A Proposal for Improving Business Services Price Indexes

Objectives of Paper

- **Seek the advice and opinions from a range of sources, including,**
  - advisory committees,
  - price index specialists in other statistical offices,
  - other federal departments,
  - STC personnel, etc…,

Objectives of Paper

- Identify the service categories development.

- Provide and discuss the costs of developing and producing a PPI for services.

Objectives of Paper

- Highlight the activity to date of the PPI services program at STC.

- Provide an overview of the American experience as a frame of reference for development in Canada.

Objectives of Paper

- **Serve as the basis for a proposal to various stakeholder departments of the federal government to obtain funding and support.**

Background of Paper

Compilation of six research efforts;

1. Framework and national accounts perspective.
2. History of efforts to improve services price measures at STC.
3. Experience and plans in the United States
4. Voorburg Group papers and other international experience.
5. Motivation and benefits to be realized.
6. Costs for price index development.

Which services? →Table 2

- **Business services**

  ⇨ **Distributive Trades**

  ⇨ **Transportation and warehousing**

  ⇨ **Finance, insurance, leasing,...+ Business management**

  ⇨ **Scientific, technical and professional services**

  ⇨ **Information, communication and cultural services**

  ⇨ **Other**

Table 2 explanation

Column 1- Service Sector Weight, 2000

– the share of total services value-added in 2000, as recorded in the national input-output tables.

Table 2 explanation

Column 2- Quality Score

- 1 = high quality
- 2 = medium quality
- 3 = low quality

- a subjective evaluation by national accounts analysts of the method currently used for deflating these services as part of GDP by industry.

Table 2 explanation

Column 3 - Complexity Score

– 1 = straightforward

– 2 = medium complexity

– 3 = high complexity

– **evaluation of the challenge to develop and produce index**

Table 2 explanation

Column 4 – Priority Rating

- – a rank-order priority, based on the factors summarized in the preceding columns.

Table 2 explanation

Column 5 – Options for Pricing Methodology

- – **transaction price**
- – **mark-up price**
- – **model price**

sources – **(1) STC experience**

(2) OECD-Eurostat 2003 Inquiry on National Collection of Services Producer Prices

Table 2 explanation

Columns 6, 7 and 8

- **Available** → **currently in production**
- **In progress** → **development is under way**
- **To do** → **no development yet**

Variables Influencing Cost

- **Complexity of service**
  - **Can we define the main service?**
  - **Can we re-price it over time?**
- **Constant-Quality Index**
  - **How do measure and treat quality change?**
- **Industry dynamics (sampling)**
  - **How easy is it to find and survey respondents in a representative way?**

Example of a Straightforward Service

- **Couriers**

  – **Service definition → Pkg. X from A to B**

  – **Terms of service held constant**

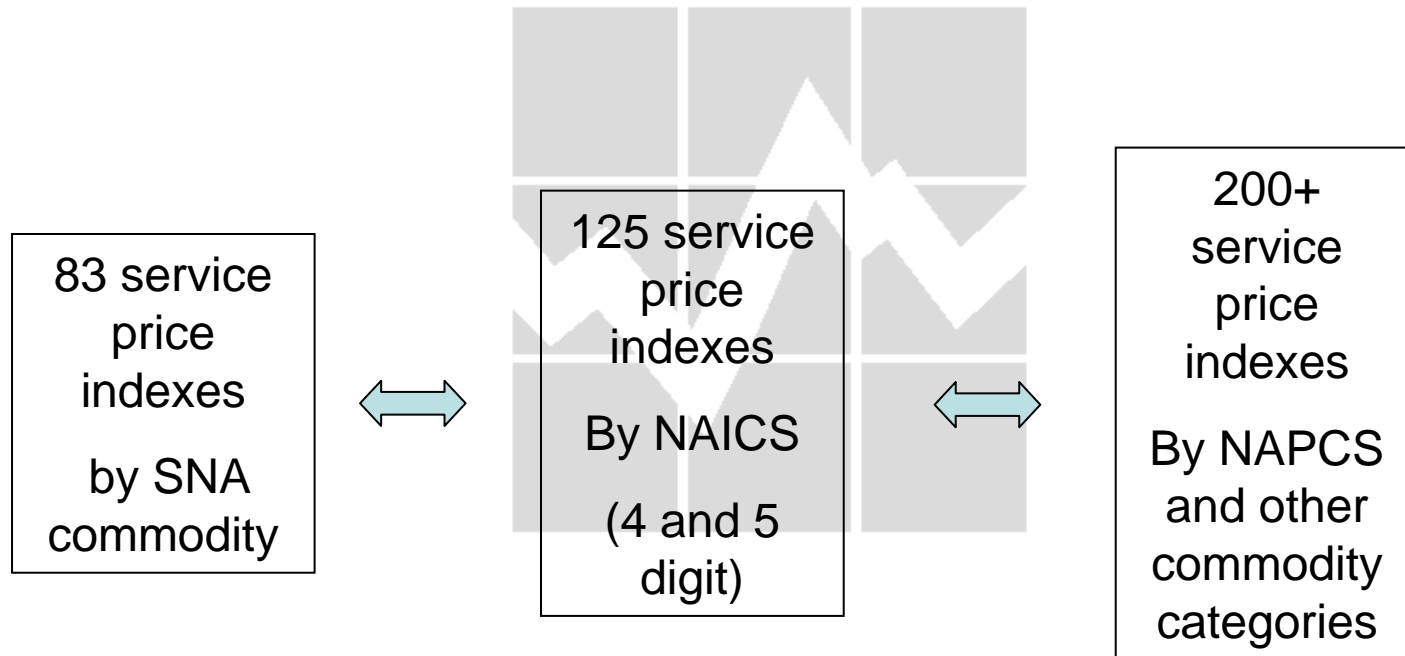 – **5 major players = 80% of industry activity (cut-off sample)**

Example of a Complex Service

- **Consulting Engineers**

    – **Service is complex, various specializations**

    – **Contracts are not repeated**

    – **Heterogeneous frame that needs updating regularly (two-phase probability sample)**

Estimate of Resource Needs

Degree of complexity	One-time development and implementation cost (PYs)	Ongoing annual update and maintenance cost (PYs)
Straightforward	0.9	0.9
Semi-complex	1.4	1.2
Complex	1.9	1.8

How Many Indexes?

83 service price indexes by SNA commodity

⟷

125 service price indexes

By NAICS

(4 and 5 digit)

⟷

200+ service price indexes

By NAPCS and other commodity categories

IPPI and SPPI Comparison

IPPI	SPPI
370 SNA commodities	83 SNA commodities
Sample = 3,000 out of 37,000 (8.1%)	Sample = 37,749 out of 1,090,300 (3.6%)
Goods → easy to price	Services → difficult to price
One survey, one methodology	Many surveys, many methodologies

Current Situation

SPPI - Distribution by Service Group
(Service sector weight 2000)

Legend:
- **Distributive trades**
- **Transportation and warehousing**
- **Finance, insurance, leasing, real estate, and business mgmt.**
- **Scientific, technical and professional services**
- **Information, communication and cultural services**
- **Other**

Pie chart values: 27%, 12%, 32%, 20%, 7%, 2%
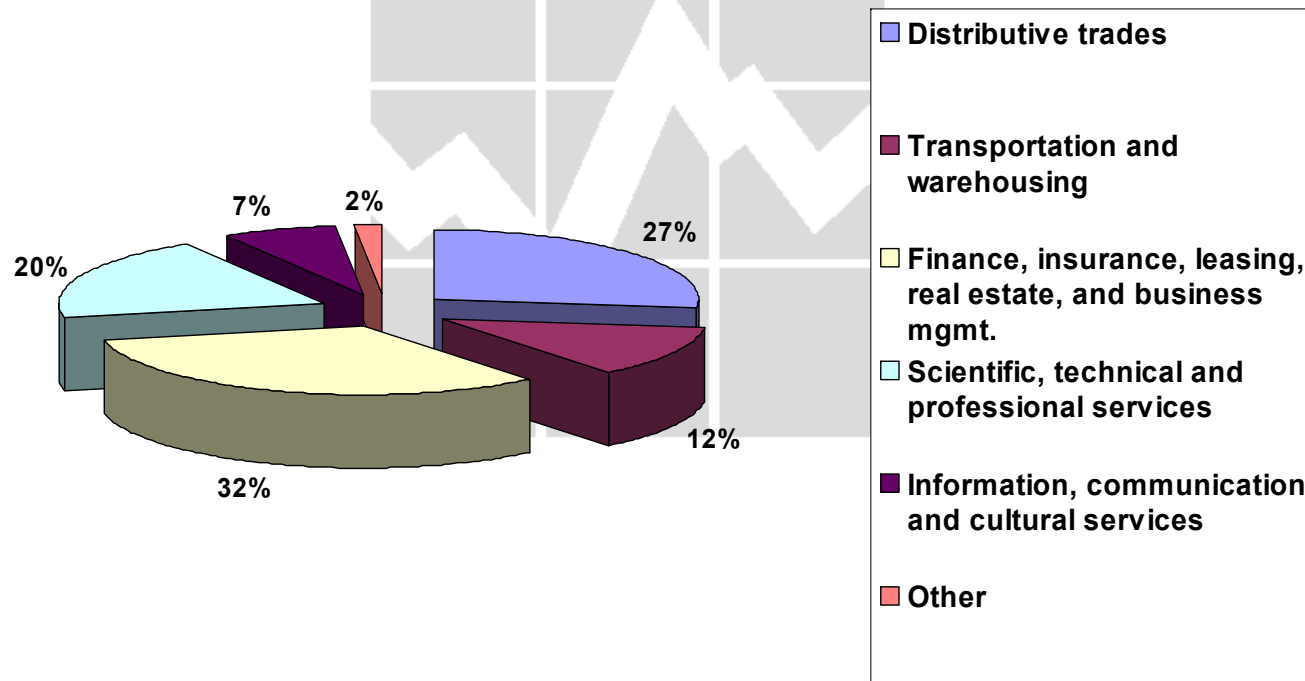
Current Coverage

- **Urban transit**

- **Taxicab transportation**

- **Gross paid residential rent**
- **Cable,other subscription programming**

} **CPI**

- **Accounting services**

- **Computer systems design**

- **Engineering services**

- **Software products development**

- **Data processing services**

} **PPI**

Proposed Coverage

- **Wholesaling margins**
- **Retailing margins**
- **Truck transportation**
- **Courier services**
- **Non-residential rent**
- **Rental, other machinery and equipment including construction**

Proposed Coverage

- **Non-life insurance**
- **Commissions, investment banking and securities dealing, and brokers**

Current and Proposed Coverage

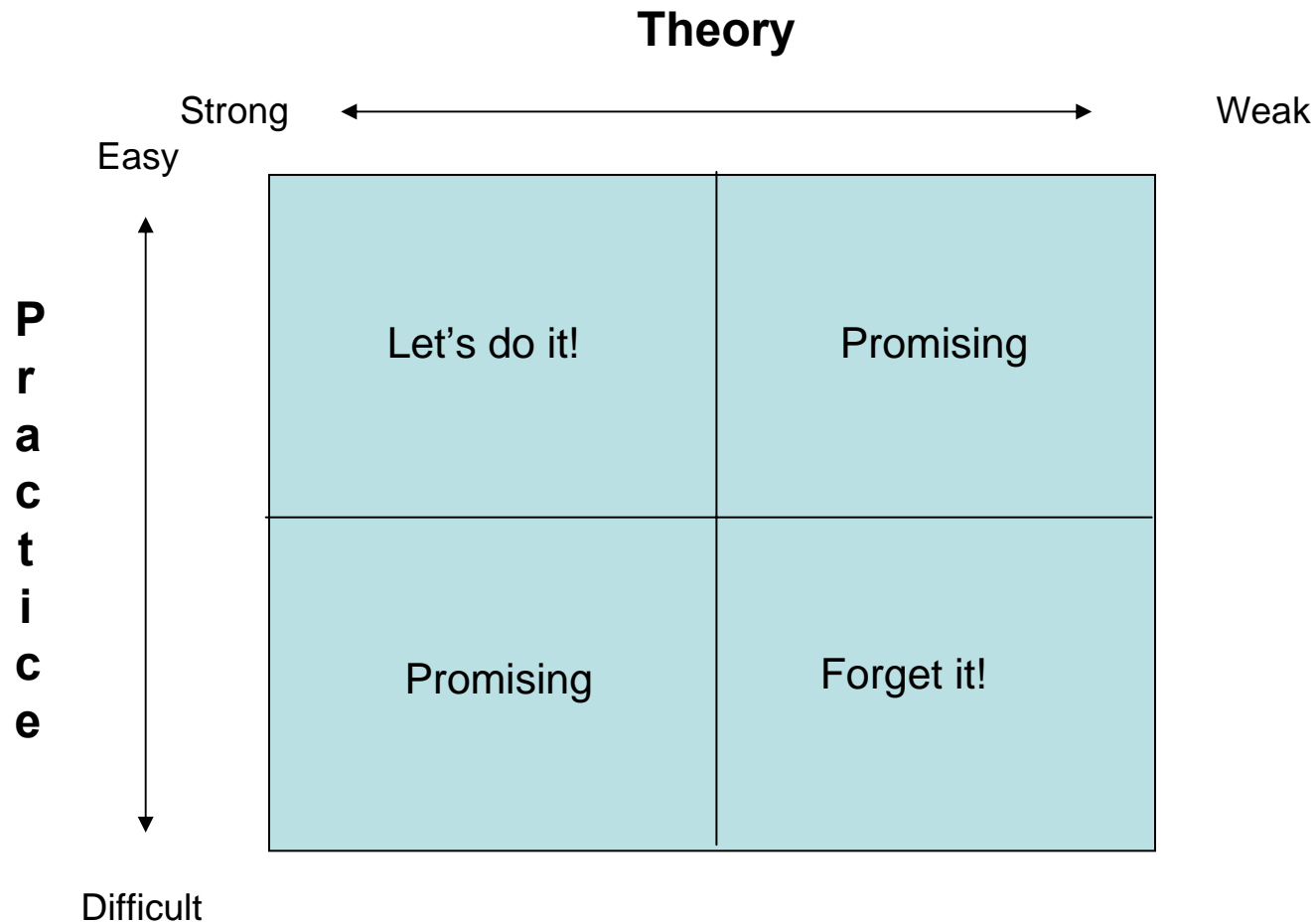| Group	Available	Proposed	To Do
Distributive trades	0.00%	25.10%	1.92%
Transportation and warehousing	0.88%	4.15%	7.06%
Finance, insurance, leasing, real estate, and business mgmt.	5.24%	10.28%	17.04%
Scientific, technical and professional services	6.41%	0.00%	13.21%
Information, communication and cultural services	0.56%	0.00%	6.50%
Other	0.00%	0.00%	1.65%
Total	**13.09%**	**39.53%**	**47.38%**

100%

Considering Options → Trade-offs

- **Theory → considerations**
  - **Accuracy**
  - **Constant-quality**
  - **Representative sample**

- **Practice → considerations**
  - **Response burden**
  - **Resources**

Considering Options → Trade-offs

Theory

Strong ←———————————————→ Weak

Easy

<table>
<tr><td></td><td>Theory</td></tr>
</table>

Let's do it!	Promising
Promising	Forget it!

P r a c t i c e

Difficult

Questions for Discussion

Question 1.

What are the most difficult challenges to developing a large scale SPPI?

Questions for Discussion

Question 2.

How resource intensive is the development?

Questions for Discussion

Question 3.

Is there any general advice for pursuing this project that would help ensure its success?