PRODUCER PRICE INDEXES FOR COMPUTER SYSTEMS DESIGN, DATA PROCESSING, AND SOFTWARE PUBLISHING

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Overview

- **Informatics Professional Service Price Index (IPSPI)**

    – Original series ⇒NAICS 54151: *Computer Systems Design and Related Services*

    - Measures changes in prices for informatics professional services such as hardware and software consultancy, computer facilities management, and system maintenance

    - Series starts in 1993

Overview cont'd

- Addition of two NAICS

    1. NAICS 51121: *Software Publishers*

    2. NAICS 51821*: Data Processing, Hosting and Related Services*

    - Data for 2001 and 2002

Methodology

PRICE $\Rightarrow$ Input approach, where

? in price = ? in wages + ? in profits

Methodology

SAMPLE $\Rightarrow$ Cut-off sampling

if $r_k > R$, then in sample

where r_k is the revenue for unit (or establishment) k and R is the cut-off revenue amount.

Methodology

SAMPLE $\Rightarrow$ Cut-off sampling

Preferred when:

- the index is strongly influenced by the changes in the items or units which contribute the largest revenues;

- the allowable sample size is small due to cost factors;

- there is "reliable" information on the revenue of all businesses in the population, and

- the revenue of the population is skewed,

Methodology

- Weights and Estimation

  – At unit level k,

  $$\left(\frac{w_t}{w_{t-1}}\right)^k, \left(\frac{p_t}{p_{t-1}}\right)^k$$
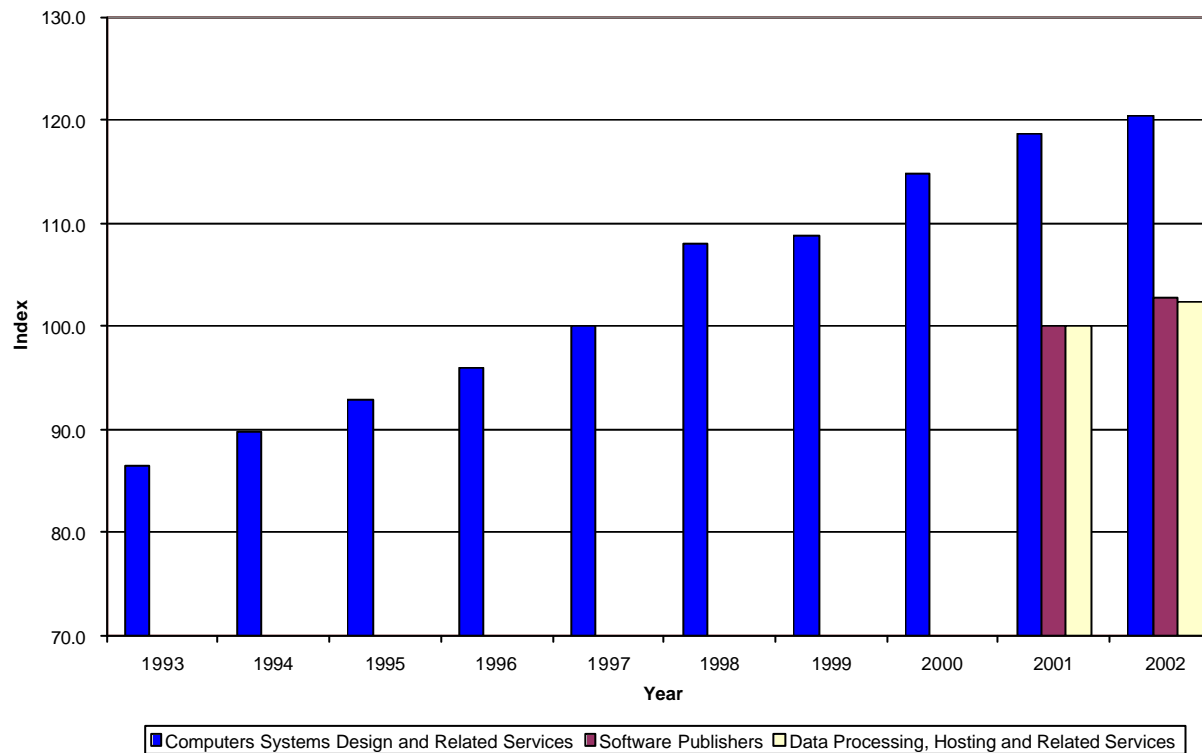
Methodology

- Weights and Estimation

  - Geomean of all units to arrive at company level estimate

  - Estimates are weighted up to province/territory level by # of units

  - National estimates based on provincial/territory estimates weighted up by # of units

Results

Figure 1 - Informatics Professional Services Price Indexes

18th MEETING OF THE
VOORBURG GROUP - Tokyo, 2003

Quality Change

- No explicit quality adjustment with input approach $\Rightarrow$ bias $\uparrow$ or $\downarrow$ depending on direction of ?

- Contract pricing, model pricing not feasible.

Price Measurement Challenges

- Establish and maintain clean survey frame.

- Improving respondent relations.

- Quality ? - industry study?