

Are National Accounts Moving Towards a Special Purpose System for Productivity Analysis?

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Paper Abstract:

In the comprehensive revisions released by most countries since 2012, adjusting their national accounts to the 2008 SNA or 2010 ESA, the most significant changes relate to the capitalization of R&D and - for some countries - (though some introduced this earlier, and some have decided so far not to make this change) the direct volume output measures for individual non-market government services.

None of these changes relate to new phenomenon, and could in principle have been introduced already with the 1968 SNA, and were also discussed in the 1993 SNA. When they reemerged with more success with the 2008 SNA/2010 ESA, it was largely as a response to the demand for data that would be better suited for productivity analysis. This includes analyzing the effect on productivity of the increasing expenditures on intangible assets, and to deal with the old “weakness” that the system did not allow productivity measurement for the government production of non-market services. But these changes were also driven by the idea that there exist a “true” GDP to which you could come still closer by eliminating obvious “shortcomings” in the existing system.

With both these changes, national accounts have, however, moved into new territories that on their own represent comprehensive technical and socio-economic fields largely unknown to national accountants and characterized by continuous development, both concerning their delimitations, possible measurements, or even concerning the very existence of some of the items anticipated to be measured. The publications on the current projects on knowledge based capital (KBC) spearheaded by the OECD as well as the Atkinson report (especially the triangulation productivity approach) and numerous subsequent articles on - and actual implementation of - direct output measures illustrate the vast extent of these expansions relative to the traditional national accounts delimitation and required expertise.

The introduction of the changes related to R&D and direct output measures into the national accounts have only been possible by relying extensively on assumptions. The R&D manual of Eurostat needs around 10 important assumptions to construct the set of data entering the accounts, and for the direct output measure no indicator, however carefully constructed, can fully capture the performance of complex public services with multiple objectives. Problems with the latter are highlighted by the ESA 2010 ban on including any direct quality adjustments in the direct output measures in the EU member countries. Both changes have implied creating markets and prices where no markets and prices exist. These expansions represent a conceptual and empirical weakening of the accounts. The earlier efforts to have environmental or well-fare oriented adjustments introduced into the core accounts failed, largely being rejected because of their conceptual weaknesses and reliance on non-observed data, but the speculative character of the above changes may be no less than of those previously rejected. With these two changes

there are also build-in contradictions. Whereas on the one hand it is seen as important to move away from the input-based volume measure for government services, this same method is being introduced for the measurement of own-account R&D, and thereby affecting the measured productivity.

According to the OECD project on Knowledge Based Capital (KBC) total KBC expenditures now exceed the classical physical fixed capital formation in many developed countries, and further these expenditures have been increasing much faster than GDP over recent decades. It is further noted that KBC expenditures other than R&D causes this accelerated growth. (Both expenditures and capital stocks depending on the measurement methods chosen). Therefore R&D is already less interesting seen in a growth and productivity context, and in the KBC project reports it is hinted that the non-R&D parts of KBC expenditures should also be capitalized, but also that the way R&D are now being capitalized in the national accounts may be less relevant from a productivity point of view. This illustrates the danger of introducing “half-cooked” improvements into the national accounts.

To illustrate the consequences of capitalizing all other kinds (in addition to R&D) of expenditures included in the OECD KBC- project (using the classification of KBC based on Corrado et al.) a numerical example will be worked out, introducing stylized data from the KBC project into a stylized country set of national accounts. The numerical example will show that a progressive capitalizing of more KBC expenditures will entirely change the character of the national accounts, making both levels and growth rates of GDP as well as NDP difficult to interpret and use for the policy purposes for which they have traditionally been used (including for the ICP). The GDP will further lose the character of being “disposable” from a common sense point of view, reflecting the consequences of more imputations where production, income creation and use of income is one single process.

For both capitalization of KBC expenditures and direct output measures for government the preferred solution would be developing these issues in satellite accounts as these areas are still work-in-progress and have not yet found a permanent structure (and perhaps never will) that would justify introducing them into the core accounts. This would also in a more flexible form facilitate analytical uses. And in general it would be preferable to make a distinction between what national accountants can measure without moving into highly specialized fields, and what should be elaborated in satellite accounts. Only in this way is it possible to retain a single multipurpose system that can realistically be applied world-wide, also in countries with limited statistical resources. And it would be important to move away from the idea that data do not exist or are deemed to be of less importance, if they are not included in the core national accounts.

The paper will primarily be based on the OECD KBC-project reports and papers; Peter Hill: Intangibles and services in economic accounts, EURONA 1/2014; and Itsuo Sakuma: The production boundary reconsidered, Rev. of Inc. and Wealth September 2013.