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Session Title: New Developments in the Compilation of Supply and Use Tables and Input-Output Tables

Session Organizer(s): Liv Hobbelstad Simpson, Statistics Norway, Oslo, Norway

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*Paper Prepared for the 29th General Conference of
The International Association for Research in Income and Wealth*

Joensuu, Finland, August 20 – 26, 2006

THE OECD'S INPUT-OUTPUT DATABASE: 2006 EDITION

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Abstract: The OECD's input-output database was started over a decade ago and is currently undergoing its second update. The database has been used in a number of analytical applications both within and outside the OECD. Two major applications within the OECD were in the analyses of the diffusion of embodied technology and, more recently, the measurement of carbon dioxide emissions embodied in the international trade of goods. The latest update is being conducted as part of a project looking at global value chains. This paper describes how the database has developed over the last decade, both from a collection and a compilation perspective, and, in particular, describes some of the thinking behind the various assumptions used during compilation and the various pre-requisite data needed to compile the tables. The paper also describes the rationale for producing these harmonised tables on an industry-by-industry basis rather than product-by-product; which partly reflects the importance of linking the tables to many other OECD databases. The purpose of the paper is therefore twofold. The first is to describe the database and its uses. The second is to describe the OECD's experience in the compilation of these tables in the hope that this may benefit input-output compilers in national statistical offices and provide them with a better understanding of the information needed and used by the OECD in compiling these tables.

The views and opinions expressed in this paper are of the authors and not necessarily those of the OECD or its Members.

THE OECD'S INPUT-OUTPUT DATABASE: 2006 EDITION

1. Introduction and History

1. The first edition of the OECD Input Output database dates back to 1995. This edition covered 10 OECD countries spanning the period 1968 to 1990. The first update to this database began in 2000 culminating in the 2002 edition¹ of the database, which increased the country coverage to 18 OECD and 2 large non-OECD countries, spanning the period 1992 to 1997. Work on the second update to the database began in 2005, and the 2006 edition, scheduled for release this August, will cover 28 OECD and 9 large non-OECD countries, extending the period of coverage to 2000 in most countries and indeed more recent years for many others (e.g. 2003 for Mexico).

2. This paper is organised as follows: Section 2 describes the purpose of the OECD IO database; Section 3 describes the data sources; Section 4 describes the coverage of the database itself; Section 5 describes the preferred price basis used by the OECD; Section 6 describes the format of the tables; Section 7 describes, in detail, the transformation processes used by the OECD to arrive at harmonised tables; and finally Section 8 provides an explanation for the industry-by-industry presentation preferred by the OECD.

2. Purpose

3. Input-output tables describe the sales and purchases relationships between producers and consumers within an economy. They can be produced by illustrating flows between the sales and purchases, final and intermediate, of *industry outputs* or by illustrating the sales and purchases, final and intermediate, of *product outputs*. The OECD input-output database is presented on the former basis, reflecting in part the collection mechanisms for many other databases such as research and development data, employment statistics, pollution data, energy consumption, which are in the main collected by establishment, and, so, industry (see also Section 4 for a description of the industries used in the database). They lend themselves to a number of uses. In the main, they can be categorised under two headings: analytical or statistical. Examples of the former include analyses that identify the importance of any industrial sector or product to economic output or growth, not just as a share of gross value-added, say, but as a contributor of activity or growth in other sectors e.g.: via embodied analyses methods. Increasingly, they are also being used in environmental analysis; for example, to measure direct and indirect pollutants produced by industrial sectors within an economy and, importantly contribute to 'footprint' or 'embodied' type analyses; indeed this is the most recent application of the database within the OECD² and by many other institutions³.

4. As a statistical analysis tool, input-output, and the closely related supply-use, tables are increasingly becoming the vehicles used to balance the income, expenditure and production estimates of GDP and as the basis for other statistical measures, such as productivity estimates, in particular multi-factor productivity estimates (e.g. the EU KLEMS project⁴). In terms of international comparability they are also used as a diagnostic statistical tool, for example some National Statistics' Institutes use the OECD harmonised tables in a diagnostic way to assist the construction of their own input-output tables. Indeed, the 2002 edition of the tables provided input into the work of the OECD Task Force on Software

¹ See <http://www.oecd.org/std/io-tables/data> to receive the previous set of OECD Input-Output tables for *free*, and Ahmad 2002.

² See Ahmad and Wyckoff, 2003.

³ See for example <http://www.mosus.net/project-index.html>.

⁴ See <http://www.euklems.net/>.

Measurement, by comparing the widely different relationships between intermediate consumption and investment on software across countries.

5. The maintenance and updating of the OECD's Input Output database is necessarily financed via voluntary contributions. In practice this means that the database update always has a designated user-application since it is, by design, demand driven. The first edition, for example, was motivated by the desire to measure the diffusion of technology embodied in products (Papaconstantinou *et al.*, 1996; Sakurai *et al.*, 1996); the second edition by the need to measure the importance of CO₂ emissions embodied in the goods (Ahmad and Wyckoff, 2003); and the current edition has been motivated by a recently started project on Global Value Chains⁵ and to update the 2003 work on embodied CO₂ emissions.

6. However the usefulness of the database extends far beyond these specific applications. By making them freely available, on request, via the internet the OECD Input-Output tables have served as important inputs into a wide range of economic analyses, including work on productivity, technology diffusion, global warming, structural change and several other issues.⁶

7. Between December 2004 and May 2006, the OECD received over 550 requests from 50 different countries for the 2002 Edition of the database (Exact records were not kept before this period but the number of users also extended into the hundreds). Of these 550 users, just over half are affiliated to academic institutions and the remainder to private and government institutions. 55% of the users are from OECD European countries, 21% from NAFTA countries, 9% from other OECD countries and 14% from non OECD member countries.

8. In an effort to ensure that the database retains its relevance and meets user's needs as much as possible, users were recently asked if they could provide information on those areas where they would welcome improvements. Not surprisingly, wider country coverage, a more detailed industry sector breakdown and more recent tables scored highly, and, as will be shown in following sections it is precisely in these three areas where the 2006 Edition of the tables has seen considerable improvements but many other improvements have also been incorporated, for example improved international harmonisation of the price bases.

3. Data Sources

9. The process of compiling the database begins with requests to National Statistical Institutes (NSIs) to provide data in accordance with a harmonised industry structure based on the International Standard of Industrial Classifications (ISIC) (see Section 4); ISIC Revision 3 providing the basis for the 2006 Edition (as was the case for the 2002 Edition, the 1995 Edition being compiled on the basis of ISIC Revision 2). However in order to minimise compliance costs, and to maximise co-operation, the requests stipulate that this pro-forma is not a pre-requisite, and that data (input-output or/and supply-use tables) at the most detailed and practicable level are welcomed in any (detailed) format. As shown in the table below most countries have chosen to deliver data using their own industrial classification systems and standard presentation in response to the latest request. The request for supply-use tables, as well as input-output tables, is partly in recognition of the increasing importance of supply-use tables to NSIs within the National Accounts framework, and as a consequence availability. However it mainly reflects the fact that a number of countries do not produce input-output tables but do produce supply-use tables; which can be easily converted into input-output tables using some standard assumptions, see Box 1. Table 1 below summarises the information received for each country's latest table in the OECD database.

⁵ See Pilat, Dirk, 2006.

⁶ See Wixted, Yamano and Webb, 2006, for a discussion on various analytical uses of Input-Output tables.

Table 1. Data sources for the OECD I-O Industry-by-Industry database

Country	Source	Year	Tables				
			Supply	Use Total	Use Import	IO Total	IO Import
Australia	Australian Bureau of Statistics	1998/99				✓	✓
Austria	Eurostat	2000	✓	✓ PU		✓ c	✓ c
Belgium	National Bank of Belgium	2000	✓	✓		✓ c	✓ c
Canada	Statistics Canada	2000				✓	✓
Czech Republic	Czech Statistical Office	2000	✓	✓	✓		
Denmark	Danmarks Statistik	2000				✓	✓
Finland	Eurostat	2000				✓	✓
France	National Institute of Statistics and Economic Studies	2000	✓	✓ PU		✓ c	
Germany	Eurostat	2000	✓	✓ PU		✓ c	✓ c
Greece	Eurostat	2000	✓	✓ PU			
Hungary	Eurostat	2000	✓	✓ PU		✓ c	✓ c
Ireland	Eurostat	1998	✓	✓ PU		✓ c	✓ c
Italy(i)	Eurostat;	2000	✓	✓ PU		✓ c	✓ c
Japan (i)	Ministry of Economy, Trade and Industry;	2000	✓			✓ c	✓ c
Korea	Bank of Korea	2000				✓ c	✓ c
Mexico	National Institute of Statistics, Geography and Informatics	2003				✓	✓
Netherlands	Statistics Netherlands	2000				✓	✓
New Zealand	Statistics New Zealand	1995/96				✓	✓
Norway	Eurostat	2001				✓	✓
Poland	Eurostat	2000	✓ (99)	✓		✓ c	✓ c
Portugal	Eurostat	1999	✓	✓ PU		✓ c	✓ c
Slovak Republic	Eurostat	2000	✓	✓ PP		✓ c	
Spain	Eurostat	2000	✓	✓	✓		
Sweden	Eurostat	2000	✓	✓ PU		✓ c	✓ c
Switzerland	Federal Institute of Technology	2001	✓	✓		✓ c	
Turkey	Turkish Statistical Institute	1998	✓	✓		✓ c	✓ c
United Kingdom	The Office for National Statistics	2000	✓	✓ PU			
United States(i)	Bureau of Labor Statistics	2000	✓	✓ PR			
Argentina	National Institute of Statistics and Censuses	1997				✓	✓
Brazil	Brazilian Institute of Geography and Statistics	2000				✓	✓
China	National Bureau of Statistics	2000				✓ c, PR	✓ c, PR
Chinese Taipei	Directorate General of Budget, Accounting and Statistics	2001				✓	✓
India	Ministry of Statistics and Programme Implementation	1998/99	✓	✓	✓		
Indonesia	Badan Pusat Statistik	2000				✓ c	✓ c
Israel	Central Bureau of Statistics	1995	✓	✓	✓		
Russia	Federal State Statistics Service	2000	✓	✓			
Singapore	Statistics Singapore	2000				✓	✓

c: Commodity-by-commodity tables; PU: Purchasers' Prices; PR: Producers' Prices; (i) For these countries a breakdown of value-added into its separate components, such as labour, operating surplus etc, was not available and so the breakdowns follow the proportions provided in the OECD's Structural Analysis database. Use and IO tables are not shown in the table above but it follows that if a 'total' and 'import' table exists then so too does the domestic table.

10. This, of course, is only the first part of the process. Each of these submissions, and those received in earlier years, needs to be converted onto a harmonised basis – harmonised in the sense that they are: industry-by-industry; on the same price basis (basic prices); align to the industry classifications used in the OECD system; and align in their treatment of concepts. This process of conversion is explained in more detail in the following sections, including other adjustments needed to overcome differences in some concepts, most notably the treatment of Financial Intermediation Services Indirectly Measured (FISIM) and differences in the treatment of other items such as non-residents expenditure and residents expenditure abroad.

4. The Database:

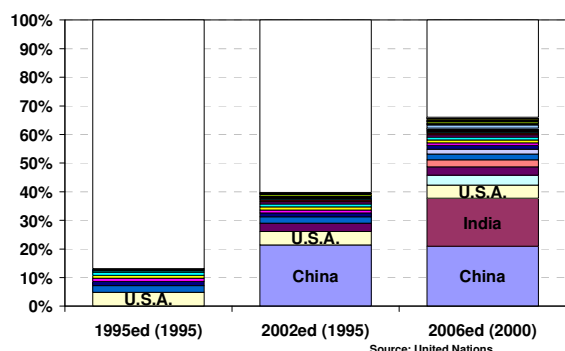
4.1 Coverage - Country and Time

11. The 2002 Edition of the OECD Input-Output database saw the coverage of countries increase from 10 (OECD) to 20 (18 OECD and 2 non-OECD) countries compared to the 1995 edition. The 2006 Edition has continued this expansion and includes 37 countries (28 OECD and 9 non OECD) further strengthening the ability of the database to allow the analysis of global issues. The effects of globalisation and increased foreign outsourcing of manufacturing goods and services for example cannot be fully analysed if some of the larger OECD countries such as Mexico and emerging non-member economies such as India, Indonesia and Russia are not included within the dataset for example; all of which have been included for the first time in the database, along with Austria, Belgium, Ireland, Portugal, Sweden, Switzerland, Argentina, Chinese Taipei and Singapore, which are also new to the dataset.

12. Table 2 below summarises the data covered by the database, showing the years and countries for which data are available. (The table also shows, for convenience, GDP estimates for each country in 2000 in US\$ together with each country's global GDP ranking and population in 2000).

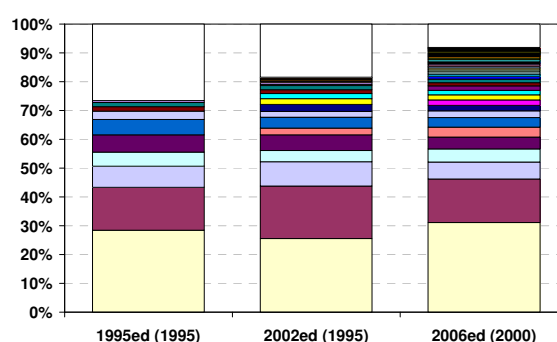
13. An interesting way of illustrating how the coverage of the database has increased over time is to consider the share of global population and global GDP covered by the countries within the database over the various editions of the database. This shows that coverage in terms of populations rose from just over 10% in the 1995 Edition to 40% in the 2002 Edition and 66% in the 2006 Edition. The coverage in terms of nominal US\$ based GDP has also increased from just over 70% (1995 Edition) to 80% (2002 Edition), and over 90% in the 2006 Edition; which in turn reflects 95% of total OECD GDP (see Figures 3 and 4).

Figure 3: OECD IO database share of global population by Edition



1995 Edition: Australia, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, United Kingdom and United States. **2002 Edition added:** Czech Republic, Finland, Greece, Hungary, Korea, Norway, Poland, Spain, Brazil and China.

Figure 4: OECD IO database share of global GDP by Edition



2006 Edition, added: Ireland, Mexico, New Zealand, Portugal, Slovak Republic, Sweden, Switzerland, Turkey, Argentina, Chinese Taipei, Indonesia, Israel, Russia and Singapore.

Table 2: OECD Input-Output Database: - Country and Period Coverage

Country	ISIC Rev 2					ISIC Rev 3		2000		
	1970	1975	1980	1985	1990	1995	2000	GDP US\$ bn	Global Ranking	Population Millions
Australia	68	74	-	86	89	94/95	98/99	389	<14>	19.2
Austria	-	-	-	-	-	✓	✓	190	<24>	8.1
Belgium	-	-	-	-	-	✓	✓	228	<22>	10.3
Canada	71	76	81	86	✓	97	✓	714	<8>	30.8
Czech Republic	-	-	-	-	-	✓	✓	56	<46>	10.3
Denmark	72	77	✓	✓	✓	✓,97	✓	158	<30>	5.3
Finland	-	-	-	-	-	✓	✓	120	<33>	5.2
France	72	77	✓	✓	✓	✓	✓	1,308	<5>	59.3
Germany	-	78	-	86,88	✓	✓	✓	1,870	<3>	82.3
Greece	-	-	-	-	-	94,✓	99	113	<36>	11.0
Hungary	-	-	-	-	-	98	✓	47	<51>	10.0
Iceland	-	-	-	-	-	-	-	8		0.3
Ireland	-	-	-	-	-	-	98	95	<39>	3.8
Italy	-	-	-	✓	-	92,✓	✓	1,075	<7>	57.5
Japan	✓	✓	✓	✓	✓	95c-97	✓	4,746	<2>	127.0
Korea	-	-	-	-	-	✓	✓c	512	<12>	46.8
Luxembourg	-	-	-	-	-	-	-	20		0.4
Mexico	-	-	-	-	-	-	03	581	<10>	98.9
Netherlands	72	77	81	86	-	95-98	✓	371	<15>	15.9
New Zealand	-	-	-	-	-	95/96	-	52	<49>	3.8
Norway	-	-	-	-	-	97	01	167	<26>	4.5
Poland	-	-	-	-	-	✓	✓	166	<27>	38.6
Portugal	-	-	-	-	-	✓	99	106	<37>	10.2
Slovak Republic	-	-	-	-	-	✓	✓	20	<58>	5.4
Spain	-	-	-	-	-	✓	✓	562	<11>	40.8
Sweden	-	-	-	-	-	✓	✓	240	<21>	8.9
Switzerland	-	-	-	-	-	-	01	246	<20>	7.2
Turkey	-	-	-	-	-	96	98	198	<23>	68.2
United Kingdom	68	79	-	84	✓	✓,98	✓	1,439	<4>	58.7
United States	72	77	82	✓	✓	✓,97	✓	9,765	<1>	285.0
Argentina	-	-	-	-	-	97	-	284	<18>	36.9
Brazil	-	-	-	-	-	✓,96	✓	602	<9>	171.8
China	-	-	-	-	-	97	✓c	1,081	<6>	1,275.2
Chinese Taipei	-	-	-	-	-	-	01c	309	<17>	22.2
India	-	-	-	-	-	93/94	98/99	457	<13>	1,016.9
Indonesia	-	-	-	-	-	✓c	✓c	165	<29>	209.2
Israel	-	-	-	-	-	✓	-	115	<35>	6.1
Russia	-	-	-	-	-	✓	✓	260	<19>	145.6
Singapore	-	-	-	-	-	✓	✓	93	<40>	4.0
Total	8	9	6	10	8	33	33			

"-": not available. Items in bold reflect tables compiled at the expanded industrial sector coverage (48) used in the 2006 Edition, which includes updates to some country's 2002 Edition tables. All other entries in the 1995 column were compiled at the 42 sector level used in the 2002 Edition. ISIC Rev 2 tables were compiled at the 35 industry level. "c" indicates a commodity-by-commodity table.

4.2 Coverage – Industries

14. The industry classification of the database (2006 and 2002 Editions) is based on the ISIC Revision 3 system, meaning that it is comparable with the OECD's STAN (Structural Analysis) database,⁷ Bilateral Trade database (BTD), IEA's energy consumption data, and other OECD industry-level databases⁸. The 1995 Edition was based on the earlier ISIC Revision 2 system, which is broadly comparable to ISIC Revision 3 at the industry level presented.

15. The number of industries in the 2006 Edition has been expanded to 48, 6 more than in the 2002 Edition and 13 more than the 1995 Edition, a full listing of the 48 industries is provided in the table below.

16. Comparing the 2006 and 2002 Editions, more detailed industry information is available in the following areas:

- (a) *Mining and quarrying (ISIC 10-14)* has been split into two sectors: Energy Mining (ISIC 10+11+12) and Non-energy Mining (ISIC 13+14)
- (b) *Electricity, gas and water supply (ISIC 40+41)* has been split into 4 sectors: Production, collection and distribution of electricity (ISIC 401); Manufacture of gas, distribution of gaseous fuels through mains (ISIC 402); Steam and hot water supply (ISIC 403); and Collection, purification and distribution of water (ISIC 41)
- (c) *Transport and storage (ISIC 60-63)* has been split into 4 sectors: Land transport; transport via pipelines (ISIC 60); Water transport (ISIC 61); Air transport (ISIC 62); and Supporting and auxiliary transport activities, activities of travel agencies (ISIC 63).

17. Unfortunately, information on all 48 industrial sectors could not be obtained for every country, reflecting a number of factors that vary by country, for example: disclosure restrictions and a lack of detailed statistical sources, but in the main this reflects the loss of industry detail that often occurs when moving from a national classification system to ISIC Revision 3. Table 4 below illustrates this by describing those sectors where imperfect concordances exist between the Input Output Industry, listed above, and the requisite ISIC Rev 3 industries; showing in each case the additional ISIC groups that are included in (or missing from) each Input Output industry, for each country where imperfect concordance relationships exist in the most recent years: (the concordance relationships used in earlier years typically differ and these relationships can be found at <http://www.oecd.org/dataoecd/20/37/34085996.pdf>).

⁷ For example, see <http://www.oecd.org/sti/stan> for the industry list of STAN database.

⁸ See <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=2> for a description of ISIC Rev.3.

Table 3. OECD IO Database - Industry Classification and Concordance with ISIC Rev 3, 2006 Edition

ISIC Rev.3 code	IO Industry	Description
1+2+5	1	Agriculture, hunting, forestry and fishing
10+11+12	2	Mining and quarrying (energy)
13+14	3	Mining and quarrying (non-energy)
15+16	4	Food products, beverages and tobacco
17+18+19	5	Textiles, textile products, leather and footwear
20	6	Wood and products of wood and cork
21+22	7	Pulp, paper, paper products, printing and publishing
23	8	Coke, refined petroleum products and nuclear fuel
24ex2423	9	Chemicals excluding pharmaceuticals
2423	10	Pharmaceuticals
25	11	Rubber and plastics products
26	12	Other non-metallic mineral products
271+2731	13	Iron & steel
272+2732	14	Non-ferrous metals
28	15	Fabricated metal products, except machinery and equipment
29	16	Machinery and equipment, nec
30	17	Office, accounting and computing machinery
31	18	Electrical machinery and apparatus, nec
32	19	Radio, television and communication equipment
33	20	Medical, precision and optical instruments
34	21	Motor vehicles, trailers and semi-trailers
351	22	Building & repairing of ships and boats
353	23	Aircraft and spacecraft
352+359	24	Railroad equipment and transport equipment n.e.c.
36+37	25	Manufacturing nec; recycling (include Furniture)
401	26	Production, collection and distribution of electricity
402	27	Manufacture of gas; distribution of gaseous fuels through mains
403	28	Steam and hot water supply
41	29	Collection, purification and distribution of water
45	30	Construction
50+51+52	31	Wholesale and retail trade; repairs
55	32	Hotels and restaurants
60	33	Land transport; transport via pipelines
61	34	Water transport
62	35	Air transport
63	36	Supporting & auxiliary transport activities; activities of travel agencies
64	37	Post and telecommunications
65+66+67	38	Finance and insurance
70	39	Real estate activities
71	40	Renting of machinery and equipment
72	41	Computer and related activities
73	42	Research and development
74	43	Other Business Activities
75	44	Public administration and defence; compulsory social security
80	45	Education
85	46	Health and social work
90-93	47	Other community, social and personal services
95+99	48	Private households with employed persons & extra-territorial organisations & bodies

Table 4. Concordance with OECD IO (48) Industry and Sector (in the latest year) by Country

Country	Industries with imperfect concordances
Australia	17 includes Radio, television & communication equipment 29 includes Steam and hot water supply and Sewage and refuse disposal, sanitation and similar activities 39 includes Renting of machinery & equipment 41 includes Research & development 44 includes extra-territorial organisations & bodies
Canada	29 includes Steam and hot water supply 31 includes part of 7250, 3220, 2919 and 3610 43 includes Research and Development (73) SBFD and Discrepancy includes Confidential values and rounding error
Denmark	23 includes Railroad equipment & transport equip nec
Austria, Belgium, Czech rep., Finland, France, Germany, Greece, Italy, Netherlands, Norway, Portugal, Sweden, & United Kingdom	9 includes Pharmaceuticals(2423) Iron & Steel (271+2731) and Non-ferrous metals (272+2732) are not separated. 22 includes non motor vehicle transport equipment (351,353, 352 and 359) 26 is Electricity, gas, steam and hot water supply (40)
Hungary, Slovak Republic	9 includes Pharmaceuticals(2423) 13 includes Non-ferrous metals (272+2732) 22 includes non motor vehicle transport equipment (351,353, 352 and 359) 26 is Electricity, gas, steam and hot water supply (40) 48 is not available
Ireland	9 includes Pharmaceuticals(2423) Iron & Steel (271+2731) and Non-ferrous metals (272+2732) are not separated. 22 includes non motor vehicle transport equipment (351,353, 352 and 359) 25 includes Coke, refined petroleum products and nuclear fuel (23) 26 is Electricity, gas, steam and hot water supply (40)
Korea	48 includes "other adjustments" such as sales by final demand and purchased by non-residents Non-comparable imports(cif/fob adj, Direct purchases abroad by residents) is not available
Mexico	27 includes Steam and hot water supply (403)
New Zealand	13 includes Non-ferrous metals (272+2732). 18 includes Office, accounting and computing machinery (30) and Radio, television and communication equipment (32) 24 includes Aircraft and spacecraft (353) 29 includes Steam and hot water supply (403) 35 includes Supporting and auxiliary transport activities (63)
Poland	2 includes Non energy mining (13, 14) 9 includes Pharmaceuticals 13 includes Non-ferrous metals (272+2732). 22 includes Aircraft & spacecraft and Railroad equipment & transport equip nec 26 includes Manufacture of gas and Steam and hot water supply 34 includes Air transport (62)

Figures 1-48 reflect Input-Output Industries. Figures in brackets () indicate ISIC Rev.3 division and group codes.

Table 4....continued

Country	Industries with imperfect concordances
Spain	9 includes Pharmaceuticals(2423) 13 includes Non-ferrous metals (272+2732). 22 is non motor vehicle transport equipment (351,353, 352 and 359) 27 includes Steam and hot water supply(403)
Switzerland	2 includes mining and quarrying of non-energy (13-14) 9 includes Coke, refined petroleum products and nuclear fuel (23) and pharmaceuticals (2423) 13 includes Non-ferrous metals (272+2732). 17 includes Electrical machinery & apparatus, nec 21 includes Aircraft and spacecraft, railroad equipment and transport equipment nec 26 includes Manufacture of gas and Steam and hot water supply 33 includes All transport services 40 includes Other business activities (74)
Turkey	13 includes Non-ferrous casting (2732). Non-ferrous casting (2732) is excluded in 14. Steam and hot water supply is not available
USA	29 includes Steam and hot water supply (403)
Argentina	22 includes Aircraft, spacecraft and locomotives. 24 excludes locomotives 29 includes Steam and hot water supply 43 includes Renting of machinery & equipment, Computer & related activities, and Research & development
Brazil	29 includes Steam and hot water supply (403) 43 includes Research and development (73)
China	24 includes Aircraft & spacecraft 26 includes Manufacture of gas and Steam and hot water supply 33 includes All transport services 43 includes Renting of machinery & equipment, Computer & related activities and Other community, social & personal services 45 includes Research & development 48 is unclassified
India	25 includes Medical, precision & optical instruments and Aircraft & spacecraft 29 includes Steam and hot water supply 39 includes Renting of machinery & equipment 45 includes Research & development 47 includes Private households with employed persons
Israel	22 includes non motor vehicle transport equipment (351,353, 352 and 359) 26 includes Manufacture of gas and Steam and hot water supply 41 includes Research & development
Singapore	2, 3, 42 and 48 are not available 24 includes motor vehicles 29 includes Steam and hot water supply
Figures 1-48 reflect Input-Output Industries. Figures in brackets () indicate ISIC Rev.3 division and group codes.	

5. Price Basis

18. In line with the 1993 System of National Accounts the OECD input-output database (2002 and 2006 Editions) shows transactions, wherever possible, at basic prices.⁹

19. Most European countries follow the basic price valuation system in producing symmetric input-output tables. But Supply-Use tables, which are the core building blocks used by the OECD to produce industry-by-industry input output tables, typically show intermediate and final demand transactions in purchasers' prices. The process of converting these into basic prices is described in Section 7.

6 Format of the tables

6.1 Value Added Components

20. The OECD Input-Output database provides data on the following components of value-added (and other items that contribute to the differences between gross output at basis prices and intermediate consumption of domestically produced goods at basic prices), as shown in the table below, and where the definitions of each component are in line with those given in SNA93.

Table 5. Variables provided in the OECD Input-Output database (Row)

Description
(a) Intermediate inputs from industry 1
(a) ...
(a) Intermediate inputs from industry 48
(b) Other adjustments (Purchases on the domestic territory by non-
(c) Noncomparable import (cif/fob adj, direct purchases abroad by
(d) Intermediate consumption/final use at basic price
(e) Net taxes on products (tax less subsidy)
(f) Intermediate consumption/final use at purchasers' price
(g) Value added at basic prices
(h) Compensation of employees
(i) Net taxes on production
(j) Gross operating surplus
(k) Industry output

⁹ For convenience, descriptions of the relationships between purchasers/producers' prices and basic prices are shown below for key aggregates:

- Intermediate demand at purchasers' prices = Intermediate demand at basic prices + Taxes on products (sales tax, consumption tax, non-deductible VAT) - Subsidies on products;
- Gross Output at basic prices = Gross output at producers' prices - Taxes on products (not including VAT and import taxes) + Subsidies on products;
- Value added at basic prices = Gross output at basic prices - Intermediate consumption at purchasers' prices,
- Value added at basic prices = Value added at producers' prices - Taxes on products (not including VAT and import taxes) + Subsidies on products.

6.2 Final Demand Components

21. Table 6 below describes the Final Demand components shown in the database. However not all countries are able to provide such a breakdown. Indeed only 10 countries report 'Valuables' separately, which is instead (typically) included within changes in inventories, and 20 countries NPISH, which is included within HHFC. Again, as was the case for the components of value-added, the definitions of each item of final demand are consistent with SNA 1993.

Table 6. Variables provided in the OECD Input- Output Database

Description
(a) Intermediate inputs by industry 1
(a) ...
(a) Intermediate inputs by industry 48
(b) Total intermediate consumption
(c) Final consumption expenditure by households (HHFC)
(d) Final consumption expenditure by non-profit organisations serving households (NPISH)
(e) Final consumption expenditure by government (GGFC)
(f) Gross fixed capital formation (GFCF)
(g) Changes in inventories
(h) Valuables
(i) Exports
(j) Imports
(k) Discrepancy

22. In summary therefore the 2006 Edition of the OECD input output tables follows the format of earlier editions, with the exception that the industry set has expanded since the 2002 edition, (see the annex which contains total economy (domestic+import) symmetric input-output tables for each country for examples of the format).

7. Transformation to the harmonised Industry-by-Industry tables

23. Table 1 showed that the type of data received from each country varies considerably. Some countries have been able to provide symmetric IO tables at basic prices at the required 48 industry level, whereas others have only been able to provide Supply-Use tables at purchaser's prices for example, using the industrial classification and industry detail usually presented in that country. Naturally this means that for many countries the data provided needs to be transformed or manipulated into the harmonised symmetric 48 industry-by-industry basis.

24. The process of transformation varies from country to country, depending on the information set supplied. Typically the process of transformation is as follows (see also Box 2):

- *Supply and Use tables at purchasers' prices – Convert use table to basic prices.*¹⁰ Using supplementary information where available (Ministry of Finance websites for example on tax rates, such as VAT) or standard assumptions we remove taxes and subsidies on products included in intermediate consumption and final demand and allocate these as a

¹⁰ Many non-European countries typically produce their IO tables on a producer price basis however the following 6 countries have been able to provide basic price tables despite their national convention: Japan, Korea, Brazil, Chinese Taipei, India and Indonesia.

separate row. Again, using supplementary information where available or standard assumptions we remove trade margins (transport and distribution) from intermediate consumption and final demand cells and re-allocate these to the appropriate industry. Typically these standard assumptions assume that all consumers pay/receive the same rate of taxes/subsidies and pay the same rates of distribution margins, although these can be refined, depending on the information available. For example if the tax column in the Supply matrix shows different taxes separately it is possible to ensure that VAT for example is only removed from those consumers that pay VAT (remembering that some industries, which varies across countries, cannot reclaim VAT). Similarly it is possible to ensure that all, or nearly all, of retail margins (as opposed to wholesale) are removed from the HHFC column. For those countries that provide symmetric commodity-by-commodity tables at basic prices, however, it is preferable to use this information to derive the use table at basic prices by reverse engineering the transformation process as described below; a process applied for Austria, France, Germany, Hungary, Italy, Portugal and Sweden.

- *Supply and Use tables at basic prices (total economy only) – Convert Use table into separate domestic and import use tables, using either a straightforward proportionality assumption or, preferably, using information available on import use structures from earlier years (if these were not themselves derived using the proportionality assumption) constrained to the latest year totals using RAS techniques for example Canada 2000 using 1997 relationships, or by using the information provided by commodity-by-commodity import tables reverse engineered (an approach applied to Belgium and Turkey).*
- *Supply and Domestic Use tables at basic prices – Convert Supply and Domestic Use tables into Symmetric Industry-by-Industry tables using ‘Fixed Industry Sales Structures’ assumption (see Box 1).*
- *Symmetric Industry-by-Industry tables (domestic and total) - Aggregate the industries shown using national classification systems so that they are harmonised to the required 48 industry level (see Table 3). For many countries it necessary to produce a concordance between the input-output or supply-use data industries supplied by NSIs, their national classifications’ system and ISIC revision 3. For those countries using NACE classifications, and where input-output sectors have a strong concordance with NACE, this is fortunately a relatively simple task. However for non-EU countries separate concordance relationships between national classification systems and ISIC Rev 3 have been used. As shown in Table 4 however it is not always possible to assign each country’s input-output industries or products to the harmonised input-output classification described in Table 3. In these circumstances the harmonised input-output table for any particular country includes, in some industries, all or part of another input-output group.*

25. For some countries however, for example Korean data for 2000, only commodity-by-commodity tables have been provided. Without additional information however it is not possible to convert these tables into industry-by-industry tables and, as such, they remain on the commodity-by-commodity basis. For countries that provide commodity-by-commodity tables and a Supply table but not a Use table, for example Japan 2000, it is possible to make a conversion to industry-by-industry tables. This process begins, in essence, by attempting to reverse-engineer the process typically used by NSIs to create the commodity-by-commodity tables, allowing the OECD to recreate the ‘original’ Use tables¹¹; in practice this means working backwards with the commodity (or product) technology¹² assumption. Clearly this is not an ideal approach as the subsequent Use table is converted to a symmetric industry-by-industry table using the

¹¹ Or rather the Use table that is consistent with this approach, as some NSIs produce their commodity-by-commodity tables directly, that is they are not created by converting Use tables.

¹² See UN *Handbook on Input-Output Tables* (1999).

‘fixed industry sales structure’ (industry, as opposed to product, technology) assumption. However, in practice, the Leontief coefficients subsequently produced stand up to scrutiny. It might be preferable to reverse-engineer the process using the industry technology assumption from the start but in some cases this leads to negatives in the Use table. As such, and partly because the method returns similar results where negatives do not occur, the standard approach is to reverse-engineer commodity-by-commodity tables using the product technology assumption.

26. Other adjustments are however needed in addition to the transformations referred to above. The following paragraphs describe the main adjustments made by the OECD Secretariat to arrive at harmonised tables.

FISIM adjustment

27. The allocation of Financial Intermediation Services Indirectly Measured (FISIM) is treated differently across countries. For the more recent tables Australia, Japan, Canada, China, India, Indonesia, Chinese Taipei and the US allocate imputed bank service charges directly to purchasing sectors, including, in some cases, households. EU countries have recently adopted this process in their national accounts but the input-output tables received by the OECD do not yet reflect these changes, and instead FISIM is shown as a separate column in their national input-output and supply-use tables or as intermediate consumption of the finance industry (ISIC65) with a corresponding deduction from gross operating surplus and value-added of the same industry.

28. For analytical purposes, and harmonisation, FISIM in the OECD database has been allocated separately to consuming industries as intermediate consumption of financial services, on the basis of each industry’s share of total gross value-added for all countries, except those where FISIM has already been allocated, but not including the household and government sector. Value-added in each industry is reduced by a corresponding amount. This treatment is consistent with the approach used in the 2002 Edition of the IO database. SNA93, of course, recommends that FISIM should be allocated to all consumers; including final demand; however the information to do this is not readily available, in any case, doing so would lead to estimates of GDP and gross value-added that differed from those published by NSIs.

Disclosed cells and rounding errors

29. In some countries some data are suppressed by NSIs to preserve confidentiality. There are also some rounding errors which need to be corrected for. Where this occurs the OECD Secretariat has estimated these missing values and corrected for rounding errors using the bi-proportional algorithm (RAS). The bi-proportional adjustment was performed for example on the supply tables of the UK and the total, domestic and import tables of New Zealand.

c.i.f/f.o.b adjustments

30. For some countries specific adjustments are required to deal with valuation differences in imports. In the United States, France and Brazil for example imports of goods are valued at c.i.f prices, as they should be, but with negative adjustments made to the imports of insurance and freight services (water transport only for France and transport more generally for Brazil) to correct for these services provided by resident producers (whose value is reflected in the c.i.f price of the imported product). Applying the proportionality method in this case to derive the import use matrix can lead to negative imports of these services however and so instead these negative values are removed from exports.

Summary of Conversion Methods for Recent Years

31. The following estimation methodologies have been applied for countries as follows:

- Symmetric industry-by-industry tables have been provided by the following 11 countries in the latest year: Australia, Canada, Denmark, Finland, Mexico, the Netherlands, New Zealand, Norway, Argentina, Brazil and Singapore.
- Supply and Use tables have been provided by the following 21 countries, in the latest year, and the symmetric industry-by-industry tables have been estimated by the OECD using the industry technology assumption: *Austria, Belgium, Czech Republic, France, Germany, Greece, Hungary, Ireland, Italy, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, USA (2000), India and Israel.*
- Supply tables and symmetric product-by-product tables have been provided in the following two cases and so symmetric industry-by-industry tables have been estimated by reverse engineering the Use table, as described above, before applying the industry technology assumption: *Japan (2000) and USA (1995).*
- Symmetric product-by-product tables, with no other information, have been provided in the latest year, unless otherwise stated, in the following 6 cases: *Korea, China, Chinese Taipei, Indonesia, Russia and Japan (1995).* These tables have not, therefore, been converted to industry-by-industry tables.

Box 1. Fixed Industry Sales Structures (Industry Technology) Assumption

For many countries the symmetric industry-by-industry input-output tables have been derived from the supply-use tables, using the fixed industry sales structures sales assumption (often referred to as the industry technology assumption (ITA)), see also Section 8. The algebraic formulation of this method is described below:

The basic relationship that describes supply use tables can be shown as:

$$q = Bg + F \quad (i)$$

Where, (q) is the vector of product outputs, (g) is the vector of industry outputs, ($B\hat{g}$) is the Industry Use matrix (showing the purchases of products by industries by product (row) and industry (column) and (F) the vector of final demand by product.

Let (M) be the matrix of supply (products (rows) produced by industries (columns) so that we can define (D) as

$$D = M\hat{q}^{-1} \quad (ii)$$

By multiplying both sides of equation (i) by (D), as shown in (ii) above, it follows that

$$Dq = DBg + DF = g \quad (iii)$$

that

$$(I - DB)g = F \quad (iv)$$

and

$$g = (I - DB)^{-1} F$$

($I - DB$)⁻¹ reflecting the Leontief inverse.

It follows that the industry-by-industry use matrix = ($DB\hat{g}$) and (DF) the final demand by industry output.

Note that this transformation to ($DB\hat{g}$) preserves, exactly, the value-added by industry relationships observed in the original Industry Use matrix (Bg).

8. Industry-by-Industry versus Product by Product Tables

32. Given the widespread presentation of symmetric tables by many countries, especially within the EU, it is perhaps important to explain why the OECD database is presented on an industry-by-industry format

33. The first reason reflects the fact that the OECD Secretariat typically uses the database in conjunction with its many other datasets for example, the Structural Analysis Database, The Structural and Demographic Statistics Database, The International Energy Agencies (Emissions) database, the Foreign Direct Investment Database, The Labour Force Survey database, The Analytical Business Enterprise Research and Development to name but a few; all of which are industry (with the exception of LFS data, which is easily convertible) datasets compatible with ISIC Revision 3.

34. The second reason reflects a policy focus. Many of these analyses that use the OECD database are fundamentally concerned with the structure of industries and businesses across economies and the questions raised by these analyses can be better answered by industry-by-industry tables.

35. The third reason reflects statistical quality. In this context it's important to recognise that the data collected in producing supply-use tables, the key source for input output tables in most countries, is based, with the exception of final demand components almost entirely on business data (supply and intermediate consumption matrices). Business Surveys typically ask for industrial output making little if any distinction between the intermediate inputs used in ancillary, secondary or by-product production. But this information is of course essential in producing commodity-by-commodity tables. Moreover commodity-by-commodity tables implicitly assume that primary products are produced using a homogenous production (technological) process (product technology assumption). Most studies of micro-level data however, whether looking at enterprises or establishments, suggest that this assumption is rarely met in practice and that there is considerable heterogeneity in production processes of the same commodity (especially when commodities are presented at a 2, 3 or even 4 digit level).

36. In this context it is perhaps important to consider why product by product tables are commonly produced. It seems that this, at least in part, reflects a misunderstanding about the nature of the assumptions (methods) used to convert supply-use tables to symmetric industry-by-industry input-output tables.

37. Typically, symmetric industry-by-industry input-output tables are arrived at by converting supply-use tables using the industry-technology assumption. This (rather unfortunate as it turns out), description of the conversion method appears to be a main factor for the preference of commodity-by-commodity tables in some countries. 'Unfortunate' because it suggests that the technology used in any particular industry is assumed to be the same, which most would accept as being unrealistic and certainly more stretching than the product technology assumption (even though, in many countries, the industry technology assumption is commonly used to derive commodity-by-commodity tables).

38. But as Thage 2005 shows this description of the conversion (industry-technology assumption) is inaccurate where industry-by-industry tables are concerned, and, is better described as a *fixed industry sales structure* assumption. In other words the conversion merely assumes that the proportion of domestically produced commodity A bought by industry B from industry C is proportional to industry C's share of the total (domestic) economy production of commodity A. Put this way, it is clear that this is a far less demanding assumption than that implied by the equivalent, but differently named, 'industry-technology' assumption. Moreover, in practice, the conversion to industry-by-industry tables best preserves the inter-industrial economic relationships that users are interested in. Most importantly it means that value-added and its components by industry are exactly the same as shown in supply-use tables (and

so remain consistent with real data returns). This is not the case of course for commodity-by-commodity tables where, whatever the conversion methods used, value-added and its components are affected.

39. The fourth reason for the preference of industry-by-industry tables reflects the simplicity of the conversion techniques. Supply-Use tables converted using the fixed industry sales structure assumption return symmetric input output tables without negatives. The same is also true for commodity-by-commodity tables converted using the industry technology but from a philosophical perspective it seems incongruous to have a preference for commodity-by-commodity tables based on an assumption that industries have specific technologies.

Box2. Structure of supply, use and symmetric tables

A. Supply Table with basic prices conversion

	Industry					
Commodity						Total supply at pp (d)
						Tax-subsidy
						Total supply at bp (c)
						Imports (b)
						Domestic Output (a)
	Industry Output (e)					0

B. Use at purchasers prices (total)

	Industry					
Commodity						Total use at pp (d)
						Gross fixed capital
						Consumption
	Intermediate use		Final use			
	Value added (f)					
	Industry Output (e)					

C. Use at basic prices (total)

	Industry					
Commodity						Total use at bp (c)
						Gross fixed capital
						Consumption
	Intermediate use		Final use			
	Value added (f)					
	Industry Output (e)					
	Tax-Subsidy					

D. Use at basic prices (domestic)

	Industry					
Commodity						Total use at bp (a)
						Gross fixed capital
						Consumption
	Intermediate use		Final use			
	Tax-Subsidy					
	Imports					

E. Symmetric/Use at basic prices (import)

	Commodity					
Commodity						Total use at bp (b)
						Gross fixed capital
						Consumption
	Intermediate use		Final use			
	Tax-Subsidy					
	Imports					

F. Symmetric (domestic, ind x ind)

	Industry					
Industry						Exports
						Consumption
	Intermediate use total		Final use total			
	Value added (f)					
	Industry Output (e)					
	Tax-Subsidy					
	Imports					

G. Symmetric (total, ind x ind)

	Industry					
Industry						Imports (b)
						Gross fixed capital
						Consumption
	Intermediate use total		Final use total			
	Value added (f)					
	Industry Output (e)					
	Tax-Subsidy					

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ANNEX: RECENT COUNTRY TABLES

OECD Members

1. Australia (1998/99)
2. Austria (1995 & 2000)
3. Belgium (1995 & 2000)
4. Canada (2000 Estimating)
5. Czech Republic(2000)
6. Denmark (1995 & 2000)
7. Finland (1995 & 2000)
8. France (1995 & 2000)
9. Germany (1995 & 2000)
10. Greece (1995 & 1999)
11. Hungary (2000)
12. Italy (1995 & 2000)
13. Ireland (1998)
14. Japan (1990, 1995, & 2000)
15. Korea (2000)
16. Mexico (2003 Estimating)
17. Netherlands (1995 & 2000)
18. New Zealand (1996)
19. Norway (2001)
20. Poland (2000)
21. Portugal (1995 & 1999)
22. Slovak republic (1995 & 2000)
23. Spain (1995 & 2000)

24. Sweden (1995 & 2000)
25. Switzerland (2001)
26. Turkey (1996 & 1998)
27. United Kingdom (1995 & 2000)
28. United States(1995 & 2000)

Non OECD Members

1. Argentina (1997)
2. Brazil (2000)
3. China (2000)
4. Chinese Taipei (2001)
5. India (1993/94&1998/99)
6. Indonesia (1995 & 2000)
7. Israel (1995)
8. Russia (1995 & 2000)

Country Australia
Year 1998/99

Valuation Basic price
Type Industry - industry symmetric, total
Currency Mill. Aus\$

Australia
1/4
Intermediate

Industry	1 Agriculture, hunting, forestry and fishing	2 Mining and quarrying (energy)	3 Mining and quarrying (non-energy)	4 Food products, beverages and tobacco	5 Textiles, textile products, leather and footwear	6 Wood and products of wood and cork	7 Pulp, paper, paper products, printing and publishing	8 Coke, refined petroleum products and nuclear fuel	9 Chemicals excluding pharmaceuticals	10 Pharmaceuticals	11 Rubber & plastics products	12 Other non-metallic mineral products	13 Iron & steel metals	14 Non-ferrous metals	15 Fabricated metal products, except machinery & equipment
1 Agriculture, hunting, forestry and fishing	4135.0	10.0	17.0	13234.0	1071.0	337.0	241.0	0.0	61.0	71.0	73.0	1.0	0.0	4.0	0.0
2 Mining and quarrying (energy)	17.0	624.0	68.0	129.0	42.0	8.0	65.0	6452.0	207.0	6.0	6.0	268.0	410.0	145.0	15.0
3 Mining and quarrying (non-energy)	18.0	979.0	2729.0	147.0	0.0	6.0	0.0	12.0	146.0	0.0	4.0	731.0	855.0	4733.0	40.0
4 Food products, beverages and tobacco	1613.0	9.0	26.0	7227.0	185.0	1.0	8.0	1.0	221.0	33.0	0.0	1.0	1.0	0.0	2.0
5 Textiles, textile products, leather and footw	125.0	14.0	16.0	254.0	3480.0	9.0	105.0	8.0	50.0	2.0	112.0	44.0	30.0	9.0	86.0
6 Wood and products of wood and cork	45.0	16.0	17.0	2.0	8.0	1381.0	28.0	6.0	2.0	0.0	11.0	12.0	10.0	5.0	155.0
7 Pulp, paper, paper products, printing and p	142.0	45.0	93.0	1415.0	117.0	104.0	4166.0	19.0	165.0	183.0	131.0	124.0	40.0	19.0	138.0
8 Coke, refined petroleum products and nucl	487.0	248.0	582.0	68.0	5.0	14.0	51.0	500.0	159.0	3.0	15.0	59.0	176.0	73.0	32.0
9 Chemicals excluding pharmaceuticals	970.0	232.0	432.0	135.0	214.0	242.0	942.0	425.0	3058.0	207.0	1815.0	163.0	210.0	156.0	247.0
10 Pharmaceuticals	1444.0	12.0	67.0	10.0	6.0	3.0	119.0	6.0	411.0	1438.0	65.0	17.0	19.0	20.0	32.0
11 Rubber & plastics products	115.0	110.0	160.0	1606.0	96.0	42.0	854.0	32.0	325.0	204.0	573.0	37.0	21.0	13.0	117.0
12 Other non-metallic mineral products	42.0	15.0	73.0	287.0	3.0	33.0	7.0	0.0	26.0	6.0	21.0	1573.0	153.0	74.0	219.0
13 Iron & steel	5.0	94.0	212.0	2.0	8.0	10.0	5.0	0.0	6.0	0.0	6.0	81.0	2702.0	49.0	2418.0
14 Non-ferrous metals	0.0	1.0	18.0	14.0	9.0	24.0	46.0	0.0	17.0	0.0	97.0	13.0	324.0	2414.0	951.0
15 Fabricated metal products, except machin	199.0	304.0	554.0	1040.0	33.0	184.0	120.0	6.0	111.0	41.0	53.0	205.0	128.0	24.0	1769.0
16 Machinery & equipment, nec	609.0	660.0	1113.0	55.0	7.0	20.0	40.0	4.0	36.0	32.0	14.0	70.0	72.0	73.0	88.0
17 Office, accounting & computing machine	52.0	42.0	141.0	77.0	1.0	5.0	69.0	1.0	2.0	1.0	13.0	3.0	8.0	2.0	19.0
18 Electrical machinery & apparatus, nec	57.0	19.0	26.0	58.0	2.0	4.0	36.0	3.0	3.0	0.0	38.0	5.0	18.0	5.0	56.0
19 Radio, television & communication equip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20 Medical, precision & optical instruments	11.0	9.0	13.0	4.0	18.0	0.0	15.0	1.0	1.0	0.0	3.0	3.0	6.0	7.0	4.0
21 Motor vehicles, trailers & semi-trailers	48.0	11.0	32.0	1.0	0.0	3.0	0.0	0.0	0.0	1.0	0.0	12.0	15.0	1.0	10.0
22 Building & repairing of ships & boats	29.0	1.0	1.0	5.0	0.0	0.0	6.0	4.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0
23 Aircraft & spacecraft	34.0	162.0	53.0	1.0	0.0	0.0	4.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0
24 Railroad equipment & transport equip n.e	0.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
25 Manufacturing nec; recycling (include Fu	11.0	3.0	6.0	21.0	43.0	4.0	8.0	0.0	9.0	4.0	5.0	2.0	27.0	76.0	73.0
26 Production, collection and distribution of	180.0	351.0	605.0	691.0	122.0	95.0	267.0	89.0	179.0	44.0	121.0	230.0	368.0	611.0	131.0
27 Manufacture of gas; distribution of gaseou	15.0	6.0	31.0	190.0	19.0	6.0	67.0	26.0	55.0	7.0	6.0	331.0	81.0	136.0	15.0
28 Steam and hot water supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 Collection, purification and distribution o	402.0	8.0	25.0	141.0	30.0	6.0	30.0	18.0	33.0	9.0	6.0	12.0	28.0	9.0	16.0
30 Construction	222.0	210.0	922.0	4.0	1.0	13.0	8.0	1.0	1.0	3.0	1.0	2.0	4.0	1.0	4.0
31 Wholesale & retail trade; repairs	2291.0	627.0	1249.0	2929.0	482.0	403.0	1545.0	143.0	852.0	124.0	424.0	267.0	121.0	121.0	704.0
32 Hotels & restaurants	362.0	84.0	286.0	973.0	117.0	37.0	372.0	67.0	169.0	153.0	44.0	88.0	61.0	42.0	236.0
33 Land transport; transport via pipelines	920.0	1272.0	379.0	2206.0	257.0	230.0	297.0	79.0	187.0	70.0	163.0	794.0	357.0	320.0	199.0
34 Water transport	9.0	9.0	90.0	21.0	8.0	3.0	16.0	186.0	7.0	1.0	2.0	8.0	33.0	77.0	15.0
35 Air transport	78.0	55.0	143.0	133.0	94.0	14.0	214.0	29.0	55.0	34.0	20.0	21.0	21.0	16.0	61.0
36 Supporting and auxiliary transport activit	402.0	297.0	210.0	960.0	110.0	245.0	618.0	109.0	306.0	218.0	53.0	109.0	123.0	55.0	336.0
37 Post & telecommunications	274.0	48.0	156.0	396.0	98.0	59.0	309.0	17.0	88.0	54.0	56.0	105.0	44.0	20.0	177.0
38 Finance & insurance	965.0	322.0	560.0	767.0	93.0	44.0	247.0	29.0	82.0	66.0	58.0	85.0	94.0	141.0	136.0
39 Real estate activities	211.0	331.0	189.0	305.0	37.0	74.0	201.0	7.0	17.0	9.0	13.0	15.0	615.0	303.0	121.0
40 Renting of machinery & equipment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41 Computer & related activities	287.0	37.0	946.0	386.0	151.0	34.0	343.0	14.0	126.0	314.0	118.0	97.0	155.0	56.0	244.0
42 Research & development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43 Other Business Activities	521.0	252.0	562.0	1244.0	398.0	224.0	1183.0	88.0	568.0	1125.0	467.0	292.0	142.0	75.0	560.0
44 Public admin. & defence; compulsory soc	60.0	69.0	151.0	160.0	9.0	15.0	222.0	39.0	31.0	2.0	12.0	14.0	42.0	6.0	37.0
45 Education	14.0	19.0	35.0	98.0	45.0	7.0	38.0	13.0	23.0	14.0	11.0	18.0	16.0	12.0	22.0
46 Health & social work	89.0	0.0	1.0	81.0	31.0	9.0	42.0	1.0	7.0	95.0	1.0	1.0	1.0	0.0	1.0
47 Other community, social & personal servi	7.0	2.0	15.0	89.0	7.0	7.0	63.0	3.0	17.0	12.0	3.0	4.0	2.0	1.0	6.0
48 Private households with employed person	25.0	6.0	40.0	89.0	32.0	11.0	96.0	5.0	25.0	29.0	31.0	20.0	10.0	3.0	44.0
SBFD including OTHER ADJUSTMENTS(	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Noncomparable imports(cif/fob adj. Direct p	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	38.0	0.0	0.0	0.0	0.0
r1 Intermediate consumption /final use at bas	17542.0	7628.0	13045.0	37655.0	7489.0	3970.0	13113.0	8444.0	7854.0	4615.0	4703.0	5939.0	7627.0	9907.0	9536.0
r2 Net taxes on products	850.0	39.0	711.0	635.0	311.0	48.0	270.0	23.0	117.0	46.0	82.0	40.0	12.0	38.0	109.0
r3 Intermediate consumption /final use at pur	18392.0	7667.0	13756.0	38290.0	7800.0	4018.0	13383.0	8467.0	7971.0	4661.0	4785.0	5979.0	7639.0	9945.0	9645.0
r4 Value Added	18146.0	13474.0	10784.0	14732.0	3168.0	2407.0	8769.0	1202.0	3384.0	1834.0	3145.0	3637.0	2994.0	3123.0	5429.0
r5 Gross Operating Surplus (=net Oper.Surp	12907.0	10864.0	7015.0	7422.0	885.0	930.0	3378.0	842.0	1572.0	1015.0	1174.0	1881.0	1155.0	1771.0	1497.0
r6 Compensation of Employees	4699.0	2453.0	3436.0	6857.0	2150.0	1418.0	5046.0	320.0	1659.0	807.0	1848.0	1616.0	1709.0	1233.0	3689.0
r7 Net taxes on production	540.0	157.0	333.0	453.0	133.0	59.0	345.0	40.0	153.0	12.0	123.0	140.0	130.0	119.0	243.0
r8 Industry Output	36571.0	21069.0	24553.0	53056.0	10983.0	6435.0	22157.0	9672.0	11360.0	6498.0	7936.0	9625.0	10633.0	13068.0	15085.0

Country Australia
Year 1999
2/4

Valuation Basic price
Type Industry - industry symmetric, total
Currency Mill. Aus\$

Industry	16 Machinery & equipment, nec	17 Office, accounting & computing machinery	18 Electrical machinery & apparatus, nec	19 Radio, television & communication equipment	20 Medical, precision & optical instruments	21 Motor vehicles, trailers & semi-trailers	22 Building & repairing of ships & boats	23 Aircraft & spacecraft	24 Railroad equipment & transport equip n.e.c.	25 Manufacturing nec; recycling (include Furniture)	26 Production, collection and distribution of electricity	27 Manufacture of gas; distribution of gaseous fuels through mains	28 Steam and hot water supply	29 Collection, purification and distribution of water	30 Construction	31 Wholesale & retail trade; repairs
1 Agriculture, hunting, fore	0.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	1.0	0.0	0.0	2.0	143.0	413.0
2 Mining and quarrying (en	8.0	3.0	3.0	0.0	1.0	15.0	1.0	0.0	1.0	5.0	3371.0	302.0	0.0	1.0	11.0	182.0
3 Mining and quarrying (nc	15.0	123.0	30.0	0.0	62.0	2.0	0.0	0.0	2.0	206.0	2.0	0.0	0.0	30.0	514.0	21.0
4 Food products, beverages	1.0	1.0	0.0	0.0	0.0	6.0	1.0	2.0	0.0	3.0	4.0	0.0	0.0	7.0	17.0	2681.0
5 Textiles, textile products,	17.0	6.0	5.0	0.0	12.0	39.0	9.0	2.0	4.0	221.0	7.0	7.0	0.0	4.0	108.0	263.0
6 Wood and products of wo	14.0	3.0	4.0	0.0	1.0	16.0	75.0	0.0	1.0	724.0	0.0	0.0	0.0	16.0	3031.0	404.0
7 Pulp, paper, paper produc	98.0	55.0	41.0	0.0	14.0	70.0	6.0	5.0	2.0	43.0	43.0	14.0	0.0	18.0	224.0	4700.0
8 Coke, refined petroleum j	4.0	2.0	9.0	0.0	1.0	8.0	1.0	1.0	1.0	4.0	130.0	7.0	0.0	48.0	325.0	532.0
9 Chemicals excludng phar	130.0	8.0	202.0	0.0	40.0	375.0	38.0	21.0	7.0	120.0	63.0	38.0	0.0	264.0	620.0	243.0
10 Pharmaceuticals	1.0	0.0	1.0	0.0	3.0	4.0	0.0	0.0	0.0	5.0	12.0	14.0	0.0	81.0	10.0	12.0
11 Rubber & plastics prod	242.0	137.0	85.0	0.0	61.0	399.0	2.0	2.0	8.0	265.0	91.0	43.0	0.0	34.0	532.0	656.0
12 Other non-metallic mine	74.0	13.0	39.0	0.0	10.0	95.0	4.0	3.0	7.0	40.0	140.0	1.0	0.0	64.0	6205.0	398.0
13 Iron & steel	1635.0	48.0	134.0	0.0	38.0	1186.0	142.0	3.0	57.0	364.0	16.0	4.0	0.0	16.0	984.0	87.0
14 Non-ferrous metals	99.0	44.0	400.0	0.0	42.0	233.0	57.0	2.0	7.0	63.0	0.0	0.0	0.0	2.0	30.0	16.0
15 Fabricated metal produc	565.0	49.0	239.0	0.0	18.0	280.0	61.0	67.0	157.0	140.0	67.0	26.0	0.0	178.0	4880.0	646.0
16 Machinery & equipment	941.0	109.0	189.0	0.0	12.0	435.0	260.0	10.0	53.0	4.0	113.0	7.0	0.0	57.0	1276.0	1477.0
17 Office, accounting & co	231.0	1213.0	103.0	0.0	93.0	136.0	13.0	7.0	30.0	23.0	18.0	4.0	0.0	39.0	1350.0	610.0
18 Electrical machinery & :	758.0	159.0	485.0	0.0	35.0	63.0	63.0	13.0	74.0	12.0	318.0	4.0	0.0	10.0	1332.0	272.0
19 Radio, television & com	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20 Medical, precision & op	35.0	50.0	9.0	0.0	12.0	11.0	257.0	13.0	5.0	8.0	1.0	1.0	0.0	7.0	13.0	181.0
21 Motor vehicles, trailers .	74.0	2.0	5.0	0.0	1.0	4951.0	4.0	2.0	1.0	27.0	4.0	1.0	0.0	1.0	16.0	3174.0
22 Building & repairing of	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	13.0
23 Aircraft & spacecraft	2.0	1.0	0.0	0.0	0.0	1.0	0.0	740.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	41.0
24 Railroad equipment & t	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	141.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
25 Manufacturing nec; recy	4.0	4.0	2.0	0.0	1.0	17.0	3.0	1.0	3.0	34.0	3.0	1.0	0.0	1.0	129.0	195.0
26 Production, collection a	113.0	135.0	49.0	0.0	6.0	141.0	10.0	17.0	8.0	31.0	1628.0	15.0	0.0	175.0	117.0	1034.0
27 Manufacture of gas; dist	7.0	4.0	3.0	0.0	1.0	16.0	1.0	1.0	1.0	7.0	535.0	214.0	0.0	1.0	2.0	207.0
28 Steam and hot water su	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 Collection, purification .	17.0	7.0	4.0	0.0	1.0	22.0	1.0	2.0	1.0	5.0	109.0	30.0	0.0	356.0	36.0	63.0
30 Construction	0.0	2.0	0.0	0.0	0.0	4.0	4.0	0.0	0.0	1.0	43.0	9.0	0.0	7.0	83.0	213.0
31 Wholesale & retail trade	1022.0	210.0	225.0	0.0	156.0	925.0	111.0	29.0	59.0	552.0	707.0	239.0	0.0	250.0	4588.0	9832.0
32 Hotels & restaurants	67.0	59.0	19.0	0.0	15.0	122.0	7.0	1.0	4.0	38.0	116.0	13.0	0.0	33.0	396.0	1625.0
33 Land transport; transpor	160.0	38.0	33.0	0.0	16.0	96.0	9.0	2.0	3.0	119.0	213.0	76.0	0.0	16.0	729.0	1580.0
34 Water transport	6.0	0.0	1.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	10.0	3.0	0.0	0.0	2.0	34.0
35 Air transport	89.0	30.0	28.0	0.0	7.0	53.0	7.0	5.0	1.0	13.0	60.0	25.0	0.0	31.0	67.0	1306.0
36 Supporting and auxiliari	47.0	13.0	22.0	0.0	4.0	163.0	19.0	4.0	6.0	29.0	21.0	5.0	0.0	14.0	431.0	6001.0
37 Post & telecommunicati	218.0	104.0	71.0	0.0	21.0	97.0	11.0	15.0	6.0	61.0	153.0	47.0	0.0	69.0	218.0	4957.0
38 Finance & insurance	70.0	44.0	31.0	0.0	9.0	147.0	11.0	10.0	5.0	41.0	646.0	74.0	0.0	363.0	1210.0	4452.0
39 Real estate activities	25.0	21.0	9.0	0.0	4.0	579.0	4.0	2.0	0.0	10.0	200.0	152.0	0.0	2.0	3872.0	7749.0
40 Renting of machinery &	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41 Computer & related acti	190.0	154.0	80.0	0.0	27.0	350.0	4.0	13.0	5.0	32.0	125.0	48.0	0.0	12.0	2250.0	1420.0
42 Research & developmer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43 Other Business Activitie	409.0	126.0	119.0	0.0	67.0	464.0	20.0	13.0	3.0	145.0	157.0	589.0	0.0	316.0	1685.0	13145.0
44 Public admin. & defenc	17.0	3.0	5.0	0.0	1.0	84.0	5.0	0.0	1.0	8.0	14.0	1.0	0.0	34.0	163.0	641.0
45 Education	25.0	14.0	8.0	0.0	3.0	29.0	2.0	1.0	1.0	3.0	59.0	15.0	0.0	10.0	48.0	136.0
46 Health & social work	2.0	1.0	1.0	0.0	0.0	24.0	0.0	2.0	0.0	1.0	1.0	0.0	0.0	2.0	8.0	50.0
47 Other community, socia	6.0	1.0	4.0	0.0	1.0	70.0	0.0	0.0	0.0	3.0	1.0	1.0	0.0	3.0	9.0	884.0
48 Private households with	27.0	16.0	3.0	0.0	5.0	44.0	3.0	2.0	1.0	8.0	28.0	3.0	0.0	7.0	30.0	210.0
SBFD including OTHER A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Noncomparable imports(cil	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
r1 Intermediate consumptic	7466.0	3013.0	2703.0	0.0	801.0	11780.0	1229.0	1013.0	666.0	3440.0	9230.0	2033.0	0.0	2580.0	37697.0	72761.0
r2 Net taxes on products	99.0	38.0	37.0	0.0	10.0	126.0	33.0	36.0	28.0	65.0	154.0	54.0	0.0	170.0	1170.0	2661.0
r3 Intermediate consumptic	7565.0	3051.0	2740.0	0.0	811.0	11906.0	1262.0	1049.0	694.0	3505.0	9384.0	2087.0	0.0	2750.0	38867.0	75422.0
r4 Value Added	3388.0	1174.0	1496.0	0.0	1041.0	4679.0	702.0	848.0	369.0	2500.0	8980.0	1270.0	0.0	3902.0	34242.0	62283.0
r5 Gross Operating Surplus	722.0	174.0	474.0	0.0	549.0	2332.0	232.0	51.0	44.0	866.0	6606.0	1029.0	0.0	2909.0	18727.0	15119.0
r6 Compensation of Emplo	2515.0	925.0	956.0	0.0	465.0	2196.0	445.0	746.0	306.0	1547.0	2120.0	193.0	0.0	879.0	14817.0	43408.0
r7 Net taxes on production	151.0	75.0	66.0	0.0	27.0	151.0	25.0	51.0	19.0	87.0	254.0	48.0	0.0	114.0	698.0	3756.0
r8 Industry Output	10971.0	4228.0	4238.0	0.0	1853.0	16586.0	1965.0	1896.0	1064.0	6008.0	18366.0	3360.0	0.0	6654.0	73111.0	137714.0

Industry	Industry	32 Hotels & restaurants	33 Land transport: transport via pipelines	34 Water transport	35 Air transport	36 Supporting and auxiliary transport activities; activities of travel agencies	37 Post & telecommunications	38 Finance & insurance	39 Real estate activities	40 Renting of machinery & equipment	41 Computer & related activities	42 Research & development	43 Other Business Activities	44 Public admin. & defence; compulsory social security	45 Education	46 Health & social work	47 Other community, social & personal services	48 Private households with intermediate employed persons & extra-territorial org.	c1Total
1 Agriculture, hunting, fo		1133.0	19.0	0.0	0.0	16.0	3.0	9.0	51.0	0.0	72.0	0.0	99.0	65.0	2.0	3.0	516.0	96.0	21930.0
2 Mining and quarrying (		140.0	12.0	1.0	1.0	13.0	43.0	4.0	36.0	0.0	14.0	0.0	32.0	40.0	11.0	23.0	22.0	19.0	12774.0
3 Mining and quarrying (		30.0	3.0	0.0	0.0	5.0	2.0	1.0	48.0	0.0	9.0	0.0	9.0	29.0	0.0	3.0	83.0	27.0	11667.0
4 Food products, beverag		5558.0	16.0	0.0	6.0	17.0	64.0	59.0	50.0	0.0	148.0	0.0	105.0	133.0	45.0	17.0	241.0	182.0	18742.0
5 Textiles, textile product		362.0	68.0	7.0	35.0	33.0	69.0	52.0	37.0	0.0	85.0	0.0	88.0	197.0	33.0	195.0	141.0	229.0	6712.0
6 Wood and products of v		14.0	48.0	2.0	2.0	125.0	53.0	0.0	212.0	0.0	4.0	0.0	5.0	106.0	66.0	3.0	43.0	14.0	6690.0
7 Pulp, paper, paper prod		814.0	136.0	13.0	41.0	94.0	872.0	275.0	425.0	0.0	960.0	0.0	1587.0	1550.0	550.0	81.0	462.0	624.0	20723.0
8 Coke, refined petroleum		175.0	426.0	33.0	1061.0	166.0	152.0	3.0	64.0	0.0	141.0	0.0	273.0	107.0	1.0	45.0	36.0	169.0	6390.0
9 Chemicals exluding phc		176.0	44.0	10.0	1.0	12.0	27.0	5.0	280.0	0.0	370.0	0.0	493.0	183.0	28.0	164.0	120.0	437.0	13994.0
10 Pharmaceuticals		18.0	5.0	0.0	2.0	4.0	6.0	0.0	27.0	0.0	42.0	0.0	33.0	3.0	7.0	433.0	258.0	36.0	4685.0
11 Rubber & plastics pro		288.0	355.0	4.0	47.0	149.0	681.0	5.0	250.0	0.0	92.0	0.0	52.0	598.0	33.0	73.0	65.0	154.0	9710.0
12 Other non-metallic mi		67.0	9.0	0.0	0.0	3.0	3.0	3.0	209.0	0.0	22.0	0.0	13.0	72.0	5.0	9.0	20.0	116.0	10199.0
13 Iron & steel		3.0	27.0	1.0	0.0	2.0	6.0	0.0	163.0	0.0	7.0	0.0	4.0	31.0	2.0	0.0	8.0	22.0	10589.0
14 Non-ferrous metals		10.0	2.0	0.0	0.0	1.0	7.0	0.0	23.0	0.0	3.0	0.0	3.0	7.0	2.0	1.0	0.0	18.0	5003.0
15 Fabricated metal prod		166.0	541.0	66.0	22.0	136.0	413.0	8.0	622.0	0.0	84.0	0.0	47.0	228.0	149.0	47.0	202.0	143.0	15031.0
16 Machinery & equipme		355.0	152.0	7.0	2.0	52.0	141.0	14.0	75.0	0.0	425.0	0.0	66.0	235.0	67.0	41.0	184.0	165.0	9820.0
17 Office, accounting & c		135.0	24.0	1.0	7.0	423.0	1171.0	36.0	132.0	0.0	849.0	0.0	555.0	363.0	336.0	28.0	321.0	157.0	8846.0
18 Electrical machinery d		48.0	60.0	2.0	2.0	29.0	519.0	17.0	63.0	0.0	106.0	0.0	35.0	54.0	10.0	18.0	163.0	47.0	5099.0
19 Radio, television & cc		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20 Medical, precision & c		7.0	2.0	0.0	0.0	23.0	102.0	3.0	7.0	0.0	123.0	0.0	39.0	120.0	109.0	1132.0	32.0	68.0	2469.0
21 Motor vehicles, trailer		28.0	371.0	0.0	0.0	94.0	128.0	3.0	14.0	0.0	19.0	0.0	25.0	80.0	29.0	2.0	15.0	23.0	9235.0
22 Building & repairing c		3.0	0.0	137.0	0.0	2.0	1.0	0.0	6.0	0.0	0.0	0.0	1.0	1057.0	0.0	0.0	1.0	1.0	1281.0
23 Aircraft & spacecraft		13.0	32.0	0.0	805.0	255.0	9.0	0.0	5.0	0.0	12.0	0.0	12.0	146.0	0.0	2.0	20.0	18.0	2377.0
24 Railroad equipment &		0.0	501.0	0.0	0.0	13.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	676.0
25 Manufacturing nec; re		125.0	23.0	0.0	1.0	12.0	84.0	11.0	50.0	0.0	41.0	0.0	56.0	560.0	134.0	12.0	55.0	34.0	1894.0
26 Production, collection		799.0	265.0	2.0	15.0	573.0	205.0	56.0	685.0	0.0	246.0	0.0	610.0	338.0	352.0	132.0	218.0	270.0	12328.0
27 Manufacture of gas; di		213.0	6.0	0.0	1.0	14.0	36.0	1.0	24.0	0.0	13.0	0.0	34.0	17.0	11.0	20.0	24.0	13.0	2418.0
28 Steam and hot water s		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 Collection, purificatio		130.0	0.0	5.0	0.0	1.0	0.0	9.0	256.0	0.0	301.0	0.0	451.0	95.0	45.0	65.0	82.0	42.0	2911.0
30 Construction		490.0	547.0	4.0	8.0	198.0	11.0	24.0	1749.0	0.0	40.0	0.0	88.0	975.0	7.0	20.0	19.0	20.0	5972.0
31 Wholesale & retail tra		1184.0	3839.0	44.0	601.0	2351.0	3253.0	613.0	1932.0	0.0	1356.0	0.0	1913.0	721.0	323.0	1265.0	1153.0	1283.0	53101.0
32 Hotels & restaurants		146.0	240.0	15.0	96.0	420.0	588.0	491.0	39.0	0.0	640.0	0.0	2766.0	882.0	147.0	21.0	432.0	381.0	12913.0
33 Land transport; transp		261.0	1484.0	3.0	164.0	507.0	476.0	52.0	193.0	0.0	221.0	0.0	415.0	284.0	96.0	266.0	259.0	185.0	15684.0
34 Water transport		3.0	3.0	780.0	4.0	2.0	24.0	0.0	8.0	0.0	25.0	0.0	24.0	35.0	2.0	0.0	72.0	28.0	1561.0
35 Air transport		98.0	35.0	7.0	580.0	133.0	496.0	192.0	36.0	0.0	382.0	0.0	1078.0	698.0	132.0	53.0	210.0	106.0	6949.0
36 Supporting and auxilia		395.0	316.0	733.0	1553.0	2065.0	270.0	77.0	281.0	0.0	473.0	0.0	1144.0	1104.0	81.0	72.0	93.0	90.0	19677.0
37 Post & telecommunica		947.0	533.0	25.0	123.0	1035.0	754.0	1314.0	879.0	0.0	1115.0	0.0	1734.0	1832.0	368.0	435.0	821.0	1045.0	20905.0
38 Finance & insurance		852.0	598.0	29.0	186.0	384.0	527.0	12350.0	3552.0	0.0	438.0	0.0	2185.0	1834.0	351.0	523.0	507.0	357.0	35467.0
39 Real estate activities		1941.0	1083.0	10.0	327.0	1120.0	1087.0	706.0	11786.0	0.0	143.0	0.0	3499.0	275.0	58.0	145.0	605.0	182.0	38048.0
40 Renting of machinery		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41 Computer & related ac		411.0	460.0	116.0	188.0	1132.0	297.0	1085.0	697.0	0.0	2752.0	0.0	2194.0	1865.0	93.0	110.0	169.0	483.0	20068.0
42 Research & developm		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43 Other Business Activi		2072.0	1154.0	97.0	269.0	1351.0	391.0	3317.0	4824.0	0.0	3288.0	0.0	5745.0	1765.0	311.0	1322.0	1650.0	1879.0	54396.0
44 Public admin. & defer		35.0	513.0	2.0	2.0	511.0	276.0	82.0	144.0	0.0	512.0	0.0	753.0	2919.0	156.0	59.0	159.0	171.0	8138.0
45 Education		67.0	41.0	4.0	14.0	115.0	22.0	278.0	81.0	0.0	261.0	0.0	458.0	182.0	174.0	31.0	72.0	213.0	2755.0
46 Health & social work		9.0	4.0	1.0	0.0	66.0	51.0	14.0	7.0	0.0	14.0	0.0	21.0	86.0	20.0	242.0	62.0	54.0	1110.0
47 Other community, soc		690.0	18.0	2.0	11.0	18.0	28.0	99.0	354.0	0.0	581.0	0.0	1082.0	95.0	87.0	11.0	1397.0	100.0	5804.0
48 Private households wi		121.0	28.0	0.0	2.0	47.0	48.0	45.0	103.0	0.0	176.0	0.0	353.0	204.0	57.0	423.0	79.0	199.0	2747.0
SBFD including OTHER		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Noncomparable imports(c		0.0	5.0	0.0	0.0	0.0	27.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.0
r1 Intermediate consumpt		20532.0	14048.0	2163.0	6179.0	13722.0	13424.0	21313.0	30479.0	0.0	16605.0	0.0	30179.0	22170.0	4490.0	7547.0	11091.0	9900.0	539567.0
r2 Net taxes on products		1337.0	1152.0	62.0	1516.0	476.0	670.0	672.0	1231.0	0.0	618.0	0.0	1006.0	477.0	153.0	202.0	350.0	467.0	18325.0
r3 Intermediate consumpt		21869.0	15200.0	2225.0	7695.0	14198.0	14094.0	21985.0	31710.0	0.0	17223.0	0.0	31185.0	22647.0	4643.0	7749.0	11441.0	10367.0	557892.0
r4 Value Added		13237.0	12778.0	598.0	5385.0	11992.0	18087.0	35389.0	74012.0	0.0	14049.0	0.0	27578.0	23710.0	26750.0	29339.0	14008.0	12980.0	542831.0
r5 Gross Operating Surpl		4608.0	4443.0	8.0	2039.0	5838.0	9670.0	13890.0	62321.0	0.0	2796.0	0.0	5856.0	3386.0	2950.0	4988.0	5294.0	3234.0	235465.0
r6 Compensation of Emp		8275.0	7363.0	585.0	3217.0	5900.0	7765.0	18168.0	8067.0	0.0	10809.0	0.0	20910.0	20053.0	23480.0	23941.0	8255.0	9361.0	286610.0
r7 Net taxes on productio		354.0	972.0	5.0	129.0	254.0	652.0	3331.0	3624.0	0.0	444.0	0.0	812.0	271.0	320.0	410.0	459.0	385.0	20756.0
r8 Industry Output		35106.0	27981.0	2829.0	13084.0	26187.0	32183.0	57391.0	105728.0	0.0	31273.0	0.0	58756.0	46196.0	31395.0	37086.0	25455.0	23353.0	1100720.0

Country Australia
Year 1999
4/4

Valuation Basic price
Type Industry - industry symmetric, total
Currency Mill. Aus\$

Final Demands

	Final consumption expenditure by households	Final consumption expenditure by non-profit organisations serving households	Final consumption expenditure by government	Gross fixed capital formation	Changes in Inventories	Valuables	Exports	Imports	Discrepancy
Industry	Industry								
1 Agriculture, hunting, forestry and fishing	4908.0	0.0	342.0	1317.0	432.0	0.0	8522.0	880.0	0.0
2 Mining and quarrying (energy)	359.0	0.0	1.0	82.0	-26.0	0.0	11866.0	3988.0	0.0
3 Mining and quarrying (non-energy)	566.3	13.5	249.7	69.5	-32.6	0.9	15067.4	3048.3	0.0
4 Food products, beverages and tobacco	27263.0	0.0	0.0	333.0	835.0	0.0	11636.0	5750.0	0.0
5 Textiles, textile products, leather and footwear	8410.0	0.0	0.0	152.0	281.0	0.0	2367.0	6938.0	0.0
6 Wood and products of wood and cork	85.0	0.0	0.0	20.0	171.0	0.0	640.0	1171.0	0.0
7 Pulp, paper, paper products, printing and publishing	3941.0	0.0	99.0	1212.0	366.0	0.0	830.0	5016.0	0.0
8 Coke, refined petroleum products and nuclear fuel	3204.0	0.0	0.0	4.0	364.0	0.0	948.0	1238.0	0.0
9 Chemicals excluding pharmaceuticals	2887.0	0.0	7.0	38.0	-166.0	0.0	1963.0	7366.0	0.0
10 Pharmaceuticals	2036.0	0.0	2314.0	28.0	312.0	0.0	962.0	3841.0	0.0
11 Rubber & plastics products	963.0	0.0	0.0	310.0	312.0	0.0	491.0	3849.0	0.0
12 Other non-metallic mineral products	166.0	0.0	0.0	75.0	420.0	0.0	263.0	1498.0	0.0
13 Iron & steel	1.0	0.0	0.0	191.0	224.0	0.0	1611.0	1984.0	0.0
14 Non-ferrous metals	20.0	0.0	0.0	235.0	-18.0	0.0	8766.0	938.0	0.0
15 Fabricated metal products, except machinery & equipment	588.0	0.0	0.0	1326.0	121.0	0.0	577.0	2556.0	0.0
16 Machinery & equipment, nec	3046.0	0.0	0.0	7691.0	34.0	0.0	2033.0	11654.0	0.0
17 Office, accounting & computing machinery	1810.0	0.0	0.0	5762.0	42.0	0.0	863.0	13094.0	0.0
18 Electrical machinery & apparatus, nec	324.0	0.0	1.0	1269.0	45.0	0.0	759.0	3258.0	0.0
19 Radio, television & communication equipment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20 Medical, precision & optical instruments	1523.0	0.0	0.0	1985.0	-157.0	0.0	785.0	4751.0	0.0
21 Motor vehicles, trailers & semi-trailers	9778.0	0.0	0.0	9213.0	177.0	0.0	2077.0	13894.0	0.0
22 Building & repairing of ships & boats	522.0	0.0	0.0	474.0	9.0	0.0	162.0	482.0	0.0
23 Aircraft & spacecraft	108.0	0.0	0.0	601.0	-80.0	0.0	279.0	1387.0	0.0
24 Railroad equipment & transport equip n.e.c.	0.0	0.0	0.0	459.0	-34.0	0.0	39.0	76.0	0.0
25 Manufacturing nec; recycling (include Furniture)	4629.0	0.0	0.0	2063.0	57.0	0.0	951.0	3587.0	0.0
26 Production, collection and distribution of electricity	5175.0	0.0	18.0	826.0	0.0	0.0	30.0	11.0	0.0
27 Manufacture of gas; distribution of gaseous fuels through mains	936.0	0.0	0.0	7.0	0.0	0.0	1.0	3.0	0.0
28 Steam and hot water supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 Collection, purification and distribution of water	3308.0	0.0	216.0	225.0	0.0	0.0	8.0	13.0	0.0
30 Construction	4.0	0.0	2799.0	64288.0	4.0	0.0	60.0	16.0	0.0
31 Wholesale & retail trade; repairs	65970.0	0.0	16.0	11272.0	213.0	0.0	7461.0	322.0	0.0
32 Hotels & restaurants	21649.0	0.0	2.0	3.0	0.0	0.0	2856.0	2317.0	0.0
33 Land transport; transport via pipelines	6290.0	0.0	925.0	1283.0	25.0	0.0	4718.0	945.0	0.0
34 Water transport	497.0	13.8	251.1	0.4	1.5	1.0	1009.6	502.0	0.0
35 Air transport	5025.7	64.7	1257.1	3.1	6.1	2.0	4741.0	4957.7	0.0
36 Supporting and auxiliary transport activities; activities of travel agency	643.0	0.0	3610.0	72.0	0.0	0.0	2462.0	276.0	0.0
37 Post & telecommunications	8448.0	0.0	86.0	2918.0	4.0	0.0	1378.0	1556.0	0.0
38 Finance & insurance	21731.0	0.0	8.0	144.0	0.0	0.0	1472.0	1433.0	0.0
39 Real estate activities	64496.0	0.0	-48.0	3570.0	0.0	0.0	532.0	870.0	0.0
40 Renting of machinery & equipment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41 Computer & related activities	525.0	0.0	2027.0	8453.0	0.0	0.0	1590.0	1391.0	0.0
42 Research & development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43 Other Business Activities	2916.0	0.0	1146.0	733.0	0.0	0.0	2074.0	2509.0	0.0
44 Public admin. & defence; compulsory social security	846.0	0.0	36826.0	237.0	0.0	0.0	150.0	0.0	0.0
45 Education	7781.0	0.0	19899.0	119.0	0.0	0.0	1656.0	815.0	0.0
46 Health & social work	10473.0	0.0	25588.0	28.0	0.0	0.0	271.0	384.0	0.0
47 Other community, social & personal services	14344.0	0.0	5596.0	330.0	0.0	0.0	545.0	1164.0	0.0
48 Private households with employed persons & extra-territorial organ	13892.0	0.0	6695.0	0.0	0.0	0.0	96.0	78.0	0.0
SBFD including OTHER ADJUSTMENTS(Purchases on the domestic t	0.0	0.0	0.0	0.0	0.0	0.0	0.0	121807.0	0.0
Noncomparable imports(cif/fob adj. Direct purchases abroad by resident:	266.0	0.0	0.0	92.0	10.0	0.0	0.0	367.0	0.0
r1 Intermediate consumption /final use at basic prices	332353.0	0.0	109931.0	129513.0	3952.0	0.0	107568.0	4200.0	0.0
r2 Net taxes on products	22071.0	0.0	0.0	7716.0	717.0	0.0	256.0	0.0	0.0
r3 Intermediate consumption /final use at purchasers prices	354424.0	0.0	109931.0	137229.0	4669.0	0.0	107824.0	0.0	0.0
r4 Value Added	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
r5 Gross Operating Surplus (=net Oper.Surp+depr of fix cap.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
r6 Compensation of Employees	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
r7 Net taxes on production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
r8 Industry Output	354418.0	0.0	108266.0	138999.0	4662.0	0.0	107825.0	0.0	0.0