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The curious case of missing global productivity growth

4-5 minutes

There are issues in measurement but total factor productivity seems to be shrinking

By Buttonwood



WORK smarter, not harder. It is one of the more irritating things that a boss can tell you. But at the macroeconomic level, it is important. Growth can come from having more labour (recruiting more workers, or making existing employees work for longer hours), more capital, or from using that labour and capital more effectively—something known as total factor productivity (TFP). This can come from the kind of brilliant innovations devised by Thomas Edison (pictured) or the less-heralded but equally

important improvements such as the adoption of the moving conveyor belt to speed up assembly work. Since there are limits to the amount of additional capital and labour, productivity is key to long-run growth.

Measuring productivity is far from easy; it tends to be the residual left over when all other factors have been accounted for. The OECD says it "can often be a measure of our ignorance". Still, the attached table is very striking. It comes from the US Conference Board (here's the [link](#), with thanks to Gervais Williams of Miton and Andrew Lees of Macrostrategy Partnership for drawing it to my attention). And it shows that, at the global level, total factor productivity fell last year, was flat the two years before, and has barely budged since 2007. Before the crisis, it was growing at 0.9% a year.

Stuck

Total Factor Productivity growth by region, %

Country/region	1999-2006	2007-13	2013	2014	2015
United States	0.5	-0.2	-0.5	0.1	0.1
Europe	0.4	-0.6	-0.2	-0.1	0.3
<i>of which: Euro Area</i>	0.1	-0.7	-0.2	-0.2	0.2
Japan	0.1	0.1	0.7	-0.8	-0.1
Other mature economies	1	0.4	0.4	0.1	-0.1
All Mature Economies	0.5	-0.3	-0.1	-0.1	0.1
China	2.3	1.3	0.2	0.1	-1.3
India	0.1	0.6	0.9	1.6	1.9
Other developing Asia	2.1	0.6	1.1	1.1	1.3
Latin America	-0.1	-0.1	-0.2	-1.6	-2.5
<i>of which: Brazil</i>	0.1	0.9	0.2	-2.2	-5.0
<i>of which: Mexico</i>	-0.5	-1.4	-1.5	-0.1	-0.5
Middle East & North Africa	0.2	-1.9	-2.5	-0.8	-0.9
Sub-Saharan Africa	2.3	1.1	-0.2	0.2	1.2
Russia, Central Asia and Southeast Europe	4.5	1.2	1.0	-0.1	-2.6
Emerging markets and developing economies	1.6	0.4	0.1	0.0	-0.7
World	0.9	0.1	0.0	0.0	-0.3
Addenda:					
<i>EU-15</i>	0.1	-0.7	-0.2	-0.2	0.2
<i>EU-13</i>	2.3	-0.1	0.2	0.3	0.9
<i>EU-28</i>	0.4	-0.6	-0.2	-0.1	0.3
OECD	0.3	-0.4	-0.2	-0.2	0.0

Source: The Conference Board

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The OECD has [written extensively](#) about the productivity issue and observes that there seems to be a pro-cyclical element

Firms may respond to short-run fluctuations in demand by varying the rates at which their existing capital and labour are utilized, for example by hoarding labour at the time of a crisis waiting for the recovery or underutilising the existing capital stock without shedding it

So it is perhaps not too surprising that productivity was sluggish in the biggest economic crisis since the 1930s. But a recovery has been underway for a while. And what about the benefits of the internet and other technological breakthroughs, which are supposed to be transforming the economy? Robert Gordon of Northwestern University would have the answer (see our [review of his book](#)); today's innovations are far less transformative than the electrical breakthroughs made by Edison, or the development of the car and airplane. Others might counter that the full benefits of new technology are not reflected in the data (you can check your e-mail at midnight, if that's a good thing).

But this is far from an academic issue. We know that, in much of the Western world (and China) workforces will be static or shrinking going forward. Global capital investment is at the lower end of its 50-year range (see this [chart from the World Bank](#)). So a lot will depend on productivity, as the OECD report declares.

Productivity is expected to be the main driver of economic growth and well-being over the next 50 years, via investment in innovation and knowledge-based capital. Thus, it is of little surprise that the recent productivity slowdown has sparked widespread interest, with the debate centring on the extent to which the productivity slowdown is temporary, or a sign of more

permanent things to come.

It could be that we are impatient and the big gains from the internet are yet to come (Edison's work on the light bulb and electric power was in the 1870s and 1880s but it wasn't until 1945 that a full range of electrical gadgets appeared in American homes). Or it could be that this cycle is particularly unusual. We know that [a few companies](#) are still producing substantial productivity gains but it may be that monetary policy, by keeping rates low, has stymied the forces of creative destruction; "zombie" companies have been kept alive, dragging down the productivity numbers. Whatever the reason, economic growth won't rebound until productivity perks up.

[Part II of the productivity challenge: Attack of the zombie firms](#)

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