

A Price Index for Advertising Services

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Advertising has taken decisive significance in both the working of contemporary developed economies as well as in corporate budgets dedicated to the search for new markets. In 1999, advertising represented 8% of the turnover for business services in France. This simple observation would by itself justify the attention granted to a price index for advertising services. However, in addition, advertising has a certain number of characteristics making it an epitome of an entire class of services to companies having one shot provision of product, such as engineering and architectural activities, many legal activities, consulting for business and management, etc. From this viewpoint, the experience acquired in connection with the prices of advertising services may prove to be useful in other sectors.

The **choice of an advertising price index** is thus justified as much by the weight of the sector, its "strategic" importance, as by the characteristics of a sector sharing many common features with other sectors. The utility of such an index will be the same as for other producer price indexes. On the one hand, we have the needs of national accounting, in order to have relevant deflators for the advertising activity, but also the need to be able to obtain volume-price splits allowing pertinent diagnoses on questions such as production growth, productivity trends, etc.

The work involved in the preparation of an advertising price index in France began early in the year 2001 with a first step during which contacts were established with the sector's business unions for the discussion of the sector's organisation, its regulatory framework, procedures with regard to price fixing, etc. It should be noted that this phase is common to all producer price indexes in services that INSEE undertakes to calculate. This first step is followed by field officers visits to different companies in order to develop a collection classification, and to define the services whose prices will then be monitored over time (definition of advertising screens, qualifications to be followed in advertising consulting agencies, etc.). The third step is the sending of questionnaires and the implementation of current production. The index will be a quarterly index and will be re-based after a few years (probably five years).

This paper deals with the tracking of advertising prices in France and contains four additional presentations concerning the experience of other countries (UK, USA, Australia, New-Zealand). We will first describe the organisation of the advertising sector in France, then the price determination methods currently used in this sector. We shall then present the collection methods considered and adopted in France as well as the justification for the choices made. Lastly, in a fourth part, we present a first analysis of the results.

1) Advertising: description of the sector in France.

The French classification distinguishes two different activities making up advertising: **advertising space selling activity (74.4A) and advertising consulting agencies (74.4B)**, the economic weights of which are very similar. Advertising expenditures were estimated at 26.5 billion Euros in 1998 in France. The table below, coming from the "Observatoire statistique de la publicité" [Statistical Observatory of Advertising], shows the turnover breakdown of the enterprises whose main activity is advertising.

	Breakdown of turnover in 1999
Advertising space selling activity	50.2%
Incl. space brokers for: press	9.2%
television	11.7%
radio	3.8%
outdoor advertising	8.0%
Advertising consulting agencies	49.8%
General advertising agency activity	24.2%
Sales promotion	8.8%
Independent creator	5.6%

The main players in advertising space selling activity are advertising space brokers who sell advertising space on behalf of the media (television, radio, written press or outdoor advertising). The space broker buys space from the medium for a given advertiser, sells it to the advertiser and bills the advertiser for this service. In certain cases, the space broker gets a commission directly from the medium or from an advertising agency which commissions the broker to negotiate on behalf of a client. For the calculation of an advertising index, the transaction of interest for us is the one involving direct billing between an advertising account (client) and a space broker.

Space brokers are generally specialised by type of medium and, in many cases, subsidiaries of these same media. In other cases, they are subsidiaries of communication groups. When space brokers are integrated within the medium as functional entities, the advertising placement activity is not identified. The work involved in placing and maintaining advertising, which falls within the "advertising space selling" branch (in particular in the case of outdoor advertising and posters), is performed either by the space brokers themselves (in which case, it will be taken into account in the price index of the "advertising media management" sector) or by subsidiaries referred to as "space broker auxiliaries."

The "advertising space selling" sector is made up of slightly more than 3,700 companies in 1999 with a turnover of 9 billion Euros and employing 33,700 people under equivalent full-time employment. The sector is very concentrated since 17% of the companies account for 80% of the sector's total revenues. This concentration can also be seen in employment since companies with less than 30 employees represent 87%, whereas 74% of all employees work for 3% of the companies.

The main players of the "advertising consulting agency" sector are the "consulting agencies." These agencies provide consultancy in several fields: definition of advertising strategies, campaign design and creation, campaign tracking, sales promotion, direct marketing, etc. The agencies may be of a "general" nature (they then intervene in all or part of these activities) or "specialists" (they will focus their activities on specific areas). Agencies are generally not specialised by sector of advertisers with the exception of the health care sector which, considering its specificities and all the legal and regulatory constraints involved, has specialised agencies. Other activities related to advertising (film production, modelling agencies, etc.) do not belong to sector 74.4.

Some of these agencies, called "media agencies," (previously "central purchasing agencies") have "media space purchasing" and "consulting" activities, which fall within sector 74.4B in the sense of the classification. Nevertheless, in certain rare cases, this activity remains incorporated within the advertising consulting agency, which then takes on the mission of advising its advertising client (account) with respect to "media strategy" and the purchase of the corresponding spaces. The organisation of this activity is governed by the Sapin Law (1993) which prohibits the purchasing of advertising space by an intermediary for the account of an agent other than the advertiser, a provision which significantly modified the financing stance of the advertising sector: this financing was previously flowing mostly from discounts and commissions that purchasing groups received in connection with their activity. Since the enactment of this law, the remuneration of intermediaries by advertising media has consequently been prohibited and is now possible only by the advertisers themselves.

The "advertising consulting agency" sector was composed of 13,482 companies in 1999, generating revenues of 10.6 billion Euros and employing 68,600 people (equivalent full-time). The sector is also highly concentrated, since 80% of all revenues are generated by 15% of the companies. Concentration is also high with respect to employment, with 91% of the companies having less than 30 employees, while 3% of the companies generate 47% of total sector employment.

According to the French Activity Classification (NAF), advertising comprises thus two sectors: the advertising space selling activity and advertising agencies, which are advertising consultants. The distinction between these two sectors is used very widely and adopted by professionals. For this reason, during the gathering of information to prepare the price index in advertising, we have investigated separately the advertising space brokers (advertising space selling activity) and the advertising agencies which are advertising consultants.

The information collection classification allows easy linking with **the French classification of products (CPF)** which distinguishes, up to 2002, three products making up advertising: "**advertising media management**", "**services of advertising agencies**" and "**other advertising services**".

"**Advertising media management**" includes exclusively those services coming from the activity of advertising space brokers whose activity consists in selling advertising space. Space brokers are specialized by media: press, television, radio, posters and outdoor advertising, cinema, directories and Internet. We provided a calculation of sub-indices for each of these media.

"**Advertising agencies**" include the design and setup of advertising campaigns, whatever the kind of media. This product class also includes advertising consultancy and media purchasing (type of media to be used) provided by media agencies. Finally, the design, without implementation, of advertising objects falls within this class.

"**Other advertising services**" include the distribution of leaflets and samples, sales promotion and point-of-sale advertising, as well as direct advertising (by mailing, telephone and visits, in particular in the field of health communication).

According to the annual business survey in the service industries, the breakdown of turnover by product in France is the following: 44% for advertising space selling

activity, 37% for the services of advertising agencies, and 19% for other advertising services.

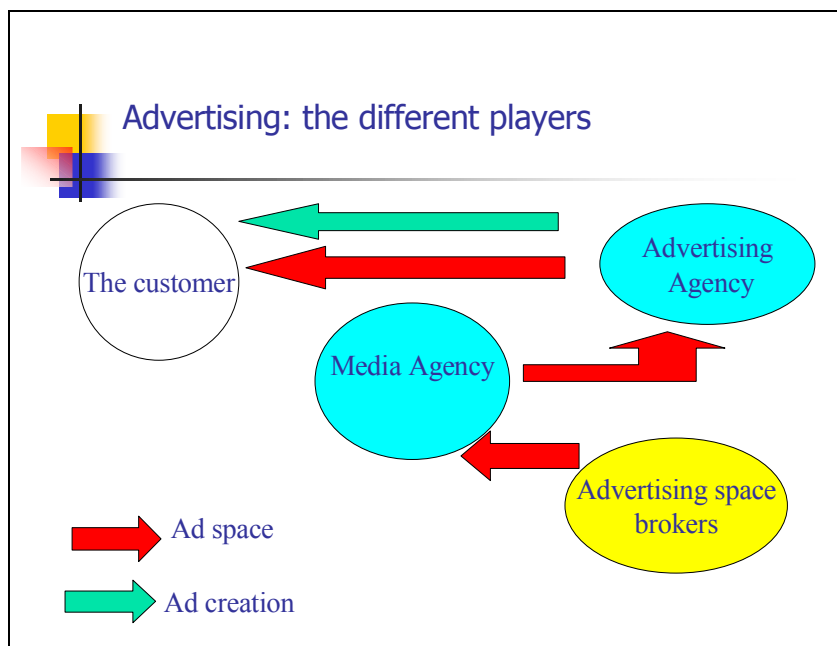
The slight revision of the CPF classification in 2003 will result in modifications in the advertising area with the creation of a product code for "advertising space sales" not included elsewhere." It will be difficult initially to produce a sub-index for this new item, which will however be of limited extent.

The international classification (CPC version 1.1) distinguishes four products for advertising:

- Item 83610: planning, creating and placement services of advertising
- Item 83620: purchase or sale of advertising space or time on commission
- Item 83630: sale of advertising space or time (except on commission)
- Item 83690: other advertising services

The correspondence between both classifications is thus straightforward for items 83610, 83620 and 83690, making it possible to calculate sub-indices for these three products.

Before analyzing the price setting methods in the profession, it is important to understand **the relationships between the different players** involved in the preparation of an advertising campaign. In most cases, the client commissions an agency for the entire setup of the campaign . This setup includes different items: determination of message, creation of message and determination of target audience and hence of media chosen. For whatever involves the media space purchasing consultant, the agency will get in touch (in most cases) with a media agency. The latter will purchase the advertising space required for the campaign from the advertising space brokers concerned. We thus have the following schematic diagram:



For advertising space sales, there are other procedures but the one described above appears to be dominant in the profession.

II) Pricing methods in the advertising sector.

1) Advertising space selling activity

In general, it can be said that prices are determined on the basis of three criteria:

- list prices, established in detail per service (published in Tarif-Média)
- general conditions of sale, which can also be found in Tarif-Média. These conditions stipulate discount conditions according, for example, to the size of the contract, the product, the development of commitments compared to the previous year, etc....
- commercial bargaining on discounts and reductions.

Compared to catalogue prices, we often note discounts of 30 % for air time and up to 70 % for outdoor advertising.

The main factors which influence the catalogue price are noted here (source Tarif-Média).

Press

- tariff for an advert, sliding scale according to number
- medium: name of medium (and thus diffusion thereof)
 - type of publicity (commercial, financial, institutional..)
- positioning in the newspaper: page number and positioning with respect to a rubric
 - size of the advert
 - colour: black, two-colour, four-colour
 - day, period of diffusion

Television and Radio

- medium
- length of advert
 - period of diffusion during the year
- days and times of diffusion (link with the audience)
- place with respect to the whole advertising break: number of adverts on the screen (first advert, last advert, other)
- positioning with respect to the other programmes (weather...)

Billposting and outdoor advertising

- duration of the advert: long term, short term
- size of the poster
- emplacement, geographical zone (link with the audience)
- types of network and number of points used
(note: installation of the poster is often included in the price)

Cinema

- types product, types of format
- duration of advert
- period during the year
- positioning in the advertising break (first, last...)
- number of theatres involved

The general conditions of sale make clear the specificities which will influence the price of advertising space. The factors reviewed previously determine the price of a given space. In most cases, the general conditions of sale clarify the conditions in which it is possible to benefit from discounts. The following elements can be quoted as influencing price setting:

- * annual turnover commissioned to the space broker (idea of sliding scale for volume)
- * seasonal sliding scale: the prices are lower when the advertiser invests proportionally more during “off-peak” periods
- * growth of annual turnover commissioned to the space broker (possibly per period and product family)
- * idea of bonus: when the advertiser benefits from several discount conditions, it is possible that he may benefit from a supplementary discount (bonus or super bonus)
- * sliding scale linked to the new client
- * sliding scale linked to the acceptance of advertising spaces available at the very last moment (floating)
- * ...

As we can see, there are a plenty of criteria which can influence prices as well as a large number of general conditions of sale. If we add to this the negotiation phase (where the size of the advertiser comes into play), we can note that there is thus no single nor predetermined price for the same “product”, defined in an apparently simple manner.

2) Services of advertising agencies

Advertising consulting agencies apply five major types of pricing:

- mark-up on the purchase of ad space

The advertising agency bills his consulting activity by applying a mark-up to the purchase of media space bought on behalf of the advertiser. For example, the advertiser wishes to purchase 100,000 euros of space in media (press, radio...). The consulting agency buys this space from the brokers and resells it to the advertiser for 115,000 euros: 100 K euros of space purchased with a commission of 15 000 euros. A rate of 15 % seems to be common practice, even though it would seem, according to the professionals, to be falling in recent years. As this case is common for “major” consulting agencies, it is important to note that the commission on purchasing space can be payment for all kind of services provided on behalf of a given advertiser and not just for the purchase of space.

This pricing method can also be used by media agencies whose activity is focused on purchasing space, or by consulting agencies, but only to pay for their advice on purchasing advertising space and not their entire service. In these cases, the commission rate is around 4 %.

- price per day and per qualification

The advertising consulting agency invoices for the different qualification involved on a given project, in terms of time spent. This method is similar to that used in engineering. This type of pricing is the subject of heated debates in the profession which is evolving towards a greater degree of modelling for agency fees. For a long time, this type of modelling and pricing seemed to be illusory in light of the activity of creation provided by consulting agencies (what is the price of creation? How can time be quantified from the perspective of creation?). Under pressure from the advertisers, this pricing method is used increasingly.

- a set price

This pricing method can be applied in the case of standard services (for example the creation of a logo) which are repeated from time to time, or in the case of a single service. In the second case, it is set by negotiation with the advertiser and can possibly be broken down into an hourly rate, but this is not always the case. This pricing method is used by consulting agencies that organise media campaigns as an alternative (according to the advertiser) to pricing by commission on the purchase of ad space.

- pricing based on an incentive scheme

In this case, pricing depends on the result of the advertising campaign with respect to the initial goal. However, this pricing method is seldom used since, in many cases, the result is difficult to measure in the short term. This method of pricing appeared only a few years ago, coming from Anglo-Saxon countries. It is used as a complement to other pricing methods: for example 80 % of the price of a service is a set price, 20 % is based on performances.

- mark-up on technical consulting

The agency can be commissioned to manage all relations with third-parties on behalf of the advertiser: printers, film production companies, modelling agencies, etc.... The consulting agency carries out transactions on behalf of the advertiser, getting a commission for these services. For example, if a consulting agency pays a modelling agency 30,000 euros on behalf of the advertiser, it invoices 33,000 euros with a mark-up of 10 %. This pricing method is a complement to other methods of payment.

3) Other advertising services

For this type of product, price determination appears quite simple. Sales promotion is invoiced in price per hour and per qualification, taking into account the number of workers involved. For telephone advertising, the call with all its characteristics (place, duration, type of message) provides the main price-deciding factors. For the distribution of leaflets, the major criteria are: number (per unit or per thousand, sliding scale according to number), weight, type of distribution (local, national, , targeted distribution...), format of document.

III) Price methodologies

1) Advertising space selling activity

The basic principle is **the measure of advertising space price changes** per medium. These price trends appear to be a good indicator reflecting the changes in prices charged by advertising space brokers to companies.

Prices under scrutiny are **average prices of transactions per quarter**. This choice has gradually tended to become dominant over time. Initially, we had decided to choose a reference week per quarter within which we wished to monitor price trends. This choice turned out to be inadequate because the indices proved to be too volatile owing to the (possible) presence of atypical events in the chosen week.

It is of primary importance to determine, by any given advertising space broker, **a sample of services** within the overall advertising time spectrum. As far as television

is concerned for example, we segmented a week into several hourly slots. This segmenting was based on the catalog prices published by advertising space brokers. For each slot adopted by broker, for example from 19:00 h to 20:00 h from Monday to Friday, we gather the quarterly turnover of the advertising space broker as well as the number of advertising seconds (during the quarter). By combining these two values, we obtain an average price per second for advertising during this hourly slot. Variations in this average price are measured throughout the quarters. This method is similar to the one used by our Australian colleagues for television. The method is also similar for other media (radio, press, posters, etc.). The basic need of this approach is the careful definition of sample services. For example, in the written press, this may be the average price of a quarter-page ad in a given day. To calculate the weighting of each control service, we take into account the turnover of the space broker as well as its breakdown into the chosen advertising spaces (during the base year of 2001).

It is of primary importance to follow transaction prices and not list prices. Discounts granted to advertisers appear to be sizeable and linked with the current economic situation. It is not always simple to follow transaction prices according to the method described above. In fact, space brokers grant discounts globally to advertisers (or in most cases to media agencies). Since most advertisers purchase advertising packages (several commercials on television for example for a period of several weeks), the space broker does not always break down its discounts according to each service purchased. In this case, we pick up sometimes changes in list prices for the control services as well as an average discount rate at the level of the space broker.

Because of the discount system, final prices are known belatedly. In fact, some discounts are granted to clients according to all the purchases made over a year. For instance, final prices for the first quarter of 2002 will not be known before the beginning of 2003 when the inventory of purchases will be made for the year. In a first step we will consequently gather only estimated prices, discounts being estimated by space brokers on the basis of purchases from their clients during previous years.

The cost of advertising space is theoretically correlated with **the audience for this space**. This correlation is more or less corroborated by the various media. For outdoor advertising, the measurement of this audience is obtained too episodically for the audience to be linked with the price of the posters. For the press, the link (according to professionals) is not direct and is more valid over the long term than in a short-term analysis. We have thus aimed our analysis primarily on television and radio. For each service chosen, we ask for the audience associated with this service on a very precise target. For example, for television, for each hourly slot chosen, we look for the average quarterly audience on the reference target for "housewives under 50". We then divide the price per second to this audience to get a price indicator taking the audience into account. The idea is not to limit our analysis to a price per unit time, the risk being to comment only on audience variations and not on a price with "constant quality." At the time being, we are still in exploratory phase in this area. We are monitoring two types of price indicators for television and radio in particular: the average price per unit time and a price corrected for the audience. The analysis of the first results shows that the link with the audience is not all that direct.

2) Services of advertising agencies

Here, the difficulty lies in the definition of the product, in its unicity, and in the many pricing methods applied. Increasingly, advertising agencies invoice on a time basis per qualification category. We consequently gather, in this case, **the fees per qualification**. However, it is difficult to get, by qualification and by agency, average transaction prices per time unit. The main "cultural" difficulty in the profession stems from the notion of time spent on a project. For many professionals, pricing cannot really take into account the time spent. In other words, it is not because the agency spends more time in preparing an advertising campaign that it will be of better quality. In fact, it is very difficult to obtain data on the current management of agencies to calculate average transaction prices. However, because of pressure from advertisers, it is probable that this will become possible in the future.

Historically, advertising agencies invoiced according **a percentage on ad space purchasing**. Even if this billing method is declining, it is still quite common. This percentage depends in fact on the annual investment the client will entrust to this agency. The term "investment" must be understood here to be the annual sum of the space purchased and entrusted to the agency. For a given investment, it is rare that the percentage varies with time, except in the case of particularly tough business negotiations. The price the client will pay is thus the result of the price of the advertising space and the commission on space purchasing. Agencies are thus asked for their commission rate per investment bracket and possibly per medium for a sample of clients. It will be followed on a quarterly basis. Changes in this rate will be linked with changes in the price of advertising space (see previous part). To make this connection, account will be taken of the specialization of the agency per medium. For example, an agency designing only campaigns for television, we will link the changes in these commission rates on space purchasing with the changes in advertising space prices on television.

In some cases, advertising agencies charge part of their work by taking **a percentage on production expense** (or technical expenses). By agency, we shall then follow the changes in this percentage for a sample of clients by client size stratum. The price paid by the client results from this percentage on production costs and from the production costs themselves (printing expenses, expenses related to modeling agencies, etc.). As previously, changes in the percentages on expenses have to be related with the changes in these expenditures. However, unlike the previous cases, expenditures correspond to spending outside of the advertising branch. It is thus not easy to determine their breakdown. At the present time, this point has not been settled: with which prices percentage on production costs must be related ? We can, for example, link this to changes in paper prices, a basic component of printing expenses which represent a significant part of production expenses.

The calculation of weighting in the case of advertising agencies is particularly important. The basic indicator used will be the gross margin and not the turnover. The turnover is not relevant owing to the extent of purchases-sales for advertising agencies. Using turnover would then be equivalent to over-weighting those agencies who do a lot of purchasing-selling, in particular media agencies that purchase and sell advertising space in large quantities. For each agency, this margin will be broken down by product and by invoicing method. We shall illustrate this by an example of an advertising agency that, in 2001, had a margin of 20 million Euros. We have the following breakdowns:



Breakdown by "product"	Breakdown by invoicing method
Advertising campaign aimed at the press: 30%	Percentage on ad space purchasing: 25%
Advertising campaign aimed at television 60%	Percentage on production costs: 25%
Advertising campaign of the poster type: 10%	Invoicing on a time basis: 50%

The breakdown by product will enable us to link our services to changes in the price of advertising space per medium, in the case of invoicing by percentage for ad space purchasing. The breakdown by product is not always easy to obtain because some advertising agencies do not gather this type of information.

For the breakdown of the gross margin per product and pricing method, we obtain:

in thousands of Euros

	% on ad space purchasing	% on production expenses	time spent on project
Press media	1,500 (20,000 x 0.3 x 0.25)	1,500	3,000
Television media	3,000	3,000	6,000
Posters	500	500	1,000

Sample of services will then be chosen: for example, a contract with an advertising design client for television, with a pricing method in percentage of ad space purchasing. If this contract is the only one of this type, its weighting will be 3,000. Of course, a contract may refer to several media (design of a multimedia campaign). In this case, the service will be linked with several elementary indices. For fees by qualification, the weight granted to each qualification depends on the price of this qualification during the basic period and on the number of people falling within this qualification (advertising manager, for example).

It would be of interest to compare this approach with the one used in the United States, consisting in taking a contract and breaking it down completely into all its components (fees per personnel category, percentage on production costs, traveling expenses, etc.). The price of each of the components is re-evaluated over time, thus making it possible to update the price of the contract. This approach is complete – the price of all the components is asked; in theory, it also makes it possible to take into account productivity variations. On the other hand, like the French approach to fees per qualification, it may be difficult to follow transaction prices.

3) Other advertising services

The measure of price evolution for this product range (distribution of leaflets, sales promotion, mailing and telephone advertising) does not raise any particular difficulties.

As an example, for the distribution of prospectuses, we follow average transaction prices per geographical zone and per type of distribution (with or without address, , for example). For sales promotion (making personnel available at the point of sale),

what is at stake is the tracking of fees per qualification and, for telephone marketing, the tracking of prices per call taking into account any relevant characteristics of the operation.

To sum up, the French method puts emphasis on the monitoring of advertising space prices. This comes directly into play for the "advertising space selling activity" branch and indirectly for "advertising agencies" given the pricing methods used. For the measure of advertising space prices, the difficulty is the measurement of transaction prices. The approach by average price per space has been favored. For advertising agencies, the monitoring methods must take into account all the pricing procedures. The calculation of weighting, based on the gross margin, is particularly important in this case.

IV) First results and provisional assessment

1) Sample and response rate

The sampling base is drawn from the annual business survey in the service industries. **The sampling principle** consists in systematically considering the largest companies and selecting smaller ones by sampling. The dividing threshold is empirical. It depends on the concentration of the branch. For "advertising space selling activity" (concentrated branch), the first 50 companies were chosen, whereas for agencies, consultants, we systematically took the first 100. Then by product (according to the classification of the yearly business survey), the probability of selection depends on the amount of coverage for the product considered after the selection of the biggest companies. The final coverage consequently depends on the concentration of the activity for each product. It ranges from over 90% for television space brokers to less than 35% for independent creators (design activity in particular).

Then a field officer will visit each company selected in order to check its activity, explain the principle of the survey to it, choose the services and the first prices, break down the turnover or the gross margin for weighting calculations. The main purpose of this meeting is to have the survey accepted by the companies. Between the drawing of the sample and the end of these first meetings, we "lose" companies for different reasons (company having discontinued its activity, purchased by a competitor, wrongly classified in terms of product codes: absence of market price, existence of several companies which correspond to the same entity for the price establishment method, refusal to respond despite several reminders, etc.). For advertising space selling activity, 110 companies were initially selected, and 80 are really within the scope of the survey. In May 2002, we had 65 completed case files, and 15 are pending information. For the agencies, 160 companies were selected of which 120 fall within the scope of the survey; 95 case files are completed and 25 are pending information.

The information is found to be particularly difficult to collect for television and radio space brokers. The small number of players in these branches, the extreme volatility of prices and discounts for the different advertisers explain to a great extent this situation. Contacts are still in progress – and have been for the past 18 months – in this area. Space brokers are very reluctant to reply as far as transaction prices are concerned.

Once this initial information has been obtained, **the company will be questioned quarterly by mail**. The response rate in advertising for these surveys reaches 70-80% for the moment, two months after the end of the survey. The aim is to achieve this rate of response within the shortest possible time span. Although the survey is quarterly; 25% of the companies (in terms of gross margin) respond only once a year to this questionnaire.

2) Analysis of initial results

The analysis of the results presented here constitutes only a first version worked out in June 2002. This analysis covers only one year. It will thus be completed in greater detail, in particular as far as television and radio are concerned, areas for which we have not yet received all the responses.

The following table summarises the values of the indexes since the beginning of year 2001:

	T1 2001	T2 2001	T3 2001	T4 2001	T1 2002
Advertising	100.0	107.2	104.0	109.0	101.0
Advertising space selling activity	100.0	109.2	105.2	112.1	103.8
including press space brokers	100.0	99.0	97.6	97.8	101.7
outdoor advertising space brokers	100.0	103.0	99.6	100.8	104.4
Advertising agency services	100.0	108.2	104.1	109.6	98.1
Advertising consulting agencies	100.0	107.7	104.1	109.1	97.2
pricing with % of ad space purchasing	100.0	115.4	109.1	119.7	96.7
other pricing methods (fees)	100.0	100.7	99.9	99.2	98.3
Media agencies	100.0	111.3	104.3	112.4	104.1
Other advertising services	100.0	100.8	100.8	100.7	100.3

In advertising, **price trends must be commented on an annual basis and not quarterly until we get a substantial time series which will enable us to seasonally adjust the information**. The prices charges – in particular by advertising space brokers – are highly seasonal, professionals have clearly pointed this out, and this has moreover been confirmed by price analysis in other countries (Australia in particular). Prices appear to be at their peak in the fourth quarter and lowest in the first. For any relevant quarterly comment, it will thus be necessary to seasonally adjust the series when it will be longer.

Price increases over a year appear to be quite limited (1%), which is not very surprising given the situation of the industry, which was not very good in 2001, particularly during the second half. Prices are even declining for the services of advertising agencies. For advertising space selling activity, the increase is 3.8% over a year. When we did not take the audience into account in the price of the space brokers (television and radio mainly), this increase is limited to 1.8%.

The main determinant of price variation in advertising is the variation in the price of advertising space. This is reflected directly on prices charged by space brokers and indirectly on the prices charged by advertising consulting agencies, with the price determination method based on a commission on space purchasing. An

increase of 1% in the price of the advertising space, uniform for all media, leads to an increase of 0.4% for the "advertising agency services" product and an increase of 0.6% for advertising as a whole.

For advertising space brokers, price variations appear to be very significant from one quarter to another. In fact, 10% of the price series (at the finest level) exhibit a price variation greater than 28% (during a quarter) and 10% exhibit a variation smaller than 14%. Variations are particularly large for television, press and radio space brokers. It is to be noted that when one takes the audience into account, the variability of the series is accentuated for television space brokers.

3) Limits of the analysis

For advertising agency services, **the main limit has to do with pricing based on fees.** Considering how the industry operates, the collected fees are list prices and do not always reflect the transaction prices. In fact, more than 55% of the recorded prices do not change from one quarter to another when the fees are observed. The bulk of these changes takes place during the first quarter.

For advertising space brokers, we gave priority to requesting that the companies should provide transaction prices and not list prices. Even if, in some cases, companies were very reluctant to communicate this type of information – considered to be confidential – on the whole we were able to obtain transaction prices. In this case, we collect average prices primarily: for example, average prices per format in the press. In general, it is not advisable to collect average prices for this type of study because their variations can reflect structural shifts. In advertising, however, tracking prices at too fine a level generates difficulties related to "isolated events" regarded as exceptional. As prices depend on many criteria (for television: duration of commercials, time of appearance, size and sector of advertiser, budget commissioned to the advertiser's space broker, budget growth over a year, etc.), excessively fine tracking leads to very significant variations. This would not be too problematical if it were possible to track a large number of services per space broker. However, the choice of the sample is very complex and it would not make sense, in order to limit the response burden for companies, to ask for too many services per space broker. According to sector players and our own experience since the beginning of 2001, collecting average prices seems to cause less bias than the collection of prices at a finer level with the choice of a sample of services.

The handling of audience data constitutes another source of interrogation for television and radio space brokers. Initially, it appears natural to take the audience into account. However, several questions arise: for what target audience data should be collected, and should we be considering the expected or the observed audience? When an advertiser chooses a station and a time for its commercial, it negotiates the price according to the expected audience (often calculated by media agencies) on a target audience corresponding to its product. The space broker sets its prices according to the expected audience on a generic target (housewives less than 50 years old for television). Nevertheless, according to industry players, the estimation of expected audiences is not very accurate. It may moreover vary, for a given slot, depending on who is doing the estimation. In fact, we decided to take into account

the audience observed on a generic target. It was « reasonable» to expect that taking this audience into account would smooth price variations. Yet it is not always the case, and the audience taken into account may increase variations and even cause them to change sign. It would be interesting to conduct studies on this subject at international level in order to determine the best strategy to consider (is it really necessary to take the audience into account?). In France, we are waiting the latest data from television and radio space brokers to carry out a more in-depth analysis.

Producer price index for the Advertising Services industry in Australia

2001 Voorburg Group conference paper

Richard McKenzie

Producer Price Indexes Section

Australian Bureau of Statistics

1 Introduction

The Australian Bureau of Statistics (ABS) is undertaking a long-term development program to progressively extend the scope of the producer price indexes into the services sector of the economy.

On 18 April 2000, the ABS launched a new quarterly publication, **Producer Price Indexes for Selected Service Industries, Australia (Cat. no. 6423.0)**. This publication presented quarterly price index numbers for most industries within the transport and storage, and property and business services sectors from September quarter 1998 to March quarter 2000. More recently, the ABS has combined all producer price indexes into a single publication: **Producer Price Indexes, Australia (Cat. no. 6427.0)**; of which a complete section is devoted to service industries.

The Advertising Services industry price index has been compiled on a quarterly basis since the September quarter 1998.

2 Nature of the Industry in Australia

2.1 Industry definition and relation to CPC

The service industries price index development work is taking place within the classification framework provided by the Australian and New Zealand Standard Industrial Classification (ANZSIC). Advertising services fall within the ANZSIC class 7851. The main activities of this class are:

- advertising agency service;
- advertising placement service;
- advertising preparation service;
- advertising service (except sale of advertising space in own publications or broadcasts);
- advertising space selling (on a commission or fee basis);
- aerial advertising service; and
- samples distribution service.

The equivalent industry under the CPC is 836 Advertising Services, with sub industries:

8361 Planning, creating and placement services of advertising.

8362 Purchase or sale of advertising space or time, on commission.

8369 Other advertising services

This description would indicate that the scope of ANZSIC class 7851 and CPC 836 are very similar. The ABS only intends to produce an index for the Advertising Services industry in aggregate (i.e. no sub indices will be produced).

2.2 Size and type of businesses

There is a general lack of quality statistics on the structure of the Advertising Services industry in Australia. From the statistics that are available, it is evident that most business are small, with approximately 95% of businesses involved in the industry employing 5 or less people.

There are three different types of businesses providing advertising services in Australia, they are:

- (1) Full service agency - providing all advertising service needs of a client;
- (2) Creative agency - providing creative advertising services (i.e. producing advertisements for clients);
- (3) Media buying agency - purchases advertising space from a distribution medium (e.g. television, radio, newspaper) and sells this to clients.

Due to the lack of consistent quality statistics on the Advertising Services industry in Australia, it is difficult to accurately assess what the proportions of main revenue earning functions for the industry are. However, it is clear that the main revenue earning function is media placements, dominated by placements on free to air television. Earnings from creative services are also significant, but probably less than 30% of total industry income.

2.3 Government regulation

In 1997, the industry was deregulated. The previous government regulations stipulated fixed charges for advertising services, basically consisting of a set agency commission of 10% and a service fee of 7.5%. Despite the deregulation, key industry associations recently spoken to suggested that approximately two thirds of agencies still use the same method to charge clients. According to industry sources, the main impact of deregulation has been for agencies to specialise as either a creative agency or a media buying agency, rather than providing a full advertising service which was more common in the past. In the past few years, several large international specialist media buying organisations have entered the market.

3 Charging methods used by businesses

The charging methods employed by most businesses are still relatively simple, and similar to the approach used under industry regulation.

3.1 Fee billing

The most common form of billing within the industry is the fee method. With a fee arrangement, agency costs are recovered and an additional service fee is charged. Common forms of fee based billing are:

Cost based fee

This can be for total agency service, an hour of service, services from a particular group of agency people, services from a particular project or any other grouping of agency people. This fee includes recovery of all direct costs (labour, materials) plus the agency contribution (indirect costs and margin).

Cost plus fee

This includes an amount added to the agreed cost for the agency service (i.e. the agency estimates its costs up front and adds a margin).

Minimum fee guarantee

Is used to describe an amount the agency is guaranteed for a specified amount of time (usually a year) for its service, a category of service, or the service associated with a specific project. A price is negotiated with the clause that, after agency costs, the agency margin is within a certain range (e.g. between 15 and 20 percent). At the end of the contract if the agency margin is less than the agreed minimum the client must pay the extra, if it is above the maximum the client is reimbursed.

Fixed fee method

A fixed amount is agreed in advance by the client and agency, which can apply to different categories of service, different periods of service, or with specific projects. The fixed fee amount is usually put in the contract before any of the services take place. Regardless of the costs incurred by the agency, this amount will not change.

3.2 Other billing methods

For media placements, some agencies have arrangements with clients where charges consist of some combination of fees and commission. The common methods of billing under these arrangements are:

- media commissions plus an overall additional fee;
- media commissions, but with a profit floor or profit ceiling arrangement; and
- minimum fee against which media commissions are credited.

Creative advertising agencies may also enter into more speculative billing arrangements, such as remuneration based on sales performance.

4 Current pricing methodology employed

The ABS is currently covering commissions and fees from television advertising placements. Anecdotal information from media buying agencies suggests that this accounts for roughly 80% of income generated from media placements. Industry statistics suggest that income from media placements accounts for over 50% of total industry income.

For the largest advertising agencies / media buying houses, we are currently pricing their charges to clients for prime-time 30 second television commercials played during 30 minute programs, for each of the three major television networks in Sydney and Melbourne only. Due to the sensitive nature of commissions and fees for individual client contracts, our respondents are asked to report the average price (for the middle month of the quarter) they charge for the specified item across all clients. Whilst this average price approach is not ideal, respondents are not willing to provide details from individual client contracts. This information is collected by mail on a quarterly basis.

The pricing basis (i.e. 30 second commercials in 30 minute programs during prime time) was considered the most representative way to capture prices, as prices differ for longer shows (e.g. movie length). The bulk of the price we capture represents the average price the advertising agency / media buying house pays the television stations for these commercials, rather than the commission and fees charged to their clients. Whilst agencies have been unwilling to provide details of actual contracts with clients, they have stated that commission and fee arrangements do not change overtime for a client purchasing the same quantity of advertising space. Therefore the average price paid by the media buying house is considered a good proxy for the item we are trying to capture, as price changes to clients are driven by the cost of advertising time purchased from the networks. We concentrated on Sydney and Melbourne (Australia's two largest cities by population) only as these are the highest contributors in terms of turnover.

5 Technical concerns

There are a number of technical concerns with the Advertising Services industry price index in its current form, best summarised under the following headings.

5.1 Coverage and representativeness

Whilst television advertisement placements are the major revenue earner for the industry, price movements for these services are not representative of the output of the remainder of the industry. This is due to the extremely seasonal nature of prices for television advertisement placements, corresponding to television ratings periods. The series provided in Attachment 1 shows quarterly movements of greater than 20% in some cases between the December and March quarters, and March and June quarters (the March quarter is the low rating period). Such large swings in this index, which carries the weight for the whole of the Advertising Services industry at present, is often a key driver of changes in the overall Business Services index, despite having a relative weight of only 5%. A special note is included in the publication to draw attention to users of the limited coverage of the Advertising Services industry price index.

The ABS is planning to cover other media placements, such as radio and newspaper, in the near future. This will extend the coverage of the index and help moderate to some extent the seasonal impacts of television advertising placements. Ideally our development work will extend to pricing the outputs of creative (i.e. advertisement production) services. Whilst we are hopeful of developing an appropriate methodology for this, discussions with industry associations and respondents thus far have not been encouraging due to the extremely diverse nature of this service to different clients.

5.2 Pricing methodology

The current pricing methodology is essentially a unit value method and can be biased by significant changes in the mix of clients our respondents have each quarter. Also, we are reliant on the stability of industry charging practises. If the method for determining client fees begins to change within the industry (e.g. as a driver to attract more business), then our current pricing approach is less likely to pick up pure price change. At present this is not a large threat as commissions and fees charged by the agencies for media placements are a small proportion of the overall charge (i.e. the bulk of the charge is for the cost of the advertising time purchased from the television station).

5.3 Benchmark data

At present, there are problems with the statistical data underlying the index weights. Various sources of official (ABS) and unofficial statistics over the last 10 years have estimated the total industry revenue to be between 1 and 10 billion Australian dollars. This appears to reflect a lack of standardisation in classification, and the potential inclusion of revenue for the mediums themselves (i.e. the income for media placement agencies should be net of the cost of the media placements they purchase from the various advertising mediums). This impacts of how the Advertising Services industry index should be combined with other service industries in constructing broader indexes. Statistics on the main revenue earning activities of the industry are also of poor quality. For example, estimates of the proportion of revenue earned from media placements range from 50% to 70% according to source, and estimates of the split on media placements between television, radio, newspaper, cinema etc. are also variable. This issue will require close examination when the coverage of media placements in the index is extended.

6 Conclusion

The ABS Advertising Services industry producer price index is very much in a developmental stage. Whilst it covers the major earning activity of the industry in television advertisement placements, the resultant price series is not likely to be representative of the remainder of the industry due to its extreme seasonality. As such, the index is potentially misleading as a price index for 'Advertising Services' as a whole. The published data therefore needs to be treated with caution, and coverage of the index needs to be improved as soon as possible.

Attachment 1 ABS Price Index of Advertising Services

Quarter	Index number (a)(b)
September 1998	103.7
December 1998	108.1
March 1999	83.5
June 1999	104.8
September 1999	112.9
December 1999	115.2
March 2000	87.9
June 2000	109.8
September 2000	117.4
December 2000	120.4
March 2001	97.1
June 2001	120.9

(a) Index reference base: 1998-99 = 100.0

(b) Covers television advertising placement services only, where charges are associated with television ratings periods. Other advertising services will be included in due course.

APPENDIX:

U.S. PRODUCER PRICE INDEX

FOR

ADVERTISING AGENCIES

Jennifer Smith
U.S. Bureau of Labor Statistics



United States advertising agencies price index

A Business Model

SIC 7311, Advertising Agencies, contains establishments preparing advertising (writing copy, art work, graphics, and other creative work) and placing such advertisements in periodicals, newspapers, radio, television, or other advertising media for clients on a contract or fee basis. While many agencies specialize in ad creation or placement, only those agencies which have the capability of performing *both* services are included in this SIC classification.

The industry as a whole has experienced great advancements in the last decade. Currently, there are over 6,000 advertising agencies in the United States using radio, television, internet, newspapers, direct mail, magazines, and outdoor signs to bombard the average person with 500 to 1,000 advertisements per day. With the expansion of media sources such as the Internet, the number of advertisements a person encounters each day will continue to rise. Globalization has also become a large factor in advertising. Advertising agencies are forced to be international organizations to support their international clients, reach more consumers, and take advantage of new markets.

Advertising agencies generally use one of the following organizational systems. The first is a group configuration. Personnel are divided into teams that combine writers, artists, media planners, and media buyers. The team is all-inclusive and functions as a separate agency. Each team completes an entire project for the client. The second organizational structure is a departmental configuration. All specialists are grouped together and each department works with the client. The advertisement is handed from one department to another until it is finished.

Two primary outputs can be measured for this industry. First is the creation of an advertisement. Advertising agencies generally use inside personnel, such as account managers, media planners, and production managers to create an advertisement. Outsourcing specialists, such as actors and production crews, are also common in this industry.

The second output is the placements of the advertisement in the media by the advertising agency. "Media" is defined as periodicals, newspapers, radio, or television. In recent trends, advertising agencies are discontinuing the placement branch of their services in lieu of media buying services (MBS), which acts as an intermediary between the advertising agencies and media outlets.

B Government Regulation

The advertising industry is regulated by the federal, state, and city governments. Regulation generally concerns the message advertisements portray as opposed to industry rates and prices. According to the First Amendment of the U.S. Constitution, "[c]ongress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances." The relationship between freedom of speech and how it applies to the advertising industry has always been a debate. In 1976, the U.S. Supreme Court ruled that advertising is a "semiprivileged form of free



expression...[and is] subject to some regulation.” This regulation is most seen in advertisements for certain products such as prescription drugs, tobacco, and alcohol. Currently, tobacco is the most regulated of these products. In 1998, the tobacco industry and the attorney generals in most states banned outdoor advertising of tobacco products as well as the use of cartoon characters in tobacco related advertisements. Advertisements aimed towards children are also regulated. One of the provisions in the 1990 Children’s Television Advertising Practice Act regulates the amount of advertising that can be included in children’s television programming.

The Federal Trade Commission (FTC), which enforces consumer protection laws to eliminated ads that are deceptive to the public, is also a regulator of the industry. Similarly, the advertising industry also has self-imposed regulations. Various associations and individual corporations have established codes of ethics and general principals in hopes of maintaining high industry standards.

C Pricing Methodology

Companies classified in SIC 7311 offer very diverse and specialized services for each client. As a result, pricing practices are varied, and it is necessary for the Producer Price Index’s description of an “acceptable price” to be flexible in order to reprice items that accurately reflect the industry. One way to make these accommodations is to provide fallbacks, or alternative ways to price. Fallbacks are provided for each output in the following manner.

Ad creation: The ideal transaction is the price for a complete contract for a specific client. This includes all advertisements designed for all media types.

Fallback 1: Repricing a complicated contract every month can be a burden for the reporter. Instead of repricing all ads for the client in all media types, the respondent prices a group of ads for only one medium.

Fallback 2: Sometimes narrowing the collection to one medium is still too complex. Also, some respondents are reluctant to supply exact hours and rates for an ad to be created. In these situations, a monthly bill for a group of ads is repriced. Since creation of an ad campaign can take months, this fallback reprices only part of the ad creation.

Fallback 3: Occasionally, respondents find it easiest to provide the information concerning one specific ad in one specific medium.

Fallback 4: Some respondents prefer to provide a monthly bill for one specific ad in one specific medium. This differs from fallback 3 in that fallback 3 might price services occurring over the many months it takes to create an ad whereas fallback 4 prices these services in a monthly fashion.

Ad placement: The ideal transaction is a single contract for a client (all ads) with one type of medium.

Fallback 1: Respondents may find pricing the entire contract to be too cumbersome. In this case, it may be easier for the respondent to reprice a monthly bill containing only the portion of the placement costs that occurred in a single month.

Fallback 2: If a monthly bill is still too complex for the respondent, one type of ad is chosen for repricing. Not only does the respondent specify the type of

medium, but also the size of ad, length of ad, placement of ad, or location of ad. A respondent may also reprice multiple ads with the same characteristics, such as 15 ten-second spots during the midday television run.

Current Pricing Characteristics

The following outlines price determining characteristics for all advertising agencies in SIC 7311.

Ad creation: Advertising is an industry where the input costs greatly affect prices. Ad creation is priced depending on the number of inputs that are used. Personnel from all departments are used in ad creation. Agency personnel are paid on an hourly basis. The final price of the ad increases as more time is invested in advertisement creation.

Placement: The price also depends on the type of media in which the ad is placed. The most common types of media are television, radio, newspaper, internet, direct mail, and magazine.

The following characteristics influence the price of an ad distributed in that medium.

Radio: length of the ad (15, 30, 60 seconds), time of day ad is aired, day of week ad is aired, delivery of ad by personality (D.J.) or by recording, ad aired around features (e.g. weather, sports, and traffic report), time of year, quantity of commercials bought, guaranteed broadcast or preemptible, spot versus network radio, and number of network affiliates.

Magazines: size of the ad, placement of the ad in magazine, color scheme of ad (black and white versus color, number of colors, bleed or non-bleed), existence of "non-traditional" advertising features such as pop-outs, size of magazine circulation, geographic and demographic targeting, national versus local advertising.

Newspapers: type of ad (run of paper [ROP] versus supplement; comics or preprints; display versus classified; black and white versus color; coupon, co-op, etc.), ad size (measured in column inches), day(s) of week ad is run, placement and positioning (ROP versus specific section/position), section of newspaper (main news, sports, real estate, business, etc.).

Television: (includes network, spot, and cable) time of day ad is aired, length of the ad (15, 30, 60 seconds), popularity of show (high versus low rating), geographic and demographic targeting, frequency ad is run, duration the ad is run (a.k.a. continuity), run of schedule (ROS) versus fixed placement, time of year, national versus local advertising, promotions and/or merchandising support

D Limitations/Concerns with published data

Because advertising agencies are so diverse, the definition of a company classified in SIC 7311 must be broad. Currently, the definition includes only those agencies that are capable of performing both the ad creation and the ad placement. While smaller companies still perform both of these services, larger corporations have eliminated the placement aspect of advertising and focus solely on ad creation. Many of these companies have subsidiaries that deal specifically with ad placement and media buying. Technically, these companies are classified as being "out of scope", however, excluding these companies from the index would lead to a misrepresentation of the industry. Therefore, what are the requirements for a



company with a media placement company as a subsidiary?

The PPI measures the change over time in prices received by domestic producers. As more companies become internationally based, how do we ensure that the companies included in the index are representative of the U.S. advertising industry?

Some reporters find it hard to reprice a certain contract and supply a hypothetical set of inputs which should represent a typical contract. Are these generic contracts representative of the industry?

E Analysis of “goodness” of published data

The PPI index for advertising agencies has been in publication since June 1995.

The current publication structure is as follows:

Advertising Agencies

Ad creation, billed separately

Media placement, including ad creation not billed separately

Newspapers

Periodicals

Television

Radio

Other

Other receipts

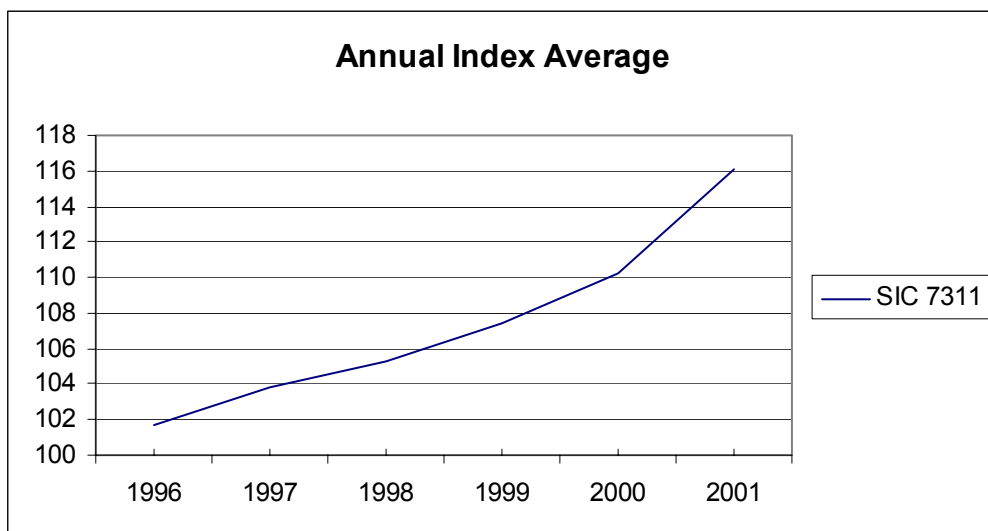
Miscellaneous receipts

Secondary services

The PPI publishes the only known national pricing index pertaining to the advertising industry. Additionally, the index is published monthly to provide a continuous stream of data. Although the index is comprehensive when it comes to the types of advertising repriced, the collected sample for certain service lines remains small, resulting in unavailability of the detailed index.

Series Id:PCU7311#
Industry:Advertising agencies
Product:Advertising agencies
Base date:9506

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1995						100	100.4	100.5	100.5	100.6	100.9	100.2	
1996	101.3	101.6	101.5	101.6	101.6	101.8	101.8	102	101.9	101.9	101.7	101.9	101.7
1997	102.3	102.7	102.8	102.8	104	104.2	104.2	104.2	104.2	104.6	104.7	104.4	103.8
1998	104.9	105.1	105.3	105.2	105.3	105.3	104.7	105.4	105.6	105.5	105.5	105.8	105.3
1999	106.8	106.8	107.2	107.1	107.2	107.3	107.3	107.4	107.6	107.6	108.2	108.8	107.4
2000	108.7	108.9	108.9	109.1	109.2	109.7	109.6	109.7	109.7	113.1	113	113.1	110.2
2001	114.4	115.4	117.1	117	116.3	116.4	116.6	116.5	116.5	116.4	115.7	115.9(P)	116.1(P)
2002	118.4(P)	117.0(P)	116.8(P)										



Example of items :

TELEVISION AD PLACEMENT: LOCAL (SPOT). SERVICE: ONE MONTHLY BILL FOR SINGLE COMPANY. TOTAL DOLLAR AMOUNT FOR ADS PLACED IN THIS CONTRACT: \$8,500. NON-PACKAGE PLAN. LENGTH OF SPOT: 30 SECONDS. PLACEMENT OF SPOT: RUN OF SCHEDULE. TIED TO NEWS AND INFORMATION PROGRAMMING. NUMBER OF SPOTS PURCHASED PER WEEK: 3. NUMBER OF WEEKS RUN: 2. GUARANTEED. DAYPART: EARLY FRINGE. DAY OF WEEK: WEEKDAY. TIED TO CHANNEL: KABC. TOTAL DOLLARS FOR ADS PLACED: \$8,500
 COMMISSION: 15%
 FEE RECEIVED: \$1,275

AD CREATION. CLIENT NAME: XYZ. OTHER IDENTIFICATION: JOB ID 6578. FALLBACK



3 (ONE AD WITH ALL OF ITS CHARACTERISTICS). OTHER ADS TO BE CREATED:
 INSERT AD. OTHER NUMBER OF ADS: 2. REPEAT CLIENT. OTHER LENGTH OF
 BILLING PERIOD: SINGLE BILL.

IN-HOUSE SERVICES RENDERED:	# HOURS	\$ BILLING RATE	\$ TOTAL
ACCOUNT MANAGEMENT:			
ADMINISTRATIVE SERVICES	4.62	\$ 100/HR	\$ 462.00
PRODUCTION COORDINATION	2.75	\$ 100/HR	\$ 275.00
CLIENT CONTACT COORDINATION	5.75	\$ 110/HR	\$ 632.50
CREATIVE SERVICES:			
CREATIVE CONCEPT	5.6	\$ 115/HR	\$ 644.00
COPYWRITING	1.8	\$ 115/HR	\$ 207.00
COPY DIRECTION	.5	\$ 110/HR	\$ 55.00
COMPUTER GRAPHICS-CREATIVE			\$ 1,814.14
COMPUTER GRAPHICS-PRODUCTION			\$ 577.50
MECHANICAL ART PRODUCTION	3.5	\$ 110/HR	\$ 385.00
DIGITAL RETOUCHING	1.5	\$ 135/HR	\$202.50
PROOFREADING	4.0	\$ 75/HR	\$ 300.00
MEDIA SERVICES:			
TOTAL IN-HOUSE SERVICES:			\$ 5,554.64
ADDITIONAL EXPENSES:			
FAX FEES,			
COPYING FEES,			
MAIL EXPENSES,			
TRAVEL EXPENSES,			\$ 7.74
8.5	\$ 70/HR		\$ 595.00
TELEPHONE EXPENSES,			
OTHER EXPENSES: 2 COLOR PROOFS			
TOTAL ADDITIONAL EXPENSE:			\$ 329.00
			\$ 931.74
OUTSIDE SERVICES EXPENSE: 2 STOCK PHOTOS			
PERCENTAGE MARKUP			\$ 920.00
			20%
COMMISSION AMOUNT RETAINED BY AGENCY			
(OUTSIDE SERVICES EXPENSE MULTIPLIED BY PERCENTAGE MARKUP)			\$ 184.00
GRAND TOTAL (SUM OF IN-HOUSE SERVICES			
RENDERED, ADDITIONAL EXPENSES AND AGENCY COMMISSION)			\$ 6670.38



UK CORPORATE SERVICES PRICE INDEX (CSPI)

PRICE INDEX FOR ADVERTISING SERVICES

Introduction

An experimental price index for the placement of advertisements has been under development by the ONS during 2002. No results have been published yet though. The proposed price index will be based on list prices, revenue figures and audience figures, primarily from published sources. This paper outlines the proposed methodology and seeks some feedback as an initial stage of consultation.

Background

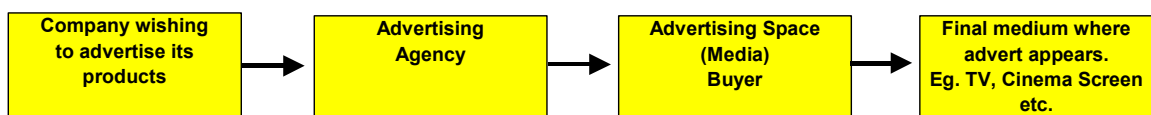
Total advertising expenditure in the UK during the year 2000 amounted to £15 billion according to figures published by the Advertising Association. A price index for advertising would represent approximately 5 per cent of a top-level CSPI encompassing the whole corporate services sector.

The UK advertising industry

Most commonly, a company wishing to advertise its products will approach an advertising agency with a pre-determined budget allocation. The advertising agency will retain a small percentage of this budget. How big this percentage is depends on the contract agreed with the advertiser. The agency will then usually manage the advertising campaign within the constraints of the remaining budget.

The advertising agency will handle the creative side of the process. If the campaign includes a TV commercial they will approach the necessary film companies and hire the necessary actors. The agency also purchases advertising space, often via specialist media buyers who act as intermediaries between the agency and the various newspapers, TV channels and radio stations in question.

The following diagram shows the relationships between the various elements of the advertising industry.



While this model is most commonly adhered to, there are variations. Sometimes the company advertising will handle the creative element of the campaign themselves. Sometimes agencies will deal with media selling advertising space directly, without going through a separate media buyer. These variations make a comprehensive price index of the advertising industry difficult to develop.

Industrial Classifications

The UK SIC (Standard Industrial Classification) identifies the following:

Advertising (74.40) :

- 74.40/1 Sale or leasing activities of advertising space or time
- 74.40/2 Planning, creation and placement of advertising activities
- 74.40/9 Advertising activities not elsewhere classified

The CPC (Central Product Classification) is similar:

Advertising (836):

- 8361 Planning, creating and placement
- 8362 Purchase or sale of space, on commission
- 8369 Other advertising services

For which advertising services should prices be collected?

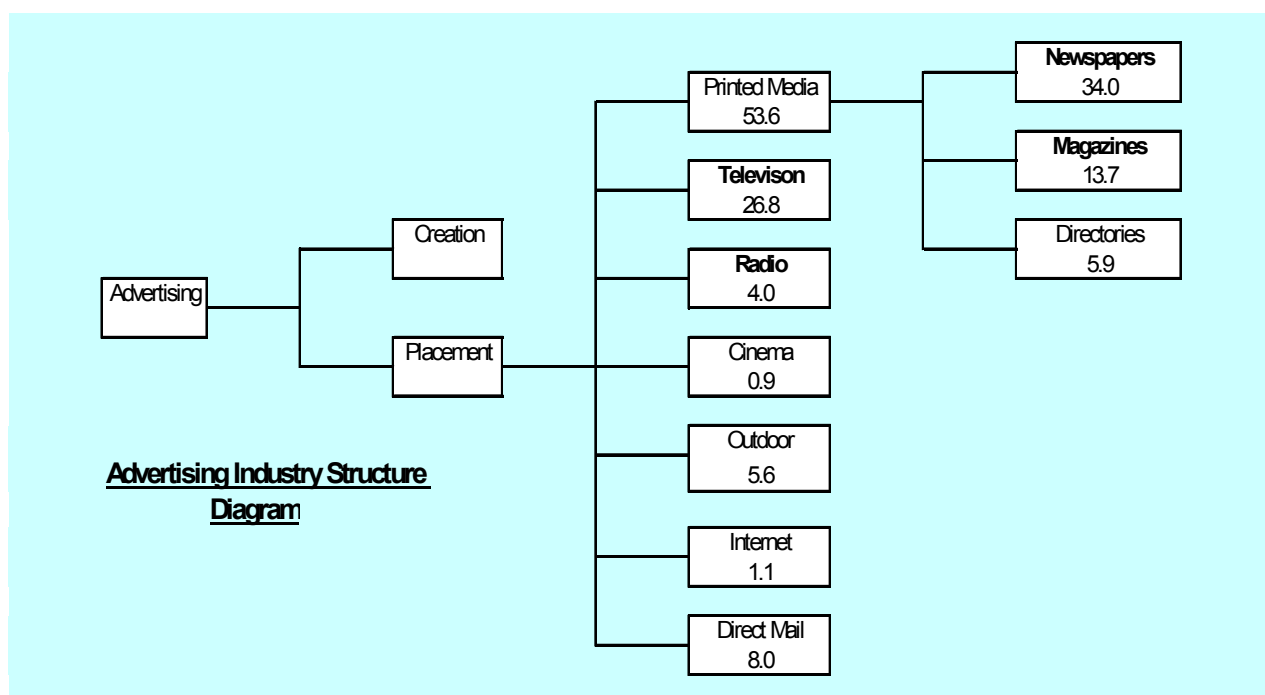
Expenditure in the advertising industry can be split between the cost of creating an advertisement, the cost of displaying an advertisement and the fees for arranging either or both of these. There are many problems to overcome when trying to develop a price index for the creative side of advertising. For a start, many of the contracts that advertising agencies take on are unique, making price collection difficult. Weighting items too is problematic because there are many different elements that make up the creative process. A TV commercial, for example, involves hiring many specialists such as film directors, actors, cameramen, lighting technicians and catering staff.

The ONS has decided to concentrate first on the placement of advertisements. It is difficult to measure the expenditure split between creation and display. It may be assumed that, having spent money to create an advertisement, a company will spend at least as much again on displaying it. This suggests that a price index for the placement of advertisements may be a suitable proxy for the industry as a whole. In order to test this hypothesis the ONS has started work on constructing an experimental index using information already published by the industry.

The ultimate goal is to have a price index for services provided by advertising agencies. This would be broadly commensurate with the industrial classification described above. A placement index will hopefully be a good proxy of this, as well as being a useful index in its own right. However, it may be necessary to approach advertising agencies directly to obtain a more accurate measurement of their fees.

The price collection framework

The following diagram shows the structure of the industry compiled using information obtained from the Advertising Association (a trade association representing the UK industry). The weights shown are the percentages of the total UK advertising revenue for placement for each media type in the year 2000. No figure is available as yet for creation.



Collection of price information

Newspapers and **magazines**, that sell advertising space, produce rate cards. These cards quote the prices for many different types of advertisement, from a full-page colour display to a couple of lines in the classified section. Rather than approach each company separately, the ONS has extracted rate card information directly from a publication called BRAD (British Rates and Data). BRAD is a commercially produced publication that is used widely by companies in the UK advertising industry. It lists rate card details for all national and regional newspapers, magazines and Internet sites. The ONS subscribes to the online version of BRAD, which also includes information on many terrestrial and satellite TV channels.

Using BRAD the ONS is able to collect a sample of prices, on a quarterly basis, over a wide range of different printed media. However, this is not true for TV and radio where prices are often negotiated on a one-off basis. For TV and radio advertising total quarterly advertising revenue figures for a sample of TV channels and radio stations have been obtained. The revenue figures have then been divided by each channel's or station's audience figures over the same period. This provides an estimate of the price paid per audience member or unit value. By fixing audience figures in the base year the unit values can be used to generate a proxy price index. BARB (British Audience Research Bureau), the Advertising Association (AA) and

RAJAR (Radio Joint Audience Research) have supplied these audience figures. The underlying assumption here is that the key element in determining the price is the size of the audience that the advertisements are expected to reach. This assumption needs to be tested further as there may be other important price-determining factors to account for.

Printed media accounts for 53.6% of total advertisement placement revenue. Similarly, TV and radio accounts for 30.8%. Using the information sources detailed above, the ONS already covered 84.4% of the placement side of the advertising industry with just these media types. It should be noted that direct marketing already exists as part of a CSPI for secretarial services (part of SIC 74.83 / CPC 8595). This appears to overlap with the “direct mailing” category shown on the industry structure diagram on the previous page. This will be investigated further.

Weighting the components of the index

Advertising seeks to promote product awareness so the more people an advertisement reaches then the more effective it will be and the more it will cost. With this in mind, audience figures and circulation figures have been used to weight all components at the low level of the industry diagram (individual TV stations, newspapers etc.) The high level branches of the industry diagram (media such as radio and TV) are then weighted together using a percentage split of the total advertisement placement revenue.

There are, of course, other factors that add to the effectiveness and the cost of an advertisement. A full-page colour advertisement in a newspaper will be far more eye catching than a couple of lines in the classified section and, as such a, lot more expensive. In some cases an advertiser will pay more to have their advertisement displayed to a certain type of audience. A toy manufacturer will pay more to advertise their products during a popular children’s TV show, for example.

For TV and radio, the ONS has used audience figures and advertising revenue figures to generate proxy indices. Unfortunately revenue figures for individual newspapers are not readily available. Prices and circulation figures for a sample of regional and national newspapers in the UK are collected from BRAD in order to create unit values and a proxy price index.

A number of different sources are being used for audience figures. BRAD publishes circulation figures together with the rate card details for all newspapers and magazines. RAJAR lists audience figures for individual radio stations and the Independent Television Commission (ITC) have provided audience figures for various TV channels. It is important that these figures are measured on a consistent basis within a media type.

The internet is a relatively new medium to advertisers and there is not, as yet, an industry standard for measuring audience figures or, as it is more commonly referred to, ‘internet traffic.’ There are currently a number of companies selling internet traffic information but, because they all use different methods and technologies to collect their data, it is difficult to judge the quality of the information on offer. For the time being, placement of advertisements on the internet will not be included in the experimental CSPI.

Treatment of discounting

In many cases the rate cards are only the start of price negotiations between an advertising agency and a company selling advertising space. Depending on the size of the advertiser, the amount of space required and the time of year, it is sometimes possible for the advertising agency to get a significant discount on the prices listed on the rate cards. This is true across all advertising media.

Measuring discounts can be difficult because of the unique nature of these contracts. Currently, the ONS is using the average discount for newspaper and magazine advertising obtained from the Advertising Association. This information can be used to adjust the index appropriately using discounting factors. For TV and radio advertising this information is not required because discounting is already reflected in the revenue figure used to generate the two proxy sub-indices.

Summary

The ONS is currently constructing an experimental price index for the placement of adverts based on a combination of price, revenue and audience figures. Price information, in the form of rate cards, is readily available from industry sources. Most companies who sell advertising space produce these and will make them freely available.

Revenue and audience figures, on the other hand, are more difficult to come by. In the UK there are many organisations that produce this information. In some cases it is free, for example, RAJAR publish radio audience figures on their web-site. In contrast, the Advertising Association charges an annual subscription fee for their publication "The Advertising Statistics Year Book" which contains TV advertising revenue figures.

While there is a cost involved in purchasing information from third party organisations it is more cost effective and less burdensome to business than surveying advertising companies directly. Also, the organisations who produce this information have well-established links with companies operating in the industry. Trade associations, for example, can survey their own members.

The ONS is planning to produce an experimental price index for the placement of advertising by spring 2003. At this time ONS will start a consultation process to test the quality of the price index ready for future publication.

Anthony Luke
UK Office for National Statistics
September 2002

VOORBURG 2002

ADVERTISING SERVICES IN THE NEW ZEALAND PRODUCERS PRICE INDEXES

BY

Sonia Collins



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A PRICE INDEX FOR ADVERTISING SERVICES IN THE PRODUCERS PRICE INDEX IN NEW ZEALAND

1. Some general points on Business Services:

During the redevelopment project of the Business Price Indexes that was started in 1996 and completed in 1998, some weaknesses in the methodology used at that stage were identified (i.e. instances where charge-out rates had been used as a proxy to represent the price of the various services provided.) These methodologies were recognised as the only practical solution given the limited scope for improvement and given the nature of the services industry and the types of services provided.

Concerns arising from the use of charge-out rates as indicators of service prices include:

The concern that labour productivity increases will result in the charge-out rates overstating the true price change for the service. This is of particular concern in the business service areas, where the adoption of computing and other technology has increased labour productivity.

While labour costs will often account for the majority of the costs in the provision of many business services, there will often be other components (materials, disbursements, overhead charges etc.) which will contribute to the final cost of the service. The effect this will have on the appropriateness of charge-out rates as indicators of effective price movement is ambiguous.

Charge-out rates could often remain constant for long periods of time, whereas the true price of the service may well be increasing. This could result from firms "padding" invoices with greater billed hours or higher overhead charges. This would lead to the charge-out rate understating the true inflationary pressures in the short term, and then recording periodic dramatic increases.

2. Price evolution on advertising services:

Methodology:

What we want to price:

The Australian and New Zealand Standard Industrial Classification (ANZSIC) (1996) states:

For Division L: Property and Business Services;

For Sub-division L78: Business Services;

For Group L785: Marketing and Business Management Services;

For Sub-class L785100: Advertising Services.

"This sub-class consist of units mainly engaged in providing advertising services (except sale of advertising space in their own publications or broadcasts).

Exclusions/References:

Units mainly engaged in



selling advertising space in printed material published by the same unit are included in the appropriate classes of Group 242 Publishing
selling advertising time in radio or television broadcasts by the same unit are included in the appropriate classes of Group 912 Radio and Television Services.

The primary activities of advertising agencies are:

- Advertising agency service
- Advertising placement service
- Advertising preparation service
- Advertising service (except sale of advertising space in own publications or broadcasts)
- Advertising space selling (on a commission or fee basis)
- Aerial advertising service
- Samples distribution service

Source : Australian and New Zealand Standard Industrial Classification (NZ version 1996)

What do we price:

The New Zealand Producers Price Index has included Advertising Services since the mid-1980's.

The latest redevelopment of this index was done during 1996 as part (although small) of the Finance, Insurance, Property and Business Services industry.

Problems experienced during the redevelopment were to determine appropriate items to price to represent the outputs. Activities in the business services area are usually "one-offs" and are charged for via an hourly rate. When measuring the hourly charge-out rates, technological and efficiency improvements are difficult to identify and the price movements are unrepresentative of the real movement.

In view of the difficulty of pricing services within the Producers Price Index (PPI), any of three approaches can be taken as follows:

Define a "model service" on the Commodity Price Survey (CPS) questionnaire sent to respondents each quarter. The respondent is asked to provide a price for the service defined on the questionnaire. This approach is used in measuring legal services. The drawbacks are that initial development involves considerable contact with the respondents, added respondent burden in filling out the questionnaire as result of the nature of the specifications, service specified might become outdated.

Priced service is standardised. This approach is very useful where the respondent has a list of standard services (eg dry cleaning services). The drawback of this approach is: services are often not standard at all.

Represent the price of the output produced with the charge-out rate of the person providing the service. (example – architect fees for designing a house are linked to the charge-out fee of the architect.) The drawbacks are: the fee might entail more than just the charge-out rate of the architect; and productivity gains or technological changes are difficult to identify.

The first approach mentioned may be the most accurate and may provide the most representative prices. It is however a costly and time consuming method to implement. In the case of advertising services, this route could not be followed in view of time and resource constraints at the time the indexes were developed.

The third method was in use at the time of the redevelopment phase during 1996 to 1998 and was kept in view of the constraints at the time. Particular effort was made to ensure the correct charge-out rate was used to represent the service.

Size of the industry:

During the 1996-1998 redevelopment, AES (Annual Enterprise Survey) 1994 data was used to determine weights for the industry.

In 1994 Gross Output of the advertising industry with ANZSIC code 7851.1 was \$948 million.

Total output for industry group PG19: Finance, Insurance, Property & Business Services was **\$20,491 billion** in 1994. Advertising services had a weight of 4.3 percent in the total output of industry group PG19 in 1994.

There were eight major contributors to the Advertising Services group from AES 1994 that contributed more than 1% of Gross Output of Advertising Services. These eight major contributors has a total weight of 22 percent in the index.

The rest of the industry contributed less than 1% to Gross Output.

Source: Industry Background Summary and Plan PG19 Finance, Insurance, Property and Business Services

In view of classification changes after the implementation of the 1993 System of National Accounts, and changes in sample selection methodology for AES, it would not be appropriate to directly compare 1994 AES data and 2000 AES data.

In 2000 Gross Output of the advertising industry with ANZSIC code 785100 was \$941 million. Total gross output for industry group L: Property and Business Services was **\$26,082 billion**. Advertising services had a weight of 3.6 percent in the total output of industry group L: Property and Business Services in 2000.

Below is a table comparing the size of the industry in 1994 with the size of the industry in 2000 according to the number of firms in the industry.

The actual growth in the industry: Based on 1995 Coverage, Geographic Units, L785100 Advertising Services

Number of firms		Growth based on numbers
February 1994	798	
February 1995	904	13.3%
February 1996	916	1.3%
February 1997	987	7.8%
February 1998	1,020	3.3%
February 1999	1,027	0.7%
February 2000	1,156	12.6%
February 2001	1,077	-6.8%
From 1994 to 2001		34.9%

Source Business Demography

Where does the index for advertising services fit in the Outputs PPI index structure:

Regimen:

ANZSIC Division L: Property and business services

Subdivision L78: Business Services

Group L785: Marketing and Business Management Services

Class L7851: Advertising Services

National Accounts Working Industry (NAWI) level: Other business services

Subclass 785100: Advertising services

Australian and New Zealand Commodity Classification (ANZCC) 87100 : Advertising and marketing services

New Zealand follows a building block approach for the suite of PPIs. Under this structure, prices collected on a quarterly basis feed into representative commodity

indexes. These commodity indexes then feed into industry indexes. The industry indexes then feed up to the All Industries indexes. (See Annex 1 for Structure and Annex 2 for Index Series.)

The representative commodity indexes are consistent with the Australian and New Zealand Standard Commodity Classification (ANZSCC). Advertising services represents code 871 on level 2 of ANZSCC.

These services are divided into four groups which are based on the main activities of the entities surveyed in AES 1994. The income of these entities for Sale of Services were cross-referenced with the NZSIC variable to determine the breakdown and the representative weights.

Advertising & Marketing Services		
Commodity	Weight	Description 1
TV etc Production	82	TELEVISION PRODUCTION. T.V. COMMERCIALS – basic, no visual effects, no location sound, mixed sound track (including hiring of outside facilities, standard one day shoot, exclude actors fees. TELEVISION PRODUCTION. – 30 second TV commercial, 4 hours editing, finished master tape, VHS tape, 2 release dubs.

Advertising Agencies 4,138

CIRCULAR DISTRIBUTION. UNDER 20, 25 GRAMS –price per 1000
 CIRCULAR AND HANDBILL DISTRIBUTION. – charge per 1000
 ADVERTISING AGENCY FEE. – commission on ad in news – 11 columns per page, price per single column cm weekdays
 ADVERTISING AGENCY FEE. – commission on ad in news – display advertising 10 columns per page price per single column cm
 ADVERTISING AGENCY FEE. – commission on ad in news – text only, single column classified, general column (5cmx1 col) price per column.
 ADVERTISING AGENCY FEE. – commission on ad in news – text only, double column classified general column price per 1cmx2 cols (Monday to Friday)
 ADVERTISING AGENCY FEE. – commission on ad in news –casual classified price per col cm
 ADVERTISING AGENCY FEE. – commission on ad in news – casual display price per col com
 ADVERTISING AGENCY FEE. – commission on ad in news – 2 cm deep by 1 single column wide local display, Monday to Friday.
 ADVERTISING AGENCY FEE. – commission on printing of ad – 2 colour leaflets, printed 2 sides, folded, white art 120 gms, A4 size, 5500 copies, 2

plates @ film \$120 each included charge to customer.

ADVERTISING AGENCY FEE. – commission on ad in magazine – price per cm for black and white display.

ADVERTISING AGENCY FEE. – commission on ad in magazine – gloss casual, price per page for four colour display.

ADVERTISING AGENCY FEE. – commission on ad on radio – per one 30 second commercial radio works superspots.

ADVERTISING AGENCY FEE. – commission on ad on radio – prime time one 30 second commercial in 6am to 10pm zone.

ADVERTISING AGENCY FEE. – commission on ad on radio – prime time up to 30 sec A zone 6am to 10pm for 98FM.

ADVERTISING AGENCY FEE. – commission on ad on radio – prime time over 30 up to 60 sec A zone 6am to 10pm for 98 FM

ADVERTISING AGENCY FEE. – commission on ad on TV – 30 sec both channels, peak fixed rate 6am to 10:30pm, middle of each month average.

MEDICAL JOURNAL – Printed twice monthly, 4750 copies, cover and 48 pages, price per binding, printing, flow wrapping and plates. (outlet 326)

PRINTING OF WEEKLY COMMUNITY NEWSPAPER – price per 10 copies.(outlet 1316)

Commercial Display 1,536 Artists

COMMERCIAL ART FEES. LINE DRAWING – computer graphics (mackintosh)– charge-out rate per hour.

COMPUTER ART FEES. – charge-out rate per hour.

COMPUTER FINISHED ART. – charge-out rate per hour.

COMMERCIAL ART FEES – AIR BRUSH – computer graphics (silicon) – charge-out rate per hour.

COMMERCIAL ART FEES (SERVICE). SIGNWRITE – on vehicle, one colour, lettering on door panel price per letter.

Marketing Research 4,244

MARKET RESEARCH. ANIMAL REMEDIES – annual charge per contract based on 1200 holdings.

CONSULTANCY FEE FOR MARKET RESEARCH, - charge-out rate per hour.

COMMERCIAL RESEARCH FEES (ECONOMIC) – fee for consulting resources of supervising

consultant for 10 days, and project consultant for 50 days (without discounts).

COMMERCIAL RESEARCH FEES (ECONOMIC) – fee for consulting resources of project consultant with appropriate skills (eg marketing/economics) for 15 days (without discounts).

TOTAL weight 10,000

Pricing methodology:

The 33 advertising services prices are based on:

Costs per line (printed) for :

Costs per 1000 deliveries (circulars) for :

Hourly charge-out rate (professional fees) for :

Commission fee based on rate per hour for ad on TV and Radio etc:

The calculation for the advertising agency fee is done in a spreadsheet. The Commission Fee (also collected via the **Commodity Price Survey**) is applied to the prices from the **Commodity Price Survey** for the cost of placing an Ad on Radio, Television, Newspaper, Magazine and Other (leaflets). The results are then transferred to the Index System (Generalised Index Facility Toolbox (GIFT)) where the index is calculated. We allow for seasonal prices and carry forward the off-season prices until the next season in some cases eg TV advert production for different times of the year.

Charge-out rates apply to services where a consultant is involved in providing the service (eg commercial display art fees, marketing research fees, editing of TV commercial). It can either be an hourly charge-out rate (computer graphics) or a fee for a fixed period (10 days for an economic research project) or (annual fee for market research on a specific subject).

Current concerns with the methodology:

These prices can not be easily adjusted for changes in technology, productivity.

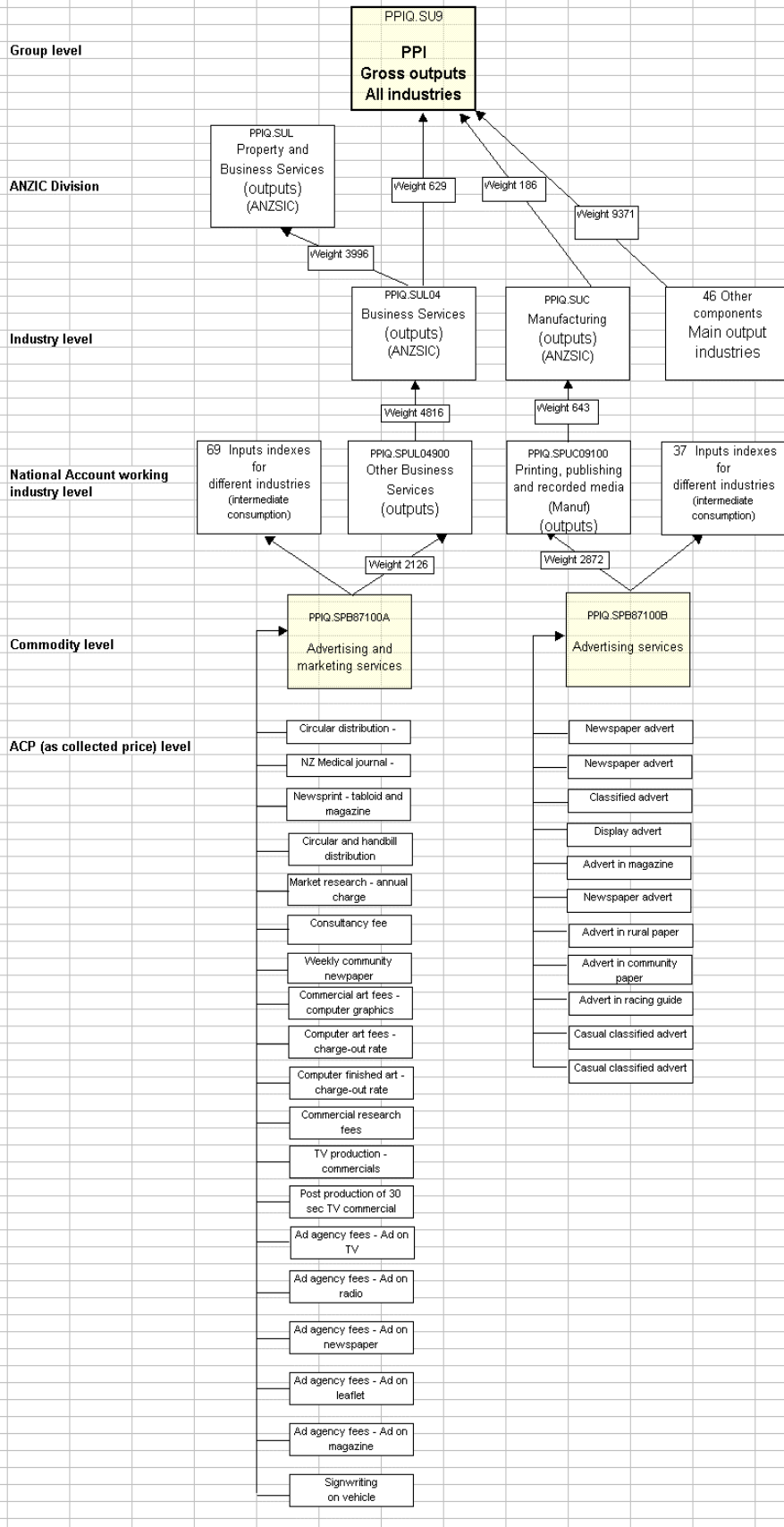
The real value of the service for the purchaser might differ from one purchaser to the next. There is no adjustment for any of these in the indexes.

Manufacturing costs are used as an indicator for the value of the service in some cases. For example we price the cost of printing a weekly community newspaper and a journal and use these movements to represent the service. Material cost increases should not have an effect on the cost of the service in producing the item.

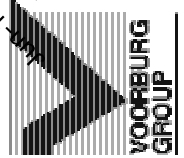
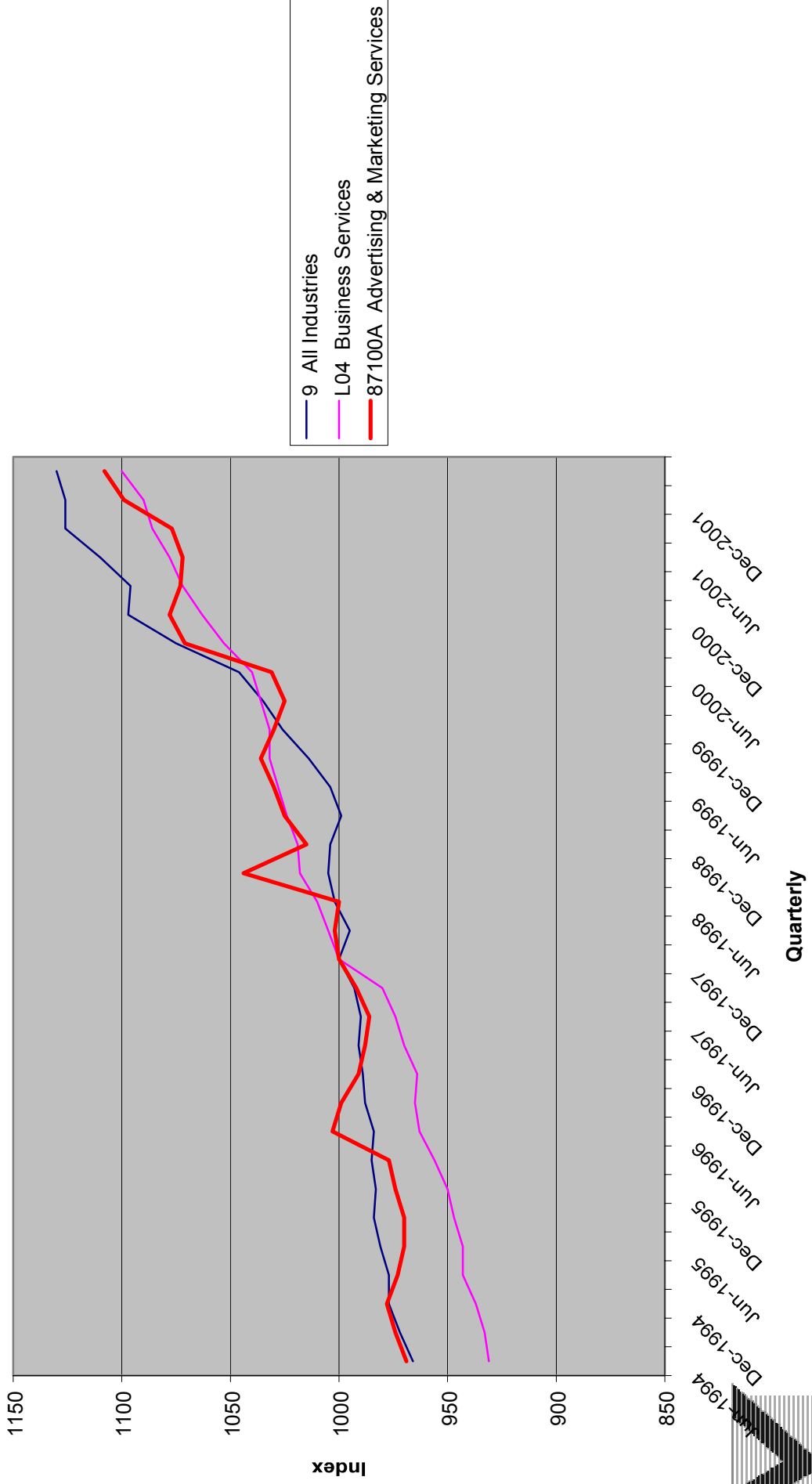
In some cases the descriptions on the questionnaires don't describe the services exactly and unambiguously (i.e. they don't include all price determining characteristics) which can lead to inconsistent responses from respondents.

The methodology used for seasonal prices needs to be reviewed. Off-season prices are carried forward to smooth the seasonal highs and lows.

Flowchart of advertising services in PPI



Producer Price Indexes



Producers Price Index

*Outputs - Division (ANZSIC) -
Base December 1997*

	9 All Industries	L Property and Business Services
	Index PPIQ.SU9	Index PPIQ.SUL
Jun-1994	966	895
Sep-1994	972	900
Dec-1994	977	902
Mar-1995	977	914
Jun-1995	981	921
Sep-1995	984	932
Dec-1995	985	938
Mar-1996	985	951
Jun-1996	984	958
Sep-1996	988	966
Dec-1996	989	967
Mar-1997	991	973
Jun-1997	990	979
Sep-1997	993	989
Dec-1997	1000	1000
Mar-1998	995	1006
Jun-1998	1002	1014
Sep-1998	1005	1019
Dec-1998	1004	1016
Mar-1999	999	1015
Jun-1999	1004	1018
Sep-1999	1014	1019
Dec-1999	1026	1017
Mar-2000	1035	1020
Jun-2000	1046	1019
Sep-2000	1075	1025
Dec-2000	1097	1031
Mar-2001	1096	1033
Jun-2001	1110	1036
Sep-2001	1126	1040
Dec-2001	1126	1044
Mar-2002	1130	1051

Producers Price Index

*Outputs - Published
Industry (ANZSIC) -
Base December 1997
Quarter (=1000)*

	L04 Business Services
	Index PPIQ.SUL04
Jun-1994	931
Sep-1994	933
Dec-1994	937
Mar-1995	943
Jun-1995	943
Sep-1995	947
Dec-1995	950
Mar-1996	956
Jun-1996	963
Sep-1996	965
Dec-1996	964
Mar-1997	970
Jun-1997	974
Sep-1997	980
Dec-1997	1000
Mar-1998	1005
Jun-1998	1010
Sep-1998	1018
Dec-1998	1019
Mar-1999	1024
Jun-1999	1028
Sep-1999	1032
Dec-1999	1032
Mar-2000	1036
Jun-2000	1040
Sep-2000	1053
Dec-2000	1063
Mar-2001	1072
Jun-2001	1078
Sep-2001	1086
Dec-2001	1090
Mar-2002	1100

Producers Price Index

*Private - Gross
Outputs (ANZSIC)*

	L04900 Other business services
	Index PPIQ.SFUL04900
Jun-1994	958
Sep-1994	956
Dec-1994	958
Mar-1995	959
Jun-1995	957
Sep-1995	961
Dec-1995	964
Mar-1996	974
Jun-1996	983
Sep-1996	982
Dec-1996	979
Mar-1997	983
Jun-1997	984
Sep-1997	985
Dec-1997	1000
Mar-1998	1007
Jun-1998	1009
Sep-1998	1021
Dec-1998	1010
Mar-1999	1017
Jun-1999	1019
Sep-1999	1024
Dec-1999	1021
Mar-2000	1020
Jun-2000	1022
Sep-2000	1043
Dec-2000	1052
Mar-2001	1057
Jun-2001	1059
Sep-2001	1071
Dec-2001	1078
Mar-2002	1086

Producers Price Index

Private - Representative Comm

	87100A Advertising & Marketing Services	87100B Advertising - manufacturing
	Index PPIQ.SPB87100A	Index PPIQ.SPB87100B
Jun-1994	969	891
Sep-1994	974	893
Dec-1994	978	893
Mar-1995	973	893
Jun-1995	970	913
Sep-1995	970	945
Dec-1995	974	947
Mar-1996	977	946
Jun-1996	1003	970
Sep-1996	999	978
Dec-1996	991	978
Mar-1997	988	984
Jun-1997	986	984
Sep-1997	992	1000
Dec-1997	1000	1000
Mar-1998	1002	1000
Jun-1998	1000	1000
Sep-1998	1044	1012
Dec-1998	1015	1012
Mar-1999	1025	1012
Jun-1999	1030	1025
Sep-1999	1036	1027
Dec-1999	1030	1027
Mar-2000	1025	1014
Jun-2000	1031	1014
Sep-2000	1071	1031
Dec-2000	1078	1031
Mar-2001	1073	1041
Jun-2001	1072	1048
Sep-2001	1077	1080
Dec-2001	1078	1080
Mar-2002	1108	1090