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Agenda item: 2.b

Globalisation and the Sectoral Accounts Framework

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Introduction

The discussion on globalisation in the context of national accounts has been shaped by two needs. The need to explain the process, and the need to address the impact that globalisation has on key economic indicators drawn from the system of national accounts and balance of payment statistics. The former aimed largely to the understanding of global production arrangements and trade in value added through the linking of extended supply and use frameworks by means of detailed international trade data. In recent years attention has shifted from the former to the latter, as major globalisation events have shown capable of having a major effect on key macro-economic indicators. The latter has driven individual countries to explore and sometimes implement alternative key indicators better suited to the economic analysis of these countries, with an adverse effect on the international comparability.

This paper explores avenues whereby the twin objectives of a better understanding of globalization processes and the use of internationally comparable key aggregates less sensitive to such shocks can be served by adding granularity to the sector accounts framework.

The AEG is asked to provide feedback on the paper.

Documentation

A paper on:

Globalization and the sector accounts framework

Main issues to be discussed

The AEG is requested to reflect upon the following questions:

- What is your view as regards the view expressed in the paper that a practical way forward as regards globalization is the introduction of additional granularity in the sector classification?
- What is your view as regards the proposed sector concepts presented in the note?
- What is your view as regards the suggested introduction of a functional breakdown in the income and financial accounts?
- What is your view as regards the introduction in the sector accounts as regards the separate identification of intra group / intra GVC flows of goods and services?

- What is your view as regards the use of the thus extended sector accounts in the definition of a consistently applied set of key aggregates on the ‘domestic’ or ‘national’ institutional sectors?

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Globalization and the sector accounts framework

1. Background

Globalization has become a major theme, if not a major challenge, as regards the interpretability of macro-economic statistics[1]. First, considerable attention was given to globalization in the latest review of the statistical manuals, together with the recognition of knowledge capital within the asset boundary, and more firmly basing international trade in goods on the concept of change in (economic) ownership. Secondly, the issue of global production has been the subject of further statistical guidance, more precisely detailing the different arrangements that exist in global value chains. The implementation of this statistical guidance has yet to work its way through the statistical production chain. Also, we note that much of the globalization debate has centered around the impact it has on detailed analysis of global production arrangements, and the (adverse) impact these arrangements have on the perceived quality (from a 'fit for use' point of view) and national accountants already find themselves in a situation where users are clamouring for changes in the guidance[2]

There are now a number of well documented cases, some more prominent than others, where the operations of large multinational enterprise (MNE) groups have led to major impact on the key statistical indicators obtained from macro-economic statistics of specific countries. These cases are well known, and mechanisms are put in place to in future handle such events in terms of methodological guidance consistency of recording and communication strategy. A useful and updated guide to what is being discussed is the summary to the CMFB conference on Globalisation, held in June 2018.

One of the responses that followed was the elaboration of supplementary indicators[3], with the intention to use these nationally as the key indicators. Rather than relying on existing indicators that proved sensitive

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[1] The term macro-economic statistics in the context of this note restricts itself to national accounts statistics and balance of payments statistics.

[2] See for instance references to Krugman's 2016 tweet, and The Economist "Not the Full Shilling".

[3] A prime example of this is the concept of GNI* developed and published by the CSO Ireland. Research papers present other concepts using different approaches.

to individual shocks, these replacement concepts were elaborated that are less sensitive, and would provide a better insight in the economic development of a specific country. The drawback to this approach is naturally that whereas most countries are sensitive to the actions of large MNE's, each country would be sensitive in different ways and would have an incentive to develop a different set of indicators to neutralize the (adverse) effect that MNE's would have on key aggregates. The drawback from such an approach is that such indicators would exclude some, but not all of the impact of MNE's on the national economy, and would create comparability problems between countries, this runs counter to the idea of statistical standards such as SNA2008 and BPM6 that aim at improving comparability of macro-economic statistics.

The sectoral framework has however been broadly left outside of the mainstream globalization discussion, with the exception of the G20 data gaps initiative of IMF and FSB where a certain level of recognition is given to the need of separately identifying foreign controlled enterprises in its recommendation 8 as regards institutional sector accounts. Of some significance however is that as part of its response to the findings of the Economics Statistics Review Committee (ESRC) [CSO 2016], CSO Ireland also committed (see CSO 2017) to developing a breakdown for non-financial corporations sector breakdown into two broadly-defined, foreign and domestic, sub-sectors.

As a final development worth noting, the United Nations is currently engaged in developing a "Handbook on Accounting for Global Value Chains" as part of the work of the UN Expert Group on International Trade and Globalisation Statistics (ITEGS) (forthcoming), encompassing both the extended supply and use table framework and the institutional sector accounts framework.

In our view therefore, an immediate way forward would be to make visible the operations of MNE's (operations is meant to encompass both production activities as well as any other type of flow and position associated to MNE's) by separately accounting for them, using current methodological guidance. This implies introducing in the core accounts the necessary granularity to be able to capture MNE operations, and to show clearly the footprint that MNE's have on individual countries macro-economic accounts[4]. Complementary to this would be efforts to ensure consistent recording of MNE's operations worldwide.

This contradicts to some degree approaches followed elsewhere, which emphasise suppressing or looking through MNE operations that would not have economic substance as seen from the perspective of specific economic territories. These operations are often associated with the existence of Special Purpose Entities (SPE's) that are in essence institutional units established to enable MNE groups to

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[4] CSO Ireland has developed a set of annual sector accounts that provides such a breakdown. The additional granularity in the sector accounts allow a consistent set of 'domestic' indicators to be developed corresponding to the standard presentation.

perform rent seeking. Two such approaches are found in Rassier (2017), who describes an attribution method to allocate consolidated MNE income, based on fiscal apportionment methods, to economic territories, as well as a consolidation approach, assigning all of MNE's operations to the home economic territory. Consolidating approaches are also explored by Tissot (2017), from the standpoint of financial stability and Borga (2018) from the point of resolving the problem of pass through investment in FDI, both describing the consolidated approach as a supplement, not an alternative, to the residency principle inherent to SNA2008 and BPM6.

Such approaches are not followed in the final report of the IMF Task Force on Special Purpose Entities (2018) which establishes that for the purposes of the external sector accounts and fully within the current statistical guidance, such entities are to be accounted for and included in the macro-economic framework. IMF is providing elaborated guidance as regards their definition and typology, whilst noting that the problem of pass through is much broader, with many entities engaging in so-called capital in transit investment showing observable levels of economic activity[5].

In the final analysis, the problem of national macro-economic statisticians is one of attribution of MNE operations to specific economic territories. In many cases concepts of residency, legal and economic identity and ownership which are the bedrock of the statistical recording, are especially hard to apply to the operations of large MNE's in a consistent and complete manner. In recognition of this, statisticians are exploring and implementing organisational responses to these challenges, such as inter alia establishing large case units and exploring more intense collaboration between statisticians as regards data sharing and cross country consistency of recording.

This note takes as its point of departure that the statistical system needs to provide a consistent and timely response in inoculating the macro-economic accounts from the adverse impact of major globalisation events by introducing an appropriate level of targeted granularity in the core accounts.

This would provide the necessary tool for statisticians in their communication as regards such events, and would simultaneously assist policy makers in understanding how globalization affects their economies and economic indicators. The focus here is on the institutional sector framework rather than the detailed goods and services accounts as encapsulated in the supply and use framework, with some extensions in the direction of the aggregate goods and services account and production account.

The note starts with the recognition that already several statistics provide insight in the operations of MNE's and have a defined reporting population that is close, but not identical of what would be required. However these statistics, notably Foreign Affiliate Statistics/Activities of Multinational Statistics (FATS/AMNE) and the extended Directional Principle in Foreign Direct Investment, do not fit easily in the

[5] IMF, Final Report of the Task Force on Special Purpose Entities, BOPCOM 3/18, Washington October 2018

concepts of the macro accounts with its focus on quadruple entry accounting and asset/liability presentation. We therefore approach both from the point of view of providing readily available primary statistics from the point of view of the macro-economic accounts.

The note takes as a given the current joint methodological framework of BPM6 and SNA2008, and builds on it as regards the level of detail presented in the accounts. It presents a stepwise approach to add the desired level of granularity to the sector accounts. A first step in this direction would be further institutional sector detail in the macro-economic framework. Such a step would enhance the framework by showing the relative importance of MNE's in the economy, as well as isolate their impact on main aggregates.

A second step is proposed to 'surface' the separate intra group financing channels that MNE groups use, by passing the financial system, making use also of the possibilities provided by the legal and financial infrastructure provided by different countries in which the MNE's operate. Although intragroup financing may be the dominant form of financing MNE subsidiary operations, MNE's eventually draw on the financial system for external financing, but have a choice in which economic territory they exercise this option. By having intra group financing separate, such external financing would become visible, and the pass through financing (capital in transit) would become visible in the sector accounts framework.

Finally, in a third step, the dependence of host economies on MNE's could be best illustrated by introducing additional breakdowns in the goods and services and production account as regards products and services. It is recognised that the additional sectoral detail could be complemented by separately identifying internationally produced products (either goods or services) e.g. goods and services that are produced in the context of global value chains, and goods and services that are not.

2. Granularity in the sectoral dimension

It is suggested in SNA2008[6] that separately accounting for foreign controlled corporations would be a sufficient response to account for global enterprises. Foreign controlled corporations are considered to be "all subsidiaries and branches resident in the economy, as well as any associates or other enterprises resident in the economy that are under de facto foreign control[7]". We note that foreign controlled enterprises can be under direct or indirect foreign control, and that enterprises with a direct parent that is co-resident, but would be ultimately controlled by a non-resident parent, would be included in the framework of direct investment relationships (FDIR[8]). It may be however that such subsidiaries financing and financial investments would not be visible in external sector statistics, as it would arrive either through

[6] See SNA2008 paragraph 4.81 and Figure 4.1 presenting the institutional sector classification

[7] See BPM6, paragraph 6.53.

[8] See BPM6, paragraph 6.14.

its direct parent, or through external financing in the economic territory of residence. The financial investment and financing of such enterprises would still need to be covered in the domestic accounts, and included in the foreign controlled enterprises sub-sector[9].

It is important to mention that the sub-sectoring proposed in this section leaves out of consideration so-called associates, e.g. enterprises that may have a minority foreign investor (e.g. an equity share between 10 and 50%). These are not foreign controlled, and are considered domestic enterprises.

The external account as described in BPM6 standard representation only sparingly indulges in providing sectoral detail. Mostly the MFI sector (central bank and credit institutions) and general government are identified as separate sectors, but not non-financial enterprises. In the context of the IMF/FSB G20 Data Gaps Initiative the IMF is supporting distinguishing in addition non-financial corporations in the I.I.P. The external account does of course take as its main organising principle, the asset liability presentation, which deviates from the directional principle central to standalone FDI statistics. The external account currently therefore does not allow separate identification of direct investment subsidiaries and direct investors with a controlling stake in subsidiaries.

Implicit in the directional principle is that there is a double counting caused by the pass through phenomenon. The enterprises covered in inward direct foreign investment involved in pass-through investment are by necessity also included in outward investment. Successive layers of adjustments intend to clean up the directional data for pass through investment, by excluding resident and non-resident SPEs in the statistic and by attempting to relate the geographical information to the ultimate investing country and ultimate host country.

FDI is focussed on cross border investments. It appears to side step the issue of investors and direct investment enterprises owning and controlling resident subsidiaries, even though it would recognise the latter as part of the foreign direct investment relationship. In discussions with regards to the identification of greenfield investment (how much physical investment succeeded due to a specific inflow of foreign capital) the issue of domestic subsidiaries is potentially overlooked, as the reporting of domestic flows and positions is outside the scope of external statistics, as is the reporting on fixed investment as part of the balance sheet or capital account.

In the context of the macro-economic accounts however domestic subsidiaries must be taken into account.

Furthermore when the focus is on foreign controlled direct investment enterprises and domestic enterprises that engage in foreign investment, a residual group of domestic enterprises exists that is either not a subsidiary or is a subsidiary from a domestic enterprise. This presentation corresponds very

[9] Please refer to Annex for 2 examples of the scope of Foreign Controlled Enterprises.

closely to FDI concepts but would have a specific disadvantage that different parts of the same multinational group may conceptually be classified in three different institutional sub-sectors when we introduce foreign control as an organising principle.

Consider for instance Figure 1 below, which contains three example group structures, denoted by letter A, B and C that are located in two economic territories (Country I and Country II). Note that in this example we abstract from further sectoring or subsectoring, which is based on the characteristics of the individual institutional unit, and which would not change. E.g. Entities engaged in producing goods and non-financial services would be found in sector S11, non-financial corporations, and for instance captive financial institutions would be classified as S127, irrespective of the outcome of the discussion below.

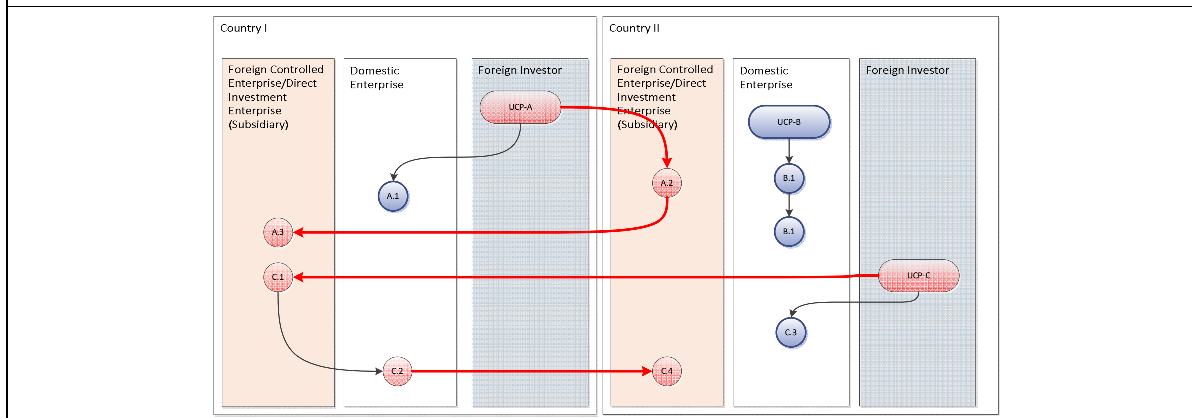
Enterprise UCP.A is ultimate parent (the head-office – holding corporation) of an enterprise group with operations in both Country I and Country II. It has two direct subsidiaries, one is resident in Country I and the second one, A.2 is resident in Country II. It also controls a third subsidiary A.3 in Country I indirectly through A.2, which is a round tripping relationship.

UPC.C is resident in Country II. It also has a resident subsidiary C.3, and a foreign subsidiary in Country I C.1. C.1 has a resident subsidiary C.2, which in turn has a foreign subsidiary in country II, namely C.4.

A third example enterprise group is shown that is in its entirety resident in country II.

In Figure 1 we organise the sector concept as follows, there are three resident sectors, namely directly foreign controlled enterprises, resident ultimate controlling parents (UCP) and enterprises under direct domestic control. The immediate parent – child enterprise relationship determines the sector in which an enterprise is classified. In this case, enterprises that have foreign subsidiaries, but are not themselves investment enterprises are allocated to the sector labelled ‘foreign investor’. Such enterprises are essentially group headquarters. Enterprises that are directly controlled by a foreign parent are shown in the sector labelled ‘foreign controlled enterprises’, and enterprises that are directly controlled by a domestic parent, or ultimate investors with only direct resident subsidiaries, are shown in the domestically controlled enterprises sector. The latter two categories are not envisaged to be presented separately in the institutional sector classification of SNA2008.

Figure 1 Immediate parent / daughter links and sector classification



We show all subsidiaries and the direct investment relationships of the three groups. Whenever foreign direct investment is implied, the arrow connecting two entities is presented in red, whenever a domestic link is shown the arrow is presented as black. It follows that FDI positions and flows may exist between UCP.A => A2, A2 => A3, UCP.C => C1 and C2 => C.4. These entities are shown in red. Domestic positions and flows are between UCP.C => C3, C.1 => C.2, as well as UCP.B => B.1 and B.1 => B.2.

It should be noted that A.1 and C.3 would not be considered to be part of the FDIR, as they are pure resident subsidiaries, lacking an outward leg. This also applies to the members of group B (UCP.B, B.1 and B.2) which is strictly domestic. They are therefore shown in blue. The implication is that they would not be included in any foreign direct investment survey.

What is striking in this example is that the members of a single enterprise group may be allocated in all three sectors spread across two countries. The sectoral breakdown provides a functional distinction between controlling investors, controlled investment enterprises and pure domestic enterprises.

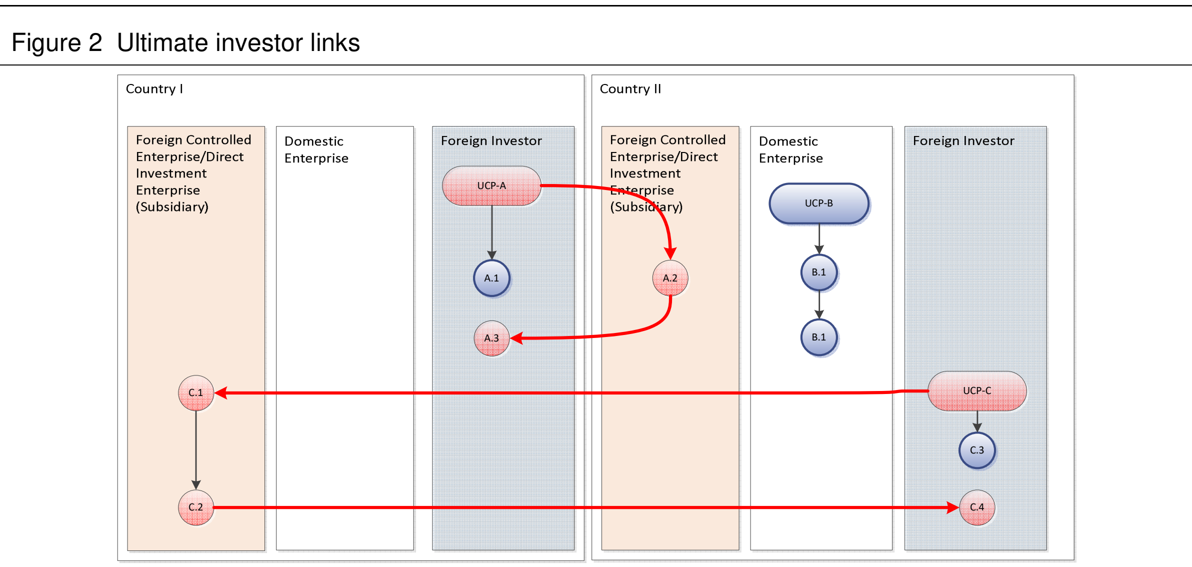
Figure 2 below presents the sector classification as regards foreign control when we consider the residence of ultimate investors as an organising principle. In this case we distinguish again three sectors, separating foreign investors, foreign investment enterprises and domestic enterprises. This time however, resident subsidiaries are assigned to the same category as their ultimate parents when they are co-resident. In the case of foreign controlled enterprises, this means that direct investment firms and any other domestic subsidiaries belonging to the group would in the sector foreign controlled enterprises, and that any foreign investors would be combined with any direct or indirect domestic subsidiaries in the same institutional sub-sector. Thus only purely domestic enterprises and members of pure domestic enterprise groups would be recorded in a sub-sector domestically controlled enterprises.

Note that the breakdowns suggested here correspond to the supplementary detail in the data reporting template for reporting sector accounts under the IMF-FSB G20 Data Gaps Initiative, phase 2. (IMF-FSB 2018a and 2018b) (See Annex 2)

It is not suggested here to override the normal institutional sector classification e.g. a non-financial corporations remains classified as part of the non-financial corporations sector, and financial corporations would remain financials. This would be important notably for the classification of captive financial institutions that are part of the group structure of non-financial corporations.

The enterprise group headed by UCP.A is shown only in the sector foreign investor for country I, and only in the sector foreign controlled enterprises in country II. The rule here is that domestic subsidiaries of a foreign controlling investor are shown in the same sector as their ultimate parent, rather than being recorded in the domestic controlled enterprise sector. The same can be observed for the enterprise group headed by UCP.C, its resident subsidiary is shown in the same sector, and the enterprise that is the result from round tripping (C4) is also allocated to the ultimate investor sector, even though technically it is a direct investment subsidiary. Enterprises C.2 and C.3 are both allocated to the foreign controlled enterprises sector in country I. Again, red lines depict entities that could engage in foreign direct investment, black lines depict domestic investments.

Figure 2 Ultimate investor links

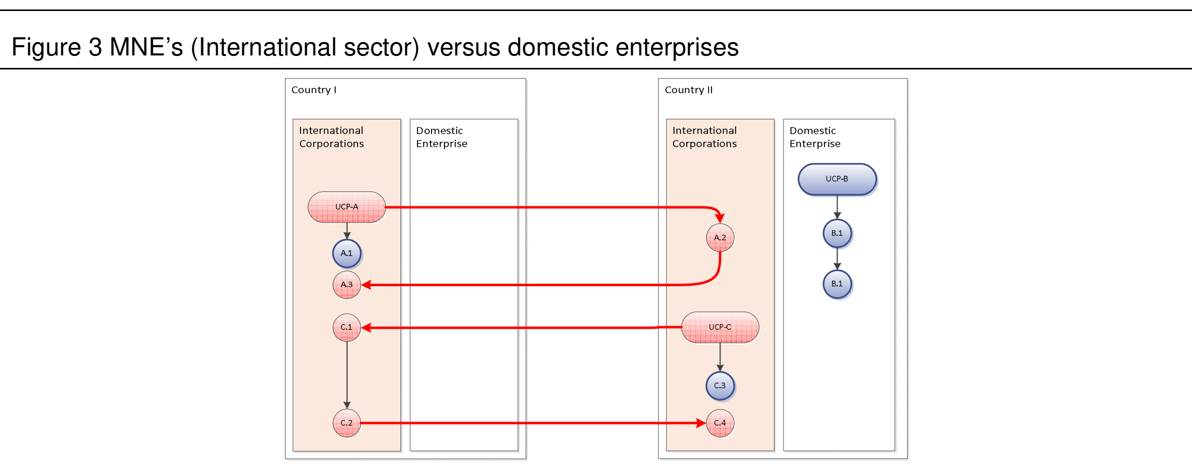


2.1 Describing MNE's

A simplification of the previous schedule is to relinquish the investor / investment corporation distinction. The behaviour of MNE groups would in principle be different from enterprise groups that exist exclusively domestically, in their ability to adjust the group structure across economic territories rather quickly, irrespective whether this implies the off shoring of specialised financial functions, the restructuring of production lines across economic territories, or the implementation of corporate inversions, where the headquarter function would transfer from one economic territory to another. Would domestic subsidiaries of MNE groups display a different behaviour from other subsidiaries abroad?

Figure 3 therefore distinguishes only between International Corporate Groups (MNE) and domestic enterprises (e.g. non-MNE) sectors. In this case resident UCP's and subsidiaries of MNE's would be shown in a single sectoral subdivision, irrespective whether the UCP would be resident or not. A side benefit advantage of this is that a greater stability of classification is obtained as regards the sectoral breakdowns, these would be less sensitive to corporate restructuring.

Figure 3 MNE's (International sector) versus domestic enterprises



3. Granularity in instruments: introducing a functional breakdown

In the introduction the argument was put forward that any additional granularity as regards the institutional sectors should be complemented with additional distinctions with regards financial instruments. Whereas the additional granularity in the sector accounts institutional classification is to some degree already anticipated in the context of the G20 DGI, less attention has been given to identifying the specific instruments that MNE groups use for intra group financing.

The suggestion made in this section is not to add MNE specific instruments, but rather to establish a breakdown compatible with the balance of payments. This focusses on the introduction of a FDI / non-FDI distinction.

FDI is defined as *“a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy[10]”*

FDI makes a distinction between control and influence, control being defined as being able to control decisions in the shareholders’ meeting, e.g. having a controlling share of equity. In simplified terms, a controlling share is taken as a share exceeding 50% of equity, and an influencing share is considered to be between 10% and 50% of equity, this corresponds to the FDI concepts of subsidiary and associate respectively. FDI instruments are either equity or debt, the latter category broadly encompassing loans, debt securities, insurance technical reserves and trade credits.

To introduce the FDI / non FDI distinction has an obvious benefit of remaining very close to the concepts of the BOP/IIP, which would further facilitate integration of the national accounts and balance of payments, and thus would have a beneficial impact on the overall quality of macro-economic statistics. The presentation would be based on the asset / liability presentation of the balance of payments, as explained above. The FDI concept is however broader than intra group financial transactions of non-financial MNE’s, but extends also to equity links within financial corporate groups and also covers investment abroad by government, households and non-profit institutions serving households (NPISH). A special category of FDI is devoted to reflect ownership of immovable non-financial assets, as these must be owned by resident institutional units in the system. Thus FDI seems to be a somewhat broader financing concept than intra group financing narrowly defined.

Moreover FDI does not cover financial arrangements between dedicated suppliers / contract manufacturers and MNE groups thus leaves part of the financing arrangements in global production out of consideration. In the context of studying global value chains it is worth consideration whether direct financing by MNE groups of dedicated suppliers would provide additional insight in the functioning of the financing of global production.

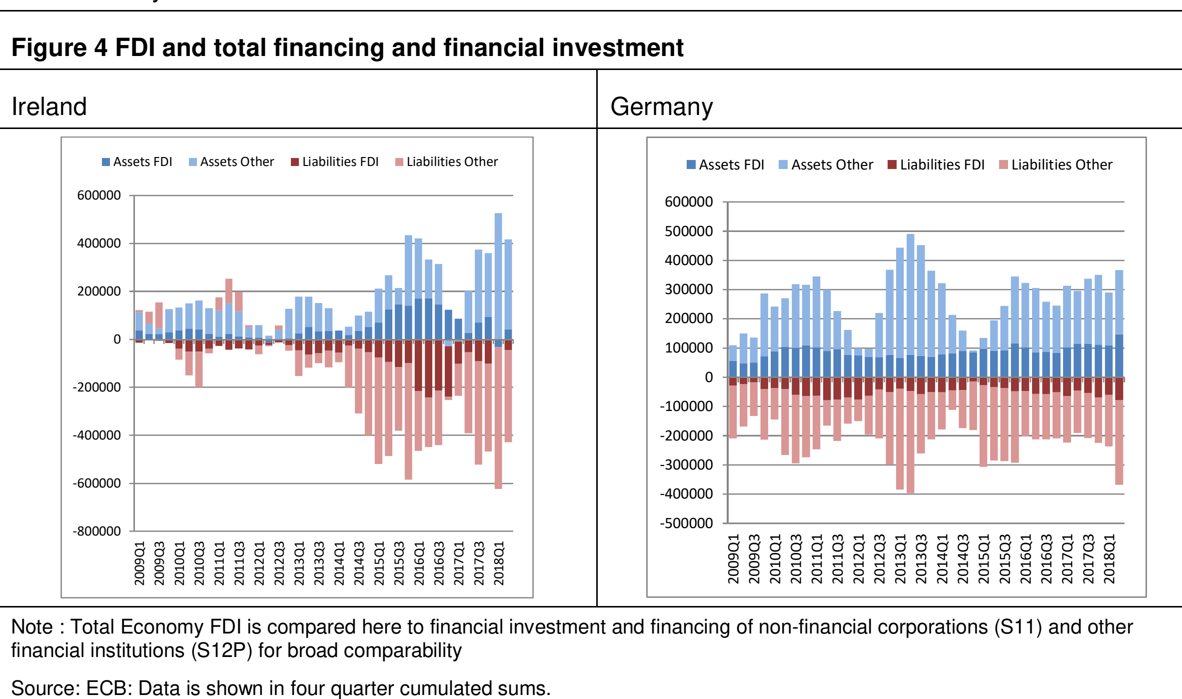
On the whole however, by extending the functional distinction into the income account, financial account and balance sheets of the institutional sector accounts framework very clear analytical benefits of are realised. First, it isolates equity and debt instruments that are different in nature from the corresponding instruments that are externally financed. MNE’s would have far greater control at the group level of these financing flows, and large singular shocks could more easily be buffered within the group, rather than

[10] See BPM6 Paragraph 6.8.

externally financed. For instance, whereas debt may have a very specific maturity when obtained from a financial institution, or a non-related non-financial enterprise (trade credit), it is much harder to identify this in an intra group setting. The functional split might thus assist usability in not over specifying accuracy of specific instrument breakdowns.

In order to assess the relevance of FDI to the financial accounts we provide a comparison in Figure 4 between total FDI transactions observed in the b.o.p. as an off- which item of the financial investment and financing of non-financial corporations and other financial institutions, excluding investment funds, pensions funds and insurance corporations. It is appreciated that this comparison is somewhat flawed, FDI coverage extending to the total economy, and the financial accounts being restricted to specific sub-sectors. The underlying assumption is that FDI is relatively unimportant for the remaining sectors. The comparison is provided for Ireland as well as for Germany, the motivation here is to establish relevance across a broad spectrum of countries. The Irish chart shows the overall volatility of financing and financial investment, and the contribution of FDI transactions, including the large net inflows during 2015-2016. On the whole however, FDI transactions only provide a moderate part in the overall financial investment and financing of these two sectors. For Germany, clearly FDI is dominated on the asset side, pointing at the importance of foreign investors resident in Germany, financial investments by resident companies on the whole seem to fluctuate rather more. Financing of S11 and S12P on the other hand appears to be much less driven by FDI.

Figure 4 FDI and total financing and financial investment



Note : Total Economy FDI is compared here to financial investment and financing of non-financial corporations (S11) and other financial institutions (S12P) for broad comparability

Source: ECB: Data is shown in four quarter cumulated sums.

Finally, the functional split will assist in understanding the behaviour of institutional units operating in the ‘international’ and ‘domestic’ sectors shown above. The former, whether being ultimate investor, or a subsidiary, would have the ability to access financing or to make financial investments either internal to the MNE group, or externally, through the resident financial corporate sector, equity investors and trading partners. The latter would be largely limited to the external form of finance.

As remarked above, the separate presentation of FDI in the context of financial instruments, together with the separate presentation of either ‘foreign investors’ and ‘foreign investment subsidiaries’ or the identification of an ‘international sector’ as suggested above will assist in answering policy questions that FDI statistics alone struggle to answer. It will provide for fully elaborated macro economic accounts, encompassing production, income allocation, capital investment and financial investment and financing, thus directly linking foreign direct investment to domestic economic developments. It would thus be able to comprehensively answer questions related to ‘greenfield’ and ‘brownfield’ investment in the aggregate, and would provide for a conceptual framework that would allow for drilling down to more detailed information, say, at the industry level, to complement the macro-economic picture.

The functional distinction will therefore benefit understanding of the behaviour of MNE’s, and because the distinction is already made in the external account will benefit greatly any cross country analysis of financial linkages between countries, in identifying separate financing channels for in essence corporate groups operating supra-nationally, and enterprises operating at the national level, engaging in international transactions. The concept referred to here, is the concept of global from whom to whom tables, that would enrich flow of funds analysis by identifying clearly separate financing channels between institutional sectors in different economies as described in IMF (2012).

4. The goods and service account

Flows of goods and services between the component parts of MNE groups are considered worthy of separate study and analysis. These flows relate to the operation of global value chains. It is recognised that such flows are different from regular trade flows, due to the difficulties to assess the valuation of these flows (transfer pricing, quasi transit trade), the variety of arrangements identified in United Nations Guide to Measuring Global Production (2015), such as Merchanting, Factory-less Production, and Goods for processing arrangements. Much work is related to provide a highly granular view of these trade flows and the structure of production as captured by the extended supply and use frameworks. These analyses aim at understanding trade in value added (TiVA) rather than the gross trade flows, and rely on an elaborated version of the Leontiev methodology.

Nonetheless, these analyses do not as yet rely on a separate identification and consistent capturing of entities that we would characterise as belonging to the 'international' sector, but rather focus on gaining additional granularity where possible. A pragmatic approach is followed in pursuing related granularity where available[11]. It is highly challenging to identify products that are produced in the context of global value chains as compared to products that are not. The identification of 'international' products which would be produced as part of global value chains would only be possible by identifying individual in detail the input and output structures of international producers, and having first-hand information about intra group deliveries of global producers. These approaches are being elaborated in the forthcoming United Nations Handbook on Global Value Chains.

Building on this work, it would therefore be relevant to try and attempt to capture intra group trade as a separate main category in the production and goods and services account within the context of the sector accounts framework. International goods and services would refer to the final products of global value chains, as well as any intermediate goods and services that would be part of global value chains, and thus goods and services that would be produced in any economic territory under the direct control of MNE groups involved in global production.

The breakdown would identify intra group transactions of products and them from products that are not dedicated inputs into global value chains. A broader, more informative, distinction would also include products produced by dedicated suppliers that would be part of the overall global value chains, such as for instance contract manufacturing services, that add value to the 'international goods' category.

[11] See for instance Ahmad, Nadim, "Accounting for Globalisation: Frameworks for Integrated International Economic Accounts", Chapter in NBER "The Challenges of Globalization in the Measurement of National Accounts" (Forthcoming).

The effort is aimed at documenting and separately showing the impact of the goods and services produced by the international sector, and how these goods and services are channelled, following economic ownership links, to the final consumers. Having international products classified separately, would allow the development of an informative set of key indicators supplementing concepts like GDP, NNP, GNI and NNI as well as the current account.

Of specific relevance to the analysis of globalisation is additional details regards gross fixed capital formation and non-financial assets on the balance sheet. Following the recommendations in the Guide on Global Production (UNECE 2015), the economic ownership of intellectual property products (IPP) play a very important role in establishing the mode of global production of MNE activities and thus also the treatment as regards international trade. One of the distinctions that could be used to fruitfully extend the framework is to account for these produced intangibles in both the capital account and the balance sheets, separate from other produced non-financial assets, and to distinguish whether these could be seen as 'international' or 'domestic' fixed capital.

5. Key indicators

As mentioned above, following major globalization events, several authors have come forward in suggesting new / alternative / supplementary indicators that would in one way or another address the needs of users. Essentially these indicators are re-active rather than pro-active, in that they follow a major event rather than anticipate them. The proposals above as regards the granularity of the sector accounts provided above are meant to be pro-active, and aim at extending the core accounts in such a way that a set of alternative indicators could be derived.

The intention of this note is not to assess the merits of the different proposals, nor of resolving any of the underlying methodological issues, but merely to indicate the type of indicators that might be derived from the framework outlined above.

Most of the alternative key indicators that can be derived from the framework will be supported by the additional detail in the sectoral dimension, as is shown in Table 1. Several others could take into account the additional detail available from the functional split.

Table 1 Supplementary Indicators from the institutional sector accounts			
	International Sectors	Domestic Sectors	
GDP/Gross Value Added	International Sectors' Gross Value Added	Domestic Sectors' Gross Value Added	Current Prices Volumes
GNI/Gross National Income	International Sectors' Balance of Primary Income	Domestic Sectors' Balance of Primary Income	Current Prices
Trade Balance by sector	International **Sectors** trade balance	Domestic sectors trade balance	Current Prices Volumes
Trade Balance by product	International **Products** trade balance	Domestic Products trade balance	Current Prices Volumes
Current Account Balance	International Sector Current Account Balance	Domestic Sectors Current Account Balance	Current Prices
Net lending / net borrowing	International Sector Net Lending	Domestic Sector Net Lending	Current Prices
Net International Investment Position	NIIP of International Sector	NIIP of Domestic sector	Current Prices

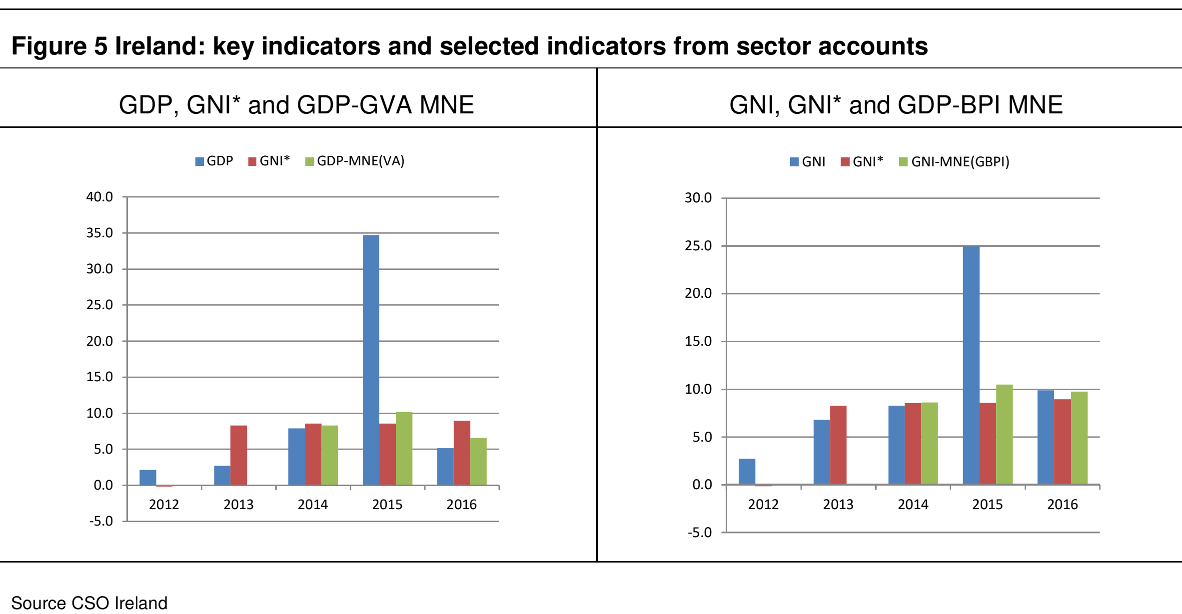
In order to illustrate this we present some aggregates in Figure 5 below drawn from the enhanced sector accounts framework published by CSO and compare it to the proposed supplementary income concept, GNI*, that CSO has proposed as the concept best suited to capture Irelands economy.

First, comparing the development of GDP, we see the large development occurring in 2015, a 35% growth in GDP. The GNI* annual growth rate for that year is 8.6%. Using the sector accounts, we subtract from GDP the value added generated by MNE's. This measure (GDP-MNE(GVA)) indicates a growth rate of 10.2%, which is higher than GNI*. In 2016 we observe that the measure for GDP excluding MNE(GVA) experiences a lower growth rate than GNI*. The suggestion is that the differences are due to differences between activity growth (as measured in the MNE VA) and the income concepts used to correct the GNI measure. The advantage of this measure is that it is an indication of economic activity, and not of income. Moreover, it offers the potential for the development of a volume measure. In terms of productivity measures, it would consistently exclude both the value added of MNE's as well as their factor inputs, e.g. employment and capital.

A second comparison is made, this time with GNI. The growth rate of GNI is shown, together with that of the modified GNI concept (GNI*) and GNI less the balance of primary income for major MNE's. Here we observe more similarity in the development of GNI* and the modified GNI concept that excludes the balance of primary incomes for MNE's. The GNI-MNE(GBPI) measure provides consistently a slightly

higher growth rate than does GNI*. In 2015, we observe 10.5% and 8.6% respectively for GNI-MNE(GBPI) and GNI*, and in 2016 9.7% and 9.0% respectively.

Figure 5 Ireland: key indicators and selected indicators from sector accounts



Source CSO Ireland

The overall benefit of developing and disseminating separate accounts for MNE's and their subsidiaries is that it becomes possible to isolate their impact on the key macro-economic indicators in a systematic and consistent way. This would leave the key macro-economic indicators very much as defined in the current manuals.

Going beyond this, excluding MNE operations from macro-economic accounts key aggregates begs the question in which economic territory these would be accounted for. Certainly, excluding the activities, but not the use of resources, such as labour and land, and some but not of all of the income, e.g. exclude primary income, and include secondary income, could be seen as introducing imbalances, and imbalances that would need to be replicated in reverse in the home country.

The Irish annual sector accounts example illustrate that the extensions suggested here are both informative and feasible in the short run. The extended accounts were developed during 2017, and first released in 2018. They are capable of providing relevant economic indicators on the level of economic activity, primary income, secondary income and net lending.

6. Conclusions

This note elaborates on the institutional sector accounts seen through the prism of discussions on globalisation. It presents and discusses additional detail aimed at identifying multinational corporations in the sector accounts framework. It supplements this analysis by suggesting that it is relevant, and also feasible, to focus attention on intra group financial transactions, by introducing functional layers distinguishing between FDI and other functional layers in the financial accounts and balance sheet, with matching detail in the income accounts. Finally, but seen from a longer perspective, and depending on the progress made in capturing global value chains, it is considered desirable also to separate out any products that form part of global value chains, so-called international products, from those that are produced domestically.

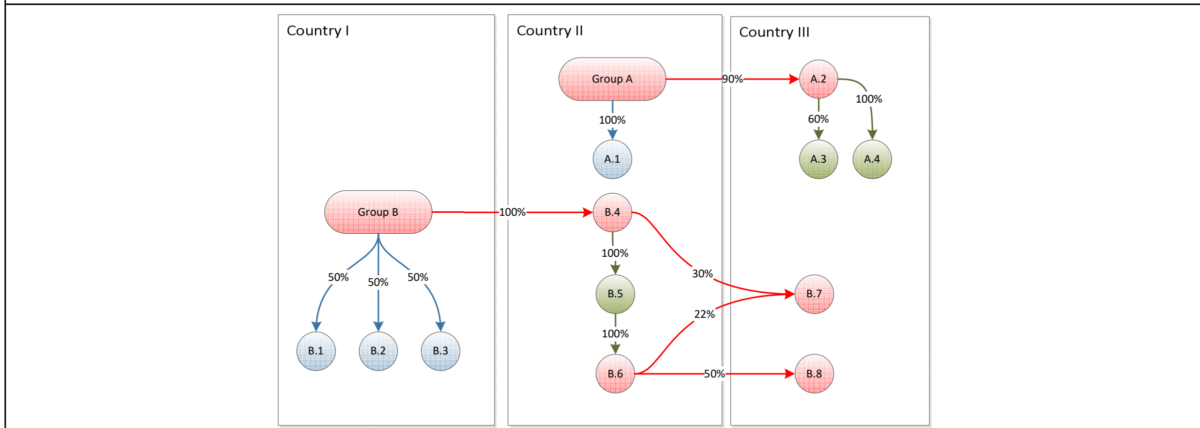
The note subsequently suggest that the sector accounts thus elaborated would provide a good source for relevant indicators that have the benefit of being comparable across countries, yet fulfil the need to provide summary measures of economic performance, excluding the impact of MNE groups.

The key proposal of this note is that in the context of the financial accounts, that intra MNE financing should be introduced as a separate functional layer, in order to capitalise on available data sources whilst at the same time adding significantly to the explanatory power of the financial accounts. The introduction of functional breakdowns in the sector accounts opens up a broader debate whether additional functional breakdowns would have a place in the future update of the manuals.

It is considered also that introducing this functional distinction will strongly contribute to strengthening b.o.p./i.i.p. and financial accounts consistency, especially in view of the sustained effort for b.o.p./ROW consistency in recent years, and thus to the overall quality of the macro-economic accounts.

Annex 1: Scope of Foreign Controlled Enterprises

Figure 6 Scope of Foreign Controlled Enterprises and FDI



Legend

Red entities : group headquarters and FDI subsidiaries

Green entities : foreign controlled enterprises not included in FDI

Blue entities : domestic corporations

In Figure 6 above the difference in scope between direct investment subsidiaries, Foreign Controlled Enterprises, and MNE subsidiaries is illustrated. Multinational group “A” has a simple structure, and operates in its home country II, and has subsidiaries in country III. Subsidiary A.1 is a domestic subsidiary, and thus would be excluded from the category foreign controlled enterprises. Subsidiaries A.2, 3 and 4 are all controlled by group “A”, and foreign controlled. Subsidiaries A.3 and A.4 are controlled by subsidiary A.2, there is however no foreign direct investment involved in their financing.

Multinational group “B” provides a slightly more complicated example. Group B controls three domestic subsidiaries that therefore fall outside the category foreign controlled enterprises, and has a series of foreign subsidiaries that are directly or indirectly controlled. Note that subsidiary B.5 again has no FDI positions, as it is only related to B.4 and B.6, but needs to be included under foreign controlled enterprises. Subsidiary B.7 is an example of indirect control through 2 subsidiaries.

Annex 2: Reporting scope under the G20 DGI Template

Figure 7 Summary Outcome

G-20 Thematic Workshop on Institutional Sector Accounts, OECD Headquarters, Paris, 14 – 16 February 2018

Non-financial corporations						
Total	Domestically controlled non-financial corporations					Foreign-controlled non-financial corporations
	Total	Public non-financial corporations	*Of which* : Public non-financial corporations, which are part of domestic multinationals	National private non-financial corporations	*Of which* : National private non-financial corporations, which are part of domestic multinationals	
S11	S11DO	S11001	S110011	S11002	S110021	S11003

Other financial institutions (financial corporations other than MFIs, insurance corporations and pension funds)				
Total	Non-MMF investment funds	Other financial Intermediaries except Insurance corporations and pension funds	Financial Auxiliaries	Captive financial institutions and money lenders
S124+S125+S126 +S127	S124	S125	S126	S127

Domestically controlled financial corporations					Foreign-controlled financial corporations
Total	Public financial corporations	*Of which:* Public financial corporations, which are part of domestic multinationals	National private financial corporations	*Of which:* National private financial corporations, which are part of domestic multinationals	
S12DO	S12001	S120011	S12002	S120021	S12003

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