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For discussion

Preliminary Report of the Working Group on Balance of Payments Statistics Relevant for Global Value Chain Analysis

Prepared by the Organisation for Economic Cooperation and Development
and the IMF Statistics Department

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ACRONYMS

APEC	Asia-Pacific Economic Cooperation
BaTIS	Balanced- Trade in Services
BOPCOM	IMF's Balance of Payments Statistics Committee
BPM6	*Balance of Payments and International Investment Position Manual,* sixth edition
CPA	Classification of Products by Activity
CPC	Central Product Classification
DI	Direct Investment
DOTS	Direction of Trade Statistics
EBOPS	Extended Balance of Payments Services
ECLAC	Economic Commission for Latin America and the Caribbean
FIGARO	Eurostat Full International and Global Accounts for Research in Input-Output Analysis
GVC	Global Value Chain
ICIOs	Inter-Country Input-Output tables
IMF	International Monetary Fund
IO	Input Output
ISIC	International Standard Industrial Classification
MNEs	Multinational enterprises
OECD	Organisation for Economic Co-operation and Development
2008 SNA	*System of National Accounts, 2008*
SPEs	Special Purpose Entities
STA	IMF Statistics Department
STEC	Services Trade by Enterprise Characteristics
SUT	Supply-Use tables
TEC	Trade by Enterprise Characteristics of goods
TiVA	Trade in Value Added
TSA	Tourism Satellite Accounts
UNECA	United Nations Economic Commission for Africa
UNECE	United Nations Economic Commission for Europe
WG	Working Group
WTO	World Trade Organization

EXECUTIVE SUMMARY

At its 2017 meeting, the IMF Committee on Balance of Payments Statistics (Committee) endorsed the creation of a Working Group (WG) [1] *on Balance of Payments Statistics Relevant for Global Value Chain (GVC) Analysis with the primary objective of: identifying components and statistics in the current balance of payments framework that are of particular relevance for the development of indicators on GVCs; and examining—building on initial experiences and ideas of country practices—how to better identify the role of multinational enterprises (MNEs) in current account transactions. This first Preliminary Report covers the deliverables of the first of the WG's two-year mandate. It presents the findings of the WG in its first phase, and its proposals for the second-year work program.*

Introduction

Policy demand for more statistical information on GVCs, including on the role of MNEs in these processes, has grown significantly in recent years. A key characteristic of GVCs relates to international fragmentation of production, that is the slicing and dicing of production activities into tasks that can be located within a global production process, rather than a national factory. This fragmentation of production has created challenges in interpreting current trade-related statistics.

Understanding the true nature of GVCs has perhaps never been more important, and not just because of their predominance in international trade. The recent backlash to globalization seen in many economies has heightened the need for sound evidence for policy making that may better substantiate whether the benefits of global trade work for all and not just the few.

In an era of increasingly complex global production systems, traditional international trade statistics are not sufficient to describe the full chain of international production. Indicators on GVCs—including Trade in Value Added (TiVA) indicators—aim to fill this gap and increase our understanding of the process of globalization, by providing insights into the value added by each country and industry in the production of goods and services that are traded and consumed worldwide. Indicators on GVCs are typically derived from Inter-Country Input-Output tables (ICIOs), which are created by combining national Supply-Use tables (SUT) or Input-Output (IO) tables with international bilateral merchandise and services trade statistics, to develop a complete global matrix of country-by-industry input-output tables.

Balance of payments statistics provide an excellent source of information on international transactions and hence GVCs. Moreover, the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)* also provides a very useful

[1] The WG's membership is presented in Annex I.

framework for additional information that would be very helpful in providing exactly those bridges between the detailed trade statistics and accounting frameworks that can improve the quality of TiVA related statistics. While the balance of payments statistics required to improve the quality of GVC estimates are part of the current balance of payments accounting framework and often explicitly referenced in *BPM6*, they typically involve auxiliary tables or supplementary items, or more detailed (geographical or product) breakdowns that are recommended in the *BPM6* but not included in its standard components, and therefore their relevance may not be immediately clear to all compilers.

International and national statistical efforts to develop statistics for GVC analysis are growing. Considering the growing analytical use of, and policy demand for, indicators of GVCs, there are many regional and global initiatives to construct inter-country input-output tables from which GVC indicators are derived. Examples include the Eurostat Full International and Global Accounts for Research in Input-Output Analysis (FIGARO) initiative, the North American TiVA initiative, the *Asia-Pacific Economic Cooperation* (APEC) TiVA initiative, the Economic Commission for Latin America and the Caribbean (ECLAC) Latin American IO tables, as well as emerging work in Africa led by United Nations Economic Commission for Africa (UNECA). In addition, the United Nations Economic Commission for Europe (UNECE) *Guide to Measuring Global Production* (2015) addresses some aspects of the GVCs indicators; and the challenges faced in compiling statistics related to the globalization process such as manufacturing services, merchanting and factory-less goods production.

In line with its agreed first year work program (Phase I), the WG work focused on identifying the main balance of payments statistics that are relevant for the development of GVC indicators. The WG provided an overview of how statistics for GVC analysis are currently developed, highlighting the individual balance of payments statistics that are particularly relevant in this process and where improved and more granular data collection should be encouraged.

Key Findings

- **In compiling the balance of payments items related to trade in goods and trade in services, several adjustments to international merchandise trade data are typically introduced to align these measures of physical flows with the balance of payments concept of change of economic ownership.** A better understanding of *which products* and which *partner countries* are particularly affected by the transition from physical move to change of economic ownership would be highly beneficial. This relates in particular to the merchandise trade transactions related to merchanting, to manufacturing services on inputs owned by others and goods (sent abroad) for processing. Information on other adjustments that are made to merchandise trade statistics in the context of the compilation of balance of payments statistics, such as for example related to CIF-FOB margins, are also highly relevant to ensure that in

compiling indicators on GVCs, these detailed statistics are well-aligned with balance of payments and national accounts aggregates without introducing product or partner country biases. *BPM6* provides guidelines for providing such information, and certain variables are already part of the standard components (although not with breakdowns by partner/product, which are particularly encouraged).

- **Two additional challenges arise when combining detailed trade in services statistics collected for balance of payments, with those in SUTs.** The first challenge is the still limited number of countries that can provide geographical information for their exports and imports of trade in services. The second challenge relates to the differences in the services classifications used in the balance of payments and those in national accounts (CPC or CPA), which are particularly relevant for the extended balance of payments services (EBOPS) transactor-based items for Travel, Construction, and Government goods and services. While these services may not be among those immediately identified with GVCs, a separate identification of the share of goods in the total transaction value as well as a breakdown of the types of goods concerned are important for generating more accurate TiVA statistics.

The WG concluded this first preliminary report and made preliminary recommendations, for which it is seeking endorsement by the Committee at its 2018 meeting.

Preliminary Recommendations

The WG has developed a list of additional balance of payments statistics, building on the existing *BPM6* framework, including the memorandum and supplementary components, that would be of use for the compilation of GVC indicators. In addition to all standard components identified in *BPM6* (see *BPM6*, Appendix 9) mainly for goods and services, compilers are encouraged to provide full and complete information on:

1. All standard components as identified in *BPM6* (Appendix 9) for the goods account, with **a breakdown of the main products involved**. This includes in particular:

    - Re-exports (1.A.a.1.1)
    - Goods acquired under merchanting (negative credits) (1.A.a.2.1)
    - Goods sold under merchanting (1.A.a.2.2)

2. A reconciliation table between merchandise trade statistics and balance of payments trade in goods statistics, along the lines of *BPM6* table 10.2, and to include, where possible, the main products and/or partner countries involved. Table 1 summarises these suggestions. (particularly applicable to countries

where manufacturing services, merchanting and other complex global production arrangements are important).

3. Balance of payments trade in goods statistics, including those identified by CPC or CPA, and partner country, consistent with the National Accounts statistics used in constructing SUT tables (particularly in countries where transactions related to GVCs and global production arrangements are important).

4. Supplementary breakdown of the travel item as identified in the *BPM6* standard components. This includes in particular the goods and services purchased:

    - Goods (1.A.b.4.0.1)
    - Local transport services (1.A.b.4.0.2)
    - Accommodation services (1.A.b.4.0.3)
    - Food-serving services (1.A.b.4.0.4
    - Other services (1.A.b.4.0.5), of which
        i. Health services (1.A.b.4.0.5.1)
        ii. Education services (1.A.b.4.0.5.2)

5. Geographical breakdowns for trade in services statistics, starting with the 12 main EBOPS categories (and total services trade) and prioritising breakdowns for more detailed services category according to their relevance and importance in a country's international trade. This includes a geographical breakdown of the balance of payments items identified in (4) above.

Proposed Phase 2 Work Program

As part of its work program during the Phase 2 of its mandate, the WG will:

- Develop GVC reporting template.
- Conduct stocktaking survey of current GVC data availability and potential feasibility (by OECD and IMF).
- Identify the role of MNEs in current account transactions, including through further enhancements to the linkages between trade and business registers, to develop Trade by Enterprise Characteristics (TEC) for both goods and services; and

- Develop additional guidance that can help to identify merchanters and factoryless producers, building on existing efforts in this area.

Questions to the Committee

1. *What are the Committee members' views on the preliminary recommendations of the WGGVC?*

2. *Do Committee members have any views on other balance of payments components that would be useful for the compilation of GVC indicators?*

3. *With a view to considering the possibility of collecting and reporting the information listed in the Recommendations section above, what are the Committee's views on (i) developing reporting templates (by the WG); (ii) challenges to data reporting; and (iii) initiating a stocktaking survey of current data availability and potential feasibility (developed by the WG and conducted by the OECD for OECD economies and the IMF for non-OECD economies)?*

4. *Do Committee members agree to the proposed work program for Phase II?*

Preliminary Report of the IMF BOCOM Working Group on Balance of Payments Statistics Relevant for Global Value Chain Analysis[2]

I. INTRODUCTION

1. Policy demand for more statistical information on global value chains (GVCs), including on the role of multinational enterprises (MNEs) in these processes, has grown significantly in recent years. A key characteristic of GVCs relates to international fragmentation of production, in other words the slicing and dicing of production activities into tasks that can be (and are) located within a global production process, rather than a national factory. While larger firms (including MNEs, and indeed firms that have become MNEs because of GVCs) have been at the forefront of this but smaller firms are also affected, either because GVCs present opportunities for smaller firms to join global supply chains or because of exposure to global competition from larger (and typically cheaper) operators.

2. This fragmentation of production has created challenges in interpreting current trade related statistics. In a world of GVCs, the benefits of exports to an exporting economy are significantly less than implied by gross trade data if those exports require significant foreign content, as would be the case for example for a low-labor cost country engaged in assembling goods for developing economies. The nature of fragmentation, in turn, can also create a distorted view of who really trades with whom, which means that the current (often politically sensitive) measures of bilateral trade balances based on gross trade data may be hampering optimal policy making.

3. Understanding the true nature of GVCs has perhaps never been more important, and not just because of their predominance in international trade (with trade in intermediates, and trade by MNEs making up the lion's share of overall trade), the recent backlash to globalization seen in many economies has heightened the need for sound evidence for sound policy making that may better substantiate whether the benefits of global trade work for all and not just the few.

4. As balance of payments statisticians are well-placed to contribute to meeting these demands, the IMF Balance of Payments Statistics Committee (BOPCOM) agreed at its meeting of October 2017, to create a Working Group (WG) led by OECD in coordination with the IMF. The work of the Group is expected to take two years with the work split into two phases, as agreed below.

- Phase I – identify components and statistics in *BPM6*; that are of relevance for the development of indicators on GVCs (to be delivered at the 2018 Committee meeting); and

[2] The WG's membership is presented in Annex I.

- Phase II – examine, building on initial experiences and ideas of country members, how to better identify the role of MNEs in current account transactions (to be delivered at the 2019 Committee meeting).

5. This note presents the findings of the WG concerning the first phase of the work. The note begins with a short overview of how statistics for GVC analysis are currently developed, highlighting the individual balance of payments statistics that are particularly relevant in this process and where improved and more granular data collection should be encouraged. The final section of the document includes a series of potential follow-up actions for the Committee's approval.

6. It is important to note that considerable progress has been made in recent years in both *BPM6* and the *System of National Accounts 2008 (2008 SNA)* to try to address these challenges. Indeed, the recommendations on goods for processing (manufacturing services) and merchanting were designed to better reflect the reality of globalization and GVCs. However, their implementation across countries has involved significant compilation challenges[3] and has highlighted the need for guidance on other types of global production arrangements (notably factory-less goods production), as described in more detail by the United Nations Economic Commission for Europe (UNECE) Guide to Measuring Global Production (2015).[4]

7. Moreover, whilst the *BPM6* recommendations have helped to provide improved insights, their implementation has also created significant challenges in compiling GVC-related indicators, which are partly dependent on measures of international trade (in particularly merchandise trade) that do not follow the change of economic ownership principle that was reinforced in the updated manuals. Many of the balance of payments components identified below aim at providing the relevant data that can 'bridge' the gap between these two concepts, thereby providing a richer source of information on the relevance of these transactions (for example, merchandise trade transactions involving goods owned by others for the purposes of processing, are removed when compiling trade in goods statistics on the *BPM6* terminology, but the product composition and trading partners involved can provide important insights for policy makers to better understand global production (in addition to supporting the analysis of, and statistics on, GVCs).

II. BACKGROUND: STATISTICS FOR GVC ANALYSIS

8. In an era of increasingly complex global production systems, traditional international trade statistics are not sufficient to describe the full chain of international production (from natural resources to end product), to provide insights into the role of individual countries,

[3] See e.g. the online interactive (and updated) version of the MSITS 2010 Compiler's Guide: https://unstats.un.org/wiki/display/M2CG/MSITS+2010+Compilers+Guide+Home, which describes these challenges and provides country practices.

[4] See also annex A.

industries and types of enterprises (including MNEs) in this process, and to correctly identify the interdependencies—and associated risks—in the global economic system.

9. This lack of information may result in imperfect policies: export promotion strategies may target the wrong sectors (with consequences for competitiveness), protectionist policies can hurt domestic upstream industries, and the misunderstanding of the relative importance of bilateral trade partners may result in an imperfect assessment of the impact of international macro-economic shocks on national and international supply chains.

10. Indicators on GVCs—including Trade in Value Added (TiVA) indicators—aim to fill this gap and increase our understanding of the process of globalization, by providing insights into the value added by each country and industry in the production of goods and services that are traded and consumed worldwide. Examples of the most frequently used indicators derived from TiVA frameworks are (see also Ahmad et al., 2017):

- The import content of exports, which describes how much foreign (non-domestically produced) value added is embodied in exports, and where this value added was created (which country and industry);

- The domestic value-added content of exports, including break-downs by value added that is exported directly, exported indirectly (i.e., upstream domestic input, including services, provided to exporting industries), and re-imported domestic value added (domestic production that has already crossed the border at least two times before being exported);

- The (share of) domestic production that is consumed abroad—either exported directly or indirectly—with a breakdown by the country of final demand;

- The domestic consumption of value added produced abroad, with a breakdown by country and industry of origin.

11. Indicators on GVCs are typically derived from Inter-Country Input-Output tables (ICIOs), which are created by combining national Supply-Use tables (SUT) or Input-Output (IO) tables with international bilateral merchandise and services trade statistics, to develop a complete global matrix of country-by- industry input-output tables.[5] ICIOs are described in more detail in Box 1, but the key aspect of the compilation involves the breakdown of exports and imports (by product) as reported in national SUTs, by geographical partner, in

[5] Note that while all of the indicators that can be derived from a global table can also be derived from purely national tables, national tables will not be able to provide insights on the chain used to create imports nor on the use of exports as upstream inputs into global supply chains. As such they cannot provide a complete view of downstream or upstream dependencies, for example the ultimate source of final demand driving a country's exports, nor of the nature of bilateral trade balances. In addition, because a single-country framework cannot identify re-imported domestic value added, the estimates of the import content of exports based on a single-country model will be higher than those based on global tables.

order to link the SUT from one country to that of all others involved in the global chain of production.

12. Important in this process, obviously, is to ensure the conceptual and empirical consistency between on the one hand, National Accounts statistics (the SUTs and IOs), and on the other hand, the detailed merchandise trade and services trade statistics. This would be a relatively trivial task if international trade statistics were available, by detailed product (Classification of Products by Activity (CPA) / Central Product Classification (CPC)) and by partner country, according to the national accounts/balance of payments accounting concepts (and if trade asymmetries were all resolved).

13. However, unfortunately, this is not typically the case. For trade in goods, detailed information on trade by product and partner is available in the form of merchandise trade statistics, but important conceptual differences exist with the National Accounts /Balance of Payments accounting frameworks, particularly for transactions related to manufacturing services and merchanting.

14. For trade in services transactions, much less information is typically available in terms of products and partners, and while less severe than in the context of trade in goods, differences between Extended Balance of Payments Services (EBOPS) and CPA/CPC classifications, notably for services trade classified by transactor (travel, construction, government goods and services), also make aligning trade in services statistics with the exports and imports of services in national accounts a challenge.

Box 1. Inter-Country Input-Output Tables

An Inter-Country Input Output (ICIO) table from which indicators on GVCs can be derived is typically constructed by combining two sets of national data sources, including on the one hand, national Supply-Use (SUTs) and/or Input-Output (IO) tables, and on the other hand, detailed bilateral trade statistics by product and partner (merchandise and services).

National Supply tables provide the statistical information that describes which industry produces which products, and which products are imported. National Use tables subsequently indicate how these products are used as either intermediate inputs in the production process, or to fulfil final demand (e.g., consumption, capital formation, exports), ideally with a detailed breakdown between the use of domestically produced products and imported products. Combined, Supply and Use tables can be converted into a symmetric industry-by-industry, or product-by-product, national input-output table, which in turn allows for the calculation of a Leontief inverse matrix. The Leontief inverse shows how much inputs are needed, both directly and indirectly, to generated one unit of output (be it destined for export or domestic consumption) and forms the core of all subsequent indicator calculations.

A single national SUT or IO table is however not sufficient for the analysis of international production structures. To include an international dimension to such structural analysis, the exports column and import flow matrix of a single country need to be broken down by trading partner, and subsequently linked to the SUTs or IOTs of those partners. An Inter-Country Supply-Use or Input-Output table provides the framework to achieve this. A simplified outline of an inter-country Input-Output table is depicted below, outlining how production in industries 1, 2, and 3 in countries A, B and C (rows) is used by those same industries and countries (columns), as well as for final demand. In the column dimensions, for each country and industry, gross output is the sum of all the above items (intermediate inputs, taxes-/-subsidies on products, CIF-FOB adjustments (resident-provided transport services) and value added).

Figure 1. Simplified Outline of A 3-Country Input-Output Table

		Country A			Country B			Country C			Final Demand		
		Sector 1	Sector 2	Sector 3	Sector 1	Sector 2	Sector 3	Sector 1	Sector 2	Sector 3	Country A	Country B	Country C
Country A	Sector 1												
	Sector 2												
	Sector 3												
Country B	Sector 1												
	Sector 2												
	Sector 3												
Country C	Sector 1												
	Sector 2												
	Sector 3												
Taxes less subsidies on products													
Cif-fob adjustments													
Value added	Labour compensation												
	Operating surplus												
	Taxes less subsidies on production												
Output													

15. In all instances, the absence of national information means that estimations have to be made. In its most crude form, this leads to for example using the geographical breakdown observed in merchandise exports for a certain product, as a key to break down the exports of that products observed in the national SUTs. This becomes particularly problematic when differences between merchandise trade and SUT trade, for example due to manufacturing services transactions, are significant, as it is clear that these differences will not be equally relevant for all partner countries. Not accounting for such differences results, ultimately, in over- or underestimation of the role of different partner countries on a value-added basis.

III. BALANCE OF PAYMENTS STATISTICS USEFUL FOR GVC

16. Balance of payments statistics provide an excellent source of information on international transactions (and hence GVCs) (see *BPM6* 1.32). Moreover, the *BPM6* also provides a very useful framework for additional information that would be very helpful in providing exactly those bridges between the detailed trade statistics and accounting frameworks that can improve the quality of TiVA related statistics. Making such information publicly available (as detailed below), particularly as these data often already exist internally as part of the process of compiling balance of payments statistics, is one of the key recommendations of the WG.

17. This contribution to improving quality becomes all the more relevant in light of the growing analytical use of, and policy demand for, indicators of GVCs, but also in light of the growing number of regional and global initiatives that construct inter-county input-output tables from which GVC indicators are derived. Examples include the Eurostat Full

International and Global Accounts for Research in Input-Output Analysis (FIGARO) initiative, the North American TiVA initiative, the Asia-Pacific Economic Cooperation (APEC) TiVA initiative, the Economic Commission for Latin America and the Caribbean (ECLAC) Latin American IO tables, as well as emerging work in Africa led by United Nations Economic Commission for Africa (UNECA), to name but a few examples. In the absence of national statistics, each initiative has to develop its own estimations to align trade statistics with national accounts information. This risk adding inconsistencies between the various initiatives—even if mutual coordination is high on the agenda and facilitated by the OECD—to the biases already there due to a lack of data.

18. This section specifies in more detail which balance of payments components would be most useful to avoid these problems and improve the quality of GVC estimates. While the statistics are part of the current balance of payments accounting framework and often explicitly referenced in *BPM6*, they typically involve auxiliary tables or supplementary items (*BPM6* 1.15(c)), or more detailed (geographical or product) breakdowns that are recommended in *BPM6* but not included in the 'Standard Components', and therefore their relevance may not be immediately clear to all compilers. Since GVC indicators are compiled with an annual frequency, the balance of payments statistics referenced would also be needed only on an annual basis (i.e., not monthly or quarterly).

19. This note focuses exclusively on improvements related to Phase 1, restricting recommendations, in the main, to balance of payments statistics in the current account (particularly trade in goods and services). However, looking forward to Phase II, an important dimension that is useful to stress already concerns the importance of more information on the actors involved in international trade. As noted above, recent manuals have provided aspects of this importance through recommendations on manufacturing services and merchanting, which are oriented towards how firms produce goods and services, as opposed to the more traditional view of what products are traded. Factoryless goods producers have also been the focus of significant investigations in countries in recent years, and indeed in the UNECE handbook mentioned above. One other important dimension where better quality information is essential concerns of MNEs. There is already a significant body of work looking at improving the quality of MNE data which will form part of the report developed by the Group in its second phase. Notwithstanding, nor prejudging, the conclusions of Phase II, it is clear that better quality information on direct investment flows are essential in understanding GVCs, and better understanding the production-trade-investment nexus, and so a series of recommendations calling for better quality data here are also included below.

A. Trade in Goods

20. In compiling the balance of payments statistics related to trade in goods, a number of adjustments to international merchandise trade data are typically introduced in order to align these measures of physical flows with the balance of payments concept of change of

economic ownership between residents and non-residents (as also used in the context of National Accounts statistics, including SUTs).

21. As explained above, a better understanding of which products and which partner countries are particularly affected by the transition from physical move to change of economic ownership would be highly beneficial in making sure that when, in the process of creating international SUTs and IO tables, detailed merchandise trade statistics (by product and partner) are used to disaggregate exports and imports in national accounts statistics, no biases are introduced as a result of proportionality assumptions (which are necessary in the absence of such more detailed data).

22. The relevance of having in any case the totals for such adjustments (by type of adjustment), as well as partner and product dimensions, was already highlighted for merchandise trade transactions related to merchanting and manufacturing services on inputs owned by others and goods (sent abroad) for processing, but equally play a role for other adjustments. For example, the transport and insurance services associated with international merchandise trade (CIF-FOB margins) are rerouted to the trade in services account in balance of payments and National Accounts frameworks. The size of this rerouting does however differ by product and by trading partner. Additional information on the total CIF-FOB margin, and its breakdown by partner/product would therefore be another very useful balance of payments element in the context of developing GVC indicators. Such information would also be helpful to improve the balanced (i.e., asymmetries reconciled) view of international merchandise trade required for the creation of an inter-country SUT or IO necessitates first of all a common valuation of transactions (FOB).[6] In the absence of publicly available data for all but a handful of countries, OECD currently estimates such margins (Fortanier and Miao, 2017), which are also used in the IMF's Direction of Trade statistics (DOTS) (Marini et al., 2018).

23. *BPM6* provides various guidelines to compilers to provide such information, and certain variables are already part of the 'standard components' (even if not with breakdowns by partner/product). For example, paragraph *BPM6* 10.15 encourages balance of payments compilers to break down trade in goods by product to aid with further analysis, while paragraph 10.34 encourages the adjustments of imports from CIF to FOB to occur at an as detailed level as possible. Overall, paragraph 10.55 identifies that the production and publication of a reconciliation table between merchandise trade and balance of payments trade (such as for example given in *BPM6* Table 10.2) is good practice.

[6] The Balanced Merchandise Trade Statistics also adjust for a variety of other factors that cause asymmetries, including for example product misclassifications, country-specific issues, confidential trade (either by product or partner), and re-exports (this far mainly Hong Kong). In the latter case data are adjusted in such a way that trade-flows reflect the consignment principle (and not the country of origin principle which is the basis for import duties), in order to correctly reflect the important role of trading hubs. This also adequately considers that re-exports involve the exports of imports that have undergone a change in economic ownership to a resident of the re-exporting economy. (see also https://stats.oecd.org/Index.aspx?DataSetCode=BIMTS_CPA)

Encouraged Balance of Payments Statistics on Trade in Goods

24. Based on the above considerations, the WG has developed a list of additional balance of payments statistics, building on the existing *BPM6* framework, including the memorandum and supplementary components, that would be of use for the compilation of GVC indicators In addition to **all standard components of goods** identified in *BPM6* (see *BPM6*, Appendix 9), compilers are encouraged to provide full and complete information on:

I. All standard components as identified in *BPM6* (Appendix 9) for the Goods account, with, ideally, a **breakdown of the main products involved.** This includes in particular:

- Re-exports (1.A.a.1.1)
- Goods acquired under merchanting (negative credits) (1.A.a.2.1)
- Goods sold under merchanting (1.A.a.2.2)

II. A reconciliation table between merchandise trade statistics and balance of payments trade in goods statistics, along the lines of *BPM6* table 10.2, focusing in particular on the changes with the largest effects, and to include, where possible, the main products and/or partner countries involved. Table 1.1 summarises these suggestions (particularly applicable to countries where manufacturing services, merchanting and other complex global production arrangements are important).

III. Balance of payments trade in goods statistics, including those identified by CPC or CPA, and partner country, consistent with the National Accounts statistics used in constructing SUT tables (particularly in countries where transactions related to GVCs and global production arrangements are important).

Table 1. Goods: Encouraged Additional Information in Support of the Development of GVC Indicators

Encouraged Balance of payments adjustment (total values)	Geographical and/or product breakdown
CIF/FOB adjustment (10.34) n.a.	Yes, and ideally both.
Goods acquired from other economies for processing abroad (10.65(b)) n.a.	
Goods sold abroad after processing in other economies (10.66(b)) n.a.	
Goods sent abroad or returned after processing without change of ownership (10.22(f))	
Goods acquired under merchanting (negative credits) (10.44(a)) n.a.	
Goods sold under merchanting (10.44(b)) n.a.	
Goods changing ownership in customs warehouses or other zones (10.25)	
Goods procured in ports by carriers (10.17(d))	Only when totals are significant, and with a focus on the most relevant products/partners
Fish catch, minerals from the seabed and salvage sold from resident-operated vessels (10.17(e))	
Goods changing ownership entering / leaving territory illegally (10.17(i) / (j))	
Goods lost or destroyed in transit (10.17(m))	
Migrants' personal effects (10.22(b))	
Goods imported for construction projects by nonresident enterprises (10.22(d))	
Goods for repair or storage without change of ownership (10.22(e))	
Returned goods (10.22(i))	
High-value capital goods, if delivery differs from change of ownership (10.28)	
Nonmonetary gold (10.50)	

Source: Based on *BPM6* Table 10.2.

B. Trade in Services

25. Unlike for goods, no major conceptual differences exist at the total level between the exports and imports of services included in the balance of payments and those included in National Accounts. Two key challenges arise when combining detailed (by EBOPS and partner) trade in services statistics collected in the context of the Balance of Payments, with those in SUTs.

26. The first challenge is the still limited number of countries that are able to provide geographical information for their exports and imports of trade in services. When such information is not available, it has to be estimated (e.g., the OECD-WTO Balanced Trade in Services (BaTIS) database).[7] In light of the growing importance of services for both domestic economies and international trade, those countries that currently do not have geographical breakdowns are encouraged to develop them, starting with the 12 main EBOPS categories (and total services trade) and prioritizing breakdowns for more detailed services category as per their relevance and importance in a country's international trade. Obviously, these

[7] http://www.oecd.org/sdd/its/balanced-trade-in-services.htm

statistics are not only relevant for the compilation of GVC indicators, but also key statistics in their own right, and provides important information to policy makers, particularly for negotiations in international trade in services within the framework of international agreements.

27. The second challenge relates to the differences in the services classifications used in the Balance of Payments and those in national accounts (CPC or CPA), which are particularly relevant for the EBOPS transactor-based items for Travel, Construction, and Government goods and services, which capture not only services but also goods, which are rerouted to the goods product categories in the National Accounts.

28. While these services may not be among those immediately identified with global value chains, a separate identification of the share of goods in the total transaction value as well as a breakdown of the types of goods concerned are important for generating more accurate TiVA statistics. For example, Travel is reported in balance of payments as a service but is specified by product of expenditure—including goods and services—in the National Accounts. In creating an inter-country SUT or IO, the geographical breakdown of travel services therefore has to be attributed to a number of different products, which is made difficult by the fact that only very few countries provide an explicit breakdown of these expenditures (either non-resident expenditures in the compiling economy, or resident expenditures abroad) by product in their SUTs, and that expenditure patterns may differ across tourists from different countries.

29. Work is ongoing to improve this, particularly in the context of Tourism Satellite Accounts (TSA). However, information from balance of payments compilers on the types of products that are purchased in the context of travel, with a geographical breakdown, is very relevant in this context, in particularly for countries where travel is important. This follows the suggested alternative presentation for travel in *BPM6* (*BPM6* 10.95), to include a breakdown into Goods, Local transport services, Accommodation services, Food-serving services, and Other services (including Health services and Education services), to improve alignment with SUTs (and the TSA).

30. Likewise, information on the share of travel that is related to business (which is considered intermediate consumption) and the share that is related to personal travel (final consumption) would be very helpful as construction of an ICIO requires breaking down international trade by use category; while the Use table (of the importing country) typically provides this information by product, this is not available for travel (being a transactor-based and not product-based services item).

31. The same arguments hold for Construction and for Government goods and services, although these services categories are typically smaller, and the issues therefore less pertinent, than for Travel.

32. In addition, more information on goods embodied in services trade, particularly travel, would be useful in and of itself to support more in-depth analysis of tourism related industries. For example, the recently created OECD WG on Tourism Statistics focuses nearly entirely on measuring the direct and indirect value added implications of tourism using a value chain approach, reflecting the growing demand for improved estimates of the direct and indirect benefits of tourism, in particular for recipient countries, in the light also of the growing importance of imports (including in products and souvenirs sold to tourists) and the role that foreign-owned hotel chains sometimes play in countries' tourism industry.

Encouraged Balance of payments statistics on Trade in Services

33. Based on the above considerations, the WG has developed a list of additional balance of payments statistics, building on the existing *BPM6* framework, including the memorandum and supplementary components, that would be of use for the compilation of GVC indicators. In addition to **all standard components of services** identified in *BPM6* (see *BPM6*, Appendix 9), compilers are encouraged to provide full and complete information on:

I. Supplementary breakdown of the Travel item as identified in the *BPM6* standard components. This includes in particular the goods and services purchased:

- Goods (1.A.b.4.0.1)
- Local transport services (1.A.b.4.0.2)
- Accommodation services (1.A.b.4.0.3)
- Food-serving services (1.A.b.4.0.4
- Other services (1.A.b.4.0.5), of which
    i. Health services (1.A.b.4.0.5.1)
    ii. Education services (1.A.b.4.0.5.2)

II. Geographical breakdowns for their trade in services statistics, starting with the 12 main EBOPS categories (and total services trade) and prioritising breakdowns for more detailed services category as per their relevance and importance in a country's international trade. This includes a geographical breakdown of the balance of payments items identified above.

C. Direct Investment Income and The Role of MNEs

34. Most of the statistical work on GVCs discussed above looks at GVCs through a trade-and-production prism. However, to fully understand GVCs, a more comprehensive

approach is required, in particular by paying more attention to the different types of enterprises engaged, and the way in which they control and coordinate activities in production networks.

35. Multinational enterprises are one of the main drivers of globalization and of the creation of global value chains. They link and organize production across countries and are an important channel for exchanging capital, goods and services, and knowledge across countries. Direct investments (DI), both inward and outward, are important to many economies, and MNEs account for a substantial part of international trade flows—both from trade within the firm (affiliated trade) and with arms-length trading partners (unaffiliated trade).

36. Given their important role, better quality information on MNEs is a pre-requisite for having a better view of GVCs. The second phase of the work program of the IMF BOPCOM WG on balance of payments statistics for GVC analysis will address options to better identify the role of firms, including MNEs in current account transactions, including through the enhanced take up of, and enhancements in recent efforts in, the linking of trade and business registers, to develop statistics on Trade by Enterprise Characteristics for goods and Services (TEC/STEC). Such efforts can provide unique insights, without adding to business burdens, on the actors in global value chains: the firms involved, their size, what they export, and indeed more recently their ownership structures. Linking tools such as these could also provide scope to develop more granular views on the roles of specific actors, notably processing firms, and may provide vehicles to better understand the role of merchanters and factoryless producers (notwithstanding the need to continue to develop guidance that can help identify these firms in statistical registers).

37. However, as mentioned above, whilst much of the work on specific actors, including MNEs, will be tackled in Phase II, it is important to recognize that the balance of payments already provides significant scope to improve the quality of related indicators used in GVC analyses. This is particularly the case with regards to FDI income, where countries report significantly less information than on financial transactions and positions, and countries should be encouraged to report as much detail as possible, including industry (International Standard Industrial Classification (ISIC)) breakdown of such income flows (as suggested in *BPM6* 6.50).

38. An important empirical question in this respect, relates to how the value added that is generated by MNEs is distributed. While one of the main contributions of TiVA is the splitting of exports into domestic and foreign (i.e., imported) value added parts, only some parts of the domestic value added created by foreign-owned firms are expected to remain in the economy; these ‘sticky’ parts include wages and taxes. However, the other part—the operating surplus or profits—is typically less ‘sticky’ because it accrues to the foreign parent. It is the foreign parent that decides whether these profits are reinvested in the affiliate or are repatriated to the home country.

39. Moreover, the line between international trade in services and property income is becoming increasingly blurred, as intra-MNE transactions, in particular related to intangible assets are often interchangeably recorded as international trade in services or as primary income payments, often driven by fiscal optimization.[8] Considering how to highlight that direct investment income is the result of the provision of goods and services internationally by MNEs, just as the trade statistics by enterprise characteristics do, could be explored in Phase II. Such a presentation could shed light on this blurring between direct investment income and trade in services as well.

40. Further, the Working Group could explore how the proposal by the IMF Task Force on SPEs for the separate identification of SPEs within cross-border statistics could be used to shed further light on the role of MNEs. The work in Phase II can also benefit from on-going efforts of the OECD Expert Group on Extended SUTs, which are of high relevance to the understanding the role of MNEs in GVCs.

[8] In principle, national tax laws are designed to ensure that a geographic unit of an MNE provides compensation to a unit in another geographic area each for intangible assets transferred to it. Nevertheless, ambiguities in tax laws may provide scope for MNEs to optimize their tax burden using the kinds of trade-offs described in this paragraph.

ANNEX I. MEMBERSHIP OF THE WORKING GROUP ON BALANCE OF PAYMENTS STATISTICS RELEVANT FOR GLOBAL VALUE CHAIN

(As of October 2018)

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ANNEX II. TYPOLOGY OF GLOBAL PRODUCTION ARRANGEMENTS AND TRANSACTIONS INVOLVED

Description of production process from point of view of domestic entity which represents the principal	*Entities involved*	*Economic activity*	*ISIC Industry*	*Economic ownership of*			*Type of output*	*International transactions related to production process*
				Materials	*Intellectual Property*	*Output*		
Case A. Goods sent abroad for processing	Domestic (Principal)	Manufacturing	Manufacturing	X	X	X	Goods	Record the processing fee as an import of a manufacturing service. Record materials sent for processing as imports of goods if purchased abroad. Exclude materials sent for processing from exports of goods if purchased in the domestic economy. Record the output of manufactured goods as exports of goods if sold abroad. Exclude the output of manufactured goods from imports of goods if sold in the domestic economy.
	Foreign Supplier	Manufacturing service provider	Manufacturing				Services	Record processing as exports of manufacturing services. Exclude materials received for processing from imports of goods if shipped from an economy different from that of the supplier. Record export of materials if bought in the economy of the supplier. Exclude the output of manufactured goods from exports of goods if not sold in the economy of the supplier. Record import of goods if sold in the economy of the supplier.
Case B. Goods under merchanting	Domestic	Merchanting	Trade			X	Services (Margin on Goods)	Record the purchase of a good under merchanting as a negative export, and the subsequent sale as a positive export, of goods. The difference between the two represents the trade margin as output of the merchant. If the physical form of the goods is changed during the period the goods are owned, as a result of manufacturing services performed by other entities, then the goods transactions are recorded under general merchandise rather than merchanting.
	Foreign Supplier	Manufacturing	Manufacturing	X	X		Goods	Record the output of the supplier as an export of goods.
Case C. Factoryless goods production (*according to the current accounting standards*)	Domestic (Principal)	Merchanting	Trade		X	X	Services (Margin on Goods)	As under B
	Foreign Supplier	Manufacturing	Manufacturing	X			Goods	As under B
Case D. Fragmenting part of production of services, IPPs	Domestic (Principal)	Production of services	Appropriate service Industry		X	X	Services	Record purchase from foreign suppliers as imports of services (by type). If the principal sells the service abroad, record gross value in exports of services (by type).
	Foreign Supplier	Production of services	Appropriate service Industry				Services	Exports of services (by type)
Case E. Fragmenting part of production of services, excluding IPPs	Domestic (Principal)	Production of services	Appropriate service Industry			X	Services	As under D
	Foreign Supplier	Production of services	Appropriate service Industry				Services	As under D
Case F. Subcontracting production of services	Domestic (Principal)	Purchase and sale of service without any significant transformation in between	Appropriate service Industry			X	Services	As under D
	Foreign Supplier	Production of services	Appropriate service Industry				Services	As under D
Case G. Direct Investment Enterprise not directly engaged in producing goods	Domestic	Financial and business services	Section M				Services	None
	Foreign Supplier	Manufacturing	Manufacturing	X	X	X	Goods	Exports of goods
Case H. Direct Investment Enterprise not directly engaged in producing services	Domestic	Financial and business services	Section M				Services	None
	Foreign Supplier	Production of services	Appropriate service Industry	X	X	X	Services	Exports of services

Source: UNECE (2015) *Guide to Measuring Global Production*, Table 2.1

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