Speech by Philippe Aghion

2025 Nobel laureate in Economics, laureate of the PEF Prize 2026

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It is a great honour for me to receive this prize from the Paris Economic Forum. I am always intimidated when I am honoured, and this is a very great honour for me. I see it as a reward for years and years of effort to advance a new approach to growth and to bring it to the general public.

Just a few words. A year ago, I received another piece of good news: I was a co-laureate of the 2025 Nobel Prize, together with Peter Howitt and Joel Mokyr. This is because, with Peter, we developed a new theory of growth that incorporates the notion of creative destruction put forward by Joseph Schumpeter.

When I was a student of economics, there was no Schumpeterian model of growth. It did not exist. The dominant model was the neoclassical model, and its most elegant version is Robert Solow's. In each period, you produce a flow of wealth with a stock of capital, then you save part of the wealth produced to increase that stock of capital, which allows you to produce more tomorrow. But Robert Solow himself was aware that capital accumulation cannot allow you to grow indefinitely, because it is subject to what we call diminishing returns: I increase output much less by going from nine machines to ten than by going from zero machines to one. So if you want long-term growth, you need something else, which Robert Solow called technical progress. But it was a black box: he did not say where technical progress came from, nor what it consisted of. In short, we said that GDP growth is population growth on one side, the increase in the capital stock on the other, and then productivity growth, the black box known as the Solow residual. And I was obsessed with one question: what is inside the black box of the Solow residual?

So, with Peter, we built a new theory of growth that incorporates the notion of creative destruction. It rests on three basic ideas.

The first is that long-term growth relies on cumulative innovation. Each innovator builds on the innovations that came before: we always stand on the shoulders of giants.

The second is that innovation does not fall from the sky. It results from investment — in research and development, in laboratories, in human capital — made by entrepreneurs who invest in innovation because they hope to earn rents from it. It is the prospect of innovation rents that drives innovative investment. If, for example, I am in an economy with hyperinflation, there will be no innovation, because hyperinflation will absorb all the potential profits from innovation.

The third idea is creative destruction: new innovations replace old technologies and make them obsolete.

At the heart of this approach, there is a contradiction. On the one hand, you need innovation rents to motivate innovation. On the other, yesterday's innovators are tempted to use their rents to block new innovations, because they do not want to be subject to creative destruction themselves. Managing a market economy means managing this contradiction. Schumpeter himself was very pessimistic about the future of capitalism, because he thought that the first innovators would turn into what we call entrenched incumbents — vested interests — who would block any new innovation.

This is where competition policy is so important. A fast-growing economy is one where new talents are constantly arriving, and where they are allowed to create businesses and make them grow. It is very important to be able to become rich. But we must make sure that, once they have become rich, once their company has grown, they will not use their rents to prevent new innovations. That is why competition policy matters.

But beyond competition policy, you need what I call the magic triangle. On one side, firms that innovate: the foundation of growth is the ability to be an entrepreneur, to innovate, to create businesses and to make them grow. On another side, the state, which regulates and, in particular, implements competition policy. And third, civil society: the media, consumer associations, voters. Because without civil society, nothing prevents yesterday's innovators from colluding with the government to block the entry of new innovators and stifle competition. That is why the triangle of business, state and civil society is absolutely key to an economy of innovation-led growth.

Another very important idea is that there are two ways to increase productivity: technological catch-up and frontier innovation. Catch-up is simple: I am far behind the technological frontier, and I grow by adopting that frontier, by imitating technology. Take Deng Xiaoping's China in 1978. China had made horrible mistakes under Mao, but it had a relatively good level of education. It opened up to international trade and grew through catch-up, by absorbing technologies invented in Western countries. This was the great engine of Chinese growth for several decades, starting in 1978. So one way to generate growth is imitation and catch-up.

But there is another way: frontier innovation. I am at the frontier, and I innovate on myself: I produce breakthrough innovation. Yet some countries begin to grow through imitation but fail to move from institutions that favour imitation-led growth to institutions that favour frontier innovation. For example, competition is very important for frontier innovation: when I am at the frontier, I innovate to escape competitors who are also at the frontier. When I am far from the technological frontier, a lack of competition does not matter much. But for a frontier economy, competition becomes essential.

This distinction between imitation and frontier innovation is very important, because it also explains what happened in Europe. Between 1945 and 1985, we had the Trente Glorieuses, the thirty glorious years, especially in France. That was largely catch-up growth. During the Second World War, our capital stock had been largely destroyed; from 1945 onwards, we rebuilt it, notably thanks to the Marshall Plan. We had a good level of education in Europe, and we caught up with the second industrial revolution, the one the United States had gone through in the 1920s and 1930s: the revolution of electricity, the combustion engine and Fordism. Europe grew largely by catching up with that revolution.

But from the late 1980s onwards, the United States experienced the internet and information technology revolution. Americans moved into high tech and breakthrough innovation, in biotech and on the internet. And we in Europe remained stuck in incremental mid-tech: we make small incremental innovations, we remain stuck in combustion-engine cars, washing machines, and so on. The big question is why Europe is failing to move from catch-up growth to growth driven by breakthrough innovation.

That is the whole point of the Draghi report, the Letta report, the Bocconi report: we do not have an ecosystem that sufficiently fosters breakthrough innovation. To have breakthrough innovation, you must first be able to fail. You must allow failure. Yet our culture, even at school, does not sufficiently accept that failure is not a disaster, that failing simply means you tried. Next, basic research and risk-taking require long-term funding; we do not have enough of it in Europe. To encourage new firms to take risks, you need venture capital; we do not have enough of it in Europe. To encourage larger firms to take risks, you need institutional investors, pension funds, retirement funds, mutual funds; we do not have enough of them in Europe. And then there are the DARPAs. In the name of competition policy, Europe has ruled out industrial policy. The United States has pursued both competition policy and industrial policy, with the famous DARPA, the Defense Advanced Research Projects Agency, created in the 1950s in the fields of space and defence, followed by other agencies of the same kind. It is a pro-competitive way of doing industrial policy.

So we must put in place policies in Europe that allow us to become champions of breakthrough innovation, especially in artificial intelligence. In Europe we have outstanding minds: outstanding mathematicians, engineers and computer scientists. Yann LeCun is a pillar of the AI revolution; we are lucky that he is leaving Meta and coming back to Europe, and others want to come to Europe too. We also have values: democracy, freedom. We can create an AI that carries our values. We must be able to make this revolution happen.

That requires, in particular, less regulation. We have too much regulation in Europe. Regulation is necessary, but too much regulation becomes a barrier to entry for new artificial intelligence companies. So we need good regulation, but not too much. We need open source, which is very important. We need to enforce data sharing, as the Digital Markets Act does by requiring companies to share their data. All of this is what I call competition policy: preventing AI from being dominated by a handful of big American companies that would lay down the law to us. And second, we need industrial policy to build computing centres in Europe, because AI is data and computing power. We do not have enough computing power in Europe. But you can see that we have the opportunity to use AI to relaunch our growth, provided we find the right combination of competition policy and industrial policy.

I would like to finish by saying this. Innovation and inclusion are often set against each other. I want to tell you that there are policies that make you both more innovative and more inclusive.

The first is education. If you have a good education system, where all children learn how to learn, many more children can become entrepreneurs and innovators. In France, in Europe and in many countries around the world, we have a serious problem with what my colleague Xavier Jaravel very aptly calls “lost Einsteins” and “lost Marie Curies”: very bright children born into families that cannot pass on to them the knowledge and the aspirations needed to become entrepreneurs and innovators. If we have a good school system that teaches the basics — reading, arithmetic, writing without spelling mistakes — with, incidentally, a whole part of schooling free of AI, we train adaptable individuals who are able to be innovative entrepreneurs and to make the most of the AI revolution. Education is therefore a policy

that makes you both more innovative and more inclusive: with a high-quality education system accessible to all, there will be many more potential innovators and, at the same time, more inclusive growth.

The second policy is flexicurity. In Denmark, when you lose your job, you receive 90% of your salary for two years, and the state trains you and helps you find a new job. This makes creative destruction far more efficient while protecting individuals.

The third policy is competition. It is competition that constantly allows new talents to enter the market and challenge existing talents, yesterday's innovators. It creates social mobility because it fosters creative destruction: new talents rise, naturally at the expense of others who fall. It is a driver of both social mobility and innovation.

So with competition, education and flexicurity, you become both more innovative and more inclusive. These are the three policies that will allow us to make the most of the artificial intelligence revolution.

To conclude, I simply want to say thank you very much for this prize. I am convinced that creative destruction and artificial intelligence are formidable levers of growth, in particular for Europe to recover and become once again the great power it used to be. We simply need to put the right institutions and policies in place. To me, a technological revolution is like a wild horse: it can drive you into a wall, or it can take you where you want to go, if you put the right institutions and policies in place. Education, competition, flexicurity: these are the pillars that will allow us to make the most of creative destruction, and in particular of the artificial intelligence revolution, which will allow Europe to recover. France has a central role to play in Europe's recovery. The coming year is crucial.

But I am a fighting optimist, and I want to finish with these words. There are several attitudes in life. You can be a Panglossian optimist: I do nothing, and all will be for the best in the best of all possible worlds. You can be completely pessimistic: whatever happens, things will go badly. To me, pessimists are spectators. And then there is Churchillian or Gaullist optimism: things will go well because I am going to fight, because I know there are levers. Churchill had this wonderful line: "History will be kind to me, for I intend to write it." I think it is up to us to make history. When people ask me what I would do in the second round if this or that candidate were in it, I answer: I am not Churchill, but I make his words my own: history will be kind to us, because we will make it.

Thank you.