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**OECD INQUIRY ON PRICES OF SERVICES TO ENTERPRISES
Part 1: REPORT**

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The opinions expressed in this paper reflect those of the author and not necessarily those of the OECD nor its Member countries.

OECD INQUIRY ON PRICES OF SERVICES TO ENTERPRISES

ABSTRACT

As a contribution to the development work of the Voorburg Group on prices of services provided to enterprises, this paper reports the outcome of the updating of an OECD inquiry on Member Countries' practices in the field of data collection of these prices. Countries were asked to report on types of prices collected (list, transaction, mark-up, other) and types of services observed (simple service, composite services, service bundle, other) by ISIC group of service activity. Frequency of pricing and number of price quotations per period were asked for. Countries were also invited to indicate for which CPC classes, within each ISIC group, prices are collected. There was a further question on publication of prices and available reports on work in this area were requested.

Responses show expanding activity with a large diversity in both service sector coverage and national practices. Some service activities are well covered by a small number of countries, others are poorly covered or not at all. Coverage of services products varies among activity groups. In only a few cases are the service products of an activity group well covered and then it is only by small number of countries. There is also variation amongst types of prices collected and types of services priced though transaction prices and simple services are reported most frequently.

The paper attempts to formulate issues regarding next steps in international development work with some suggestions on the possible future direction of this work.

ISSUES PARTICIPANTS MAY WISH TO ADDRESS

- i. Is the report an accurate and useful reflection of activity? If not, what changes should be introduced?
- ii. Is further information required? If so what information?
- iii. On what issues should future work of the OECD focus?
- iv. Is it desirable and timely to start to consider recommendations on best practices, perhaps in the form of a Manual? Should this work be coordinated with work on PPIs generally?
- v. CPI components are sometimes used as proxies for prices of services to enterprises. What studies have been done on measuring the adequacy or inadequacy of this practice in deflating services output?

OECD Inquiry on Prices of Services to Enterprises

INTRODUCTION

1. There has been a considerable effort undertaken, in a few national statistical offices, to develop the collection of data on prices of services provided to enterprises. In order to measure the real output of services, it is seen as necessary to improve the range of deflators appropriate to particular service products. This need is accentuated by the growing weight of service sector output in GDP seen in most economies. Further the UN Statistical Commission in 1999 has asked the Voorburg Group to focus on the measurement of these prices.
2. As a contribution to the work of the Voorburg Group, this report presents an update in 1999 of a previous study on prices of services to enterprises carried out by the National Accounts Division of the Statistics Directorate of the OECD. The original study was conducted by Ann Chadeau and this update largely preserves the structure and content that she created. Most of the credit for the paper consequently is due to her. The report is presented in two parts: Part 1 contains the report proper, Part 2 contains the Tables and the explanatory notes. It is offered as a working and evolving document and in that sense is incomplete.
3. The report of the 1998 study was sent out to OECD Member Countries on 22 July 1999 with a letter requesting:
 - a) comments on the accuracy of the report as a reflection of activity in each Member Country.
 - b) a report on recent developments in collection of prices of services to enterprises (since July 1998);
 - c) that countries update the entries in tables 2 and 3 of the 1998 report concerning collection of prices classified by activity (ISIC rev 3) and prices classified by product (CPC v 1.0) respectively.
 - d) information on resulting price indices, which are published (by ISIC rev 3)
 - e) any documentation or recently published papers that describe countries work in this area.
4. Responses were optimistically requested by 27 August. We were aware that this was peak holiday season in the Northern Hemisphere and many potential respondents would not be in the office. In fact responses are still being received at the time of writing.
5. At the time of writing, responses to the 1999 inquiry have been received from 17 countries namely: Australia, Canada, Czech Republic, Denmark, France, Germany, Iceland, Italy, Japan, New Zealand, Norway, Switzerland, Poland, Portugal, Turkey, United Kingdom and United States. Three countries - Iceland, Poland and Turkey - are included as respondents for the first time to this OECD inquiry, thus bringing the coverage of OECD knowledge of activity in this area to 25 countries. In the case of Iceland they had replied to an earlier request but had not been recorded as so doing. As for Poland, only a telephone response had been received at the time of writing and full details were not available but are expected in the near future.
6. The cumulative responses to this and the previous two inquiries from 25 countries in all are summarised in tables 1,2 and 3. Changes in tables since last year are shown in **bold**.

7. Table 1 “State of Inquiry - Prices of Services to Enterprises” provides a simple summary of cumulative national responses to the questionnaire.
8. Table 2 “Summary of Responses to Inquiry on Prices by ISIC Activity” provides summary information by ISIC rev 3 (3 or 4 digit) activity, on which countries collect data, what type of prices are collected, the frequency of collection, the type of service priced, and the start date.
9. Table 3 “Summary of Responses to Inquiry on Prices by CPC Product” sets out, for those countries that have been able to provide it, information on price collection by 3 or 4 digit ISIC activity and product. Products are classified by CPC version 1.0 as far as possible, but some products have not been definitively classified.
10. To provide some historical background, the 1997 questionnaire asked countries to indicate for ISIC Rev.3 service groups or classes, the type of price collected (i.e. whether list, transaction, mark-up price, other), the frequency of pricing, the number of price quotations per period, the type of service priced (simple service, composite service, service bundle, other), the start date of data collection.
11. The 1998 questionnaire introduced the correspondence between those ISIC groups or classes for which prices of services to enterprises are collected (listed in the response to the 1997 questionnaire) and the CPC version 1.0, at the five or occasionally four digit level. The correspondence between ISIC and CPC was that given in the *Draft Central Product Classification (Services Part; Sections 5-9) Version 1.0, ST/ESA/STAT/SER.M/77, 30 October 1996*. Respondents, who had been identified as data collectors, were requested to indicate for which CPC classes price data are collected, or to describe which service products are observed where they do not fit CPC classes.

RESULTS

Description of summary Tables

12. Table 1 sets out which countries have responded to the OECD inquiry and attempts to categorize their activity in the domain of collection of prices of services provided to enterprises. It indicates which collect price data on these services, which use CPI as a proxy for such prices, which have indicated future plans for data collection, and those countries that have provided CPC product details relating to prices collected.

A.Prices of services to enterprises by service activity

13. Table 2, is an updated version of the table in the report, that was presented to the Voorburg Group in 1998.
 - Columns 1 and 2 list, ISIC rev 3 codes and descriptions of activity groups (three digit level) or classes (four digit level).

- Column 3 provides the codes of countries which report collecting prices of services to enterprises.
- Column 4 gives details of the *type of price collected*. Three types of prices are identified, list prices, transaction prices, mark-up prices and a residual category “other” is provided for those prices which do not correspond to any of the three differentiated types:
 - A *list price* is a price or tariff published by the service provider which can be collected by simply reading the list; list prices are gross of any discounts which some customers may be able to negotiate.
 - A *transaction price* is the price actually charged by the producer after deduction of any discounts.
 - A *mark-up price* is calculated by the statistical office by adding a mark-up, reported by the service provider, to the estimated cost of hours of work. This type of price is used for services consisting mainly of labour inputs.
 - It is worth remarking that the UK identified as well, the type “*model price*”, where a hypothetical job is priced.
- Column 5, *frequency of pricing*, indicates whether prices are collected monthly (M), quarterly (Q) or annually (A);
- Column 6 shows the *number of quotations* per period.
- In column 7, *type of service priced*, three types of services are identified, a simple service, a composite service, a service bundle; a residual category “other” is provided for those services which do not correspond to any of the three differentiated types.
 - A *simple service* is a standard service often measured in physical quantity units such as ton-miles, number of hours.
 - A *composite service* is a service composed of a number of simple services which are necessarily produced together due to existing regulations, security measures or production processes. The customer is not free to choose to purchase only some of the components of a composite service. Either all are purchased together or none are purchased at all.
 - A *service bundle* is composed of a set of services negotiated between the service provider and the customer. The bundle of services provided may differ according to the customer.
- In column 8, *start date*, the actual or planned date for data collection of prices is indicated.
- *Explanatory notes* at the end of the table give additional information on coverage, type of price collected and type of service priced.

B.Prices of services to enterprises by service product

14. Table 3 indicates the CPC classes, or other service products which do not match the CPC, for which prices are collected. CPC classes are listed so as to show the correspondence with the ISIC groups given in Table 2.
15. To understand the links between Tables 2 and 3, it should be noted that only those ISIC groups or classes for which price collection by product has been identified, by at least one country, appear in table 3.
16. Table 3 is laid out as follows:
 - Columns 1, 2 and 3 are identical to columns 1, 2 and 3 of Table 2. ISIC Rev.3 codes and headings are given in columns 1 and 2. Codes of countries which collect data on these service activities are given in column 3.
 - Columns 4 and 5 list the codes and headings of the CPC version 1.0 corresponding to the ISIC headings given in columns 1 and 2.
 - Column 6 indicates the acronyms of countries which are able to identify service products for which prices are collected, in terms of the CPC.
 - Column 7 indicates service products for which prices are collected but do not fit the CPC classes. The description of services listed in this column repeat the wording used in the responses to the questionnaire.
 - Explanatory notes at the end of table 3 provide additional information on coverage and type of price.

Comments on results

A. Prices of services to enterprises by service activity

17. Out of the 25 countries which have responded to OECD since 1997, sixteen report that they collect prices of services to enterprises (Australia, Canada, Czech Republic, Finland, France, Germany, Japan, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Sweden, United Kingdom, United States), nine report that they do not as yet collect prices of services to enterprises (Belgium, Denmark, Hungary, Iceland, Ireland, Italy, Korea, Switzerland, Turkey) and four have not responded (Austria, Greece, Luxembourg, Spain). It is not always clear, where countries collect producer prices (i.e. prices of producers) of services that might be supplied to consumers or enterprises, whether or not they make a differentiation between the two in the prices collected.
18. Over a third of the countries which report collecting prices of services to enterprises, collect prices for the following activities (in ISIC order):
 - Hotels, camping sites and other provision of short-stay accommodation (ISIC 551)- 7 countries
 - Transport via railways (ISIC 601) - 9 countries
 - Freight transport by road (ISIC 6023) - 9 countries

- Sea and coastal transport (ISIC 611) - 8 countries
- Scheduled air transport (ISIC 621) - 9 countries
- National post activities (ISIC 6411) - 8 countries
- Telecommunications (ISIC 642) - 9 countries
- Real estate activities with own or leased property (ISIC 701) - 8 countries
- Real estate activities on a fee or contract basis (ISIC 702) - 8 countries
- Renting of land transport equipment (ISIC 7111) - 8 countries
- Renting of construction and civil engineering machinery and equipment (ISIC 7122) - 6 countries
- Software consultancy and supply (ISIC 722) - 6 countries
- Accounting, book-keeping and auditing activities; tax consultancy (ISIC 7412) - 7 countries
- Architectural and engineering activities and related technical consultancy (ISIC 7421) - 8 countries
- Advertising (ISIC 743) - 6 countries
- Investigation and security activities (ISIC 7492) - 7 countries
- Building cleaning activities (ISIC 7493) - 8 countries.

19. Prices for some ISIC groups are collected by only one or two countries. This is the case for:

- Activities of other transport agencies (ISIC 6309)
- Financial leasing (ISIC 6591)
- Other credit granting (ISIC 6592)
- Research and development (ISIC 73)
- Business and management consultancy services (ISIC 7414)
- Technical testing and analysis (ISIC 7422)
- Packaging activities (ISIC 7495)
- Veterinary activities (ISIC 852)
- Social work activities (ISIC 853)
- Washing and dry-cleaning of textile services (ISIC 9301).

20. The frequency of pricing for the activities listed above is either monthly, quarterly and in a few cases annual. The type of price collected is a transaction price or, slightly less frequently, a list price; mark-up prices and other prices are relatively seldom. The type of service most frequently priced is a simple service. Composite services and, to a lesser degree, service bundles are also priced, sometimes in conjunction with a simple service. The number of price quotations varies widely between countries within each ISIC group and from one ISIC group to another. Most countries started collecting data on prices of services to enterprises during the 1990s. Some countries (Finland, Japan, Mexico, New Zealand) have some data which go back to the 1970s or 1980s.

21. These results could serve as a starting point to define standard practices for data collection on prices of services to enterprises. It would appear that there is a preference for simple services, transaction prices and monthly data. A minimum number of price quotations may need to be set for the sample to be statistically significant.

New Surveys

22. 13 new surveys have been confirmed as launched since mid 1998 or are to be launched in 1999 by Australia, France and United Kingdom. It is noteworthy that they are all in section K of the ISIC. They are on:

- Renting of Agricultural equipment (ISIC 7121) - UK
 - Renting of construction/civil engineering machinery and equipment (ISIC 7122) - FR
 - Renting of office machinery and equipment - (ISIC 7123) - UK,FR
 - Hardware consultancy/software consultancy and supply - AL
 - Software consultancy and supply (ISIC 722) - UK
 - Market research and public opinion polling (ISIC 7413) - FR
 - Business and management consultancy activities (ISIC 7414) - AL
 - Architectural and engineering activities (ISIC 7421) - FR
 - Advertising (ISIC 743) - AL
 - Labour recruitment and provision of personnel (ISIC 7491) - AL
 - Investigation and security activities (ISIC 7492) - AL
 - Packaging (ISIC 7495) - AL.
23. More surveys are being planned by Australia, Canada, France, Norway, Switzerland, United Kingdom and United States. These are distributed through sections H, I, J and K of the ISIC:
- Hotels (ISIC 551) - CA
 - Transport via railways (ISIC 601) - SW
 - Freight transport by road (ISIC 6023) - SW
 - Cargo handling (ISIC 6301) - UK
 - Storage and warehousing (ISIC 6302) - UK
 - Telecommunications (ISIC 642) - CA, AL
 - Activities auxiliary to financial intermediation, except insurance and pension funding (ISIC 671) - US
 - Maintenance and repair of office accounting and computing machinery (ISIC 725) - AL
 - Legal activities (ISIC 7411) - AL
 - Business and management consultancy activities (ISIC 7414) - FR
 - Architectural and engineering activities (ISIC 7421) - AL, NO
 - Advertising (ISIC 743) - UK, AL
 - Labour recruitment and provision of personnel (ISIC 7491) - AL
 - Other business activities - (ISIC 7499) - AL

B.Prices of services to enterprises by service product

24. Countries were asked to update table 3, which seeks to identify the product being priced, using either the CPC or a description where the CPC classification is inadequate. Only ten countries, which had been identified as price collectors in 1997 would have seen the questionnaire on products in 1998. Consequently a few respondents did not feel able, despite being provided with the table of products, to fill in table 3. There may also be some, who do not actively use the CPC. To date only ten countries have provided details of products being priced (Australia, Canada, France, Germany, Japan, New Zealand, Portugal, Sweden, United Kingdom, United States).
25. The responses are summarised in Table 3. In column 6, *CPC*, the codes of countries are indicated on the line of the CPC class for which prices of services to enterprises are collected. The notes following the table provide additional information on country practices included in the questionnaire responses. In

column 7, *Other*, services which do not match the CPC are described in the terms used by respondents. The description of the service is aligned either with the CPC class to which it comes closest or on a separate line when a correspondence with CPC is not possible.

26. A crude count of CPC products and “other service products” priced shows that, out of a total of 203 CPC classes corresponding to the 48 ISIC groups for which product prices are collected and identified, 148 CPC service products are priced. Prices for over 50 “Other service products” are also collected. If these are added to the CPC classes, under the assumption that all “other services” correspond to different products, a total of about 200 service products are priced by the ten respondent countries together. In fact these “other products” are in most cases either combinations of CPCs or part of one or several CPCs. This does not mean, of course, that each of the ten countries collect data for 200 service products. For countries individually, the number of products priced varies between two (Sweden) and about ninety (New Zealand).
27. The figures above give a rough indication of the extent to which services to enterprises are priced. The following table A gives a better idea of the distribution and extent of price collection by identified product for the ten countries responding on table 3. For fuller details refer to table 3 and the accompanying notes. The actual number of products priced when indicated by CPC is not a precise or strictly comparable indicator of price collection activity and numbers should be treated with appropriate caution. We can see that six countries are collecting prices by identified product for a broad range of business services (at least four of the ISIC groupings) These are AL, CA, JA, NZ, UK and US. Of the others France has been undertaking notable development work in equipmental rental (ISIC 71) and other business services (ISIC 74). Germany has focused on transport and communications. Portugal and Sweden have the most limited range of price collections by product of the ten. It should also be noted that Japan, US and New Zealand have relatively well established and extensive price collection systems, while France, Australia, the UK and to a slightly lesser extent Canada have been actively developing systems in recent years.
28. Table 3 provides price data collection by service product and by country for each ISIC service activity group. In some cases, prices are collected but not released for lack of reliability; in other cases prices of services to enterprises are complemented by prices of services to consumers in order to obtain a sufficiently large number of price observations for the price index to be significant; sometimes, only components of the consumer price index are used as a proxy. These practices are indicated in the notes to table 3.

Table A Number of reported CPC and “other products” prices collected by country and ISIC activity

ISIC Activity Group	AL	CA	FR	GE	JA	NZ	PO	SE	UK	US
50					1	1			1	
55		1				2	7	1	1	1
60-63	8			4	11	15			3	15
64	1	1		5	6	5			5	6
65-67					5	3				4
70	3				1	4		1	1	4

71	6		3		5	6			4	3
72	5	5			3	5			3	1
73						1				
74	16	6	16		29	46			9	17
80						1			1	
90-93					5	1			4	

C. Other information

29. **Quality adjustments:** Australia, Germany, **Japan**, Mexico, New Zealand, United Kingdom and United States, have provided explanations on how quality adjustments are dealt with when pricing services to enterprises. These are copied in the Annex to part 1 of this report.
30. **Price indices:** The price indices used are generally Laspeyres type indices.
31. **Publications:** There were relatively few responses to the question on publication. The Bank of Japan publishes a monthly Corporate Service Price Index with 28 component series. The US publishes established services price indices as part of its PPI publication. The UK price series when established are published alongside other goods product PPIs. Australian prices data were published in an article in March 1999 as ten experimental series, but ABS does not publish data regularly. Norway plans to publish prices for activity 7421 in 2000. New Zealand publish an extensive range of services producer prices on their website alongside other PPIs and are planning to publish trade in services price indices for 4 broad sectors.
32. **Documentation:** Some significant documentation, all in English, on prices work was kindly provided by three countries. Voorburg Group Members and others may wish to be aware of the following:
- New Zealand's "Producers Price Index - Concepts, Sources and Methods and Index Detail".
 - From Germany two papers on "New Computation of the Indices of Sea Freight Rates" I. Beuerlein 1996 and "Recalculating the Price Indices of Postal, Postal Banking and Telecommunications" I. Beuerlein 1995.
 - The Bank of Japan made available background documentation "Explanation of the Corporate Service Price Index".

Some Concluding remarks

33. The review of responses to the two questionnaires shows that the coverage of the service sector varies considerably between countries. Some have achieved a fairly wide coverage, whereas others provide a limited coverage or no coverage at all but there are plans for further development. The collection of prices in this area is expanding. 13 new surveys are reported this year and a similar number were identified as planned. However in a significant number of countries prices of services provided to enterprises are not collected and there are no plans for price data collection in the short or medium term.

34. Practices of those countries which do collect price data raise a series of questions as to the lessons which can be usefully drawn from national experiences concerning the:
- **Setting of priorities for price data collection.** Prices for the services listed in paragraph 12 are collected by more than one third of respondents. Are they the easiest service categories for which prices can be collected and should they therefore be considered as priority for those countries which do not collect prices? On the other hand, what priority should be given to price data collection for products not yet surveyed?
 - **Choice of the type of price.** Transaction prices reflect the price received and charged in service transactions. Should they, on this stand, be preferred to other types of prices? To what extent are other types of prices good proxies? The United Kingdom refers to list prices when discounts are not granted or are rare. CPI components are used as a proxy by New Zealand. It is argued that components of the consumer price index can be used for cost effective reasons when price changes faced by businesses are expected to be similar to price changes faced by households. Under this assumption, when the number of items covered by surveys of prices of services to enterprises is too small to be statistically significant, a mix of prices to enterprises and to households are used. Indirect taxes charged to consumers, included in the CPI, can easily be removed and there are usually no transport costs linked to the supply of services.
 - **Choice of the type of service.** Simple services present the advantage of a clear definition which facilitates data collection and serves international comparability. They cannot always be easily identified by producers. When this is the case composite services or service bundles are priced. It may be useful to gain further insight into their content for the assessment of comparability.
 - **Need for additional information.** The information received from OECD Member countries already provides an instructive description of national practices in the field of data collection of prices of services to enterprises. Should additional information be collected in order to strengthen experience sharing between countries? If so, what information is missing? Should some non-OECD members be approached?
35. Services prices are often collected by PPI divisions in National Statistical Offices. There may be some advantages in coordinating our work with PPI experts, while recognising that the services work presents special problems and will continue to need special attention.
36. We should continue to advance the use of the CPC as a product framework in services output and prices work, while learning about its deficiencies.
37. CPI components are often used as proxies for deflators of services output. It might be helpful to know what studies have been done to measure the adequacy or inadequacy of this practice.

ANNEX

Quality adjustments - Comments by:

Australia

In compiling the price indexes we attempt to identify and adjust for changes in the quality of the services priced. This involves regular contact with respondents.

Where changes in services are detected we seek both qualitative and quantitative data e.g. cost data. In general, the quality adjustment reflects the change in the costs of providing the service.

Germany

Quality adjustments in producer price statistics for services are restricted to cases where a substitution is necessitated because a priced item is no longer offered on the market.

When a replacement of a priced item is necessary, a stipulated procedure for quality adjustment is applied:

1. First there is a search for a new variety, which is of the same quality as the one to be replaced or which has only minimal differences in the relevant quality characteristics. The prices of the old and the new variety are then directly compared, that is, the price change is equal to the difference of the observed prices.
2. If a new variety with relevant quality differences has to be selected, there are two possibilities. Either an expert makes an explicit estimation of the money value of the quality difference and this money value is subtracted (quality improvement) respectively added (quality deterioration) to the observed price of the new variety. Or, if an expert judgment is not available, the new variety is brought into the index showing no price change from the previous month. The implication of the link method is that all of the difference in the price between the two varieties is due to quality difference.

Japan

The sample prices are replaced when they cease to be representative of the selected service, the contract terms are changed, or the surveyed companies are required to change. In such replacements of sample prices, any price difference between the new and old services will be adjusted as below so that only the fundamental price change, which excludes the price change attributed to quality change, will be reflected in the indexes. (a) The new sample price will be linked with the old one without adjustment (direct comparison), as long as the difference in quality between the two services is negligible. (b) The new sample price will be linked so as not to raise or lower the index (treated as no change), if the price difference between the two services is entirely attributed to quality. (c) The new sample price will be linked so as to reflect the price change unrelated to any quality change, if the price difference between the two services differs from that associated with a change in quality. However, if it is difficult to compare the difference in quality between the two services, the price is treated unchanged.

The production/supply cost method, which specifies the price difference corresponding to the quality difference, on the assumption that the cost for the quality change equals the price difference due to its

quality difference, is mainly used to specify the part of the price difference corresponding to the quality change out of the total price difference between the two services.

Mexico

The quality adjustments made reflect the change in the cost of the service provided.

Prices are adjusted for quality changes in the following : 551 Hotels; 552 Restaurants, bars and canteens; 642 Telecommunications; 660 Insurance and pension funding; 7111 Renting of land transport equipment; 809 Adult and other education.

New Zealand

Several strategies are used to minimise the effects of changing quality on price movements:

1. The items to price are generally for simple services and are clearly defined so that changes in quality can be more easily identified and quantified.
2. Respondents are contacted to ensure that questionnaires specify commodities that they are able to price.
3. When quality changes are noted by the respondent, or a change in price occurs, the respondents are contacted. In most cases the respondents are happy to provide further information that is useful in deciding how to deal with the quality change.

Process when a quality change occurs, then :

1. Obtain overlapping prices, which allows a price change for the relevant periods to be calculated. Where overlapping prices are not available then a price change is decided based on available information.
2. Either :
 - 2a. In most cases no change in price is recorded and the commodities are treated as being different and the 'new' commodity is spliced in to replace the old one.
 - 2b. If the respondent notes that the change in quality and a change in price has occurred then either a butt or a "splutt" (partial splice/butt) is performed. The price change is estimated.

United Kingdom

Our approach is to seek a detailed specification for each service priced. Contributors are then asked to notify us if any aspect of the specification changes. (An example would be more intensive cleaning services under an office cleaning contract). In addition, when we identify a price change, we check with contributors that there has been no change in specification. Where a change in specification has occurred, we ask contributors to estimate the full costs (including profit) incurred, or saved, by the change. Price relatives are adjusted so that they do not reflect changes in charges that are due to specification changes.

United States

In general, the Producer Price Index is not quality adjusted for changes in technology. The PPI's detailed specification pricing enables quality adjustment for changes in the service provided. When price determining features of the detailed service specification change, a value of the change is ascertained and a calculation is performed to account for this value in relation to the prices or price change reported. If that value of quality adjustment cannot be obtained or is not appropriate, then overlap prices are requested. The overlap prices are from the same time period for the same service but before and after the service change. The PPI uses net transaction prices, which generally allow the quantity to be held constant. For changes to the input mix of the services priced, the prices are linked showing no price change or linked showing only the amount of price change that is not related to the input mix change, if that can be determined.

Country abbreviations used

CA	Canada
US	United States
JA	Japan
AL	Australia
NZ	New Zealand
FR	France
GE	Germany
UK	United Kingdom
NL	Netherlands
SE	Sweden
MX	Mexico
CZ	Czech Republic
NO	Norway
FI	Finland
KO	Korea
BE	Belgium
DK	Denmark
HU	Hungary
IR	Ireland
IT	Italy
PO	Portugal
SW	Switzerland
AU	Austria
GR	Greece
IC	Iceland
LU	Luxembourg
PL	Poland
SP	Spain
TU	Turkey