



Organisation for Economic Co-operation and Development

SDD/CSSP/WPNA/M(2018)1

Unclassified

English - Or. English

12 September 2019

**STATISTICS AND DATA DIRECTORATE
COMMITTEE ON STATISTICS AND STATISTICAL POLICY**

Working Party on National Accounts

Summary Record: Meeting of the Working Party on National Accounts

**8 November 2018
OECD Conference Centre, Paris**

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JT03450899

SUMMARY RECORD OF THE MEETING OF THE WORKING PARTY ON NATIONAL ACCOUNTS

8 November 2018, 09:30 am – 6:00 pm

Session 1: Opening statement

1. Peter van de Ven, Head of the National Accounts Division (OECD), gave a short opening address. He introduced himself, welcomed the participants to the meeting of the Working Party on National Accounts (WPNA), and thanked Delegates for their willingness to share their experience and for their contributions to the various sessions. Subsequently, Peter handed over the meeting to the chair of the WPNA Bureau, Ann Lisbet Brathaug (Statistics Norway) to open the meeting. Ann Lisbet chaired session 2 and 7, Catherine van Rompaey (Statistics Canada) session 3, Sanjiv Mahajan sessions 4 and 5, and Francisco Guillén Martín (INEGI, Mexico) session 6.

Adoption of the agenda

2. Delegates adopted the draft agenda of the meeting of the WPNA [SDD/CSSP/WPNA/A(2018)1].

Adoption of the minutes of the 2017 WPNA meeting

3. The minutes of the 2017 meeting of the Working Party on National Accounts [SDD/CSSP/WPNA/M(2017)1] were approved without any further comments.

Session 2: Price and volume measurement

4. Ann Lisbet introduced the session on price and volume measurement by explaining its importance. Important indicators such as economic growth and productivity analyses directly depend on the volume and price split of current price developments in goods and services, and different practices across countries may affect international comparability of number on GDP volume growth and its underlying activities. For that reason, it is important to exchange country practices in deflating goods and services, impacted by the fast developments in digitalisation but also in other difficult areas such as health and education.

5. Andreas Dollt (Eurostat) made a presentation on the work of the task force on “price and volume measures for service activities” [[Final task force report](#)]. The aim of the task force was to develop recommendations and best practices for price and volume measures in difficult areas, including construction, global production arrangements, digitalisation, education and health. It released its final report in June 2018 and Andreas presented the main conclusions and recommendations from the report.

6. Pedro Oliveira (INE, Portugal) underlined the importance of this work and asked how many countries are still using costs based estimates for construction activities. Andreas noted that most countries are using costs based indices and that most countries are still struggling to obtain good output prices. In response, Sanjiv Mahajan (Office for National Statistics, U.K.) stressed that he felt more work is needed on output price measurement in construction. Furthermore, for goods for processing, it would be important to share more data across countries, as the related goods often don't cross the borders. He also stressed that more work is needed on e-platforms. Finally, he emphasised the importance of incorporating explicit quality adjustments in non-market service activities to make sure that results are compiled in line with the SNA. Andreas agreed with that, but he also explained that currently only very few countries make the latter type of adjustments. Further exchange of best practices in this area would definitely help. To a question by Erich Strassner (U.S. Bureau of Economic Analysis) on the work regarding platforms, Andreas replied that work on this issue just recently started and is definitely an area for further research. Marisa Wierny

(INDEC, Argentina) asked about the recommendation on quality adjustment for education when you don't have long periods of examination results. Furthermore, she was interested to know what data source is used for the individual models regarding education. Andreas referred to the study done by Sweden in the task force report which contains a lot of information on this issue. Peter van de Ven (OECD) stressed the importance of price and volume measurement, also in relation to criticism from users that 'mismeasurement in this area is creating a productivity slowdown'. He encouraged countries to share more practices and to have more presentations on this issue in future meetings. He also posed a question where participants feel that more work is needed. In response, Ann Lisbet Brathaug (Statistics Norway) explained that construction and telecommunication are probably the topics that still need most attention. Andreas added that he also felt that digitalisation is an important issue.

7. In his presentation, "Quality Adjustments of Hospital Services", Aksel Juel Clemmensen (Statistics Denmark) explained the quality adjustments made to the volume indicator of Danish hospital treatments [SDD/CSSP/WPNA(2018)1]. This was part of a pilot project with the aim to collect quantitative information on quality aspects of health care and to experiment with different models to explicitly quality-adjust the volume indicator for hospitals. They also wanted to explore whether this could be used as input in constant price calculations of non-market services for individual consumption. They focused on developing a general quality adjustment of patient treatments and explicit treatment-specific quality adjustments of the volume indicator for hospital services, on the basis of a large health care database. The explicit quality adjustments had a positive impact on volume indicators, which is a strong indication that the quality of patient treatments in general has increased. Furthermore, the results had a significant impact on the national accounts results.

8. There was much appreciation for the presentation and the work done by Statistics Denmark. Participants were generally impressed by the size of the database underlying the calculations. Catherine van Rompaey (Statistics Canada) and Pedro Oliveira (INE, Portugal) asked how difficult it was to build a healthcare database and to implement the methodology in practice. David Wasshausen (BEA, USA) asked about the number of observations in the database and whether they make any corrections for other elements (e.g. other health issues) that may influence the results of a treatment. Avdhesh Kumar Shukla (Reserve Bank of India) explained that a lot of the quality improvements in healthcare services may probably not be captured in India. In that regard he was also interested to learn more about how they implemented this approach in practice. Aksel responded that they have a complete dataset for all patient treatments in Denmark, and that the dataset includes a variable on health conditions which may help in correcting for other elements affecting the result of the treatment. He also explained that the most challenging issue in setting up the database had to do with establishing cooperation with hospitals, since they may be hesitant to provide this type of information, as they are concerned about possible dissemination of results for individual hospitals. Those worries were alleviated when the purpose of obtaining more insight in quality improvements at the national level was explained to them. They were also very pleased when they saw the results of the study. Claudia Dziobek (IMF) inquired about possible other sources of information for this type of work, e.g. from medical insurers and hospital administrators. As a follow-up question, Avdhesh Kumar Shukla (Reserve Bank of India) asked whether they differentiate between private and public hospitals. Aksel noted that there is not really a need for this additional data sources and these additional breakdowns in Denmark as the current data set covers almost all hospital treatments in Denmark and 98% of the hospital services are public and financed by the central government. Peter van de Ven (OECD) asked whether Denmark experienced negative labour productivity in the health industry as was the case for some other countries in the past (as a result of labour increase outpacing the volume increase of health services). Aksel confirmed that they experienced this, but that they have improved on the volume measurements of hospital services which has helped them to solve this issue.

9. The chair, Ann Lisbet Brathaug (Statistics Norway), wrapped up the session. She concluded that having access to granular data is very important when it comes to improving price and volume measurement. This requires close cooperation with both providers of source data as well as with other

statistical institutes, the latter especially with regard to exports and imports. Furthermore, more time should be dedicated to this issue in order to further improve price and volume measures. Peter van de Ven (OECD) confirmed this and wondered how to take this work forward, particularly with regard to digitalisation where price and volume measurement is an important issue. An idea would be to conduct a very small survey on the current practices, e.g. when it comes to telecommunications services. This may help in moving this topic forward.

Session 3: Accounting for well-being and sustainability in the context of national accounts

10. Catherine van Rompaey (Statistics Canada) introduced the session by explaining the increased importance on obtaining more information on well-being and sustainability in relation to macroeconomic statistics.

11. Richard Tonkin (Office for National Statistics, U.K.) made a presentation on experiences in developing distributional results of household income, consumption and savings in the UK. He explained that the ONS, in response to growing policy demands, compiled and published experimental distributional accounts in 2015, using methods as developed by the OECD-Eurostat Expert Group on Disparities within a National Accounts framework (EG DNA). He pointed out a number of issues in the compilation of these estimates and showed some experimental results. He also explained that since the 2015 publication, the ONS have sought to better understand the difference between the micro and macro estimates for different components and, where possible, to develop improved imputations of distributional information with the aim of further increasing the robustness of the results. They are also exploring nowcasting techniques to arrive at more timely distributional results, with the objective of publishing quarterly distributional results in the future.

12. Gary Dunnet (Statistics New Zealand) explained that they are also engaged in this work and asked how they analyse the saving results for the various household groups. Francisco had a similar question, explaining that this is of particular relevance in Mexico where the lower income quintiles currently record large negative saving rates. Whereas in Mexico, this could be partially explained by a large informal economy, this is probably not the case for the UK. Richard explained that part of their negative savings may be explained by underreporting for certain items in the surveys. The use of administrative data may partially solve this issue. Pedro Oliveira (INE, Portugal) explained that they are also participating in the EG DNA and asked whether they used alternative methods to allocate social transfers in kind, as the current guidance now leads to a relatively flat distribution. Richard explained that they have been exploring this extensively. The conclusion was that the current guidance to apply actual use for education and an insurance cost approach for health care is quite suitable. Gian Paolo Oneto (ISTAT, Italy) explained that they are also looking into the compilation of these results, trying to rely as much as possible on fiscal and other administrative data, which may be particularly useful for items such as property income, which typically suffer from significant underreporting in survey data. In that regard, Jorrit Zwijnenburg (OECD) stressed the importance of further exploring gaps between micro and macro data and that from that perspective it would be very interesting to see how the move to administrative data affects the micro-macro gaps. Francisco Guillen explained that they are also exploring big data (e.g. credit card data) to obtain additional information for items that may be underreported in surveys (e.g. alcohol and tobacco). He asked whether the ONS is also looking into this. Furthermore, Pedro Oliveira (INE, Portugal) asked to what extent the ONS already uses administrative data. Richard informed that the use of administrative and fiscal data is part of the multi-year work programme of the ONS. They are in the final stages of reaching agreement with the tax office to start using these data with the aim of linking these datasets to the micro survey data. John Verrinder (Eurostat) asked whether they already established a kind of feedback loop, where results from analysing underlying reasons for micro-macro gaps were used to improve the results of the underlying statistics. Richard stressed the importance of such as feedback loop in order to make improvements to the micro and macro data.

13. Gian Paolo Oneto (ISTAT, Italy) asked why the ONS is already looking into nowcasting, as the data are still very experimental and may still suffer from significant margins of error. In response, John Verrinder (Eurostat) explained that from the Eurostat side, they see a large demand from the European Commission for early poverty indicators. He also underlined the importance of this work and explained that Eurostat is promoting it across European countries. Erich Strassner (BEA) explained that as they are trying to move to a more regular compilation of distributional data, they would also be very interested to know more about the nowcasting techniques. An important issue would be how they assess the plausibility of the results. Richard explained that they have applied nowcasting for a couple of years now, using a combination of macroeconomic data (e.g. on changes of wages and inflation), information on policy changes, and applying reweighting. They were able to assess the results against the actual results that eventually replaced the nowcasts.

14. Amanda Seneviratne (ABS) explained that they are also involved in this work and that they have a range of users. However, a lot of policy users currently still focus on the micro distributions. In that regard, she was interested to know whether the data in the UK is already used for specific policy purposes. Catherine van Rompaey (Statistics Canada) informed the group that they also conducted a lot of work in this area, currently publishing long time series on income, consumption and wealth. What they struggled with is how to convey the message, avoiding telling the same story as the micro statistics. Richard explained that for them the timeliness of the information is very important. Currently a lot of people are mainly focusing on GDP as a proxy for change in economic well-being, whereas household disposable income may provide a much better measure. However, until these results become available in a timely manner, this is not going to replace the use of GDP by the main users. The data are currently mainly used by the Treasury and the Finance Ministry, but the use is expected to increase when data move from an experimental status to a part of regular data program.

15. Henry Vargas Campos (Central Bank of Costa Rica) presented the paper on “The impact of financial mechanisms to reduce CO2 emissions in Costa Rica: an application of the IEEM platform” [SDD/CSSP/WPNA(2018)4]. This paper assesses the potential impact of two different financial mechanisms to reduce CO2 emissions over the period 2012-2030 by applying a dynamic Computable General Equilibrium (CGE) Model that integrates the environmental accounts for Costa Rica developed under the SEEA framework. It analyses the impact of subsidizing the use of electric vehicles as well as the impact of taxing activities with the highest contribution to CO2 emissions and a consumption tax on fossil fuels. Henri presented the methodology for these analyses and showed some results. He also explained that in the near future, they want to start integrating water, forests and ecosystem accounts into the model.

16. Pedro Oliveira (INE, Portugal) complimented Costa Rica on the work done and underlined the importance of integrating information from environmental accounts in the system of national accounts. As it is complex work that may require the input of experts from various domains, he made a plea to international organisations to assist in further advancing this work. Sanjiv Mahajan (Office for National Statistics, U.K.) echoed this point, also explaining that he very much liked the sensitivity analyses included in their work. He explained that work has been done in the context of a UN handbook on ‘supply use and input-output tables with extensions and applications’ to bring SEEA and national accounts results together in specific tables. However, as this concerns bringing together physical and monetary flows, this sometimes requires solving specific issues (e.g. around activities such as merchanting). In that context, he asked whether Costa Rica also developed bridging tables between the two. Henry explained that they do not use bridge tables, but rely on equations to link the physical and monetary values. Francisco Guillén Martín (INEGI, Mexico) asked if they are planning to look at broader impacts than CO2 emissions, e.g. other emissions and depletion of natural resources. Henry explained that they built a Social Accounting Matrix, in which one can see the whole impact. In response to a question by Sebastián Rebora (Central Bank of Chile), Henry explained that they only have volume measures for forests, but no values. Peter van de Ven (OECD) emphasized that the work on environmental economic accounting is a priority area at the OECD.

In that regard, he announced the upcoming OECD/UNECE Seminar on the Implementation of SEEA on 20-21 February 2019 in Geneva.

17. Edwin Horlings (Statistics Netherlands) made a presentation on the measurement of well-being and sustainability in the Netherlands. He explained that there is a growing demand in the Netherlands for “beyond GDP” measures and for better capturing well-being. Statistics Netherlands has recently developed a Monitor ‘Broad Well-Being’, which is a statistical instrument designed to provide a balanced set of reliable and timely indicators on broader aspects of well-being. This concerns the quality of life “here and now”, as well as to what extent that quality of life has been achieved at the expense of future generations (“later”) or at the expense of people in other countries (“elsewhere”). Edwin stressed that one of the key aspects of the Monitor that attracted attention was how well-being is distributed across the population. He explained that consistency over time and international comparability have been key criteria in the selection of the indicators. Since statistical standards are of crucial importance, where possible, indicators are based on SNA, SEEA, or other international standards. Future work will include further integration of work on natural capital and ecosystem accounting (based on SEEA).

18. Catherine van Rompaey (Statistics Canada) very much liked the visualisations included in the monitor and asked whether they did any user testing for their interpretability. Edwin informed that they indeed had done extensive testing, by involving their communications department that consists of people from television, various media and of people with a large network of journalists. The outcome was that it is useful to have more complex visualisations, but that it is really necessary to properly explain to users how to read the information. Gary Dunnet (Statistics New Zealand) explained that they are developing a living standards framework, in response to growing government demand for information on well-being and sustainability. He would be very interested to know if other countries are doing something similar. Edwin responded that they would be happy to share their experiences and that starting next year, they will also have an English version of the monitor available. Gian Paolo Oneto (ISTAT, Italy) explained that although ISTAT is doing something similar, he is very sceptical about the approach, as there is no framework for measuring societal developments. Some of the indicators (e.g. peace and justice) are very difficult to measure and monitor, as they are very subjective. Edwin acknowledged that it is difficult to properly measure some of the more subjective indicators. To address this, they try to come up with measurable empirical information, e.g. on money spent on specific topics, the number of people benefiting from a specific policy, etc. Only in the final indicator in the framework, they focus on how people perceive specific issues.

19. Catherine van Rompaey (Statistics Canada) summarized the key points of the presentations. The main theme is the challenge to look into combining indicators of well-being and sustainability with the system of national accounts and other frameworks. It is also clear that we should try to develop multiple indicators instead of focusing on one overarching indicator for well-being. There is also a need to add more granularity to existing SNA measures, e.g. compiling distributional national accounts.

Session 4: Satellite accounts: National practices and way forward

20. Sanjiv Mahajan (Office for National Statistics, U.K.), chair of the session, briefly introduced the topic.

21. Catherine van Rompaey (Statistics Canada) presented the results from an in-depth review on satellite accounting. In 2018, the Conference of European Statisticians (CES) asked Statistics Canada to carry out an in-depth review of satellite accounting which includes examining the role of satellite accounts within the context of the 2008 SNA and documenting the current ‘state of play’ in satellite accounting across countries. In order to gather national practices on satellite accounts, a country survey was developed, for which the collection of national responses would be finalised by 15 November 2018. Whereas the report will be presented in February 2019, she already showed preliminary conclusions, explaining that satellite accounts can generally be clustered into three groups, i.e. purely thematic ones (focusing on specific issues

but not altering the underlying concepts), extensions which go beyond the current boundaries of the SNA, and combinations of the two. Furthermore, the analysis shows that the tourism satellite account is the most frequently compiled satellite account.

22. Stefan Hauf (Destatis) explained that in Germany a lot of satellite accounts are set up by private institutes, with assistance from Destatis. For that reason, they could not answer to all questions in the questionnaire. Francisco Guillén Martín (INEGI, Mexico) explained that they have a long history of compiling satellite accounts, but that recently a question emerged whether these should actually be developed and compiled by national accountants. Catherine responded that she was surprised to hear that in Germany a lot of satellite accounts were not done by the statistical office, because they require specific expertise which would imply a close cooperation between national accountants and subject specialists. In that regard, she would be interested to know whether Destatis has some sense of the quality of the various satellite accounts developed by external parties. David Wasshausen (BEA, US) explained that they have recently expanded their set of satellite accounts, on outdoor recreation, on arts and cultural production, and on the digital economy. Most of these are sponsored, at least partially, by external entities, which often poses a challenge of staying within the scope of GDP. He was wondering whether other countries have had similar experiences. Furthermore, he stressed the importance of developing guidelines for satellite accounts to arrive at consistent results across countries. Catherine responded that it is often indeed a challenge to find the right balance between user demands and what is feasible in terms of data quality and in terms of the resources that are required to compile the results. In this regard, it is sometimes a challenge to properly manage expectations of users in setting up satellite accounts. Peter van de Ven (OECD) stressed the importance of having this inventory and raised three points. The first was with regard to the terminology and the need to rethink the term ‘satellite accounts’, as it may give the impression that this is not very important. In response, Sanjiv suggested the term ‘extended tables’, whereas Catherine explained that they call them types of ‘economic account’, e.g. infrastructure economic account or cannabis economic account. The second issue was related to the need to keep a certain level of consistency between the various satellite accounts, e.g. to be able to link information on transport, environmental and economics. Catherine confirmed that a lot of the satellite accounts are not mutually exclusive, but that there is indeed a need to see how to properly link them. The third issue concerned funding opportunities, raising the issue whether a lot of countries obtain external funding for developing satellite accounts. Catherine confirmed that funding is often useful but that it also requires good expectations’ management and that some clients may be high maintenance. Peter was also interested to know what may explain the success of the tourism satellite account. Catherine explained that this was mainly due to the fact that a lot of countries want to promote tourism and that the satellite accounts helps them to show economic impact.

23. Ann-Lisbet Brathaug (Statistics Norway) presented the work by the UNECE Task Force on Satellite Accounts for Education and Training (SAE), which she is chairing. The satellite account is one of the two accounts proposed in the Guide for Measuring Human Capital (2016). The objective is to provide an estimate of the total expenditure on education and training (thus providing an improved cost-based measure of human capital) and to distinguish the various types of expenditure on education (including e-learning) and the respective financing arrangements. The Task Force report will present the pilot results of SAE for a range of countries and include recommendations and guidance for countries that would like to pursue this line of work as well. A draft compilation guide will most likely be presented to the Bureau of the Conference of European Statisticians (CES) in February 2019. The final guide is expected to be delivered to the plenary session of the CES in June 2019.

24. Sanjiv Mahajan (Office for National Statistics, U.K.) underlined the difficulty in quantifying some of the items included in the satellite account and expressed his appreciation that the Task Force addressed the increasing phenomenon of e-learning. Francisco Guillén Martín (INEGI, Mexico) welcomed the update and asked about the practical guidance to measure e-education, in particular in relation to the volume/price split. Ann-Lisbet explained that they currently only focus on measures in current prices, not yet in constant prices. Tihomira Dimova Rodde (UNECE) added that the primary aim was to provide some structure so

that countries can start building their own satellite accounts for education and training. From there, one could work on further improving the guidance.

Session 5: General discussion on the way forward in satellite accounts and measuring well-being and sustainability

25. Peter van de Ven (OECD) made a presentation on measuring well-being and sustainability within the framework of national accounts. He provided an overview of the main OECD initiatives to give more prominence to households within the current system and also showed initiatives that go beyond the current system. He emphasised that well-being is a multi-dimensional phenomenon which cannot be captured in a single indicator. Therefore, there is a need to bring the relevant measures together in a more encompassing framework, providing information on the various aspects of well-being. He presented a vision how we can move forward the measurement of well-being and sustainability within the system of national accounts, suggesting to start with developing a conceptual framework that includes ‘national monetary accounts’ (the current SNA) including distributional information, the system of environmental-economic accounts, unpaid household activities, health satellite accounts and satellite accounts for education.

26. Vanessa Bagnat (National Bank of Belgium) agreed on the importance of developing satellite accounts to respond to increasing demands for this type of information, but due to limited resources, this may also ask for a reassessment of the current requirements for national accounts. This was echoed by René Krippes (STATEC, Luxembourg). From his point of view, this should be something that should be taken forward as part of the SNA Research Agenda. Catherine van Rompaey (Statistics Canada) suggested that we should not only focus on expanding the current framework, but also to look more closely at including more granularity within the current system, particularly for the household sector. She explained that there is increasing user demand to identify who is benefiting from economic developments, which puts more emphasis on the compilation on the micro-macro linkages. Aksel Juel Clemmensen (Statistics Denmark) suggested to develop a specific satellite account on social services provided to the elderly, disabled and the weak in the society, which from his point of view would be as important as satellite accounts on health and education. Gian Paolo Oneto (ISTAT, Italy) explained that he feels that the framework of national accounts should be kept separate from subjective indicators related to quality of life. In his opinion, such a framework (similar to the SNA) should be developed by social statisticians. Edwin Horlings (Statistics Netherlands) mentioned that the difficulty in linking SNA to well-being arises when you start expanding the boundaries of the SNA and you need to put a value on specific issues that are not valued in practice. For the Netherlands this is currently the case in developing ecosystem accounts. In that regard, he thinks there is a need for increased flexibility in the system, at least for these specific issues, to enable their inclusion in the accounts. Erich Strassner (Bureau of Economic Analysis, USA) explained that in the US there are also increasing user demands for this type of information, and that it is important that it is being developed in close cooperation with statistical offices and international organisations. The BEA approach is to look where the current framework can be extended with relevant flows and stocks to provide more insight in well-being and sustainability. However, the question is where to draw the line, bearing in mind their expertise and that of others. In this regard, Thomas Schachl (Statistics Austria) felt that this was more something for social statisticians to work on. David Wasshausen (Bureau of Economic Analysis, USA) added that there is also a need to carefully look how the new indicators will relate to the current indicators. Are they going to be replaced by the new indicators or will the new ones be published in conjunction with the current ones? John Verrinder (Eurostat) commented that we need to clearly define what we mean by ‘conceptual framework’. Are we trying to bring all the already developed conceptual frameworks for satellite accounts together in one big new conceptual overarching framework? Furthermore, are we going to bring all the indicators together in one framework or are we just going to present already existing information in a more favourable way? With regard to unpaid household activities, he agreed that this is complex as different methods may lead to different results and raised the question whether we should perhaps focus on information on time spent on various activities, instead of trying to derive monetary values. Andreas Dollt (Eurostat) asked what an overarching framework,

including all satellite accounts would look like, as various satellite accounts currently may apply different boundaries. Sanjiv Mahajan (Office for National Statistics, U.K.) underlined the importance of this topic, also referring to the Bean report in the UK. He also raised the issue that if we don't address these increasing user demands fast, others will step in and national accounts may lose its relevance. In moving forward, it is important to find the right balance between user demands and feasibility. Furthermore, we need to bear in mind that this will also imply a cultural change, as we would need to rely on more assumptions, and need to accept more variability and more uncertainty. We also need to think how we properly communicate that to users.

27. Peter clarified that the goal is not to develop an alternative summary indicator of development of the economy or the society. The goal is to create a more encompassing accounting framework. Although we may not have expertise in all the domains, we are very good in creating accounting frameworks. This means we will need to work closely together with the experts from various domains to create these frameworks. He also explained that it is not clear yet what the framework is going to look like exactly. In some cases, it may turn out not to be possible to put a monetary value on something, but in that case it may still be very useful to provide information in non-monetary terms. This should become clear in further developing the framework. The possibility of linking everything together will provide much more possibilities to do meaningful analyses.

28. Sanjiv summarized the main points of this session, explaining that there is a strong need to respond to increasing user demands and to specific criticism. For this purpose, it is important to link the various modules. As this may be challenging and may require a lot of resources, we probably have to do it sequentially. It would be good if participants would further discuss the vision as presented by Peter back home and think about ways how to best move this work forward. It will also be further discussed at the upcoming AEG and in other international forums.

Session 6: Other items for discussion and information

29. Francisco Guillén Martin (INEGI, Mexico) opened the final session of the WPNA meeting.

30. Erich Strassner (Bureau of Economic Analysis, USA) made a presentation on ongoing work within BEA to standardize the domestic and cross-border measurement of FISIM, in response to the issue that their international trade data currently do not include measures of FISIM, whereas the National Income and Production Accounts (NIPA), the US-version of national accounts do. He described the main issues and challenges in the work to standardize and harmonise the treatment of FISIM. He explained that they already finished the work on the export side where they rely on data from the Treasury International Capital (TIC) system which is a joint effort of BEA, the Treasury and the Federal Reserve. However, creating estimates on the import side is more challenging, from a data point of view as well as from the perspective of assumptions to be made. He presented some results for exports and explained that the attention will now move to imports. They will only implement the new methodology in production after the latter part of the project has been finalised.

31. Emmanuel Manolikakis (Statistics Canada) asked whether the TIC data source includes information on both domestic and foreign positions. This was confirmed by Erich. Furthermore, Emmanuel asked how the new estimates affected GDP. Erich explained that the new results (including an improved sector allocation of total FISIM) led to an increase of final demand and thus to an increase of GDP. John Verrinder (Eurostat) asked whether they observed interesting results regarding the use of different underlying currencies. Erich indicated that only US dollar based reference rates were considered at this stage, in particular because for the US, a very large proportion of loans and deposits is denominated in US dollars. Further work on other currencies is planned as part of sensitivity analyses. John also asked whether they are going to look into asymmetries once they finalised their methodology. Erich confirmed that their work will indeed help in solving some of the asymmetries. He also explained that the new methodology should solve existing inconsistencies across BEA accounts and should prevent imbalances across the three

GDP approaches. It should also lead to full consistency between balance of payments and national accounts. Claudia Dziobek (IMF) asked whether they also tested the methodology for historical periods with higher interest rates and larger spreads. Erich confirmed that they have to do more historical analyses to test the methods and to review the results, before going into production.

32. Jorrit Zwijnenburg (OECD) presented the results of a study of revisions to quarterly GDP growth rates for OECD countries and key partners [STD/CSSP/WPNA(2018)2]. The study analyses the various vintages of GDP estimates and its main expenditure components, using quarterly estimates from the second quarter of 1995 up to and including the first quarter of 2018. Using a set of summary statistics (mean revision, mean absolute revision and relative mean absolute revision), it aims at discussing the differences across countries in order to improve the overall quality of early estimates. In comparison with the previous OECD study (conducted in 2014), the paper includes some additional analyses providing more insight in the randomness and in possible trends in the revisions. In his presentation, Jorrit showed the main results and ideas for further analyses.

33. Gian Paolo Oneto (ISTAT, Italy) underlined the importance of this type of analysis. He suggested the inclusion of more information on possible underlying reasons for revisions across different time intervals. He also inquired about the definition of the first estimate included in the analysis. Pedro Oliveira (INE, Portugal) asked a similar question. Jorrit explained that this is the first estimate provided to the OECD and may thus differ across countries. It would indeed be useful to include a specific table on the timelines of the first estimate in the paper. Jorrit also agreed that, in case this paper would be made available to external users, there is a need to make some changes to include more information on how to interpret revisions. Sanjiv Mahajan (Office for National Statistics, U.K.) emphasized the importance of including more metadata from countries which may explain differences in revisions across countries. Furthermore, he stressed that it is good that compilers have revisions. In that sense, we have to avoid terminology such as “performing best”. Jorrit fully agreed with that. Avdhesh Kumar Shukla (Reserve Bank of India) noted that the results presented for India were in line with the ones observed via an internal analysis. He asked for some guidance from international organisations on how to share information on revisions with users and to possibly include confidence intervals around GDP estimates when publishing them. Jorrit explained that from his point of view, it would be very difficult to derive confidence intervals for national accounts estimates as they are derived on the basis of a range of data sources, but that it would be interesting if some researchers could further explore this route.

34. Changku Kang (Bank of Korea) made a presentation on the measurement of North Korean GDP by the Bank of Korea. The aim is to evaluate the North Korean economy from a South Korean perspective and to utilize the results in policy-making, in response to high user demands. Annual GDP estimates have been made for the period from 1991 onwards, using basic information on production quantities as available from various institutions. Changku presented the concepts, data sources and the methodology for compiling the results. He explained that there are several caveats with regard to their methodology and that they have to rely on quite a lot of assumptions. For that reason, they would very much appreciate feedback on their methodology.

35. Stefan Hauf (Destatis, Germany) explained that they had a similar situation before the reunification with regard to estimates for East-Germany. He indicated that in that time the German Democratic Republic relied on the so-called Material Product System (MPS) as an alternative to the SNA methodology and he wondered whether North Korea is perhaps using something similar. Changku indicated that North Korea might indeed have used MPS to compile some GNI per capita data. He is also aware that North Korean colleagues have provided estimates to the UN in the past, but metadata on the compilation methods have always been missing. Claudia Dziobek (IMF) stressed the usefulness of these estimates. She wondered whether they have made comparisons with alternative estimates for North Korean GDP. Changku pointed out that various estimates have been published by various organisations (e.g. CIA, UN). However, it is not always easy to compare these estimates, as they may focus on different indicators

and may be denominated in different currencies. Claudia also asked whether they have some kind of dialogue with North Korean counterparts to share and possibly discuss the methodology and the results. Changku explained that this really depends on the further developments of the relations between the two Koreas. Peter van de Ven (OECD) mentioned research for some African countries to estimate economic growth on the basis of satellite images on light intensity. He was wondering if such alternative estimates could also be considered in the case of North Korea to compare with the current results. Changku explained that he did not know if this has already been applied. He was only aware of some work that has been done using satellite images to estimate crop production but this covers only part of the whole economic activity.

36. The chair, Francisco Guillén Martin (INEGI, Mexico), closed the session by summarizing the main takeaways of the three presentations.

Session 7: Closing of the WPNA

37. Due to the change in positions of Young-Tai Kim (Bank of Korea), there was a vacancy for the Bureau of the WPNA. Therefore, the Delegates elected Vladimir Kermit (Czech Statistical Office) as the new member of the Bureau. The other members of the bureau are Ann-Lisbet Brathaug (Statistics Norway, chair), Gary Dunnet (Statistics New Zealand), Francisco Guillén Martin (INEGI, Mexico), Sanjiv Mahajan (Office for National Statistics, U.K.), and Catherine van Rompaey (Statistics Canada).

38. Ann-Lisbet Brathaug (Statistics Norway) and Peter van de Ven (OECD) thanked all people involved in the organisation of the WPNA meeting and all delegates who made presentations and participated in the discussions. He also announced that next year's WPFS, joint meeting, and WPNA will be held in the week of November 4 – 8, 2019.