



# **Quality Adjustment of Service Prices in Japan**

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# Outline of CSPI Corporate Service Price Statistics

- started in 1991.
- The CSPI covers about 60% of total transaction value of all intercorporations services.
- There are 8 Major groups, 17 groups, 39 sub-groups, 102 items, about 3,000 price data in the CSPI.
- A weight of item is each transaction value in the I-O Tables of corresponding service in 1995.
- Next major revision is scheduled in 2004.

# Environment surrounding Quality adjustment in Service prices

- Rapid technological innovations
  - rapid change of service contents in the IT related industries
- Expanding made to order services
- Deregulation has progressed in many services
- Number of replacement of price data in 2000  
361 cases in the CSPI ( 919 cases in the WPI)

# Various Quality Adjustment Methods and Actual Usage in compiling the CSPI

- We use 4 types of Quality Adjustment methods
  - 1 Direct Comparison Method (40% in 2000)
  - 2 Unit price Comparison Method (5%)
  - 3 Overlap Method (around 1%)
  - 4 Production Cost method (10%)
  - 5 Hedonic Regression Method (not yet use)
- ◆ over 40 % of Quality Adjustments were “difficult to compare”

# Effects of Quality Adjustment in the CSPI

- Price decline = decrease in nominal price  
+ price reduction by improvement of quality
- Effect of Quality adjustment in the CSPI was 0.1% in 2000 ( 0.4% in the WPI),  
0.0% in 2001 ( 0.4% in the WPI)
- This difference shows the gap between the low productivity growth of non-manufacturers and the high productivity growth of manufacturers

# Difficulty in Quality Adjustment of Service output

- **Ambiguity of Definition of service output**
- **Limitations in data availability**
- **Difficulty to evaluate quality change from demand side**
  - 1) **in capturing the quality change of customized services**
  - 2) **in estimating the impact of technological innovations**
  - 3) **in dealing with the impact of recent deregulations**

# Pricing and Quality Adjustment under a Monopoly

- **Difficulty to estimate difference in quality from the price gaps between old and new services**
  - **New price of Monopolistic service reflects marginal cost and monopolistic rent**
  - **Monopolistic producers may change their monopolistic powers according to the quality change of their services**

# **Direction toward Quality Adjustment methods**

**1) The wider application of Hedonic regression method**

**)Econometric model approach based on the concept of saving/wasting of time**

**3)Econometric model approach based on the idea to estimate the relation between changes in quality and that in prices by capturing the behavior of monopolistic companies**

**The important key for success is to collect sufficient detailed data**



# **Our next revision plan of the CSPI**

- **Our plan for next revision of the CSPI**
  - spring 2003** release of preliminary plan and asking for public comments
  - autumn 2003** release of final plan
  - December 2004** release of new CSPI
- **Our trial for next revision of the CSPI**
  - Hedonic regression method and/or Econometric model approach for Telecommunication services**