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on the findings of the pilot studies on annual FDI statistics based on the ultimate ownership concept and FDI statistics distinguishing Greenfield FDI transactions from takeover

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EXECUTIVE SUMMARY

Regulation (EC) No 184/2005[1] establishes a common framework for systematically producing European statistics on balance of payments, international trade in services and foreign direct investment (FDI). According to Article 5 of the Regulation, the Commission (Eurostat) must ensure that Member States carry out pilot studies on annual FDI statistics based on the ultimate ownership concept and on FDI statistics that distinguish greenfield FDI transactions from takeovers. The purpose of these studies was to determine the conditions, including the methodological framework, for introducing new data collections on annual FDI statistics and for assessing the costs of the related data collections, the implied statistical quality, and the comparability across countries. Twenty-four Member States and Iceland (the 'countries') took part in the pilot studies (see Annex 1 for the list of participating countries).

The Regulation also states that the Commission (Eurostat) has to prepare a report on the findings of these studies and, if appropriate, identify the remaining conditions, which need to be fulfilled for developing the methodology. The Commission then has to forward this report to the European Parliament and to the Council.

FDI has long been regarded as an important source of foreign funding because, in addition to the financing, it brings with it technological transfer and managerial expertise, leading to increased economic growth, higher productivity, stronger trade links, and other benefits. Identifying the source or destination of direct investment is considered an important analytical tool. However, the current international practice generally only measures the immediate counterpart FDI ownership investment. If an investor uses a chain of investment entities in economies other than its own or the country where it wishes to place the funds for final use, the ultimate investing country for inward investment and the associated controlling parent, as well as the ultimate host economy for outward investment, are not known.

In addition, because FDI covers all financial transactions between the direct investor and its related entities abroad, it has not been the general practice to identify to what extent the FDI transactions in a given period represent new sources of funds ('greenfield investment') for new and existing direct investment enterprises and to what extent these funds may be used for other purposes (such as for mergers and acquisitions). Because funds are fungible, it can be challenging to separate these types of funding. Identifying new sources of funds can help link FDI data with other economic variables, such as gross fixed capital formation, which leads to increased output and employment.

The methodology and guidance for these FDI statistics were developed by the Joint ESS/ESCB[2] Task Force on Foreign Direct Investment (TF-FDI). The most important part of the work was to agree on a common methodological approach so that the data would be as comparable as possible and to determine the implications for the costs of the related data collections.

Countries were able to collect and compile one or more of the extended measures of FDI: ultimate investing country, ultimate host country and greenfield investments. Because ultimate investing country is a generally accepted concept, most of the countries were able to produce these data or plan to do so. The initial results indicate that the ultimate ownership of inward FDI for some countries is quite different from FDI statistics based on immediate counterparty. Although measuring ultimate host country and greenfield investments is new for many countries, the level of participation was very encouraging. The preliminary results indicate that

[1] Regulation (EC) No 184/2005 of the European Parliament and of the Council of 12 January 2005 on Community statistics concerning balance of payments, international trade in services and foreign direct investment (OJ L 35, 8.2.2005, p. 23).

[2] European statistical system/European system of central banks.

more than half of the participating countries were able to propose a ‘Data completion date’ and generate metadata for current and future work for both ultimate host country and greenfield investments. A number of these dates were within the initial May 2019 collection time frame.

Eurostat offered grants to develop the estimates, but not many countries took up the funds. As for the incremental resource implications for collecting and compiling the data on an ongoing basis, these varied considerably. For those countries already doing one or more of these extensions to FDI, the incremental costs are assessed to be low or zero. On the other hand, for those countries coming to these measures for the first time, the incremental costs would be expected to be higher, especially for smaller countries with relatively modest resources. However, as the work is in its developmental stage, several countries were unable to assess the ongoing costs at this point in time.

BACKGROUND

This document provides the European Parliament and the Council with the results of the pilot studies that Member States conducted to determine whether it is feasible to obtain data on the ultimate ownership of foreign direct investment (FDI) as well as FDI statistics distinguishing greenfield FDI transactions from takeovers (mergers and acquisitions). The methodology and guidance for these FDI statistics were developed in the joint ESS/ESCB Task Force on Foreign Direct Investment (TF-FDI)[3]. A team of consultants[4] worked with the TF-FDI in order to establish the conditions, including the methodological framework, for introducing new data collections on annual FDI statistics and for assessing the costs of the related data collections, the implied statistical quality, and the comparability across countries.

FDI is a major element in cross-border financing and contributes to economic activities and income across countries. It comprises any foreign financing that is provided to a resident entity where the *direct investor* holds 10% or more of the voting power in that entity. FDI provides more than just financing. It also serves to transfer technology and managerial and technical expertise. It is often less volatile than other forms of foreign financing. Accordingly, FDI statistics are important indicators and drivers for economies. They are also used in economic development studies. However, in their present form and in the face of a changing and more integrated world, these statistics can be seen as somewhat limited in their capacity to address some of the more important emerging questions.

One area of particular interest for FDI is the country of residence of the counterparty to the financing. In current FDI statistics, the residence of the immediate counterpart is used. While identifying this relationship serves certain purposes, it does have limitations for some analytical purposes, especially where there are multiple links to a chain of enterprises along which the financing may be sent by multinational enterprises. Extending the data to the *ultimate* origin and destination of FDI by country will be beneficial in a number of ways, such as identifying the country of the controlling parent on inward FDI, offering more nuanced statistics that give further insights into economic relationships, providing a better understanding of the degree of layering of FDI and of the links to global production chains, improving the traceability of investments, and so on.

In addition to identifying the ultimate origin and destination of FDI, progress can be made in measuring the impacts of FDI, especially on capital formation, employment, and value added. While some work has been undertaken in this domain, one area where additional information would be of help to policymakers would be

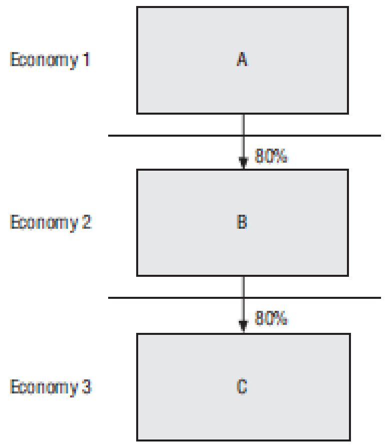
[3] Task Force co-chaired by Eurostat and the European Central Bank with the participation of 24 countries, the OECD, the IMF and UNCTAD.
[4] Expert team from Canada with extensive experience in FDI statistics from Statistics Canada and international organisations.

to separately identify investments that represent an additional injection of funds to an enterprise, as opposed to those investments that merely involve the purchase of existing assets – financial and nonfinancial – through mergers and acquisitions. These new sources of funds are broadly referred to as '*greenfield investment*'.

DEFINITION OF TERMS

As noted, the concept of FDI statistics captures all the financing (transactions and positions) between a resident enterprise and a non-resident investor where the latter owns 10% or more of the voting power of the resident enterprise. Thus, not only is equity financing included but debt — such as loans, debt securities (such as bonds), trade credit, accounts receivable/payable — is too. FDI, therefore, will represent funds received from abroad (inward) and funds sent abroad (outward). FDI covers data for both transactions (during a period) and positions (at the end of a period).

However, the extended measures of FDI — ultimate investing country (UIC), ultimate host country (UHC), and greenfield investment — are currently not well established. The internationally accepted standard for FDI statistics is the OECD Benchmark Definition of Foreign Direct Investment, fourth edition (BD4). That document focuses on the standard measures of FDI but offers only limited advice for UIC, UHC and greenfield. For identifying and measuring investment from the UIC, the OECD recommendations are more developed than those identifying and measuring investments in the UHC, on which the development was left on a research agenda. Similarly, for greenfield investment: the topic is raised but the methodology is not developed. Therefore, to undertake the pilot study, concepts and methodology for these three extended measures of direct investment needed to be refined and/or developed.



Large multinational enterprises may establish a long chain of affiliates through which financing may be channelled. Thus, for example, an investor resident in economy 1 may wish to invest in economy 3, but, for a variety of reasons, does not wish to do so directly. In that case, it may set up affiliates in economy 2. Accordingly, for economy 3, the immediate direct investing country in this instance would be economy 2, not economy 1. However, economy 1 is considered the UIC. Economy 3 would be the UHC for economy 1.

Greenfield investment is the financial investment that brings mostly new and additional resources to the enterprise and often leads to gross fixed capital formation (GFCF). This new investment typically leads directly to increased output, improvements in productivity, etc. (though some company acquisitions may also lead to improved efficiency and increased output). However, because finance is fungible, it is often difficult in the case of funds invested in an entity to identify separately those funds that are to be used for new investments from funds that are to be used for investments serving other purposes.

RESULTS OF THE PILOT STUDY

In total, 25 countries (24 Member States and Iceland) participated in the study. Overall, obtaining data for UIC was found to be relatively straightforward. Several countries were quite advanced, with some already having published their estimates. Although most of the data have already been compiled according to the UIC methodology as prescribed by the OECD definition, the vast majority of countries will also be able to compile these UIC measures based on the country of control measure as defined for this pilot study. For UHC and greenfield investments, however, the situation was quite different. Conceptually, these statistics are more complicated and the OECD's BD4 provided very little guidance, leaving it, at the time of its publication, to the research agenda. Some participants had already begun compiling data on UHC and greenfield investment before the pilot study began, but, for the most part, countries indicated that this would be a departure from their existing collection processes.

Dissemination plans are a good indicator of success of the pilot studies. In addition to submitting data to Eurostat, 10 countries intended to make available to the public the sources and methods used in compiling the datasets for UIC, UHC, and greenfield alongside the release of the extended FDI measures. Most of those countries that plan to release their results to the public indicated that the data would be placed on their websites and/or included in official releases or would be supplementary to official statistics. Nine countries plan to include these data as part of their annual release of FDI statistics, while a further 5 countries would treat these extended datasets as supplementary to the data. Also, 9 countries plan to provide a descriptive text to accompany the release of the datasets, and 5 countries indicated that they did not plan to publish the results of the pilot study; the remaining 5 either had not yet decided or indicated that that their decision would be dependent on what regulations were issued, or they did not comment.

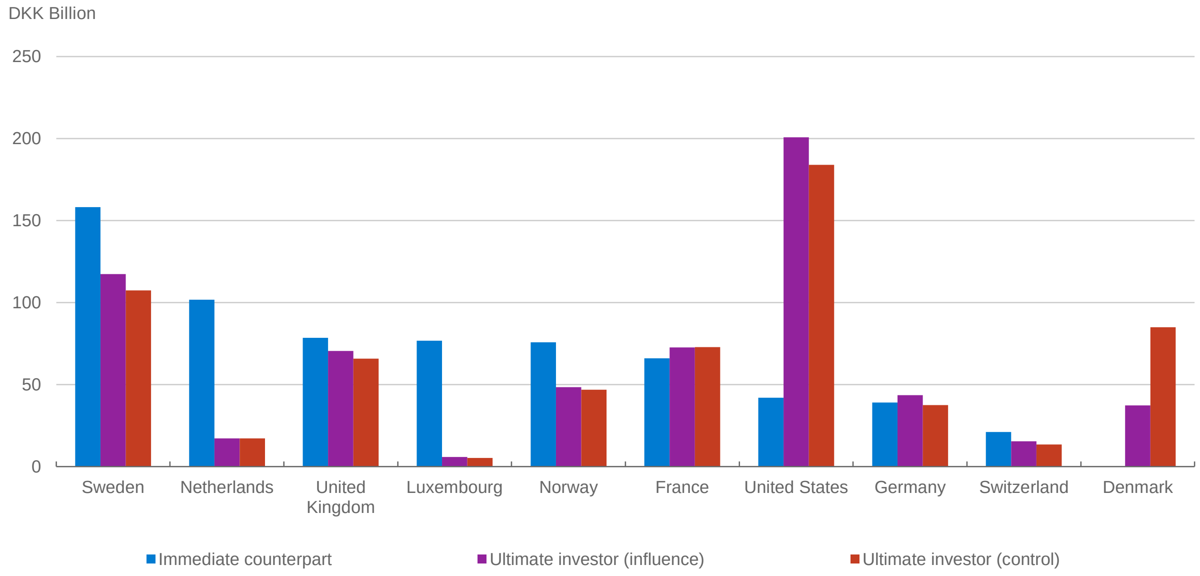
For the purpose of the pilot studies, some countries also provided data to Eurostat (see Annexes 2.a and 2.b). It was agreed that wherever possible, 2017 should be the year for which data would be compiled. Although data may not yet be completely comparable for that year, as methodologies have yet to be finalised or refined, having a common year will provide some basis for comparisons across countries. However, not all countries were able to prepare data for 2017 and have used data for another year instead. While this limits comparability, this pilot study was undertaken to explore what could be collected to ascertain what would be involved in producing the data on an ongoing basis.

Ultimate investing country

The following paragraphs review the results by economic measure, focusing on elements of data quality. Certain criteria (accuracy, comparability) were limited to subjective assessments, given the developmental dimension to the estimates. Not all countries delivered metadata for summarising the results of the pilot studies, and some countries did not reply to all questions in the metadata template. From the metadata, some countries also delivered data for the pilot studies.

A survey revealed that in most of the countries of the TF-FDI members, a majority ownership (one investor owns more than 50% of the voting power in the enterprise either directly or indirectly; also called a control relationship) accounted for the majority of both inward and outward FDI positions (in the range of 80-90%). The TF-FDI agreed that identifying a unique UIC was a feasible approach in this pilot study, unlike the multiple UIC approach prescribed in the OECD's BD4 (influence). Therefore, when there is one foreign majority-owned inward FDI position in a domestic company, associated with other minority inward FDI investors, the entire inward FDI position value is to be attributed to the country of the controlling parent referred to as the UIC. This approach can, however, result in a broader measure of round tripping, that is when investors resident in a country invest in their own country via foreign-owned companies (see example in Figure 1)[5].

Figure 1 Denmark: Inward FDI position by immediate and ultimate investor, based on the directional principle excluding pass-through investments, end 2017



Source: Danmarks Nationalbank (Danish Central Bank)

Initial estimates

Twenty countries indicated that they should be able to compile UIC data in 2019 according to the unique UIC measure agreed upon by the countries[6]. This is, in part, because several countries were already producing UIC data based on the BD4 approach before the project started. Even for those countries not in that situation, all but three should be able to compile the data by the end of the pilot studies (September 2019), if not by the first deadline (May 2019). These three may be able to compile the data by the end of the pilot studies but not before.

Accessibility and interpretability

There was no consensus on how to disseminate the UIC data. Eight countries will release the data as official estimates, largely because they are already doing so, while another 6 intend to release the data to Eurostat and the ECB only (and 1 stated it would release to the TF-FDI only, which includes Eurostat and the ECB). Three are likely to release the data on a provisional basis to the general public, while the rest of the countries do not have any plans to disseminate or did not indicate when they plan to disseminate UIC data.

Preparation of metadata is part of the preparation and release of data. Seventeen of the participants indicated that their methodology for UIC has either been completed or will be completed by the end of the pilot studies.

[5] As far as inward direct investment data are concerned, the totals for each country's UIC data and the standard presentation of the data should be the same. This is because the UIC data are a re-arrangement of the standard presentation, even though in some countries, the re-arrangement may mean that the Member State becomes an inward investor in itself as a result of the chain of investment leading back to the home country, such as in 'round tripping'. This additional measure may require harmonisation across Member States to ensure consistency in UIC classification.

[6] Seven countries indicated that they could also produce UIC data for entities that have multiple direct investors (influence).

Details in the pilot study

As to what extent countries might be able to provide geographical and industry details on UIC data, 21 countries provided a response. Most could provide some geographical information, with varying degrees of detail. There was concern about confidentiality restrictions, which could be quite limiting for analysis in some instances, especially for smaller economies. However, for industry data, only a few indicated they could provide the industry of the UIC, in addition to the industry of the entity in the reporting economy. Cross-classifying countries by industry is not considered feasible at this point, except in a few instances, because of confidentiality constraints. Nonetheless, the correct industry classification can be challenging in the case of investment chains where the first point of entry is a special purpose entity (SPE).

Accuracy

When assessing the accuracy of existing datasets, it is important to try coming up with some objective measures (e.g., reliability via analysis of revisions). However, even in these cases, there is a certain amount of subjectivity in the approaches. The challenge is even more complicated when trying to assess the accuracy of estimates in pilot studies that have been completed or are in progress. As a result, the approach is a subjective assessment of the countries' existing FDI estimates.

Countries were first asked to rate the accuracy of their current inward and outward FDI data for transactions and positions. Countries assessed their current FDI data to be either good or very good in nearly all instances. Most (13) regarded their FDI positions data to be very good, while the rest regarded their data to be good. One participant noted that its data would be considerably revised and improved when new data on SPEs become available in September 2019.

Three quarters of the countries in the pilot study felt their UIC estimates would be as good as their standard FDI estimates, reflecting those who currently produce, or can produce relatively easily, a measure of UIC. The pilot study's focus on control relationships may help support the quality of the UIC data, because measuring influence is more difficult. For the minority of countries that indicated that the UIC estimates would be of lower quality than their standard measures, most are in the developmental stages where accuracy cannot be fully assessed for ongoing compilation.

Comparability

Comparability is an extension of accuracy that is particularly important in international statistics. As for the comparability of their data with other countries, most expected their UIC data to be as comparable as their standard FDI datasets, with one indicating that it expected the data to be more comparable. Four countries thought that their UIC data would be less comparable, no doubt reflecting the preliminary nature of their work, while the remainder of countries were either unable to assess the degree of comparability or did not provide any indication of comparability.

Closely related to comparability is the application of common methodology across the countries. In this regard, the majority of the countries (17) said that they had followed the proposed methodology, notably in applying all FDI to the controlling investor, though some had made minor changes. Only 1 country said it had not followed the methodology, as it would require a change to its legal text for collecting the data. The other countries did not give any indication of the extent to which they had followed the proposed methodology.

Using internationally agreed valuation principles for FDI positions is part of accuracy and comparability. Virtually all the countries stated that they would be able to apply these standards, with some (minor) modifications in some instances.

Cost considerations

Consideration was given to the incremental costs of developing UIC statistics followed by the ongoing production of data. For more than half of the countries, these incremental costs were either zero or very small, in part because they are already compiling the data, but also because they could use more effectively data sources that are already available. On the other hand, for close to half of the countries, obtaining UIC data would involve conducting new surveys. Three countries expect that developing UIC data would incur significant costs but that their ongoing production would not involve major cost increases. On the other hand, for 1 country both the development and the ongoing production of UIC data would involve a significant increase. For the remaining 5 countries, it was too early to provide any indication of costs.

Regarding the incremental costs for respondents providing UIC data, several countries noted that these would be zero, as the data are already being collected. For the other countries, while not being able to provide definitive answers, the general view was that it could constitute a large increase.

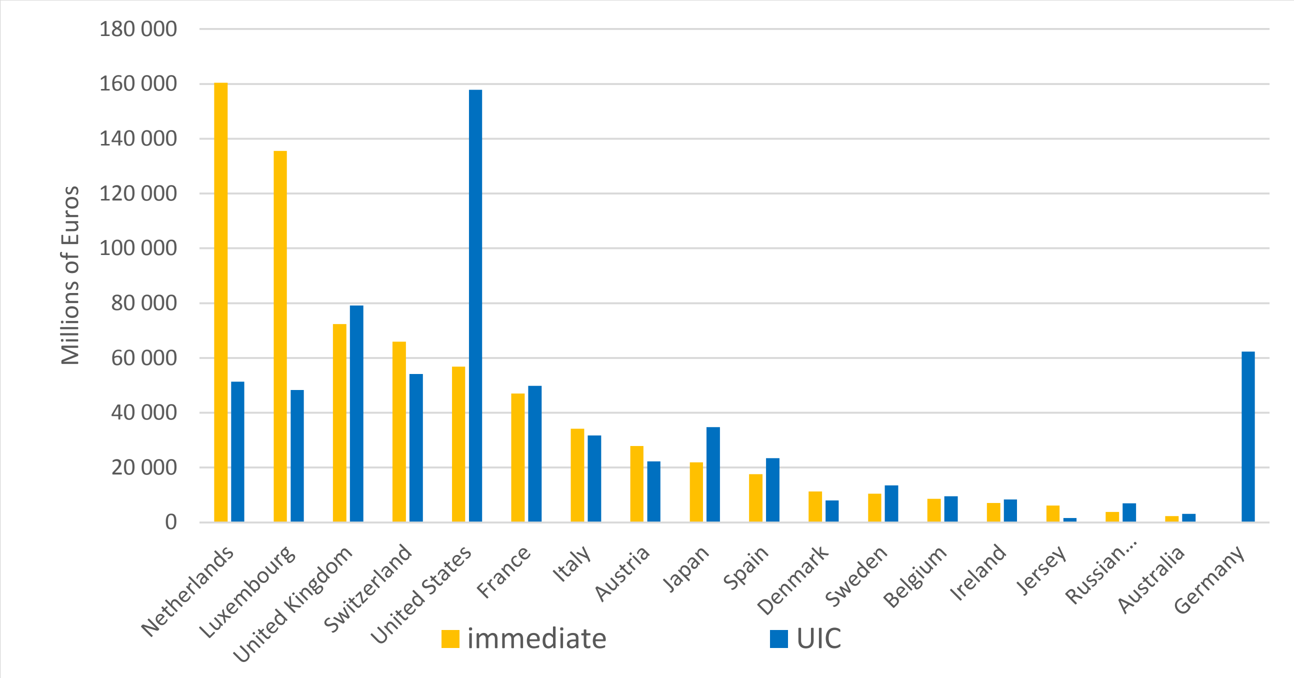
Data received by Eurostat

As part of the pilot study, Eurostat initiated data collection on 1 May 2019 with the last response coming on 7 June. The intent was to provide a preliminary assessment of what could be collected, including the details, even though some countries indicated that they could only supply data at a later date. Of the 17 countries that replied, 16 provided UIC (with the controlling parent) estimates in varying degrees of detail (see Annex 2.a). FDI by UIC therefore seems feasible.

Selected analytical results

For Germany, Figure 2 shows the differences between the immediate counterpart countries and the inward ultimate controlling investment countries for 2016. Cross-border funds from immediate counterpart countries identify the Netherlands and Luxembourg as key sources of investment; however, ultimately these funds can be sourced back to the controlling countries, which accentuates the United States' position in Germany and underlines the important role of Germany itself (round tripping), as the ultimate source of investment.

Figure 2 Germany: Inward FDI positions broken down by ultimate control and immediate investor country (2016)



Source: Deutsche Bundesbank (German Central Bank)

Ultimate host country

As for UIC, the approach for UHC was to focus on outward FDI positions into foreign majority-owned affiliates (control relationships). It was also agreed to restrict these outward investments to direct investors that are controlled domestically, that is where the domestic investor is the ultimate parent. In this way, much layering in outward FDI statistics is removed[7].

The objective is then to go through non-resident SPEs to locate the first operating entity, respecting the control restrictions. It was generally agreed by the countries that this was achievable, though some countries indicated that they could take (and had taken) the UHC concept to the last operating enterprise along the chain. On the other hand, some countries indicated that identifying SPEs would prove very difficult operationally. Providing a definition of SPEs was beyond the scope of the pilot studies, and many countries have practical definitions that they apply as reflected in industrial classifications. The TF-FDI also discussed the recently adopted definition of an SPE outlined in the final report of the IMF Task Force on SPEs[8].

SPEs are entities that are set up for a specific purpose in a country other than that of the direct investor. Most SPEs have few employees and little physical presence in the countries where they are registered or have legal domicile. They are often used as vehicles through which direct investors channel funds to entities further along the investment chain. Because SPEs generally do not have significant activities in the economy in which

[7] As far as outward investment is concerned, Member State totals for UHC and the standard presentation may not be the same because the UHC data exclude the outward investment by entities that are not majority owned by residents, whereas the standard presentation will include those entities. The overall outward FDI total would be the same, but the minority interest could be classified as unallocated or as immediate investments, which would mean that the UHC portion might not be harmonised between countries.

[8] BOPCOM 18/03 - Final Report of the Task Force on Special Purpose Entities.

they reside, there is an interest in 'looking through' them to see where investment that is passed through them is placed.

Initial estimates

As noted, data for UHC are more difficult to collect and compile and, as a result, less than half of the participants indicated that estimates would be ready by the end of the pilot studies. Of the remaining countries, some indicated that collecting these data was not part of their current work plan or could not commit to a deadline, while others noted that these data would not be available for 2 to 3 years.

Accessibility and interpretability

Plans by countries to release their UHC data were more mixed than for UIC. Seven countries indicated that they would release the data to the public (either as official statistics or as provisional data), largely because they are already doing so. Four indicated that the data would be provided only to Eurostat and the ECB (and 1 other stated it would release only to the TF-FDI, which includes Eurostat and the ECB). The remaining countries did not have any plans to disseminate, or indicated that they had no current plans to compile UHC data, or they did not indicate what their plans for disseminating UHC data were.

Preparation of metadata is part of the preparation and release of data. Three quarters of the countries that indicated they will prepare UHC data noted that their methodology for UHC is either completed or will be by the end of the pilot studies. The rest indicated that their methodology would not be ready for a couple of years or, as they were not compiling UHC data, they had no methodology to publish.

Details in the pilot study

Only 9 countries noted that they could provide some geographical and industry detail, fewer than for UIC because there are fewer countries that have undertaken work on UHC data. Thus, it is premature to indicate what, if any, geographical or industry data they can provide. As with UIC data, countries indicated that the degree of detail for UHC data would be subject to confidentiality constraints, which could be quite limiting in some instances, especially for the smaller economies. For industry data, however, only 4 countries indicated they could provide that information for the industry of the UHC, rather than that of the entity in the reporting economy. Cross-classifying countries by industry is not considered possible at this point except in a few instances because of confidentiality constraints. Nonetheless, the correct industry classification can be challenging in the case of investment chains where the first point of entry is an SPE.

Accuracy

As with UIC measures above, this constitutes a subjective assessment in relation to the countries' existing FDI estimates. Only 5 of the participants assessed the accuracy of their (current or expected) UHC data to be as good as their current (standard) measures of direct investment, while 10 indicated that their UHC data would be (or are) of a lower quality. The remaining countries said either that they do not have current plans to develop UHC data or that it is too early to make an assessment.

Comparability

Given that for many countries progress in developing UHC data is not as advanced as for their UIC data – or has not begun – and given the greater difficulties with compilation, it is not surprising that only 4 countries indicated that their UHC data would be as comparable to the datasets of other EU countries as their existing (standard) annual FDI data. On the other hand, 10 countries indicated that they expected their UHC data to be less comparable, no doubt reflecting the preliminary nature of their work. The remaining countries were either unable to assess the degree of comparability or did not provide any input on this issue.

Of those countries that indicated that they would compile UHC data, most declared that they had followed the methodology adopted by the TF-FDI for compilation of their UHC data, though some had made some minor changes. Nine countries stated that they had restricted their UHC data to domestically controlled entities (in line with the agreed methodology for the pilot study). Two countries said they had not followed the methodology, 1 of which noted that it would require a change to its legal framework to collect the data. The other country noted that it was unable to identify SPEs so that it was not possible to identify the first operational enterprise along the chain of entities. The remaining countries either noted that the question was not applicable, as they are not planning to produce UHC data, or they did not respond to the question.

Most of the countries indicated that they would apply the internationally agreed standards for the valuation of outward FDI positions.

Cost considerations

As to the incremental costs of developing UHC statistics, it was not surprising that they are significantly greater or more difficult to estimate than UIC. Even so, 6 countries indicated that these additional costs were either zero or very small for both developing UHC data and producing them on an ongoing basis. On the other hand, 3 countries noted that both developing UHC data and producing them on an ongoing basis could incur significant costs, with several participants noting that measuring UHC data would require additional surveys. The remaining countries indicated that either it was not possible to provide any indication at this stage of what these costs would amount to, or they were not planning to produce UHC data at the current time, or they did not provide any input on this issue.

With regard to the incremental resource impact for respondents providing UHC data, 4 countries noted that it would be zero (as the data are already being collected) or low, while another 4 countries indicated that the increased response burden would be moderate to high. However, most of the other countries indicated that it was not possible to provide an estimate of the increased respondent burden yet, or they were not planning to produce UHC data, or did not provide input on this issue.

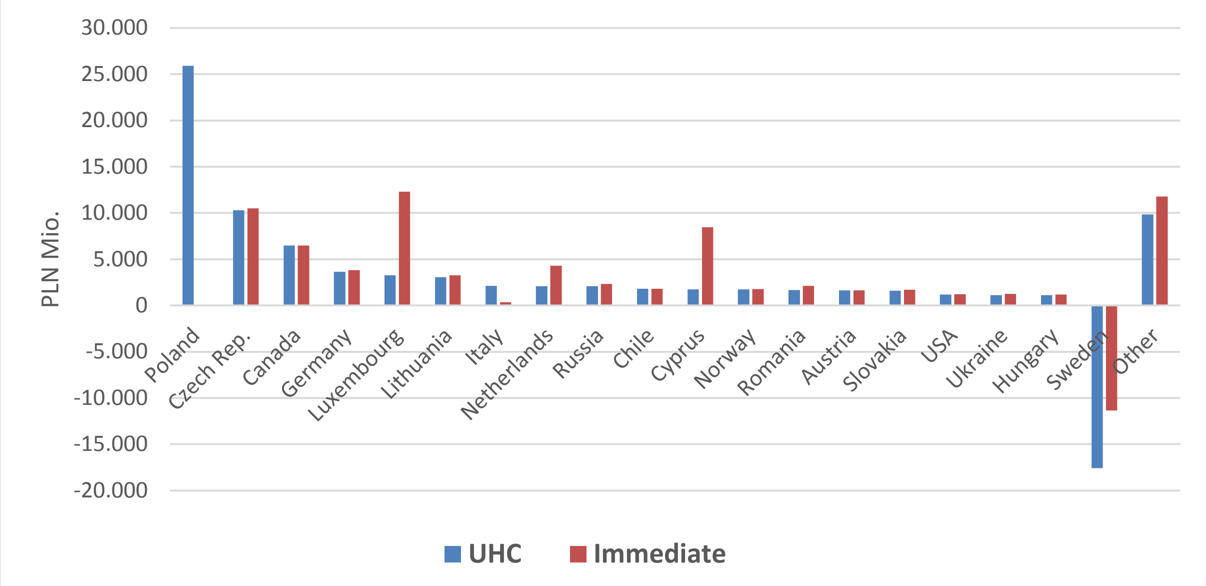
Data received by Eurostat

The Eurostat data collection mentioned above included measures of UHC, with the focus also being on control relationships. Of the 17 countries that were able to meet the collection deadline, 10 supplied estimates in varying degrees of detail (see Annex 2.a). This result suggests that data collection is feasible. However, more technical and conceptual work is needed.

Selected analytical results

For Poland, the data in Figure 3 indicates that Luxembourg, Cyprus and the Netherlands are important destinations for outward FDI on an immediate basis. However, the ultimate basis estimates indicate that the bulk of these funds are merely passing through to be used in other countries, with significant amounts in Poland (round tripping).

Figure 3 Poland: Outward FDI of resident controlled entities broken down by immediate and ultimate host country (2017)



Source: Narodowy Bank Polski (Polish Central Bank)

Greenfield investment

The concept of greenfield has two dimensions: the portion of inward FDI transactions that constitute greenfield investment (used for capital purposes) into the domestic direct investment enterprise (DIE); and, the capital expenditure of the domestic DIE. The methodology developed for the pilot study incorporated both concepts – (a) the FDI transactions approach (assess the purpose of FDI inward transactions as outlined in the OECD's BD4) and (b) the capital approach (measuring fixed capital formation of newly created DIEs in the compiling country) – for three reasons. First, most FDI compilers in the EU can only attempt the FDI transactions approach, which was the recommended approach for the pilot study. This approach covered both greenfield investment in new DIEs (narrow measure) and existing DIEs (brownfield investment) shown separately. Second, a few countries indicated that they would only consider the capital approach, and this needed to be accommodated. Third, the two are related measures, with the FDI greenfield inflows being the catalyst for the DIEs capital expenditure. In other words, there is a multiplier effect from FDI. This proposed measure of greenfield in the pilot studies would be only for transactions from the immediate investor during any given period.

Industry details are important for analysing extended measures. Notably, any analysis of industry data needs to be treated with some care because the chain of investment – both within an economy and across economies – may mean that the classification by industry is constrained by the vehicles through which data are collected via surveys. European legislation requires Member States to use the enterprise (defined as the legal entity) as the only institutional unit for collecting survey data[9].

[9] The enterprise through which funds are received in the case of inward investment is often through a holding company, which would be classified to the financial sector. However, that holding company is, by definition, not the operating entity and may, in turn, invest in related entities in the same economy. These entities may be in other industries, such as resource extraction, manufacturing, retail, wholesale, construction, etc. However, because the survey obtains data from the entity that receives the direct investment, which is in the financial sector, the ultimate destination of the funds may not be available. Where countries have significant investment through holding companies, obtaining the industry of the ultimate user would be very helpful for analytical purposes. Outward investment has the mirror problem, but it also has another matter of concern: the industry of the direct investor may be different from the industry of

Given that DIEs likely account for an important share of the total capital formation of many countries, it is important to understand the dynamics of funding. The seed funding from the controlling parent, combined with the internal and external financing of the DIE, is critical in ensuring that capital formation takes place. This indirectly argues that it is essential to use in combination both the FDI transactions approach and the capital approach (mostly from foreign affiliate statistics – FATS) in order to monitor the impacts (e.g. capital formation, employment, etc.) of FDI on the domestic economy.

Initial estimates

Thirteen countries indicated they could have data on greenfield ready by the end of the pilot studies or available by 2020. The remaining countries were either not planning to prepare these data until 2021 or later or were not planning to produce data on greenfield. Some of these countries are at a more advanced stage in preparing the data on greenfield than UHC data.

Accessibility and interpretability

As with UIC and UHC data, the responses on the dissemination of greenfield data varied considerably. Three countries indicated that they would release the data as official estimates, largely because they are already doing so, while 3 indicated they would release the data on a provisional basis to the public. Seven indicated that the data would be provided to Eurostat and the ECB only (and 1 stated it would release to the TF-FDI only, which includes Eurostat and the ECB), while the rest did not have any plans to disseminate, or they have no current plans to compile greenfield data, or they did not provide any input on this issue.

Preparing metadata is part of the preparation and release of data. A little over half of the countries indicated that their methodology for greenfield had either been completed or would be so by the end of the pilot studies. The rest indicated that their methodology would not be ready for a couple of years or, as they were not planning to compile greenfield statistics, they had no methodology to publish.

Details in the pilot study

Providing geographical or industry detail for greenfield data poses a problem for most countries. Because the amounts are much smaller (being transactions) than either UIC or UHC data (which are both positions data), the confidentiality constraints are more severe, with some larger countries even noting that their data would be highly aggregated. Only 6 countries indicated that geographical information could be provided, with varying degree of detail. Similarly, for industry data, only 5 countries indicated they could provide greenfield information for the industry data. Given these confidentiality constraints, cross-classifying a country by industry would be unlikely at this point in most countries.

Accuracy

As with the ultimate investment measures, the approach is a subjective assessment in relation to the countries' existing FDI estimates. To this end, 13 countries regarded their FDI transactions data to be very good, while the remaining countries regarded their data to be good. Only 5 of the countries assessed the accuracy of their (current or expected) greenfield data to be as good as their current FDI transactions, while 11 indicated that their data for greenfield would be (or were) of a lower quality. The remaining countries did not provide any

the entity that first receives the funds. Having outward data classified to the industry of both the investor and the industry of the investee helps overcome some of these problems, but not all countries are able to provide this. Accordingly, any analysis of industry data should be undertaken with these caveats in mind. Current statistical practices may lead to a somewhat misleading outcome, and it would be a valuable exercise to extend the data collection to the industry of the ultimate user. It should be noted that these problems of industry analysis are relevant for both the standard presentation of direct investment and the extended measures.

input on this issue, perhaps either because it is too early to make such an assessment or they do not have plans to develop greenfield data in the near future.

Comparability

As to what extent their greenfield data would be comparable to those produced by other EU countries, only 5 countries indicated that their greenfield data would be as comparable as their existing annual FDI data, while on the other hand, 9 countries noted that they expected their greenfield data to be less comparable. Given that for many countries progress in developing greenfield data is not as advanced as for their UIC data – or has not begun – and given the greater difficulties with compilation, those expectations are not surprising. The remaining countries were either unable to assess the degree of comparability or did not comment.

Of the two possible approaches to measuring greenfield, nearly all those countries that have compiled, or plan to compile, greenfield data chose the FDI transactions approach – only 2 chose to use the capital approach (while 2 countries did both). Most countries obtained their greenfield data from surveys. As to what was captured as 'greenfield investment', 9 countries included both 'greenfield' and 'brownfield' investments, while the rest used either one or the other. For the time horizon, 8 countries included all such investments in the previous 3 years in their measures of greenfield, 3 used a two-year time horizon, and the rest used only a one-year horizon. Most countries applied the control criterion to allocate the country providing the greenfield funding.

About half of the countries indicated that they had followed the proposed methodology in support of comparability, though some had made some minor changes. Two countries said they had not followed the methodology, one of which noted that it would require a change to its legislation to collect the data. The other countries either noted that the issue was not applicable, as they are not planning to produce greenfield data, or they did not answer the question.

Cost considerations

As regards the incremental costs of developing and then producing greenfield data on an ongoing basis, there was considerable variation. As was indicated above, greenfield data are more difficult for some countries to produce than UIC data, while, on the other hand, some countries have been producing greenfield data for some time. Accordingly, it was not surprising that the incremental costs are significantly greater or more difficult to estimate for countries new to the exercise. Even so, 3 countries indicated that these additional costs were either zero or very small for both developing greenfield data and producing them on an ongoing basis. On the other hand, 3 countries stated that both developing greenfield data and producing them on an ongoing basis would incur significant increased costs. The remaining countries indicated that either it was not possible to provide any indication at this stage of what these costs would amount to, or they were not planning to produce greenfield data at the current time or they did not comment on this issue.

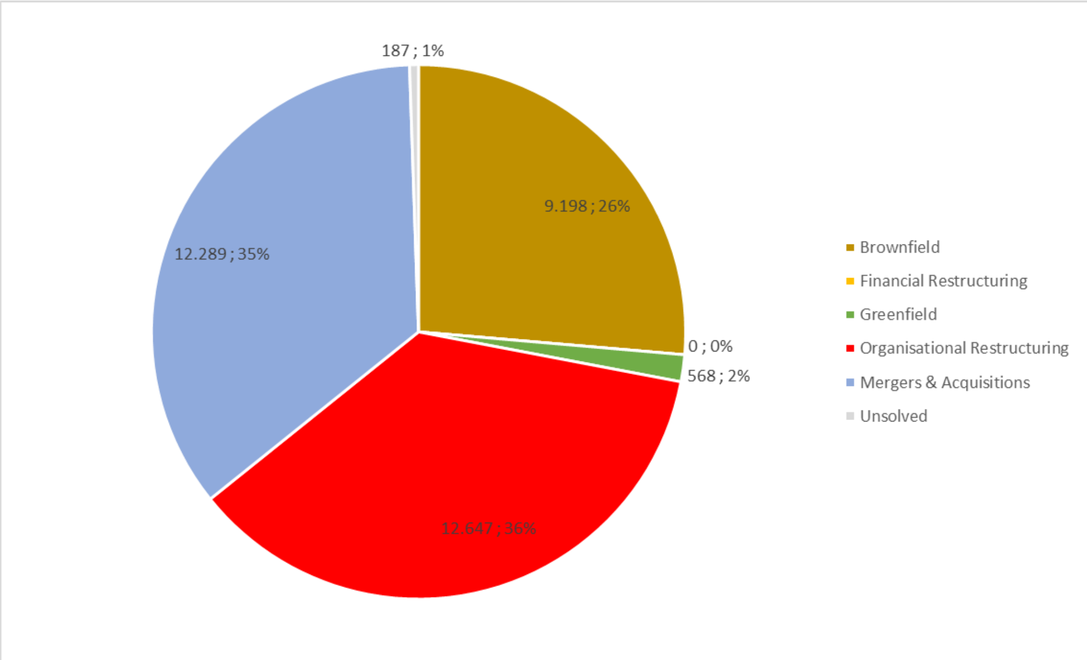
Data received by Eurostat

Of the 17 countries that met the Eurostat collection deadline, 7 supplied estimates of the FDI transactions approach to greenfield in varying degrees of detail (see Annex 2.b). While this is not many, it must be balanced by the fact that other countries have provisional estimates of this measure that they have presented at the TF-FDI, and a few other countries are working on such estimates. In addition, 2 countries have indicated that they will pursue the capital approach, reflecting principally the policy-analytic needs of their user communities. This result suggests that data collection is feasible. However, more technical and conceptual work is needed.

Selected analytical results

In the case of Austria (Figure 4), provisional estimates indicate that the narrow measure of greenfield is very small, accounting for under 2% of FDI transactions in 2017. Further, brownfield investment is much larger; when brownfield investment is added, the total investment for capital expansion reaches close to 28%. It is likely a reflection of the fact that foreign direct investors typically add productive capital to their operations in developed economies through acquisitions of existing enterprises.

Figure 4 AUSTRIA: Breakdown of FDI flows by type million EUR (2017)



Source: Oesterreichische Nationalbank (Austrian central bank)

CONCLUSIONS AND IMPLICATIONS ON THE DEVELOPMENT OF FDI STATISTICS

The pilot studies were, in essence, feasibility studies. This document reports on the status of the country efforts within the pilot studies as well as their intentions. As with all such work, there remains the key issue of identifying the potential next steps, against the backdrop of demand weighed against country constraints.

Firstly, the pilot studies proved very useful in determining methodological approaches and to establish what is and could be available on UIC, UHC, and greenfield statistics in the countries. It is to be defined which variables should be core measures (from all countries) and which should be supplementary measures (from countries with a more developed FDI statistical system).

The methodological approaches for UIC, UHC and greenfield placed a high priority on relevance and practical considerations, while promoting comparability. For the ultimate measures, for example, the emphasis was placed on majority ownership relations (control). Control relationships determine how production is distributed across borders as well as where the bulk of income arising from production and other activities end up. However, using control relationships can also overestimate resident investors' investments in their own economies (round tripping) and excludes minority investors' investments in an economy, which for some countries can be politically sensitive information. For greenfield, given that there was no generally accepted concept or approach, the methodology breaks new ground in this area related to FDI. Further, it provides a bridge from FDI transactions to DIE fixed capital formation.

Secondly, while the pilot studies revealed considerable variation in availability and development of these datasets, these differing stages of development reflect variations in overall policy interest as well as statistical capacity across the countries. It is clear that UIC data are the most advanced for most countries, where they have been prepared for some time. Other countries indicated that they could calculate UIC estimates. On the other hand, UHC and greenfield data are somewhat less developed than UIC data. These differing stages of development reflect, perhaps to a large extent, the current level of overall domestic policy interest.

Thirdly, while some countries are unable to indicate the extent to which producing these datasets would require additional resources, the countries that can estimate this indicated that they have not experienced / do not anticipate a large increase. A few countries noted that costs and, therefore, the need of funding would be significant. In this context, Eurostat is also exploring in which way, for example, the EuroGroups Register could be helpful for countries in compiling UIC and UHC estimates.

Fourthly, as regards the quality of the data for the proposed extended measures of FDI, in the main, the UIC data are likely to have a similar high degree of accuracy as their current measures of FDI, although countries may need more time to compile the data. Moreover, given the likely high quality of their datasets, an equally high degree of comparability with other countries' data for UIC can be expected in the future, should it be decided to produce these data on an ongoing basis. For UHC and greenfield, however, the current expectations are that the data would be of a lower quality — less accurate and taking longer to compile — reflecting that these latter datasets are not as advanced as the UIC data for many countries. Therefore, more technical and conceptual work is needed for these two statistics.

Implications on the development of FDI statistics

The pilot studies showed an uneven response, by UIC, UHC and greenfield, and uneven details submitted in the initial data collection. This leads to the conclusion that any ongoing collection should include a judicious assessment of core and non-core variables to add some degree of country flexibility to the process.

While the pilot studies focused on the ultimate countries involved in investment flows, there would be value in applying this approach also to income from these investments, which would for instance reveal what portion accrues to the ultimate owners.

Ultimate FDI provides a different perspective, as it cuts out many of the challenges with understanding global ownership links and focuses at the top and bottom of investment chains. It would be useful to be able to reconcile the results between FDI on an immediate basis and FDI on an ultimate basis, which would require enough statistical harmonisation between the approaches.

Better understanding of both the amount of new resources available to the investee economy and the link those additional resources provide to the increase in capital formation would require further work on the 2 greenfield approaches. These measures are complimentary and not specifically substitutes for each other. The broad measure (new DIEs and existing DIEs) of FDI greenfield inflows is the catalyst for the subsequent capital formation in the domestic economy of the DIEs and the resulting increases in employment and productive capacity that accompany it. It is important to understand not only the incidence of greenfield, but also the causal relationship and associated multiplier between inward FDI for capital expansion and capital formation of the DIE.

A few countries in the pilot studies have attempted to measure both inward and outward greenfield transactions, with some interesting results. Adding measures of greenfield on outward FDI would provide a more comprehensive picture of the impacts of FDI for each country.

There is potential to link the extended FDI measures with other globalisation statistical efforts, such as FATS, global production measures and trade in value added. This would often require closer cooperation between several statistical compilers.

Comparability of data is essential. Therefore, the new datasets relating to the extended measures, if established as a data requirement, could be used to compare results between countries, and with countries outside the EU that have constructed estimates for the extended measures using similar methodology (such as the United States and Canada). The causes for large discrepancies, when they arise, would need to be investigated to improve the quality of the country datasets.

Over the course of the pilot study, compilers of FDI statistics referred to confidentiality constraints that limited the degree of country and industry details in the extended FDI measures. Harmonising and relaxing the countries' restrictive confidentiality policies/practices on FDI statistics could eventually increase the capacity for business register information and data sharing and subsequently improve the quality and comparability of FDI statistics. Perhaps, most importantly, efforts in this area would improve the relevance of FDI statistics, as it would lead to an increase in the country and industry details available for policy-analytic research[10]. In practice, this suggests a review of countries' confidentiality practices (for example, in the TF-FDI) with a view to potentially harmonising these, as a first step, so as to better understand and possibly improve comparability over time; and, as a second step, countries could then re-assess their practices with the objective of possibly making new data available to the public.

The concepts and approaches taken in the pilot study on ultimate measures of FDI positions and greenfield investment transactions went beyond what is covered in the OECD's BD4 for UHC and greenfield. The OECD may draw useful lessons from this work for the next update of its Benchmark Definition on FDI.

As stated in Article 5(7) of Regulation (EC) No 184/2005, no later than 12 months after the date of issuing this report, the Commission must, where appropriate, and depending in particular on the assessment of the result of the pilot studies, make a proposal for amendments to this Regulation in order to define the methodological and data requirements for annual FDI statistics on the ultimate ownership concept and for annual FDI statistics distinguishing greenfield FDI transactions from takeovers. In that context, the Commission services will continue to seek the Member States' active participation in the process in order to determine potential future developments based on user needs at both EU and national levels. Further technical and conceptual work on UHC and greenfield investments would take place with Member State experts in the relevant working groups. Finally, compliance with the current international standards, in particular the Balance of Payments and International Investment Position Manual ed.6 and the OECD's BD4 remains crucial.

10 Some countries, notably Canada (after reassessing risks and applying a decision tree model, as presented at the March 2016 OECD Working Group on International Investment Statistics), have no suppressed values in their detailed annual FDI statistics.

Annex 1: Metadata received on extended measures of FDI

(1 May 2019 collection)

Countries/measures	Ultimate investing country	Ultimate host country	Greenfield investment
Belgium	Yes	No	Yes
Bulgaria	Yes	Yes	Yes
Czech Republic	Yes	Yes	Yes
Denmark	Yes	Yes	Yes
Germany	Yes	Yes	Yes
Ireland	No	No	No
Greece	No	No	No
Spain	Yes	Yes	Yes
France	Yes	Yes	Yes
Italy	Yes	Yes	Yes
Cyprus	Yes	Yes	Yes
Latvia	No	No	No
Luxembourg	Yes	Yes	Yes
Hungary	Yes	Yes	Yes
Malta	Yes	Yes	Yes
Netherlands	Yes	Yes	Yes
Austria	Yes	Yes	Yes
Poland	Yes	Yes	Yes
Portugal	Yes	Yes	Yes
Romania	Yes	No	Yes
Slovenia	Yes	Yes	Yes
Finland	Yes	Yes	Yes
Sweden	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes
Iceland	No	No	No

Note: Croatia, Estonia, Lithuania and Slovakia did not participate in the pilot studies

Annex 2a: Ultimate investing country & ultimate host country – data received (1 May 2019 collection)

Details →	Ultimate investing country						Ultimate host country			
	Geographical breakdown		Industry breakdown		Geographical & industry breakdown		Geographical breakdown		Industry breakdown	
Countries and reference years ↓	POSITIONS TOTAL	POSITIONS IN EQUITY AND DEBT	Of the Direct Investment Enterprise	Of the ultimate controlling parent, in the unique UIC	According to the industry of the Direct Investment Enterprise	According to the industry of the ultimate controlling parent in the UIC	POSITIONS TOTAL	POSITIONS IN EQUITY AND DEBT	Of the ultimate controlling parent	Of the Direct Investment Enterprise in the UHC
Bulgaria 2016-2017	No	No	No	No	No	No	Yes	No	No	No
Czech Republic 2017	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No
Denmark 2015-2017	Yes	Yes	No	No	Yes	No	Yes	Yes	No	No
Germany 2016	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Spain 2016	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes
France 2017	Yes	Yes	Yes	No	Yes	No	No	No	No	No
Italy 2017	Yes	Yes	Yes	No	Yes	No	No	No	No	No
Luxembourg 2017	Yes	No	No	No	No	No	No	No	No	No
Hungary 2016	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Malta 2016	Yes	No	Yes	Yes	No	No	Yes	No	Yes	Yes
Austria 2016	Yes	Yes	Yes	No	Yes	No	No	No	No	No
Poland 2016	Yes	No	No	No	No	No	Yes	No	No	No
Portugal 2014-2018	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
Slovenia 2017	Yes	Yes	Yes	No	No	No	No	No	No	No
Finland 2017	Yes	Yes	Yes	No	No	No	No	No	Yes	No
Sweden 2016	Yes	Yes	No	No	Yes	No	Yes	Yes	No	No
UK 2014-2016	Yes	No	No	No	No	No	No	No	No	No

Note: Geographical breakdowns are level 5 or level 6. Industry breakdowns are NACE Rev. 2 level 1 (aggregates) or level 2

Annex 2b: Greenfield investment – data received

(1 May 2019 collection)

Details →	Geographical breakdowns			Industry breakdowns
Countries and reference years ↓	**Transactions by M&As, greenfield, and other**	**Transaction in equity by M&As, greenfield, and other**	**Transactions in debt by M&As, greenfield, and other**	**Transactions by industry for M&As, greenfield, and other**
Bulgaria 2016-2017	No	No	No	No
Czech Republic 2017	Yes	Yes	Yes	Yes
Denmark 2015-2017	No	No	No	No
Germany 2016	No	No	No	No
Spain 2018	No	Yes	No	No
France 2017	No	No	No	No
Italy 2017 *	Yes	Yes	Yes	No
Luxembourg 2016	No	No	No	No
Hungary 2017	Yes	Yes	Yes	Yes
Malta 2016	Yes	No	No	Yes
Austria 2017	Yes	No	No	Yes
Poland 2016	Yes	No	No	Yes
Portugal 2014 – 2018 **	Yes	Yes	Yes	Yes
Slovenia 2017	No	No	No	No
Finland 2017	No	No	No	No
Sweden 2016 - 2017	No	No	No	No
UK 2014 – 2016	No	No	No	No

Note: Geographical breakdowns are level 5 or level 6, industry breakdowns are NACE Rev. 2 level 1 (aggregates) or level 2

** Data refer to outward FDI transactions*

***Only data for greenfield investments*