Priorities and Directions for Future Productivity Research: The Need for Historical Perspective

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Abstract

This article identifies three priorities for future productivity research: intangible assets, a better understanding of the impact of innovation on productivity, and a bridging of the gap between firm-level measures of productivity and industry-level and aggregate measures. It also makes the case for greater emphasis on historical measurement of productivity performance in the tradition of Angus Maddison.

Economists have a wide range of perspectives on the productivity issue, depending on the environment in which one works. I have been fortunate to have worked in more than one work environment, which has given me different perspectives on productivity. The first part of my career was spent in academia at the University of Groningen in the Netherlands. Since 2008, I have worked for The Conference Board, a business research organization.

When I was in academia I worked primarily on international productivity comparisons. From that perspective I would argue that priorities for future productivity research include more contributions to World KLEMS, greater integration of growth accounts in the national accounts, additional work on the prices of new goods and services, and research on services output. Advances in these areas are overdue.

In my current position, I work with business, to help them understand and improve productivity performance. In that capacity, I would argue that priorities for future productivity research include more work on intangible assets, a better understanding of the impact of innovation on productivity, and a bridging of the gap between firm-level measures of productivity and industry-level and aggregate measures. There is much to do here.

As other panelists have addressed several of these priorities, I would like to emphasize a third priority or direction for future productivity research which has not been focused on. In the tradition of that great empirical economist, and my mentor, Angus Maddison, I argue for continued emphasis on historical measurement of productivity performance. Surprisingly, there has been no paper in this conference specifically focused on historical

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analysis, and there has only been limited discussion about the long term. If he were still alive, Angus would probably have presented a paper on productivity in the Roman Empire, or how the development of the Maya population has changed growth from extensive to intensive. And we would all be wondering how this exotic work contributes to our understanding of today's growth challenges.

Now, I am not arguing that no one has taken up the baton on the study of the dynamics of long-term economic growth. Nick Crafts, Barry Eichengreen, Kevin O'Rourke, Alan Taylor, and Stephen Broadberry have all made important contributions in this field. And let us not forget Bob Gordon, whether we agree with him or not. And I am sure I am omitting other excellent scholars in economic history.

But where are the productivity experts, present at this conference, who are developing state-of-the-art methodologies in this field? Would not we be able to learn much from applying our methodologies to historical data? To be sure, these data are weaker and more spotty than contemporary data, but at least we do not have to ask for new surveys! Long-term estimates of GDP, labour and capital are widely available. There is some sectoral detail (agriculture, industry, trade), allowing the construction of simple growth accounts data set, as have been produced by such pioneering economists as Simon Kuznets, Edward Denison, Moses Abramovitz, John Kendrick, and of course Angus Maddison.

It is also possible to develop good proxies of explanatory factors of productivity growth, including innovation, global integration, and institutional stability. The many gaps in our understanding of productivity require creativity, but collectively we can advance our knowledge. The applications are plentiful.

Nick Oulton at this conference presented a paper on the impact of financial crises on productivity (Oulton, 2013). I think this question should and could be taken back before 1950. It would help us to better understand whether this time is really different, now that we have a better understanding of the impact of the depression of the 1930s, and the other 200-odd banking crises that Reinhardt and Rogoff (2011) examined.

I would also like to highlight a new paper from Gilbert Cette and colleagues at the Banque de France (Cette, Bergeaud and Lecat, 2014) on productivity growth, trend breaks, and levels for 13 advanced countries over the 1890-2012 period. They identify two productivity waves, one following the second industrial revolution and another following the ICT revolution.

It is also crucial to better understand the impact of globalization, or more precisely the pace of globalization, on productivity. Some fear that the pace of globalization, as measured for example by trade flows, capital flows, including foreign direct investment and portfolio capital, and international migration, has slowed considerably, with a negative effect on resource reallocation and productivity.

And finally, to develop more accurate projections, we need a better understanding of historical productivity dynamics. At The Conference Board, we produce annual projections of key economic variables including output for 55 economies based on a growth accounting model.[2] In this model, we develop projections for capital and total factor productivity on the basis of historical relationships. This exercise is grounded in historical analysis of productivity trends. Without the discipline provided by this historical work it would be difficult to know whether some of the blue sky projections that are out there are blue, grey or black.

2 Details on the model used for the projections are available at http://www.conference-board.org/pdf_free/GEO2014_Methodology.pdf.

To conclude my recommendation for directions for future productivity research is simple: LOOK MORE AT THE PAST.[3]

References

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Reinhart, Carmen and Kenneth Rogoff (2011) *This Time Is Different: Eight Centuries of Financial Folly* (Princeton, NJ: Princeton University Press).

3 Recognition of the importance of historical perspective appears to be re-emerging in the economics profession. For example, Thomas Piketty (2014:675), author of the best-seller *Capital in the Twenty-First Century*, has written: "The new methods [in economics] often lead to a neglect of history and of the fact that historical experience remains our principal source of knowledge."