

Priorities and Directions for Future Productivity Research: An OECD Perspective

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ABSTRACT

This article puts forward three priority areas for future productivity research. It first identifies important data gaps related to non-produced, non-financial assets such as land and sub-soil assets as the exclusion of these assets can lead to biased multifactor productivity growth estimates. It then highlights the health and education sectors as a focus for future productivity research, given the challenges of capturing quality change in these sectors as well as the public provision of much of the output and absence of market prices. Finally, it points out that research is needed on the implications of globalization on productivity measurement, giving the example of intellectual property, which is produced in one country, but used in many.

PRODUCTIVITY CHANGE AND ITS MEASUREMENT has long been a matter of considerable policy interest. During the economic crisis that OECD countries have experienced, productivity growth has come to play an even greater role as a longer-term source of economic growth and resilience. The measurement of productivity change is intimately connected to the measurement of economic activity in the national accounts. While nearly all parts of the non-financial national accounts are of interest to productivity analysts, some stand out due to their immediate policy relevance, share in the economy and/or persistent measurement gaps. These should constitute priority areas for data development at both the national and international level. I put forward three such domains.

Land and Sub-soil Assets

First, the measurement of wealth should be a priority for future work on productivity. The System of National Accounts (SNA) 2008 provides a complete accounting framework with, at its heart, a consistent link between stocks of assets and flows of output, income and expenditure. While data on economic flows tend to be relatively well covered, and while data on *produced* and *non-produced financial* capital are also rather complete, there are important gaps for *non-produced, non-financial assets*. Probably the single most important such asset is land. Despite the fact that most countries have entertained land registers for a long time, volumes and values of land, in particular broken down by type of land and consistent with national accounts definitions, are scarce statistics. Yet, land plays an

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important role as an asset and land prices have been driving large swings in real estate prices with significant consequences on economic activity. Services from land are also an important input into agricultural and other production and consequently a determinant of productivity. Further, excluding land from the stock of assets risks over-estimating rates of return on capital when these rates are computed 'endogenously', that is by relating profits to the stock of assets. Such an over-estimation can in turn affect computations of multi-factor productivity.

Closely linked to land are sub-soil assets. What holds for land is true for these assets also: in some countries, they produce important natural capital services with a potential impact on measured productivity. Admittedly, measuring and valuing the stock of sub-soil assets is a difficult task but so are other statistical areas. The new international standard for environment-economy accounting, the System of Environmental Economic Accounting (SEEA), provides important guidance for the measurement of sub-soil assets.

Services

A second priority for future productivity research should be work on services. One might ask whether this is specific enough given that services account for two-thirds of economic activity in most OECD countries. Indeed, some priority areas stand out given their size and policy relevance. These include health and education services, which are large parts of overall economic activity and important for individual well-being above and beyond the incomes generated through these services. Demand for health services is likely to increase further with the aging of the population. Ensuring steady productivity growth in the provision of health services is thus key to ensure their financing. Demand for educational services is also rising with skills becoming ever more important on the

labour market. But productivity in health and education services is not well measured. One reason is the difficulty of capturing quality change of these services. Another reason is the public provision of services and the absence of market prices in many countries, which complicates the measurement of health and education output. Other services industries whose output tends to be particularly hard to measure include communications and financial services.

Impact of Globalization

Third, going forward, the implications of globalization for productivity measurement need to be taken up in data development and productivity research. One example is intellectual property. To date, intellectual assets are often produced in one country but used in many other places in return for payments. In practice, it is often not clear whether these transactions constitute payment for a service, whether they constitute property income that moves between countries or whether assets are sold. A differential treatment will affect values and volumes of imports, exports and GDP as well as measures of R&D stocks and associated capital services. Consequently, measures of productivity will be affected as well, but neither the size nor sometimes even the direction of the measurement impact are clear.

Dealing with the three issues outlined above is a tall agenda but necessary for our better understanding of productivity growth and its sources. Work has started in the various areas: there exists a good conceptual basis to build on and empirical evidence is sprouting for some industries, countries and time periods. In some areas, such as in health measurement, the emergence of new administrative systems helps statistical developments as an unintended but most welcome spin-off. But more can and should be done. International initiatives and cooperation, as shown by conferences such as the 2013 IARIW-UNSW

conference on productivity where these remarks were presented,² are crucial for the exchange of information and experiences and avoiding duplication of efforts where time and

money are scarce. The OECD continues to work in all these fields and stands ready for further active engagement.

2 The papers presented at this conference are available at <http://iariw.org/c2013australia.php>. A supplementary issue of the *Review of Income and Wealth* based on selected papers from this conference will be published in 2015.