

CHAPTER 7

International transactions in intellectual property products

Introduction

7.1 The 2008 SNA recognizes five categories of intellectual property assets:

- a. Research and development (R&D).
- b. Mineral exploration and evaluation.
- c. Computer software and databases.
- d. Entertainment, literary and artistic originals.
- e. Other intellectual property products (IPPs).

7.2 Each of the five categories of IPP can be broken down into the following IPP types:

- The *original* IPP - whether produced on own account or sold (customized).
- *Licences to reproduce* the IPP.
- *Copies* of the original which owners may use for more than a year.

7.3 *Services* can also be provided by IPP originals: typically these services are provided by copies which owners may use for one year or less, but they can also represent services provided by customized products not related to an underlying original with an expected life of one year or less.

7.4 Both the 2008 SNA and BPM6 treat IPPs (originals, licences to reproduce, and copies) as *produced* assets. Because the assets are produced, any international trade in them, or international services provided by them, should be recorded in the goods and services accounts.

7.5 With the exception of mineral exploration and evaluation, IPPs are subject to substantial international trade. Commonly, the trade relates to copies of IPPs, such as packaged software and musical and film recordings, or the services provided by them, but trade in originals, such as an R&D original, is becoming increasingly important, partly reflecting the increasing internationalization of production processes. The 2008 SNA recognizes R&D as capital formation for the first time.

7.6 Unlike other produced assets however, which physically move across borders when they are bought and sold, there is rarely an equivalent physical movement for IPPs, as they can generally be transmitted across borders electronically. This presents measurement challenges for statisticians: transactions in IPPs may not appear in trade statistics as trade in goods and services. Often they appear under the general BPM5 category of "royalties and other license fees" without any further breakdown to distinguish whether the royalties, etc. relate to produced or non-produced assets. Payments for the use of IPPs and payments to obtain ownership of IPPs may be included in "royalties and other license fees", but not be separately identifiable with a specific category of IPP. So in practice they may be treated as transactions in or related to non-produced assets, such as trademarks or franchise fees.

7.7 Trade in IPPs also raises the question of the nature of the ownership of the products - economic or legal.

7.8 The intangible nature of IPPs means that they can easily be registered as the property of a unit in one country when they are used in production by an enterprise located in another. This characteristic creates an incentive for companies to register their IPPs as owned by a unit in a low-tax jurisdiction. For example a mobile phone producer in a high-tax country which develops its own software and embeds it in the phone may choose to transfer ownership of the software original to a subsidiary established in a low-tax jurisdiction, whose sole output is copies of the original software for use by the parent company. This shifts value added from the parent company to the affiliate, although the global production function of the parent company remains the same.

7.9 This raises difficult questions for national accountants and users of statistics. On the one hand, it can be argued that the transfer of the IPP from the parent company to the affiliate reflects an economic reality resulting in a shift of value added

from the parent to the affiliate, in the same way that value added would shift if a productive activity were outsourced from the parent to the affiliate. On the other hand the transfer may be seen as merely an administrative arrangement, economic ownership, in the sense of who bears the risks and rewards of using the asset, remaining with the parent company. What differentiates the two approaches is ownership: who is the economic owner of the original? There is limited practical guidance in the 2008 SNA on transfers of economic ownership between affiliated enterprises. Developing this guidance will require further research at the international level to clarify the existing standards. The section on further research towards the end of this chapter develops some ideas.

7.10 Aside from economic ownership, two more practical problems arise in the context of trade in or related to IPPs.

- The first relates to the ability of official statistics to recognize that the trade is in IPPs, since the intangible nature of IPPs makes it difficult to identify transactions in them and as such they may be misclassified in international classification systems to other items, in particular transactions in non-produced assets. There is a risk therefore that transactions in or related to IPPs are incorrectly recorded as property income.
- The second relates to trade within an MNE, where there are incentives to value transactions at transfer prices which are tax efficient. This is an issue that affects all cross-border transactions within an MNE, not only transactions in IPPs. What makes transfer pricing related to IPPs particularly challenging is that the originals are one-off assets, creating potential for a wide range of arm's-length valuations for transactions in them, given the lack of a market for comparable goods and services. While tax authorities no doubt keep MNEs' transfer pricing under review, there seems to be little that statisticians themselves can do to limit the problem.

7.11 These two difficulties affect some important economic aggregates, depending on whether the transaction relates to trade in an IPP asset or trade in services produced by IPPs, and whether the transactions are within an MNE or not.

7.12 Other chapters describe the potential scale of estimation problems caused by transfer pricing.

7.13 The scope for expenditures on IPPs (recorded under "royalties and license fees") to be incorrectly classified as expenditures on non-produced assets depends on the statistical information collected in the country concerned. In the United States the scope seems small, as "royalties and license fees" are broken down into main types of intangible asset, including industrial processes (a proxy for R&D); books, records and tapes; broadcasting and recording of live events; franchise fees; trademarks; general use computer software; and other intangibles (the last component forming typically only about 0.25 per cent of the total). Such detail is unlikely to be available in most countries.

The statistical treatment recommended in international standards

7.14 Despite the practical difficulties in recording transactions related to IPPs, the underlying concepts for recording these entries in both the 1993 SNA and the 2008 SNA are relatively clear. Indeed, the difficulties related to measurement are not caused by a conceptual change introduced in the 2008 SNA, which, with two exceptions, follows the 1993 SNA. These exceptions are the recognition of R&D as capital formation, and the treatment of sales of licences to reproduce.

7.15 The 1993 SNA did not recognise R&D as capital formation in the form of intellectual property assets. In this sense the changes introduced in the 2008 SNA have increased the size of the existing difficulties in identifying and classifying transactions without changing their nature.

7.16 The second exception concerns the treatment of sales of licences to reproduce. The 1993 SNA recommended that payments for licences to reproduce should be recorded as payments for services provided by the original IPP. The 2008 SNA however treats the licence to reproduce as a part of the underlying original. Accordingly the sale of a licence to reproduce does not reflect new production. The sale of a licence to reproduce for use in a territory that had not been factored into the valuation of the original should be recorded as a positive increase in "other" changes in the volume of assets account (matching the negative gross fixed capital formation (GFCF) represented by the sale of the licence viewed as part of the original).

7.17 Paragraphs 10.99-10.100 of the 2008 SNA say the following on the treatment of IPPs:

“Some intellectual property products are used solely by the unit responsible for their development or by a single unit to whom the product is transferred. Mineral exploration and evaluation is an example. Other products, such as computer software and artistic originals, are used in two forms. The first is the original or “master copy”. This is frequently controlled by a single unit but exceptions exist as explained below. The original is used to make copies that are in turn supplied to other units. The copies may be sold outright or made available under a licence (paragraph 10.99).

A copy sold outright may be treated as a fixed asset if it satisfies the necessary conditions, that is, it will be used in production for a period in excess of one year. A copy made available under a licence to use may also be treated as a fixed asset if it meets the necessary conditions, that is, it is expected to be used in production for more than one year and the licensee assumes all the risks and rewards of ownership. A good, but not necessary, indication is if the licence to use is purchased with a single payment for use over a multi-year period. If the acquisition of a copy with a licence to use is purchased with regular payments over a multi-year contract and the licensee is judged to have acquired economic ownership of the copy, then it should be regarded as the acquisition of an asset. If regular payments are made for a licence to use without a long-term contract, then the payments are treated as payments for a service. If there is a large initial payment followed by a series of smaller payments in succeeding years, the initial payment is recorded as gross fixed capital formation and the succeeding payments as payments for a service. If the licence allows the licensee to reproduce the original and subsequently assume responsibility for the distribution, support and maintenance of these copies, then this is described as a licence to reproduce and should be regarded as the sale of part or whole of the original to the unit holding the licence to reproduce” (paragraph 10.100).

7.18 IPPs can be made available for use in a number of ways. An original can be sold or transferred; copies can be sold represented by licences to use for more than year; licences to use for one year or less can be sold; and finally licences to reproduce can be provided. Accordingly the following accounting entries arise when companies resident of different economies engage in transactions in IPPs:

i. *When the entire IPP original produced in an earlier accounting period is sold by one company*

for sole use by another: the accounts should record an export and negative GFCF in the exporting country and a corresponding import and positive GFCF in the importing country.

ii. *When the entire IPP original produced in the same accounting period is sold by one company for sole use by another:* the accounts should record an export in the exporting country and a corresponding import and positive GFCF in the importing country.

iii. *When a licence to reproduce is sold by one company to another:* assuming that the creation and acquisition of the licence to reproduce does not change the value of the underlying original, the accounts should record an export and negative GFCF in the exporting country and a corresponding import and positive GFCF in the importing country.

iv. *When a copy or licence to use is sold by one company to another:* as long as the copy or licence to use satisfies the requirements that it can be treated as an asset, and is produced in the same accounting period, the accounts should record an export (equivalent to the value of the copy/licence) and a corresponding import and positive GFCF in the importing country.

v. *When the underlying asset is used to provide services only:* this is equivalent to the provision of a licence to use or a licence to reproduce that does not satisfy asset requirements. In these circumstances the accounts should record an export (equivalent to the value of the services) and a corresponding import in the importing country.

7.19 The rules above hold irrespective of whether the transactions relate to flows between affiliated enterprises or not. It is nevertheless useful to elaborate on the additional flows that should be recorded when IPPs are transferred between affiliates. When an IPP is provided by one affiliated enterprise to another, either in its entirety or via a licence to use or reproduce, a number of possibilities for recording the transaction arise:

a. In the simplest case, there is a sale or licence agreement between the provider and the recipient. The provider gives access to the IPP in exchange for a fee that is observable and should be recorded as a transaction in goods and services in the national accounts and balance of payments.

b. The IPP may be provided free. Imputations should be made to reflect this gift. The first imputation should reflect a capital transfer from the provider to the recipient. A second imputation is needed to record the transaction in IPPs

following the rules (i) to (v) set out in paragraph 7.18, depending on the type of IPP.

c. The IPP is provided by the parent to a foreign subsidiary without a fee but in the expectation of receiving income from the affiliate. In effect, the parent provides the IPP for a fee and uses the fee to increase its foreign direct investment (FDI) in the subsidiary. In this case the accounts should record FDI from the parent, equivalent to the value of the IPP, and a purchase of the IPP from the parent (again following the flows described in (i) to (v) above, depending on the IPP type).

d. The IPP is provided to the parent by the foreign subsidiary without a fee but in response to previous FDI. The accounts should impute the sale of the IPP and then an equivalent receipt of property income by the parent.

7.20 Transactions between affiliates may also affect the value of the original IPP. Where, for example, the MNE acquires a new affiliate and so obtains economic rights within a country that were not expected at the time of the original valuation, the present value of expected future benefits, and thus the aggregate value of the asset, increases. The increase would be recorded in the "other" changes in the volume of assets account of the provider. Such recordings have been rare in practice. A consequential difficulty relates to the split, if any, of the asset across the different countries where economic rights exist. However, it could equally be argued that in initially valuing the original, the owner of the original had priced in the possibility that the IPP would be used in the country of the new affiliate, in which case, all other things being equal, there would be no change in the value of the original. Determining which of the two scenarios is likelier is very difficult, but since in practice national accountants estimate the value of the original using a sum of costs approach, the distinction between the two scenarios is largely academic.

Measurement problems

7.21 This section assumes that the economic owner of the IPP is correctly identified in the accounts. (The thorny issue concerning economic ownership is discussed at the end of this chapter.) The section proceeds by separately considering each of the five transaction types described in paragraph 7.18 above when: (a) they are incorrectly classified as transactions in property income, rather than as transactions in goods and services, and (b) they are affected by artificially low or high transfer prices. Annex 7.1 contains extracts from the *OECD Handbook on Deriving Capital*

Measures of Intellectual Property Products, including summarized questions which might be addressed to companies with cross-border transactions in IPPs.

i. *When the entire IPP original (produced in an earlier accounting period) is sold by one company for sole use by another and (iii) when a licence to reproduce is sold by one company to another*

a. *incorrect classification as property income*

If the transactions relate to IPPs produced in an earlier accounting period, estimates of GDP will be unaffected even if the flows are incorrectly recorded as property income transactions, since GDP is unaffected by sales and acquisitions of pre-existing goods. Trade in goods and services will however be underestimated. Capital stock and GFCF may also be underestimated in the importing country and overestimated in the exporting country because trade data are often used in calculating them.

b. *artificial transfer prices*

GDP should be (largely) unaffected if artificial transfer prices are used. This is because in the accounts of the country selling the asset there will be offsetting errors in GFCF (sale of an existing asset, a negative entry) and in exports. Similarly in the importing country there will be offsetting errors in imports and in GFCF. Where there are taxes on the acquisition or sale of assets, however, artificial valuations may affect estimates of GDP and GNI.

ii. *When the entire IPP original (produced in the same accounting period) is sold by one company for sole use by another, and (iv) when a copy or licence to use is sold by one company to another*

a. *incorrect classification as property income*

For transactions in newly created IPP assets (i.e. those that have not previously been capitalized), GDP will be too low in the exporting country and too high in the importing country. However, estimates of value added from the production or income (as opposed to the expenditure) approach may not be similarly affected. Business surveys may, for example, record the sales or purchases of IPPs as either output (for sales) or intermediate consumption (for purchases) of goods and services. Trade in goods and services will be underestimated. Capital stock and GFCF may also be underestimated in the importing country. Estimates of GNI will however be unaffected.

b. artificial transfer prices

An affiliate in country A that pays for services provided by an affiliate in country B may pay a price for IPPs produced in the same accounting period that is subsequently identified as being above or below the arm's-length valuation of those services. If the transfer price is artificially high, GDP in A will be too low and in B too high. Both exports and imports of trade in services will also be too high. Conversely, if the transfer price is artificially low, GDP will be too high in A and too low in B. Even though all profits within affiliates are repatriated to the parent company (either directly or indirectly via imputation), estimates of GNI can also be affected by transfer pricing. If, for example, the affiliate in A is the parent company, and it paid above arm's-length prices for the IPPs provided by the affiliate in B because income taxes in B are lower than in A, GNI in B will be higher than it would otherwise have been by the amount of additional taxes paid to the government in B. To illustrate this point, suppose that the affiliate sells its IPPs to the parent for 100 units, when the arm's-length price is 40. GDP is then 60 higher than it should be in B and 60 lower in A. Of this additional 60 in B, the affiliate will return, either explicitly via property income or implicitly via the imputed remittance of retained earnings, a post-tax contribution of 60-X units to the parent, where X is the income tax payable in B on 60 units of profits. GNI in the territory of the parent company is therefore X lower than it should have been and X higher in the territory of the affiliate.

v. When the underlying asset is used to provide services only

a. incorrect classification as property income

GDP will be too high in the country paying for the IPP services and too low in the country exporting the services. However, estimates of value added based on the production or income (as opposed to the expenditure) approach may not be similarly affected, since business surveys may correctly record the sales and purchases of IPPs as (respectively) output and intermediate consumption of goods and services. Estimates of GNI will be unaffected.

b. artificial transfer prices

The impact on the accounts is the same as for transactions in new IPPs described in 7.21 ii b.

Recommendations and operational treatment in the accounts

7.22 The measurement problems described above reflect two issues. The first, concerning the incorrect classification of transactions in goods and services as property income, mainly arises from a lack of detail in the 2002 *Extended Balance of Payments Services Classification* (EBOPS). The second relates to transfer pricing issues covered in other chapters. This section focuses on the former issue.

International trade classification systems and intellectual property products

7.23 Correctly recording transactions in IPPs has been difficult since the 1993 SNA first advocated the capitalization of some intellectual property assets. This difficulty reflects the lack of detail in the international trade classification systems in use since then, notably the supporting manuals and classifications of BPM5, such as the 2002 *Manual on Statistics of International Trade in Services* (MSITS) and the associated EBOPS. The consequence has been that many transactions in IPP goods and IPP services have been captured under the "other royalty and license fees" category of BPM5:

"... the authorized use of intangible, non-produced, non-financial assets and proprietary rights (such as patents, copyrights, and industrial processes and designs) and the use, through licensing agreements, of produced originals or prototypes (such as manuscripts, computer programs, and cinematographic works and sound recording)....."

7.24 As described above, the lack of a breakdown by type of royalty (in particular the inability to distinguish between transactions in produced and non-produced non-financial assets) may affect estimates of GDP and GFCF.

7.25 Fortunately however, improvements are being made in this area. Revisions to the MSITS, BPM6 and the associated EBOPS include a more detailed breakdown of IPPs, as described in Table 7.1. This means that the category "other royalties and license fees" no longer exists in the new classifications.

7.26 The discussion below of the three main types of internationally traded IPP shows why the breakdown into the product groups defined in the version of EBOPS consistent with the 2002 MSITS is often not sufficient for national accounts purposes.

Computer software and databases

7.27 The supply-side approach to estimating GFCF requires a breakdown of products between those destined for intermediate consumption (IC) and those for GFCF. This is of particular relevance for the measurement of software as opposed to databases, where this distinction is of less relevance in practice since most transactions in databases relate to services provided in accessing a database. Such a breakdown has been developed conceptually for software as shown below (with the entry in brackets reflecting the conceptual destination category). More detailed information can be found in the *OECD Handbook on Deriving Capital Measures of Intellectual Property Products*. Computer software and databases can therefore be broken down into the following categories:

- Customized software and non-customized originals (GFCF).
- Non-customized software - outright sales of copies and long-term (more than one year) licences to use (GFCF).
- Non-customized software - short-term (one year or less) licences to use (IC).
- Non-customized software - licences to reproduce (resembling an operating lease) (IC).
- Non-customized software - licences to reproduce (not resembling an operating lease) (GFCF).
- Hardware and software consultancy, implementation and installation services; analysis, design and programming of systems ready to use (GFCF).
- 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 (IC).

7.28 However, the product breakdown currently provided in the MSITS (2002) is at a more aggregate level. The 2002 version of the EBOPS classification contains a specific classification for *Computer services* but with no further breakdown. It does not capture trade in licences to use non-customized products provided on disks, etc. permitting perpetual use, which are instead recorded as trade in goods rather than trade in services. Neither does it capture licences to

reproduce software separately, as they are included in the more general heading of *Other royalties and license fees*.

7.29 The new MSITS (2010), and corresponding EBOPS, have been developed to better accommodate the needs of the national accounts in this regard. In March 2009, the Inter-agency Task Force on Statistics of International Trade approved a number of changes to the EBOPS classification. The following affect the measurement of software:

- A separate category, *Licenses to reproduce and/or distribute software*, within *Charges for the use of intellectual property n.i.e.* (previously referred to as *Royalties and license fees*).
- A breakdown of *Computer services* into *Computer software* and *Other computer services*, with a further of-which item for the former, *Software originals*.
- The inclusion of a supplementary item *Computer software transactions* (which includes *Licenses to reproduce/distribute software*, *Computer software* and importantly, *Transactions in computer software goods*).
- The inclusion of a further supplementary item *Licenses to use computer software* (which includes all licences to use computer software, irrespective of whether they are classified as goods or services).

7.30 Such a breakdown should provide data to improve the quality of supply-based methods of compiling GFCF. Note that transactions related to databases are included under the EBOPS 2010 category "Other information services" (see table 7.1).

Entertainment, literary and artistic originals (audiovisual products)

7.31 As for computer software, MSITS (2002) contains general product categories for audiovisual products such as *Audiovisual and related services* and *Royalties and license fees*.

7.32 A product breakdown is needed that facilitates supply-based estimates of GFCF. Fortunately, as with software, planned and agreed revisions to the EBOPS will improve the situation. Those affecting the measurement of audiovisual products are as follows:

- A separate category, *Licenses to reproduce and/or distribute audiovisual and related services*, within *Charges for the use of intellectual property*.

Table 7.1 Extended Balance of Payments Services Classification 2010 (EBOPS 2010)

| | | |
|------------|--|--|
| 8 | Charges for the use of intellectual property, n.i.e. | |
| 8.1 | Franchises and trademarks licensing fees | |
| 8.2 | Licenses for the use of outcomes of research and development | |
| 8.3 | Licenses to reproduce and/or distribute computer software | |
| 8.4 | Licenses to reproduce and/or distribute audiovisual and related products | |
| 8.4.1 | Licenses to reproduce and or distribute audiovisual products | |
| 8.4.2 | Licenses to reproduce and/or distribute other products | |
| 9 | Telecommunications, computer, and information services | |
| 9.1 | Telecommunications services | |
| 9.2 | Computer services | |
| 9.2.1 | Computer software | |
| | <i>of which: 9.2.1.a Software originals</i> | |
| 9.2.2 | Other computer services | |
| 9.3 | Information services | |
| 9.3.1 | News agency services | |
| 9.3.2 | Other information services | |
| 10 | Other business services | |
| 10.1 | Research and development services | |
| 10.1.1 | 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 | |
| 10.1.1.2.1 | Patents | |
| 10.1.1.2.2 | Copyrights arising from R&D | |
| 10.1.1.2.3 | Industrial processes and designs | |
| 10.1.1.2.4 | Other | |
| 10.1.2 | Other | |
| 11 | Personal, cultural, and recreational services | |
| 11.1 | Audiovisual and related services | |
| 11.1.1 | Audiovisual services | |
| | <i>of which: 11.1.1.a Audiovisual originals</i> | |
| 11.1.2 | Artistic related services | |

EBOPS 2010 complementary groupings

C.1. Audiovisual transactions

of which: C. 1.1 Licenses to use audiovisual products

C.3. Computer software transactions

of which: C.3.1 Licenses to use computer software products

- A breakdown of *Audiovisual and related services* into *Audiovisual services* and *Artistic related services*: with a further of-which item for the former, (audiovisual) *originals*.
- The inclusion of a supplementary item *Audiovisual transactions*.
- The inclusion of a further supplementary item *Licenses to use audiovisual products*, which will include, for example, transactions in audiovisual goods (CDs, DVDs, etc.).

Research and development

7.33 In the 2002 MSITS, R&D transactions fall into three categories: *Other royalties and license fees*, *Research and development services* and *Acquisition or disposal of non-produced, non-financial assets*. The first two categories are in the current account and the third is in the capital account. In BPM6 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 non-produced, non-financial assets* in the capital account to *R&D services* in the current account. This reflects the change in the 2008 SNA recognizing R&D expenditures as GFCF, and so as produced assets. In the 1993 SNA payments for these assets were often recorded as transactions in patents.

7.34 The definition of R&D services in BPM6 is wider than that in the 2008 SNA and the Frascati Manual (the standard for R&D surveys in OECD countries) because it includes *Testing and other product development activities that may give rise to patents* (see BPM6, paragraph 10.148). The planned revision to EBOPS, however, has been designed to identify this component of R&D services, as shown in the table.

Further research: economic ownership of intellectual property products within multinational enterprises

7.35 The recognition of IPPs as produced assets, and the associated recognition of the payments for use as service payments, has caused a growing gap between estimates of GDP and GNI for some countries, which is hard to explain to users.

7.36 For example, countries with low rates of tax on corporate profits may be chosen as the location for subsidiaries of MNEs. These subsidiaries may be brass-plate companies with no staff apart from a local “director”, where IPPs are registered and fees for licences to use them are received. The parent of the MNE pays fees to the subsidiary for the use of the IPPs in the production process. These fees are recorded as service payments according to the 2008 SNA, and so GDP of the low-tax economy is increased by this amount. Given the FDI relationship between the MNE parent and the subsidiary, the profits earned are returned to the parent as property income.

7.37 So moving the registration location reduces GDP in the country where the MNE parent is resident, but the corresponding increase in net property income from abroad means that GNI there is unchanged. Similarly, the GDP of the low-tax economy rises by the amount of the service payments, but GNI is unaltered, other things being equal, because of the subsequent outflow of profits as property income arising from the FDI relationship with the parent MNE.

7.38 Examples of this happening, often in substantial amounts, include large pharmaceutical firms establishing IPP subsidiaries in a low-tax jurisdiction.

7.39 This outcome is not at odds with national accounts practices, but it does complicate economic analysis, and, arguably, reduces the relevance of GDP, as is already being seen in countries with significant outward flows of property income. But a legitimate question arises about who the economic owner of the IPP is, as opposed to the legal owner, which in turn raises questions about whether the SNA contains sufficient guidance to determine ownership of IPPs within MNEs.

7.40 Developing such guidance will require a collective effort at the international level. Meanwhile there remains the possibility that international comparability will be affected. Some countries for example may treat unidentifiable income implicitly generated by IPPs registered in their country as property income, whilst others may take the view that it arises from production of services.

7.41 Until the underlying question relating to economic ownership is resolved, it is therefore possible that some international incomparability will remain. Some modifications may be needed to ensure consistency between estimates of capital stock and IPP service payments. Ideally, new surveys targeted at MNEs should be launched to address directly the measurement of these transactions.

Annex 7.1

Extract from the OECD handbook on deriving capital measures of intellectual property products

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

Questions for R&D survey respondents

7.1.1 International R&D transactions within your company [with foreign parent/other entities outside the country]

7.1.2 International R&D transactions with others outside your company [and located outside the country]

7.1.3 International transfers of R&D or patents (inflow/outflow)

Have you received/donated free transfers of R&D or patents from/to [including foreign parent, other foreign entities within the company]? Would you be able to estimate the production cost or value of these transfers?

Questions for international services trade respondents

7.1.4 R&D services vs. other business and technical services - (one-off)

Have you reported R&D services exports/imports to include transactions in the following services [commercial testing, software development, engineering/design, post-sales customer services, royalties and licence fees]? Would you be able to separate out R&D services exports/imports from transactions involving these services?

7.1.5 International R&D transactions within your company

Would your company be able to report payments/revenues for R&D performed for/by you by/for others within your company [but located outside the country] [foreign parent/other foreign entities within the company]?

7.1.6 International R&D transactions with others outside your company

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

7.1.7 International royalties, licence fees for the use or sale of intangible property excluding cross-licensing/in a cross-licensing arrangement [payments/revenues, of which software licensing]

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

Questions for FDI survey respondents: new investments

7.1.8 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 per cent 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.

7.1.9 Have you or your foreign parent company engaged in [various types of investment] in this country?

7.1.10 For M&As of existing businesses, would you be able to report the magnitude of the following items at the time of the M/A [including R&D expenditures, stock of patents issued, stock of patent applications]?

7.1.11 For newly established businesses, would you be able to report if the new business is intended for R&D performance; if you plan to sell or license R&D to the new business; if you plan to sell or license patents to the new business; if you plan to transfer (for free) R&D or patents to the new business?