An introduction to the IBIS database*

Stuart Kells

Melbourne Institute
The University of Melbourne

and

Christopher Worswick

Department of Economics
The University of Melbourne

Melbourne Institute of Applied Economic and Social Research
The University of Melbourne
Parkville, Victoria 3052 Australia

Telephone **(03) 9344 5288**
Fax **(03) 9344 5630**
Email **r.qin@iaesr.unimelb.edu.au**
WWW Address **http://www.ecom.unimelb.edu.au/iaesrwww/home.html**

Abstract

This paper describes the IBIS database. The database contains detailed longitudinal information on an annual basis for medium to large firms in Australia over the period 1979 through to the present. The strengths and weaknesses of the data are discussed. The paper introduces two panels extracted from the database. The first ("long and shallow") panel contains 333 firms and extends from 1983 to 1994. The second ("short and deep") panel follows 939 firms over the period 1989 to 1994.

2

1. Introduction

The IBIS database has been made available by IBIS Business Information Pty Ltd to the Melbourne Institute for the purposes of undertaking economic research into the dynamics of large Australian firms.[1] This research is being conducted at the Melbourne Institute under the banner of the IBIS Collaborative Program in Enterprise Dynamics, a program sponsored by IBIS Business Information, the Victorian Department of State Development and the Australian Research Council. The Program's use of the IBIS database is pursuant to an intellectual property agreement signed by the Program participants. Accordingly, the Melbourne Institute is not in a position to make the data generally available to researchers. Instead, restricted access to the data has been possible for researchers working within the Program.

This paper describes the origins and sample design of the IBIS database. In Section 2 of the paper, the database is described and the strengths and weaknesses of the data are discussed. The discussion is intended to act as a guide for researchers using the IBIS data. Section 3 introduces two panels extracted from the database. The panels are introduced in order to show the kind of analysis that can be undertaken using the IBIS data.

2. The IBIS database

The IBIS database contains detailed longitudinal information on an annual basis for medium to large firms in Australia over the period 1979 through to the present. The database covers companies Australian-owned and foreign-owned private and public companies in all industries.

---

[1] IBIS Business Information Pty Ltd specialises in providing a range of corporate information services to its commercial clients.

In total, the database currently has historical data for approximately 6,000 firms. Of these, approximately 2,900 firms were present on the database in 1994.[2]

Firm-level information in the IBIS data set

The IBIS data set contains detailed financial information including revenue, profit, tax, assets, liabilities and depreciation. The database also contains information about shareholders, the number of employees, subsidiary information, industry information and details relating to senior personnel.

The distribution of firms in the IBIS data set by survey year is presented in Table 1. It is apparent from the table that the sample inclusion criteria have changed considerably over the life of the survey. The number of firms rose from 312 in 1979 to around 3,000 fifteen years later.[3] The changing inclusion criteria reflect the fact that the database has served different purposes at different times. It was first compiled in 1982 to contain the "top 500" Australian companies (by revenue) for Australian Business magazine. At that time, historical information on the companies was obtained dating back to 1979. Annual information on these companies was collected in the subsequent years. In 1987, the database was expanded to the "top 1,000" Australian companies for the magazine Business Review Weekly.[4] In 1990, the database was further expanded so that it contained (skeletal) data on all Australian companies with revenue

---

[2] The figures in the present paper were current for the version of the IBIS database that was available at the Melbourne Institute from late 1995 to late 1997. At the time of writing the Institute was in the process of installing the latest version of database, a regular task as the database is being updated continually.

[3] The large drop in the number of firms from 1994 to 1995 is due to some 1995 accounts not being available at the time of compilation of the current Enterprise Database.

[4] Again, historical data for the newly added firms was obtained for the preceding one or two years.

greater than A$20 million. This skeleton was "fleshed out" for the largest 2,000 companies (again by revenue) to create IBIS's "active" database product, the IBIS Enterprise Database.

Table 1: Number of firms in the IBIS data set by survey year

Year	Number of Firms
1979	312
1980	412
1981	481
1982	516
1983	836
1984	1245
1985	1295
1986	1462
1987	1563
1988	1759
1989	1779
1990	2082
1991	2457
1992	2959
1993	3362
1994	2890
1995	1455

Strengths of the IBIS database

The IBIS database is unique in Australia in that it contains detailed, firm-level information for a large number of firms across time. The large number of firms in each survey year permits comparisons of the activities and performance of different types of firms in the same year. In addition, due to the longitudinal nature of the data, it is possible to follow the majority of firms on the database over two or more years, thus facilitating the analysis of the dynamic behaviour of firms.

The data have been gathered from both public sources (annual reports, "Business Who's Who," Australian Securities Commission annual returns, the Local Government Directory and other sources) and via an annual mail-out questionnaire survey conducted by IBIS.

Firm-level information available in the data set can be grouped into the following categories: i. accounting profit and loss items, ii. balance sheet items, iii. cashflow statement items, iv. employment information, v. shareholder details, vi. subsidiaries information, vii. industry information, viii. company identifiers and ix. takeover information.[5]

(i) Accounting profit and loss items

The database contains all the key profit and loss items to be found in a standard set of Australian accounts. These include sales revenue, other revenue, audit fees, interest paid, interest received, net profit before tax, income tax, minority interests in profit, net profit after tax, equity profit, abnormal items and extraordinary items.

(ii) Balance sheet items

Like the profit and loss items, the IBIS database is very comprehensive with respect to balance sheet items. The balance sheet items on the database include total assets, shareholders' funds, total current liabilities, cash, trade debtors, inventories, other current assets, total current assets, total non-current liabilities, intangible assets, tangible assets and trade creditors.

(iii) Cashflow statement items

The cashflow information on the database is less comprehensive than the profit and loss information and the balance sheet information. The cash flow items available are depreciation, R&D expenditure and dividends paid to associated companies.

---

[5] A more detailed list of categories and information within each category is presented in Appendix 1.

(iv) Employment information

The database provides the number of employees for each firm in each year, as well as the names and positions of directors (as at the latest compilation date).

(v) Shareholder details

Shareholder details on the database include the names of major shareholders, the percentage of issued shares held by these shareholders and the country of incorporation of (incorporated) shareholders. The inclusion criterion for shareholder details is whether the information is available. Accordingly, while for many firms information on the largest 20 to 50 shareholders is held, for many others details for only the largest two to five shareholders, or often for no shareholders, are available.

(vi) Subsidiaries information

Subsidiary information includes an identifier code to link the subsidiary with its parent, the name of the subsidiary, the type of subsidiary (whether the subsidiary is wholly owned, a holding company, a joint venture, an associated company—ie. the shareholding is between 20 and 50 per cent—or whether the company has no subsidiaries), the percentage of the subsidiary owned by the parent, the subsidiary's contribution to the parent's profit, the country of incorporation of the subsidiary and the dates (if applicable) at which subsidiaries were purchased or sold.

(vii) Industry information

The database provides the Australian Standard Industrial Classification (ASIC) and Australian and New Zealand Standard Industrial Classification (ANZSIC) code for each company where it is available, as well as the ASIC code for firms' segments (divisions).

(viii) Company identifiers

These include the company's full name, the type of company that it is (public or private, government or non-government, Australian owned or foreign owned, listed or unlisted, whether it is a mutual society, an association, a cooperative, a partnership etc.), the company's head office address, telephone and facsimile numbers, ASX code where applicable, ACN number, State and date of incorporation, whether the company changed its name and whether it was ever taken over.

(ix) Takeover information

The database contains basic takeover information including the date of the acquisition, the offeror and the offeree.[6]

In addition to the above information, the database contains information on results balance dates, as well as brief information on reporting segments (segment revenue, profit and assets).

For a significant number of firms on the database, information is available for many years; for some firms we have data covering 17 years of their operations. This longitudinal aspect of the database is a major strength and permits a variety of dynamic analyses to be performed. The number of years of data available for firms on the database is summarised in Table 2. It can be seen that over 12 per cent of firms have ten or more years of data available on the database, while just under 90 per cent of firms appear for two or more years.

---

[6] Melbourne Institute researchers also have access to the Corporate Adviser takeover database, which provides more comprehensive information including share price effects and specific offer details (proportion cash, scrip etc.).

The information contained in the database can be used to derive, infer or proxy certain other variables not explicitly available in the data. For example, it is possible to derive an approximate measure of operating cash flow by adding back net interest paid and depreciation to profit before tax; see Bosworth, Kells and Jobome (1997).

Since the company name is available on each database record, it is possible to link the IBIS database with other data sources, in order to expand the range of variables covered. A number of recent research projects have supplemented the IBIS data in this way. For example, Brailsford and Knights (1997) combined the IBIS data with comprehensive information on takeovers from the Corporate Adviser database. Other research has linked the IBIS data with information on industrial disputes.

Table 2: Proportion of firms by number of years on the database

Duration	Percentage of firms	Cumulative
17 years	1.5	1.5
16 years	1.2	2.7
15 years	0.8	3.6
14 years	1.0	4.5
13 years	1.5	6.0
12 years	2.6	8.7
11 years	1.8	10.5
10 years	1.6	12.1
9 years	2.2	14.3
8 years	3.9	18.2
7 years	4.1	22.3
6 years	6.5	28.8
5 years	7.2	36.1
4 years	10.4	46.5
3 years	14.2	60.7
2 years	28.9	89.5
1 year	10.5	100.0

Issues concerning the use of the IBIS database

Missing values

A large number of firms on the database do not have data for certain variables for certain years. While many variables such as revenue and employment are largely complete for all firms, for some variables as many as 50 per cent of records are blank. The main reason for this is that the data for many firms are simply not available. Private companies are frequently not required to lodge even the most basic financial accounts with the ASC, provided they comply with certain basic requirements. So, if these firms are not approached, or when they are approached they refuse to provide their details, there is little way of discovering this information. As the number of firms in the database has grown, the proportion of small private companies has also grown, so that the proportion of missing values has grown in concert.

Accounting data

The database contains accounting data and so is vulnerable to all the standard criticisms of accounting data. Such data are distorted by accounting adjustments such as depreciation, goodwill and transfer pricing policies, and so may only distantly reflect the underlying economic reality. Further, many important variables for economists (such as investment) are often not published in companies' statutory accounts.

Researchers using the IBIS database have had some success in overcoming these problems. It has often been possible to adjust the accounting figures—such as by adding back the depreciation charge to earnings before interest and tax, or by considering, say, non-current tangible assets rather than total assets—to obtain economically more meaningful figures. In the case of unavailable variables, it has often been possible to infer or to construct variables using

the data available. Nevertheless, authors must recognise the need to treat accounting data with caution.

Profile of the IBIS database

This section provides a brief overview of the "shape" of the IBIS database. Table 3 reports the means of certain key financial variables from the database, as well as annual mean employment. The means of the financial variables are deflated using the GDP(E) deflator (June 1990 = 100). Missing values are excluded from the calculation of the means. "Revenue" is total revenue (sales revenue plus other revenue). "Tax" is income tax paid out of profits; it excludes other taxes such as wholesale sales tax. For the large majority of firms, "employment" is the total number of employees in the firm (ie. it counts part-time employees in the same way as full-time employees); the one important exception to this is government firms, which report the number of equivalent full-time employees.

Table 3: Means of key financial variables and employment from the IBIS database

	Revenue	Net profit before tax	Tax	Total assets	Shareholders' funds	Employment
	(A$m)	(A$m)	(A$m)	(A$m)	(A$m)	
1979	491.6	41.8	0.0	921.2	324.6	4,046
1980	565.6	61.1	2.8	1088.2	391.4	4,086
1981	549.7	44.8	5.4	1072.1	384.0	3,822
1982	538.9	36.4	9.5	1049.5	280.9	3,791
1983	392.0	31.5	8.2	836.8	251.2	2,961
1984	351.8	35.2	7.2	782.9	247.0	3,049
1985	382.4	39.8	8.3	760.6	255.0	2,680
1986	370.5	46.1	7.7	842.0	256.3	2,123
1987	382.9	35.2	7.8	884.8	260.2	2,123
1988	392.9	38.0	8.1	906.7	259.2	2,406
1989	407.8	37.1	8.5	943.9	273.3	2,486
1990	363.0	24.0	6.0	911.0	279.0	2,236
1991	312.3	13.6	4.8	836.1	264.8	1,661
1992	261.9	10.5	4.8	818.1	264.8	1,267
1993	234.2	20.7	5.6	825.0	274.7	1,146
1994	254.9	26.0	6.5	842.8	291.2	1,300
1995	339.4	40.1	11.9	1267.3	363.1	1,603

Note: The financial variables were deflated using the GDP(E) deflator (June 1990 = 100).

Table 3 shows how average employment on the database has declined from 4,046 persons in 1979 to 1,300 in 1994. The cause of this trend is mainly the growth in the number of firms present on the database. In the earliest years of the database, data for only the largest firms were obtained. Gradually, more and more smaller firms have been added, and so the average size of firms has declined. As the Table shows, average real revenue declined from $492 million in 1979 to $255 million in 1994.

Table 4 shows the distribution of firms on the database across different company types. The most common company structure on the database is the proprietary (private) company, representing over 45 per cent of firms on the database. Approximately 75 per cent of firms on the database are Australian owned. Firms listed on the Australian Stock Exchange make up 15.5 per cent of the total number of firms on the database. Approximately 16 per cent of the firms on the database belong to the public sector (this includes local councils).

Table 4: Company type[7]

Type	(%)
Australian proprietary company	29.5
Foreign owned proprietary company	15.8
Australian listed industrial company	12.3
State government	8.4
Unlisted foreign owned public company	8.4
Unlisted Australian public company	7.1
Local government	5.1
Undisclosed, Australian owned	3.2
Australian listed mining company	2.7
Federal government	2.3
Partnership	1.1
Co-operative	0.9
Credit union	0.7
Undisclosed, foreign owned	0.6
Association	0.5
Listed trust	0.4
Mutual society	0.4
Building society	0.3
Unlisted trust	0.1
Foreign owned listed industrial company	0.0
	100.0

Table 5 contains information on location and place of incorporation of firms in the database, by Australian State and foreign country. As the table shows, the database contains a small number of New Zealand and PNG firms. The most common State of head office location is NSW, with just under 40 per cent of firms located in NSW, and the majority of these in Sydney. Similarly, the most frequently recorded State of incorporation is NSW (36 per cent), followed not far behind by Victoria (27 per cent).

---

[7] Missing values are excluded from the calculation of the percentage. Company type is the recorded type as at the latest appearance of the firm on the database. Approximately 37 per cent of all final entries for company type are blank.

Table 5: Present head office location and State of incorporation[8]

	Head office location	State of incorporation
	(% of firms)	(% of firms)
Australian Capital Territory	0.7	5.6
New South Wales	39.7	35.9
Northern Territory	0.3	0.6
Queensland	9.5	9.0
South Australia	5.1	5.9
Tasmania	1.3	2.0
Victoria	26.7	26.6
Western Australia	7.3	6.8
New Zealand	9.3	7.2
Papua New Guinea	0.1	0.3
	100.0	100.0

The firm location recorded on the database is the location of the firm's head office. This becomes an important issue where a firm has significant operations outside the region in which its head office is located.

The pattern of additions of firms to and departures of firms from the database is shown in Table 6. The number of additions relative to the number of firms in each year is generally higher than the number of departures—particularly in the earlier years of the database—reflecting the fact that the database has grown over time. On average, excluding 1979 and 1994, approximately 77 per cent of firms present on the database in any given year were present in the preceding year.

---

[8] Head office location is taken from the most recent entry for each firm in the database.

Table 6: Additions and attrition by year

Year	Number of records	Additions/number of records (%)	Departures/number of records (%)
1979	312	100.0	0.0
1980	412	24.5	0.0
1981	481	19.8	0.4
1982	516	14.7	1.4
1983	836	36.6	2.4
1984	1245	36.1	5.2
1985	1295	9.7	12.0
1986	1462	23.1	9.7
1987	1563	17.5	14.3
1988	1759	23.4	16.9
1989	1779	16.5	15.2
1990	2082	25.9	9.4
1991	2457	22.0	10.1
1992	2959	25.0	15.3
1993	3362	25.1	23.2
1994	2890	10.6	49.9

2. The panels

The period from 1983 to 1994 was important for the Australian economy. In addition to two major recessions and an asset price crash, the period was one in which Australian businesses experienced the partial deregulation of the financial system and the rapid internationalisation of the economy. As an example of what researchers can do with the IBIS data, this Section introduces two data panels. One panel allows researchers to follow a cohort of large Australian firms over a long period. The second panel permits the analysis of the experiences of medium to large firms over a shorter period. The panels will be used elsewhere to analyse the dynamics of Australian firms over the period 1983 to 1994.[9]

Description of the panels

Two data panels were constructed from the IBIS database. The panels differ in the period of time they cover and the number of firms they include. The longer panel covers the period 1983

---

[9] For example Dawkins et al. (1997).

to 1994. The shorter panel extends from 1989 to 1994. Australian firms only were included in the panels (the small number of New Zealand and PNG firms that appear on the IBIS database were excluded).

Firms were included in the panels if they satisfied a minimal data requirement for each year of the panels. The minimal data requirement was that the firm had a value in the revenue field. Accordingly, firms that were included have a value for revenue in each year of the panels (also, they all have a value for accounting period, company type, industry and some other variables).

It was noted above that the IBIS database revenue field is the most complete of the financial data fields (that is, it has the lowest proportion of missing values). Accordingly, as the inclusion criterion was based on the revenue field, the panels are not balanced with respect to some other financial variables such as profits and shareholders' funds. While many firms have, say, a figure for net profit after tax for each year of the panels, others have this information for only some of the years of the panels, while a small number of others have this data for no years.

The database fields

In this section the database fields that feature in the panel are described. The panels contain a selection of financial variables as well as employment, the one- and two-digit Australian Standard Industrial Classification (ASIC) codes, the company type (whether it is foreign owned or Australian owned, listed or unlisted and whether it is of the public sector or the private sector). The financial variables on the panels are revenue, interest paid, interest received, profit, income tax, total assets, shareholders' funds and depreciation. The financial variables are rendered real by applying the gross domestic product (expenditure based) implicit price deflator (1990 = 100).

The revenue figure is the sum of sales revenue and other revenue. The figure is annualised; for example, where the figure applies to an accounting period of less than twelve months (a situation which may arise when a company changes its balance date), the figure is "grossed up" so as to be comparable to other years' figures. (Similarly, figures for accounting periods with greater than twelve months are discounted.) This process is applied to all the flow variables in the panel (revenue, interest paid, interest received, profit, tax and depreciation), and to none of the stock variables. In general, then, the flow variables have the following factor applied: (12/number of months in accounting period).

The profit figure in the panels is net profit before tax. The before tax figure is used to abstract from the direct effect of corporate income tax on profits. The profit figure is inclusive of abnormal and extraordinary items. Earnings before interest, depreciation and tax is arrived at by adding the net interest and depreciation expenses to net profit before tax. Trivially, profit after tax is obtained by subtracting company income tax paid from the net profit before tax figure. An "effective tax rate" can be constructed by comparing actual tax paid with net profit before tax (though this figure should be treated with some caution as it does not take account of the effect of prior tax losses carried forward).

The panels include two balance sheet items: total assets and shareholders' funds (net assets). The difference between a firm's total assets figure and its shareholders' funds is its total liabilities. These balance sheet items permit the construction of a rough "gearing" measure, by taking the ratio of a firm's shareholders' funds to its total assets.

For private sector companies on the database, the employment figure is generally total number of employees rather than full time equivalent employees. This is just one of a number of differences between public sector and private sector companies on the database. Such

differences in the accounting practices of government and non-government firms have led us to perform much of the analysis with government firms excluded or separately treated.

With respect to terminology, in the analysis that follows we have avoided using the phrases "private company" and "private firm" as the word "private" has two separate connotations—one to do with whether a firm is government owned and one concerning its legal status under the corporations law—and so introduces a degree of ambiguity. Instead we have used the phrases "government owned" and "public sector" to denote firms majority owned by one of the tiers of government, and "privately owned" or "private sector" to indicate firms that are majority owned by non-government interests.

Profile of firms in the long panel (1983-1994)

There are 333 firms on the long panel, giving 3,996 observations over the twelve years of the panel. Of the 333 firms, 219 (66 per cent) are majority Australian-owned and 114 are majority foreign-owned. With respect to government ownership, 47 firms (14 per cent) are government-owned while the remaining 286 firms are private-sector companies. All of the public sector firms are Australian-owned. The majority of the firms in the panel are not listed on the Australian Stock Exchange: 132 firms (40 per cent of the sample) are listed while the remaining 201 firms (60 per cent) are unlisted.

The one-digit ASIC classification most heavily represented in the panel is manufacturing. The distribution across one-digit industry classifications is as follows: manufacturing 34 per cent of firms; finance, property and business services 27 per cent; construction and wholesale and retail trade 19 per cent; mining six per cent; transport and storage five per cent; with the remaining nine per cent spread over electricity, gas, water and sewerage (4.5 per cent), recreation, personal and other services (2.4 per cent), public administration and defence (0.9 per cent), community services (0.9 per cent) and agriculture, forestry, fishing and hunting (0.3 per cent). The

commonest two-digit industries represented by firms in the panel are wholesale trade (41 firms), finance and investment (40 firms), chemical, petroleum and coal products (29 firms), insurance and services to insurance (25 firms) and property and business services (25 firms).

Table 7: Profile of long panel (all firms): means of financial variables and employment

Variable	Average	Number of observations
	(A$m)	
Total revenue	1,027.6	3,996
Interest paid	132.9	3,615
Interest received	152.6	3,605
Net profit before tax	77.2	3,867
Tax	26.8	3,207
Assets	2,479.8	3,906
Shareholders' funds	721.2	3,837
Depreciation	38.2	3,595
Variable	Average	Number of observations
Employment	5,112	3,368

Table 8: Profile of long panel (non-government firms): means of financial variables and employment

Variable	Average	Number of observations
	(A$m)	
Total revenue	1,030.9	3,432
Interest paid	127.6	3,187
Interest received	162.8	3,132
Net profit before tax	75.4	3,344
Tax	25.9	3,111
Assets	2,447.8	3,363
Shareholders' funds	663.2	3,357
Depreciation	31.4	3,130
Variable	Average	Number of observations
Employment	4,797	2,871

The means of the financial variables and the employment field from the long panel are shown in Table 7.

Table 8 shows the same series but with government firms excluded. As suggested above, there are good reasons to treat the published accounts of government-owned firms separately. For example, being owned by the government removes the financial uncertainty because of which private firms are forced to maintain relatively prudent balance sheets. The shareholders' funds of a public sector firm are essentially an accounting construct rather than risk capital (of course such comments are less applicable to corporatised public sector firms which have been re-organised so as to operate as if they were privately owned firms).

Profile of the short panel (1989-1994)

The short panel contains 939 firms and covers the period 1989 to 1994 (giving 5,634 observations). Foreign-owned firms make up 39 per cent of the short panel (362 firms compared to 577 Australian-owned firms), while government-owned firms comprise 16 per cent of the panel (148 firms, compared to 791 privately-owned firms). Firms that are owned by the Australian private sector make up 46 per cent of the panel. Again, no firm in the panel is both foreign-owned and government-owned. Of the 939 firms, 262 firms (28 per cent) are listed on the Australian Stock Exchange.

As is the case in the long panel described above, manufacturing firms make up the largest one-digit industry group in the short panel, while the agriculture, forestry, fishing and hunting classification has the smallest number of firms. Of the short panel, manufacturing firms constitute 31 per cent; construction and wholesale and retail trade firms 24 per cent; finance, property and business services 21.5 per cent; community services six per cent; mining firms 5.5 per cent; transport and storage four per cent; with the residual made up of recreation, personal and other services (3.5 per cent), electricity, gas, water and sewerage (2.7 per cent), public administration and defence (1.4 per cent) and agriculture, forestry, fishing and hunting (0.5 per cent).

Table 9: Profile of short panel (all firms): means of financial variables and employment

Variable	Average	Number of observations
	(A$m)	
Total revenue	560.1	5,634
Interest paid	65.8	4,756
Interest received	73.0	4,981
Net profit before tax	34.8	5,249
Tax	13.2	4,039
Assets	1,350.8	5,321
Shareholders' funds	427.0	5,298
Depreciation	21.3	5,113
Variable	Average	Number of observations
Employment	2,775	4,320

Table 10: Profile of short panel (non-government firms): means of financial variables and employment

Variable	Average	Number of observations
	(A$m)	
Total revenue	560.3	4,746
Interest paid	62.7	4,238
Interest received	78.4	4,261
Net profit before tax	31.2	4,410
Tax	12.2	3,923
Assets	1,299.9	4,481
Shareholders' funds	376.8	4,466
Depreciation	17.5	4,392
Variable	Average	Number of observations
Employment	2,597	3,554

The means of the financial variables and the employment field from the short panel are shown in Table 9. Table 10 presents the means of the same variables while excluding government firms from the sample.

Analysis of revenue field

This section presents a brief summary of the revenue field of the short panel. Table 11 decomposes the revenue field across Australian-owned firms and foreign-owned firms, and across government and non-governmnet firms.

Table 11: Analysis of revenue field, short panel: all firms

	1989	1990	1991	1992	1993	1994
Australian-owned (excluding government firms)						
Number	429	429	429	429	429	429
Total (A$m)	319,942.4	323,099.9	324,902.8	331,244.1	345,068.5	304,112.2
Average (A$m)	745.8	753.1	757.3	772.1	804.4	708.9
Median (A$m)	136.0	148.5	143.5	152.8	157.4	172.2
Foreign-owned						
Number	362	362	362	362	362	362
Total (A$m)	117,920.3	119,554.4	112,413.4	113,677.0	121,426.8	126,013.2
Average (A$m)	325.7	330.3	310.5	314.0	335.4	348.1
Median (A$m)	126.7	131.9	127.0	119.2	122.7	129.6
Government						
Number	148	148	148	148	148	148
Total (A$m)	74,920.3	78,033.0	79,523.0	84,618.1	90,575.2	88,488.5
Average (A$m)	506.2	527.3	537.3	571.7	612.0	597.9
Median (A$m)	212.1	220.6	232.7	242.3	253.9	254.8
All firms						
Number	939	939	939	939	939	939
Total (A$m)	512,783.0	520,687.3	516,839.1	529,539.2	557,070.5	518,613.9
Average (A$m)	546.1	554.5	550.4	563.9	593.3	552.3
Median (A$m)	138.8	149.2	146.5	148.3	155.0	168.1

The figures in Table 11 are distorted by the impact of four anomalous firms, all of which suffered year-to-year revenue movements of greater than A$5 billion (in 1990 prices). The four anomalous firms are AMP Society, DJL Limited, Industrial Equity Limited and Adelaide Steamship Limited. These changes were all due to restructuring or to terminally ill performance. No other firms in the panel experienced revenue changes of such a magnitude.

The following Table repeats the analysis of the revenue field with the four anomalous firms excluded.

Table 12: Analysis of revenue field, short panel: excluding four anomalous firms

	1989	1990	1991	1992	1993	1994
Australian-owned (excluding government firms)						
Number	425	425	425	425	425	425
Total (A$m)	297,984.7	303,429.5	298,005.3	286,809.1	289,579.6	293,671.2
Average (A$m)	701.1	714.0	701.2	674.8	681.4	691.0
Median (A$m)	135.4	147.5	140.5	150.5	153.7	168.1
Foreign-owned						
Number	362	362	362	362	362	362
Total (A$m)	117,920.3	119,554.4	112,413.4	113,677.0	121,426.8	126,013.2
Average (A$m)	325.7	330.3	310.5	314.0	335.4	348.1
Median (A$m)	126.7	131.9	127.0	119.2	122.7	129.6
Government						
Number	148	148	148	148	148	148
Total (A$m)	74,920.3	78,033.0	79,523.0	84,618.1	90,575.2	88,488.5
Average (A$m)	506.2	527.3	537.3	571.7	612.0	597.9
Median (A$m)	212.1	220.6	232.7	242.3	253.9	254.8
All firms						
Number	935	935	935	935	935	935
Total (A$m)	490,825.3	501,016.9	489,941.6	485,104.2	501,581.5	508,172.8
Average (A$m)	524.9	535.8	524.0	518.8	536.5	543.5
Median (A$m)	138.6	148.5	144.0	147.0	154.7	167.4

Conclusion

The IBIS database is a large and comprehensive database of (primarily) financial information relating to Australian firms. The database is unusual in its scope and in the length of time for which it has been compiled. The longitudinal aspect of the data set is valuable for researchers interested in studying the dynamics of Australian industry over recent decades. Issues to be addressed when using the data include the significant number of missing values for certain fields, and the fact that the database contains accounting data, data which can give a distorted picture of firms' operations. Despite these caveats, the database is a highly valuable resource.

References

Bosworth, Derek, Greg Jobome and Stuart Kells (1997) "Measuring the Performance of Australian Firms," mimeo, Melbourne Institute.

Brailsford, Tim and Stephen Knights (1997) "The Effects of Corporate Takeovers," mimeo,

Melbourne Institute.

Bosworth, Derek, Peter Dawkins, Mark Harris and Stuart Kells (1997) "Diversification and the

performance of Australian firms," mimeo, Melbourne Institute.

Appendix 1: Selected variables available from the IBIS database

Accounting profit and loss items	Sales revenue
	Other revenue
	Audit fees
	Interest paid
	Interest received
	Net profit before tax
	Income tax
	Minority interests
	Net profit after tax
	Abnormal items
	Extraordinary items
Balance sheet items	Total assets
	Shareholders' funds
	Current liabilities
	Current assets—cash
	Current assets—trade debtors
	Current assets—inventories
	Other current assets
	Total current assets
	Non-current liabilities
	Intangible assets
	Tangible assets
	Trade creditors
Cashflow items	Depreciation
	R&D expenditure
	Dividends paid to associated companies
Other accounting information	Results balance date
	Accounting period
Employment information	Number of employees
	Names and positions of directors
Major shareholder details	Names of major shareholders
	"As at" date of holding
	Percentage held
	Country of incorporation

Subsidiaries information	Parent name
	Subsidiary name
	Subsidiary type
	Percentage owned
	Contribution to parent's profit
	Country of incorporation
	Date purchased and/or sold
Industry information	ASIC code, ANZSIC code
	Segments' ASIC codes
Company identifiers	Full company name
	Abridged company name
	Company type
	Head office address
	Telephone, fax, telex
	ASX code
	ACN number
	State of incorporation
	Date of incorporation
	Name change if applicable
Takeover information	Date of action
	Offeror
	Offeree
Segment information	Segment revenue
	Segment profit
	Segment assets