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

Updated version

22nd Voorburg Group meeting Seoul,
10 - 14 September 2007

Changes in the Thesaurus

- **Chapter 1. Introduction**
  - No changes except purely technical ones
- **Section 2.1 The seven pricing methods from the OECD/Eurostat SPPI Guide**
  - Definitions have been clarified
  - Examples of pricing methods
- **Section 2.2 Data types in surveys**
  - As agreed in the VG meeting 2006, descriptions of "Expert estimate" and "Input data" have been slightly revised.
- **Chapters 3 and 4**
  - No changes
- **Chapter 5. Three more optional aspects for describing an SPPI**
  - The chapter is dropped

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

Component pricing

- divides the service into a number of key output components of which one or more are then priced separately

- uses existing 'hard' company data - real transaction prices that have been combined to form a price

- not the price of any transacted service because quantities of sub-services in the component price may differ from actually transacted services

Component pricing

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.

Component pricing

Comments on the example:

- 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.

- 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.

- 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

- real transaction prices are charged for the same or similar service that is repeated each survey period by the same producer for the same client

- prices are agreed for more than one period when the contract is signed or renewed

- prices may be the same for a certain period or change according to an agreed pattern

Contract pricing

Example 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 53 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.

Contract pricing

Example 2
Repair & 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

Contract pricing

Example 2, Repair & Maintenance Multi–Year Contract

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 there are 3 different contract years. If the contract life is 5 years, there are 5 different contract years.

Contract pricing

Comments on the examples:

- 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.
- 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.
- 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.
- 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

○ directly surveying the price of a service or package of services that occurs every survey period (a real transaction)
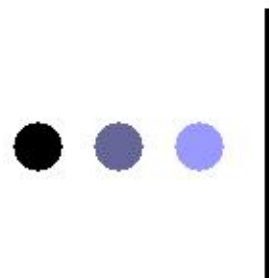
Direct use of prices of repeated services

Example 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.

Direct use of prices of repeated services

Example 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

o 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.

Direct use of prices of repeated services

Example 3

Wholesale trade margin transaction

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.

Direct use of prices of repeated services

Comments on the examples:

- In all of these examples, the services are transacted every survey period.
- Example 3 is not a percentage fee method because gross margin is targeted directly.
- 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.
- These examples are not model prices because they are actual transactions that occur every survey period.
- These examples are not component prices because they are complete transactions and represent actual transactions that occurred during the survey period.

Model pricing

Expert estimation of a model transaction:

- Single fictitious service developed as model transaction

or

- Actual transaction developed as model transaction

Model pricing

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.

Model pricing

Example

Engineering services (cont.)

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

Model pricing

Comments on the example:

o 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.

o 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.

o This example is not contract pricing because the service is not transacted in successive survey periods and the prices are estimated.

o 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.

o This example is not component pricing because the entire service is priced and the prices provided by the respondents are partly or entirely estimates, not hard data.

Percentage fees

○ estimates a price by multiplying a percentage and the value of the good for which that the service and the percentage fee are tied

Percentage fees

Example 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%.

- 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)

Percentage fees

Example 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 $0.46 $ _____

Percentage fees

Comments on the examples:

○ 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.

○ 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.

○ These examples are not component pricing methods because the entire transaction is priced rather than is made up of prices of sub-components.

○ 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.

Pricing based on working time

○ the amount of money 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 provision of that service
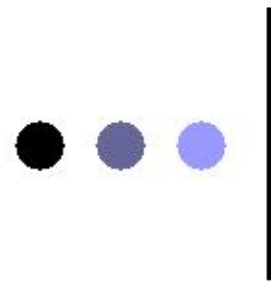
Pricing based on working time

Example

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

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

Pricing based on working time

Comments on the example:

○ 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.

○ 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.

○ 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.

○ This example is not a direct use of prices for repeated services because this transaction is based on prices of working time.

Unit values

- the price is the revenue for providing the services divided by the amount of service provided
- results in an average price over a large number of transactions

Unit values

Example 1

Leasing 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

Unit values

Example 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

Unit values

Comments on the examples:

- In both these transactions, the pricing method is unit value pricing because the price is calculated by dividing the revenue by the amount.
- These examples are not direct use of prices of repeated services because the price contains multiple, variable transactions.
- 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.
- These examples are not component pricing method because the entire transaction is priced not just a part of a transaction.
- These examples are not model pricing method even though the description is fixed because the respondent is not providing estimates but uses actual data.

Further work

Updating Thesaurus

- Conclusions of the discussion are incorporated in the text.
- Thesaurus is a living document for time being. To prepare a new version, further comments should be sent latest **15 October**. Also practical examples are welcome.
- Updated Thesaurus will be prepared before **end of October.**

Updating the SPPI Guide on the web

- Incorporation of changes in the descriptions of pricing methods in the text. Links will be updated.
- Revised Guide will be available **before end of 2007**.

Implementation of pricing methods: Updating the SPPI inventory

- Adoption of revised definitions of pricing methods.
- Countries are asked to list pricing methods used in each service activity. (Use of brackets if a method is used only in very few cases.)
- The 2007 survey will be sent out **in November**.