	-.0006	-.0045	-.0011	-.0004	-.0014	-.0011	-.1464
7	OTHER FARM IMP. COMP	.0035	.0058	.0097	.0057	.0044	.0119	.0054	.9452
8	POULTRY	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0012
9 L	SERVICES TO AGRIC	.0010	.0008	.0018	.0013	.0014	.0014	.0011	.1505
10	FORESTRY	-.0001	-.0001	-.0001	-.0001	-.0002	-.0006	-.0001	-.0466
11	FISHING	-.0001	-.0001	-.0002	-.0003	-.0008	-.0005	-.0002	-.1434
12	IRON	-.0000	-.0000	-.0000	-.0001	-.0010	-.0001	-.0001	-.0167
13	OTHER METALLIC MINS	-.0007	-.0000	-.0032	-.0011	-.0028	-.0036	-.0011	-.1072
14	COAL	-.0018	-.0002	-.0048	-.0001	-.0002	-.0000	-.0013	-.2187
15	CRUDE OIL	0.0000	.0001	.0000	.0000	.0000	0.0000	.0000	.0156
16	NON-METALLIC NEC	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0087
17	SERVICES TO MINING	-.0000	-.0000	-.0000	-.0001	-.0003	-.0000	-.0000	-.0143
18	MEAT PRODUCTS	-.0000	-.0000	-.0001	-.0000	-.0000	-.0000	-.0000	-.0040
19	MILK PRODUCTS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0035
20	FRUIT + VEG PRODUCTS	-.0001	-.0002	-.0001	-.0001	-.0000	-.0002	-.0001	-.0407
21	MARGE,OILS + FATS	-.0001	-.0001	-.0000	-.0000	-.0000	0.0000	-.0001	-.0999
22	FLOUR + CEREAL PRODS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0085
23 L	BREAD,CAKES	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0008
24	CONFECTIONERY	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0127
25	FOOD PRODUCTS NEC	-.0007	-.0007	-.0056	-.0005	-.0004	-.0013	-.0013	-.2698
26 L	SOFT DRINKS,CORDIALS	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0029
27 L	BEER + MALT	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0030
28	ALCOHOLIC DRINKS NEC	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0110
29	TOBACCO	-.0002	-.0002	-.0001	0.0000	0.0000	0.0000	-.0001	-.0782
30	PREPARED FIBRES	.0096	.0088	.0035	.0136	.0054	.0447	.0097	12.7131
31	MAN-MADE FIBRES,YARN	-.0001	-.0003	0.0000	0.0000	0.0000	-.0004	-.0001	-.0602
32	COTTON,SILK,FLAX	-.0007	-.0009	0.0000	-.0003	-.0002	-.0013	-.0006	-.2673
33	WOOL + WORSTED YARNS	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0061
34	TEXTILE FINISHING	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0260
35	TEXTILE FLOOR COVERS	-.0001	-.0002	-.0000	-.0000	-.0000	-.0000	-.0001	-.1062
36	TEXTILE PRODUCTS NEC	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0192
37	KNITTING MILLS	-.0000	-.0002	-.0000	-.0000	-.0000	-.0000	-.0001	-.0281
38	CLOTHING	-.0002	-.0003	-.0001	-.0001	-.0000	-.0000	-.0002	-.0238
39	FOOTWEAR	-.0001	-.0002	-.0001	-.0001	-.0000	-.0000	-.0001	-.0487
40	SAWMILL PRODUCTS	-.0001	-.0001	-.0002	-.0002	-.0001	-.0003	-.0001	-.0284
41	PLYWOOD,VENEERS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0000	-.0281
42	JOINERY + WOOD PRODS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0000	-.0102
43	FURNITURE,MATTRESSES	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0083
44	PULP,PAPER	-.0000	-.0001	-.0000	-.0001	-.0000	-.0007	-.0001	-.0257
45	FIBREBOARD	.0001	.0001	.0001	.0001	.0000	.0000	.0001	.0289
46	PAPER PRODUCTS NEC	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0044
47	NEWSPAPERS + BOOKS	-.0001	-.0001	-.0001	-.0000	-.0000	-.0000	-.0001	-.0096
48	COMMERCIAL PRINTING	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0043
49	CHEMICAL FERTILISERS	.0001	.0001	.0004	.0004	.0002	.0001	.0002	.0935
50	INDUSTRIAL CHEMICALS	-.0004	-.0004	-.0001	-.0001	-.0000	-.0005	-.0003	-.0563

TABLE 1 (CONTINUED)

51		PAINTS,VARNISHES	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0107
52		PHARMACEUTICALS	-.0001	-.0000	-.0000	-.0000	-.0000	0.0000	-.0001	-.0199
53		SOAP + DETERGENTS	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0080
54		COSMETICS,TOILETRY	-.0000	-.0000	0.0000	0.0000	0.0000	0.0000	-.0000	-.0047
55		CHEMICAL PRODS NEC	-.0001	-.0001	-.0001	-.0000	-.0000	-.0000	-.0001	-.0475
56		OIL + COAL PRODUCTS	.0000	.0000	.0001	.0001	.0001	.0000	.0001	.0156
57		GLASS	-.0001	-.0001	-.0000	-.0001	-.0000	-.0000	-.0001	-.0336
58		CLAY PRODUCTS	-.0001	-.0001	-.0000	-.0001	-.0001	-.0000	-.0001	-.0184
59		CEMENT	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0028
60	L	READY-MIXED CONCRETE	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0221
61		CONCRETE PRODUCTS	.0000	.0000	.0001	.0000	.0001	.0000	.0000	.0155
62		NON-METAL MIN PRODS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0089
63		BASIC IRON + STEEL	-.0043	-.0012	-.0007	-.0030	-.0020	-.0026	-.0026	-.1431
64		OTHER BASIC METALS	-.0012	-.0005	-.0030	-.0011	-.0026	-.0034	-.0014	-.1371
65		STRUCTURAL METAL	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0012
66		SHEET METAL PRODS	-.0002	-.0002	-.0001	-.0002	-.0001	-.0000	-.0002	-.0267
67		METAL PRODUCTS NEC	-.0003	-.0004	-.0003	-.0002	-.0002	-.0001	-.0003	-.0357
68		MOTOR VEHICLES,PARTS	-.0005	-.0018	-.0007	-.0020	-.0001	-.0001	-.0010	-.0512
69		SHIP + BOAT BUILDING	-.0005	-.0003	-.0004	-.0008	-.0004	-.0001	-.0004	-.1186
70		LOCOMOTIVES	-.0003	-.0003	-.0006	-.0004	-.0005	-.0005	-.0004	-.1016
71		AIRCRAFT BUILDING	-.0000	-.0000	0.0000	-.0000	-.0000	0.0000	-.0000	-.0110
72		SCIENTIFIC EQUIPT	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0232
73		ELECTRONIC EQUIPT	-.0004	-.0003	-.0000	-.0002	-.0000	-.0000	-.0003	-.0600
74		HOUSEHOLD APPLIANCES	-.0001	-.0001	-.0000	-.0001	-.0000	-.0000	-.0001	-.0132
75		ELECTRICAL MACHINERY	-.0003	-.0003	-.0001	-.0002	-.0001	-.0000	-.0002	-.0325
76		AGRICULTURAL MACH.	.0002	.0009	.0008	.0007	.0008	.0002	.0006	.2470
77		CONSTRUCTION EQUIPT	-.0003	-.0004	-.0001	-.0004	-.0001	0.0000	-.0003	-.1166
78		OTHER MACHINERY	-.0006	-.0008	-.0003	-.0003	-.0003	-.0001	-.0005	-.0560
79		LEATHER PRODUCTS	-.0001	-.0000	-.0000	-.0000	-.0000	0.0000	-.0000	-.0352
80		RUBBER PRODUCTS	-.0001	-.0002	-.0000	-.0001	-.0000	-.0000	-.0001	-.0220
81		PLASTIC PRODUCTS	-.0001	-.0003	-.0000	-.0001	-.0000	-.0000	-.0001	-.0314
82		SIGNS,WRITING EQUIPT	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0248
83		OTHER MANUFACTURING	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0158
84	L	ELECTRICITY	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0017
85	L	GAS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0011
86	L	WATER,SEWERAGE	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0045
87	L	RESIDENTIAL BUILDING	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
88	L	BUILDING NEC	.0018	.0017	.0019	.0018	.0020	.0019	.0018	.0312
89	L	WHOLESALE TRADE	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0185
90	L	RETAIL TRADE	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0007
91	L	MOTOR VEHICLE REPAIR	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0104
92	L	OTHER REPAIRS	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0151
93		ROAD TRANSPORT	.0003	.0003	.0002	.0003	.0003	.0003	.0003	.0093
94		RAILWAY TRANSPORT	-.0003	-.0003	-.0002	-.0004	-.0004	-.0003	-.0003	-.0241
95		WATER TRANSPORT	-.0002	-.0002	-.0001	-.0002	-.0003	-.0003	-.0002	-.0186
96		AIR TRANSPORT	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0115
97	L	COMMUNICATION	-.0002	-.0002	-.0002	-.0002	-.0001	-.0002	-.0002	-.0079
98	L	BANKING	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0054
99	L	FINANCE + LIFE INS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0004
100	L	OTHER INSURANCE	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0018

TABLE 1 (CONCLUDED)

101	L	INVESTMENT,REAL EST	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0026
102	L	OTHER BUSINESS SERV	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0081
103	L	OWNERSHIP OF DWELLG	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
104		PUBLIC ADMIN	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003
105		DEFENCE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
106	L	HEALTH	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0005
107	L	EDUCATION,LIBRARIES	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0003
108	L	WELFARE SERVICES	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0008
109	L	ENTERTAINMENT	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0036
110	L	RESTAURANTS,HOTELS	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0004
111	L	PERSONAL SERVICES	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003
112	L	BUSINESS EXPENSES	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.0067
113		DOMESTIC NCI(DUMMY)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		TOTAL	.0050	.0096	-.0045	.0146	.0065	.0485	.0075	

EMPLOYMENT MATRIX (OCCUPATION X REGION)

	OCCUPATION \ REGION :	NSW (+ACT)	VIC	QLD	SA (+NT)	WA	TAS	AUSTRALIA
1	PROFESSIONAL	-.0071	-.0018	-.0174	-.0019	-.0111	.0000	-.0065
2	WHITE COLLAR SKILLED	.0000	.0035	.0116	.0099	.0003	.0410	.0019
3	WHITE COLLAR OTHER	.0015	.0036	-.0046	.0079	.0020	.0293	.0029
4	BLUE- METAL AND ELEC	-.0352	-.0173	-.0480	-.0226	-.0246	.0048	-.0282
5	BLUE- BUILDING	.0061	.0095	.0041	.0070	.0102	.0137	.0076
6	BLUE- OTHER SKILLED	.0178	.0029	.0088	.0533	.0214	.1724	.0181
7	BLUE COLLAR OTHER	.0005	.0084	-.0406	.0252	-.0046	.1175	.0036
8	RURAL	.2057	.2512	.1568	.2135	.1772	.3243	.2116
9	ARMED SERVICES	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
	REAL WAGE BILL	.0074	.0147	-.0064	.0225	.0115	.0761	.0117

TABLE 2 : 28 INDUSTRIES IN THE LOCAL CATEGORY. GAMMA = 1.000
EXPERIMENT 1

CONTRIBUTION MATRIX

	REGION :	NSW (+ACT)	VIC	QLD	SA (+NT)	WA	TAS	AUSTRALIA
9	L SERVICES TO AGRIC	.0009	.0012	.0014	.0012	.0012	.0024	.0011
23	L BREAD,CAKES	-.0000	.0000	-.0000	.0000	-.0000	.0001	.0000
26	L SOFT DRINKS,CORDIALS	-.0000	.0000	-.0000	.0000	-.0000	.0001	.0000
27	L BEER + MALT	-.0000	.0000	-.0001	.0000	-.0000	.0003	-.0000
60	L READY-MIXED CONCRETE	.0000	.0000	-.0000	.0000	-.0000	.0002	.0000
84	L ELECTRICITY	-.0003	.0003	-.0012	.0006	-.0004	.0034	-.0000
85	L GAS	-.0000	.0000	-.0001	.0000	-.0000	.0003	-.0000
86	L WATER,SEWERAGE	-.0001	.0001	-.0004	.0003	-.0001	.0015	.0000
87	L RESIDENTIAL BUILDING	-.0003	.0004	-.0016	.0009	-.0005	.0055	0.0000
88	L BUILDING NEC	.0012	.0032	-.0015	.0033	-.0011	.0126	.0018
89	L WHOLESALE TRADE	.0007	.0031	-.0047	.0045	-.0033	.0251	.0015
90	L RETAIL TRADE	-.0003	.0006	-.0020	.0011	-.0006	.0069	.0000
91	L MOTOR VEHICLE REPAIR	.0000	.0003	-.0004	.0004	-.0001	.0019	.0001
92	L OTHER REPARS	.0000	.0001	-.0001	.0002	-.0000	.0007	.0001
97	L COMMUNICATION	-.0003	.0001	-.0009	.0004	-.0004	.0024	-.0002
98	L BANKING	.0000	.0002	-.0006	.0005	-.0002	.0027	.0001
99	L FINANCE + LIFE INS	-.0001	.0001	-.0005	.0003	-.0002	.0018	-.0000
100	L OTHER INSURANCE	-.0000	.0001	-.0003	.0002	-.0001	.0012	.0000
101	L INVESTMENT,REAL EST	-.0001	.0002	-.0008	.0005	-.0003	.0030	.0001
102	L OTHER BUSINESS SERV	.0000	.0004	-.0008	.0007	-.0003	.0035	.0002
103	L OWNERSHIP OF DWELLG	-.0010	.0012	-.0048	.0026	-.0016	.0170	0.0000
106	L HEALTH	-.0002	.0002	-.0009	.0005	-.0003	.0032	-.0000
107	L EDUCATION,LIBRARIES	-.0001	.0000	-.0002	.0001	-.0001	.0008	-.0000
108	L WELFARE SERVICES	-.0000	.0001	-.0002	.0001	-.0001	.0007	.0000
109	L ENTERTAINMENT	-.0000	.0001	-.0004	.0003	-.0001	.0016	.0000
110	L RESTAURANTS,HOTELS	-.0002	.0002	-.0009	.0005	-.0003	.0032	-.0000
111	L PERSONAL SERVICES	-.0001	.0001	-.0003	.0002	-.0001	.0010	.0000
112	L BUSINESS EXPENSES	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	TOTAL(OVER 109 INDUSTRIES)	-.0001	.0175	-.0326	.0290	-.0078	.1464	.0075

EMPLOYMENT MATRIX (OCCUPATION X REGION)

	OCCUPATION / REGION :	NSW (+ACT)	VIC	QLD	SA (+NT)	WA	TAS	AUSTRALIA
1	PROFESSIONAL	-.0108	.0037	-.0373	.0083	-.0198	.0623	-.0065
2	WHITE COLLAR SKILLED	-.0046	.0110	-.0403	.0241	-.0156	.1403	.0019
3	WHITE COLLAR OTHER	-.0035	.0115	-.0380	.0243	-.0158	.1452	.0029
4	BLUE- METAL AND ELEC	-.0395	-.0102	-.0726	-.0110	-.0401	.1018	-.0282
5	BLUE- BUILDING	-.0026	.0276	-.0440	.0298	-.0227	.1613	.0076
6	BLUE- OTHER SKILLED	.0153	.0057	-.0064	.0620	.0140	.2321	.0181
7	BLUE COLLAR OTHER	-.0028	.0142	-.0612	.0352	-.0182	.1853	.0036
8	RURAL	.2022	.2594	.1484	.2143	.1724	.3470	.2116
9	ARMED SERVICES	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
	REAL WAGE BILL	.0032	.0218	-.0314	.0347	-.0032	.1622	.0117

VII. Concluding Remarks

This manual can be used to obtain regional results for most ORANI simulations. At present there are a number of limitations on the flexibility of the ORANI regional programs (e.g. restrictions (1) - (v) listed on p.2). Eventually the code will be modified to obviate the need for such restrictions. An updated version of this manual will then be issued.

Notes

1. All the necessary documentation is in Dixon Peter B., B.R. Parmenter, J. Sutton and D.P. Vincent (1982), ORANI: A Multisectoral Model of the Australian Economy, North-Holland Publishing Company - hereafter DPSV.

2. For a discussion of the γ parameter and its effects see DPSV section 39.2 part (b) and DPSV Table 45.7.

3. It is possible to make user-specified changes to the data base. However, in this paper we do not show how to make such changes.

4. Local commodities are defined as non-traded (see DPSV, section 38). However, the ORANI input-output data do show very small amounts of international trade for some of the commodities which are classified as local in the ORANI regional package, hence the need for the restriction on the substitution elasticities.

5. In the standard database, the substitution elasticity for all of the local commodities is the default value (2.0).

6. The linear properties of Johansen solutions to ORANI carry over into the regional results. Hence the results of shocks to different exogenous vectors can be combined by simple addition in a separate post solution computation.

7. The punching formats required in the regional computing decks are described in the appendix. See Appendix, subsection A.3.

8. Note that regional results can only be obtained for ORANI simulations where the shift terms for domestic "other" usage are uniform (i.e., $f_{(i1)} = f_{(.1)}$).

9. See Appendix, subsection A.1.

10. See Appendix, subsection A.2.

11. See Appendix, subsection A.4.

12. Note that the third data column contains industry rather than commodity data. The industry-activity levels in column 4 have been displaced such that the activity level for industry 1 appears in column 3, and from column 10 onwards (i.e., after the joint production sector industries) the industry activity levels match their corresponding commodity output levels.

13. The rows corresponding to the national industries will be identical to the rows in the matrix for the experiment in which all industries are assumed national.

14. For a description of the computational technique used to obtain these employment projections see Dixon, Peter B., B.R. Parmenter and John Sutton (1978), "Spatial Disaggregation of ORANI Results: A Regional Balance Method", IMPACT Preliminary Working Paper No. OP-19.

APPENDIX: FORMATS USED IN THE REGIONAL INPUT CARD DECKS

To help regional ORANI users who are not familiar with FORTRAN format statements, we include in this appendix details of how to punch input cards in all of the formats used in the regional input card decks.

A.1 Formats 10F8.0 ; 10F8.3 and 10F5.2

For format 10F8.0 punch 10 decimal numbers each in a field of 8 columns. The decimal point must be included and each number can be punched anywhere in its field.

For format 10F8.3 punch 10 decimal numbers each in a field of 8 columns. If the decimal point is included each number can be punched anywhere in its field. Otherwise omit the decimal point, end the number in the last column of its field and it will be read by the computer as having the last 3 digits to the right of the (omitted) decimal point.

Format 10F5.2 is similar to the above formats except now punch 10 decimal numbers each in a field of 5 columns. Again if the decimal point is included each number can be punched anywhere in its field. If you decide to omit the decimal point, end the number in the last column of its field and it will be read as having the last 2 digits to the right of the (omitted) decimal point.

A.2 Formats I5; 2I5; 4I5; 5I5; 7I5; 8I5; 9I5 and 16I5

For format, say, xI5 punch x integers (of maximum length 5 digits each) in fields of 5 columns, with each integer ending in the last column of its field.

A.3 Format 2I5, F10.3, 2I5, 3F10.3

Punch 2 integers (maximum 5 digits each) in columns 1 - 5 and 6 - 10 (each integer ending in the last column of its 5 column field); punch a decimal number in columns 11-20 (if the decimal point is included punch the number anywhere in columns 11-20, otherwise the computer will read any digits in columns 18-20 as being to the right of the (omitted) decimal point); punch 2 integers (maximum 5 digits each) in columns 21-25 and 26-30 (each integer ending in the last column of its 5 column field); finally punch 3 decimal numbers in columns 31-40, 41-50 and 51-60 (if the decimal point is included punch the number anywhere in its field, otherwise the last 3 digits in the field will be read as being to the right of the (omitted) decimal point).

A.4 Format 2X,F10.3

Leave the first two columns blank, then punch a decimal number in columns 3-12 (if the decimal point is included punch the number anywhere in columns 3-12, otherwise the computer will read any digits in columns 10-12 as being to the right of the (omitted) decimal point).