VG 2018 Meeting notes

**Monday**

The thirty-third meeting of the Voorburg Group opened with welcoming remarks from the Co-Chairs, Jakob Kalko and Mary Beth Garneau. Welcome and introductory remarks from Mr. Stefano Menghinello, Director of the Directorate for Economic Statistics, followed. As part of the remarks, the group was informed that Professor Maurizio Franzini, Acting ISTAT president would introduce the group to the ISTAT reorganization and changes taking place to improve economic statistics. Mr. Menghinello also noted that he participates on the UN Expert Group on Business Statistics. Services industries are becoming more important and harder to measure because of rapid change. He expressed hope that the Voorburg Group can work together with Evo Havinga and the Expert Group on collaborative efforts in the future.

**Opening Remarks & Meeting Agenda Overview – Voorburg Group co-chairs: Jakob Kalko, Statistics Norway / Mary Beth Garneau, Statistics Canada |**[**slides**](https://www.istat.it/it/files/2018/03/24SEP.Opening-remarks.Kalko_.Garneau.slides.pdf)

The morning session continued with an introduction of the Voorburg Bureau members, a review of the ground rules for the meeting, and individual introductions around the room.

Next was a review of the agenda for the week and a solicitation for note takers during the poster session. (The order on the agenda reviewed changed during the week to ensure adequate time for each topic. These summary minutes reflect the actual order of presentation and vary from the published agenda.)

**Country Progress Reports – John Murphy (US Census) |**[**slides**](https://www.istat.it/it/files/2018/03/24sept.murphy.country-progress-report.pdf)

The final portion of the first morning session was the presentation of the country progress report and summary of the responses related to turnover and prices for the target industries this year and information about uses of alternative data in NSOs. The slides are available on the website. All survey respondents provided some information about alternative data sources and uses. The experiences were more extensive than last year and the Voorburg Group participants are gaining additional experience and expertise with alternative data sources.

**The Status of Price Statistics Compilation in 196 Economies – Margarida Martins (IMF) |**[**slides**](https://www.istat.it/it/files/2018/03/24SEP_Margarida_Martins_price_statistics.pdf)

The IMF representative presented a summary of the status of price statistics compilation in 196 economies. After the paper, the discussion focused on two separate issues. The first was the prevalence of sharing economy representation in CPI and the second concerned commercial and residential property price indexes. The IMF will send the sharing economy information to Sweden. Eurostat is working on the requirements for commercial property price indexes and the delivery date is not yet certain. IMF is working closely with many countries on the development of residential property price indexes.

**International Comparisons of SPPIs – Mary O’Mahony (UK) |**[**paper**](https://www.istat.it/it/files/2018/03/24SEP.Mary_.OMahony.SPPI-audit.pdf)**|** [**slide**](https://www.istat.it/it/files/2018/03/24SEPMaryOMahonyAuditofSPPIs.pdf)

The group discussion included a number of questions and suggestions for future research. First it was noted that time based methods imply no productivity change. This was further discussed in terms of model pricing compared to time based methods. A delegate noted that there is greater variation in time based methods and wondered if that was considered. The Economic Statistics Center of Excellence agreed that would be an interesting point to research. Another delegate asked if the studies had access to microdata. The response was that there is very little access to prices microdata or information on how the data is actually constructed. Another delegate expressed the difficulty in determining what methods are actually being used in SPPIs and wondered if that information should be added to the annual detailed status reports undertaken by the Voorburg Group. Another delegate noted that attempting to track methods by industry could be a problem. Often the method is chosen and applied by product, not by industry. While the Vooburg Group previously obtained this information from an OECD survey many years ago, completion of the survey was very time consuming. Another delegate opined that it would in fact be very time consuming. Finally, a delegate noted that when buying data, you must be able to determine what you need. If indexes are different, the pricing method can be very important. If all indexes are somewhat similar, there is not a big problem. There was no consensus reached regarding additional information requests on the detailed status reports for methods or products.

**Investment Banking Sector Paper (64.9), Marcus Friden (Sweden) |**[**paper**](https://www.istat.it/it/files/2018/03/24SEP.Marcus.Friden.InvestmentBanking.pdf) **|** [**slides**](https://www.istat.it/it/files/2018/03/24SEP.Marcus.Friden.InvestmentBanking-1.pdf) **Lucy Opsitnik (Canada), Andrew Baer and Bonnie Murphy (US), Gopal Singh Negi and Anupam Mitra (India)**

The discussion began when one delegate noted that only two countries have prices information for investment banking. There is no short-term statistics requirement in the EU for investment banking but no one knew specifically why it was not included in the regulations. Another delegate noted that their coverage differs from that of the EU but they make their coverage decisions based on relative importance within the GDP framework. Interest in new areas changes for the Voorburg Group as new regulations require additional scope and coverage.

Statistics Canada has a certified financial accountant in charge of this area to make sure that terminology is good and that the approach is appropriate for both prices and output. This area requires much more specific knowledge than most and is much more technical. The CPC and ISIC do not seem to present any classification issues but NAICS could probably use an adjustment. The United States agreed that some NAICS changes might be useful. The prices program creates separate units based on the products because of substantial overlap in product provision across different industries.

The US noted that product information was more useful for prices because the products do not always align well with the industry structure. Output noted that it was hard to get direct reporting and that available administrative data did not follow NAICS. Another delegate also noted that the business registers could be a problem. Administrative data sources and differences in locations created the need for a large amount of manual editing to resolve data confrontations. Another delegate also noted that external data was necessary and buy in from stakeholders was necessary for high quality data. There is a formalized agreement in their country to get data from the regulators.

Overall, it appeared that prices were well defined compared to output across countries. Many countries use VAT data and it does not have the necessary detail for output statistics. Specialized surveys would be required for more detail. Because most administrative data is at a consolidated level, NSOs must either allocate aggregate data to the individual locations or revise reporting units to more closely align with administrative data units.

The availability of administrative data for prices raised a discussion of the most appropriate calculation formula to use in practice for this industry. Fischer is possible at lower levels when e current weight data is readily available. Most programs are using Laspeyres methods but it might be possible to reconsider that based on the availability of data.

The VG adopted the sector paper with several minor modifications and additions. The final version of the paper should note that we need additional focus on outputs and include the notion of reviewing the most appropriate methods for prices based on the availability of data.

**Revisited Sector Paper on Telecommunications*,*  Christian Puchter (Austria) |** [**slides**](https://www.istat.it/it/files/2018/03/24SEP.Christian.Puchter.Telecommunication-.pdf) **Dorothee Blang (Germany), Bonnie Murphy (US), Ildiko Holocsy (Hungary), Jakob Kalko (Norway)**

The discussion of the telecom sector paper started with a question concerning the units for wireless telecom and whether the units were based on offered or actually used. Two countries responded that it was based on actual units used. A delegate also raised questions about bundles. That NSO attempts to get bundles and has questionnaires that differentiate between establishment size classes. They use model pricing for small and medium survey units. Large establishments use unit value, and for public administration, companies use a fair value approach that does not change over time. Other delegates noted that they break up bundles. Some are tracking price bundles and others are separating out the individual services. An NSO noted that they are attempting to look at data only. All of the normal services (e.g., data, texts, SMS, calls) are converted to data values and those transfers are tracked. Tower data can be used in this approach and it begins to address the problem of product merger. While a unit value approach had been used, engineers in that country assert that the only real product is data. The NSO has been doing work with regulator data to model the data transfers. In response to a question, the NSO noted that data is quality agnostic. Data is data. A different NSO continued by informing the group that when they used GB as the divisor in the unit value calculations, the unit values continued to decline. They have switched to using the number of active phones on the network to account for this. This approach is similar to the ARPU (average revenue per user) approach that was presented by the US.

The VG adopted the telecom sector paper with the caveat that the comments and suggestions raised during the session would be incorporated into a final version. The paper will not be brought back for presentation again in 2019.

**Motion picture, video and television production, sound recording and music publishing (59.1 and 59.2) | Rohan Draper (Sweden) |** [**slides**](https://www.istat.it/it/files/2018/03/24SEP.Rohan_.Draper.IssuesPaper.Film_.Music_.pdf)

There was a brief discussion of the sector paper presentation. One delegate noted that their NSO was working on developing an SPPI but only for B2B so streaming was not included. The session chair noted that advertising revenue is a B2B source of revenue but it also subsidizes the consumer services. The discussion continued with a discussion of model prices or transactions for repeated services. There is some concern about transactions for repeated services when there are changes to program content/quality. One way to address or minimize this problem is to follow transactions for only the same show. That reduces the quality change problem.

Streaming continues to be a problem for statistical offices. Should streaming sites be distribution similar to broadcasting? The VG again focused on the ISIC/CPC issues of the differences between audio and video streaming on the Internet and terminology problems with “streaming” vs. “streaming service” creating confusion. The session chair summarized the discussion by noting that it is best to focus on what the transactions are, what the unit is doing, and understand the impact of changing the treatment on things like consumption of music.

The VG adopted the paper as an issues paper because there are still issues that need to be resolved.

**Session: Data processing, hosting and related activities (63.11)  
Session leader: Christian Stock (Austria) |**[**slides**](https://www.istat.it/it/files/2018/03/24SEP.Christian.Stock_.Data_.processing-1.pdf) **Output: Ramon Bravo (Mexico) |**[**paper**](https://www.istat.it/it/files/2018/03/24SEP.ramon_.bravo_.data-processing.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/24SEP.ramon_.bravo_.data-processing-1.pdf) **Olof Landberg (Sweden)** [**slides**](https://www.istat.it/it/files/2018/03/24SEP.Olof_Landberg.6311.pdf) **Andrew Baer (US) |**[**paper**](https://www.istat.it/it/files/2018/03/24SEP.Andrew.Baer_.Data-Processing.pdf)**|** [**slide**](https://www.istat.it/it/files/2018/03/24SEPAndrewBAerDataProcessing.pdf) **Susanna Tåg (Finland) |**[**paper**](https://www.istat.it/it/files/2018/03/24sep.susanna.taag_.6311.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/24SEP.susanna.taag_.6311-1.pdf) **Beata Cebula (Poland) |**[**paper**](https://www.istat.it/it/files/2018/03/24SEP.BEATACEBULA.6311.pdf) **|** [**slides**](https://www.istat.it/it/files/2018/03/24SEP.BEATACEBULA.6311.S.pdf) **Itsik Tal (Israel) |**[**paper**](https://www.istat.it/it/files/2018/03/24sep.itsik_.tal_.6311-paper.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/24sep.itsik_.tal_.6311-slides.pdf) **Discussant: Dorothee Blang (Germany) |**[**slides**](https://www.istat.it/it/files/2018/03/24SEP_Dorothee.Blang_DataProcessing.pdf)

The discussion began with a question about scope and the treatment of production within countries. When a data center is located in Country A but is owned by a company in Country B, should the revenue generated or allocated to the unit in Country A be treated as an import of a service? Dorothee presented Discussant slides. A delegate noted that this must be reviewed carefully with an eye toward where the revenue is being booked and reflected. Another delegate noted that they had no data centers until 2015. Since then, they have been growing rapidly. Latency is a driving force for this change. Latency also seems to be a driving factor for pricing. Perhaps the changes in latency that are location driven can be used to better allocate revenue to countries or locations regardless of where the revenue is recognized.

The discussion continued with a focus on classifications, products, and the “intent” of services such as Infrastructure as a Service (IaaS). Although software can be provided as part of IaaS, the real focus of the activity is the provision of infrastructure. Separation of bundles creates problems with identifying the entire expenditure on data processing and hosting services. The Group also noted that there are certainly other price determining characteristics in addition to latency. One NSO observed that processing performed overnight is cheaper than processing during the workday. Over the weekend processing is available even more cheaply.

The VG decided that the next step for this topic is the development of an issues paper. There are issues with classification, terminology, inconsistent treatment across NSOs, and outstanding questions about domestic or international characterization of transactions for Multinational Enterprises that should be detailed for future work.

Session: Input to future agenda  
**Session leader: Jakob Kalko**  
John Murphy (US) | [slides](https://www.istat.it/it/files/2018/03/24sept.murphy.future-agenda.pdf)

**Tuesday**

The agenda was modified at the beginning of the Tuesday sessions by moving the revisited sector paper for architectural and engineering services to Friday morning.

**Session: Cross-cutting topics I – Digital Economy  
Session leader : Erika Barrera (Chile)  
Ecommerce Issues Paper | Mary Beth Garneau (Canada) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEP.MaryBeth.Garneau.Ecommerce-issues-paper.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/25SEP.MaryBeth.Garneau.Ecommerce.slides-1.pdf) **Measurement challenges of a digital economy | Erika Barrera (Chile) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEP.Erika_.Barrera.ChallengesDigitalEconomy-1.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/25SEP.Erika_.Barrera.ChallengesDigitalEconomy.slides.pdf) **John Murphy (US), Ramon Bravo (Mexico), Cristina Cecconi (Italy)**

The discussion format for this session was small group oriented with a summary provided by each group.

**Group 1**

Delegates noted the shift from store to online by product category is in demand by data users. Confusing or inconsistent treatment is not helping users acquire the bigger picture. The group also noted that intermediation of non-digital services could also be addressed. Delegates noted that sources of data for intermediaries may be available in the alternative data universe and could provide efficient measurement of the activities. The presence of outlet substitution for price indexes was also raised. Outlet substitution is clearly happening but are weight adjustments being performed in a timely manner? Omni-channel distribution is also creating problems. Data can be collected but the results are hard to interpret. One country noted that for prices, they separate by delivery mode and get weights up front.

The delegates also expressed concern about classification of new intermediaries. The classification of activities is complicated because they could be treated as new activities or as new ways of performing old activities. This results in classification inconsistency across countries.

Further comments addressed new hedonic model development methods (multiple models and then choose the most reasonable) by the United States.

Lastly, group 1 commented on a variety of alternative data issues ranging from availability of a new airline database to evaluation of alternative data quality and fitness for use. The United States BEA noted that they are doing an UBER project that is looking at data quality compared to how long it takes for tax records to be submitted and actually make it into the national accounts.

**Group 2**

The IMF expressed the importance of a thorough review of deflators, frames, and access to data sources. Other delegates noted that there are substantial differences in terminology and use that can create confusion (e.g., definition of sharing economy or even digital economy).

Delegates offered suggestions to improve data including regulation requiring measurement of cloud computing in the EU, a program to standardize e-commerce and classification, better alignment of supply/use tables with SPPIs, and a more consistent treatment of company location changes and country of residence.

Group 2 noted that the digital economy is hard to grasp because of the classification problems noted by group 1. While the transactions are very similar, splitting transactions out consistently using some form of digital indicator is lacking. This does not necessarily require a new classification but rather more consistent application.

**Group 3**

Group 3 highlighted many similar concerns including classification issues, identifying transactions, residency of supplier, and where revenue is recognized. Other concerns were the classification of intermediaries and possibly regulation based on country. There were some specific issues raised for intermediaries such as home sharing services and the issue of imputed rents vs. transactions in the national accounts. There are similar questions about ride sharing value, vacation stays, and other activities that are of growing significance in the economy. Finally group 3 stressed that a big problem is we, as statisticians, use different terminology than the companies and that creates confusion.

**Group 4**

Group 4 reported that there is a Nordic working group on the sharing economy who can share their outputs with the Voorburg Group. Delegates expressed a growing problem with household production and how to measure that sharing economy output and consistently include it in the national accounts.

The delegates in group 4 also highlighted issues with ICT capital and the measurement impacts of a decision to rent rather than own (including cloud computing). Price index compilers also are having a problem trying to figure out SaaS vs. IaaS. Other new problems include digital advertising and the classification of social networks. Canada is working on a series of e-commerce modules for retail trade and are in the evaluation phase of development. The goal is to be able to show how the industries are changing. Similar changes are occurring in publishing, sound, and video.

Group 4 also noted that the entire concept of non-store retail might be out of date for some countries. Should classifications focus on physical delivery – store vs. direct to consumer? Omni-channel distribution is blurring lines for data users.

**Session: Cross-cutting topics II – Export of services  
Session leader: Jakob Kalko (Norway)** [**slides**](https://www.istat.it/it/files/2018/03/25SEP.Jakob-Kalko.Export_services.pdf) **Output: Maja Dozet (Croatia) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEP.Maja_.Dozet_.ExportServices.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/25SEP.Maja_.Dozet_.ExportServices.Slides.pdf) **Eveli Sokman (Estonia) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEP.Eveli_.Sokman-Export_of_services.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/25SEP.Eveli_.Sokman-Export_of_servicesPPT.pdf) **Agnieszka Matulska-Bachura (Poland) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEP.AGNIESZKA.MATULSKA.EXPORT.pdf) **|** [**slides**](https://www.istat.it/it/files/2018/03/25SEP.AGNIESZKA.MATULSKA.EXPORT-1.pdf) **SPPI: Yann Leurs/Frederic Ouradou (France) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEPLeursOuradouExportPrices.pdf)**|** [**slide**](https://www.istat.it/it/files/2018/03/25SEP.Leurs_.Ouradou.ExportPrices.pdf) **John Jeremy (UK) |** [**paper**](https://www.istat.it/it/files/2018/03/25SEP_John_Jeremy_Export.pdf)**|** [**slides**](https://www.istat.it/it/files/2018/03/25SEP.John_.Jeremy.ExportServices.pdf) **Discussant: Margarida Martins (IMF)**

Following the presentations, delegates raised a number of questions for the Voorburg Group to consider when looking at services from an international trade perspective. Overall, there is a need for consistency among the Balance of Payments Manual, National Accounts, and foreign trade statistics. This requires that definitions, revision policies, etc. are coordinated and treated as a system rather than discrete programs. The system also must be applied consistently across countries because comparability is an important factor in evaluating the impact of trade in services.

If the Voorburg Group focused on platforms, the sharing economy, cloud computing, and similar activities, could we develop comparable methods for quality adjustment for prices? Can we leverage other sources of data? For example, there is output data available but can countries ask respondents about where the consumption occurs – domestic or overseas. This is not a replacement for Balance of Payments data but it could provide useful input for data confrontations.

The discussion continued with a focus on how trade in services sampling frames are developed. There were a variety of approaches offered. Some countries worked directly with major providers and trade associations to obtain data about exporters. Other countries asked directly as part of the output surveys. In the EU, often questions were asked as part of the SBS. Some focused on within/outside of the EU. Others had more detail or origin and destination. In general, delegates felt that enterprises could report trade in services data fairly easily. One delegate described a separate trade in services survey and attempts to reconcile the results of that survey with more comprehensive output data to identify possible improvements.

Prices have some special problems beyond the common problems of frame development. Price statisticians are often confronted with transfer prices when looking at multinational enterprises. Some programs exclude transfer prices, some delegates will have to further research the issue of transfer prices. SPPIs do include exported services but many countries cannot develop separate indices for that component. From a weighting perspective, how feasible is it to collect or separately identify transactions for services sold to non-residents? It is hard for air transportation. Accommodation services are queried during initial collection. Still, there can be problems because bookings information does not always include country of residence information but when it is provided, it is used.

**Session: Cross-cutting topics III –poster session  
Practical aspects of profiling and collecting data on large complex enterprises  
Session leader: Cristina Cecconi  
Barbro von Hofsten (Sweden) |**[**paper**](https://www.istat.it/it/files/2018/03/25Sep.Barbro-von-Hofsten.PaperProfiling.pdf)**|**[**poster**](https://www.istat.it/it/files/2018/03/25Sep.Barbro-von-Hofsten.PosterProfiling.pdf) **Gopal Singh Negi (India) |**[**poster**](https://www.istat.it/it/files/2018/03/25SEP.GOPAL_.NEGI_.PosterCOMPLEXENTERPRISE.pdf)**|** [**paper**](https://www.istat.it/it/files/2018/03/25SEPGOPALNEGICOMPLEXENTERPRISE.pdf) **Jennifer Winters (Canada) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEP.Jennifer.Winters.ProfilingComplexEnterprisesPaper.pdf) **|** [**poster**](https://www.istat.it/it/files/2018/03/25SEP.Jennifer.Winters.ProfilingPoster.pdf) **S. Ambroselli (Italy) |**[**paper**](https://www.istat.it/it/files/2018/03/25SEP.Simone.Ambroselli.posterLCU.pdf)**|** [**poster**](https://www.istat.it/it/files/2018/03/25Sep.Simone.Ambroselli.posterLCU.pdf)

**Wednesday**

**Poster Session Reports –**

**India** reported that there are two main sources of data collection, 1) an annual survey of industries under the companies act that focuses on employment; and 2) a separate collection under the Ministry of Corporate Affairs (MCA) that focuses on turnover. Delegates asked about the comparability of the collections. Because the surveys are different with different scope delineations, they cannot easily be combined into a unified system of data. There are also some time lags between initial collection and availability of the data for use. India is using technology to reduce the time lags. In addition, a new goods and service tax was instituted that has increased response almost 40%. This is primarily because reporting is necessary to qualify for credits, rebates, and similar tax issues.

Delegates asked how India address R&D and other nontraditional variables that can be collected from employment or turnover surveys. India acknowledged the need for this information and asked for input from the Voorburg Group on what has worked and what is being attempted to learn more about the various strategies being employed to collect nontraditional variables.

**Canada** reported that based on delegate input, Finland and Italy have put similar profiling and large enterprise coordination systems into place. Most questions from delegates focused on how the program works and the practicality of the approach. Statistics Canada uses full time positions to operate the program. This includes approximately 10 portfolio managers and 4 or 5 researchers. Canada reported that their response rates from the targeted enterprises are very high, approaching 95%, demonstrating the high performance of the program.

Delegates also asked about the characteristics of employees who are managing the company contacts. Statistics Canada looks for employees who have a broad knowledge of the various programs being covered, appropriate subject matter knowledge when appropriate, have a professional demeanor, and are generally mid-level in the hierarchy. The profilers do visit the companies directly when the need arises and work closely with the subject matter analysts in the programs when questions arise.

**Sweden** reported that the delegates were very interested in the automatic profiling aspects of their poster. Delegates were also interested in the target of the profile – enterprises or legal units. Sweden noted that they profile both enterprises and legal units but are trying to get more on legal units. One country expressed concern with the ability of the process to address Kind of Activity Units (KAU) and Sweden validated that concern but noted that smaller enterprises are more easily addressed from a KAU perspective and can help with that problem. Sweden looks at balance sheets and income statements when profiling. New regulations will probably break many time series and the double presentation of enterprises and KAUs will require many changes to national accounts

**Italy** reported that their process worked well for mergers and divestitures but was also very helpful in evaluating enterprises. Head offices can sometimes answer for all of the various sectors in which they operate and that is helpful. Delegates expressed interest in the three prongs of the program. These are the ISTAT Business Portal, specialized newspapers, and the early warning system (EWS) launched by Eurostat in 2017. Italy works with the structural business statistics (SBS), the short term statistics (STS) and the national accounts. They also cooperate with the Central Bank when possible although there is no microdata sharing. The EWS does not provide direct information because the system is anonymized but is still very useful because it provides indicators of where to look when researching issues.

There are about 15 people working in the large case unit on a part time basis. There are about four full time equivalents across SBS, STS, business register and foreign trade. The group is beginning to perform more profiling work in additional to reporting evaluation because of the regulation changes addressing enterprises and KAUs.

**Session: Modern methods (part 1)  
Session leader:  Mary Beth Garneau  
Visualization Tool | Bonnie Murphy (US) |**[**slides**](https://www.istat.it/it/files/2018/03/26SEP.BonnieMurphy.Data-Visualizationdemo.pdf)

The Bureau of Labor Statistics presented a demonstration of the visualization tool that has been developed for PPIs. The tools currently shows visualizations of industries or items but not revisions by analyst. The tool includes a circle plot that identifies outliers based on percentage change. The threshold percentage change is dynamic and can be set by industry as appropriate.

A delegate noted that his might be a useful public tool but the PPI program does not have a separate R server. They do plan on making some code changes and then making it available on a website or possibly as an app.

Delegates also asked about the functional operation of the system. BLS reported that the system is not currently dynamic accounting for changes as they come in but rather the database is populated after estimation runs. Changes are incorporated in subsequent estimation runs. Delegates also noted there are different definitions of outliers. BLS uses standard deviations from the estimation system but further development by a good R programmer could probably build the ability to redefine outliers directly into the system.

**Host Presentations and Country Day**

The President of Istat, Dr. Franzini, welcomed the delegates and noted that many things have changed since the Voorburg Group visited Rome 20 years ago. The work of the group has played a significant role in the improvement of statistics. Italy is continuing that change with the focus on their modernization process. Dr. Franzini noted that both internal and external forces drive our strategic moves. New technology is available and there is a very large quantity of data available outside of NSOs.

NSOs have to compete with the market and must keep up. Internally, we need to be more efficient in how we use and produce data. Main elements are new culture regarding the collection and dissemination of statistics. NSOs are in a position to use much more data and result in more useful and higher quality data for individual and collective decision-making.

The modernization process is ongoing and to some extent, a trial and error process. The end goal is that all data users will be able to access data more easily and make the best use of the high quality data.

**Modernisation Program in Istat: Business Architecture and Governance   
Valerio Fiorespino | Head of the Department for data collection and development of methods and technologies for the production and dissemination of statistical information | Istat |** [**slides**](https://www.istat.it/it/files/2018/03/26SEP.Valerio.Fiorespino.pdf)

**The Integrated System of Statistical Registers: Methodological Approach and Impact on Official Statistics  
Roberto Monducci | Head of the Department for statistical production | Istat; Orietta Luzi | Directorate for methodology and statistical process design | Istat |** [**slides**](https://www.istat.it/it/files/2018/03/26SEP_Monducci_Luzi.pdf)

**Business Statistics in Italy: Recent Developments and Future Perspectives  
Stefano Menghinello | Director of the Directorate for economic statistics | Istat|** [**slides**](https://www.istat.it/it/files/2018/03/26SEP.STEFANO.MENGHINELLO_Final.pdf)

The Istat presentations on their modernization efforts addressed the comprehensive approach including business architecture, governance, methodology, and consolidation of practices from integrated business registers to consolidated collection and dissemination. This requires breaking of current silos and a new culture in the statistical office.

The process of modernization at Istat includes the institution of more corporate services, elimination of multiple business registers, centralization of call centers, processing system harmonization, and similar efforts with a goal of increasing the usability of administrative data, reduction of respondent burden, and ultimately improvement of quality in official statistics.

After the three presentations the question period focused on the issue of developing a finance industry ontology. Istat responded that the ontology is in line with the EU standards and regulations. Classifications and other single elements are compliant with the EU standards as well. The ontology approach is SOA (service oriented architecture) driven by metadata system standards at the national level.

It is not clear how this approach aligns with the ISO standards but it is standardized at the EU level. The process does not happen quickly. Work started in 2016 and has taken almost three years to incorporate into the base registers and will probably take another three years to complete the work.

**Thursday**

Session: Cross-cutting topic IV – Intermediaries in the provision of services  
**Session leader:  John Murphy (US)**  
Classification principles | John Murphy (US) | [paper](https://www.istat.it/it/files/2018/03/27Sept.John_.Murphy.classification.principles.pdf) | [slides](https://www.istat.it/it/files/2018/03/27sept.murphy.intermediaries-slides.pdf)  
Output issues, administrative data | Bi, Xinhua (China) | [slides](https://www.istat.it/it/files/2018/03/27SEP.Bi_.Xinhua.Intermediary.pdf)  
Output measurement of Travel Arrangers and Tour Operators | Jennifer Winters (Canada) | [paper](https://www.istat.it/it/files/2018/03/27SEP.Jennifer.Winters.IntermediaryServicesOutputinTravel.Paper_.pdf) | [slides](https://www.istat.it/it/files/2018/03/27SEP.Jennifer.Winters.IntermediaryServicesOutputinTravel.Presentation.pdf)  
SPPI perspective of broker activity in sea transport | Cristina Cecconi | Italy | [paper](https://www.istat.it/it/files/2018/03/27SEP.Cristina.Cecconi.SeaBrokers-1.pdf) | [slides](https://www.istat.it/it/files/2018/03/27SEP.Cristina.Cecconi.SeaBrokers-2.pdf)  
SPPI issues | Mark Lomax (Netherlands) | [slides](https://www.istat.it/it/files/2018/03/27SEP-Mark-Lomax-SPPI-Intermediaries.pdf)

The four presentations offered different approaches to dealing with intermediaries in service transactions. These approaches varied from classification based on the actual function, classification to a single internet intermediaries industry, and classification as IT services.

Delegates raised questions with the presenting countries. Canada was asked if they found the measurement problems with travel agencies through profiling. Canada said no, profiling did not identify the problem. Another delegate asked about the classification process. In many cases, we are classifying based on how things are done, not on what is being done. The session chair responded that what is being done must also be considered if we are to link the related transactions together in a system of national accounts. There are two very different uses or views of the data for units that are acting as intermediaries on the Internet. One approach (how) will provide some answers about the use of particular technologies that can be used to potentially quantify things like the digital economy. However, outsourcing of portions of service provision must be relatable to each other for the system of national accounts and the quantification of inputs and outputs.

To further the discussion, a delegate asked about an example from the Netherlands. The intermediary is a real estate platform. The approach of how the service is performed could result in classification to IT services because the example makes extensive use of digital technologies and computer software. The “what is being done approach” could result in classification associated with real estate services. The session chair related the example to the multiple listing service in the United States. They also make extensive use of digital technologies but are integral support services for real estate transactions and classified as real estate services in the US. The session chair opined that there are strengths and weaknesses to each approach but the current inconsistency across countries causes significant comparability problems.

Another example that was raised was freight forwarding. A delegate noted that they are intermediaries between buyers and sellers of transportation services but they also can bundle together multiple services. The session chair noted that the shipping firms are in essence outsourcing the freight arrangement portion of the transportation service. They can perform this function themselves or they can outsource it to a specialized freight arrangement entity. It is important to be able to link the arrangement back to the actual transport to properly reflect the actual value of the freight provision.

A question was raised about the need for quality adjustment when looking at intermediaries. The Netherlands responded that if the hotel room quality changed for a particular intermediary transaction, you would need to account for it if measuring transactions in currency or the resulting volume measures would be off.

Finally the discussion turned to addressing classifications. There are several options such as creating a section for intermediaries, creating separate industries where the activity is important, or just changing the wording of current ISIC industries to more clearly identify the location of various intermediaries. Any of these changes would require a revision to ISIC. The most appropriate course of action will depend on what it is that we want to measure – traditional service activities such as accommodation or retail trade or broader concepts such as the digital economy. The two uses may be practically incompatible when considering respondent burden. The classification decision will also play a major role in the measurement of output as net or gross. While the growth of intermediaries is significant in some countries, it may not be anywhere near as important in other countries. At this time, ISIC does not see a major need to revise the industry classification because intermediaries can be accommodated within the existing structure.

Cross cutting topic V – Quality adjustment in a digital economy  
**Session leader: Kat Pegler**  
US PPI Hedonic Models for Digital Services**|**Bonnie Murphy (US BLS) | [slides](https://www.istat.it/it/files/2018/03/27SEP.Bonnie.Murphy.-Hedonicqualityadjustment-1.pdf)  
Quality adjustment of digital services in Japan’s SPPIs | Moegi Inoue (Bank of Japan) | [slides](https://www.istat.it/it/files/2018/03/27SEP.MoegiInoue.Quality-Adjustment-of-Digital-Services_ver.2-1.pdf)  
Quality adjustment and use of large datasets for SPPIs | Ana Aizcorbe (US BEA) | [slides](https://www.istat.it/it/files/2018/03/27Sep.Ana_.Aizcorbe.qualitychangeandalternativedata-1.pdf)

There were questions asked after the hedonic models for digital services presentation. One delegate asked if there were a minimum number of data points or time series needed to develop the hedonic models. The US noted that the numbers used vary but often more data points result in more robust models. Another delegate asked if the modeled speeds were based on advertised speeds or actual achieved service levels. The US used advertised download speeds in the models.

The next set of questions related to what the sources of data were and how accurate Internet observations are vs. data collected directly from a respondent. The US noted staffing level problems with pulling data from the Internet but also noted that direct survey of the providers can present a significant burden as well. The results of the normal procedures are compared to hedonic model estimates to determine which one is the best to use in production. For example, when considering master switches, the normal procedures were better than the modeled estimates.

Another delegate noted that in their experience, hedonics do not work well for either cloud or telecom services. There are concerns about product redefinition over time and they are possibly moving toward measuring all current products as data (an example was given for the conversion of phone service to data). Models also have the potential to miss competitive and market impacts as well as changes in the type and volume of data available.

There were a couple of delegate questions or observations in response to Japan’s presentation. The first observation was that visits per sight might be an indicator to look for potential quality changes but may not be appropriate as a direct quality indicator. Japan noted that they are still reviewing different methods but actual indexes could be out next year. Another delegate asked if the cost per conversion was available. Japan does have average cost per conversion and can provide more information to anyone interested.

Session: Recent developments in Wholesale Trade  
**Session leader: Rohan Draper (Sweden)** [slides](https://www.istat.it/it/files/2018/03/27SEP.Rohan_.Draper.SLeader.WhsleTrade.pdf)  
Compilation of a WSPI in Japan | Moegi Inoue (Bank of Japan) | [slides](https://www.istat.it/it/files/2018/03/27SEP.MoegiInoue.Compilation.Method.of_.the_.WSPI_.in_.Japan_.pdf)

The session chair introduced the Bank of Japan presentation and also provided the group a summary of wholesale trade measurement. One conclusion was that improved accuracy is important but in practice, current deflators are deficient because we assume that margins are constant over time when in reality they are not.

The discussion started with a review by the Co-chairs of work done by the Voorburg Group over time. In 2008, the group produced mini-presentations for wholesale trade. Those resulted in an issues paper in 2009 including noting that wholesalers can sometimes have value added assembly, factoryless goods production, or similar activities. For 2010, the VG addressed retail trade with a resulting issues paper in 2011 for distributive trades. The group finalized the issues paper in 2012. There are still some legacy questions, particularly related to what constitutes a margin price. The Bureau needs to consider if we need to reopen these papers for update if there is enough experience in this area to report. No one responded when asked if countries are working on these questions so it might not yet be time to reopen these issues. The VG should track these issues and consider further action on distributive trades in the future.

A delegate noted that the product approach vs. outlet approach might be a point of divergence. In addition, treatment of negative margins might need some additional discussion and work.

A delegate asked for additional detail concerning the slide summarizing the utilization of external data for gasoline prices. Japan uses the RIM Intelligence Company “RIM Report” as well as a crude petroleum price index. Japan noted that they also use external data in agriculture.

A delegate noted the significant requirements of broadening product unit values. There are large numbers of transactions and obtaining quality adjustment data is not easy. Japan agreed that it is very hard to get quality adjustment cost data for wholesale trade. However, to reduce respondent burden they negotiate up front when visiting the companies to match what is available to what they need.

Other delegates expressed interest in the broadening of product unit values approach and noted that broadening would eventually begin to change to an outlet approach.

Session: Modern methods (part 2)  
**Session leader:** **Mary Beth Garneau**  
Establishing a deflator group | Kat Pegler (UK) and Lis-Lotta Sjöblom (Finland) | [slides](https://www.istat.it/it/files/2018/03/27SEP.Lotta_.Sjoblom.deflatorgroup.pdf)

Delegates noted that approaches such as the deflator group have significant advantages for constant learning but are also very time consuming. Working together with the ISP has also helped because we can use both SPPI and NA deflators resulting in greater coherence. SPPI programs also get a better understanding of how indices are used. Cooperation across programs results in feedback from the deflator group if there is an unusual development in prices. Explanations to users for unusual developments improve transparency. Cooperation also helps direct expansion planning based on gaps and other user needs. Working with national accounts facilitates access to supply/use weights and allows sharing of information about difficult issues such as globalization and classification.

Other delegates said that there were no formal agreements for regular meetings. Still, there is contact and communication about methods and shared understanding of quality standards, deadlines for deliveries and related topics.

Still other delegates noted that not all statistics are produced under a centralized authority. Independent schedules create friction when a program needs outputs but they are not available. In addition, business register input would be very helpful. Often classification differences between business registers and programs arise.

While the deflator group does not currently include business registers as formal members, the communication channel is well established. In addition, not all programs survey directly from the business register. Often, sampling sources are one degree of separation from the BR. For example, SPPIs often base their work on PRODCOM which does survey from the business register.

Delegates that do not currently have similar deflator groups expressed interest in the process. One potential area of alignment could be revision policies. Even if the revisions are not aligned, a better understating across areas would be useful. Some delegates reported on less formal approaches. One noted that national accounts could have early (prerelease) access to critical data when publication timelines do not align. Another trains new analysts on national accounts uses of PPIs and SPPIs but acknowledged that even quarterly meetings do not result in flawless communication.

The IMF reported that technical assistance missions always begin with stressing the importance of communication within and across agencies or areas. Working together allows questions about source data to be addressed.

Finally, delegates noted that GDP deflators can vary from PPIs and SPPIs because the GDP deflator is often needed before the indexes are available. Research on ways to align dependent data sets could result in significant improvements for the entire system of statistics.

Session: Future plan and progress following VG strategic plan  
**Session leader: Jakob Kalko**  
Report on feedback for future agenda  
Status of achievements in the strategic plan

The final session of the day addressed topics for the future agenda. Group input was solicited over several days based on the needs expressed by members in the future agenda survey circulated before the meeting. Delegates received eight votes that could be cast for one or more topics depending on the level of need and interest. The session provided the counts and solicited input from members on willingness to address the individual topics in papers, posters, or other work next year.

**Friday**

Report from Task forces  
**Session leader: Mary Beth Garneau**  
CDF  | Jakob Kalko (Norway), Dorothee Blang (Germany), Erika Barrera (Chile), Marcus Friden (Sweden), John Murphy (US) | [slides](https://www.istat.it/it/files/2018/03/25SEP.Jakob-Kalko.CDF_.pdf)  
VG website | Lucy Opsitnik (Canada), Andrew Baer (US), John Jeremy (UK)  
Update to glossary | Bonnie Murphy (US) | [paper](https://www.istat.it/it/files/2018/03/25SEP.Bonnie.Murphy.Glossary-Updates.pdf)

As the content development framework is used, delegates have suggested changes based on their experiences. Specific CDF section changes adopted include:

1. Descriptions of characteristics of the industry
2. Measurement output
3. Measurement of SPPI
4. Evaluation of measurement
5. International progress (sector paper only)

These changes include a single description of the comparability of output and price data that will be included in section 4. Section 4 will also include information about national accounts use of available SPPIs and some explanation if the national accounts are not using the SPPIs.

The website taskforce presented a live demonstration of the revised website and noted that WebEx meetings were successful. There is also a need for better communications with external users. One possible path is the UNECE statistics Wiki on Google. Access is currently limited to bureau members. If a wiki site is used, it requires personnel to manage the site and clear postings for public access. Other changes include additional and continuous work to elevate VG results in Google and other search tools. The website task force is also looking to separate out the latest VG guidance on various topics to ease site use. Any effort at improving communication requires someone take control of those efforts and provide oversight. Statistics Canada has the website but requires assistance from others for expanded communication efforts.

The final taskforce report provided a summary of changes to the Glossary based on the Delhi meeting and solicited suggestions for additions from Rome. Delegates suggested some of the finance terms from the sector paper and terms from presentations this year such as SaaS and other cloud computing terms.

Session: Sector and issues papers (part 3)  
Revisited Sector Paper on Architectural and Engineering Services | Kat Pegler (UK) | [slides](https://www.istat.it/it/files/2018/03/28SEPT.KatPegler.ArchEng.pdf)

The final topic session of the meeting was a presentation of the revisited sector paper on Architectural and Engineering services. The VG agreed to move the revisited sector paper into the new CDF and add an issues section to address technology developments (e.g., drones, BIM) to the final version.

Conclude VG 2019 meeting plan  
Designation of Assignments for VG 2019  
Meeting Arrangements for Next Year | Yann Leurs  and Frederic Ouradou | [slides](https://www.istat.it/it/files/2018/03/28SEP.Leurs_.NextYearsMeeting.pdf)  
Closing Remarks

The Bureau of the Voorburg Group reported out on progress toward the goals of the strategic plan and presented membership for the coming year.

**Jakob Kalko (co-chair)**, Statistics Norway

**Bonnie Murphy (co-chair)**, U.S. Bureau of Labor Statistics

**John Murphy (secretary)**, U.S. Census Bureau

Eirka Barrera, Central Bank of Chile

Ramon Bravo, INEGI, Mexico

Chistina Cecconi, Istat, Italy

Marcus Friden, Statistics Sweden

Mary Beth Garneau, Statistics Canada

2019 Host, 2019 Host country

In addition, the Bureau nominated Christian Puchter, Statistics Austria, to join the Bureau pending NSO approval. The Bureau also thanked departing members from India and the UK for their years of service.

**Agenda Topics Proposed for 2019**

**Revisited Sector Papers**

Data processing, hosting and related activities

Architects and Engineers

**Issue Papers**

Export of services

Intermediaries in the provision of services

**Industry Papers**

Short-term Accommodations (ISIC 5510)

Advertising Agencies (ISIC 7311)

Publishing (ISIC 5812 directories/mailing lists and 5813 newspapers, magazines etc.)

**Cross-cutting issues**

SPPIs by customer sector (B2B, B2C, B2G, B2X, B2All)

Digital advertising activities in service industries (outside of advertising)

Practical experience in using third party data sources (data other than administrative and tax data)

**Task Force on Guidance documents from past meetings**

Task force is needed to pull documentation on cross-cutting issues of interest to the group that already resides on the VG website (e.g. Bundling, Time based methods, CPI as a proxy, etc.) and create a FAQ type page of document links on the VG website.

The Bureau accepted volunteers for each task and topic. The Bureau next thanked the hosts and presented thank you gifts to the individuals from Istat that worked so hard to make the meeting a success. The Bureau also presented a thank you gift to Mary Beth Garneau who stepped down as co-chair.

INSEE closed out the meeting with a presentation of the venue for the 2019 meeting to be held in Paris.