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Item 4(f) of the provisional agenda
International trade and economic globalization statistics

Background document
Available in English only

Report of the first meeting of the Expert Group on international trade and economic globalization statistics

Prepared by the Expert Group on international trade and economic globalization statistics

Draft Report

This report presents the outcome and summary of proceedings of the first meeting of the UN Expert Group on International Trade and Economic Globalization Statistics, which took place on 26-28 January 2016 at the United Nations in New York.

The UN Statistical Commission established the Expert Group in March 2015, requested the Expert Group to prepare a Handbook with the working title of a System of Extended International and Global Accounts and proposed that this group would be a continuation of the Friends of the Chair (FOC) group.

All former members of the FOC group confirmed their membership in the new Expert Group. In addition, the United Kingdom and Kazakhstan, as well as the Asian Development Bank requested to become member, and were accepted.

Outcome

Handbook

The Expert Group agreed that:

- The motivation of the Handbook is (i) the policy need for an extended set of macroeconomic, industry and firm based measures on globalization and (ii) the statistical need to address the integration and harmonization of firm based statistics with the macroeconomic and sectoral accounts and tables to improve quality of official statistics.

- The Handbook broadly aims to cover the following parts (i) policy and statistical motivation of a global value chain (GVC) approach for measuring trade and globalization, (ii) general statistical framework of extended national and global accounts, (iii) global value chain satellite accounts based on extended national and multi-country GVC industry related supply and use tables (SUTs) and input-output tables (IOTs) and (iv) a framework of integrated business, investment and trade statistics, their classifications and requirements for the national and global business registers..

- The general statistical framework of extended national and global accounts should build on the existing statistical standards and international recommendations[1], and cover global SUTs and IOTs with reference to various existing applications[2] to highlight the importance of developing extended accounts that can improve quality,

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[1] In particular, System of National Accounts 2008 (the 2008 SNA), the 6th edition of the Balance of Payments and International Investment Position Manual (BPM6), the 4th edition of the OECD Benchmark Definition of Foreign Direct Investment (BD4), the 2010 International Merchandise Trade Statistics, Concepts and Definitions, and the 2010 Manual of Statistics of International Trade in Services.

[2] Such as such as Eurostat's "*Full International and Global Accounts for Research in Input-Output Analysis*" (FIGARO), the World Input-Output Database (WIOD), the World KLEMS (K-capital, L-labor, E-energy, M-materials, and S-purchased services) initiative and the OECD-WTO Trade in Value Added (TiVA) database.

and coherence, by providing insights into data challenges, such as the proportionality assumptions and bilateral asymmetries. These extended national and global SUTs and IOTs can draw on the work of OECD's expert group on extended SUTs and can derive key aggregates and indicators for business, investment and trade statistics and macroeconomic accounts, including KLEMS-based productivity indicators.

- Integrated business, investment and trade statistics form the bedrock of the extended accounts, and should therefore be described in a systematic way, together with their classifications and applications, such as Trade by Enterprise Characteristics (TEC) and Services Trade by Enterprise Characteristics (STEC), and the surveys on the international sourcing of Business Functions, while considering the following issues:

  - Improve business registers with identification of multi-national enterprises, foreign affiliates and size class, and with links to trade and investment statistics
  - Establish a global enterprise group register, by further developing the approach employed by the euro-groups register
  - Balance bilateral trade and investment asymmetries in a consistent way
  - Standardize surveys on international sourcing of Business Functions
  - Address the concerns of confidentiality in the access to and use of micro-data
  - Recommend indirect measures where basic data are missing

- The GVC approach should be the central theme of the Handbook with a systematic description of the components of the GVC model consisting of: (i) the input-output relationships of production in the GVC from concept and design to end market, (ii) the business arrangements in the GVC through sourcing of business functions, (iii) the governance relationships including foreign ownership and (iv) the institutional and regulatory environment for global production, investment and trade.

- Therefore, GVC satellite accounts can be formulated in terms of their goods and services producing activities, their supply and use of intermediate products, their final outputs in the end markets, and their heterogeneity of firms, in terms of ownership, size class and trade intensity. In other words, GVC satellite accounts can be defined in terms of extended national and GVC industry related SUTs.

- The Handbook will cover a few detailed examples of GVC satellite accounts. Various GVC industries can be considered, such as the agri-food, textile and apparel, automotive, energy, pharmaceutical and tourism industries.

- The exact title of the Handbook is still open for discussion, but the concept of global value chains should be reflected.

Organization of work

The development of the Handbook will be driven by a core editorial board including Steve Landefeld as the editor, Michael Connolly as chair, UNSD as secretariat and a few more members to be identified.

Volunteers are needed to draft particular chapters. Once the outline is developed and agreed, the editorial board will be in touch with the members of the expert group for requests of

specific contributions. At this meeting, IMF, OECD and Eurostat volunteered contributions on the topics of financial accounts, extended (national and global) supply and use tables and enterprise group registers, respectively. Statistics Canada, US BEA and Statistics Italy were also willing to take on some of the drafting work.

UNSD in collaboration with Statistics Italy, Statistics Canada and the Statistical Office of Mexico will prepare the template for case studies for a few GVC industries and the corresponding modalities of bringing communities and information together. Especially the development and testing of satellite accounts for specific GVC sectors (including extended national GVC related supply and use tables) requires collaborative input from the statistical and academic communities.

A Forum is tentatively scheduled to take place towards the end of this year around the theme of adequately measuring GVCs to support sustainable development policies on economic growth, creation of jobs and use of natural resources with a multi-disciplinary participation of policy makers, academics and statisticians.

The next meeting of the Expert Group will be back-to-back with the Forum.

Next steps

The conclusions and proceedings of the meeting will be circulated for comments to the Expert Group by mid-February and will be posted as a background document on the Commission website before the end of February.

A draft outline of the Handbook will be circulated for comments by mid-March.

UNSD will circulate a proposal on the preparation of satellite accounts for a few GVC sectors by mid-April.

UNSD will circulate a proposal and date for the conference and next EG meeting also around mid-April.

The Expert group agreed that the Handbook would be finalized by mid-2018 for submission to the Statistical Commission in 2019.

Summary of Proceedings

Dates: 26-18 January 2016
Venue: UN HQ building, New York, United States

List of participants:

Chair: Michael Connolly (Ireland)

Members: Silvina Santos (Cape Verde), André Loranger (Canada), Huaju Li (China), Carlos Prada (Colombia), Lilian Navas (Colombia), Hugo Mora (Costa Rica), Peter Boegh Nielsen (Denmark), Nivedita Gupta (India), Stefano Menghinello (Italy), Hyun Kim (Republic of Korea), Gerardo Durand (Mexico), Houssein Ouljour (Morocco), Martin Luppes (Netherlands), Gerda Bruwer (South Africa), Wirongrong Niamthanom (Thailand), Michael Hardie (United Kingdom), Sally Thompson (United States), Thi Minh Thuy Le (Vietnam)
Ani Todorova (Eurostat), Axel Behrens (Eurostat), Isabelle Remond-Tiedrez (Eurostat), Robert Dippelsman (IMF), Thomas Alexander (IMF), Nadim Ahmad (OECD), Onno Hoffmeister (UNCTAD), Steve MacFeely (UNCTAD), Ekaterina Chernova (UNCTAD), Ivo Havinga (UNSD), Ronald Jansen (UNSD), Hubert Escaith (WTO)

Experts: Prof. Dale Jorgenson (Harvard), Steve Landefeld (UNSD consultant), Timothy Sturgeon (MIT), Aaron Sydor (Global Affairs Canada)

The Agenda is provided as an annex to this report.

Opening

Stefan Schweinfest, Director of UNSD, opened the first meeting of the UN Expert Group on international trade and economic globalization statistics. He welcomed everyone to this first meeting at the United Nations in New York, thanked Michael Connolly and CSO Ireland for assuming the role of chair of the group, and especially thanked Prof. Jorgenson for making the effort to participate in this meeting on its first day.

Introduction

The Global Value Chain (GVC) approach is a useful way to determine complex industry interactions of global production, to link geographically dispersed activities and actors of a single GVC industry, from its conception of the goods and services to the final products in the end markets, and to determine the roles they play in economies. From a national and global perspective, there is increasing evidence that the national integration in GVCs has a positive effect on productivity and growth in national income, employment and capital, while making economies more interdependent. Moreover, GVCs may account for a considerable share of the use of natural resources, which have to be factored in national and international perspectives on sustainable use of these resources. As a consequence of the impact of GVCs on the interdependency of economies and the increased domestic content of imports, the focus of trade policy shifted from protecting less the domestic producers and to protecting more the consumer, employees, and the environment.

Because of the impact of GVCs, there is a need to move from international accounts based on bilateral relations to global accounts to better describe the inter-firm and intra-firm networks as a global assembly line of globally-produced goods and service. The GVC satellite accounts should provide information to national policy for a better understanding of the positioning of the country in the various GVCs. For instance, processing firms and primary goods producers (mostly from developing countries) need only a lower entry level to participate in GVCs as less competence is required in technology, skills and capital. Once entered, firms look for upgrading opportunities in product, process, price, market and market share. Regional value chains allow for regional integration with focus on near markets.

Good progress has already been made on global accounts, including WIOD and the OECD-WTO TiVA database, which standardize national SUTs and IOTs and adjust for trade-asymmetries as needed. While work is ongoing within the OECD expert group on extended SUTs, further work is needed to standardize extended national supply and use tables and extended integrated economic accounts for specific GVC industries building on an existing conceptual GVC model.

The Expert Group generally agreed with this proposal to focus on the national perspective of extended national supply and use tables and extended integrated economic accounts for specific GVC industries while briefly covering the global input-output approach, and address the related policy questions, methodology, units and classifications, source data, key aggregates and quality issues.

The Expert Group also noted the need to link the extended accounts with existing national accounts. Moreover, it was agreed that the requirements for integrated business, investment and international trade statistics along with the national and global business registers should be set out in the Handbook on par with the accounting perspective to improve basic data collection for a comprehensive measurement of globalization, in both developed and developing countries.

Policy questions of international trade and economic globalization

Macro Accounts perspective

The Handbook needs to address measurement challenges associated with trade, financial, environmental, and social integration around the globe and address policy needs not met by existing statistics in order to maintain the relevance of official statistics. Increased globalization of production, income, spending, finance, and natural resources has led to double counting in both the real and financial sector and has thus distorted the underlying global flows of production, investment, and income, and the composition of ownership and assets and liabilities. The Handbook also needs to address questions relevant for monetary and financial regulatory policies, tax and investment policies, trade policy, development policy, fiscal policy, intellectual property protection, export promotion, and subsidies, among others. In addition, it needs to engage in outreach to explain the value of the new extended accounts, so as to justify any increase in burden and resources and to promote data sharing.

Satellite Accounts perspective

A better ability to analyze GVC sectors can help to address various policy questions at the national level regarding competitiveness of industries and firms, including

- o identification of a country's comparative advantage from a GVC point of view;
- o identification of which "upgrading" paths domestic firms can follow;
- o the extent of the role of multinational enterprises (MNE) in the development agenda;
- o the extent of value added embodied in exports by domestic firms;
- o the extent to which firms and industries are involved in globalization;
- o the impact of GVC involvement on a domestic economy;
- o the impact of firm characteristics on GVC involvement and overall productivity and employment and wages

Policy questions regarding GVC sectors are different at global, regional and national level, and this distinction should therefore be addressed in various parts of the Handbook.

Macro-economic accounts

Global Input-Output tables

A number of initiatives have taken place over the last years to construct global IOTs, such as WIOD covering 40 countries, and the OECD-WTO TiVA database (see below) covering currently 61 economies. A new initiative is Eurostat's FIGARO that aims to regularly disseminate inter-European SUTs and IOTs starting in 2017 if successful. All three initiatives are based on harmonized national IOTs and SUTs that are consistent with national accounts and include import use tables, and trade in goods (at the product level) and services (by extended balance-of-payments categories). Such frameworks can be linked to productivity data; labor accounts (e.g., hours worked by age group, gender and industry); capital indicators; the environmental accounts; and material flow accounts.

To construct global (or inter-country) IOTs, bilateral trade asymmetries need to be addressed and balanced. Progress is being made in that regard, including annual reconciliation rounds of intra-EU asymmetries; work done by OECD's Working Party on trade in goods and services and by the inter-agency Task Force on international trade statistics, which focuses also on methodological issues, such as using country of consignment for imports rather than country of origin.

International organizations show commitment to work systematically and collectively towards resolving trade asymmetries. Further, micro-data exchange programs, such as Eurostat's Single Market Statistics (SIMSTAT) and the FDI network, could be further utilized and asymmetries at the product level should be further investigated. It was noted that developing countries, especially in Africa, need assistance to strengthen their statistical capacity in this respect.

World KLEMS

The importance and policy relevance of deconstructing production accounts by intermediate inputs based on cost categories known as KLEMS was highlighted. KLEMS facilitates the analysis of those industries that are contributing to GDP growth and productivity and complements the construction of extended SUTs. KLEMS is currently compiled as part of official statistics in 10 countries – USA, Canada, Australia, 7 EU countries – plus another 40 countries with KLEMS-type databases, such as the EU KLEMS database that covers 27 EU countries and on-going work in Asia and Latin America. For those countries, where KLEMS

databases are not compiled as part of official statistics, difficulties exist in keeping them up-to-date.

The Expert Group agreed that the general statistical framework in the Handbook should try to incorporate the labor and capital (services) accounts to encourage the compilation of KLEMS related statistics.

Trade in Value-Added

The OECD-WTO TiVA database currently covers 61 countries and 34 industries. TiVA decomposes production, consumption and trade flows into their value-added parts and provides globalization indicators, such as the foreign content of exports and the services content of manufacturing. The globalization indicators derived from TiVA are useful for policymakers, especially when analyzing the interconnectedness between economies, and analyzing impacts on jobs and skills.

To further improve the quality of the TiVA database extended supply and use tables are being developed under the auspices of the OECD expert group on extended SUTs that disaggregate foreign-owned and domestically-owned firms and MNEs, as well as by size class and trade intensity. The construction of extended SUTs can capitalize on existing data sources, such as foreign affiliates statistics (FATS), structural business statistics and TEC. Notwithstanding the complications involved in developing an integrated and coherent view entailed in bringing these various characteristics of GVCs together, tt was recognized that, for now at least, building extended national SUTs in developing countries may prove less complicated, since only a limited number of firms directly account for most of the international trade and value added, and many of these are large and foreign owned. In addition it was recognized that the focus for developing extensions could zoom in on those sectors of most importance to their economy and with the most firm heterogeneity. In terms of priorities, NSOs should ensure that business registers were developed that contained the key characteristics of firms relevant for GVC analysis (such as foreign ownership).

Extended International and Global Accounts

The purpose of the Handbook is to provide guidance on how to produce accurate, timely and relevant data on global interdependencies in terms of trade, investment, income, production, and finance to better inform key policies, including those on economic development, trade and investment, monetary and fiscal policy, and environmental policies, among others. The Handbook can provide an integrated presentation of the extended international and global accounts, national accounts, and Balance of Payments that provide decomposition and linkages of production, income, expenditures, assets, liabilities, and environmental-economic transactions across regions, countries, and industries, with additional breakdowns by firm characteristics. The Handbook can further provide examples of expanded country tables which show trade and bilateral balances on a value-added basis.

For a more in-depth view of the accounts, the solution is likely to be a set of extended, or supplemental, satellite accounts that: (i) complement the core accounts of the 2008 SNA, BPM6 and BD4 (e.g. linking goods and services production and trade, income, investment in produced and financial assets, detailing product and industry classifications, elaborating on concept of control and ownership and statistical units in the context of GVC industries) and

(ii) address policy needs not met by existing statistics. Satellite accounts have the advantage of not over-complicating existing accounts that are hard-wired into monetary and economic policy and provide a framework to experiment with different firm ownership and accounting structures.

The Expert Group agreed that the Handbook would outline a flexible modular structure in which countries can apply the concepts to the industries that are important for their economy (e.g., producing satellite accounts for specific industries). Moreover, the Handbook would focus on scope and architecture of the accounting structure and the supporting integrated business and international trade statistics, and should delineate GVC specific extended national supply and use tables and related product and industry classifications.

Integrated Business and International Trade Statistics

What are Global Value Chains?

GVCs describe the full range of activities, business functions, institutional environment and governance of the value chain required to bring a product or service from conception through the different phases of production, including delivery to final consumers and the final disposal after use. Since the 1990s, the academic and policy community has extensively analyzed and described GVCs for different industries, which has led to a robust conceptual foundation for the GVC approach and the typology of government arrangements of firms in the GVCs. GVC analysis relies on detailed international trade statistics (e.g. UN Comtrade), industry association data, private or commercial registers and data, field and desk research, and other domain knowledge of an industry. While the use of firm-level microdata raises confidentiality issues, much can be gained from exploiting or linking existing datasets and ultimately incorporating additional information to traditional data sources, such as structural business statistics, business registers and merchandise trade statistics.

Factoryless Goods Producers

Considerable conceptual developments for the measurement of globalization have been introduced in the 2008 SNA, which was followed by further work on the operationalization of the globalization related national accounts concepts. Following concerns that current guidance in ISIC created a potentially misleading, and arguably archaic, distinction between 'factoryless' firms that engaged in production depending on whether they owned (in which case they would be classified as manufacturers) or did not own (where they would be classed as distributors) material inputs used in the production process, the Task Force on Global Production recently recommended classifying firms as Factoryless Goods Producers (FGP) if more than 50% of its value-added originates from Intellectual Property Products activities, if it has a higher than average 'trade' margin, and if it has a staff profile that is far from the norm. Further, the Task Force recommended categorizing FGP firms as manufacturers rather than distributors and considering (1) FGP output as a good, (2) output of the contractor as a good (and not a service), and (3) the international flows as general merchandise. The line between producing goods and services gets very blurry in this case. The expert group will follow with interest if reclassification of FGP firms will take place over time.

Multi-National Enterprise Statistics and Micro-Data Linking

Differentiating business and trade statistics by enterprises with inward and outward foreign direct investment (i.e. by MNE relationship) is an important firm characteristic to address firm heterogeneity in extended SUTs and their key aggregates. Moreover, MNEs that source within their resident economy differ from those that source from abroad and can show important differences in terms of productivity, growth and generation of value-added and employment.

The Expert Group agreed that additional enterprise characteristics related to globalization are to be included in the business registers to profile firm heterogeneity, in particular for large and complex enterprises. Moreover, the profiled enterprises should be linked to basic economic and trade statistics to improve data compilation in extended supply and use tables, improve the survey frame, validate survey information, compile TEC and STEC, and match goods and services at the firm level. Linking economic and trade statistics with social statistics will make microdata even more valuable, as shown for example in the Netherlands where data on jobs, turnover, added value, personnel costs, trade and products were linked across both multinationals and domestic-oriented firms. Further, the next step of statistical profiling of enterprises could go into more detailed analysis of spatial disaggregation, business models and strategies. The Expert Group emphasized that issues of confidentiality need to be addressed with respect to working with the micro-data.

Classifications

The classification of business functions can be a good tool to capture a firm's make or buy decision, and to better understand the role of business services in the production processes. So far, several countries have conducted business functions surveys, including EU member states, Canada, USA, and Republic of Korea. The 2007 and 2012 EU surveys collected international sourcing and relocation of jobs by business functions, either to foreign affiliates or to independent firms. EU is now in the process of proposing a revision of the classification of business functions which should become part of EU regulations in 2018. This revision breaks down five existing functions into further detail by – for instance - separating Research and Development (R&D) from engineering and providing more detail on ICT functions, and adds manufacturing services. If the global statistical community could agree on an international classification of business functions over the next year, this would give the EU the opportunity to implement it in its 2018 regulation.

The fifth revision of the Classification by Broad Economic Categories (BEC) will be presented at the Statistical Commission in March 2016. This revision provides a separate dimension of end-use of traded goods and services, which could be useful for the construction of SUTs. Compared to earlier versions, BEC Rev.5 added services and a "specification" dimension, which provides a distinction of generic and specified processed intermediate goods and a distinction of generic and specified (or "custom-made") services, which will help to better identify GVC-related trade.

The Expert Group agreed that the Value Chain Reference Model (VCRM) holds promise in describing the GVCs in the satellite accounting structure. VCRM tries to break down and refine the existing International Standard Industrial Classification of all economic activity (ISIC) in its use for the analysis of GVCs. The VCRM proposes four components for analyzing economic activities, namely

(1) <u>Value-adding activities or business functions</u>, which include research and product development, design, production, logistics (physical distribution and logistics management/sourcing), marketing and branding, and strategic management.

(2) <u>The supply chain</u>, which represents the unique input-output process of an industry that begins with raw materials and continues through the making of components and subassemblies, final product manufacturing, distribution and sales.

(3) <u>End-use markets,</u> which are included as a separate concept because many intermediate products feed into final products of different industries. For example, a textile fabric feeds into several industries, such as Apparel, Furniture, and Motor vehicles.

(4) <u>External supporting business environment</u>, which includes both the local to global entities that support and influence internal stakeholders. Members of the supporting business environment can be separated into six categories: (i) business, information, and technology services, (ii) education, testing, and training, (iii) government services, (iv) infrastructure and finance, (v) Non-governmental organizations (NGOs) and standards, and (vi) trade and professional organizations.

ISIC and Central Product Classification (CPC) classifications may not be specific enough to classify particular economic activities for certain GVCs and to properly build the extended national GVC industry supply and use tables. However, it is expected that sub-categories of ISIC and CPC (or similar classifications) will be maintained at national level for those cases, which will ensure the link with the existing national supply and use tables.

Other important elements of the GVC theoretical foundation are the five typologies of governance arrangements between lead firms with the intermediate and primary good producers and sourced services producers in global production chains from conception to final products in end markets describing increasing levels of explicit coordination and asymmetry in power and control between the lead firm and other firms: i) market (arm's length) relationship, ii) modular, relationship, iii) relational relationship iv) captive relationship and v) hierarchical (taking ownership relationship). These five typologies are described using three key variables:

(1) Complexity of information and knowledge on products and processes required for a transaction
(2) Extent to which this information and knowledge can be codified
(3) Supplier capabilities in relation to a transaction's requirements to meet the buyers demand

The expert group also agreed that the typology of governance arrangements in GVCs hold promise for the description of the relationships in the extended accounts.

<u>Building Global Value Chain Satellite Accounts</u>

Researchers have been able to map a number of specific GVCs in terms of economic activity and products, showing that such an exercise is possible. In particular, the GVC analyses by Duke researchers on the medical devices industries in Costa Rica and Brazil break out the stages of the GVC, namely by research and development, components manufacturing, assembly and production, distribution and marketing, and post-sales services. Similar studies

have been done for the apparel industry, the automotive industry, and tourism. GVC analyses have the potential to identify value chain "gaps" in certain countries. For instance, countries may participate in assembly but not in product development.

GVC analysis at the national level needs to be policy-relevant, in terms of analysis of jobs and skills and the impact on the domestic economy. Focusing on larger or higher-valued industries may be more attractive from a policy perspective, especially in developing countries where there may only be a few large industries as part of GVCs. More generally, considerable statistical benefits can be generated through the compilation of GVC related tables and accounts by countries in the same GVC industry. This inter-country statistical collaboration seems increasingly beneficial with the evidence of the emergence of regional fragmentation of value chain through co-location of firms. With the emerging regional pattern of global production chains (due to proximity to markets, lowering of transaction cost of explicit coordination, regional integration policies, etc.), the statistical collaboration could be limited to a restricted number of countries in a particular chain.

The Expert Group expressed concerns about the feasibility of NSOs producing GVC analyses, noting that existing data sources do not contain sufficient information to construct a GVC mapping and that such analysis can get resource-intensive. The Expert Group reiterated its concern about the confidentiality issues, especially of firm-level data.

The Expert Group encouraged collaboration between NSOs in producing extended national supply and use tables and accounts for a GVC of common interest, noting that existing micro data sources should be used to construct a GVC mapping. Such an analysis may prove resource-intensive initially but could be standardized over time as was the case for the various modules in environmental-economic accounting.

Model projects and workshops on the pilot compilations of GVC industries should share experiences in their GVC analysis, in which business, trade, national accounts and balance of payment statisticians, GVC researchers and policy makers would work collaboratively in multi-disciplinary teams. It was proposed to draft a project template for inter-country statistical collaboration on the compilation of GVC satellite accounts.

North America regional project

Regional SUTs can be developed by cooperation of multiple NSOs, as demonstrated by the North American project between Canada, USA and Mexico. This project is set up over the time span of a number of years. During this period the following project phases will be executed: (i) evaluation of the availability and consistency of data across countries (e.g. sectoral and firm classifications, years, and trade data); (ii) resolving or reconciling data gaps; (iii) development of a common framework industry classification; (iv) processing data on firm heterogeneity based on a common firm type classification; and (v) defining a structure for and producing a set of extended SUTs for each country that preserves as much commonality across countries as possible. The results of such an exercise can be checked for consistency with the TiVA database and once completed will provide a robust framework for GVC analysis. The North American regional project can be an example for other countries, noting that political will is needed and awareness of the timeline and cooperation involved.

Way forward

In the final session of the meeting some conclusions regarding the focus of the Handbook were reiterated. Aside from the general statistical framework, the Handbook should outline a set of extended, or supplemental, satellite accounts that: (1) complement the core accounts; (2) link back to core accounts (e.g., by decomposing Balance of Payment and national accounts statistics); and (3) address policy needs not met by existing statistics. This statistical framework needs to be comprehensive while also modular, to offer countries the flexibility to implement the aspects that are of greatest interest and relevance to them. The priority for NSOs should be to first focus on improving the quality of integrated business, investment and trade statistics, not forgetting the importance of resolving existing bilateral trade asymmetries and in particular better quality bilateral trade in services data, and testing of the GVC related extended tables and accounts. It was further noted that the Handbook should not reinvent the wheel and exploit existing data, indirect methods, and GVC research as much as possible.

The process of drafting the Handbook should involve an interdisciplinary team of experts consisting of national accounts, balance of payments, business and trade statisticians and experts on classifications, and should also involve GVC academics and policy makers. Further, the Expert Group explicitly noted that developing countries should be involved.

The title of the Handbook may need to change and may need to reflect both the macroeconomic perspective through a system of extended national supply and use tables and integrated economic accounts as well as the business and trade (firm) perspective through integrated business and international trade statistics.

The Expert Group agreed that
- the terms of reference will be circulated after the meeting
- the timetable for the next steps would be circulated in March
- the outline of the Handbook will be circulated with a sufficient comment period
- input for specific content will be solicited once the outline is approved, noting that the specific experiences and expertise of the members should be utilized in this context
- the Handbook would be finalized by mid-2018 for submission to the Statistical Commission in 2019
- good communication among the members of the group is needed via a website and by regularly circulating materials

In addition, the Expert Group recognized the need for an editorial board that will communicate regularly, noting that some organizations have already expressed interest in participating in it. The next meeting of the Expert Group is tentatively set for late 2016.

Annex – Agenda

Opening session

9:30 – 10:30   **Welcome**
Mr. Stefan Schweinfest, Director, UNSD

Opening Statement
Mr. Michael Connolly, CSO Ireland and Chair of the Expert Group

Background and context
Mr. Ronald Jansen, UNSD
Documentation:
- Report of the Secretary-General on international trade and economic globalization statistics (E/CN.3/2016/23)

Morning session – *Motivation*

10:30 – 13:00   **Framing the Macro and Satellite Accounts perspective to economic globalization**
Mr. Ivo Havinga, UNSD

Macro Accounts: Policy Questions
Mr. Steven Landefeld, Consultant, UNSD
Documentation:
- Developing a System of Extended International and Global Accounts, Steven Landefeld, July 2015, Presentation at UNECE Group of Experts on National Accounts
- Implications and Challenges Associated With Developing a New System of Extended International Accounts, Steven Landefeld, Aug 2014

Satellite Accounts: Policy Questions
Mr. Aaron Sydor, Deputy Chief Economist, Canada
Documentation:
- Global Value Chains: Policy and Research, Aaron Sydor, July 2015, Presentation at UNECE Group of Experts on National Accounts
- Global Value Chain analysis and Samsung Electronics, Canadian Embassy in Republic of Korea, Feb 2012

Afternoon session – *Macro Accounts* *Units, Classifications, Source data, Key aggregates and Quality*

Chair: Prof. Dale Jorgenson, Harvard University

14:30 – 17:30   **Global Input-Output tables**
Ms. Ani Todorova and Ms. Isabelle Remond-Tiedrez, Eurostat
Documentation:

- EU Multi-country Supply, Use and Input-Output Tables, Eurostat, July 2015 (ECE/CES/GE.20/2015/18)
- Full International and Global Accounts for Research in Input-Output Analysis (FIGARO), Isabelle Remond-Tiedrez, July 2015, Presentation at UNECE Group of Experts on National Accounts

Trade in Value Added
Mr. Nadim Ahmad, OECD
Documentation:
- OECD expert group on extended supply-use tables, Terms of Reference, April 2015
- Trade in value-added: concepts, methodologies and challenges (joint OECD-WTO note), 2012
- Extended Supply-Use Tables for Internationally Integrated Economic Accounts, Nadim Ahmad, July 2015, Presentation at UNECE Group of Experts on National Accounts

System of Extended International and Global Accounts (SEIGA)
Mr. Steven Landefeld, Consultant, UNSD
Documentation:
- Handbook for a System of Extended International and Global Accounts (SEIGA), Overview of Major Issues, Steve Landefeld, Nov 2015

Wednesday, 27 January 2016

Morning session – *Satellite Account by Global Value Chain sector*

9:30 – 13:00   **Typology of Global Production arrangements**
Mr. Michael Connolly, CSO Ireland
Documentation:
- Typology of Global Production Arrangements, Task Force on Global Production, July 2015 (ECE/CES/GE.20/2015/8)
- Recording Factoryless Goods Production Arrangements in the National Accounts, Task Force on Global Production, July 2015, Presentation at UNECE Group of Experts on National Accounts

Governance of Global Value Chains
Mr. Ivo Havinga, UNSD
Documentation:
- The Governance of Global Value Chains; Implications for Industrial Upgrading, Tim Sturgeon, Nov 2006, Presentation at Duke University
- The governance of global value chains (2005), Gereffi, Humphreys and Sturgeon, Review of International Political Economy

Global Value Chains analysis
Mr. Tim Sturgeon, Senior Research Affiliate at the Industrial Performance Center, MIT

Documentation:
- Global Value Chains and Economic Globalization - Towards a New Measurement Framework, Tim Sturgeon (2013), Report to Eurostat
- Trade in value added indicators: what they are, what they aren't, and where they're headed, Tim Sturgeon, VOX, May 2015

Mr. Hubert Escaith, WTO
Documentation:
- Mapping global value chains and measuring trade in tasks (2014), Hubert Escaith, in: Asia and Global Production Networks, Ferrarini and Hummels (Eds)

Afternoon session – *Satellite account: Units, Classifications, Source data*

14:30 – 17:30 **Multi-National Enterprise Statistics and Micro-Data Linking**
Ms. Sally Thompson, US BEA
Documentation:
- Identifying Heterogeneity in the Production Components of Globally Engaged Business Enterprises in the US, US BEA, July 2015 (ECE/CES/GE.20/2015/11), Paper and Presentation
- Multinationals, Offshoring, and the Decline of U.S. Manufacturing, Boehm et al, Dec 2015

Ms. Ani Todorova, Eurostat
Documentation:
- The European profiling of multinational enterprise groups and the European Enterprise Groups Register, Eurostat, July 2015 (ECE/CES/GE.20/2015/12)

Mr. Martin Luppes, Statistics Netherlands
Documentation:
- Internationalisation Monitor 2013, Statistics Netherlands, Oct 2013
- Internationaliserings Monitor 2015 3rd Qtr, Statistics Netherlands
- Global Value Chains in official business statistics, Luppes and Nielsen, 2015

Classifications
Mr. Peter Boegh Nielsen, Statistics Denmark
Documentation:
- Measuring International organisation and sourcing of business functions, Peter Nielsen, Sep 2014, Presentation at University of Hertfordshire

Mr. Ronald Jansen, UNSD
Documentation:
- Classification of Broad Economic Categories, Revision 5
- Combining the Global Value Chain and global I-O approaches, Stacey Frederick, Sep 2014, Duke University

Thursday, 28 January 2016

10:00 – 13:00   **GVC Satellite Accounts**
Mr. Ronald Jansen, UNSD
Documentation:
- Global Value Chain Analysis: Data Requirements, Gaps & Improvements with New Datasets, Gary Gereffi, July 2015, Presentation at UNECE Group of Experts on National Accounts
- Value Chain Analysis: Data Needs, Gereffi and Mayer, July 2015, Presentation at UNECE Group of Experts on National Accounts
- Costa Rica in the Medical Devices Global Value Chain, Bamber and Gereffi, Duke CGGC, Aug 2013

North American Global Value Chains
Mr. André Loranger, Statistics Canada

Automotive Satellite Account
Documentation :
- Effects of the 2008-09 Crisis on the Automotive Industry in Developing Countries: A Global Value Chain Perspective, (2010), Van Biesebroeck, J. and T. J. Sturgeon, in O. Cattaneo, G. Gereffi and C. Staritz (eds.), *Global Value Chains in a Postcrisis World*
- Mapping Global Value Chains (2013), De Backer and Miroudot, *OECD Trade Policy Papers*, No. 159

14:30 – 16:30   Terms of Reference
Next steps