VOORBURG GROUP

2016

Thesaurus
of
Producer Price Indices for
Services (SPPI's)

… you cannot use language to get in between language and reality. If you describe reality, you always use words; so when you compare a concept with reality, you in fact compare only a concept with another concept.
– Roger Scruton (after Wittgenstein)

1. Introduction

Producer Price Indices for services (SPPI's) have received increasing attention in the Voorburg Group. Here, an important problem emerged: members of the Group use ad hoc terminology. This is not surprising as SPPI's deal with new statistics, not discussed conceptually before internationally. Within one National Statistical Office, it is easy to share a clear and common terminology, as the group of SPPI statisticians is small and their contacts are frequent. This is not the case in an international exchange, where statisticians from many different mother tongues convene. Consequently, the prices session of the Voorburg Group was hampered by confusion in terminology, although individual papers were clear as they used the ad hoc terminology of a single writer.

Problems were bigger in reaching the main goal of the OECD/Eurostat SPPI Guide: codification of the present state of knowledge on SPPI's. In the compilation of this Guide a Babel on terminology erupted. After considerable effort, a satisfactory consensus was reached. The Guide was presented at the 2005 Voorburg Group meeting, as well as the paper 'Pricing methods' which analyses difficulties in terminology on SPPI's. As a consequence, the Task Force that reviewed the Voorburg Group process, voiced the need for a dictionary or thesaurus to standardise the vocabulary and terminology of SPPI's.

The guide was further discussed at the 2006 Voorburg meeting and updates have been made to clarify the meaning of the different pricing methods. An addendum of examples that illustrate the use of the different pricing methods was also added. In 2016, the margin pricing method was added and matches the definition from the Second Edition of the Eurostat/OECD SPPI Guide.

The Eurostat/OECD SPPI Guide provides extensive discussions on eight pricing methods. These eight **pricing methods** are the basis for a good description of a pricing method of an individual SPPI. Additional clarification has been added to facilitate the classification of practices in the various pricing methods. However, to describe an SPPI well and unambiguously, it has to be described in the light of an additional concept: the **data type in the survey**.

The principal part of this thesaurus consists of the terms in the table hereunder: eight pricing methods, and seven data types in the survey. *It is envisaged that these terms are the main ones used in future mini-papers and sector-papers of the Voorburg Group.* They are discussed in section 2 'Main terms'.

Pricing methods (Section 2.1)
Component pricing
Contract pricing
Direct use of prices of repeated services
Model pricing
Percentage fees
Pricing based on working time
Unit values
Margin pricing

Data type in the survey
Percentages fees and related value
List prices
Input prices
Real transaction prices
Revenue and amount sold
Expert estimate
Acquisition and selling prices

Section 3 'Other preferred terms', discusses further terms, also envisaged for future use in papers. Section 4 'Related terms', lists many more terms (including many used in Voorburg Group papers between 2000 and 2005). The use of these is discouraged, mostly because they mean (almost) the same as terms in sections 2 and 3; having multiple terms for one concept is considered not necessary, even confusing.

The underlining of a term means that it has its own entry in section 2, 3 or 4.

2.   Main terms

2.1   The eight pricing methods from the OECD/Eurostat SPPI Guide

Component pricing: a pricing method that divides the service into a number of key output components of which one or more are then priced separately. The data type in the survey for this pricing method concerns existing "hard" company data (real transaction prices, revenue and amount sold, list prices, etc. except time-based prices). The statistician enters all the prices on a worksheet or bill, resulting in an aggregate price. Component pricing is different from model pricing because component pricing is fully based on real transaction prices that have been combined to form a price.

To be categorized as component pricing, time based prices (as price for one hour's work) should not be in use in the pricing of components because, due to their often significant weight in a price, the method would become pricing based on working time. On the other hand, assessing required working time rather than keeping it fixed would mean that the method falls into the category of model pricing where at least some subjective estimation is made.

Note that the component price is not (necessarily) a price of any transacted service because quantities of sub-services in the component price may differ from actually transacted services.

The method's best-known use is in telephony SPPI's, were it is sometimes known by a synonym, bill method, a term which should not to be used to avoid confusion.

Contract pricing: a pricing method which uses real transaction prices of a special kind as the data type in the survey. They are special because the prices are charged for the same (or very similar) service that is repeated each survey period by the same producer for the same client. Prices of contracts are agreed for more than one period when the contract is signed or renewed. Prices may be the same for a certain period of time or change according to an agreed pattern. This pricing method may work if the pricing mechanism entails these contracts, for instance in cleaning, security services and freight transport.

The method should be used with caution because periodical payments are normally agreed when a contract is signed. As a result, payments may be flat or follow an agreed pattern and are not necessarily in line with market evolution. Therefore, inclusion of a sufficient number of price observations in a survey and adequate updating of the sample are of crucial importance. Updating should be made with care to avoid the resulting SPPI being largely influenced by changes in the sample rather than showing true price development in the market.

Note that the surveyed price data may be based on "a contract" but this does not presuppose that the pricing method used is contract pricing. In contract pricing, the contract is supposed to cover more than one survey period, services provided in each period are the same and prices are agreed at the same time for more than one period.

Direct use of prices of repeated services: a straightforward pricing method which surveys a real transaction price or (although not preferably) a list price, thereby acquiring directly the price of a service that occurs every survey period (a real transaction). This coincides with the PPI Manual's transaction pricing and is standard PPI and CPI practice. It is the preferred and easiest method because there is no difference between the surveyed prices and the price entering standard PPI compilation procedures. Assumptions or calculations are necessary only when services in the sample are replaced or their quality changes requiring price adjustments.

Model pricing: a pricing method in which a price is estimated for a standardised product, a model transaction, which is not transacted in the comparison period. A single fictitious service can be set as the re-pricable product for a group of respondents. Alternatively, the specifications of an actual service provided can be developed as the 'model' to price. When selecting an actual transaction to use for the model, generally a recent transaction is selected. An advantage in using a recent transaction is that the service may represent better current activity of an enterprise and the price may also be easier to update. Synonyms for this second type found in the literature, which should not be used to avoid confusion, are: estimated net transaction price or billed method.

In estimating a realistic transaction price, the expert might consider real transaction prices, revenue and amount sold, list prices, input prices as data type in the survey for calculating this price. A particularly central task is to estimate working time required in a service provision. A subjective judgement based on the overall market situation is needed, for instance, by keeping recent bids in mind. The resulting total price for the standardised product is a fully fictitious expert estimate.

The model pricing method is used for unique services, notably the professional business services for which hourly charge-out rates are also used often. It is often a challenge to make an adequate quality adjustment when the service becomes outdated and is replaced by a new service.

Model pricing differs from component pricing because model pricing always involves estimation of the prices or expert evaluation to determine prices whereas component pricing is fully based on real transaction prices. Model pricing is also different from pricing based on working time. It captures the price of the whole service provided to a client, while pricing based on working time does not. Instead, it captures a price of time (e.g. rate per hour) in service provision. Pricing factors such as hours worked are updated in model prices when the hours required to provide the service change. As noted, the re-evaluation of the required working time is essential for model pricing to capture changes in the efficiency in service provision. If the working time is not evaluated but assumed automatically unchanged, the method cannot be called model pricing but would be categorized as pricing based on working time.

Percentage fees: a pricing method that estimates a price by multiplying a percentage and the value of the good that the service and the percentage fee are tied to. This is only possible if the pricing mechanism uses these figures. For example, prices for service of real estate agencies use the price of the real estate and a percentage fee. Other examples include placing advertisements, architecture and rental. If the percentages or values are estimated by the respondent, then this is still the percentage fee pricing method.

Note that the case where the price development is measured by directly comparing the fees tied to the same product (in trade, the difference between selling and acquisition price) in consecutive periods, would be categorized as direct use of prices of repeated services. In the percentage fee method, the price change is split into two parts, change of the percentage fee and change of the product price. Doing this is often appropriate for practical reasons, mainly because prices for exactly the same products are not necessarily available in consecutive periods.

Each data type in the survey (the percentage and the price of the good) can be surveyed from a different source. Strictly speaking, the percentage can be taken from a list or be estimated by an expert

or calculated as an average. Often, the price (index) of the good is already available within the statistical institute, like the price index for house prices or goods rented (e.g. office equipment). A synonym, not to be used to avoid confusion is ad valorem price.

Pricing based on working time: a pricing method which surveys the money amount charged to a buyer of a service, for a standard amount (e.g. one hour) of work by an employee of the producer, contributing to the production (provision) of that service. It is only used in the professional business services were the pricing mechanism is such that the price of a service is largely based on the number and charge-out rates of the hours needed to produce the service (not to be mistaken for the employee's wage). The data type in the survey can differ highly:
   1. unit values type information of revenue divided by number of hours worked (also known as realised hourly rates and fee income per grade of worker),
   2. list prices (also known as standard hourly rates),
   3. input data in the form of wages increased by a overhead costs and mark up, or
   4. expert estimate.

In general, pricing based on working time is inferior to the other pricing methods in the sense that prices of the whole service provided to a client is not directly targeted. Thus, despite the fact that charge-out rates are typically used as pricing mechanisms, these prices do not necessarily conform to the central principle of the index compilation where prices for some products are surveyed in consecutive periods. The method may omit changes in the quality of services and, more importantly, disregard possible changes in the efficiency of service provision resulting in a possible 'productivity bias' A risk of bias is significant in service activities that are capital intensive or undergoing strong technological development.

Note that pricing based on working time usually results in an hourly charge-out rate, but prices for working time can also be entered into a model transaction. If the price of a model transaction is highly determined by hourly rates and no re-evaluation of required working time is made, the OECD/Eurostat SPPI Guide recommends that the pricing method is classified as pricing based on working time, to make clear to users that the resulting SPPI has potentially a 'productivity bias'. If the hours required to provide the service is updated when the service changes, then the pricing method would be model pricing.

Unit values: a pricing method that uses revenue and amount sold as data type in the survey. The quotient of these two results in an average price over a large number of transactions, which may be regarded as an output component or a real transaction but it is usually an average price over a whole group of transactions. For example, in telephony, the 'local calling price' is the total revenue from local phone calls divided by the total number of local phone calls.

The unit value method is applicable in cases when transactions in a group are sufficiently homogeneous. In other words, quality of individual services is unchanged and their quantities in the transactions do not vary. If this is not the case, changes within a group would be erroneously recorded as price changes.

Note that the term 'unit value' is often used for any 'average price' over multiple transactions and/or a survey period, being preferred over the alternative, a single price observation. However, average prices where the average is the sum of service prices divided by the number of service prices quoted are NOT included in the unit value pricing method. The unit value pricing method is where the price is the revenue for providing the services divided by the amount of service provided. Note also the term unit price.

Margin pricing: a pricing method where prices are not directly observable but where the value of the service can be measured as the difference between the observed acquisition and selling prices of a given product.

The margin pricing method is used to measure price development in services that are not separately invoiced and where the service is related to the transformation in space or time of an item. The item may be a product, such as a good purchased and sold by a retailer or a loan provided by a financial intermediary. The price of the service can be estimated as the difference between the price paid by the service provider for the good or service they transformed and the price paid by the final consumer (at the same point in time).

2.2 Data types in surveys

Expert estimate: a data type in the survey which bases a price on the potentially subjective judgement of the expert in the responding company who fills in the survey form. The estimate can reflect different types of units, for instance only components of an entire service or prices per working time and per product. If an SPPI uses expert estimates, it effectively transfers the responsibility and burden of pricing to the expert. The pricing statistician therefore has less control over how the price that enters SPPI calculation is established.

Input prices: a data type in the survey which corresponds to the prices of all (or a number of) input components needed to make a set amount of output. The profit margin is always to be included as an important input component. The pricing mechanism is sometimes such that an enterprise applies a set factor to calculate an output price from an input price. This practice is best known from the pricing method pricing based on working time which multiplies an hourly wage with a factor (see also mark-up) to arrive at an hourly charge-out rate. The other pricing method using this data type in the survey is model pricing.
Strictly speaking, the input prices can be taken from a list or be estimated by an expert or calculated as an average from real transactions, but an input price is set apart as it is not an output price, unlike every standard data type in the survey.

List price: a data type in the survey in which the price of a product is quoted from the producer's price list, catalogue, Internet site, etc. It is generally the gross price exclusive of all discounts, surcharges, rebates, etc. that may apply to an actual transaction. A list price is therefore inferior to a real transaction price or shipment price for SPPI compilation, although from case to case the assumption of correspondence with a real transaction price can differ from reasonable to poor. List prices for fixed amounts of working time are known as standard hourly rates. Another synonym which should not be used to avoid confusion is book price.

Percentage fees and related value: a data type in the survey, only used in the pricing method percentage fees. Strictly speaking, the percentage can be taken from a list or be estimated by an expert or calculated as an average from real transactions, but a percentage is set apart as it is not a price, unlike every other data type in the survey. The 'related value' (see percentage fees) is an unusual data type as well and refers to an underlying good or other product to which the service relates.

Real transaction price: a data type in the survey in which the price was truly paid in the market, taken form a receipt, bank statement or electronic database with transactions.

Revenue and amount sold: a data type in the survey in which the quotient of the two variables (revenue and amount sold) results in a price, which can be used in almost any pricing method. In calculating this price, the equation *Value (v) = Price(p)* Quantity(q)* is re-written at the micro level into *p=v/q*.

Acquisition and selling prices: a data type in the survey where the difference between the two (acquisition and selling prices) allows for calculation of a margin price. The acquisition price is the cost to the seller of purchasing a product or a service from

a supplier excluding any taxes and rebates. The selling price is the cost to the purchaser excluding any taxes and transport charges.

3. Other preferred terms

Amount: the quantity of (a component of a) service which is homogenous enough to be useful in SPPI related calculations. E.g. the quantity of 'calling minutes' in telephony is useful, but the quantity of projects of an engineering firm is not useful. See revenue and amount sold.

Data type in the survey: a description of the raw data surveyed by a statistician from a respondent. The pricing method transforms these data into prices ready for standard PPI compilation procedures.

Fictitious service: a service that is devised for a price survey only, used in model pricing.

Hourly charge-out rates: the price of one hour's work by an employee of the producer which contributes to the production (provision) of a service.

Input component pricing: a pricing method which is based on the assumption that a selection of input prices can be an acceptable estimate of an output price. This pricing method on its own, is not a desirable method and is, therefore, not listed with the main pricing methods. An example is the use of truck write-off, driver's wage, and fuel costs to estimate an output price for road haulage. Note that input prices can be used in a number of better pricing methods.

Lump sum: a total price (quote) which is derived from substantial calculations based on (typically many) components, as opposed to separate price (quoting) of the components, e.g. the price of a large engineering project.

Model transaction: a standardised service which is frozen to allow meaningful price comparisons over time.

Order price: the price quoted at the time the order is placed by the purchaser. (From PPI manual). See also shipment price.

Pricing method: the use of a specific type of information on prices to represent the evolution of price in price index compilation. It is a procedure put in place by statisticians to make price data eligible to be entered in an index. The pricing method is largely determined by the characteristics of the data. (from OECD/Eurostat SPPI Guide).

Pricing mechanism: the way prices come about in the market between producer and client. It differs from a pricing method which is a method used by a statistician. In the ideal circumstance where the data type in the survey = real transaction prices, the difference between pricing mechanism and pricing method is unimportant. In the ideal case, a price that came about in the market is surveyed and directly used in SPPI calculation.

Revenue: money paid to a producer, see revenue and amount sold. The same is sometimes meant by income and turnover.

Shipment price: the price at the time the order is delivered to the purchaser. (From PPI manual). See also order price.

Spot (market) price: a generic term referring to any short-term sales agreement, as opposed to prices in a long-term contract. It generally refers to a single provision of an uncustomized service, reflecting current (efficient) market conditions. (Largely from the PPI Manual).

Tariff prices: money to be paid by a customer for regulatory tariffs, additional to the service price that a producer charges. Tariff prices are 'outside' the pricing mechanism that arrives at a market price.

Tender(ed) price: a price that is offered and which may differ from the transaction price finally arrived at. A list price and model pricing may involve tendered prices.

Transaction: The buying and selling of a product on terms mutually agreed by the buyer and seller. (From PPI manual).

Transaction pricing: ideal pricing method using actually paid prices of individual transactions that are repeated in each survey period. For SPPI's, same as direct use of prices of repeated services.

Unique service: a type of service such that any two actually provided services of the type differ too much to allow meaningful comparison of their prices for acquiring a price relative.

Unit price: a price of an individual product, e.g. a price per kg etc. A unit price is not calculated from revenue and amount sold (not a unit value).

User cost prices: prices calculated as forgone interest (compared to a standard interest rate), charged for FISIM of loans and savings in banking SPPI's.

4. Related terms

The use of these is discouraged, as they mean (almost) the same as terms in sections 2 and 3.

Ad valorem price: see percentage fee.

Average invoiced hourly rate: see pricing based on working time.

Average price per qualification: see pricing based on working time.

Bill(ing) method: see component pricing.

Billed method: see model pricing.

Billing rate: a rate or price taken from a bill, and therefore a real transaction price.

Book price: see list price.

Competitive contract pricing: same as model pricing.

Estimated net transaction price or **estimated new transaction price**: see model pricing.

Estimated output price approach: pricing based on working time with input prices as data type in the survey; the input prices are hourly wages.

Fee income per grade of worker: see pricing based on working time.

Income: see revenue.

Labour charge-out rates: same as hourly charge-out rates, (=output) despite the suggestion of a relation to wages for labour (=input).

Market price: see real transaction price.

Mark-up (markup): a term used in SPPI context for the factor between input (like wages) and output prices (hourly rates), see input prices. Term should not be used as it is defined differently in the SNA.

Model contract pricing: same as model pricing.

Model service: see model transaction.

Offered price: see tender(ed) price.

Price determination method: same as pricing mechanism.

Price fixing method: same as pricing mechanism.

Price setting: same as pricing mechanism.

Rate method: roughly the same as component pricing. Term used for telephony SPPI's. A rate is the price of a unit of which typically large numbers are bought, e.g. a price per minute calling.

Realised hourly rates: see pricing based on working time.

Specification pricing: a term to be avoided, used in different and irreconcilable ways. The word 'specification' reflects that in a PPI, sampled products have to be specified and quality held constant.

Standard hourly rates: see <u>pricing based on working time</u>.

Component Pricing Method Example

RESIDENCE LOCAL SERVICE IN NPA/NNX (818) -864 BILL INCLUDES:
   RESIDENCE ACCESS LINE   @ 8.37
   SUBSCRIBER LINE CHARGE (FCC)   @ 3.50
   USAGE (322 CALLS)   322   @ 0.01

   TOTAL PRICE $15.09

The sum of the three components results in the price. The data used for these components are 'hard' data based on respondent's records.

1. This example is not a model pricing because an entire service is not described and the price is not estimated but based on real transaction prices of sub-components.
2. This example is not contract pricing even though a contract may exist for this transaction because the price is not determined for more than one period in that contract.
3. This is not direct use of repeated services pricing because the price is not based on an observed transaction of 322 calls in different survey periods.

Contract Pricing Method Examples

1. Railroad contracts

TYPE OF SERVICE: RAIL TRANSPORTATION, FREIGHT (CARLOAD). SERVICE IDENTIFICATION: BLS COMPANY EQUIPMENT (ROLLING STOCK): BOX CAR, PLAIN AND EQUIPPED; FREIGHT CAR, LEASED; TRAIN EQUIPMENT DIMENSIONS: NOT EXCEEDING 50 FEET. TRAIN EQUIPMENT INITIALS AND NUMBER: XLT 1234. TYPE OF COMMODITY SHIPPED: COAL. STANDARD TRANSPORTATION COMMODITY CODE (STCC CODE): 1121290. PRICE AUTHORITY, TARIFF/PRICE LIST: XLT 46890-A. NUMBER OF CARLOADS: 100. SHIPMENT WEIGHT: 90 TONS. POINT OF ORIGIN: BUCKEYE, KY. POINT OF DESTINATION: MIDDLETON, SC. ROUTE, DIRECT/INDIRECT: DIRECT. OTHER FEATURES: NONE.

2. Repair and Maintenance Multi – Year Contract

TYPE OF SERVICE: FORKLIFT REPAIR AND MAINTENANCE. SERVICE IDENTIFICATION: MODEL OF MACHINERY/EQUIPMENT: MODEL # 1234. CONTRACT NUMBER: 100AB. CUSTOMER NAME/TYPE: BOB'S FORKLIFT. FIELD CALL. MAINTENANCE CONTRACT. ANNIVERSARY DATE (MONTH) FOR MAINTENANCE CONTRACT: OCTOBER ADDITIONAL SERVICE DESCRIPTION: OIL CHANGE AND DEGREASING/ GREASING OF THE LIFT MECHANISM.

MULTI-YEAR MAINTENANCE CONTRACT

YEAR	MONTHLY/YEARLY RATE
2002	$65
2003	$70
2004	$75
CALCULATED SUMMED RATE	$210

Note: This is an example of a multi year contract that is priced to try to eliminate the age bias in contract pricing by pricing the contract once a year and summing the total of the active contracts. So every year, the oldest contract will drop off and the contract from the new year will be added. For example, it the contract's life is 3 years, then we will have 3 different contract years. If the contract life is 5 years, we will have 5 different contract years. We could divide by the number of years to get an average but whether we use the sum or average, it is the same in index calculation.

In both these examples, railroads and repair and maintenance, the respondent prices a contract which fixes the price of the service and these fixed prices cross several survey periods.

1. These examples are not model pricing method because the respondent is not estimating the price based on current market conditions but real transaction prices are used.
2. These examples are not component pricing method because the price is observed covering the entire service and is not made up of prices of sub-components.
3. These examples are not direct use of prices for repeated services because the price is agreed for several periods when the contract is signed.

Direct Use of Prices of Repeated Services Examples

1. Passenger Car Rental industry

TYPE OF SERVICE: PASSENGER CAR RENTAL FOR LEISURE TRAVEL. LOCATION 6437500. ESTABLISHMENT NUMBER AND STREET: 64375 BLS PARKWAY, CINCINNATI, OHIO 45260. CORPORATE-OWNED ESTABLISHMENT. AIRPORT SITE. STANDARD RATE PLAN. DURATION OF CAR RENTAL PERIOD: ONE DAY. STANDARD CLASS. YEAR OF RENTAL VEHICLE: 2004; MODEL/NAME OF RENTAL VEHICLE: PONTIAC GRAND AM. PASSENGER COUNT OF RENTAL VEHICLE: FIVE PASSENGERS. DAILY RATE. ONE-WAY RENTAL (PICK-UP AND DROP-OFF POINTS ARE AT DIFFERENT LOCATIONS.) PICK-UP POINT: 64375 BLS PARKWAY, CINCINNATI, OHIO 45260. DROP-OFF POINT: 80631 DOL PLACE, CINCINNATI, OHIO 45309. UNLIMITED MILEAGE (NO EXTRA CHARGE.) NO FUEL CHARGE (FOR RENTAL CAR WITH FULL TANK OF GAS; RETURNED WITH FULL TANK). ADVANCE RESERVATION.

The price: the total daily rental.

2. Medical Laboratories industry

TYPE OF SERVICE: CHEMISTRY. FACILITY NAME: ABC LABORATORY; FACILITY ADDRESS: 123 ELM ST.; WASHINGTON, DC 20212. CPT CODE: 80061; PANEL/ PROFILE/ AUTOMATED MULTICHANNEL TEST NAME: LIPID PANEL; TESTS INCLUDED IN PANEL/ PROFILE/ AUTOMATED MULTICHANNEL GROUP (INCLUDE CPT CODES): CHOLESTEROL, SERUM, TOTAL (82465), LIPOPROTEIN, DIRECT MEASUREMENT, HDL CHOLESTEROL (83718), TRIGLYCERIDES (84478). PRIMARY PAYOR: PRIVATE INSURANCE; NAME OF INSURANCE COMPANY: ABC INSURANCE COMPANY; NAME OF INSURANCE PLAN: FEDERAL EMPLOYEES HEALTH BENEFITS PLAN, HIGH LEVEL PLAN. REIMBURSEMENT AMOUNT (ALLOWED AMOUNT): $20.00; PRIMARY INSURANCE REIMBURSEMENT: $15.00. PATIENT COPAYMENT: $5.00

The price: the total reimbursement = $20.00. This is the total amount received by the provider for this service and includes payments from both the insurance company and the patient.

In all of these examples, the services are transacted every survey period.

1. These examples are not contract prices, even if there are contracts for the transactions, because the price is not fixed in the contract for more than one period.
2. These examples are not model prices because they are actual transactions that occur every survey period.
3. These examples are not component prices because they are complete transactions and represent actual transactions that occurred during the survey period.

Model Pricing Method Example

Engineering services

Type of Service: Building related engineering services. Contract identifier: Project BLS-PPI. Billing invoice number: 123. CLIENT #456. Multi-use building. Non-fixed (variable-hourly fee). Qualifications based selection. Monthly billing. Review soils @ excavation base; test engineered fill, backfill, observe concrete reinforcement & masonry construction for compliance; provide proof roll of parking areas; sample & test fresh concrete & compressive strength; masonry grout & prism testing.

Charge Category	Hours	Rate	Hours X Rate
Compaction testing	1	$40.00	$40.00
Special inspections, concrete	15	$50.00	$750.00
Concrete testing	25	$40.00	$1,000.00
Sample pick-up	6	$40.00	$240.00
Special inspections, masonry	8	$50.00	$400.00
Project mgmt – Senior project engineer	2	$80.00	$160.00
Total fee			$2,590.00

In this model pricing method example, every survey period the respondent is estimating the number of hours and rates for each charge category required to provide the fixed service described in the specification.

1. This example is not a price based on working time since the number of hours is not fixed but rather the service being provided is fixed.
2. This example is not contract pricing because the service is not transacted in successive survey periods and the prices are estimated.
3. This example is not direct use of prices of repeated services because the service is not transacted in successive survey periods and the prices are estimated.
4. This example is not component pricing because the entire service is priced and the prices provided by the respondent are entirely estimates, not hard data.

Percentage Fee Pricing Method Examples

1. Real Estate Agents and Brokers

RESIDENTIAL PROPERTY SALE/PURCHASE. AGENTS AND BROKERS SERVICES PROVIDED: LISTING AGENT. FULL SERVICE. SINGLE FAMILY COOPERATIVE APARTMENT. ADDRESS OF PROPERTY: 804 RIVER RD #4F, NOWHERE, NY. OTHER PROPERTY IDENTIFICATION: MLS #2205775. NUMBER OF BEDROOMS: 2. NUMBER OF BATHROOMS: 1. PROPERTY VALUE: $176,000. COMMISSION RATE: 2.00%.

Note: The exact house has not been transacted every survey period. The property value and commission rates are updated using hard data from recent sales of comparable properties.

Price = $176,000 x 2% commission = $3520 (previous price = $182,000 x 2% commission = $3640)

2. Wholesale trade commission transaction

TYPE OF PRODUCT: FOOD. VARIETY/MODEL: TOMATO KETCHUP. PRODUCT IDENTIFICATION NUMBER: BOTTLED (CASE OF 20, 24 OZ EACH). COMMISSION SALES CALCULATION:

PRICE PER UNIT	$ 23.55	$_____	
(TIMES) COMMISSION PERCENTAGE		1.97%	_____ %
TOTAL DOLLAR VALUE OF COMMISSION PER UNIT	$ .46	$_____	

1. These examples are not direct use of pricing of repeated services because the commission rate and trade margin are not targeted directly but prices are estimated based on percentage fees and product prices.
2. The real estate example is not a contract pricing method even though there is a contract for the transaction because the price is determined for each survey period rather than covers several periods.
3. These examples are not component pricing methods because the entire transaction is priced rather than is made up of prices of sub-components.
4. These examples are not model pricing methods because the prices are based on data on actual transactions. In the real estate sales example the price is not directly actual transaction price but data on real transactions are used when estimating changes in the property value and commission rate.

Accounting services

Type of service: Auditing. Time required for service completion: 290 hours. Client information: Repeat customer, commercial business. Length of billing period: Single bill for entire service. Services included in engagement:

Service rendered	Rate	Hours	Total fee
Partner	$375	10	$ 3,750
Manager	$300	40	$12,000
Senior accountant	$220	60	$13,200
Associates	$125	180	$22,500
	Total for services rendered:		$51,450

The number of hours will remain fixed and the price will be updated when the rates change.

1. This example is not a model price because the service is not described in detail so the number of hours required to perform a specific service cannot be updated.
2. This example is not contract pricing even though a contract is used for this transaction because the price is based on prices of working time and is determined only for one period.
3. This example is not component pricing because price measurement using working time (hourly rates and fixed number of hours) should not be used in component pricing.
4. This example is not a direct use of prices for repeated services because this transaction is based on prices of working time.

Unit Value Pricing Method Examples

1. Lessors of Nonresidential Building

LEASING OF GOVERNMENT OFFICE BUILDING. POSTAL SQUARE BUILDING. 2 MASSACHUSETTS AVE, NE WASHINGTON, DC. CLASS A PROPERTY. OWNER RESPONSIBLE FOR UTILITIES. TOTAL SQUARE FEET: 250,000. TOTAL NUMBER OF FLOORS: 7. YEAR CONSTRUCTED: 1923. YEAR LAST RENOVATED: 1993.

A. TOTAL RENT	$1,100,000.0000
B. TOTAL OCCUPIED SQUARE FEET IN BUILDING	22,000

AVERAGE GROSS RENT PER OCCUPIED SQUARE FOOT: A/B = $50.0000

2. Television broadcasting

LOCAL SPOT ADVERTISING SALES. AVERAGE SPOT RATE FOR 30-SECOND SPOT. WEEKDAY. DAYPART: EARLY NEWS. NUMBER OF SPOTS SOLD: 360 PER MONTH. DAYPART RATING: 0.0 TV HOUSEHOLDS. AVERAGE CPP: $0.00

A. TOTAL VALUE OF SALES	$540,000.0000
B. NUMBER OF SPOTS	360

AVERAGE SPOT RATE: A/B = $1,500.0000

In both these transactions, the pricing method is unit value pricing because the price is calculated by dividing the revenue by the amount.

1. These examples are not direct use of prices of repeated services because the price contains multiple, variable transactions.
2. These examples are not contract pricing method even though both transactions have contracts because the price is not fixed for more than one period in the contract.
3. These examples are not component pricing method because the entire transaction is priced not just a part of a transaction.
4. These examples are not model pricing method even though they description is fixed because the respondent is not providing estimates but uses actual data.

Wholesale trade margin pricing example

COPYING MACHINE. VARIETY/MODEL: 246. BUYER SALES INFORMATION: AMOUNT OF SALES NEEDED
TO QUALIFY FOR CUSTOMER CLASS: $100,000 to $300,000. AVERAGE PRICE BASIS: LEVEL:
NATIONWIDE, 300 OFFICES. TIME PERIOD: FIRST TWO WEEKS OF MONTH.
PRICE TO BUYER $ 23,750 $_____
     (MINUS)
PRICE FROM SUPPLIER $ 20,500 $_____
GROSS MARGIN $ 3,250 $_____
FREIGHT-OUT FOB DISTRIBUTION CENTER. FREIGHT-IN, LANDED COST

The price: the total gross margin for the first 2 weeks of the month.