

Voorburg Group
Content Development Framework for Service Sector Statistics

The Voorburg Group (VG) Task Force recommends the following five elements of a service sector statistics content development framework (CDF) for producing nominal turnover/output data and pricing statistics, with links to classifications and national accounts, for member countries. This proposal focuses on PPIs and turnover/output statistics, and PPI will play a major but equal role with turnover/output data. This Content Development Framework will lead to the development of a set of guidelines to be included in a series of sector papers covering individual service industries.

- I. Agree on: 1) Pricing Method Terminologies (or Equivalent Terminologies in the Manner of a Thesaurus) and 2) Turnover/Output Method Terminologies for Use in the Mini-Presentations and Sector Papers (Note: The SPPI Thesaurus was prepared by March 2006. It includes suggested common terminologies for prices. A similar thesaurus is not a requirement for turnover/output work at this time.)**
- II. Develop Mini-Presentations (in Year 1) Detailing Current Practices for 1) Turnover/Output Data Collection (Including Prescribed Levels for Industry Products) and 2) Price Data Collection and Methods^{1 2} (Both of these types of mini-presentations will include sections on implications for classifications and national accounts – where relevant)**
- III. Present and Discuss the Mini-Presentations and Discussant Remarks, Leading to a Set of Key Guidelines Based on Differences in Country Market Constraints Under Element II (VG discussion would focus on the quality assessment of different conceptual choices, e.g., real world characteristics and market constraints and the cost effectiveness of using particular PPI and Turnover/Output methodologies and how they can best meet the needs of the national accounts)**
- IV. Develop, Present, Discuss, and Adopt Sector Papers (in Year 2) Containing VG Guidelines for the Development of Service Industry Statistics (Including Guidelines for Turnover/Output Data, Pricing Methods and Quality Adjustment Methods), Accompanied by Prescribed Changes for Standard Classifications or National Accounts as Necessary**
- V. Periodic Review to Validate or Revise the Set of Guidelines as Necessary**

¹ Scope includes but is not limited to the current production boundary of the 1993 SNA. Detail includes reasonable breakouts for intermediate vs. final demand categories, different price trends, and other issues.

² PPI methodologies and valuations include market output/transaction price, constant quality, current production, shipment price, and using the appropriate price change measure for the time period.

The Proposed Production Process

This CDF presents a production process for developing a series of sector papers that, when completed, will present a set of methodological guidelines for developing measures of the constant dollar outputs of service industries. It provides a structured approach for assessing the quality of conceptual choices related to pricing and turnover/output data levels in undertaking content development and improvement efforts. Within this framework, PPIs will play a major but equal role with turnover/outputs. The process will provide feedback to classifications and national accounts where necessary. When a particular subject industry/industry group has little development, the process allows for the conceptual development of content using the vast pool of knowledge and experience available in the VG. When there is extensive experience for an industry, current practices, experiences, and data results will form more quantitatively supported guidelines. In all cases, collaborative work among turnover/output and price specialists (with commentary from selected classification experts and national accountants) will result in improved services data to be used in the production of real GDP.

As countries prepare mini-presentations on turnover/output and/or PPI for an assigned industry/industry group, they will need to review their particular practices with respect to PPI and turnover/output data. To guide and provide structure to this review, it is proposed that presenters refer to the various categories on the attached quality assessment tool for PPI (and for turnover/output data when a similar tool becomes available). After the mini-presentations have been delivered, group discussions of PPI and turnover/output data will occur at the same time for the same industry/industry group and will cover why particular pricing or turnover/output methods were selected. Also, as a pilot, it may be useful to conduct a review of the results of the quality assessment tool in conjunction with these discussions of one of the mini-presentations. This pilot should provide much useful information with respect to how easy or difficult or useful it is to complete the quality assessment tool. It also may shed light on how to assess the various tradeoffs associated with choosing certain methodologies. Ultimately VG discussions should focus on what the optimal methods should be – given the conditions under which countries must measure prices and turnover/output. Based on what the country is actually doing, it should be possible to identify the gaps between the optimal and the actual. These gaps, then, would constitute a tailored list of opportunities for improvement for that country with respect to their pricing and turnover/output methods.

As anticipated, more structure must be provided to these sessions in order to better identify the various practices. With the discussant role and the introduction of formal group discussion, the role of the session chair is expanded under this framework. The session chair for the mini-presentations will need to ensure that papers are prepared well in advance of the VG meeting in order to allow discussants adequate time to develop consolidated presentations on turnover/output, PPI, and how best to meet the needs of the national accounts. The session chair also will be responsible for facilitating formal group discussions covering the mini-presentations and discussant's remarks, including a comparison/contrast of the real world characteristics and market constraints of the various countries and their impact on the choice of PPI and turnover/output methods.

Further, the session chair will be responsible for facilitating the discussion for developing key guidelines for inclusion in the sector paper in the subsequent year.

In summary, this CDF requires much greater involvement in the work of the VG all year long and should encourage informed and productive discussion sessions combined with the presentations (as described by element III). The CDF process also will ensure that a set of key guidelines will result (from the element III discussions of the mini-presentations and discussant's remarks) from each mini-presentation session. This set of key guidelines should be included in the sector papers prepared in the following year and will be influenced by the market constraints within which the various countries operates. The key guidelines from the mini-presentation sessions will form the basis for the development of the sector papers, in the following year, covered by element IV. A country will be assigned to prepare a sector paper that would synthesize key guidelines developed from the mini-presentations on turnover/output and prices.

All of the mini-presentations, including discussant commentaries by PPI and turnover/output experts and national accountants should be included in the appendices of the sector paper. The body of the sector paper should consist of a detailed discussion of the predominant models identified in the mini-presentations and how that led to the key guidelines. The sector paper will be presented, discussed, edited, and adopted by the whole group at the VG meeting in that following year. These sector papers will constitute concrete final deliverables to the UNSC from the VG for each industry or industry group. They will reflect real world complications encountered by the various countries and how best to deal with those complications from a methodological standpoint. Ultimately, the various guideline sets for particular economic contexts contained in the sector papers should provide a valuable resource for use by countries as they consider adopting various recommended strategies for content development. As such, countries will be better informed to formulate wise resource investment decisions in the development of their service sector statistical programs (e.g., they would be advised to not spend money on certain methods that might not be worth it).

See Attachment A for an inventory of PPI work previously accomplished by the VG (PP= principal paper and MP = mini-presentation). These previously published and presented papers are not final deliverables, but will serve as important PPI-related inputs to sector papers to be eventually prepared for these areas.

See Attachment B for an outline of the suggested headings to be covered by the mini-presentations and sector papers for a particular industry/sector. Attachment B also covers suggested topics for inclusion in discussant remarks and group discussion activities.

See Attachment C for the suggested ISIC industries or industry groups on which the VG would call for: 1) mini-presentations for the VG 2006 meeting, 2) sector papers for the VG 2007 meeting, 3) mini-presentations for the VG 2007-2009 meetings, and 4) sector papers for the VG 2008-2009 meetings.

See Attachment D for possible agendas for the VG 2006 and 2007 (and later) meetings.

See Attachment E for the PPI Quality Assessment Framework Tool (which will be referred to in the preparation of all mini-presentations. As a pilot, a QAT will be completed and attached as part of one mini-presentation for VG 2006 – particular industry to be determined). A complementary QAT needs to be developed for turnover/output.

Attachment A.
Inventory of Voorburg Group PPI Activity

(Note: PP = Principal Paper, meaning that both a Principal Paper and a Mini Presentation have been done. MP = Mini Presentation only)

<u>ISIC Class</u>	<u>Description</u>	<u>Status</u>
4911	Passenger rail transport	
4912	Freight rail transport	PP 2005
4923	Freight transport by road	PP 2002
4930	Transport via pipeline	
5011	Sea and coastal passenger water transport	
5012	Sea and coastal freight water transport	MP 2003
5021	Inland passenger water transport	
5022	Inland freight water transport	
5110	Passenger air transport	PP 2004
5120	Freight air transport	PP 2004
5210	Warehousing and storage	MP 2004
5221	Service activities incidental to land transportation	
5222	Service activities incidental to water transportation	
5224	Cargo handling	MP 2004
5229	Other transportation support activities	
5310	Postal activities	
5320	Courier activities	PP 2005
5510	Short term accommodation activities	
5520	Recreational vehicle parks, trailer parks and camping grounds	
5590	Other accommodation	
5610	Restaurants and mobile food service activities	
5621	Event catering	
5629	Other food service activities	
5630	Beverage serving activities	
5811	Book publishing	
5812	Publishing of directories and mailing lists	
5813	Publishing of newspapers, journals and periodicals	
5819	Other publishing activities	
5820	Software publishing	PP 2003
5911	Motion picture, video and TV program production activities	
5912	Motion picture, video and TV program post-prod activities	
5913	Motion picture, video and TV program distribution activities	
5914	Motion picture projection activities	
5920	Sound recording and music publishing activities	
6010	Radio broadcasting	
6021	Television broadcasting	
6022	Cable, satellite and other subscription programming	
6110	Wired telecommunication activities	PP 2001

6120	Wireless telecommunications activities	PP 2001
6130	Satellite telecommunications activities	
6190	Other telecommunications activities	
6201	Computer programming activities	
6202	Information technology consultancy and computer facilities management activities	PP Partial
2004		
6209	Other information technology service activities	
6311	Data processing, hosting and related services	PP Partial
2004		
6312	Web portals	
6321	News agency activities	
6329	Other information service activities n.e.c.	
6411	Central banking	
6419	Other monetary intermediation	MP 2003
6420	Activities of holding companies	
6430	Trusts, funds and other financial vehicles	
6491	Financial leasing	
6492	Other credit granting	
6499	Other financial intermediation n.e.c.	
6511	Life insurance	
6512	Non-life insurance	PP 2004
6520	Reinsurance	
6530	Pension funding	
6611	Administration of financial markets	
6612	Security and commodity contracts dealing activities	
6619	Activities auxiliary to financial intermediation	
6621	Risk and damage evaluation	
6622	Activities of insurance agents and brokers	
6629	Other activities auxiliary to insurance and pension funding	
6630	Fund management activities	
6810	Real estate activities with own or leased property	PP 2001
6820	Real estate activities on a fee or contract basis	PP 2001
6910	Legal activities	PP 2001
6920	Accounting, bookkeeping and auditing activities	PP 2001
7010	Activities of head offices	
7020	Management consultancy	MP 2005
7110	Architecture and engineering activities	PP 2002
7120	Technical testing and analysis	
7210	Research and experimental development science and engrg	
7220	Research and experimental development soc sci and humanities	
7310	Advertising	PP 2002
7320	Market research and public opinion polling	
7410	Specialized design activities	
7420	Photographic activities	

7490	Other professional, scientific and technical activities	
7500	Veterinary activities	
7710	Rental and leasing of motor vehicles	MP 2004
7721	Rental and leasing of recreational and sports goods	
7722	Rental of video tapes and disks	
7729	Rental and leasing of other personal and household goods	
7730	Rental and leasing of other machinery, equipment and tangible goods	
7740	Leasing of nonfinancial intangible assets	
7810	Activities of employment placement agencies	PP 2005
7820	Temporary employment agency activities	PP 2005
7830	Human resources provision and mgmt of functions	
7911	Travel agency activities	
7912	Tour operator activities	
7920	Other reservation service activities	
8010	Private security activities	MP 2005
8020	Security systems service activities	MP 2005
8030	Investigation activities	MP 2005
8110	Combined facilities support activities	
8121	General cleaning of buildings	
8129	Other building and industrial cleaning activities	
8130	Landscape care and maintenance service activities	
8211	Combined office administrative service activities	
8219	Photocopying, document preparation and other spec activities	
8220	Activities of call centers	
8230	Convention and trade show organizers	
8291	Activities of collection agencies and credit bureaus	
8292	Packaging activities	
8299	Other business support service activities	

Attachment B. Suggested Topics for Mini-Presentations, Discussant Remarks, Group Discussions, and Sector Papers

The Voorburg Group Task Force recommends the following structure of major headings/sections for each type of presentation:

1. Mini-Presentation on PPI and Quality Adjustment Methodologies and Valuations

HEADINGS: (These headings represent the best effort of the VG Task Force as of December 2005. They are subject to further modification, clarification, and fine-tuning.)

- 1) Definition of the service being priced
- 2) Pricing unit of measure
- 3) Market conditions and constraints
 - a. Size of industry
 - b. Special conditions or restrictions
 - c. Record keeping practices
- 4) Standard classification structure and detail related to the area – does the standard include necessary product detail based on identified price determining characteristics?
- 5) Evaluation of standard vs. definition and market conditions
- 6) National accounts concepts and measurement issues for the area related to GDP measurement
- 7) Pricing method(s) and criteria for choosing various pricing methods – depending on record keeping practices and billing practices, there may need to be a hierarchy of methods from actual to best proxy (discuss order and list prices, current or lagged prices, transaction, shipment, etc.) -- Refer to the categories in the PPI Quality Assessment Tool for guidance. (Note: these headings will include agreed upon methods developed by VG pricing experts as part of a paper referred to by Roman Numeral I on the first page of this proposal. This paper must be complete by February/March 2006 so as to provide guidance to the other presenters. It will be presented on Monday afternoon of the VG 2006 meeting.)
- 8) Quality adjustment methodology(s) – depending on the pricing mechanism and item substitution practices
- 9) Evaluation of comparability with turnover/output measures (including an assessment of the quality of turnover/output data and problems encountered in using classifications systems, especially for product line determination) (The purpose of Headings 8 and 9 is to help ensure that turnover/output and quality adjusted price data are adequate for use and provided in enough detail that major differences are not lost within the aggregates.)
- 10) Summary

(Irwin Gerduk's PPI Quality Assessment Framework – referred to in this proposal as the Quality Assessment Tool (QAT) – includes useful details to apply to the categories above when presenting a content development paper for prices. Those critical factors must be accounted for in the presentation if reasonable and useful guidance is to be provided by the VG for programs attempting to develop or improve their price statistics. As a pilot, one of the VG 2006 industry mini-presentations will include a review of the results of the QAT. This should provide much useful information on how easy or difficult it is to complete the QAT. It also may shed light on how best to assess the various tradeoffs countries must make as they choose certain methodologies.)

2. Mini-Presentation on Nominal Turnover/Output Data, Including Prescribed Levels for Industry Products

HEADINGS: (These headings represent the best effort of the VG Task Force as of December 2005. They are subject to further modification, clarification, and fine-tuning.)

- 1) Definition of service being collected
- 2) Unit of measure to be collected – units, tons, dollar value, margin, etc.
- 3) Market conditions and constraints
- 4) Standard classification structure and product detail/levels – does the standard include an exhaustive, up to date listing of products produced by the industry or group being studied? Are the products reflective of significant output groupings?
- 5) Evaluation of standard vs. definition and market conditions
- 6) National accounts concepts and measurement issues for the area related to GDP measurement
- 7) Turnover/output data method(s) and criteria for choosing various output methods – Refer to the categories in the Turnover/Output Data Quality Assessment Tool (forthcoming) for guidance.
- 8) Evaluation of comparability of turnover/output data (especially product lines and related broad grouping levels) with price index practices (The purpose of Heading 8 is to help determine the optimal level of breakdown for turnover. While a less detailed level might be sufficient for the national accounts – Heading 5 above – for PPI we need to determine the level of turnover detail relevant for the firm. We need good breakdowns of turnover data in order to determine proper weights for price indexes. The level of detail at which price monitoring is possible might be one selection criterion.)
- 9) Summary

3. Discussant Remarks: Presentation of discussant remarks on the “year one” industry/industry group being studied, covering: 1) different approaches used for PPI and why; 2) different approaches used for turnover/output and why; and 3) how PPI and turnover/output data for this industry/industry group would best meet the needs of the national accounts

4. Group Discussion: Comparison/contrast of the real world characteristics and market constraints in the various countries and their impacts on the choice of PPI and Turnover/Output Data methodologies.

Possible topic: In order for turnover data to be appropriate for use in weighting price indices, the concepts and definitions must be consistent. A margin concept in prices and a gross output concept for turnover statistics is not the best match. The VG discussion of these issues and ultimate presentation of a sector paper with combined recommendations (either single or multiple based on a variety of conditions) will result in concrete deliverables and guidance for the development and improvement of service industry statistics.

5. Sector Paper

HEADINGS:

1. Summary (from the Mini-Presentations) of the Primary Findings from Headings 1 Through 7 (PPI and Turnover/Output Data) for the Industry/Industry Group
2. Summary of the Points of the Various Real World Complications Encountered by the Various Countries and Suggested Guidelines for Determining Which PPI and Turnover/Output Data Methodologies Work Best Under Particular Market Conditions and Constraints
3. Evaluation of the Turnover/Output Definition and Measurement Compared to the Defined Output Activity by Both PPI and Turnover/Output Technicians (Based on PPI Mini-Presentation Heading 9 and Turnover/Output Data Heading 8) – This Should Cover the Optimal Level of Breakdown for Turnover Based on the Level of Detail at Which Price Monitoring is Possible and/or Required
4. How the Suggested Key Methodology Guidelines and Results Meet the Needs of the National Accountants
5. Prescribed Changes for Standard Classifications or National Accounts as Required – Based on Problems in Trying to Conform to 4-Digit ISIC Boundaries and Identifying Uniform Product Lines Across Countries

Attachment 1: Mini-Presentations Prepared for the Industry/Industry Group for PPI and Turnover/Output data

Attachment 2: Discussant Remarks Summarizing the Issues on PPI, Turnover/Output data, National Accounts, and Classifications for the Industry/Industry Group

Attachment C. Proposed ISIC Industries/Industry Groups on Which Mini-Presentations and Sector papers Would Be Prepared for VG 2006-2008

1. Mini-Presentations for the VG 2006 Meeting (includes both mini-presentations on turnover/outputs and prices for each ISIC industry or industry group)
 - Freight Transport by Road (ISIC 4923)
 - Management Consultancy (ISIC 7020) **(NOTE: As a Pilot, it is Suggested that this Mini-Presentation Will Include, as an Attachment, a Completed Quality Assessment Tool)**
2. Mini-Presentations for the VG 2007-2008 Meetings
 - 2007**
 - General Cleaning of Buildings (ISIC 8121)
 - Storage and Warehousing (ISIC 5210)
 - 2008**
 - Passenger Rail Transport (ISIC 4911)
 - Coastal Water Transport (ISIC 5011 and 5012)

3. **Sector Papers for the VG 2007-2009 Meetings**

2007

- Freight Transport by Road (ISIC 4923)
- Management Consultancy (ISIC 7020)

2008

- General Cleaning of Buildings (ISIC 8121)
- Storage and Warehousing (ISIC 5210)

2009

- Passenger Rail Transport (ISICX 4911)
- Coastal Water Transport (ISIC 5011 and 5012)

Attachment D. Possible Schedule for the VG Meeting (2006)

Day 1 – Monday

Morning

- Meeting Agenda Overview
- Presentation and Discussion of the Recommendations of the VG Task Force
- VG Report to the UNSC
- Country Progress Reports and Cross Cutting Issues

Afternoon

- Presentation and Discussion on Common Terminologies (or Equivalent Terminologies in the Manner of a Thesaurus) for Pricing Methods
- Development of Agreed-upon Common Terminologies (or Equivalent Terminologies in the Manner of a Thesaurus) for Pricing Methods and Implications for Turnover/Outputs Methods

Day 2 – Tuesday

Morning

- Mini-presentations (three countries selected) on PPI for Freight Transport by Road (ISIC 4923)
- Mini-presentations (three countries selected) on turnover/outputs for Freight Transport by Road (ISIC 4923)
- Presentation of Discussant Remarks on Freight Transport by Road, Covering: 1) Different Approaches Used for PPI and Why; 2) Different Approaches Used for Turnover/Output and Why; and 3) How PPI and Turnover/Output Data for Freight Transport by Road Would Best Meet the Needs of the National Accounts

Afternoon

- Facilitated Group Discussion of the Mini-presentations and Discussant Remarks – Including a Comparison/Contrast of the Real World Characteristics and Market Constraints in the Various Countries and Their Impact on the Choice of PPI and Turnover/output Methodologies for Freight Transport by Road
- Facilitated Development of Key Points to be Included in the Sector Paper for Freight Transport by Road to be Presented at the VG 2007 Meeting

Day 3 – Wednesday

- Country Day

Day 4 – Thursday

Morning

- Mini-presentations (three countries selected) on PPI for Management Consultancy (ISIC 7020)
- Mini-presentations (three countries selected) on turnover/outputs for Management Consultancy (ISIC 7020)
- Presentation of Discussant Remarks on Management Consultancy, Covering:
1) Different Approaches Used for PPI and Why; 2) Different Approaches Used for Turnover/Output and Why; and 3) How PPI and Turnover/Output Data for Management Consultancy Would Best Meet the Needs of the National Accounts

Afternoon

- Facilitated Group Discussion of the Mini-presentations and Discussant Remarks – Including a Comparison/Contrast of the Real World Characteristics and Market Constraints in the Various Countries and Their Impact on the Choice of PPI and Turnover/output Methodologies for Management Consultancy
- Facilitated Development of Key Points to be Included in the Sector Paper for Management Consultancy to be Presented at the VG 2007 Meeting

Day 5 – Friday

Morning

- Strategy Session: Facilitated Discussion on the Success of the New Format, the Use of Common Terminologies for PPI and Turnover/Output, and Suggestions for Improvement
- Future Agenda:
 - Assignment of the Sector Papers for Freight Transport by Road and Management Consultancy for Presentation at the VG 2007 Meeting
 - Designation of VG 2007 Mini-presentations General Cleaning of Buildings (ISIC 8121) and Storage and Warehousing (ISIC 5210)
 - Discussion of Cross Cutting Issues to be Addressed in Upcoming Country Progress Reports and Future VG Meetings

VG Meeting for 2007 and Subsequent Years

Day 1 – Monday

Morning

- Meeting Agenda Overview and Review of the Format/Production Process of the VG Content Development Framework for Service Industries
- VG Report to the UNSC
- Country Progress Reports and Cross Cutting Issues
- Presentation of the Sector Paper for Industry Freight Transport by Road (ISIC 4923)
- Discussion, Editing, and Modification of the Sector Paper for Freight Transport by Road (ISIC 4923)

Afternoon

- Adoption of the Sector Paper for Freight Transport by Road (ISIC 4923) as a Final Product (Pending Modifications)
- Presentation of the Sector Paper for Management Consultancy (ISIC 7020)
- Discussion, Editing, and Modification of the Sector Paper for Management Consultancy (ISIC 7020)
- Adoption of the Sector Paper for Management Consultancy (ISIC 7020) as a Final Product (Pending Modifications)

Day 2 – Tuesday

Morning

- Mini-presentations (three countries selected) on PPI for General Cleaning of Buildings (ISIC 8121)
- Mini-presentations (three countries selected) on turnover/outputs for General Cleaning of Buildings (ISIC 8121)
- Presentation of Discussant Remarks on General Cleaning of Buildings, Covering: 1) Different Approaches Used for PPI and Why; 2) Different Approaches Used for Turnover/Output and Why; and 3) How PPI and Turnover/Output Data for General Cleaning of Buildings Would Best Meet the Needs of the National Accounts

Afternoon

- Facilitated Group Discussion of the Mini-presentations and Discussant Remarks – Including a Comparison/Contrast of the Real World Characteristics and Market Constraints in the Various Countries and Their Impact on the Choice of PPI and Turnover/output Methodologies for General Cleaning of Buildings
- Facilitated Development of Key Points to be Included in the Sector Paper for General Cleaning of Buildings at the VG 2008 Meeting

Day 3 – Wednesday

- Country Day

■

Day 4 – Thursday

Morning

- Mini-presentations (three countries selected) on PPI for Storage and Warehousing (ISIC 5210)
- Mini-presentations (three countries selected) on turnover/outputs for Storage and Warehousing (ISIC 5210)
- Presentation of Discussant Remarks on Storage and Warehousing, Covering: 1) Different Approaches Used for PPI and Why; 2) Different Approaches Used for Turnover/Output and Why; and 3) How PPI and Turnover/Output Data for Storage and Warehousing Would Best Meet the Needs of the National Accounts

Afternoon

- Facilitated Group Discussion of the Mini-presentations and Discussant Remarks – Including a Comparison/Contrast of the Real World Characteristics and Market Constraints in the Various Countries and Their Impact on the Choice of PPI and Turnover/output Methodologies for Storage and Warehousing
- Facilitated Development of Key Points to be Included in the Sector Paper for Storage and Warehousing to be at the VG 2008 Meeting

Day 5 – Friday

Morning

- Future Agenda:
 - Assignment of the Sector Papers for General Cleaning of Buildings (ISIC 8121) and Storage and Warehousing (ISIC 5210) for Presentation at the VG 2008 Meeting
 - Designation of VG 2008 Mini-presentations for Passenger Rail Transport (ISIC 4911) and Coastal Water Transport (ISIC 5011 and 5012)
 - Discussion of Cross Cutting Issues to be Addressed in Upcoming Country Progress Reports and Future VG Meetings

Attachment E.
PPI Quality Assessment Framework

Points	Category and Questions	Score
	1. Shipment Price (Weight = .10)	
	<i>Select a. or b.</i>	
0	a. Price represents order pricing, actual price at shipment may well be different.	
100	b. Price represents the completion of service or a proxy measure for the completed transaction.	
	2. Representative of current period production (Weight = .10)	
	<i>Select a. or b.</i>	
50	a. Emergence of new product lines or critical new product features has not occurred since the index reference period or since sample augmentation last done.	
0	b. Emergence of new product lines or critical new product features has occurred since the index reference period or since sample augmentation last done.	
	<i>Select c. or d.</i>	
50	c. Product substitution usually occurs when an item becomes obsolete or, if model pricing applies, the models are regularly updated to reflect changes.	
0	d. Product substitution usually does not occur when an item becomes obsolete or, if model pricing applies, the models are not regularly updated to reflect changes.	
	3. Transaction price (Weight = .25)	
	<i>Select the one most prevalent in the industry</i>	
100	a. The price is the real transaction price or a list price that can always be assumed to be equal to the transaction price.	
50	b. The price is a list price not equal to the transaction price.	
100	c. The price is a unit value for a homogeneous group of products.	
50	d. The price is a unit value for a non-homogeneous group of products.	
75	e. The price is a model price.	
50	f. The price is constructed from input cost plus profit and overhead mark-up.	
	4. Output price (Weight = .25)	
	<i>Select the one most prevalent in the industry</i>	
100	a. Recorded price reflects an actual transaction or average of	

	actual transactions.	
75	b. Recorded price reflects a model transaction incorporating the pricing of all features found in an actual transaction.	
50	c. Recorded price reflects a model transaction incorporating the pricing of only some of the features found in an actual transaction.	
50	d. Recorded price reflects some components of a transaction.	
50	e. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of all features found in an actual transaction.	
25	f. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of some of the features found in an actual transaction.	
0	g. Recorded price reflects charge out rates for fixed labor inputs not directly tied to a specific quantity of output.	
	5. Timely measure (Weight = .10)	
	<i>Select a. or b.</i>	
50	a. Pricing data reflect the service provision in the current period and are not lagged.	
0	b. Pricing data are lagged.	
	<i>Select c., d., or e.</i>	
50	c. Pricing data reflect an average over the entire period.	
40	d. Pricing data reflect an average of multiple measurements over a portion of the period.	
25	e. Pricing data reflect a single point in time.	
	6. Constant quality maintained (Weight = .20)	
	<i>Select a. or b.</i>	
100	a. Rapid changes to product specification are not expected or, if they are, a good method to explicitly quality adjust is in use.	
0	b. Rapid changes to product specification are expected and no explicit quality adjustment method is in use.	
	Total =	
	Type A point range = over 90	
	Type B point range = 70 to 90	
	Type C point range = less than 70	

Attachment E. - Continued

PPI Quality Assessment Procedures

Background

The quality assessment system allows the scoring of each NAICS or ISIC industry currently in publication by the national statistical office against a standardized framework. The assessment framework identifies six major concepts of fundamental importance to output price measurement.

1. Output price – This includes correct identification of the unique output generating activities of the industry and formulating an operational methodology that allows the pricing of the unique outputs.
2. Transaction price – This addresses how well the reported price reflects actual market transaction pricing.
3. Shipment price – This addresses whether the price reflects the completion and provision of the product to the customer.
4. Representative of current period production – This is an assessment of how closely the current item sample comes to reflecting current period production in the industry.
5. Constant quality – This is an assessment of how well the index movement reflects pure price change unaffected by product changes or terms of transaction changes.
6. Timely price measure – This includes an assessment of how well the reported price represents the entire reference period and how well the reported price adheres to the current period concept and avoids phenomena such as lags.

This assessment framework isolates each of the six concepts and allows the assignment of a quality score relevant to that specific concept. The advantage of this approach is that the specific limitation in the operational approach followed by the national statistical office is immediately evident from perusing the assessment form. Additionally, summing the individual scores permits a fairly objective assessment of the overall quality of the published data. The scoring ranges listed below define whether a given industry index is assessed as a Type A, B, or C deflator. Data users can then know the overall quality of the index and areas of deficiency.

Finally, this approach allows the identification of the specific strengths and weaknesses in a given pricing method. Let us assume that the pricing method for a wired telecommunications services index is a unit value price reflecting all transactions for a homogeneous product line such as residential long-distance telephony. Let us also assume that the reporters provide data for an entire period of such calls for all residential customers, but with a one-period lag. We can assess this pricing method against all six

concepts. Since the data are lagged one period, the scoring will reflect that limitation. Rather than listing every possible combination of pricing methods and speaking more broadly of quality, this approach readily identifies both the strengths and weaknesses of the pricing method captured in the survey statistic.

Procedures

1. The form should be filled out for a single ISIC or NAICS industry by a PPI practitioner familiar with the methodologies and collection results for the industry being assessed.

2. The scoring should strictly follow the assigned points for each item. For example, *3.b. The price is a list price not equal to the transaction price* scores 50 points. The person completing the framework would not judgmentally adjust the score because they felt that the price was close to the transaction price and deserved better than a 50.

3. The scoring should reflect the plurality pricing methodology used in the industry. It is understood that several different types of pricing methods may be encountered in a single industry.

4. Shipment price – The appropriate price for the PPI should be the price at the time there is a change in ownership from the producer to the buyer. The price at the time of shipment or provision of the service is, operationally, the closest one could come to this. Order prices are quoted at the time the customer places the order and while often the same as the shipment price, they may be different. This is especially true if a price escalator is used to adjust for cost increases over the life of the long-term contract. A price that serves as a proxy for the transaction price when the good is shipped, such as a model price, should be treated as a shipment price.

5. Representative of current period production – The sample of items actively being repriced in the current period should reflect current period production and not base period production. If new product lines have emerged in the industry after the index reference period, the item sample could no longer be viewed as representative. Additionally, new major product/service features may be important in the current period when they were not in the index reference period. Items a. and b. score this phenomenon. This contrasts with c. and d. because the real issue is sample representativeness being maintained over time. Item substitution, which generally occurs when a product is obsolete, is generally insufficient toward maintaining an up to date sample on a regular basis. Newer versions of a product with additional features generally enter the market place and co-exist with the earlier versions for quite some time before they fully replace the older version. This causes the item sample to be unrepresentative. Sample augmentation or resampling is the usual way of overcoming this problem. Items c. and d. deal more with products that have very minor or more evolutionary changes. Especially for model pricing, the specification should be periodically updated to reflect current practice.

6. Transaction price – In order for alternative a. Transaction price to be chosen, the good or service must be assumed to be transacted on a very regular basis. If the item is not

transacted at least once every pricing period, then it is a model price. Alternative e.

Model pricing refers to one of three pricing mechanisms:

a) A transaction price in some or many periods, but requires price estimation occasionally due to somewhat irregular shipments.

b) A transaction price was reported in the reference period, the item specification was frozen at that point, and price estimation occurs for all subsequent repricing.

c) A model transaction was constructed in the reference period by the national statistical office, and was priced from the inception by estimation.

If the so called price is actually a cost of an input or inputs, with no adjustment for profit and overhead, then it is not a price at all. Such a statistic has no place in a PPI. There is no scoring option for this as such a statistic is out of scope of the PPI and cannot be considered a PPI eligible for any meaningful quality assessment.

7. Output price – This primarily attempts to evaluate how close to an actual good or service the priced item comes. That is, does the priced item truly reflect an actual unique output of the industry. Alternatives a. through f. refer to an item where both the detailed specification of the unique good or service is clearly described in the repricing form and the price directly relates to the description of the item. Alternative g. is the situation where the recorded price bears no relation to the item description. It refers to charges for unique services, such as the rate charged per hour for senior accountant services by an accounting firm, but does not directly relate to a given output. This does not allow for any productivity improvements affecting the price index.

8. Timely measure – Alternatives a. and b. refer to whether the price strictly relates to the current period or includes some portion of the previous period. It is especially difficult when pricing unit values to construct a pricing method that only encompasses transactions occurring in the current period. Reporters often compile average price information over a particular period and then require additional time to compile and report out the data. This prevents the price office from obtaining the data in time for the current period tabulation. Alternatives c, d, and e refer to the representativeness of the data – do they truly represent the entire time period. A price representing a single point in time may miss some very dynamic changes that could occur later in the period. This is often the case with pricing energy items.

9. Constant quality maintained – This refers to the ability of the price office to come up with a valuation of any quality change where such changes occur with some frequency. It does not reward the use of fallbacks such as overlap pricing. In an industry where change is encountered with some frequency, either a producer cost or hedonic method must be used to arrive at the value of the quality adjustment. There are industries where product change occurs at a very slow pace. This would also qualify as alternative a.

