

B.6. Services related to intellectual property products

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Introduction

14.323. The present subsection discusses the compilation of services related to intellectual property products (IPP), and covers the EBOPS category entitled use of intellectual property n.i.e., as well as parts of other main EBOPS categories, including telecommunications, computer, and information services, other business services and personal, cultural and recreational services. The present *Guide* combines those components in the present subsection because of the partial overlap of and interrelationships among the categories.

14.324. Services derived from IPP cover the following items in the EBOPS 2010:

- (a) Charges for the use of intellectual property n.i.e. (main EBOPS category);
- (b) Computer and information services (included in telecommunications, computer and information services);
- (c) Research and development services (included in other business services);
- (d) Architectural, engineering, scientific and other technical services (included in other business services);
- (e) Audiovisual and related services (included in personal, cultural and recreational services).

14.325. Recent decades have seen an explosion in transactions related to those categories. Many of the transactions relate to the use of an underlying produced asset (typically research and development, software, databases and audiovisual originals). However, the categories present significant measurement challenges. Firstly, because the distinction between the categories from a reporter's perspective may not always be clear (for example, software versus research and development, or software versus audiovisual). And, secondly, because intrafirm transactions may be affected by transfer pricing phenomena or indeed by more general tax planning issues, meaning that the distinction between flows recorded as trade in services and flows recorded in the primary income account of the BOP as property income may not always be clear-cut.

14.326. The present section provides a detailed description of each of the service categories derived from IPP. It focuses on the particular challenges concerning flows relating to IPP recorded as assets in the system of national accounts. Special mention is also made of the treatment of transactions related to franchise and trademark licence fees. Such fees usually also reflect payments for the use of marketing assets, which are considered to be non-produced assets. As a consequence, in theory, transactions should be recorded in the primary income account in the balance of payments. However, given that the payments also include a service element, and if it is not possible to make the distinction with the income element, then by convention the full value is recorded under franchise and trademark licence fees.

14.327. Despite the guidance offered below, it is important to note that it is unlikely that compilers will ever be able to fully account for transactions in intellectual property in a way that is consistent with the underlying principles of economic ownership. However, it is at least possible to make progress on achieving more coherence both internationally, by encouraging compilers to engage in asymmetry reconciliation exercises, and nationally, by improving the coherence of capital stock and productivity estimates. Ultimately, pragmatic approaches to measurement are necessarily advocated here. Improvements in a few key areas could significantly improve quality.

Use of intellectual property n.i.e.

14.328. Charges for the use of intellectual property n.i.e. are defined in paragraph 3.214 of MSITS 2010, and include franchises and trademark licensing fees, licences for the use of outcomes of research and development, licences to reproduce and/or distribute computer software, licences to reproduce and/or distribute audiovisual products and licences to reproduce and/or distribute other products.

14.329. *Franchises and trademark licensing fees* are, in theory, related to charges for the use of non-produced assets (marketing assets). As such and, if one were to follow the underlying principles of national accounts, payments would not be recorded in production accounts of national accounts nor in the goods and services account of the BOP. Rather, the payments correspond to property income. However, often, the payments are bundled with additional service items that make it difficult to disentangle the pure payments for the use of the underlying brand and, as such, both the 2008 SNA and BPM6 recommend that such payments be recorded as payments for services. Nevertheless, outright purchases of the entire brand (the marketing asset) or indeed rights to use the brand in certain regions, such that the licence has the characteristics of a *licence to reproduce*, should not be recorded in the goods and services account and should instead be recorded in the capital account.

14.330. *Licences for the use of outcomes of research and development* include payments for licences to use and licences to reproduce. The latter reflects a transaction in a pre-existing produced asset in the SNA corresponding to negative gross fixed capital formation (GFCF) for the unit selling the licence and positive GFCF for the acquiring unit.

14.331. Care should be taken to differentiate between payments included in that category from those included in EBOPS category 10.1, which includes payments for customized (made to order) research and development as well as acquisitions of entire research and development originals. Differentiating between sales/purchases of licences to reproduce and sales/purchases of entire originals may not always be trivial, but the latter will usually, at least for transactions between unaffiliated parties, be accompanied by sales/purchases of legal instruments, such as a patent or copyright.

14.332. Since the 1993 SNA, when software was recognized as a produced asset for the first time, significant improvements have been made in measuring software and software-related transactions, and the proposed changes for more details in the latest EBOPS classification system should consolidate those advancements. The inclusion of a separate category, "licences to reproduce and/or distribute computer software", which specifically relates to licences to reproduce and not licences to use (which are included in EBOPS category 9.2) was requested by the national accounts community to assist in efforts to estimate GFCF in software. Licences to reproduce (with a contract period of more than one year) are recorded as GFCF by the purchaser and negative GFCF by the seller.

14.333. Similar improvements have been made with respect to other intellectual property products, such as databases, audiovisual, literary and other artistic originals. "Licences to reproduce and/or distribute audiovisual products" and "licences to reproduce and/or distribute other products" refer only to licences to reproduce and not licences to use.

Computer services

14.334. MSITS 2010, in paragraph 3.224, defines “computer services” as covering “hardware- and software-related services and data processing services”. Compilers should take particular care with respect to the coverage of computer software, in particular its distinction from “licences to reproduce and/or distribute computer software” (see also MSITS 2010, para. 3.225).

14.335. The key difference vis-à-vis licences to reproduce concerns the recording of flows in the national accounts. Whereas “licences to reproduce” (of more than one year) are not considered to reflect new output, transactions in computer software, with the potential exception of “software originals” (which may have been produced in prior periods) are. That item does not include the value of software embodied in other products, such as a computer, and sold as a bundle where the software component and value are not separately invoiced. Moreover, with the exception of sales to households and expenditures on licences with one year or less, all domestic expenditures in this category are typically recorded as GFCF in the national accounts.

14.336. Also of note is the recording of software provided on a physical storage device with a periodic licence fee as transactions in services, whereas software acquired on physical media with a one-off payment are recorded as transactions in goods.

14.337. It is clear that the blurring of lines between a good and a service, magnified by the difficulties that may exist in differentiating between the two categories in practice, complicates measurement. A complementary grouping (C.3) in EBOPS is included for computer software transactions”, which includes all related transactions whether embodied on physical media or not (see below). An additional grouping, C.3.1, is included to separately identify transactions that concern licences (explicit or otherwise) whose duration is for more than one year, which are recorded as GFCF when acquired by producers.

14.338. “Other computer services” (EBOPS 9.2.2) includes all other related transactions that are generally not recognized as investment in the national accounts. The detailed coverage of other computer services is given in MSITS 2010, paragraph 3.230.

Information services

14.339. MSITS 2010 divides information services into news agency services and other information services. Those are defined in paragraph 3.232 of MSITS 2010. One particular issue worthy of mention here concerns database-related transactions. The use and outright purchase or sale of originals and copies of databases are included in that category. However, some care is needed to ensure that software development costs in developing databases are not included in that category but in “computer software”.

Research and development services

14.340. Research and development services are defined in paragraph 3.234 of MSITS 2010. EBOPS 2010 recommends a breakdown of research and development services into two subgroupings: work undertaken on a systematic basis to increase the stock of knowledge (reflecting the coverage of research and development within a 2008 SNA context) and other research and development services.

14.341. It is important to note that the categories above within the provision of customized and non-customized research and development services (10.1.1.1) primarily relate to “new” research and development, such as newly produced customized software, or transactions in “originals”, where ownership and the concomitant rights are transferred to the purchaser. Care is needed in that context to differentiate between licences to reproduce and originals. Most, if not all, of such expenditures will be recorded as investment in the accounts of the importing country. Note, too, that not all acquisitions necessarily need reflect patented, copyrighted or other protected forms of research and development. In many cases, companies may deliberately opt not to patent the outcomes of some of their research and development. This may be motivated by a desire to preserve secrecy, by the cost of patenting, which may be perceived as outweighing the benefits, or by the research and development subject matter not being patentable.

14.342. Other research and development services primarily reflect other research and development-related expenditures that are not expected to add to the stock of knowledge as defined in the OECD *Frascati Manual* and recognized in the SNA and, therefore, will not be treated as investment in the national accounts.

14.343. There are other borderline issues to consider however. They chiefly concern design originals and the potential overlap with “architectural, engineering, scientific and other technical services”, which is covered below.

Audiovisual and related services

14.344. “Audiovisual and related services” relates to the production of motion pictures (on film, videotape or disk or transmitted electronically), radio and television programmes (live or on tape) and musical recordings (see MSITS 2010, para. 3.256). As noted above, care should be taken to ensure that “licences to reproduce and/or distribute audiovisual products” are not included in that category. There may, however, be borderline issues concerning the rights acquired by transmitters such as television companies and radio stations, when the contractual arrangements allow for multiple transmissions. Where the fees are paid on a “pay as you go” basis, for example, when a royalty payment is made every time a song is played on a radio station, they should be recorded under 11.1.1 (audiovisual). If, however, a one-off fee is paid that provides for unlimited airtime it should be recorded as being equivalent to a licence to reproduce (intellectual property).

14.345. Performing arts and other live entertainment event presentation and promotion services (namely, live performances such as concerts and plays) are excluded from audiovisual services and are instead included in artistic related services. The transaction corresponding to the performance of resident actors, musicians or other artists for the shooting of a movie (or other types of visual programmes) or musical recording by a non-resident entity (and vice-versa) is also included under artistic services, under the condition that artists are not in an employer-employee relationship with the recording entity. However, the subsequent transactions for the result of the recording will be included in audiovisual services. If for the recording the services of an independent recording studio or similar services are outsourced, then transactions will be included under audiovisual services if they are between residents and non-residents, and there is no employer-employee relationship, if the transactions correspond to the services of an independent service provider. Also included in audiovisual services are amounts receivable or payable for rentals of audiovisual and related products and charges for access to encrypted television channels, such as those offering cable and satellite services.

14.346. Like software, a complementary grouping is provided for “audiovisual transactions” in recognition of the grey borderline between transactions in goods and services. In the same way a complementary grouping is included to account for transactions that reflect investment expenditure in the national accounts (i.e., licences for more than one year), when undertaken by producers.

14.347. For artistic related services, care should be taken to ensure that transactions are included only if the service providers are not employees of the entity making payments; otherwise, they should be recorded as compensation of employees.

14.348. Sales of ownership rights of literary or other artistic originals (excluding those covered under audiovisual), should be recorded under 11.1.2 (artistic related services). There may be borderline issues for rights that restrict reproductions to certain markets or languages, where transactions should be recorded under EBOPS 8.4.2 (intellectual property).

14.349. Other borderline issues may concern transactions relating to the selling of exclusive rights before any originals have been created (for example, the exclusivity of a publisher to publish future literary works of an author). Those types of rights should be recorded as contracts for future production, and therefore payments should be included in the capital account. However, at the point in time when the "original" is produced, an imputation should be recorded for either (a) the transfer of the entire ownership from the "author/producer" to the "funder" or (b) a licence to reproduce.

Compiling intellectual property product-related services

14.350. Despite some of its current shortcomings in identifying international transactions in trade in research and development services, with the addition of supplementary questions, the Frascati-based ^[1] survey approach provides perhaps the best mechanism for improving the measurement of trade in research and development services. The OECD *Handbook on Deriving Capital Measures of Intellectual Property Products* describes a prototype questionnaire with a comprehensive list of questions that could inform the design of new or modified surveys (see also below).

14.351. The key challenge for measuring research and development flows, however, concerns transactions between affiliated parties. Research and development-related transactions between affiliated enterprises are not always observable and, often, payments that are implicitly related to research and development are instead recorded in the primary income account of BPM6. At the same time, flows may also be channelled through convoluted chains of affiliates, including special purpose entities, that have been set up to maximize post-tax profits for the controlling multinational enterprise.

14.352. The Task Force on Global Production ^[2] and its predecessor, the Task Force on Globalization in the National Accounts, have the goal of developing guidance on the issue of ensuring that flows for the funding, performance and use of research and development align with the concept of "economic ownership" in the national accounts. Since the conclusions reported in the interim "Guide to measuring global production" of the Task Force on Global Production are still under discussion in other intergovernmental bodies at the time of writing of the present *Guide*, more concrete guidance on those issues will be provided on the online version of the *Guide*. In the interim "Guide to measuring global production" the Task Force proposes that the most expedient approach to ensuring an underlying consistency between payments for the use of an asset and economic ownership would likely be through adjustments to balance sheets and, where possible, through the recording of transfers of assets from one affiliated party to another.

14.353. Central to that proposition is a desire to remain close to recorded and observed flows. This partly reflects practicalities, in particular the difficulties in making corrective imputations in the absence of complementary data, but it also reflects a desire to retain a close consistency between recorded profits and taxes paid, even if such payments suggest departures from the principles of economic ownership. Nevertheless, in two specific cases, the Task Force on Global Production suggests imputations to correct for flows recorded "incorrectly" as property income, where evidence is available.

14.354. The first case relates to affiliates using an underlying asset, owned by the parent or other affiliate, but where no explicit payment for use is recorded, and, instead, related flows are recorded as property income. In such circumstances, the interim "Guide to measuring global production" proposes that, in principle, an imputed payment for the use of the underlying asset should be recorded as charges for the use of intellectual property n.i.e. ^[3] The imputation could be based on observable flows in property income that can be related to the underlying asset, or failing that, the imputation should be based on the affiliate enterprise's share of total relevant multinational enterprise output multiplied by the total income generated by the underlying asset. However, the data requirements of such an approach are arduous as it requires not only information on the entire multinational enterprise, but also on the income generated by the asset, or proxies, such as the value of capital services provided by the asset. As such, more often than not, it is unlikely that such imputations will be made in practice. Nevertheless, if compilers do make such imputations, they should ensure that counterpart transactions (in particular, international transactions) should be coherent, requiring coordination with other statistics agencies.

14.355. The second case concerns dedicated affiliates engaged in the production of intellectual property products for use by other affiliated parties in production, but where the affiliate producing the intellectual property does not itself use the asset in production or receive any revenue through sales of licence to use or reproduce the asset or related income. Often such units have no recorded output beyond the production of the asset itself, which is recorded as own-account production of GFCF. In such circumstances the interim "Guide to measuring global production" proposes that an imputation be made such that the produced asset is transferred (exported in cases of international transactions) to the parent company. Sources of such information are scarce but some potential sources or approaches exist.

14.356. The first source relates to firm-level data and, in particular, data collections on the activities of multinational enterprises and foreign affiliates. Units classified to research and development activity (ISIC rev.4, division 72) but with no identifiable output, except for own-account production of research and development originals, or with no expectation of revenue through sales of licences (which can be indicated if historically this is also the case) can be considered as satisfying the criteria established in the interim "Guide on measuring global production" for imputing unrecorded or misreported exchanges of research and development assets to their parents. In such cases, the value attributed to the asset should be equivalent to the valuation used in estimating the own-account production (typically based on the sum of costs with an estimated mark-up for gross operating surplus).

14.357. A second potential source is the surveys used for the collection of research and development data in the Frascati framework. Data on the external funding of business research and development are collected in a large number of countries as part of that framework. The information includes funding from abroad by affiliated and non-affiliated enterprises. Although business enterprises mainly perform market transactions, those flows of funding might include donations and subsidies and not necessarily represent acquisitions of research and development, so some care is needed in interpreting the information. Nevertheless, the source can serve as a useful proxy or diagnostic for investigating flows recorded as acquisitions of research and development originals or payments for customized research and development services within the EBOPS category for research and development services.

Include page: [Country experience: Germany: Charges for the use of intellectual property](#)

Next: [B.7. Education and health services](#)

[1] OECD, *Frascati Manual*.

[2] See *Guide to Measuring Global Production*, chap. 4 (forthcoming).

[3] Since the conclusions reported in the forthcoming *Guide to Measuring Global Production* are still under discussion in other intergovernmental bodies at the time of writing of the present *Guide*, more concrete guidance on those issues will be provided on the online version of the present *Guide*.

