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**INTERNATIONAL TRANSACTIONS IN INTELLECTUAL PROPERTY  
(FOR EXAMPLE, RESEARCH AND DEVELOPMENT)**

INTERNATIONAL TRANSACTIONS IN INTELLECTUAL PROPERTY

Note by the Organisation for Economic Co-operation and Development

*Summary*

As production processes become more global and the processes themselves more complex the role of international trade in intellectual property products, in particular software and research and development, has grown. Their importance grows with the fact that in the 1993 System of National Accounts software and databases are included within fixed assets and in the 2008 System of National Accounts likewise with research and development. However, the difficulty is that little is known about these international flows of intellectual property and related income. The problems facing international transactions are described in the draft Handbook on Deriving Capital Measures of Intellectual Property Products. The Task Force of the Organisation for Economic Co-operation and Development on Intellectual Property Products has developed a prototype survey that might be used to shed some light on this issue.

## **I. BACKGROUND**

1. The Conference of European Statisticians decided at its 2007 plenary session that a Group of Experts on the Impact of Globalisation on National Accounts be created to review the main distortions in the compilation of national accounts caused by the growing globalisation of economies and to develop recommendations on how to deal with these distortions. The election of the Group of Experts was approved by the Executive Committee of the United Nations Economic Commission for Europe (UNECE) at its twentieth session (27 February 2008). The Group of Experts will work in cooperation with Eurostat and the Organisation for Economic Co-operation and Development (OECD). The present document contains an input for the preparation of the Recommendations.
2. As production processes become more global and the processes themselves more complex the role of international trade in intellectual property products, in particular software and research and development, has grown. Measuring these flows in international property has always been important but with the decisions taken in the 1993 System of National Accounts (SNA) to include software and databases within fixed assets and in the 2008 SNA to do likewise with research and development, their importance has grown ever more important.
3. The difficulty however is that little is known about these international flows of intellectual property and related income. Multinationals for example are able to exchange and use intangible assets across borders, with these flows rarely being recorded as payments for assets or payments for the use of assets. Rather they are more likely to be recorded, if at all, as property income back to the parent company or reinvested foreign direct investment (FDI).
4. Further, even if one ignores the flows between affiliated enterprises, the situation is still far from perfect, at least from a national accounts perspective, as the current classification systems used for international trade, particularly trade in services, do not provide for an adequate breakdown between the various types of intellectual property products (IPP) assets recognized in the 2008 SNA; although work is on-going to improve this situation, as described below.
5. What is needed therefore is two-pronged approach to dealing with these issues. The first is to motivate changes in the current trade classification systems that allow for the better identification of the various types of IPP. The second is to develop mechanisms, perhaps using new dedicated surveys or via modifications to existing surveys that allow for the measurement of all flows of IPP between affiliates.

## **II. INTERNATIONAL TRADE CLASSIFICATION SYSTEMS AND IPPS**

6. The 2008 SNA recognizes five categories of intellectual property assets:
  - (a) Research and development;
  - (b) Mineral exploration and evaluation;
  - (c) Computer software and databases;

- (d) Entertainment, literary and artistic originals; and
- (e) Other IPPs.

7. With the exception of mineral exploration and evaluation, IPPs are subject to substantial international trade. To be more precise, it is most commonly the copies of IPPs, such as packaged software, and musical and film recordings, or the services provided by them that are traded rather than the originals themselves. But trade in originals can be important, particularly with Research and Development (R&D).

8. The measurement of these assets is clearly important in and of itself, as part of the measurement of gross domestic product (GDP), and in order to measure, for example, Capital, Labour, Energy, Materials and Services (KLEMS) type productivity estimates but their measurement is complicated by the scarcity of data that is typically available to accurately measure expenditures on them. Typical demand type approaches that survey enterprises and government for example are, at least at present, not ideal to estimate these expenditures as the IPP assets themselves, particularly software and R&D, are not usually recognised as assets by the survey respondents. Redesigns of traditional investment (gross fixed capital formation) surveys are therefore being considered/run in many countries based on the idea that rather than asking respondents to provide information on expenditures considered as being investment in the SNA sense, even if they are not in a business accounting sense.

9. It will take some time however before most countries are able to undertake such changes to their surveys however and in the meantime, supply-based approaches to estimating gross fixed capital formation (GFCF) in IPPs will continue to play a prominent role. The problem however is that the current classification systems used to measure trade in imports of IPPs, a significant contributor, to total supply are not, at present, detailed enough to allow for the separate identification of investment in IPPs by type.

10. Transactions in originals and copies of IPPs and IPP services are recorded in the goods and services account of the balance of payments (BOP) and Chapter 10 of the Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual (BPM) describes in which categories they are recorded. Unfortunately, both the level of detail and how the items are categorised are less than ideal for national accounts purposes. This lack of detail in the BOP was identified in the reports of both the 2002 OECD Software Task Force (and the 2003 European Union (EU) Task Force on Entertainment, Literary and Artistic Originals).

11. One of the most important sources for estimating international trade in services are surveys conducted in accordance with the Manual on Statistics of International Trade in services (MSITS). The 2002 edition of this manual, which is consistent with both the 1993 SNA and the BPM, fifth edition, includes the Extended Balance of Payments Services Classification (EBOPS). This provides for a more detailed categorisation of trade in services than the BPM, fifth edition and also includes some memorandum items. Most notably, it recommends the collection of data for Audiovisual and related services and a memorandum item, Audiovisual transactions, which may include audiovisual items in Royalties and licence fees; and Research and development, although this category is a broader than that defined in the 2008 SNA, which is discussed further below. However, the EBOPS does not provide for a decomposition of

Computer services. Following the update of the BPM and the SNA, the MSITS and its EBOPS are under revision, with an expected release in 2010.

## **A. Needs of the national accounts**

### **1. Software**

12. The most important deficiency with the BOP categorisation of transactions for the purpose of measuring GFCF of IPPs is that Licences to use non-customised products provided on disks, etc. and which convey perpetual use are recorded as trade in goods, while all other transactions in these products are recorded as services. The problem is particularly serious for software, but it also affects audiovisual products. In the case of software the service categories are Computer services or Charges for the use of intellectual property (IP). All other licences to use software and sales of original software are included in the former, while licences to distribute software are included in the latter. Neither of these categories is unique to software and they include other IPPs.

13. From a national accounts perspective, the requirement is for the separate identification of the following software products referred to in table 10.4 of BPM, sixth edition:

- (a) Customized software and non-customized originals (GFCF);
- (b) Non-customized software – outright sales of copies and long-term licences to use (GFCF and Household Final Consumption (HFC));
- (c) Non-customized software – short-term licences to use (Intermediate Consumption (IC) and HFC);
- (d) Non-customized software - licences to reproduce (IC and GFCF).

14. In addition, there are some other types of computer services not included in table 10.4 that are of interest:

(a) Computer services of a capital nature (GFCF and HFC): hardware and software consultancy, implementation and installation services; analysis, design and programming of systems ready to use. These are included in the category Computer services in both BPM fifth and sixth editions;

(b) Computer services of a consumption nature (IC and HFC): repairs and maintenance of computers and peripherals; data recovery services, provision of advice on matters related to management of computer resources; systems maintenance and other support services, such as training; data processing; web page hosting services; provision of applications, hosting clients' applications, and computer facilities management. These, too, are included in the category Computer services in both BPM fifth and sixth editions.

15. With the exception of Licences to use non-customized software provided on disks, etc. for perpetual use all six of the above components are included in either Computer services or

Charges for the use of intellectual property<sup>1</sup> in BPM6, and could, at least in principle, be identified via a revision to EBOPS and the MSITS. Although Licences to use non-customized software provided on disk, etc. for perpetual use is classified to goods it would make sense to include it in trade in services surveys so that it can be separately identified, or at least included in a software aggregate.

16. For data collection purposes, the six categories above could be reduced by combining categories (i) and (v), as these two items have similar characteristics. If it is not possible to separate categories (ii) and (iii), then their aggregate should be provided. As noted above, Licences to reproduce are in Charges for the use of intellectual property - a different BOP category than the other five software categories identified here.

## **2. Audiovisual products**

17. The situation regarding audiovisual products in BPM fifth and sixth editions is much the same as for computer software. In BPM, sixth edition there is the category Audiovisual and related services rather than the category Computer services for software. Other than that, the classification in BPM, sixth edition is identical.

18. The national accounts requirements for audiovisual products are essentially the same as they are for computer software. A major problem with the existing BOP categories is that they comprise many types of flows including fees to actors and fees for motion picture production. The major requirement is to separately identify transactions in existing originals (or parts thereof) and newly created customized products, and payments for licences (or royalties). Like software, licences to reproduce and/or distribute originals and licences to use can be fixed assets in certain circumstances.

## **3. Research and Development**

19. In BPM, fifth edition and the 2002 MSITS, R&D transactions fall into three categories: Other royalties and licence fees, Research and development services and Acquisition or disposal of nonproduced, nonfinancial assets. The first two of these categories are in the current account and the third is in the capital account. In BPM, sixth edition, R&D transactions fall into two categories: Charges for the use of intellectual property and R&D services. As far as R&D is concerned, the major change in categorization is that payments for the acquisition of patents have been moved from Acquisition or disposal of nonproduced, nonfinancial assets in the capital account to R&D services in the current account.

20. As can be seen from paragraph 10.134 of BPM, sixth edition, the definition of R&D services is wider than that in the 2008 SNA and the FM because it includes testing and other product development activities that may give rise to patents. It would therefore be appropriate to identify that part of R&D services that is not part of the SNA definition of R&D. In all other respects this category appears to be an appropriate categorization of trade in R&D originals and R&D inputs into the production of R&D originals. Nevertheless, it would be desirable to sub-

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<sup>1</sup> Charges for the use of intellectual property in BPM, sixth edition replaces Royalties and licence fees in BPM5.

categorize it to separately identify the acquisition and disposal of proprietary rights (patents, copyrights, trade secrets, etc.) so that R&D services excluding them can be reconciled with funding data from R&D surveys<sup>2</sup>. Hence, the following breakdown could be provided:

(a) R&D as defined in the SNA (creative work undertaken on a systematic basis to increase the stock of knowledge):

- (i) Provision of customized and non-customized R&D services;
- (ii) Sale of proprietary rights (patents, copyrights, industrial processes and designs, etc.);

(b) Other R&D services (testing and other product/process development activities beyond R&D as defined in the SNA).

21. It may be best to source some of the data in item (a(ii)) separately from administrative sources. It would therefore be useful if this item were broken down by type: Patents, Copyrights, Industrial processes and designs (including trade secrets) and Other.

22. A proposal (Charles Aspden, 2008) along these lines has been submitted to the Working Party on International Trade in Goods and Trade in Services Statistics, which is undertaking the update of the MSITS, and if approved will greatly improve the situation. These proposals (described in more detail under Issues and questions below) will be considered at the Interagency Task Force on Statistics of International Trade in Services in Bangkok on the 10-12 March 2009.

## **B. Movement of IPPs between affiliated enterprises**

23. As described above the flows related to IPPs between affiliated enterprises, particularly cross-border are not thought to be particularly well covered in international trade statistics. There are two separate issues here. The first concerns ownership and the associated transactions. The second concerns whether there has been an increase in the total value of the asset, and if there has been how should it be dealt with. Regarding ownership, four possibilities exist:

(a) There is either a sale or licence agreement between the provider and the recipient: the provider provides access to the IPP in exchange for a fee that is observable and should be recorded in the BOP and SNA goods and services accounts;

(b) There is a capital transfer from the provider to the recipient, i.e. the IPP is a gift. This should be recorded in the BOP and SNA capital accounts, but it is very likely to go unrecorded;

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<sup>2</sup> Investigations by the OECD Task Force on IPP (TFIPP) have revealed that there is no one best source of data for international transactions in R&D. In practice, national accountants and balance of payments statisticians will use data from a number of sources, including: SITS, FDI surveys, R&D surveys and data from administrative sources, such as patent offices, in order to derive consistent estimates of international flows of R&D for the national accounts and BOP.

(c) The IPP is provided by the parent to a foreign subsidiary without a fee but with the expectation of receiving property income in the future. In effect, the parent is providing the IPP for a fee and then using the fee to increase its foreign direct investment in the subsidiary. This, too, is likely to go unrecorded;

(d) The IPP is provided to the parent by the foreign subsidiary without a fee but in response to previous foreign direct investment. In effect, the parent is receiving the IPP in lieu of property income. This, also, is likely to go unrecorded unless steps are taken to monitor what is happening to the output of foreign-owned units created to undertake the production of IPPs.

24. Regarding an increase in the value of the asset there are two possibilities:

(a) The aggregate value of the asset has increased: the expected present value of future benefits has increased. This would be recorded in the other changes in the volume of assets account of the provider. Such recordings have been rare in practice;

(b) The aggregate value of the asset has not changed: the provider expected to share the asset in some way at the time it was acquired.

25. The MSITS identifies four different modes of trading, in a broad sense, between units resident in different economies. The two modes most relevant for measuring the movements of IPPs between economies are mode 1, “cross border supply [which] takes place when the consumer remains in [the] home territory while the service crosses national borders” (MSITS 2.16) and mode 3, commercial presence, associated with foreign direct investment (FDI) (2.18, 2.59). Mode 1 is captured by conventional cross-border trade statistics and is reflected in exports and imports of goods and services, whereas mode 3 is concerned with foreign-owned subsidiaries. While their production, exports, imports, etc. are recorded in respect of the economy in which they are resident, there is interest from the parent economy’s point of view in how they perform. These are provided by Foreign Affiliates Trade in Services (FATS) statistics (1.21, 1.24, 2.64) and FDI statistics (1.20, 2.46, 2.59).

26. While there is potential for using FATS and FDI statistics to help properly record the movements of IPPs between affiliated enterprises, a good deal of care needs to be taken. For example, just because a parent enterprise funds IPP production of a subsidiary in another country does not mean that the IPP is intended for use back in the parent country – this may be the case but funding or FDI data by themselves do not suffice to reach such a conclusion.

27. An important first step in addressing problems with properly recording movements of IPPs between affiliated enterprises is to separately identify transactions between them in surveys of trade in services. This provides a starting point for valuing flows which otherwise go unreported.

28. Statistics on transactions of international services associated with IPPs are difficult to separate from other activities, especially for intra-group services. Indeed, intra-group arrangements for rendering services are sometimes linked to arrangements for transferring goods or intangible property (or the licensing thereof). In some cases, such as know-how contracts containing a service element, it may be very difficult to determine where the exact border lies

between the transfer or licensing of property and the transfer of services (OECD 2001: 1.42-1.44, 7.3).

29. Evidently the national accounts should reflect economic reality, and changes in ownership of IPP assets and the associated transactions should be recorded. However, current data sources generally do not identify transactions such as (b), (c) or (d) in paragraph 23 above, and so it is not possible to record them in the accounts. Further research is needed to find ways to obtain the values of transactions between affiliated units and the nature of these transactions. Likewise if the aggregate value of the asset has changed it should, in principle, be recorded in the accounts. But in the absence of information it is not possible to record any changes. This, too, is a matter for further research.

30. The draft Handbook on Deriving Capital Measures of IPPs goes further still in its description of the problems facing international transaction in R&D and transfer pricing in particular. The relevant extract is provided below.

### **III. EXTRACT FROM THE DRAFT HANDBOOK ON DERIVING CAPITAL MEASURES OF IPPs**

#### **A. International transactions between affiliated enterprises**

31. For the purposes of this Handbook, issues on transfer prices arise for cross-border trade involving R&D, software, and other IPPs. International transaction surveys collected for BOP purposes already cover both affiliated and unaffiliated transactions. National accountants, tax authorities, and researchers are aware of distortions, whatever the underlying causes, implied by transfer prices for fiscal matters (Hines 1996), national and international economic accounts (Landefeld et al. 2008), and more recently, measures of intangibles production and exploitation (Lipsev 2008).

32. The IMF's BOP Compilation Guide (IMF 1995) provides guidance on this issue from the perspective of international transactions (paragraphs 487-491). In particular, it recognizes misreporting issues (over- or under-reporting of quantities or values) for intra-company transactions and describes transfer prices for transactions "between enterprises in a direct investment relationship" as prices "significantly distorted from market values". Further, "an enterprise may sell goods to a related enterprise for prices unrelated to the cost of production or the acquisition cost of the goods. Such a sale might be made, for example, to transfer profits from one country to another for tax reasons or because the country of the direct investment enterprise imposes restrictions on the repatriation of income." The OECD Transfer Prices Guidelines (OECD 2001) recommends that internal transactions (prepared for tax administration purposes) should be reported as if they were performed by independent parties at arm's-length market prices. In particular, the arm's length principle seeks "to adjust profits by reference to the conditions which would have obtained between independent enterprises in comparable transactions and comparable circumstances, [thus] ...treating the members of an multinational enterprise (MNE) group as [if] operating as separate entities...".

33. The International Monetary Fund (IMF) BOP Guide goes on with suggestions on adjustments to reported data but also cautions that "such adjustments should be made only when

significant distortions are encountered” (paragraphs 487-491). Notably, adjustments recommended by either OECD or IMF guidelines are intended for tax authorities with access to taxpayer records. Some of this material may be applicable for surveys work (e.g., microdata editing/processing, imputation, and further survey development). Alternatively, adjustments to aggregate data would have to be performed by national accountants. At the moment, however, generic guidance on possible transfer price adjustments to R&D export and import totals is hindered by data and metadata limitations. Further, given the relatively small share of IPPs in aggregate FDI and transactions data, new or improved data on transactions between affiliated enterprises should be designed and developed collaboratively by intangibles, trade, national accounts, and globalization experts and working groups (see for example OECD 2007).

## **B. Joint production and /or ownership of research and development and intellectual property**

34. Joint production, both within and across companies, is recognised in the OECD Transfer Prices Guidelines under the label of ‘cost contribution arrangements (CCA)’. The latter are defined as “contractual arrangement to share costs & risks of developing, producing, or obtaining assets, services, or rights” (8.3). The Guidelines note that these arrangements are conceptually different from licensing agreements and from exchanges or transfer of existing assets. Again, the goal is to apply the arm's length principle. Further, “for the conditions of a CCA to satisfy the arm’s length principle, a participant’s contributions must be consistent with what an independent enterprise would have agreed to contribute under comparable circumstances given the benefits it reasonably expects to derive from the arrangement” (8.8).

35. Within multinational companies (MNCs), joint production is entangled with joint ownership, which highlights the need to distinguish between legal vs. economic ownership and sort out implications for asset boundary issues in terms of who benefits from what and where. The Guidelines note that “...legal ownership of developed intangible property [may be] vested in only one of [the arrangement parties] but all of them have effective ownership interests.” (8.4). These issues go to the core of properly defining the direction of trade flows not only for R&D (Yorgason 2007: 14-18) but also for other IPPs in the Handbook.

## **C. Merchanting and “fables” production**

36. Merchanting is the purchase of a good by a resident of the compiling economy from a non-resident and the subsequent resale of the good to another non-resident, without the goods entering or leaving the compiling economy (BMP5 and BMP6 draft [10.42]). Thus, with respect to the compiling economy, there is a change in ownership affecting a resident although there is no entry or exit of goods. However, “[t]he physical form of the goods may be changed during the period the goods are under merchanting, as a result of manufacturing services performed by other entities. In these cases, the enterprise that owns the goods makes contributions to the manufacturing process, such as providing planning, management, patents and other know-how, marketing, and financing, but without physically possessing the goods. Particularly for high-technology goods, these non-physical contributions may be large in relation to the value of materials and assembly.” These transactions are particularly important given global and contract manufacturing, services outsourcing and subcontracting (BMP6 10.145), and within-MNCs transactions (Connolly 2008; Takeda 2006), including so called fables companies (Peleg 2008).

37. For our purposes, the relevant issue is to properly capture R&D and other IPP development services provided by a compiling economy resident under merchanting. However, any recommendations for further data collection on intangibles and merchanting, if any, should be part of broader discussions within SNA, BPM, and MSITS revisions. For an overview on merchanting transactions in the context of SNA and BPM revision see Takeda (2006).

#### **D. Non-research and development testing services**

38. As noted earlier, Central Product Classification (CPC) v.1 does not provide a separate code for commercial non-R&D testing services. Such a category is contemplated in the North American Product Classification System (NAPCS) categories for the North American Industry Classification System (NAICS) 5417.<sup>3</sup> In addition to categories similar to the CPC code, NAPCS includes ‘Testing laboratory services’, defined as services “Providing various conformity assessment services such as testing, instrument calibration, product certification, management system registration and commercial inspection services, and other related services such as sale of standards information, consulting, and training.”<sup>4</sup> Data linking exercises involving trade and R&D surveys may provide additional tools to separate out non-R&D testing.

#### **E. Research and development transfers**

39. A possible future source for statistics on transfer of (completed or in-progress) R&D is FM(Frascati Manual)-based surveys, assuming the definition of transfers in the FM and SNA are reconciled in the future. R&D surveys could ask for the cost of producing R&D that is subsequently transferred outside the performing unit (output could then be estimated by methodology similar to other R&D expenditures).

#### **F. Intellectual property sales/purchases**

40. In addition to flows of current production of R&D, a full account of R&D trade needs to incorporate sales/purchases of past R&D captured in patents and other forms of legally protected (or secret) intellectual property. These flows are separate from licensing and royalty fee statistics (for use and/or reproduction) already recognised in services trade statistics. However, information on outright sales/purchases of IP assets is very limited.

41. A related indicator is cross-border mergers and acquisitions (M&As) of R&D-performing or IP-holding companies. Peleg (2008) developed an experimental ‘decision tree’ to identify M&A transactions involving IP. Alternatively, surveys on new FDI investments<sup>5</sup> may be further developed to accommodate some of these issues.

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<sup>3</sup> Both NAICS and NAPCS support economic statistics in The North American Free Trade Agreement (NAFTA) countries.

<sup>4</sup> <http://www.census.gov/eos/www/napcs/napcs.htm>

<sup>5</sup> <http://www.bea.gov/surveys/pdf/be13.pdf>

#### **IV. QUESTIONS AND ISSUES**

42. The OECD Task Force on IPPs has been investigating all of the issues described above and has developed a prototype survey that might be used to shed some light on this issue and which are included as annexes within the draft Handbook on Deriving Capital Measures of IPPs. The relevant sections are provided as a separate annex below for information.

##### **A. Proposals on Trade Classifications**

43. As noted above, the classification systems are being discussed by the Interagency Task Force on Statistics of International Trade in Services in Bangkok. As such the Task Force may already have formulated a recommendation by the time of the May 2009 meeting of the Group of Experts on the Impact of Globalisation on National Accounts. If they have not however, the Task Force may welcome the views of the Group of Experts with respect to the proposals.

44. The Group of Experts are therefore asked if they support the following suggested amendments to the EBOPS classification as follows (with the amendments underlined):

**Box A. Suggested amendments to the EBOPS classification**

8. Charges for the use of intellectual property, n.i.e.

- 8.1 Licenses to reproduce and/or distribute computer software A
- 8.2 Licenses to reproduce and/or distribute audiovisual and related services A
- 8.3 Licenses for the use of the outcomes of research and development A
- 8.4 Franchises and trademarks licensing fees A

9.2 Computer services

- 9.2.1 Computer software A  
(of which originals) B
- 9.2.2 Other computer services A

10.1 Research and development services

10.1.1 Creative work undertaken on a systematic basis to increase the stock of knowledge

- 10.1.1.1 Provision of customized and non-customized R&D services
- 10.1.1.2 Sale of proprietary rights arising from R&D (patents, copyrights, etc.)

10.1.1.2.1 Patents

10.1.1.2.2 Copyrights

10.1.1.2.3 Industrial processes and designs (including trade secrets)

10.1.1.2.4 Other

10.1.2 Other R&D services (testing and other product/process development activities)

OR

10.1.1 Creative work undertaken on a systematic basis to increase the stock of knowledge

of which sales of proprietary rights arising from R&D: patents, copyrights, industrial processes and designs (including trade secrets) and other

10.1.2 Other R&D services (testing and other product/process development activities)

11.1 Audiovisual and related services

11.1.1 Audiovisual products  
(of which originals)

11.1.2 Other audiovisual services

Alternative EBOPS groupings

2 Audiovisual transactions

Licences to use audiovisual products

3 Computer software transactions D

Licences to use computer software

Capital transfers

Computer software

Audiovisual products

R&D products

Of which proprietary rights arising from R&D: patents, copyrights, industrial processes and designs (including trade secrets) and other.

**B. Questions on Surveys**

45. The Group of Experts are asked to consider if the proposed surveys described in the annex below are feasible and exhaustive in their coverage of the main issues.

**C. Questions on International Trade between Affiliated Enterprises**

46. The Group of Experts are asked if they can provide information on how, if at all, the following transactions are recorded in their country's statistics:

- (a) Cross border sales or licence agreements of IPPs between affiliated enterprises.
  - (i) Are these fees observed and recorded in BOP and the national accounts goods and services accounts?
- (b) Cross border Capital transfers of IPPs between affiliated enterprises.
  - (i) Are these fees observed and recorded in BOP and the national accounts capital accounts?
- (c) IPPs provided by parents to foreign subsidiaries without a fee but with the expectation of receiving property income in the future.
- (d) IPPs provided by foreign subsidiaries to parents without a fee but in response to previous foreign direct investment.
  - (i) For the four flows described above, what adjustments, if any, are made to ensure that transactions are recorded as 'at-length market prices'?
  - (ii) When IPPs cross borders are changes made to the capital stock of IPPs? If so how? And are these only recorded for some of the four flows described above?
  - (iii) For further information, how are volume estimates of the flows above and trade in IPPs more generally, estimated in your country? What price indices are used for deflation for example?

## ANNEX

### EXTRACT ON SURVEY SECTIONS FROM THE DRAFT HANDBOOK ON DERIVING CAPITAL MEASURES OF IPPs

#### III. International trade in R&D services and R&D output produced in the past (such as patents) between (i) affiliated enterprises and (ii) non-affiliated enterprises (recurrent)

##### Questions for R&D survey respondents

1. International R&D transactions within your company
  - (a) Would your company be able to report payments for R&D performed for you by others within your company but located outside this country?
    - (i) Transactions involving your foreign parent company
    - (ii) Transactions involving other foreign members of your company
  - (b) Would your company be able to report revenues for R&D performed by you for others within your company but located outside this country?
    - (i) Transactions involving your foreign parent company
    - (ii) Transactions involving other foreign members of your company
2. International R&D transactions with others outside your company
  - (a) Would your company be able to report payments for R&D performed for you by others outside your company and also located outside this country?
  - (b) Would your company be able to report revenues for R&D performed by you for others outside your company and also located outside this country?
  - (c) Can you separate out R&D grants from contracts for R&D services?
3. International transfers of R&D or patents (inflow)
  - (a) Have you received free transfers of R&D or patents from the following sources?
    - (i) Your foreign parent company? (if applicable)
    - (ii) Other foreign members of your company (if applicable)
    - (iii) A foreign university or research institute?
    - (iv) A foreign government unit or international organization?
  - (b) Would you be able to estimate the production cost or value of these transfers?
4. International transfers of R&D or patents (outflow)

- (a) Have you donated R&D or patents to the following recipients?
  - (i) Your foreign parent company? (if applicable)
  - (ii) Other foreign members of your company (if applicable)
  - (iii) A foreign university or research institute?
  - (iv) A foreign government unit or international organization?
- (b) Would you be able to estimate the production cost or value of these transfers?

### Questions for international services trade respondents

1. R&D services vs. other business and technical services - (one-off)
  - (a) Have you reported R&D services exports/imports to include transactions in the following services? (this question assumes R&D services is a survey category in your survey,
    - (i) Commercial testing services
    - (ii) Software development services
    - (iii) Engineering services
    - (iv) Design services
    - (v) Customer services (post-sales)
    - (vi) Royalties and license fees
  - (b) otherwise skip
    - (i) Commercial testing services
    - (ii) Software development services
    - (iii) Engineering services
    - (iv) Design services
    - (v) Customer services (post-sales)
    - (vi) Royalties and license fees
  - (c) Would you be able to separate out R&D services exports/imports from transactions involving the following services?
    - (i) Commercial testing services
    - (ii) Software development services
    - (iii) Engineering services
    - (iv) Design services
    - (v) Customer services (post-sales)
    - (vi) Royalties and license fees
2. International R&D transactions within your company
  - (a) Would your company be able to report payments for R&D performed for you by others within your company but located outside this country?
    - (i) Transactions involving your foreign parent company
    - (ii) Transactions involving other foreign members of your company
  - (b) Would your company be able to report revenues for R&D performed by you for others within your company but located outside this country?
    - (i) Transactions involving your foreign parent company
    - (ii) Transactions involving other foreign members of your company
3. International R&D transactions with others outside your company

- (a) Would your company be able to report payments for R&D performed for you by others outside your company and also located outside this country?
- (b) Would your company be able to report revenues for R&D performed by you for others outside your company and also located outside this country?

4. International royalties, license fees for the use or sale of intangible property

Note: For the purposes of this question intangible property includes patents, trademarks, copyrights, and trade secrets.

- (a) Total royalties, license fees, and other fees for the use of intangible property (IP), EXCLUDING cross-licensing:

Payments

Receipts

of which:

Industrial processes and products (except software licensing)

Payments

Receipts

Software licensing

Payments

Receipts

- (b) Total royalties, license fees, and other fees for the use of intangible property (IP), in a CROSS-LICENSING arrangement:

Payments

Receipts

of which:

Industrial processes and products (except software licensing)

Payments

Receipts

Software licensing

Payments

Receipts

Are these cross-licensing measures net or gross transactions with respect to cross-licensing? If net, could you estimate the gross value of these transactions?

- (c) Total fees paid or received for the sale or purchase of intangible property (IP):

Payments

Receipts

of which: industrial processes and products (except software)

Payments

Receipts

**Questions for FDI survey respondents: new investments**

These questions should be directed to either –

(a) A local business enterprise when a foreign parent company establishes or acquires directly, or indirectly through an existing affiliate, a 10 percent or more voting interest in that enterprise; or

(b) Existing affiliates of foreign parents when they acquire, or merge with, a local business enterprise, or a business segment or operating unit in the compiling country.

1. Have you or your foreign parent company engaged in the following investments in this country?

(a) Created a new legal entity, either incorporated or unincorporated, including a branch, which is organized and operating as a new business enterprise.

(b) Bought or secured a voting equity interest in a previously existing, separate legal entity that was already organized and operating as a business enterprise and it continued to operate as a separate legal entity, either incorporated or unincorporated, including a branch.

(c) Bought or secured a voting equity interest in a business segment or operating unit of an existing business enterprise, which is organized as a new separate legal entity, either incorporated or unincorporated, including a branch.

(d) Bought and merged another local business enterprise, or business segment or operating unit of a business enterprise, into your own operations rather than continuing or organizing it as a separate legal entity.

2. For M&As of existing businesses, would you be able to report the magnitude of the following items (where applicable) at the time of the M/A?

(a) Employment

(b) R&D expenditures

(c) Stock of patents issued

(d) Stock of patent applications

3. For newly established businesses, would you be able to report: (one-off)

(a) If the new business is intended for R&D performance?

(b) If you plan to sell or license R&D to the new business?

- (c) If you plan to sell or license patents to the new business?
- (d) If you plan to transfer (for free) R&D or patents to the new business.

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