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**Seminar
Creation, Recognition and Valuation
of
Intellectual Assets**

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Intellectual assets in the update of the 1993 System of National Accounts

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Intellectual assets in the Update of the 1993 System of National Accounts

Seminar on the Creation, Recognition and Valuation of

Intellectual Assets

13-14 July 2006

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UN STATISTICS DIVISION

Economic Statistics Branch

National Accounts Section



Introduction

- Update of the 1993 SNA
- Definition of assets
- Capitalization of R&D
- Goodwill and marketing assets
- Classification of assets
- Freely available R&D



System of National Accounts

- The national accounts are the source of information about the state and performance of the economy
- It conveys information about the performance of the economy in a similar way as that of the operating and financial accounts of an individual firm



Update of the 1993 SNA



Mandate for 1993 SNA update

- UNSC charged ISWGNA with responsibility for the update of the SNA in February 2003.
- ISWGNA consists of: UN, World Bank, IMF, Eurostat and OECD
- ISWGNA is supported by the AEG and various taskforces dealing with specialized issues
- UNSC approved the work programme on February 2004.
- Work began in early 2003, e.g. the first meeting of Canberra II was April 2003.



Goals of the ISWGNA:

- Product that meets the needs of NSOs and users
- Efficient update process - release of updated SNA in 2008
- Maximum involvement by all interested parties throughout the process
- Transparent management process
- Perfect consistency with BPM and maximum consistency with GFSM



To achieve the goals

- Issue papers and AEG recommendations placed on the UNSD website.
- NSOs, CBs and ISOs consulted about recommendations and asked for comments. Comments considered at following AEG meeting.
- Issue papers presented at regional meetings.
- Task forces working co-operatively, including the BoP Committee and TFHPSA.



Definition of assets



Definition of an asset

- The assets recorded in the System are economic assets:
 - ownership rights can be enforced
 - economic benefits may be derived by holding them, or using them, over time
- It is a store of value that depends upon the amounts of the economic benefits that can be derived from it by its owners.



Definition of an asset (cont)

- This value (discounted for inflation) does not usually remain constant but often diminish with the passage of time.
- Different kinds of benefits may be derived such as
 - (a) using assets such as buildings or machinery in production;
 - (b) Some benefits consist of property incomes: for example, interest, dividends, rents, etc., received by the owners of financial assets and non-produced assets;
 - (c) Some assets may be held purely as stores of values (precious metals or stones, etc.) without any other benefits being derived from them.



Asset boundary

- All entities which meet the definition of an asset. All appear on the balance sheet of the economy.
- All assets can be represented by a monetary value
- Value represents the markets view of the total of the benefits embodied in the asset.



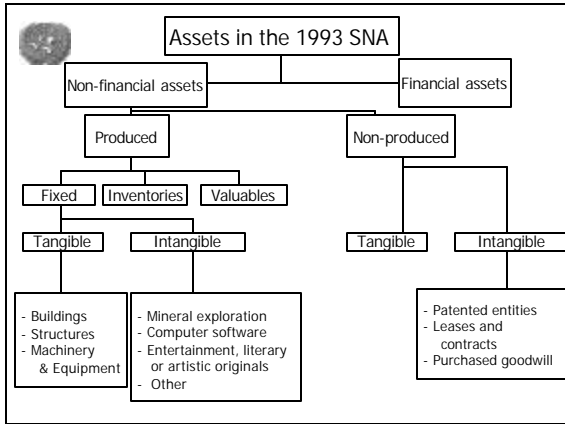
Produced vs non-produced assets

Produced

- Enter via production or imports
- Leave via being exhausted, sold to residents for use other than as asset, sold to non-residents

Non-produced

- It exists, like land and sub-soil assets; or
- appears over time and is valued/recognised when there is an equivalent market price
- May leave via depletion or impairment



- ### Exclusions
- Consumer durables
 - Human capital

Capitalization of R&D



Research and Development

R&D in 1993 SNA

- R&D expenditure is treated as consumption and not as capital formation even though it is acknowledged that it is inherently investment in nature.
- This recommendation created difficulty – what to do with the output of R&D that generates income for its owners over a considerable period of time?
- The 1993 SNA solution is to recognise '*patented entities*' as *non-produced assets* that appear via the other changes in assets account
- The SNA therefore recognises assets created by R&D but denies their connection with R&D production.



Research and Development (cont)

R&D in 1993 SNA

- **Although the 1993 SNA moved closer in recognizing the contribution of R&D in the production process it left the anomaly:**
 - non-produced assets producing services.



Research and Development (cont)

Update of 1993 SNA

- There has been increased interest in what contributes to economic growth and why some countries have enjoyed more prosperity than others.
- There is a widespread belief that R&D and other intangible assets increasingly contributes to economic growth.
- The knowledge gained from R&D is reflected in technological innovation, new products and better ways of doing things
- To keep up with economic reality R&D need to be recognised as asset in the SNA



Research and Development (cont)

The R&D statisticians identifies three types:

- **Basic research**, defined to be experimental or theoretical work undertaken primarily to acquire new knowledge or the underlying foundation of phenomena and observable facts without any particular application or use in view.
- **Applied research**, defined to be original investigation undertaken in order to acquire new knowledge... directed primarily towards a specific practical aim or objective.
- **Experimental development**, defined to be systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed.



Research and Development (cont)

Canberra-II Group recommendations:

- Outputs of R&D should be recognised as assets, and the acquisition, disposal and depreciation of R&D should be treated in the same way as other fixed assets.
- All R&D output should be treated as an asset, even if it is made freely available.
- The definition of an asset should be reviewed to ensure it covers the assets of non-market producers adequately.
- The definition of R&D given in the Frascati Manual (FM) should be adopted in the SNA.
- The label patented entities should no longer be used to describe R&D products in the system (it represents assets, but is not an asset in its own right)



AEG Decisions on R&D

- Outputs of R&D should be recognised as assets.
- However, in the case where the results of R&D are made freely available the AEG argued that theoretically it cannot be treated as assets
- More about this later



Goodwill and marketing assets



Purchased Goodwill in the SNA

- 1993 SNA defines goodwill as the difference between the value paid for an enterprise as a going concern and the sum of its assets less the sum of its liabilities, each item of which has been separately identified and valued
- As an accounting entry in SNA, purchased goodwill is a mechanism to align the value of assets and liabilities of a business with the demonstrated market value of that business at point of sale



Purchased goodwill and other intangible non-produced assets

There are a number of deficiencies in the treatment of purchased goodwill and other non-produced intangible assets in the 1993 SNA:

- it does not elaborate on the scope and conceptual nature of purchased goodwill and other intangible non-produced assets, or why they are economic assets to be included in the system;
- the calculation of purchased goodwill is different for unincorporated enterprises and corporations;



Purchased goodwill and other intangible non-produced assets (cont)

Deficiencies (cont) :

- **purchased goodwill is only recognised when a business is purchased, but goodwill is likely to be present in all businesses; and**
- **it does not elaborate on why they should be classified as non-produced assets and how they should be amortised.**



Purchased goodwill and marketing assets in the SNA update

- **Goodwill is only recognised in the System when a business is sold and hence the term 'purchased goodwill'**
- **A goodwill asset is likely to be present in most businesses, but for reasons of reliability of measurement it only enters the system when its value is evidenced by a market transaction.**



Purchased goodwill and marketing assets in the SNA update (cont)

- **Brand names, mastheads, trademarks, logos and domain names are referred to as 'marketing assets' (MA)**
- **Unlike goodwill, marketing assets are identifiable as separate assets and can be sold or licensed (franchised) to others but MA are included in the same asset category as purchased goodwill**



Purchased goodwill and marketing assets in the SNA update (cont)

- Internally generated goodwill and marketing assets will be present in most businesses but its valuation is not robust and therefore, should be excluded except where they are evidenced by a sale
- Purchased goodwill and marketing assets are not subject to wear and tear like physical assets.
- Once established at the point of sale they can be maintained indefinitely, enhanced or run down depending on a business's efforts to maintain or improve its good reputation with customers and its efficient business structures.
- As such, it is not appropriate to simply write the assets off over time at a predetermined rate.



Purchased goodwill and marketing assets in the SNA update (cont)

AEG Decisions:

- 'Purchased goodwill and marketing assets' should replace the existing item 'purchased goodwill';
- The economic nature of purchased goodwill and marketing assets should be clarified in the updated SNA;
- Valuation principles for purchased goodwill and MA should be applied consistently calculated as the excess of the purchase (or takeover) value of a business over the value of the other assets and liabilities otherwise identified in the SNA system for that business;
- Internally generated goodwill and MA should be excluded except where evidenced by a sale;
- Purchased goodwill and MA is to be treated as non-produced assets;
- Should not be amortized at a predetermined rate but made subject to an impairment test.



Purchased goodwill and marketing assets in the SNA update (cont)

- Although there was no support to reclassify purchased goodwill and marketing assets as produced assets, the CII members remained somewhat uneasy about describing them as non-produced.
- This is also supported by classification statisticians who view income from trademarks and franchises as generated from a production activity, which cannot be the case if the assets are non-produced.



Databases



Measurement of Database in National Accounts

1993 SNA Treatment

- 1993 SNA recommends capitalisation of large databases.

Problems?

- However, no guidelines to operationalise this.
- How large? (subjective qualification)



Databases

- Databases consist of two components – software (DBMS) and the electronic data.
- Databases are largely ubiquitous:
 - Including: internal databases, e.g. used for administrative purposes
 - Databases for market services, e.g. Yellow Pages
 - Databases for non-market services held by statistical offices
- In theory all should be capitalised



Databases (cont)

Value of the database reflects the value of DBMS, plus the cost of converting data from one medium/format to the medium/format required for access by DBMS. The value of database does not include the collection value of information in it.



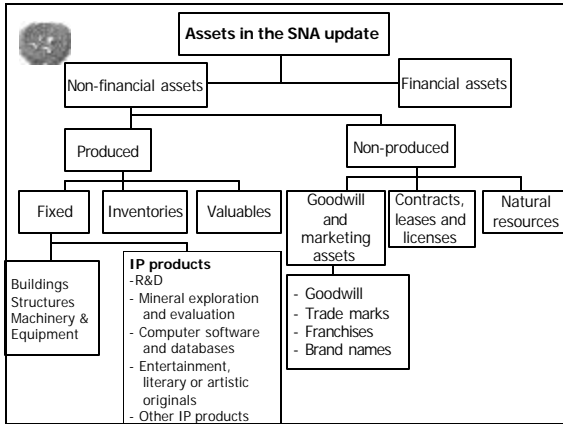
AEG decisions: database

- The reference to “ large” databases should be dropped;
- All databases, including those built on own-account, should in principle be treated as fixed capital formation.
- Databases holding data with a useful life of more than one year are fixed assets
- Value of the software component of databases, the DBMS, would normally be recorded elsewhere as a software asset



AEG decisions: database

- Remaining value of the database should only include the costs involved in converting data from one medium/format to that required by the DBMS, including the application costs (adapting the software for a particular application, setting up the structure of the database, loading metadata, etc.), but should exclude the costs of acquiring the data themselves
- No maintenance is entailed with databases and all updating costs should be recorded as capital formation
- Value of databases should be estimated using a sum-of-costs approach, in the absence of a more satisfactory alternative.
- The value of databases for sale includes the value of the information content



Implementation of the capitalization of R&D in the SNA

Implementation of R&D

Meeting between national accountants and R&D statisticians was held to discuss the implementation of the AEG recommendation to record expenditure on R&D as capital formation in the updated SNA.



Implementation of R&D (cont)

Bridge tables between Frascati data and the national accounts

- While it is possible to do this bridging with data available currently by making some assumptions, better estimates could be obtained if the surveys conducted as per the FM covers also:
 - Expenditures classified by SNA sector
 - A breakdown of capital expenditure by asset type
 - provided explicitly other taxes on production and subsidies.
- Better and more complete data of international trade in R&D



Implementation of R&D (cont)

Areas of particular difficulty estimating R&D for NA purposes

- *International trade flows*
 - Very difficult to measure, especially between affiliated enterprises in different countries
 - Major multinationals needed special attention by the R&D survey statisticians.
- *Double counting*
- *Volume estimation*
 - National accountants need to work with price index statisticians to develop the required price indexes.
- *Capital measures*
 - Difficulty in obtaining reliable estimates of depreciation rates (or alternatively asset lives).
- *Quarterly R&D estimates*
 - Using employment and wages data from other surveys to impute R&D labour compensation.



Implementation of R&D (cont)

R&D manual

- The OECD proposal to prepare a manual, providing guidelines for the compilation of R&D statistics in the national accounts (to be part of a greater manual covering all intellectual property, including software) was strongly supported.
- Draft for discussion in April 2007.
- Final at the same time as SNA 1993 rev. 1, in 2008.



Exclusion of freely available R&D

- One of the AEG recommendations reads as follows:
- In principle, freely available R&D should not be included as capital formation but in practice it may not be possible to exclude it. The assumption is that including freely available R&D would not lead to significant error.
- Reason: ownership rights are not enforced, which means monopoly profits are forfeited, and so the R&D output has no value to the "owner".



Exclusion of freely available R&D

(cont)

However

- It is possible for R&D to be made freely available on condition that the owner's rights are recognised, for example when research work is quoted by other researchers.
- This satisfies the first condition to be an asset.
- Even though monopoly profits are forfeited it is not to say that R&D output has no value to the "owner".
- There are cases where the owner still expects to get an adequate return on the investment in R&D despite making the results of the R&D freely available to others. This situation is commonly found in a non-competitive environment, particularly in the non-market sector.



Exclusion of freely available R&D

(cont)

- It is proposed to define freely available R&D output as R&D that leaves the owner (or the members of its collective group) with no economic benefits.
- Making R&D output freely available does not exclude the intended benefits for the owner.



Thank You
