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STATISTICS AND DATA DIRECTORATE
COMMITTEE ON STATISTICS AND STATISTICAL POLICY

## Working Party on National Accounts

# Summary record: 5th meeting of the Informal Advisory Group on measuring GDP in the digital economy

9 – 10 June 2021, Meeting held virtually.

The meeting took place in a virtual format. The meeting ran from 13:30 – 17:00 each (Paris time).

Contacts: Mr John Mitchell (john.mitchell@oecd.org); Mr Jorrit Zwijnenburg (jorrit.zwijnenburg@oecd.org).

JT03480735

# Summary record: 5th meeting of the Informal Advisory Group on measuring GDP in the digital economy

9-10 June 2021, Meeting conducted virtually

## Wednesday 9 June 2021 (13:30 – 17:00)

### Item 1. Welcome, procedures and housekeeping for virtual meeting; Jorrit Zwijnenburg (OECD)

Jorrit Zwijnenburg (OECD) welcomed participants to the virtual meeting, noting that the particular benefit of having virtual meetings is the large number of people able to attend as nearly 150 participants have registered for this meeting.[1] After mentioning some general housekeeping rules, he invited the chair to open the meeting.

### Item 2. Introduction and goals for the meeting; Chair: Erich H. Strassner (BEA)

The chair, Erich H. Strassner (US Bureau of Economic Analysis (BEA)) welcomed the participants to the 5th meeting of the Informal Advisory Group on measuring GDP in the digital economy (the informal advisory group). He thanked John Mitchell (OECD) and Jorrit Zwijnenburg (OECD) for putting together the agenda and participants for making the time to join the meeting. He noted that with this being the 5th meeting, the goal has evolved from identifying the challenges in measuring the digital economy to discussing and observing what countries can learn from each other to better inform users of changes brought on by digitalisation. Erich outlined the agenda for the two days, with the first day focusing on progressing the work on the Digital Supply-Use Tables (Digital SUTs) and the second day on how best to bring data into the SNA production and asset boundaries. He finished his introduction by celebrating the milestone achieved by Statistics Canada who published its first experimental estimates of the high priority indicators of the digital SUTs. Erich felt this demonstrated that even though progress is sometimes slow, the group is clearly progressing the digitalisation agenda.

### Item 3. Developments in compilation of initial estimates using the Digital Supply-Use Tables (digital SUTs) framework in member countries

### Item 3.a. Update on progress of the digital SUTs framework / guidance note on increasing visibility of digital activity in the national accounts; John Mitchell (OECD)

John Mitchell (OECD) provided an update on developments surrounding the digital SUTs framework since the last meeting. He noted the large amount of work that has been progressed since last year's meeting, both on a practical and strategic level. On the strategic level, there has been a global effort to raise the awareness of the digital SUTs, with them presented at G20 workshops as well as the publishing of an OECD "Going Digital" measurement toolkit note that explained the concept of the digital SUTs in a more easily digestible manner. John highlighted that on a practical level, a joint BEA/OECD project sought to estimate some of the high-priority indicators using publicly available data. Furthermore, the IMF tested the concept with a number of countries over the course of 2021. John also mentioned the work by Statistics Canada highlighting the importance of having publicly available estimates to be discussed, as well as the increased motivation this provides to other countries.

### Item 3.b. Progress on Supply-Use Tables for the Digital Economy at Statistics Netherlands Joram Vuik & Maarten van Rossum (Statistics Netherlands)

Joram Vuik (Statistics Netherlands) presented on efforts by Statistics Netherlands to develop a first set of digital SUTs. He outlined that the project followed a grant from Eurostat and focuses on results for 2018

[1] A full list of participants is available at the end of this document.

with a plan to publish results by the end of 2021. Joram reinforced the relevance of the project due to the high media attention paid to the digital economy lately. The methodology used for the project is based on standard SUTs for 2018 with a variety of data sources used to split the cells in digital and non-digital transaction/products/industries. Overall, the work so far has mainly focused on the industry perspective of the digital SUTs. The data sources used to do this include surveys on retail industry, ICT usage surveys, a platform survey created through extensive web scraping. Joram outlined several issues encountered during compilation, including confidentiality issues with large resident digital intermediary platforms (a few making up around 97% of the industry share), the resource intensity of the web scraping process, and the lack of data concerning imports and exports of digitally order products. Joram concluded by suggesting that adding more detailed questions to existing surveys may overcome some of these issues and that overall, there is a large amount of microdata available that can be used for the digital SUTs.

**Item 3.c. Canadian Digital Supply and Use Tables (DSUTs) for the 2017 to 2019 period** Ziad Ghanem (Statistics Canada)

Ziad Ghanem (Statistics Canada) presented on the recently published estimates of the digital SUTs for Canada for the 2017-2019 period. While the estimates are experimental and expected to be revised, Statistics Canada were keen to publish to receive feedback from users and international organisations. Ziad mentioned that Canada has the benefit of having access to a lot of micro-level data from different surveys that help compile results for the digital industries. Ziad provided more detail regarding the compilation strategy and added a few reflections on the work including a discussion on the best way to record digitally ordered retail transaction, specifically if this meant the entire product should be recorded as digitally ordered, or only the retail margin (if the source data allows for this level of detail). Importantly, Ziad emphasised that the overall process is best approached as a re-allocation of the conventional SUTs rather than a compilation of a new digital SUTs, in Statistics Canada's case this meant using constrained optimisation to split the conventional SUT estimates subject to certain restrictions, based on micro-data.

**Item 3.d. The OECD digital SUTs for 2015 and 2018 in Japan;** Takeshi Sakuramoto (Economic and Social Research Institute (ESRI), Cabinet Office, Government of Japan)

Takeshi Sakuramoto (Economic and Social Research Institute (ESRI), Cabinet Office, Government of Japan) presented on the update made to the Japanese digital SUTs to include data for 2018. This update showed that both output and GVA from the digital industries had increased from the previous year. While the tables are currently only in current prices, contained various assumptions, and differed from the OECD framework slightly by excluding a couple of the digital industries, Japan will continue to investigate additional data sources that they can apply to the digital SUTs, especially from the demand side to improve the tables and to further align with the OECD framework.

Following the presentations, Hamish Grant (Statistics New Zealand) asked Joram Vuik (Statistics Netherlands) how they are ensuring good coverage of the entire digital platform industry, in particular capturing those that are not large or well-known, noting this is something they are struggling to do in New Zealand. Joram replied that they have a survey of online platforms, which they were able to launch after creating a register of platforms (using webscraping techniques focusing on specific key words and characteristics). John Mitchell (OECD) asked if value added of the resident platforms was straightforward to calculate, as this would equal the priced digital intermediary service (DIS) product. Joram replied that the domestic supply can be calculated from information on the platforms, but that they have little data sources on domestic/external use of DIS.

Maarten van Rossum (Statistics Netherlands) asked Ziad Ghanem (Statistics Canada) if they measured direct imports of digital services by households, for example streaming services or cloud services? Ziad replied that they had attempted to track the large firms (Netflix etc.), and that they looked at their annual reports to estimate the size of their services, and then combine this with additional information from household surveys. John Mitchell (OECD) asked what the broader feedback to the work had been? Ziad responded that there has been a lot of interest by users and requests to present and explain the data. However, some of the concepts are not familiar to some of their users, so there is still a teaching element

to the presentation. He also mentioned that different parties will have different interests in the digital SUTs' estimates and gave an example from the Ministry of Finance that would find taxes and fiscal revenues from digital activities the most interesting. Ligia Luetticken (Destatis, Germany) asked about the software used to compile the digital SUTs. Ziad noted that this was a manually intensive process using an SQL database, SAS to feed the database, and a DV type application form to help people visualise the data. For more advanced digital SUTs, Canada uses a SAS based system, to allow constrained optimisation to balance the data, subject to a set of constraints. Nur Indah Kristiani (BPS, Statistics Indonesia) asked if the output-to-input ratio was the same for digital and non-digital industries? Ziad explained that they are indeed applying the same ratios for now, but that this might change when further refinements are made based on new data sources.

John Mitchell (OECD) asked Takeshi Sakuramoto (Government of Japan) to provide a little more information on the economic conditions survey. Takeshi replied that it provides additional information on e-commerce and allows the compilers to check the accuracy of some of the other information used for the digital SUTs. He followed this up by explaining that within the cabinet office, they are using simple excel tables to derive the estimates, as it is done separately from the core production of the annual accounts.

The chair thanked the three colleagues for sharing their work. He was pleased to see the progress made over the last year and noted a common theme in terms of the challenges the countries are facing in the data collection space.

### Item 4. Digital SUTs – Compiling indicators on digital activity in non-OECD countries
Martha Tovar (IMF)

Martha Tovar (IMF) presented on recent work by the IMF Statistics Department to produce experimental estimates of highly digitally enabled economic activities for Chile, Mexico, Thailand and Colombia. The objective of this exercise was to; (i) test if experimental estimates could be developed from existing data sources, (ii) determine if comparable estimates could be constructed across countries, and (iii) determine if it was possible to derive robust estimates of the output and value added of highly digitally enabled economic activities that were fit for research purposes. The work was a mixture of applying both elements of the digital SUTs framework as well as the earlier methodology used by the BEA focusing on specific digital products depending on what source data is available in each country.

Maarten van Rossum (Statistics Netherlands) asked which indicator is most relevant from an IMF point of view. Jennifer Ribarsky (IMF) replied that the IMF research department was most interested in comparing countries against what the US had published, in particular the evolution over time of the overall share of 'the digital economy' in GDP. John Mitchell (OECD) asked how they determined what method to apply for each country. Martha Tovar (IMF) responded that it depended on whether the countries' source data covered more of the supply or demand side. When supply tables are available, the IMF identified the type of digital products. If there was more information on the demand side, this could be used to determine the digital industries that interacted with households, i.e. E-Tailers and firms dependent on platforms. Ponjan Pathomdanai (Ministry of Digital Economy and Society (MDES), Thailand) commented that he looked forward to trying to compare the two methodologies for the Thai example, as this will help them with the future development of their digital SUTs.

### Item 5. Digital SUTs – Compiling internationally comparable digital SUTs estimates using publicly available data; Ina Tobiassen (OECD), Connor Franks (BEA) and Hussein Charara (BEA)

The meeting then heard from OECD and BEA colleagues on recent work populating components of the digital SUTs. Ina Tobiassen (OECD) began by highlighting the estimation of value added generated by hosts via Airbnb. She explained that the work had been modeled on previous work by Statistics Netherlands and that it was relatively easy to replicate as it relies on only a few publicly available data sources along with components from the standard SUTs. She explained, however, that the quality of the output is very dependent on the quality of the information from Airbnb. Connor Franks (BEA) showcased the estimation of intermediate consumption growth of ICT good and services across countries. He explained that ratios delineating ICT goods and services were derived from lower level product data from the United States and

the Netherlands, and that these were applied to estimates from the OECD SUT database to estimate the growth of intermediate consumption of these digital products in production. While the growth was not immediately obvious when using current price data, when a price index was applied to factor-in the decreasing prices of most of the ICT goods and services, a clear growth could be observed in the use of these products in production. Hussein Charara (BEA) concluded by displaying different data sources he had found that could be used to derive estimates related to e-commerce. These were not limited to just the United States, rather they showed that much data is available and produced by many statistical offices. Hussein explained the benefits to users of this work due to the easy interpretability of this data, if applied to well-known consumption estimates.

There were several questions on the specific classification of the value added as compiled by Ina. She clarified that the value added she had estimated was not the one generated by the platform but by the producers (i.e. the host) of the accommodation services. Hamish Grant (Statistics New Zealand) commented that the percentage of GDP regarding intermediary platforms was in a similar range to the work that they have done so far. Responding to a question from Dyah Soendhari (BPS, Statistics Indonesia), Connor confirmed that the price index used was the implicit price deflator from the Information and Communication industry. This is a simple approach, but the work could be redone using detailed deflators for each of the products. Finally, Joram Vuik (Statistics Netherlands) enquired if the model used by Ina could be applied to other global platforms. Ina confirmed that this should be feasible in theory, but that it will depend on the available source data. John Mitchell (OECD) confirmed that due to the large amount of attention on Airbnb from community groups, there is a large amount of information that can be attained publicly, which may not be the case for other platforms.

**Item 6. The digital SUTs: next steps and future work of statistical offices;** John Mitchell (OECD)

John Mitchell (OECD) presented on the medium term goals of the informal advisory group in relation to the digital SUTs. He explained that, based on a simple questionnaire completed prior to the meeting, it appeared that some other countries would also be able to publish basic experimental estimates in the next 12 to 18 months, which would help form the basis for a potential handbook. He also provided additional information on the guidance note, drafted as part of the SNA update process, detailing the digital SUTs framework that will be sent for global consultation later in 2021. The work will benefit from the testing already taking place by members of the informal advisory group.

**Item 7. Summary of other work on Digitalisation as part of the SNA research agenda**
Nicola Massarelli (Eurostat)

Nicola Massarelli (Eurostat), as secretariat of the digitalisation Task Team, updated the advisory group on the ongoing work on digitalisation as part of the SNA research agenda, beyond the construction of the digital SUTs. Guidance notes are prepared for other digitalisation subjects, including crypto-assets, artificial intelligence, and how the value of free digital services might be represented in a satellite account. Nicola cautioned that the progress of this work is at different stages. The informal advisory group will be informed about the progress in future meetings and may contact Nicola if they have specific questions on some of the work streams.

**Item 8. Conclusion from day 1;** Chair: Erich H. Strassner (BEA)

The chair thanked all presenters for their updates and the participants for their active engagement in the discussions. He encouraged members to continue actively engaging in the work of the informal advisory group, exploring possibilities to compile estimates for (some of) the high priority indicators, and to contact the Secretariat in case they need any help in this. He also encouraged participants to actively monitor the work of the broader digitalisation task team and to contribute to the discussions whenever feasible. He then closed the meeting for day 1, inviting people to join the next day for the discussion on the measurement of data.

## Thursday 10 June 2021 (13:30 - 17:00)

### Item 9. Welcome, outline for second day of the meeting; Erich H. Strassner (BEA)

Erich H. Strassner (BEA) started the meeting by thanking everyone for joining the second day of the informal advisory group meeting. He outlined the agenda for the day, and spoke of his enthusiasm for progressing the discussion on data measurement, which is an important topic on the SNA Research Agenda.

### Item 10. Overview of the data issues paper presented to AEG; John Mitchell (OECD)

John Mitchell (OECD) presented an overview of the issues paper on data measurement that was discussed at the 15th meeting of the Advisory Expert Group (AEG) in April 2021. The paper builds on a preliminary guidance note sent to the AEG and includes practical examples on how data might be represented in the accounts. John outlined a recommendation for how information on observable phenomena (OPs) might be treated and recorded conceptually. The paper suggests that information elements of OPs could be regarded as a non-produced asset from a conceptual point of view but not recorded on balance sheets in the core accounts as an accurate valuation is often very difficult. Rather a value of the information elements and the "transactions" that allow data producers to access the OP and record the information might be included in potential satellite accounts. John then went into the different scenarios via which enterprises can obtain access to OPs as well as the different recording options potentially available for recording and valuing the creation of data assets. The paper applied the different recording options to the different scenarios, without making a recommendation of which method is the preferred one. However, the paper highlighted the preference for a prudent estimation method. Furthermore, it stressed the importance of arriving at an approach that is feasible for statistical offices.

### Item 11. Measurement and valuation of data, examples of recent practical implementation

### Item 11.a. Perspectives on the value of data and data flows; Vincenzo Spiezia & Daniel Ker (OECD)

Vincenzo Spiezia (OECD/STI) introduced the OECD horizontal project on "Data Governance for Growth and Well-Being". The project's two main pillars are classification of data and approaches to value data. The project aims to develop a conceptual framework to delineate the various stages in the value chain of data and data flows, and the growing contribution of data to current and future business models. Daniel Ker (OECD/STI) then provided more detail on earlier work by the Science, Technology and Innovation (STI) Directorate, focusing on different methods to value data as held by businesses. One of the approaches included identifying specific data related products in statistical classifications, such as expenditure on data storage and service activities related to compiling and selling databases. An alternative was to look at the market value of data reliant companies as this should reflect the value of data held by these companies. By identifying data reliant firms and matching them to stock market tickers allowed them to create a valuation time series. The results showed that data driven firms grow much faster in terms of market capitalisation than the market at large, although the differences were less significant when they took out the large well-known companies. Daniel acknowledged that there is obviously a range of factors driving the market price, i.e. not just the value of the data held by the firm, so this should be borne in mind when looking at the results. Finally. Daniel concluded by noting that data products and industries are often not clearly delineated from other production, which made useful data sources difficult to identify. However, data is an increasingly important input in production and a valuable commodity, which suggests that it is important to reflect the value of data in the national accounts.

The chair thanked Daniel and Vincenzo for their presentation and noted the importance of tracking firms spending on storing data as the purchase of clouds services has transformed the way many businesses operate. Ligia Luetticken (Destatis, Germany) commented that great care is needed when publishing such results, as they may significantly deviate from national accounts concepts and values. Therefore, differences to national accounts' results should be clearly noted. Daniel agreed and responded that the

paper highlighted that the work did not relate to national accounts. Additionally, Ligia asked how data-driven firms are classified. Daniel explained that they used general information to select the relevant firms, but that this could be further improved with more and better information on firms. Paulius Drazdauskas (Department of Statistics to the Government of the Republic of Lithuania) asked if the Nasdaq average, which was used to compare the market valuation of data driven firms, might be inflated, as superstar firm are also included in this index. Daniel responded that this is a valid point and that they would indeed like to assess this, but that there are limits to what can be obtained with the web-scraping tool.

### Item 11.b. Valuation of data in the Australian economy
Michael Smedes & Thai Nguyen (Australian Bureau of Statistics (ABS))

Michael Smedes and Thai Nguyen (Australian Bureau of Statistics (ABS)) introduced the ABS' attempt to re-create the approach developed by Statistics Canada to generate an estimate of the value of data assets produced in Australia. The estimates are created by using a share of wages of specific occupations (based on the occupations level of interaction with data production) and combining it with other assumptions to derive a sum-of-cost estimate of data investment. Thai explained that the census population data is the key data source, with income and employment occupations as the key variables. One of the challenges was to develop the concordance between the occupation categories as used by Statistics Canada (NOC) and those available in Australia (ANZCO). Overall, the ABS produced results that were broadly similar to those produced by Statistics Canada. Thai mentioned that the next steps would include further improving the concordance between the classifications, ideally at the 6-digit level, while also having a larger discussion on the appropriateness of the shares applied to each of the nominated data-related occupations.

### Item 11.c. Valuation of data in the US economy; Dylan Rassier (BEA)

Dylan Rassier (BEA) updated the group on the BEA approach to valuing data, also focusing on occupations, but applying machine learning to better estimate the specific occupations involved in the production of data as well as the time each occupation spends on it. Dylan further elaborated, specifically tying the methodology back to some of the questions raised in the data issues paper as referred to before, e.g., on which costs to include or exclude in the sum-of-cost approach.

John Arvin Bernabe (African Development Bank) wondered how the two countries separated out the different costs related to the creation of different types of assets that may be closely related (i.e. data, database, data science). This point was supported by Ponjan Pathomdanai (MDES, Thailand) who commented that due to "data fluidity", it is difficult to come up with clear delineations between related types of assets and proper valuation methods. Aisah Aisah (BPS, Statistics Indonesia) asked if the share of production activities and the percentages applied to occupations changed over time. Thai Nguyen (ABS) replied that the ABS applied the occupation shares used by Statistics Canada and that these were fixed over time. However, an improvement could be made by looking at changes in job descriptions over time, to see how heavily employees are involved in data production over time. Ligia Luetticken (Destatis, Germany) was interested to know if the occupational profiles are country or region specific. Michael Smedes (ABS) supported this point, stressing the importance to improve the occupational classification including their international alignment. Dylan explained that the US classification has been updated in 2018 and now includes data science occupations (although the updated classification has not yet been implemented into the US accounts yet). Hamish Grant (Statistics New Zealand) showed potential interest to replicate the ABS approach for New Zealand (given that they use the same ANZSCO classification as the ABS).

### Item 12. Measurement and valuation of data, remaining conceptual and practical challenges

### Item 12.a. Including data in the SNA (i), what costs to include when calculating sum of cost?
John Mitchell (OECD)

John Mitchell (OECD) led a discussion explicitly centered on which costs to include in the sum-of-cost approach to deriving a value of data assets. He outlined that the costs involved can be split into two types. The first concern the recording and processing costs, for which there is broad consensus that this should be included in the sum-of-cost value of production. The other type of cost concerns the OP procurement

costs, which are costs related to accessing and observing OPs. John explained the rationale to also include these costs in the sum-of-cost approach, but also explained the practical concern that many of these costs may already be included in other assets (in software assets, databases, and R&D).

Ligia Luetticken (Destatis, Germany) raised the issue that the definition of OPs should be further clarified, especially in relation to statistical data. She also cautioned about the impact on non-digital firms with similar business models to social media, such as newspapers. Similarly, Brenda Bugge (Statistics Canada) asked for clarification on when an OP becomes data, while Maarten van Rossum (Statistics Netherlands) questioned if we really wanted all investments in promoting and enlarging the social network to be included in the value of the final data asset. Dylan Rassier (BEA) thought it was important that the information from OPs be treated consistently in the accounts regardless of how they are obtained by the firms.

John Mitchell (OECD) and Richard Heys (ONS) both attempted to clarify the difference between an OP and data by using the example of a free app that records your public transport journey. The fact that you are making the journey is an OP in itself, and once information on this OP is recorded by the app it becomes data. In response to the question from Maarten van Rossum (Statistics Netherlands), John suggested that it is the ability for firms to access and obtain this information that differentiates them and that it is arguably the largest component adding to the value of the data asset. He agreed with Maarten that many of the costs are likely already captured in other assets, so while it may seem that this recording would have a large impact on GDP in theory, it may turn out to be relatively small in practice (mainly leading to larger reclassification from one asset category to another).

### Item 12.b. Including data in the SNA (ii), does data contain a non-produced component?
Jorrit Zwijnenburg (OECD)

The discussion then moved to whether data assets should be considered entirely produced or as a mixture of produced and non-produced. Jorrit Zwijnenburg (OECD) explained that by recording the asset as a mix, this would protect against GDP, GFCF and other indicators being swamped by new investment considered entirely produced. Additionally, since a large amount of the value of the data asset is derived from the information content contained in the OPs, which are themselves, non-produced, it may make more sense to regard this part of the asset value as non-produced than to allocate that to being the result of production.

Ligia Luetticken (Destatis, Germany) worried that by focusing too much on digitalisation examples, we may cause other unintended issues for other parts of the SNA. In addition, she suggested that payments from firms to access OPs could be considered similarly to payments paid for permits and license to access natural resources. Benson Sim (UNSD) believed that there is an important difference between non-produced OPs and other natural resources, in the sense that OPs can be used repeatedly. Maarten van Rossum (Statistics Netherlands) thought that there might be a parallel between expenditures on seismologic research and exploration (oil and gas), which are capitalised, and those costs on acquiring information content from OPs. Finally, Dylan Rassier (BEA) thought that if OPs are produced, the implication is that households are engaged in production. If OPs are non-produced, then it seems awkward to include these costs in a cost of "production" approach. However, if it is limited to OP procurement activities, then it may all be regarded as produced.

Jorrit agreed with all colleagues on the difficulty that is faced by this subject, especially when there is a need to recommend an approach that is consistent across all the different accounts as well as taking into consideration all the different situations that allow data to be created and used. Jorrit believed there is merit looking at the mineral exploration case, just as there is merit looking at any other parallel examples that may exist. Jorrit concluded by addressing Dylan's question, noting that if OPs are considered produced then the household is indeed the sector producing them, which due to the effect this would have on GDP, is a treatment best avoided. He again raised the prospect of treating these payments as rent (as a remuneration for being allowed to access households' OPs), which could then be included in the sum-of-cost approach. However, he acknowledged that this would indeed require a change to the SNA.

**Item 12.c. Including data in the SNA (iii), other conceptual challenges, including compiling volume estimates of data:** John Mitchell and Jorrit Zwijnenburg (OECD) & Richard Heys (ONS)

The final conceptual presentation covered some of the remaining issues still faced in identifying a consistent approach to data measurement. Jorrit Zwijnenburg (OECD) outlined that this included, how data is sold, how to record the continual addition of new data points to a data set, and what assumptions could be used to derive a capital stock estimate from the initial GFCF estimates. Richard Heys (ONS) then focused on the challenge of deriving volume estimates of data production. This issue, while difficult, is crucial to the goal of measuring the impact that the use of data is having on productivity.

Ligia Luetticken (Destatis, Germany) considered that data was most often sold as a digital copy of a master file, while Juha Martikainen (Statistics Finland) considered that the final product sold is indeed unlikely to be data asset itself but what data is contributing to, e.g. a trained algorithm. The session finished with both the chair and Jorrit welcoming any work by members of the informal advisory group in this area to share it, so as to continue to progress the discussion.

**Item 13. Future work for the informal advisory group, conclusions and wrap up of day 2**
Chair: Erich H. Strassner (BEA)

The chair, Erich Strassner (BEA), then proceeded to conclude the meeting by summarising the main takeaways from each of the sessions. He acknowledged the many challenges faced in measuring data, that small steps are clearly being taken to further progress the discussion, and that it is clear that agreement is already being reached on some specific issues. Erich considered the clearest takeaway from the meeting, for both digital SUTs and data measurement, that there is a need for members of the informal advisory group to continue engaging in practical testing of the different recommendations. He believed that these real world experiences would not only help other countries develop their own work but in the case of data, would also assist in determining what guidance is feasible for inclusion in the next iteration of the SNA. Erich finished by thanking all presenters and those who attended for making the meeting so fruitful as well as the OECD for organising the event, especially John Mitchell, Jorrit Zwijnenburg and Virginie Elgrably. The chair then closed the meeting.

# Participants List for 5th meeting of the Informal Advisory Group on measuring GDP in a digitalised economy
# Liste des Participants pour 5th meeting of the Informal Advisory Group on measuring GDP in a digitalised economy

9/6/2021 - 10/6/2021

All Sessions

## *Australia/Australie*

| | |
|---|---|
| **Mr. Sean CRICK** | *Australian Bureau of Statistics* |
| **Mr. Thai NGUYEN** | *Australian Bureau of Statistics* |
| **Mr. Michael SMEDES** | *Head, National Accounts Branch*<br>*National Accounts*<br>*Australian Bureau of Statistics (ABS)* |
| **Mr. Jeff TYNDALL** | *National accounts*<br>*Australian Bureau of Statistics (ABS)* |

## *Austria/Autriche*

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|---|---|
| **Ms. Nina DJAHANGIRI** | *Directorate Population Statistics*<br>*Austrian Statistical Office* |
| **Mr. Thomas SCHACHL** | *Directorate for Macro-Economics Statistics*<br>*Statistics Austria* |

## *Canada*

| | |
|---|---|
| **Ms. Brenda BUGGE** | *Chief, National Economic Accounts Division*<br>*Macroeconomic Accounts Branch*<br>*Statistics Canada* |
| **Ms. Carolina CABAÑAS-LEÒN** | *Chief, Industrial Organization and Finance*<br>*Natiional Economic Accounts Division*<br>*Statistics Canada* |
| **Mr. Ziad GHANEM** | *Assistant Director, Industry Accounts*<br>*Macroeconomic Accounts Branch*<br>*Statistics Canada* |

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| **Ms. Sonia RAIZENNE** | *Iofd*<br>*Statistics Canada* |

## *Chile/Chili*

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| **Ms. Sandra PERALTA** | *Commercial Policy Division*<br>*Permanent Mission of Chile to the OECD* |
| **Mr. Sebastián REBORA** | *Head of Annual National Accounts Division*<br>*Statistics Department*<br>*Ministry of Finance* |

## *Colombia/Colombie*

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|---|---|
| **Mr. Juan Pablo CARDOSO** | *DANE Colombia* |
| **Ms. Angela Patricia CASAS** | *DANE Colombia* |
| **Ms. Yuly CUELLAR** | *National Statistics Department* |
| **Mr. Henry Antonio MENDOZA** | *Head of National Accounts*<br>*National Statistics Department* |

## *Finland/Finlande*

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| **Mr. Ville LINDROOS** | *Senior Statistician*<br>*National Accounts*<br>*Statistics Finland* |
| **Mr. Henri LUKKARINEN** | *Statistics Finland* |
| **Mr. Juha MARTIKAINEN** | *Senior Statistician*<br>*Economic Statistics*<br>*Statistics Finland* |
| **markuu RATY** | *Statistics Finland* |
| **Mr. Eljas TUOMAALA** | *Senior Statistician*<br>*Economic and Environmental Statistics*<br>*Statistics Finland* |

## *Germany/Allemagne*

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|---|---|
| **Ms. Iris GOENSCH** | *Federal Statistical Office (Destatis)* |
| **Ms. Ligia LUETTICKEN** | *Federal Statistical Office (Destatis)* |
| **Mr. Daniel SEEGER** | *Federal Statistical Office (Destatis)* |
| **Dr. Lenka VALENTA** | *Federal Statistical Office (Destatis)* |

## *Ireland/Irlande*

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| **Mr. Barra CASEY** | *Senior Statistician, Price Division*<br>*Price Statistics*<br>*Central Statistics Office* |
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## *Latvia/Lettonie*

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## *Mexico/Mexique*

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## *Sweden/Suède*

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## *United Kingdom/Royaume-Uni*

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