



PPI Mini-paper

**Producer Price Indexes
for Business
Management Services
within Australia**

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1. INTRODUCTION

The Australian Bureau of Statistics (ABS) publishes a producer price index for business management services. The scope of this index is Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993 class 7855 'Business Management Services'. The time series for this price index commenced in September quarter 1998 and was first published April 2000. It is currently released as part of *Producer Price Indexes, Australia* (ABS Catalogue no. 6427.0), a quarterly suite of PPIs available within four weeks of the end of the reference period.

The key use of the business management services PPI is as a deflator in the preparation of the Australian National Accounts. This price index also contributes to the stage of production producer price indexes, and to an output PPI for property and business services (corresponding to ANZSIC Division L).

2. INDUSTRY OUTPUT

Business management services (ANZSIC class 7855) covers establishments mainly engaged in providing business analysis, efficiency or organisation and methods studies, personnel management, public relations consultancy or statistical services. The most prominent activities include business management consulting, marketing management, environmental consultancy, human resource management and consulting, public relations consultancy and motor vehicle fleet management.

A significant complication with the ANZSIC class 7855 is that this class is not comprised solely of management consultants. It has additionally been used to classify a large number of business services not easily classified elsewhere, and in some cases not readily recognisable as business management services.

ANZSIC class 7855 broadly corresponds to International Standard Industrial Classification (ISIC rev 3.1) class 7414, 'Business and management consultancy services'. However, ANZSIC 7855 is broader than ISIC 7414, in that motor vehicle fleet management is included in ANZSIC 7855 but excluded from ISIC 7414.

Note that the activities covered by the business management services PPI also broadly correspond to different services classified according to the Central Product Classification (CPC v1.1). ANZSIC 7855 is the industry of origin for CPC products as follows:

- Class 8311 - Management consulting services
- Class 8312 - Business consulting services
- Class 8319 - Other management services, except construction project management services
- Code 83131 - Environmental consulting services
- Subclass 73111 - Leasing or rental services concerning cars and light vans without operator (partial activities, ANZSIC 7855 being restricted to fleet management in this case).

Whilst ANZSIC classifies establishments based on their main economic activity, the business management services PPI is designed to capture price movements of the different services/activities defined by this classification. Many of the major firms supplying business management services are either arms of the dominant international accounting firms, or long established consultancy firms. In Australia, these businesses are amongst the largest revenue earners for those establishments providing business management services, and have a well-established place in the market due to their size, the comparatively large number of services they have to offer clients and a good reputation that has been built up over a number of years. The sample for business management services therefore covers not only those establishments who are classified as business management services according to ANZSIC but also establishments that are classified to other ANZSIC classes but additionally provide business management services.

Business management services are a self-regulating industry with a small number of professional associations. No one body can be seen as an organisation representing the entire group of activities due to the diverse nature of services offered in the area of business management. Whilst some professional associations have a broad membership, others restrict membership to specialist practitioners or to specific types of management consultant.

3. INDEX METHODOLOGY

3.1 Pricing mechanisms for consultants

The business consultancy industry applies no fee guidelines or standards in price setting for the services they provide. Individual firms frequently have their own schedule of fees, although in practice there is a large degree of negotiation with individual clients in setting prices for particular service requirements, and actual transaction prices may vary substantially from fee schedules. Discounting and bundling of services apply here, as well as price discrimination for favoured customers or during times of peak demand.

The very nature of consulting jobs means that the actual service provided may vary, both between customers and from period to period, due to factors including:

- the number of hours of service provided;
- the seniority or level of experience of consulting staff level; and
- specific areas of expertise required.

This absence of uniformity makes it difficult to compare the same type of services over time on a consistent basis.

The industry does however employ some common pricing mechanisms in determining the fees they charge their customers. Service providers may charge for a consultation on a flat fee basis, or more frequently through use of hourly charge-out rates. In both cases, the fee levied will vary by both type of expertise provided and the level of experience of the staff delivering the service.

The final aspect of the pricing mechanism employed by business management services is the realisation rate. The realisation rate is in effect a device to convert the fee or charge rate to a “success fee”, reflecting amongst other things the timeliness of the service provided and the satisfaction of the customer. This practice is also employed in both the legal and accounting professions. The final fee levied to a customer is determined by applying the realisation rate to a previously quoted fee, in effect reducing the fee charged to reflect the outcome of the consultancy. Such a pricing mechanism also helps protect the customer against poor quoting practices; for example, it mitigates against unforeseen increases in the number of charged hours by, in effect, reducing the hourly charge out rate.

3.2 Pricing mechanisms for other activities within business management services

The pricing of other activities within scope of the business management services producer price index follows more traditional product “repeated service” type activities. This includes such activities as the management of motor vehicles, and the sale of both financial and economic reports.

3.3 Examples of pricing specifications from the business management services PPI

A number of examples of pricing methods are included in Table 1 below.

Table 1 Examples of specifications for the Business Management Services PPI

Price per hour for work done by someone of a specified occupation with a specified level of experience	Billing rate and percentage of rate realised as recoverable (realisation rate) for a given service level
Please supply the average hourly charge-out rate for the following staff levels: <ul style="list-style-type: none">• Consultant• Director• Economist	Please provide the standard billing rate (before discount) and realisation rate (%) for the following staff levels: <ul style="list-style-type: none">• Senior manager (grade 2)• Senior consultant (grade 2)
Price of a defined report or subscription	Fleet management fees
Please provide the prices for the following industry studies: Annual Subscriptions for Business Forecast products: <ul style="list-style-type: none">• Long Term Forecasts• Economic Outlook	Please provide the Monthly Management Fees applicable on the pricing date, for full service. Management fee per vehicle Fleet code: <ul style="list-style-type: none">• 1 4389• 2 8362

3.4 Structure

The business management services PPI index is a flat structure composed of six elementary aggregates (EAs):

1. Business management and consultancy
2. Environmental consultancy
3. Human resources consultancy
4. Marketing management
5. Motor vehicle fleet management
6. Public relations consultancy

Price samples are collected for each of the six EAs and compiled quarterly.

4 SAMPLING AND WEIGHTS

4.1 Sampling

ABS price indexes are based on judgement samples, where the sample is selected on the basis of the knowledge and judgement of staff compiling the index. The alternative of using probability (or scientific) sampling would be far more difficult and expensive to use in the Australian context. In particular:

- factors other than sales volume are important when selecting items and respondents. These include availability of prices on an ongoing basis, degree of price dispersion and the pricing behaviour of respondents.
- judgement sampling is more practical in the day-to-day operations of price collection, where the basket of goods changes and respondents regularly need to be replaced.

Interviews with respondents, market reports, and industry associations all help to form the basis for the selection and ongoing maintenance of samples of respondents and items (specifications) for pricing. This information is essential in developing a comprehensive understanding of the market and making appropriate judgements in the sample selection process.

The use of judgement sampling has implications for the selection of replacement specifications or respondents. Generally, specifications and respondents will be representing a category of specifications or respondents, not just themselves (e.g. a respondent may represent medium sized firms or a specification may represent a broader product grouping). Therefore, the selection of replacements takes into account these characteristics and, as far as possible, ensures that they are still covered by the new specification or respondent.

Judgmental sampling has particular applicability to business management services where there are a large number of respondents in a competitive market. The largest players in each of the elementary aggregate markets are selected along with judgmentally selected respondents to represent other size segments.

4.2 Micro level (within elementary aggregate) weights

Each elementary aggregate within the ABS business management services PPI consists of samples of specifications for a select type of service priced from a range of representative service providers.

A price relative form of the Laspeyres price index is applied within each elementary aggregate. Each specification within an EA has a differential weight based its share of revenue in the base period (being 1996-97 values price updated to December 2001 in this case). Such detailed revenue data are obtained from personal interviews with respondents, as well as discussions with industry associations.

4.2 Upper level weighting

Above the elementary aggregate level the ABS business management services price index uses Laspeyres type weighting, whereby index components are combined using revenue data. Revenue information for determining weights below the ANZSIC class (4 digit) level was obtained from extensive research into the activities of the major companies involved in delivering business management services, including analysis of other ABS survey data. In particular, use was made of the ABS Economic Activity Survey and the ABS Service Industries Surveys, as well as data from input-output tables.

Upper level weighting reflects base period (December quarter 2001) revenues. Initial data were obtained from 1996-97 Input Output tables and price updated to 2001 using the business management services price index (which, at that period, was weighted using 1994-95 IO data).

The base period weighting structure of the index is shown in Table 2 below.

Table 2 Structure and 1996-97 base period weighting for Business Management Services, December 2001

Structure	Weight
7855 Business Management	100
Business management and consultancy EA	32.1
Environmental Consultancy EA	13.0
Human resource's consultancy EA	18.4
Marketing management EA	6.8
Motor vehicle fleet management EA	3.5
Public relations consultancy EA	26.2

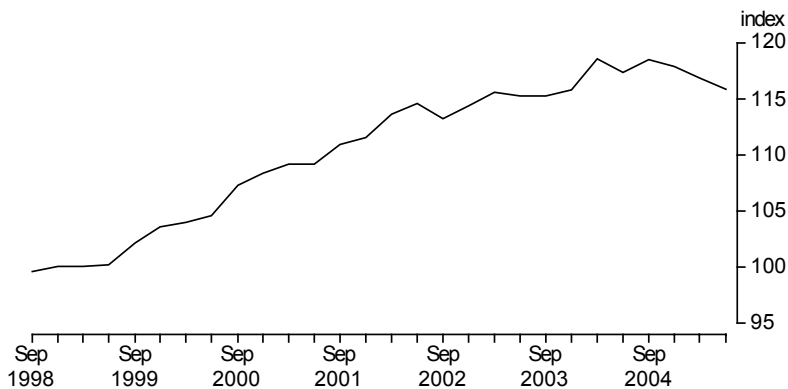
As at 2003-04 service industries comprise 46% of GDP, with ANZSIC division L (to which business management services is classified) making up 22.9% of the total. In dollar terms, ANZSIC division L represents around \$85.6 billion at 2003-04 current prices.

5. RESULTS AND PRICE MEASUREMENT CHALLENGES

5.1 Results

Since beginning in September quarter 1998, the business management index has shown a steady increase until recording its peak of 118.6 during March quarter 2004. The index remained close to that level over the next two quarters, but began a slight decline from December 2004.

Figure 1 BUSINESS MANAGEMENT SERVICES PRODUCER PRICE INDEX
Base: 1998-99 = 100



5.2 Heterogeneity

Services are inherently difficult to measure due to their often-intangible nature. In regards to consultancy services, many businesses utilise varying methods to charge their clients, and the services being provided may vary greatly.

To reduce the problem this causes in measuring the price of such services over time, the ABS conducts personal interviews with our providers, both at the initial point of enrolment into the survey, and at periodic intervals thereafter. This enables us to acquire a greater depth of understanding about the services they provide. With an in-depth knowledge of our provider operations, we are better equipped to design specifications that reflect the services individual businesses are providing, and what they are charging for their services. However, this undertaking is expensive, both in terms of ABS resources and the burden it places on providers.

5.3 Realisation rates

As discussed, one of the mechanisms frequently applied by providers is a realisation rate. The key danger in utilising a realisation rate in a pricing specification is that variation in the rate may actually reflect a change in the level of service provided, and should hence be a quality change and not a price change. The challenge in this area is to develop a pricing specification in such a manner that such variations in service (as opposed to variations in price) are correctly captured and identified via the quarterly survey instrument.

5.4 Temporal aspects to quality: do repeated services change over time?

One of the largest challenges common to all indexes is how best to manage the effect of time on the item being priced. A dynamic, constantly evolving industry (such as the manufacture of ITC products) presents obvious challenges. For service industries the challenges are perhaps more difficult but less obvious; whilst it is assumed that advances in technology and methodologies must be improving business management services delivered over time, it is not clear exactly when or even how these services have changed.

To manage this issue, it is essential to develop detailed product (service) specifications. It is also essential to maintain regular contact with providers, and to monitor changes in the industry as a whole. In addition to our regular contact through the quarterly survey and through the series of personal visits outlined above, the ABS has found that in treating anomalies observed when pricing individual specifications it is frequently necessary to determine whether the cause is an isolated event, or industry wide shock.