# Philip N Jefferson: AI and the economy

Speech by Mr Philip N Jefferson, Vice Chair of the Board of Governors of the Federal Reserve System, at the Euro20+, hosted by the Deutsche Bundesbank, Frankfurt am Main, Germany, 7 November 2025.

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Thank you, President Nagel and the Bundesbank, for the opportunity to meet with you today.[1] I am excited to be here. I cherish opportunities to talk with groups of young people such as this. I spent most of my career as a professor and university administrator. I am glad to return to those roots a bit today. I will make sure I leave plenty of time for questions. But I would like to start by speaking with you about a topic that's been on my mind, and I bet it has been on many of yours: artificial intelligence (AI).

Often, when I gather with students, consumers, or businesspeople, the conversation quickly turns to AI. And it is easy to understand why-you do not even need to ask a chatbot! AI has the potential to transform how we work and how we live, and it could have a profound effect on the economy. Today, I will talk about AI's rapid growth and how I approach thinking about AI by examining it through the lens of the dual mandate given to the Federal Reserve by the U.S. Congress. That mandate instructs America's central bank to pursue maximum employment and price stability. I will describe the effects that AI may have on both sides of that mandate. Finally, I will briefly update you on my economic outlook before turning to your questions.

## AI's Rapid Growth

In a few short years, AI morphed from the realm of science fiction to a tool that high schoolers use to help them do their science homework! Seriously, it is amazing to see school children use AI to generate quizzes to prepare for exams, home chefs use it to create recipes for a wholesome dinner, and jobseekers use it to consider career tradeoffs, among many other purposes. Consumer use of AI has grown rapidly, and it is integrated into a multitude of existing products, including search engines, phones, and vehicles.

As of last month, ChatGPT, which is just one of a growing number of generative AI models, is used by more than 800 million people every week, an increase from 500 million a week at the end of March.[2] Enterprise use of AI has been growing too. A recently released study showed that the proportion of Americans using AI at their jobs has also been growing at a fast clip. Researchers found that workers' adoption of generative AI rose from 30.1 percent as of December 2024 to 45.9 percent as of June and July of this year.[3] And among survey respondents who had adopted AI tools, about a third said they use them daily. That same study found that AI is most used at jobs by younger, more highly educated, and higher-earning workers and that productivity for workers increased substantially when using AI tools.

There is strong evidence that AI can increase labor productivity in various industries and occupations. For example, a paper from Stanford economist, Erik Brynjolfsson, and

coauthors showed the effects of AI implementation among customer support agents.[4] They found that AI tools increased productivity-as measured by issues resolved per hour-14 percent, on average, and the improvement in productivity for novice and low-skilled employees was much larger.

AI is also advancing productivity in highly technical scientific research. Take protein folding, for example. Proteins are the building blocks of the human body and life itself. They assume an almost infinite variety of shapes. Predicting those shapes-which determine their function-is vital for understanding how cells and diseases work and for finding drugs to treat them. Just five years ago, scientists had a good understanding of the structures of just 17 percent of the roughly 20,000 proteins in the human body.[5] For each protein, that knowledge was earned through months or years of hard work and a potential cost of tens of thousands of dollars or more. Thanks to the development of the AlphaFold model, an AI system that predicts a protein's structure, scientists now know the structures of all the proteins in the human body-and some 200 million more.[6]

More broadly, like many others, I see the promise for AI technology to be transformative, perhaps in ways as dramatic as past technological achievements, such as the printing press, steam engine, and the Internet, which are known as general purpose technologies for their wide-ranging effects.

## Labor Market and Prices

When I think about this technology, I consider how it will affect both sides of the Fed's dual mandate of promoting maximum employment and stable prices. As such, it is something that economists and policymakers must monitor.

AI can allow a worker to complete tasks in moments that previously took many minutes, if not hours. That has caused many to question whether AI will lead to notable job loss. This potential disruption of labor is a real risk. By automating certain tasks, it could lead to a reduction in some types of jobs. But increased productivity leads to economic growth, which may create new employment opportunities. AI is also expected to create new job categories and transform existing ones. There has been robust competition among high-tech firms for workers who possess the skills to develop this technology.[7]

Many have legitimate concerns that AI will cause job loss. At least for certain firms and workers in certain occupations, this is likely to be true. There are many examples where transformative technologies, such as the personal computer, did cause some workers to lose their jobs, but we also saw new industries and occupations emerge because of the innovation. Indeed, some large employers have recently indicated they are lowering overall hiring plans in light of advances in AI and other forms of automation.[8] Some research has also suggested that AI is having a more detrimental effect on the job prospects of younger, less experienced workers, including recent graduates, relative to those further along in their careers.[9] The net effect on employment is highly uncertain and may show variation across industries and occupations over time. For the overall economy, one way to think about AI-related job losses-at least until it creates new jobs-is that it can create economic slack. In a world where firms only deployed AI to replace existing workers, even at a lower level of overall employment, the productive capacity of the economy has increased (or stayed the same). Of course, if people seamlessly get

redeployed to more productive tasks, the economy produces more without any additional slack-more on this soon. Whether AI substitutes for labor or complements it is an important question that requires continued study.

On the other side of our dual mandate, price stability, AI could help the economy achieve higher growth through increased productivity while reducing inflationary pressures. Specifically, increased productivity could lower production costs and put downward pressure on prices. Not only could AI allow a specific worker to be more efficient in their day-to-day tasks, but it also has the potential to allow for better thinking around complex problems-for example, in logistics and transportation. More efficient allocation of resources as well as potential improvements in supply chains could reduce associated costs, leading to lower prices for various goods and services. Conversely, AI could put upward pressure on certain price categories as many firms push to scale up the technology. I mentioned the rising wages for certain workers with skills that complement AI. AI technology also requires data centers, which compete with other production processes for land, energy, and other inputs. So, I think that AI's effect on inflation is not solely downward pressure.

## Implications on monetary policy

So, what do these still-developing labor and price effects mean for monetary policy? The short answer is that it is likely still too soon to tell. As always, policymakers confront the challenge of sorting out changes in the economy that are due to cyclical factors from those resulting from structural change, which AI may well represent. Some of the recent changes in hiring patterns, productivity growth, and inflation are likely to represent AI-driven change, but it is difficult to know the degree.

Productivity gains from AI may affect the relationship between employment and inflation and hence the conduct of monetary policy. For example, a productivity-induced boost to the growth rate of potential output could imply that monetary policy will not need to react strongly to what would have previously been perceived as tightness in the labor market.

The uncertain implications of AI for employment and inflation could take some time to filter broadly through economy. Also, AI's effects will likely vary across different industries and regions of both the U.S. and the world. And monetary policy decisions need to be made with a broad view of what is happening in the economy, not just in one sector or technology. There is still much to learn. I counsel exercising humility about the challenges in predicting AI's effects on employment and inflation. Policymakers, businesses, and individuals should remain flexible and prepared to adapt as the effects of AI continue to unfold.

## Economic Outlook

Now having discussed the policy implications of AI, I would like to briefly update you about my current outlook for the U.S. economy. While federal statistical agencies are largely not producing data during the government shutdown, data available from other sources suggest that the overall economic picture in the U.S. has not changed much over the past few months. The economy has been growing at a moderate pace while labor market conditions appear to be consistent with a gradually cooling. Inflation is running at a rate similar to that of a year ago. The lack of progress on headline inflation

appears to be due to tariff effects, with signs that underlying inflation may be continuing to make progress to 2 percent. Market-based long-term inflation expectations continue to be well-anchored. I remain firmly committed to returning inflation to the Fed's 2 percent target.

I supported last week's decision to reduce our policy rate by a quarter percentage point. That step was appropriate because I see the balance of risks as having shifted in recent months as downside risks to employment have increased. The current policy stance is still somewhat restrictive, but we have moved it closer to its neutral level that neither restricts nor stimulates the economy. Given this, it makes sense to proceed slowly as we approach the neutral rate.

With respect to the path of the policy rate going forward, I will continue to determine policy based on the incoming data, the evolving outlook, and the balance of risks. I always take a meeting-by-meeting approach. This approach is especially prudent because it is unclear how much official data we will have before our December meeting.

Before I turn to your questions, let me conclude by saying that this is an exciting time. It feels like we are at the dawn of a new age-an age your generation will shape and see come to its full maturity. By the end of your careers, many of you will take on tasks and accomplish feats you cannot even imagine at this moment, and AI technology may well be part of that progress.

Thank you again for having me. It is an honor to be here. I am looking forward to our discussion.

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[1] The views expressed here are my own and are not necessarily those of my colleagues on the Federal Reserve Board or the Federal Open Market Committee.

[2] Rebecca Bellan (2025), "Sam Altman Says ChatGPT Has Hit 800m Weekly Active Users," *TechCrunch*, October 6, https://techcrunch.com/2025/10/06/sam-altman-says-chatgpt-has-hit-800m-weekly-active-users/.

[3] Jonathan Hartley, Filip Jolevski, Vitor Melo, and Brendan Moore (2024), "The Labor Market Effects of Generative Artificial Intelligence," unpublished paper, available at SSRN: http://dx.doi.org/10.2139/ssrn.5136877.

[4] Erik Brynjolfsson, Danielle Li, and Lindsey R. Raymond (2023), "Generative AI at Work," NBER Working Paper Series 31161 (Cambridge, Mass.: National Bureau of Economic Research, April; revised November 2023).

[5] Eduard Porta-Pardo, Victoria Ruiz-Serra, Samuel Valentini, and Alfonso Valencia (2022), "The Structural Coverage of the Human Proteome Before and After AlphaFold," *PLoS Comput Biol.*, vol. 18 (1), January 24.

[6] EMBL-EBI (2023), "AlphaFold Protein Structure Database," webpage, https://alphafold.ebi.ac.uk/.

[7] Meghan Bobrowsky, Berber Jin, and Ben Cohen (2025), "Zuckerberg Leads AI Recruitment Blitz Armed With $100 Million Pay Packages," *Wall Street Journal*, June 22.

[8] For example, see Tom Huddleston Jr. (2025), "Walmart CEO: 'AI Is Literally Going to Change Every Job'-How The Best Employees Can Still Stand Out," CNBC, September 29; and Karen Weise (2025), "Amazon Plans to Replace More Than Half a Million Jobs With Robots," *New York Times*, October 21.

[9] J.P. Morgan (2025), "AI's Impact on Job Growth," webpage, https://www.jpmorgan.com/insights/global-research/artificial-intelligence/ai-impact-job-growth.