

## 1993 SNA - Updates

*Type of update:* CLARIFICATION BEYOND DISPUTE

### **Intangible assets, patents and copyrights in the 1993 SNA**

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Accounting for intangible assets, and any associated patents or copyrights, is an area in which some significant improvements occurred between the 1968 and the 1993 SNA. However, patents cannot be treated symmetrically with copyrights in the 1993 SNA because of difficulties created by the decision to continue to treat all expenditures on R and D as current. The purpose of this note is to try to clarify the complex issues involved which may be a source of some confusion.

Patents and copyrights are legal instruments which constitute evidence of their holders' ownership rights over certain kinds of intangible assets which may be described as 'originals' as they are the outputs produced by creative or innovative activities of a scientific, engineering, entertainment, artistic or literary nature. Patents confer ownership rights over scientific originals or inventions, whereas copyrights confer ownership rights over entertainment, artistic, literary or programming originals (new recordings, films, manuscripts etc. and computer software). The laws governing patents and copyrights are broadly similar in most countries. The ownership rights conferred by patents and copyrights are often described as 'intellectual property rights'.

Patents and copyrights have to be clearly distinguished from the intangible assets to which they relate. Similar kinds of legal instruments may exist for tangible assets: for example, the 'deeds' of a house (i.e., the legal documents which are evidence of ownership over a house) are obviously very different from the house itself. It is convenient to explain the treatment of copyrights first as they are not subject to certain additional complications which affect patents in the SNA.

#### **Copyrights**

The 1993 SNA explicitly recognises the process of creating an entertainment, literary or artistic original as falling within the production boundary of the SNA. The output consists of an original in the form of a new visual and/or sound recording, manuscript, musical composition, etc. The original is then used to produce copies which are themselves used in further processes of production or for consumption. The original must, in fact, be an intangible fixed asset, as defined in para. 10.7 of the 1993 SNA, provided it is itself used repeatedly or continuously in the production of other goods and services (i.e., copies) for

more than a year. Although an original has to be recorded and stored on some physical medium -- paper, film, tape, disk, etc., -- it must be clearly distinguished from the latter. Blank pages, films, tapes, disks, etc. have little value. They acquire value by having an original recorded on them, the original being essentially an intangible entity with no physical dimensions or coordinates of its own. Nothing material is transferred from the original in the process of producing the copies.

An entertainment, literary or artistic original is therefore classified as an intangible fixed asset in the 1993 SNA and recorded under AN.112 in the asset classification. By definition, therefore, the acquisition of an original, whether through own account production or purchase on the market, counts as gross fixed capital formation. Notice that the copyright does not appear anywhere in the asset classification because the copyright is not itself an asset, being only a legal instrument providing evidence of ownership over an asset. Any payments received by the owner of the asset -- i.e., the holder of the copyright -- from other units who are licensed to use the asset are conceptually equivalent to the rentals received by owners of tangible fixed assets who lease them out. They are treated as payments for services provided by the owner of the asset, whereas in the 1968 SNA they were treated as a form of property income.

Writing new computer software counts as production in the same way as writing a new book or musical composition. In the 1993 SNA, a new computer programme is therefore treated as an original, which must be an intangible fixed asset when it is used repeatedly or continuously in the production of other goods and services for more than a year. It is then classified under AN.112 alongside artistic originals. As every PC user is aware, the creator of software can obtain copyright.

### **Patents and scientific originals**

The situation is different in the 1993 SNA, however, for scientific originals, such as inventions, new drugs, new processes, etc. and any associated patents. Their treatment is linked to that of expenditures on research and development (R and D). This was the subject of an intense debate during the SNA revision process. As R and D may continue to yield benefits long after it is undertaken, it can be argued that the expenditures incurred are essentially capital in nature. Most economists consider that R and D should be treated as investment rather than consumption and many national accountants would agree with them. Despite long discussions and extensive consultations with national statistical offices, no consensus emerged during the revision process, but a majority favoured continuing to classify all expenditures on R and D as current. The reluctance to classify expenditures on R and D as capital formation may be explained more by practical than conceptual considerations because of the difficulty of identifying and valuing the 'assets' produced by many R and D activities and accounting for their subsequent use and consumption.

In consequence, the outputs of R and D establishments are treated as being consumed as they are produced. Even though scientific originals may be produced which are assets

from an economic point of view, they cannot be recognised as assets within the SNA. There is no category 'scientific originals' under intangible fixed assets, AN.112, in the asset classification of the 1993 SNA. Nevertheless, patents may be taken out which establish legal ownership over these supposedly non-existent produced assets.

The SNA is placed in an impossible situation. In reality, the holders of the patents are owners of assets which must be recorded in the balance sheets of the SNA. Moreover, the holders of the patents also engage in transactions which have to be accounted for. The 1993 SNA was fully cognizant of the problem and tried to find a way around it. Recognising that assets in the form of 'patented entities' do exist, it felt obliged to classify them under AN.221, non-produced intangible assets. These are described (p. 310 of the printed 1993 SNA) as 'constitutions of matter, processes, mechanisms, electrical and electronic devices, pharmaceutical formulations and new varieties of living things produced by artifice'. The trouble is, of course, that these entities are clearly scientific originals produced as the outputs of activities which fall within the production boundary of the SNA. This implies that they ought to be classified as intangible produced assets alongside entertainment, scientific and literary originals and computer software, i.e., as intangible fixed assets. This would in turn imply that their acquisition should be classified as gross fixed capital formation, but this option is ruled out by the R and D decision. There is no conceptually satisfactory way of escaping from this impasse.

The potential confusion is compounded by the fact that it was decided in the 1993 SNA to treat payments of royalties to holders of patents, by convention, as payments for services rendered (see para.7.92 and para. 69 of Annex 1), i.e., as if they were rentals received from the lease of fixed assets. This treatment would be valid if patented entities, i.e., scientific originals, were recognised as fixed assets, but it is inconsistent both with their classification as non-produced intangible assets and with the decision to treat all R and D as current.

Given the constraint imposed by the R and D decision, another possibility might have been to treat patents, by convention, as if they, and not the patented entities, were the assets. Viewed as legal instruments (i.e., 'constructs of society' as described in AN.22), patents could then be classified as non-produced intangible assets. Royalties would then have to be classified as property income. In effect, this is the treatment adopted in the 1968 SNA. However, the underlying inconsistency remains, whatever expedient is adopted.

### **Conclusion**

The treatment of programming, entertainment, literary, and artistic originals and their associated copyrights in the 1993 SNA constitutes a major improvement over the 1968 SNA. However, a similar treatment for scientific originals is effectively blocked by the decision to treat all expenditures on R and D as current which prevents creative or innovative scientific activities from producing assets. As a result, the SNA treatment of patents and patented entities is inherently, and unavoidably, unsatisfactory and leads to

inconsistencies within the system. In effect, the SNA needs to move either forwards or backwards.

(1) One possibility is to accept the fact that the decision to treat all R and D expenditures as current implies that no assets are produced by R and D activities. Assets in the form of scientific originals (i.e., patented entities) cannot therefore exist. The patents themselves, as legal instruments, have to be treated as non-produced assets and royalties treated as property incomes. This means going back to the 1968 SNA.

(2) The other possibility is to accept the fact that scientific originals do actually exist. This implies that intangible fixed assets may be produced as outputs from R and D activities so that some expenditures on R and D have to be classified as gross fixed capital formation. In short, the treatment of scientific originals should be aligned with that of entertainment, literary and other artistic originals, and also computer software.

It is difficult to see either change being made in the immediate future, as both would entail important changes from the 1993 SNA. It may be necessary to continue to live with the inconsistencies for the time being, but they should be recognised as inconsistencies.

The first change would be a retrograde step which ignores economic reality. It may be conjectured that in the longer term the second change will eventually have to be made. It is extremely difficult to justify the differing treatments of scientific and other originals within the 1993 SNA, and it may also become increasingly indefensible from an economic point of view to deny scientific originals the status of intangible fixed assets in the face of the major contributions which they appear to make to economic growth and development. The second change does present a serious challenge to national accountants, however, and requires further elaboration because simply reclassifying R and D as capital formation would not dispose of the problems which concerned those who were reluctant to do so during the SNA revision.