

# Reinvigorating Productivity Growth

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*As prepared for delivery*

Good morning. Thank you for the kind introduction, Arthur, and thank you to the American Enterprise Institute for giving me the opportunity to talk about the importance of productivity.

To my mind, the new AEI building is a fitting venue for our discussion. Why? Because of the intellectual leadership of Arthur Brooks and his team on so many economic issues, and because of your *new address*—1789 Massachusetts Avenue.

In 1789, the U.S. Constitution came into force, reminding everyone to this day that government exists to serve its citizens. I firmly believe that this includes fostering growth that reliably raises the income of *all* citizens.

**Productivity growth is an essential part of that story**, because it is the most important source of higher income and rising living standards over the long term. It allows us to substantially grow the economic pie, creating larger pieces for everyone.

For example, the average American worker today works only about *17 weeks* to live at the *annual* real income level of the average worker in 1915. [\[1\]](#)

We have seen similar progress in many countries. In fact, billions of people around the world enjoy longer, healthier, and more prosperous lives—largely because of our ability to harness the power of productivity.

But this engine of prosperity has slowed down in recent years, with negative consequences for growth and incomes that look very hard to unwind.

With this in mind, I would like to touch on three issues:

- How serious is the productivity slowdown?
- What is holding back innovation and technology diffusion?
- Which policies should economies pursue to reinvigorate productivity growth?

## 1. Productivity slowdown

Let me start with the good news. Technological innovation seems to be moving faster than ever, from driverless cars to robot lawyers to 3D-printed human organs.

The not-so-good news is that we can see technological breakthroughs everywhere *except* in the productivity statistics.

Over the past decade, there have been sharp slowdowns in measured output per worker and total factor productivity—which can be seen as a measure of innovation. In advanced economies, for example, productivity growth has dropped to 0.3 percent, down from a pre-crisis average of about 1 percent. This trend has also affected many emerging and developing countries, including China.

Even before the global financial crisis, productivity growth was slowing in many advanced economies, such as the United States. And there was a further, abrupt slowdown after the crisis, especially in continental Europe.

We estimate that, if total factor productivity growth had followed its pre-crisis trend, overall GDP in advanced

economies would be about **5 percent higher** today. [2] That would be the equivalent of adding another Japan—and more—to the global economy.

Another decade of weak productivity growth would seriously **undermine the rise in global living standards**. Slower growth could also jeopardize the financial and social **stability** of some countries by making it more difficult to reduce excessive inequality and sustain private debt and public obligations.

So, leaning back and waiting for artificial intelligence or other technologies to trigger a productivity revival is simply not an option.

## 2. Productivity headwinds

Instead, policymakers must take action to address the forces that are holding back innovation and technology diffusion. What is holding back productivity? Productivity growth is being held back by at least **three major headwinds**:

- One is **population aging** in most advanced economies. Research suggests that worker skills tend to increase until a certain age and then to decline—with negative effects on innovation and productivity, although this remains an issue still subject to debate. [3]
- A second headwind is the **slowdown in global trade**. We know from well-established research that trade encourages firms to invest in new technologies and more efficient business practices. It also encourages the sharing of new technologies across borders. The lack of global demand and the gradual increase in trade restrictions have led to a slowdown in trade growth in recent years. This, in turn, has hurt the productivity and living standards of *all* citizens.
- A third productivity headwind is the **unresolved legacy** of the global financial crisis in some major economies.

Our new [Staff Discussion Note](#)—which we are releasing today—underscores that the legacy issue is a crucial factor. [4] Unlike normal economic slowdowns, deep recessions leave permanent scars on total factor productivity.

We saw this in the past, and we have seen it again in many countries after the 2008 financial crisis, especially in Southern Europe.

A major factor was the impact of the credit crunch on firms that had entered the crisis with high levels of debt. These companies were often forced into fire sales of assets and deep cuts in physical and intangible investment—with lasting effects on productivity.

## 3. Reinvigorating productivity growth

These and other headwinds mean that we must take strong policy actions to ensure that the next generation will be better off.

One thing is clear: we need *more* innovation, not less. Market forces alone will not be able to deliver that boost, because innovation and invention are to some degree public goods. Smartphone technologies, for example, have hugely benefited from state funding—from the internet to wireless networks to GPS to touch screens. At the same time, various policy barriers may actually impede innovation.

We at the IMF therefore believe that *all* governments should do more to unleash entrepreneurial energy. They can achieve this by removing unnecessary barriers to competition, cutting red tape, investing more in education, and providing tax incentives for research and development (R&D).

IMF analysis shows that, if advanced economies were able to ramp up private R&D by 40 percent on average, they could increase their GDP by 5 percent in the long term. [5]

To encourage investment and risk-taking, governments need to give clear signals about future economic policy.

High-quality public investments in education and training, R&D, and infrastructure, including in the United States, could help provide those signals, catalyzing private investment while boosting productivity and economic potential. Similarly, signals about tax policy can enhance predictability for investors.

Moreover, I firmly believe that reinforcing trade as an engine of broadly shared growth will reduce uncertainty and boost productivity.

In Europe, governments can move the productivity needle by facilitating corporate debt restructuring and strengthening bank balance sheets. This would encourage fresh corporate investment and improve the allocation of capital—away from low-productivity firms and into the hands of young and vibrant companies.

And for countries that have received large numbers of refugees, effectively integrating immigrant workers would contribute to a younger and more dynamic workforce, with growth and productivity dividends. [6]

## Conclusion

One final point: we know that technology gains, trade, and structural reforms have come with job losses in shrinking sectors. Structural change has always accompanied economic growth, of course. But now we are seeing entrenched economic and social problems in some disadvantaged regions when economic inequality has already been rising in many countries. This is obvious among lower skilled workers who suffer disproportionately from job losses, family breakdowns and poor physical and mental health—those who suffer from what you, Arthur, have coined the “dignity deficit”.

A critical first step is to support such workers through targeted education programs, skills training, and employment incentives. Another priority is to retool income policies and tax systems—including in the United States, where we have advocated extending the earned income tax credit.

Above all, we need more and better education. We estimate that in advanced and emerging economies, the slowdown of educational attainment has lowered labor productivity growth by 0.3 percentage points annually since the 1990s. Indeed, education and training are the key policy actions to raise both productivity growth and reduce inequality. More inclusive and sustainable growth is what “we, the people,” presumably expect from our policymakers.

Let me remind you that the year 1789 not only saw the adoption of the Constitution but also the beginning of the French Revolution. Today, we are witnessing a *technological* revolution that holds the promise of higher productivity and better living standards.

Thank you!

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[1] Finance & Development, September 2016, Vol. 53, No. 3

[2] Adler and others (2017), IMF Staff Discussion Note 17/04, “Gone with the Headwinds: Global Productivity.”

[3] Feyrer (2009); Jones (2010); Aksoy and others (2015); Börsch-Supan and Weiss (2016). Acemoglu and Restrepo (2017), however, highlight an offsetting mechanism, namely the greater incentives for fast-aging societies to introduce labor-saving innovations, which raises productivity, all else equal.

[4] Adler and others (2017), IMF Staff Discussion Note 17/04, “Gone with the Headwinds: Global Productivity.”

[5] IMF: April 2016 Fiscal Monitor. These economic benefits (in net present value terms) should of course be compared with the R&D investments costs (also in net present value), both from private and public funds. Calculations suggest that the net social benefit is likely to be positive.

[6] IMF Staff Discussion Note (Jan 2016), “The Refugee Surge in Europe: Economic Challenges.”

