

**Germany, Ligia Luetticken:**

I think that the paper/discussion shall be extended to clarify which data are to be recorded as GFCF and which on produced goods (it is said, it shall refer only to non produces phenomena).Further the definion shall clarify what is a fixed asset: the single data file or the sum of datafiles. Related to this, there is an unclarified question GFCF: if the sum of datasets is an assets, then current updates of such a dataset would not be GFCF (similar to minor improvements of fixed assts).

**Marshall Reinsdorf:**

We ought to think about data original vs. data copies. Artistic originals are fixed assets but not the copies.

**Sanjiv Mahajan:**

Any proposals on how is the price of data established where no licence exists or transaction takes place? How is the service life of the data as an asset to be determined?

**Germany, Ligia Luetticken:**

With respect to the valuation at cost of production, SNA 6.125 recommends valuation at basis prices of similar products. Valuation at cost is the second-best method, if the first one is not reliable. It should be

**OECD - John Mitchell:**

*@Ligia:* There is no reason that observable phenomenon defined as “the occurrence of a singular event or piece of information.” Can’t come from both produced and non-produced occurrences.

**Sanjiv Mahajan:**

For market producers' own account, how will a mark-up be established on different producers on very different types of data?

**Germany, Ligia Luetticken:**

It should be investigated, which method is more reliable: similar products prices of costs assessed via quota on working hours.

**Pedro Lines, Argentina INDEC:**

I agree with the idea of having a clarification on the data as digital goods because the definition of goods in the 2008 SNA, paragraph 6, defines a good as a physical object among other criteria. In what so called as digital goods, it is difficult to set the boundary between goods and services since they fulfil all criteria for a good in the SNA definition, except the first, which requires that goods are physical objects. So, why do we not follow the criteria of CPC2.1 that breaks down the products in three categories goods, services and other products and consider all digital goods as Other Products?

**Peter van de Ven:**

I get the feeling that the issue of recording non-produced assets (observable phenomena) is mixed up with fixed assets versus intermediate consumption. Non-produced assets can have a life of less than one year. In this respect, I'm wondering how a purchase of observable phenomena will need to be recorded according to the Task Team.

**Germany, Ligia Luetticken:**

With respect to data included in SNA2008, it would be interesting to ask what happened with data included as produced intangible assets in SNA 1993

**NADIM AHMAD:**

*@Peter:* Indeed. Acquisition (payments) for observations (non-produced assets) should not be included as intermediate consumption. Instead the associated costs should appear on the balance sheets of the unit acquiring the data as another change in volume (in essence the non-produced asset is integrated with the produced asset -- the database)

**Germany, Ligia Luetticken:**

With respect to valuation, my point was to look if using prices of similar products would not be more reliable as costs assessments

Please clarify if a building is produced and if data of buildings are included

**United States Carol Robbins:**

While the SNA is not detailed on databases, the Manual on Measuring IPPs does give us a starting place, page 103 in this manual: <http://www.oecd.org/sdd/na/44312350.pdf>

**NADIM AHMAD:**

*@Ligia:* The 1993 SNA and 2008 SNA both treated data in basically the same way. The latter merely included more detail to help clarify measurement challenges.

**Germany, Ligia Luetticken:**

*@Nadim:* I totally agree

With respect non bundled free software: one question: if this shall be included as production, it has to be recorded also as consumption, which is in my opinion impossible. Also I would recommend do have similar treatment for free software (no bundled) and sofa-traveling (offering accommodation for free)

**USA Dylan Rassier:**

Nice balanced presentation Marshall. There does not seem to be much difference in substance between the barter approach and the bundling approach. Both of them impact GDP only through the newly developed data (or database) asset. A key question that arises is whether we want to track the household's participation in digital platforms/"free" digital services in a satellite household account, which is proposed in the barter approach? Is there value to users of official statistics to understand the role that households play in the provision of "free" products? For example, is there any impact on household well-being?

**Peter van de Ven:**

Approach of Brynjolfsson is looking at consumer surplus. This is inconsistent with NA-valuation, which is based on exchange values. You can not simply add one to the other.

**Dennis Fixler:**

Peter is correct

**Sanjiv Mahajan:**

Peter touches on the elephant in the room, do we want to or do we not want to include a consumer surplus!!

**Germany, Ligia Luetticken:**

*@Dylan:* "Is there value to users of official statistics to understand the role that households play in the provision of "free" products? For example, is there any impact on household well-being?" I totally agree and see a link to social welfare. Maybe we can imagine a cohesion indicator outside the gdp to reflect the degree of willingness for sharing abilities

**Rebeca - Brasil:**

The same problem emerges with environmental assets

**Sanjiv Mahajan:**

Hard to measure should not be an argument for exclusion ... we already have lots of difficult issues to measure and assumptions used ..... on speculative, I agree!

**Rachel Soloveichik:**

There are good arguments for tracking consumer surplus in the official statistics. However, it's hard to argue why officials should only track consumer surplus from digital services but not other goods and services.

**Peter van de Ven:**

*@Rachel:* I fully agree, but we need to realise that it's a different animal altogether. Marshall also made this point.

**USA Dylan Rassier:**

I think the barter approach and bundled approach are well aligned. The barter approach doesn't imply consumer surplus. I think the bundled approach focuses on measurement and the barter approach focuses on recording transactions.

**UK Richard Heys:**

I would agree with Dylan. Two methods very close

**Dennis Fixler:**

Adjusting prices for quality change can be distinguished from consumer surplus concerns

**Germany, Ligia Luetticken:**

If specific for digital products: do we need more frequent survey or more frequent updating the shopping basket? I guess, digital products offer is more dynamic than offer of traditional products

**Marshall Reinsdorf:**

Electricity is not so straightforward in CPI and PPI compilation, as there are fixed charges, the price for consumption (monthly or hourly) above some threshold may be different, and difference customers may pay different prices. Price index compilers usually price a sample of typical bundles.

**US Ana Aizcorbe:**

Very interesting paper, Dave. Are the IDC price indexes using exchange rates? If so, were there any important trends in exchange rates that might drive differences in price indexes across countries? I really liked David Byrne's idea that economic relationships (as in his three examples) may be used as diagnostic tools to set priorities across sectors/goods. Extremely useful when facing limited resources. Thanks.

**Sanjiv Mahajan:**

Granularity of the products and link to the product classifications and prices and then consistency across countries for comparisons is key. For example, important penetration will include parts, certain types of services linked to the computers themselves whereas this may not be the case for domestic output. The product grouping may be too heterogenous.

**Dave Byrne:**

*@Ligia*: The rapid price declines for mobile phones I showed using IDC data were based on quarterly-frequency prices, which suggests higher frequency isn't the issue, at least for this product, since CPIs are typically based on monthly observation and in many cases they fell slower than those using the IDC data.

In the case of high-volume digital electronics (mobile phones, laptops), you have the option of observing \*all the prices in the market (if IDC and its competitors are to be believed), rather than a sample. So, it may be the case that it's the process of forced substitution when products exit the basket that is confounding the official indexes that seem counterintuitively slow-falling series. Or, perhaps the process of constructing the basket initially. If it's the case that the market is fairly competitive, the trends in incumbent products should provide some downward pressure, as is the case in the index I showed, even \*without hedonics. It's important not to fixate on hedonics as a cure-all for these problems.

**Germany, Ligia Luetticken:**

With respect to crypto as store of value: when I think of their volatility I wonder if they are hold to store value for years or only for a short time. For recording them as valuable, they should be intended to transfer value over time and not only to save some means of payment for a while.

**ECB\_Celestino:**

For CA being means of payment and without liability an alternative to be considered is to classify them in a separate category for financial assets without liabilities, together with gold

**Germany, Ligia Luetticken:**

Against valuable recording: saving books are also financial and no valuables

**Marshall Reinsdorf:**

Some new crypto assets are scams. Do we want to wait to record new crypto assets until they have a track record of holding their value.

**UK Richard Heys:**

As you I have worried about treatment of crypto without liability as valuables - valuables should be stable or increasing price. Crypto too volatile to qualify.

**Germany, Ligia Luetticken:**

*@Richard:* I fully agree!

**Rachel Soloveichik:**

I'm not sure valuables can't have volatile prices. In some eras, gold prices were extremely volatile.

**Peter van de Ven:**

*@Marshall:* Some shares probably also fall in the category of scams.

**Marshall Reinsdorf:**

Yes, but not as frequently as crypto assets. One estimate said the majority of new ones were scams

**UNSD-Benson Sim:**

Valuables are produced goods and the 2008 SNA says goods are physical objects. Thus, is it possible to justify how some crypto assets can be classified as valuables?

**UK Richard Heys:**

*@Rachel:* I think I would stretch to ask whether gold should be a valuable or go back to being a financial asset - just because of the volatility point.

**Peter van de Ven:**

*@Richard and Ligia:* I don't like the argument of volatility for classifying assets. As I see it, it doesn't work.

**Jose Carlos Moreno:**

Instead of separating crypto assets as means of payment vs store of value, a more useful classification would be: money-like and not money-like crypto assets. Currently, there are no money-like, but there will be in the future.

**Germany, Ligia Luetticken:**

*@Peter:* But what is with saving books? They are not recorded as valuables

**UK Richard Heys:**

*@Peter:* The SNA defines a valuable as having stable or rising price. I don;t think I'm saying volatility as %tage movement, but if the price of the good price falls regularly or deeply, this struggles to meet the existing defn. We'll talk offline

**Peter van de Ven:**

*@Richard:* As I said before, I think this is an over-interpretation of the 2008 SNA.

**Marshall Reinsdorf:**

I agree with Peter

**Peter van de Ven:**

By the way, we are now in the process of updating the 2008 SNA. So, we are "free" to change the working of the SNA.

**Germany, Ligia Luetticken:**

Crypto as valuables or not: are they relevant for the GDP or is this only a theoretical discussion?

**Martha Tovar:**

In some particular moments some assets (financial and non-financial) have volatile movements, as example: oil. It might not be an argument.

**UK Richard Heys:**

Para 10.13 looks pretty clear to me: 'Valuables are expected to appreciate or at least not to decline in real value'.

**Kevin Armbrister:**

Wouldn't it have been more practical to treat them as barter items

**Marshall Reinsdorf:**

"expected" by the buyer/holder, but not necessarily the seller!

**UNSD-Benson Sim:**

Scams are a form of illegal activity, which should be recorded in the SNA.

**Marshall Reinsdorf:**

No. Illegal is not sufficient for something to be a transaction. If people are being tricked it is not a transaction as defined in the SNA

**UNSD-Benson Sim:**

There is some mutual agreement in the exchange.

**Sanjiv Mahajan:**

Agree, not a mutually agreed transaction.

**Rachel Soloveichik:**

It may be true that a fraudulent transaction isn't a true transaction in the SNA sense. But the flow of funds still needs to be tracked somewhere in the accounts.

**Peter van de Ven:**

If it concerns outright stealing of money through a scam, it cannot be considered as a transaction, and it should be recorded via other changes in the volume of assets (in this case: currency).