

Producer Price Index for Services 2005=100 (TOL 2008) User's Handbook



CONTENTS

1	INTRODUCTION	ERVICES WITHIN THE SYSTEM OF STATISTICS ON PRICES
2	PRODUCER PRICE INDEX FOR SERVICES WITHIN THE SYSTEM OF STATISTICS ON PRICES	2
2.1	DESCRIPTION OF PRODUCER PRICE INDEX FOR SERVICES	2
2.2	PRICE INDEX SYSTEM	
3	SAMPLING AND MONITORED SERVICES	4
4	WEIGHT STRUCTURE	5
5	COLLECTION OF PRICE DATA	7
6	CHANGES IN QUALITY	7
7	CONTENTS OF INDUSTRY-SPECIFIC INDICES	
8	COMPILATION OF THE INDEX	10
9	POSSIBLE SOURCES OF ERROR IN THE PRODUCER PRICE INDEX FOR SERVICES	11
10 INF	PUBLICATION OF THE PRODUCER PRICE INDEX FOR SERVICES AND PROVISION OF OTHER ORMATION FROM IT	12
11	USAGES OF THE PRODUCER PRICE INDEX FOR SERVICES	12
12	CALCULATING WITH INDICES	
12.1	CALCULATING CHANGE	13
12.2	DEFLATION AND VOLUME CALCULATIONS.	13

APPENDIX 1: WEIGHT STRUCTURE AND COVERAGE OF PRODUCER PRICE INDEX FOR SERVICES

1 Introduction

In April 2009, Statistics Finland adopted the revised TOL 2008 standard industrial classification in its Producer Price Index for Services. In connection with the introduction of the new classification the weight structure has been updated and the coverage of industries improved in the Producer Price Index for Services. The base year of the index is still 2005.

Under the new industrial classification the four main industries previously published in the Producer Price Index for Services will be replaced by seven main industries. New index series at a lower classification level will be published on publishing activities, information service activities and services to buildings and landscape activities.

The weight structure of Producer Price Indexs for Services has been updated so that the weights for the different industries are based on national accounts data from 2005 on the use of services by enterprises and the public sector. The previous weight structure was based on national accounts data from 2003.

2 Producer Price Index for Services within the system of statistics on prices

The Producer Price Index for Services describes developments in the prices of services enterprises produce for each other and for the public sector. Thus, it complements the picture the Consumer Price Index and the Producer Price Index for Manufactured Products draw of price changes in the national economy.

2.1 Description of Producer Price Index for Services

The importance of services to the national economy has grown significantly in the past few decades. At the moment the share of the services sector in Finland's gross domestic product exceeds 65 per cent, of which public services account for around 25 per cent and private market services for 75 per cent. The large growth of the services sector has also generated increased demand for statistics on service industries.

The Producer Price Index for Services is a quarterly index that measures developments in the prices of services enterprises produce for each other and for the public sector. The Index describes relative changes in these prices against a certain comparison point in time. The base year of the Index is 2005. The scope of the Producer Price Index for Services does not extend to services intended for consumers or those produced by the public sector. Developments in the prices of the services purchased by consumers are monitored with the Consumer Prices Index.

The Producer Price Index for Services is compiled on product basis. The index describes development in the prices of certain types of services irrespective of the main industry of the producing enterprise. If a service enterprise also produces goods, its goods production is excluded from the scope of the description of the The Producer Price Index for Services. On the other hand, an enterprise that mainly produces industrial goods may also produce services in which case its services production is included in the scope of the The Producer Price Index for Services. The alternative would be to compile an activity-based index whereby all commodities (both goods and services) produced by service enterprises would fall within the scope of the frame/description of one producer price index for services.

One of the key tasks of the Producer Price Index for Services is to function as a deflator in national accounts calculations for converting the value of production or sales to the volume of production. In addition, producer price indices can be used for describing short-term inflationary pressures on various sectors of the economy. Enterprises can use the data of the Producer Price Index for Services when comparing the development in the prices of their purchases or sales against the average development in their respective industry.

The Index is published on the 17th day of the month following a statistical reference quarter or the weekday following it. The production of the Index is based on the Finnish Statistics Act (280/2004) and on a Council Regulations (EC) concerning short-term statistics (No 1165/1998 and 1158/2005).

At the moment Producer Price Indices are calculated for 27 service industries and published quarterly for 26 industries. Indices have been designed for the priority industries specified in the Council Regulation, as well as for a few other nationally important service industries. The lengths of the time series vary depending on when the production of each industry-specific index was started. Industries are classified by the national standard industrial classification TOL 2008, confirmed by Statistics Finland and based on the common industrial classification NACE Rev. 2 of the European Union.

The Index currently covers 51 per cent of market services. Statistics Finland continues to improve the coverage by designing indices for additional service industries. The publication of a new index can commence once data on an industry have been collected for at least twelve months from an adequate number of enterprises in it and it has been ascertained that the price data provided by the data suppliers can be used for calculating sufficiently reliably index figures depicting the average price development in the industry concerned.

2.2 Price index system

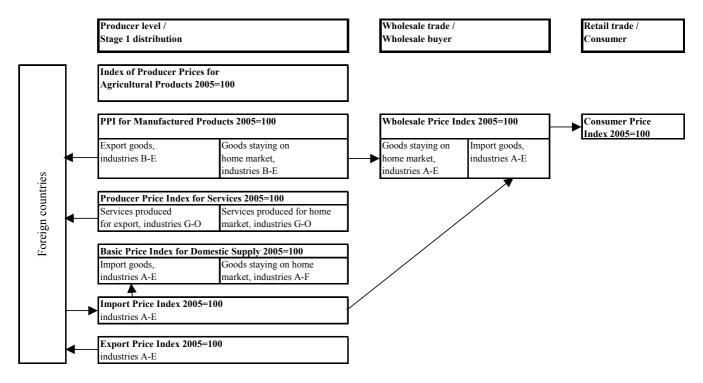
The indices of commodity and service prices that Statistics Finland compiles can be described as a system whose aim is to measure the development of prices at different stages of distribution and production (Figure 1). The Producer Price Indices describe how the prices of commodities or services develop at the beginning of price formation as products leave their producer. Producer Price Indices are calculated for agriculture, manufacturing and services. The Wholesale Price Index describes the second stage of distribution when goods arrive at wholesale buyers¹. Development in the prices of consumption goods and services at the end use stage is measured by the Consumer Price Index.

The Producer Price Index for Manufactured Products comprises products intended for the domestic market and exported products. Statistics Finland publishes a separate price index describing development in the prices of exported goods. Enterprises also export some of the services they produce but for the time being Statistics Finland does not calculate a separate index for them.

¹ In the ideal situation the Wholesale Price Index would describe the sales prices of wholesale traders and would contain in addition to taxes also wholesale trade margins. In the present system the wholesale trade margin is ignored.



Figure 1 Price Index System



3 Sampling and monitored services

The calculation of producer price indices is based on a sample. The price data used to calculate the index are collected from enterprises included in the sample. This price Index is considered as being descriptive of the average development in the prices of all services produced for enterprises. To keep the Index up-to-date, the population of the service enterprises included in the sample of the Producer Price Index for Services is reviewed generally every five years and relevant changes are made immediately, to keep the index up-to-date.

Statistics Finland's Business Register is used as the sampling frame for the Producer Price Index for Services. The Business Register contains data on the industry and turnover of enterprises. Industry-specific indices have been designed independent of each other; hence the used sampling method varies by industry. Depending on the industry, data suppliers have been selected by applying PPS (Probability Proportional to Size) sampling or judicious sampling, or by combining judicious and probability-based sampling.

The services for the quarterly price monitoring have been selected in co-operation with data suppliers. The objective was that the examined services would be as representative as possible and could be monitored as well as possible. The selection criteria for the examined services were:

- The service is as representative as possible and generates a significant share of the enterprise's turnover
- The service reflects as closely as possible the average development in the prices of other services of the same service entity
- Price for a certain unit (e.g. number or day) and quality can be quoted regularly by quarter (or less frequently) for the service
- The service remains on the market for as long as possible.



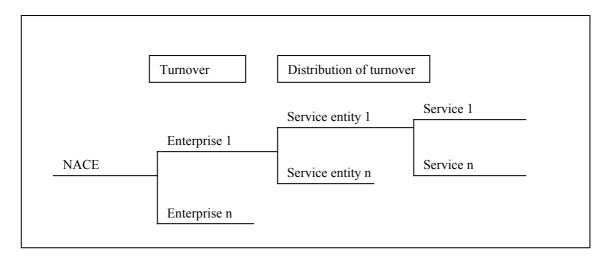
Due to non-response, some of the enterprises drawn to the sample had to be replaced by additional sampling which was implemented judiciously by selecting the replacement from the old frame wherever possible.

The Producer Price Index for Services is calculated using over 17,500 price data items collected from approximately 360 data suppliers. The numbers of price data items and data suppliers vary by industry. Roughly 15,000 of the price data items concern the leasing of office and business premises.

4 Weight structure

The industry-specific indices of the Producer Price Index for Services describe the average development of prices in the industry concerned. The industry-specific indices are Laspeyres indices with fixed weights. The geometric means of price ratios calculated for individual service products are added up to an enterprise's service entity indices (main group indices) which are then weighted to an overall index for the industry with a weighting coefficient assigned for each service entity. The weighting coefficients are based on data on the enterprises' turnover and its breakdown by service entity in each enterprise. The used data on turnover are either figures reported by the enterprises themselves on turnover received from services within the industry concerned or figures on turnover obtained from the Business Register. The separate services selected by the data suppliers do not have their own weights, but data on them are used to calculate a service entity index for each data supplier as a geometric average of the price ratios of the commodities.

Figure 2. Formation of the weight structure of industry-specific indices



The overall index is calculated from the industry-specific indices. The weights for the different industries are based on national accounts data from 2005 on the use of services by enterprises and the public sector. The industry-specific weights have been formed by first dividing the total volume of services expressed in euros to the alphabetical main activity level, then to the 2-digit level and from there on to the 4-digit level according to relative use. The weight structure of the overall index is shown on Table 1.

Table 1. Weight structure of the Producer Price Index for Services 2005=100 (TOL 2008)

Industry	Name	Share, %
	Total Index	100,0 %
G	Wholesale and retail trade	-
45	Wholesale and retail trade and repair of motor vehicles and motorcycles	-
46 47	Wholesale trade, except of motor vehicles and motorcycles	-
47 H	Retail trade, except of motor vehicles and motorcycles Transportation and storage	23,4 %
49	Land transport and transport via pipelines	11,9 %
4932	Taxi operation	0,9 %
4941	Freight transport by road	11,0 %
50	Water transport	1,8 %
51	Air transport	2,6 %
52 5210	Warehousing and support activities for transportation	4,6 %
5210	Warehousing and storage Cargo handling	1,6 % 2,9 %
53	Postal and courier activities	2,5 %
5310	Postal activities under universal service oblication	2,0 %
5320	Other postal and courier activities	0,5 %
I	Accommodation and food service activities	3,2 %
55 5510	Accommodation Hotels	3,2 %
56	Food and beverage service activities	3,2 %
J	Information and communication	19,8 %
58	Publishing activities	2,9 %
59	Motion picture, video and television programme production, sound recording and music publishi	-
60	Programming and broadcasting activities	-
61	Telecommunications	6,7 %
62 63	Computer programming, consultancy and related activities Information service activities	7,0 % 3,2 %
K	Financial and insurance activities	-
64	Financial service activities, except insurance and pension funding	-
65	Insurance, reinsurance and pension funding, except compulsory social security	-
66	Activities auxiliary to financial services and insurance activities	-
L	Real estate activities	13,2 %
68 6820	Real estate activities Rents of office and business premises	13,2 % 13,2 %
M	Professional, scientific and technical activities	28,3 %
69	Legal and accounting activities	3,3 %
6910	Legal services	1,2 %
6920	Accounting, book-keeping and auditing activities	2,1 %
70	Activities of head offices; management consultancy activities	6,4 %
7020 71	Business and other management consultancy	6,4 %
71 711	Architectural and engineering activities; technical testing and analysis Architectural and engineering activities	12,2 % 10,1 %
712	Technical testing and analysis	2,0 %
72	Scientific research and development	-
73	Advertising and market research	6,4 %
731	Advertising	6,1 %
732	Market research and public opinion polling	0,3 %
74 75	Other professional, scientific and technical activities Veterinary activities	-
N .	Administrative and support service activities	10,5 %
77	Rental and leasing activities	2,7 %
7732	Renting of construction and civil engineering machinery	2,7 %
78	Employment activities	1,6 %
7820	Temporary employment activities	1,6 %
79 80	Travel agency, tour operator and other reservation service and related activities Security and investication activities	- 0,7 %
8010	Private security activities	0,7 %
81	Services to buildings and landscape activities	5,4 %
811	Combined facilities support activities	3,3 %
812	Cleaning activities	2,2 %
82	Office administrative, office support and other business support activities	-
0	Public administration and defence; compulsory social security	-
84 P	Public administration and defence; compulsory social security Education	-
85	Education	-
Q	Human health and social service activities	-
86	Human health activities	-
87	Residential care activities	-
88 D	Social work activities without accommodation	-
R 90	Arts, entertaintment and recreation Creative, arts and entertainment activities	-
90 91	Libraries, archives, museums and other cultural activities	I -
92	Gambling and betting activities	-
93	Sports activities and amusement and recreation activities	
S	Other service activities	1,7 %
94	Activities of membership organisations	-
95 oc	Repair of computers and personal and household goods	470/
96 9601/1	Other personal service activities Washing and dry-cleaning services for enterprises	1,7 % 1,7 %
JUU 1/ 1	vvasining and dry-dearing services for effectives	1,7 70



5 Collection of price data

The price data for the Producer Prices Index for Services are mainly collected from enterprises. The data are collected with an electronic questionnaire via the Internet, and by email. Besides the data collected directly from enterprises, price data and point figures from the Consumer Price Index are also utilised in the compilation of the Producer Price Index for Services. In addition, price data on office and business facilities are provided by the Institute for Real Estate Economics (KTI).

Depending on the industry, the time of quoting the price data collected from enterprises may be the first, second or third month of the quarter under review. In some cases charged unit prices are collected for the whole quarter under review.

The pricing method used in the Producer Price Index for Services varies by industry and enterprise. The real price can often be used for identically repetitive services. For other services, the employed method could be based on a unit value, model pricing or the time used for producing the service.

The non-response rate of the price data collection has been on average 1-2 per cent.

6 Changes in quality

The Producer Price Indices for Services are "pure" price indices, which should not be affected by changes in the quality of the measured services. Qualitative changes and their treatment are the main challenges in index calculations. In Producer Price Indices for Services the changes in quality are controlled for with several methods.

First and foremost, an overlapping price observation is collected for the changed product. In practice, this means that as the product changes, the price of the preceding quarter is collected in addition to the price of the reference quarter. This allows the real change in price to be calculated, and the price history stays unbroken despite the change in the monitored product.

If overlapping price observations cannot be obtained, old price can be carried forward. The method is applied in the Producer Price Index for Services if price is not obtained for a monitored service during the reviewed quarter for some reason. If the data are not obtained in several successive quarters the service is put under surveillance and the average price development in the industry is imputed as the price for it until such time as genuine price data are found as replacement. Imputation is based on the assumption that the price of an individual service is identical to that of all other services of the same industry.

Also the following methods can be used on a judicious basis:

- The quality of the changed product is assumed to be the same as that of the product before the change. In this case the price change is included in the index as such.
- The price change is assumed to derive entirely from a change in quality, in which case the index is not changed at all as a product changes.
- -Quantitative adjustment is used if the occurred price change derives fully or partially from change in the quantity of the monitored service.
- -Expert assessment where the data supplier is asked to assess which proportion of the price change is a pure change in price and which proportion is due to the change in the quality of the product. In that case the effect of the quality change is eliminated from the price change. The expert assessment is based on the idea that the data supplier enterprise has the best possible estimate of the price development of its own products.
- -Expert assessment based on some other source: Discretionary changes may in certain cases be made to the Index if more accurate data on the development of the price of an examined service are available

from some other source. This may also be done if for some reason the employed method does not measure the realised development correct, e.g. by ignoring some significant change that has taken place on the market.

Methodologies to control for changes in quality are constantly being developed and international guidelines and recommendations are taken into account when applying different methods².

7 Contents of industry-specific indices

Contents of industry spesific indices of The Producer Price Index for Services are presented in table 2.

Table 2. Industry specific indices

Table 2. Industry specific indices	
Industry	Services:
4932 Taxi operation	Same as the index for taxi journeys in the Consumer Price Index (COICOP 07.3.2.2).
4941 Freight transport by road	Transport of parcelled goods, part and full vehicle load transports, road tanker transports, forestry transports, transport services for manufacturing and temperature-controlled vehicle transports.
5020 Sea and coastal water transport	Transport of cargo by sea (containers, transport of frozen and refrigerated goods, tanker transport, transport services for manufacturing, general cargo, e.g. trailers, and dry bulk cargo).
51 Scheduled air transport	Transport of freight and passengers. The index point figures are not public.
5210 Storage and warehousing	Storage and warehousing proper (in outdoor, indoor, warm, cold, frozen, tank or silo depots) and transhipments of goods.
5224 Cargo handling	Stevedoring services for vessels (on and off loading of cargo).
53 Post and courier activities	Transport of postal items (letters and parcels) and other distribution and courier activity.
5510 Hotels	Hotel room on a weekday.
58 Publishing activities	Publishing of books, news papers, directories and software.
61 Telecommunications	Services in fixed line network, and mobile calls and text messages.
62 Computer programming, consultancy and related activities	Software design, supply and consultancy, computer consultancy activities.

² A good source list would be the source list of the chapter concerning this in the OECD manual . http://www.imf.org/external/np/sta/tegppi



63 Information service activities	Data processing, hosting and related activities; web portals, news agency activities, other information service activities.
6820 Rents for office and business premises	Separate indices for rents of office and business premises. The index is only calculated twice a year, in the 2 nd and 4 th quarter.
6910 Legal activities	Legal advisory service activities
6920 Accounting, book-keeping and auditing activities; tax consultancy	Book-keeping, compiling of financial statements, payroll accounting, services related to taxation and auditing.
7022 Business and management consultancy activities	Consultancy services for general administration, consultancy services for financial administration (not connected with corporate taxation), consultancy services for personnel management, consultancy service for production, communication services and other business management consultancy services.
711 Architectural and engineering activities and related technical consultancy	Architectural services and community planning, technical services for civil engineering, structural engineering services, heating, plumbing and air-conditioning design services, electrical engineering design services and mechanical and process engineering design services.
712 Technical testing and analysis	Inspection of motor vehicles and other testing, inspection, measurement and validation services
731 Advertising	Advertising design, sales of advertising space, advertising on radio, newspapers and periodicals, and television advertising.
732 Market research and public opinion polling	Diverse market research and opinion poll surveys.
7732 Renting of construction and civil engineering machinery and equipment	Passenger hoists, scaffolding, weather shelters and site facilities, heating devices, electricity switchboards, pumps, drilling and chipping machines and other machinery and equipment.
7820 Labour recruitment and provision of personnel	Labour rental.
8010 Investigation and security activities	Guarding services.
811 Combined facilities support activities	Building maintenance services
812 Cleaning activities	Cleaning services used by enterprises and the public sector.
96011 Washing and dry-cleaning of textile and fur products	Washing and dry-cleaning services used by enterprises and the public sector.



8 Compilation of the index

The overall index of the Producer Price Index for Services describes average development in the prices of the industries covered by the index. First, geometric means are calculated for the separate service entities (main groups) of each enterprise from price ratios (= current price/previous quarter's price) deduced from individual services. These micro indices are combined into enterprise-specific/industry-specific indices/overall index by weighting each micro index with its own weighting coefficient. Thus, the size of the impact on the Index from changes in the prices of individual enterprises and services varies.

In practice, indices for point in time t are calculated as follows:

The micro index is the enterprise's given service entity (main group) which contains 1–n different services. First, the price ratios of individual services of each main group of each enterprise are used to calculate geometric means for them – average change form the previous quarter in the prices of the main group. The micro indices of the previous period (t-1) are carried onwards with this change

$$I_{maingroup,t} = \exp(\frac{1}{n^t} \sum_{i=1}^{n^t} \ln(\frac{p_{it}}{p_{i(t-1)}})) \cdot I_{maingroup,t-1},$$

for all enterprises and all main groups. The number of services belonging to a main group may fluctuate in time. The essential criterion for the inclusion of a service in the calculation is that either a genuine or imputed price observation is found for it for both the reference and the comparison period.

Enterprise-specific indices are calculated with these micro indices. Data on the distribution of an enterprise's turnover by main group are used as the fixed weights. The distribution always sums up to one.

$$I_{enterprise,t} = \sum_{k=1}^{K} w_{maingroup(k)} \cdot I_{maingroup(k),t} ,$$

where K is the number of main groups of an enterprise.

These indices for individual enterprises are weighted together into an industry-specific price index. Data on an enterprises' pure turnover from each industry are used as the weight.

$$I_{industry,t} = \sum_{s=1}^{S} w_{enterprise(s)} \cdot I_{enterprise(s),t} ,$$

where S is the number of enterprises included in an industry in the Index. W represents an enterprise's share of the total turnover of all enterprises in the industry.

Finally, the overall Index is obtained by weighting together the industry-specific indices with the weights for each industry.

$$I_{total,t} = \sum_{l=1}^{L} w_{industry(l)} \cdot I_{industry(l),t},$$



where L is the number of industries, i.e. 27, and w an industry's share of the overall Index. The calculation of the enterprise-specific indices is in a way unnecessary: the same results could be obtained by dividing the weight of an industry direct to the micro level, i.e. enterprises and their main groups. However, to ensure the reliability of the results and facilitate the necessary verifications the calculation proceeds in the manner described above.

9 Possible sources of error in the Producer Price Index for Services

Scientific literature on indices often refers to the substitution bias that Laspeyres' index formula may create. The direction of the bias depends on the target of measurement. In the case of the Producer Price Index for Services, substitution bias may arise because (when maximising their profits) enterprises react to changes in relative prices and shift the emphasis of their activity. Thus, an index calculated with Laspeyres' formula underestimates price development from enterprises' viewpoint³. The significance of the substitution bias depends on the scale and speed at which individual enterprises are able to redirect their activities when relative prices change.

Fixed-weight indices may contain bias arising from the entry of new products or services on the market. When new services are mentioned reference is often made to data processing services the production and sales of which can grow quite rapidly in the course of a five-year time span. If there is vigorous change, an index may not describe sufficiently accurately average development in the prices of the services produced in the economy. However, the bias caused by new services is not very significant in practice, because a new service can be added to the ones monitored with the index if the volumes of its production and sales have increased significantly.

The objective of producer prices indices is to describe pure price development, therefore, changes in the quality of products must be taken into consideration in the calculations. The problem of quality change is usually encountered either when a data supplier reports that a service on which data are collected is no longer produced or exported, or that changes have been made to the service concerned. The quality adjustment methods used in the Producer Price Index for Services are described in Chapter 6.

Other factors that have a bearing on the precision of the Index are accuracy of the sampling frame and the data on which the weight structure is based, possible errors in the processing of individual data items, and non-response.

³ In the Consumer Price Index the possible substitution bias would be exactly the opposite as consumers switch over to a commodity that is cheaper in relative terms.



10 Publication of the Producer Price Index for Services and provision of other information from it

The Producer Price Index for Services is published quarterly on the 17th day, or the weekday following it of the month following the end of a statistical reference quarter in Statistics Finland's web page http://tilastokeskus.fi/til/pthi/index en.html.

The published Producer Price Index for Services point figures are available in Statistics Finland's StatFin service. The service is free of charge and located under 'Tables' on the Producer Price Indices for Services' web page. Also a quarterly publication is produced of the Producer Price Indices for Services, which can be downloaded for free in pdf format under 'Available products and services' on the Producer Price Indices for Services web page.

In addition, the Producer Price Index for Services is published in Bulletins of Statistics, the Statistical Yearbook of Finland, the FINSERIES time series database and in the publication of Producer Price Indices.

11 Usages of the Producer Price Index for Services

Producer price indices can be used for describing short-term inflationary pressures on various sectors of the economy. Especially central banks and government ministries utilise producer price indices for this purpose. Many enterprises, such and investment banks, can also exploit the data in their macroeconomic forecasting models.

One of the key purposes for which the Producer Price Index for Services is used as a deflator in national accounts calculations. With it, change in the value of production or sales is converted to change in the volume of production.

Producer price indices can be used as an index clause in agreements. An index clause means that the final amount of a payment specified in an agreement is tied to a change in some index. Indexing is a means of seeking protection against inflationary risks. In practice, an index clause is usually attached to long-term agreements. Limitations on the use of an index clause are laid down in the Act on the Restriction of the Use of Index Clauses.

Enterprises can utilise the data from producer price indices for comparing the prices of their purchases or the services they have sold against the average price development.

The data from the Producer Price Index for Services can be combined with other data on business trends, such as those on the turnover of service industries in order to analyse business trends more closely. Apart from the ones mentioned here, producer price indices can be used for a host of other practical purposes.



12 Calculating with indices

12.1 Calculating change

The change in the Index figures between two points in time is usually calculated as a percentage. The change percentage is calculated as follows:

 $\frac{I_t - I_0}{I_0}$ · 100, where I_t = index for the reference point in time and I_0 = index for the comparison point in time.

An example: What was the change in the price index for an example industry 2005=100 from the first quarter of 2004 to the third quarter of 2005? The point figure for the first quarter of 2004 was 98.4 and the point figure for the third quarter of 2005 was 100.2. Thus, the change in question was,

$$\frac{100.2 - 98.4}{98.4} \cdot 100 \approx 1.8$$
, i.e. 1.8 per cent rise.

12.2 Deflation and volume calculations

Price indices, such as the Producer Price Index for Services, can be used as deflators in volume calculations. In this instance, the change in a certain value (value index), such as the value of the sales of an enterprise, for example, is known. To find out the change in the volume over the same time period, a suitable price index, such as the Producer Price Index for Services, or one of its sub-indices, is used as a deflator. The volume index is calculated according to the following formula:

Volume index =
$$\frac{\text{Value index}}{\text{Price index}} \cdot 100$$
.

An example: The value of the sales of an enterprise went up by 8.9 per cent from 2004 to 2005. At the same time the prices of the services the enterprise sells went up by 0.3 per cent. Thus, the change in the volume of the sales was:

$$\frac{108.9}{100.3} \cdot 100 \approx 108.6$$
. The growth in the volume from 2004 to 2005 was 8.6 per cent.

Further information about index calculations can be found in the Indices module of the eCourse in Statistics on Statistics Finland's website.



Appendix 1. Weight structure and coverage of Producer Price Index for Services

Service industries according to TOL 2008 (NACE Rev. 2)	Industry's share of all services	Coverage of indices	Share of indices of overall index	Internal weight structure of indices
G Wholesale and retail trade	19,9 %	_	-	
45 Wholesale and retail trade and repair of motor vehicles and motorcycles	3,1 %		-	
46 Wholesale trade, except of motor vehicles and motorcycles	15,6 %	-	-	
47 Retail trade, except of motor vehicles and motorcycles	1,3 %	-	-	
H Transportation and storage	17,0 %	77,7 %	23,4 %	
49 Land transport and transport via pipelines	8,7 %	88,4 %	11,9 %	
4932 Taxi operation 4941 Freight transport by road				7,3 % 92,7 %
50 Water transport	1,3 %	63,3 %	1,8 %	
5020 Sea and coastal freight water transport	,	,	,	100,0 %
51 Air transport	1,9 %	100,0 %	2,6 %	
52 Warehousing and support activities for transportation	3,3 %	30,2 %	4,6 %	
5210 Warehousing and storage				63,9 %
5224 Cargo handling				36,1 %
53 Postal and courier activities	1,8 %	100,0 %	2,5 %	
5310 Postal activities under universal service oblication 5320 Other postal and courier activities				81,0 % 19,0 %
I Accommodation and food service activities	2,3 %		,	
55 Accommodation	0,6 %	27,0 %	3,2 %	
5510 Hotels	4.7.0/			100,0 %
56 Food and beverage service activities	1,7 %	-	-	
J Information and communication	14,4 %	94,2 %	19,8 %	
58 Publishing activities	2,0 %			
59 Motion picture, video and television programme production, sound recording and n	n 0,4 %	-	-	
60 Programming and broadcasting activities	0,4 %		-	
61 Telecommunications	4,6 %			
62 Computer programming, consultancy and related activities	4,8 %			
63 Information service activities	2,2 %	100,0 %	3,2 %	
K Financial and insurance activities	4,5 %	-	-	
65 Financial service activities, except insurance and pension funding		-	-	
66 Insurance, reinsurance and pension funding, except compulsory social security		-	-	
67 Activities auxiliary to financial services and insurance activities		-	-	
L Real estate activities	9,6 %	75,1 %	13,2 %	
68 Real estate activities	9,6 %			
6820/9 Rents of office and business premises				100,0 %
M Professional, scientific and technical activities	20.6 %	83,5 %	28,3 %	
69 Legal and accounting activities	1,5 %	,		
6910 Legal services	,,	,	.,	36,3 % 63,7 %
6920 Accounting, book-keeping and auditing activities 70 Activities of head offices; management consultancy activities	2,9 %	57,2 %	6,4 %	
7020 Business and other management consultancy	2,0 70	01,2 70	0,1 70	100,0 %
71 Architectural and engineering activities; technical testing and analysis	5,5 %	100,0 %	12,2 %	
711 Architectural and engineering activities	,	,	,	83,4 %
712 Technical testing and analysis				16,6 %
72 Scientific research and development	5,0 %			
73 Advertising and market research	2,9 %	100,0 %	6,4 %	
731 Advertising				95,6 %
732 Market research and public opinion polling	0.00			4,4 %
74 Other professional, scientific and technical activities	2,8 % 0,1 %		-	
75 Veterinary activities	0,1 %	-	-	

Service industries according to TOL 2008 (NACE Rev. 2)	Industry's share of all services	Coverage of indices	Share of indices of overall index	Internal weight structure of indices
N Administrative and support service activities	7,6 %	62,8 %	10,5 %	
77 Rental and leasing activities	1,6 %	29,8 %	2,7 %	
7732 Renting of construction and civil engineering machinery78 Employment activities	1.0 %	100,0 %	1.6 %	
7820 Temporary employment activities	1,0 /0	100,0 70	1,0 /0	
79 Travel agency, tour operator and other reservation service and related activities	0,8 %	-		
80 Security and investication activities	0,4 %	100,0 %	0,7 %	
8010 Private security activities				
81 Services to buildings and landscape activities	3,2 %	91,4 %	5,4 %	
811 Services to buildings and landscape 812 Cleaning activities				60,1 % 39,9 %
82 Office administrative, office support and other business support activities	0,6 %	-	-	33,3 /0
O Public administration and defence; compulsory social security	0.0 %	-		
84 Public administration and defence; compulsory social security	2,2 /2	-	-	
P Education	0,7 %	-	-	
85 Education		-	-	
Q Human health and social service activities	1,4 %	-	-	
86 Human health activities		-	-	
87 Residential care activities		-	-	
88 Social work activities without accommodation		-	·	
R Arts, entertaintment and recreation	0,7 %	-	-	
90 Creative, arts and entertainment activities		-	-	
91 Libraries, archives, museums and other cultural activities		-	-	
92 Gambling and betting activities		-	-	
93 Sports activities and amusement and recreation activities		-	-	
S Other service activities	1,3 %	22,6 %	1,7 %	
94 Activities of membership organisations	0,3 %			
95 Repair of computers and personal and household goods	0,6 %			
96 Other personal service activities 9601/1 Washing and dry-cleaning services for enterprises	0,3 %	92,3 %	1,7 %	100,0 %
Trading and ary dearing solvies to enterprises				100,0 /0
Total	100,0 %	51,2 %	100,0 %	

^{*)} Index is included in the calculations of overall index but the point figures are not public.