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What Will Artificial Intelligence Mean for the Labor Market and the Economy?

Remarks by

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Thank you for the invitation to speak to you today.[1] Before I get into my main topic, I wanted to share my current views on the economy and monetary policy.

Last week, we received the latest report on employment, and it provided further evidence that while the labor market slowed through last summer, it is now stabilizing. This stabilization is occurring with an unemployment rate that is broadly consistent with what many estimate is its long-run level, when the economy is in balance. That said, job creation has been near zero over the course of last year, as has labor force growth. With very low levels of job creation and also a low firing rate, there seems to be a tentative balance in labor supply and demand. But it is a delicate balance, and that means that the labor market could be especially vulnerable to negative shocks.

Turning to the other component of our mandate, inflation based on personal consumption expenditures remains elevated at 3 percent, about where it was a year ago. Disinflation, which started in mid-2022, slowed last year, as goods price inflation picked up, in large part due to tariffs. That pattern appeared to continue in the inflation data released last week. Looking ahead, it is reasonable to forecast that tariff effects on inflation will begin to abate later this year, but there are many reasons to be concerned that inflation will remain elevated. I see the risk of persistent inflation above our 2 percent target as significant, which means we need to remain vigilant.

The prudent course for monetary policy right now is to take the time necessary to assess conditions as they evolve. I would like to see evidence that goods price inflation is sustainably retreating before considering reducing the policy rate further, provided labor market conditions remain stable. Based on current conditions and the data in hand, it will

[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.

likely be appropriate to hold rates steady for some time as we assess incoming data, the evolving outlook, and the balance of risks.

I'll now turn to my main topic today.

Artificial intelligence (AI)—and by this, I mean in particular the recent explosive growth of generative AI—looks increasing likely to become what technologists call a general-purpose technology. General-purpose technologies such as the steam engine, electricity, and personal computers are characterized by widespread adoption, continual improvement, and a cascade of downstream innovations in new goods or services, production processes, and business structures.[2]

In addition to the likelihood that AI becomes a general-purpose technology, it may also become an "invention in the method of invention," something that increases the efficiency of research and development (R&D) and thus drives further innovation and the attendant benefits. Personal computers qualify here because their widespread adoption, continuous improvement, and many applications over the past 50 years or so exponentially expanded our ability to invent things. And in the same way that computers were used to fundamentally improve the process of discovery in, for example, medicine, engineering, and physical sciences, generative AI and earlier forms of AI such as machine learning applications are already being used in R&D and yielding discoveries in domains such as drug discovery and materials science.[3]

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[2] See Timothy F. Bresnahan and M. Trajtenberg (1995), "General Purpose Technologies 'Engines of Growth'?" *Journal of Econometrics,* vol. 65 (January), pp. 83–108.

[3] See Martin Neil Baily, David M. Byrne, Aidan T. Kane, and Paul E. Soto (2025), "Generative AI at the Crossroads: Light Bulb, Dynamo, or Microscope?" Finance and Economics Discussion Series 2025-053 (Washington: Board of Governors of the Federal Reserve System, July), https://doi.org/10.17016/FEDS.2025.053.

Periods of rapid technological change are often accompanied by anxiety about the economic and social consequences of automation. Although new technologies often create winners and losers in the short run, history shows that in the longer run innovation leads to broadly shared increases in productivity and living standards that tend to support economic growth and a healthy labor market. As with other general-purpose technologies, the long-run effects of AI are likely to be profoundly positive. But in the short term, AI may deeply disrupt labor markets and harm some workers. The ultimate impact on workers will depend not only on the extent of the disruption and the length of time it takes for the long-term benefits to appear, but importantly on how we, as a society, navigate this transition.

In the past, the type of work that was most amenable to automation, whether by machines or computer software, were routine tasks that followed explicit, codifiable rules—rules that were written by people. AI models, on the other hand, learn by example: An AI model doesn't need to be told exactly how to accomplish a certain task, only provided with the right training data to infer patterns. Consequently, AI can learn how to complete complex, nonroutine tasks that require knowledge that is difficult or impossible for humans to codify.[4] Unlike a robot that follows necessarily human instructions to, say, bolt on a car fender over and over, this ability to implement complex tasks could vastly expand the set of tasks that AI is potentially capable of performing. That is especially true if one considers the integration of AI with other technologies such as robots, or cars. Moreover, agentic AI can accomplish more general goals with limited

[4] See David H. Autor (2025), "Polanyi's Paradox and the Shape of Employment Growth," in *Re-Evaluating Labor Market Dynamics: A Symposium Sponsored by the Federal Reserve Bank of Kansas City* (Kansas City: Federal Reserve Bank of Kansas City, pp. 129–77).

human supervision, mimicking human decision-making, reasoning, and implementation. Many economically valuable tasks can (or may soon) be feasible using AI.[5]

Developments in AI Adoption

The capabilities of GenAI models have improved rapidly. In just a few years, we have seen AI models meet or surpass human performance on increasingly challenging benchmarks, including competition-level mathematics and Ph.D.-level science questions.[6] Real-world applications abound. AI is already changing the speed of pharmaceutical drug discoveries, the efficiency of customer service, and the pace of computer coding, especially by the biggest tech firms themselves.[7]

The speed of AI adoption may be much faster than previous general-purpose technologies, boosting productivity growth, but also allowing less time for workers, businesses, and the economy to adapt to these changes.

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[5] Researchers typically measure exposure to AI at the occupation level by analyzing descriptions of job tasks and comparing them with assumptions about the tasks that AI might feasibly complete; see Kunal Handa, Alex Tamkin, Miles McCain, Saffron Huang, Esin Durmus, Sarah Heck, Jared Mueller, Jerry Hong, Stuart Ritchie, Tim Belonax, Kevin K. Troy, Dario Amodei, Jared Kaplan, Jack Clark, and Deep Ganguli (2025), "Which Economic Tasks Are Performed with AI? Evidence from Millions of Claude Conversations," working paper; Tyna Eloundou, Sam Manning, Pamela Mishkin, and Daniel Rock (2024), "GPTs Are GPTs: Labor Market Impact Potential of LLMs," *Science,* vol. 384 (6702), pp. 1306–08; Ed Felten, Manav Raj, and Robert Seamans (2023), "How Will Language Modelers Like ChatGPT Affect Occupations and Industries?" working paper; Michael Webb (2020), "The Impact of Artificial Intelligence on the Labor Market," working paper.

[6] See Nestor Maslej, Loredana Fattorini, Raymond Perrault, Yolanda Gil, Vanessa Parli, Njenga Kariuki, Emily Capstick, Anka Reuel, Erik Brynjolfsson, John Etchemendy, Katrina Ligett, Terah Lyons, James Manyika, Juan Carlos Niebles, Yoav Shoham, Russell Wald, Toby Walsh, Armin Hamrah, Lapo Santarlasci, Julia Betts Lotufo, Alexandra Rome, Andrew Shi, and Sukrut Oak (2025), "The AI Index 2025 Annual Report," AI Index Steering Committee, Institute for Human-Centered AI, Stanford University (Stanford, Calif.: Stanford University, April), https://hai.stanford.edu/ai-index/2025-ai-index-report.

[7] See *Economist* (2026), "An AI Revolution in Drugmaking Is Under Way," January 5; Thomas Kwa, Ben West, Joel Becker, Amy Deng, Katharyn Garcia, Max Hasin, Sami Jawhar, Megan Kinniment, Nate Rush, Sydney Von Arx, Ryan Bloom, Thomas Broadley, Haoxing Du, Brian Goodrich, Nikola Jurkovic, Luke Harold Miles, Seraphina Nix, Tao Lin, Neev Parikh, David Rein, Lucas Jun Koba Sato, Hjalmar Wijk, Daniel M. Ziegler, Elizabeth Barnes, and Lawrence Chan (2025), "Measuring AI Ability to Complete Long Tasks," METR, March 19, https://metr.org/blog/2025-03-19-measuring-ai-ability-to-complete-long-tasks.

As of December 2025, 17 percent of businesses in the U.S. Census Business Trends and Outlook Survey (BTOS) report using AI in their business functions. While that may seem modest on the surface, the share is much higher among large firms and in tech-intensive sectors like information, finance and insurance, and professional and technical services. In the BTOS, about 30 percent of businesses with more than 250 employees report using AI. A recent survey of mostly large firms by McKinsey found that 88 percent report that AI has been used in at least one business function.[8] The share using generative AI specifically rose from 33 percent in 2023 to 79 percent in 2025.

Adoption of generative AI among both individuals and businesses has been very fast by historical standards. A 2024 St. Louis Fed paper estimates that generative AI adoption in the workplace following the release of ChatGPT in late 2022 was as fast as workplace computer adoption after the release of the IBM PC in 1984.[9] Actual use of generative AI in the workplace may be even higher than reported by businesses since there is some evidence of workers using AI tools without their manager's knowledge.[10]

That said, the depth of AI adoption at this point remains unclear. McKinsey found that most businesses using AI remain in the experimentation or piloting phases of adoption. Some firms that have experimented with AI abandoned these trials.[11] Like

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[8] See Alex Singla, Alexander Sukharevsky, Bryce Hall, Lareina Yee, and Michael Chui (2025), "The State of AI in 2025: Agents, Innovation, and Transformation," McKinsey & Company, November 5.
[9] See Alexander Brick, Adam Blandin, and David J. Deming (2024), "The Rapid Adoption of Generative AI," Working Paper Series 2024-027 (St. Louis: Federal Reserve Bank of St. Louis, September; revised October 2025), https://fedinprint.org/item/fedlwp/98805/original.
[10] See Conference Board (2023), "Majority of US Workers Are Already Using Generative AI Tools," press release, September 13, .
[11] See Kathryn Bonney, Cory Breaux, Cathy Buffington, Emin Dinlersoz, Lucia S. Foster, Nathan Goldschlag, John C Haltiwanger, Zachary Kroff, and Keith Savage (2024), "Tracking Firm Use of AI in Real Time: A Snapshot from the Business Trends and Outlook Survey," NBER Working Paper Series 32319 (Cambridge, Mass.: National Bureau of Economic Research, April), https://www.nber.org/papers/w32319.

previous technology breakthroughs, effective use of AI will likely require fundamental changes in business practices and organization. Workers have to be retrained. Managers have to develop best practices. And obtaining the full range of productivity enhancements from new technology may require costly experimentation and further innovation. The productivity gains from electrification in the early 20th century reflected not only how factories were powered but also changes in how they were designed.[12] This process took decades to play out. Within firms, there is evidence from the manufacturing sector that productivity follows a J-shape after technology adoption: adjustment costs lead to short-run losses before firms that ride it out are able to realize larger, longer-run gains.[13]

Within the Federal Reserve System, we have also been exploring the use of AI in our own operations and have established an AI program and governance framework for the use of AI technologies. One internal application of GenAI that shows considerable promise is technology modernization. Within clear guardrails, we are using GenAI tools to translate legacy code, generate unit tests, and accelerate cloud migration. So far, the result of this usage is faster delivery, improved quality, and an enhanced developer experience. In one recent project updating hundreds of databases, AI tools helped cut the time to complete this type of work by 50 percent, detected and resolved 30 percent more issues during testing compared to previous migrations, and enhanced team focus on higher-value coding work. My sense is that these are the kinds of uses and the scale of success that many businesses are experiencing.

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[12] See Paul A. David (1990), "The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox," *American Economic Review,* vol. 80 (May), pp. 355–61.

[13] See Kristina McElheran, Mu-Jeung Yang, Zachary Kroff, and Erik Brynjolfsson (2025), "The Rise of Industrial AI in America: Microfoundations of the Productivity J-curve(s)," working paper.

Implications for the Labor Market

Predictions about how generative AI will evolve, and in particular how it will affect the labor market, range from the utopian to the apocalyptic.[14] In previous speeches, I have outlined a couple of scenarios as a way to think through the potential effects of AI on the economy, including the labor market.[15] But as is the case for AI's technological advances, the debate about the possible effects of AI evolves quickly, so I will briefly revisit these scenarios and then discuss how new research is starting to bring the initial and potential labor market effects of AI into focus.

Scenario of gradual adoption

Under a first scenario, AI proceeds like other general-purpose technologies, perhaps diffusing a bit faster. This leads to strong productivity growth, comparable to what we saw in the late 1990s and early 2000s, or maybe even stronger than that. As was the case during earlier technological advances, some occupations are displaced while new ones emerge, as AI is increasingly integrated into many existing roles. But AI adoption occurs gradually enough that large and widespread joblessness is avoided. Unemployment might rise somewhat in the short term due to skill mismatch, but education and training choices adjust over time, and many workers successfully retrain and retain their jobs or find new ones. With strong productivity growth, the economy can sustain faster output growth and real wages rise.

Scenario of rapid growth in AI capabilities and adoption

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[14] See Mark A. Wynne and Lillian Derr (2025), "Advances in AI Will Boost Productivity, Living Standards over Time," Federal Reserve Bank of Dallas, June 24, https://www.dallasfed.org/research/economics/2025/0624.

[15] For example, see Michael S. Barr (2025), "Artificial Intelligence and the Labor Market: A Scenario-Based Approach," speech delivered at the Reykjavik Economic Conference 2025, Central Bank of Iceland, Reykjavik, Iceland, May 9, https://www.federalreserve.gov/newsevents/speech/barr20250509a.htm.

Under a second scenario, AI capabilities grow exponentially and adoption is extremely rapid, ushering in a "jobless boom." AI agents replace or displace a range of professional and service occupations. Autonomous vehicles and robotics automate many manufacturing and transportation jobs, with labor increasingly concentrated in a few manual or highly skilled trades, or in roles where consumers put a premium on human interaction. AI-centric start-ups with radically new business models displace firms that are unable to adapt, and layoffs soar, leading to widespread unemployment in the short run and declines in labor force participation over time, as a large share of the population is essentially unemployable. It is understandable why many people would fear such a future, and it would present profound social and distributional challenges. With a vastly more productive economy, but much less demand for labor, society would have to rethink the social safety net to ensure that the gains from unprecedented economic growth are shared rather than concentrated among a small group of capital holders and AI superstars. And there would need to be profound changes in education, training, and workforce development. We should be clear-eyed about how painful these changes could be for affected workers and how challenging it would be for the government and the private sector to successfully manage the fallout.

One thing that these two scenarios have in common is that AI's initial promise is borne out, and it transforms the economy—either gradually and in a more manageable way, or abruptly and to a much greater extent.

Scenario of stalled growth in AI capabilities and adoption

A third option is that improvements in AI capabilities stall, perhaps owing to the exhaustion of training data, a shortage of electricity supply or distribution to satisfy the

huge demands of data centers, or shortages of the capital required to build all this new infrastructure.[16] One estimate is that AI investment will require the issuance of $1 trillion in new debt over the next five years, and other estimates are even higher. With questions about whether demand will grow sufficiently to utilize this investment, some have drawn comparisons to the overinvestment in the dot-com era.[17] Timing mismatches in the investment and business integration process could lead to reduced realization of the potential of AI.[18] The hard work of business process transformation takes time, which partly accounts for the J curve dynamics I mentioned earlier. Businesses that do not see immediate productivity improvements may lose interest. In a scenario of stalled growth in AI capabilities and adoption, some productivity improvements occur in easy-to-learn tasks, but AI proves incapable of completing hard-to-learn tasks or complex projects, or an AI bust occurs, abruptly ending needed investment. As a result, any boost that AI provides to aggregate productivity growth is modest and fades over time.

It is possible that in this scenario, AI still ends up widely adopted. As is the case for social media or smartphones, AI applications may still generate significant value for consumers and many businesses. In the workplace, it might look much like email or search engines do now—tools that are ubiquitous, even indispensable, but not necessarily revolutionary by themselves. In a scenario where AI disappoints, the balance of risks shifts from the labor market to the financial sector. When anticipated demand falls short,

[16] For example, generation capacity aside, current inefficiencies in the U.S. electrical grid may not permit sufficient power to go where it is needed for rapid AI deployment.
[17] A notable difference now is that most of the large tech companies making these investments are hugely profitable, in contrast to many of the profitless companies of that earlier boom.
[18] One warning sign that the speed of adoption may not match the speed of AI infrastructure deployment is in what some firms are reporting about the depreciation of their investments. While computer chips have historically been depreciated over three years, some firms have stretched the depreciation of AI chips to five years or more in their disclosures to shareholders.

the risk of financial stress increases, as happened following the expansion of the U.S. railroad network in the late 19th century.[19] More recently, we saw these dynamics play out in a more limited way with the overbuilding of fiber optic telecommunications in the early 2000s, which contributed to stress in bond markets.[20]

Of course, these are stylized scenarios, and facts on the ground may play out differently. Or different scenarios might come to pass in different sectors of the economy in different ways and at different speeds. But a scenario-based approach helps ground our thinking about these potential outcomes.

What Have We Learned about the Effects of AI So Far?

In judging the prospects for the range of outcomes reflected in these scenarios, or other plausible scenarios, we can start with what we have learned about the effects of AI so far. Of course, ChatGPT was released only a bit over three years ago, and we are still in the very early stages of generative AI diffusion. So far, however, research seems to be more consistent with scenario 1: AI as a normal early-stage general-purpose technology, though that doesn't necessarily rule out more extreme scenarios going forward.

Productivity

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[19] In the early 1890s, bankruptcies at a number of prominent railroads, as well as businesses connected directly and indirectly to the railroads, contributed to a deterioration in the quality of bank loan portfolios. While this was not the trigger of the Panic of 1893, it was part of the backdrop that made the economy and the banking system more vulnerable; see Mark Carlson (2013), "Panic of 1893," in Randall E. Parker and Robert Whaples, eds., *Routledge Handbook of Major Events in Economic History* (London: Routledge), pp. 40–49.

[20] See Jeff Hecht (2016), "OSA Centennial Snapshots: The Fiber Optic Mania," *Optics & Photonics News,* vol. 27 (October), pp. 46–53. For more information on the dynamics of the dot-com bubble and the effects on the bond market, see Patrick Lenain and Sam Paltridge (2003), "After the Telecommunications Bubble," OECD Economics Department Working Papers No. 361 (Paris: Organisation for Economic Co-operation and Development, June), https://dx.doi.org/10.1787/311813664474. According to Lenain and Paltridge, "Several large firms—including Worldcom and Global Crossing—filed for bankruptcy under Chapter 11 in the United States and AT&T Canada undertook a similar proceeding. This led to a wave of defaults on telecommunications corporate bonds and contributed to the largest cycle of defaults on bonds since the 1930s" (Lenain and Paltridge, 2003, p. 8).

Let me focus on several aspects of the early economic effects of AI, starting with productivity. We have been in a period of elevated productivity growth for the past five years. This period of higher productivity growth began with the pandemic and the ensuing tight labor market, which led to investment in labor-saving technologies. Moreover, new business formation surged and has remained strong. New businesses that survive tend to be more productive than incumbents, and competition from new businesses spurs innovation among incumbents as well. While it is possible that AI has contributed to this strength more recently, GenAI has had relatively modest penetration thus far.

Yet AI is very likely to have a profound positive impact on productivity growth in the long term. At the microlevel, there is increasing evidence that access to AI assistants improves worker efficiency, speed, and accuracy at various tasks.[21] Aggregating the aforementioned task-level evidence, one recent study estimated that AI could contribute between 0.3 and 0.9 of a percentage point to annual total factor productivity growth over the next decade.[22] The upper end of these estimates would make the productivity gains of AI comparable to those of internet communications technologies in the late 1990s, a

[21] On writing, see Shakked Noy and Whitney Zhang (2023), "Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence," *Science,* vol. 381 (6654), pp. 187–92; on customer service, see Erik Brynjolfsson, Danielle Li, and Lindsey Raymond (2025), "Generative AI at Work," *Quarterly Journal of Economics,* vol. 140 (May), pp. 889–942; on consultants, see Fabrizio Dell'Acqua, Edward McFowland III, Ethan Mollick, Hila Lifshitz-Assaf, Katherine C. Kellogg, Saran Rajendran, Lisa Krayer, Francois Candelon, and Karim R. Lakhani (2023), "Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality," Working Paper 24-013 (Boston: Harvard Business School, September 22), https://www.hbs.edu/ris/Publication%20Files/24-013_d9b45b68-9e74-42d6-a1c6-c72fb70c7282.pdf; on coders, see Sida Peng, Eirini Kalliamvakou, Peter Cihon, and Mert Demirer (2023), "The Impact of AI on Developer Productivity: Evidence from GitHub Copilot," working paper; Kevin Zheyuan Cui, Mert Demirer, Sonia Jaffe, Leon Musolff, Sida Peng, and Tobias Salz (2024), "The Effects of Generative AI on High-Skilled Work: Evidence from Three Field Experiments with Software Developers," working paper.

[22] See Francesco Filippucci, Peter N. Gal, and Matthias Schief (2025), "Aggregate Productivity Gains from Artificial Intelligence: A Sectoral Perspective," working paper.

period of strong productivity growth. Other studies point to much smaller or larger gains, underscoring how dependent these projections are on assumptions about the speed of technological progress and adoption of AI by businesses.[23]

But the forms these innovations will take and how long the benefits will take to accrue is hard to say. In 1987, for example, the economist Robert Solow famously quipped, "You can see the computer age everywhere but in the productivity statistics." As it turned out, firms had to learn how to integrate this technology into their business practices in order to fully realize the economic potential of personal computing.

Of course, AI may also contribute to productivity growth not just by improving the efficiency of existing tasks, but also by increasing the efficiency of R&D. The potential of AI to boost the rate of innovation—to be an invention in the method of invention—is where we could see even greater economic benefits, though they may take some time to materialize.[24]

Employment

So far, the literature suggests that while AI has yet to have a substantial effect on *aggregate* employment or unemployment, it may be starting to adversely affect some groups, in particular young people who are just starting their careers in some sectors. On balance, this evidence so far is consistent with what we might expect under the gradual adoption scenario I previously described. One study uses data from the payroll provider

[23] See Daron Acemoglu (2025), "The Simple Macroeconomics of AI," *Economic Policy,* vol. 40 (January), pp. 13–58; and Michael Chui, Eric Hazan, Roger Roberts, Alex Singla, Kate Smaje, Alex Sukharveksy, Lareina Yee, and Rodney Zemmel (2023), "The Economic Potential of Generative AI," McKinsey & Company (New York: McKinsey, June).

[24] While AI may boost productivity growth relative to a counterfactual world without AI, this does not necessarily imply that AI will lead to productivity growth well above its long-run trend, as in the transformative scenario I described. Rather, as the growth effects of previous waves of innovation fade, new innovations, such as AI, might be needed just to keep productivity growth near its historical trend rather than slowing down.

ADP and finds that early-career workers in occupations highly exposed to AI—such as software developers and customer service representatives—have experienced a decline in employment relative to other early-career workers in less exposed fields and experienced workers in the same line of work.[25] Some other research reaches a similar conclusion using resume and job-posting data.[26] The long-run consequences of AI for recent cohorts of young workers is uncertain, but research shows that entering a weak labor market can have persistently adverse effects on workers' earnings. So, for these workers, the short run may have long-term consequences.[27]

More broadly, rather than laying off workers, there is evidence that AI adoption is so far leading to re-allocation within firms. One paper finds that although AI does substitute for labor at the task level, overall employment effects are small, as workers shift their time to complementary tasks and firms expand employment elsewhere.[28] Consistent with this internal re-allocation, a recent survey by the New York Fed found that while some firms using AI did report reduced hiring plans and limited layoffs, a much larger share plan to retrain their existing workforce.[29]

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[25] See Erik Brynjolfsson, Bharat Chandar, and Ruyu Chen (2025), "Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of Artificial Intelligence," working paper.
[26] See Seyed M. Hosseini and Guy Lichtinger (2025), "Generative AI as Seniority-Biased Technological Change: Evidence from U.S. Resume and Job Posting Data," working paper.
[27] See Philip Oreopoulos, Till von Wachter, and Andrew Heisz (2012), "The Short- and Long-Term Career Effects of Graduating in a Recession," *American Economic Journal: Applied Economics,* vol. 4 (January), pp. 1–29.
[28] See Menaka Hampole, Dimitris Papanikolaou, Lawrence D.W. Schmidt, and Bryan Seegmiller (2025), "Artificial Intelligence and the Labor Market," NBER Working Paper Series 33509 (Cambridge, Mass.: National Bureau of Economic Research, February; revised September 2025), https://www.nber.org/papers/w33509.
[29] See Jaison R. Abel, Richard Deitz, Natalia Emanuel, Ben Hyman, and Nick Montalbano (2025), "Are Businesses Scaling Back Hiring Due to AI?" Federal Reserve Bank of New York, *Liberty Street Economics* (blog), September 4, https://libertystreeteconomics.newyorkfed.org/2025/09/are-businesses-scaling-back-hiring-due-to-ai.

At the same time, we should be prepared for the possibility that there might be serious short-term disruptions in the labor market, even if the long-term gains to society could be quite favorable. The extent of disruption will depend in part on whether society undertakes the investments needed in new job creation, worker training, connecting workers to new jobs, and other efforts to mitigate adverse labor market effects. The historical record on meaningful efforts to help workers in such a transition is not encouraging.[30] In my judgement, now is the time for society to begin to consider how to address these potential disruptions, while AI adoption is in its early stages.

Income and Inequality

As with employment, there is little evidence that AI has had a meaningful impact on wage growth or the distribution of income gains, at least so far. Going forward, the effect of AI on wages and the distribution of income will depend on factors including whether AI complements or substitutes expertise within jobs that continue to exist, how AI changes relative demand for high-wage occupations, and who owns AI capital. On the one hand, research evaluating the effect of AI assistants in the workplace tends to find the largest productivity gains among the least-experienced workers.[31] This suggests that AI could narrow gaps in productivity and wages. If AI facilitates worker learning, as some studies suggest, it might also help displaced workers to re-skill for new jobs, reducing the cost of job dislocation. On the other hand, recent research finds that GenAI is more commonly used by younger, highly educated, and high-income individuals.[32] If

[30] See Lawrence F. Katz (2025), "Beyond the Race between Education and Technology," paper prepared for "Labor Markets in Transition: Demographics, Productivity, and Macroeconomic Policy," an economic symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 22, https://lkatz.scholars.harvard.edu/sites/g/files/omnuum5961/files/2025-09/katz_jh_brbet_2025_final_0.pdf.
[31] See footnote 21.
[32] See Jonathan Hartley, Filip Jolevski, Victor Melo, and Brendan Moore (2025), "The Labor Market Effects of Generative Artificial Intelligence," working paper.

high earners are better positioned to take advantage of AI, we could see wage inequality rise as the most productive workers pull even further ahead of their peers.

AI can also affect the wage structure by shifting demand for different occupations. Whereas technological progress has historically favored occupations with higher wages and education requirements, one paper shows that AI has the potential to reverse this pattern, automating higher-paying information-based jobs while increasing relative demand for lower-paying jobs and those requiring less education, thus reducing aggregate wage inequality.[33]

As with our discussion of labor market disruptions, the effects of AI on inequality will depend in part on whether society undertakes the investments needed to mitigate adverse labor market effects. It is incumbent on us to begin thinking about these important questions now.

Implications of AI for Monetary Policy

I am also thinking about the implications of AI for monetary policy. If AI causes a large and long-lasting dislocation of workers, permanently reducing demand for many kinds of jobs, it could imply higher rates of unemployment, even when the economy is healthy and operating close to its potential. Monetary policy is able to address cyclical conditions, like a downturn in the business cycle, but it cannot address the structural factors that determine the long-run rates of employment. While monetary policy is not suited to dealing with structural changes in the economy, it could be difficult for policymakers to assess in real time whether changes are structural or cyclical. Moreover,

[33] See Huben Liu, Dimitris Papanikolaou, Lawrence D.W. Schmidt, and Bryan Seegmiller (2025), "Technology and Labor Markets: Past, Present, and Future; Evidence from Two Centuries of Innovation," Brookings Papers on Economic Activity, September 24, https://www.brookings.edu/articles/technology-and-labor-markets-past-present-and-future.

some components of the labor market may face structural changes, while others may not. As I noted earlier, it will be important for society to deal with the consequences of any structural changes in the economy because of AI, and policies beyond the purview of the central bank would certainly be needed to address a structural rise in the natural rate of unemployment. As a central banker, I see endeavoring to understand how AI is evolving and affecting labor markets as a crucial component of our work in the years ahead. I have noted that my base case foresees labor market disruptions as relatively short term, even if painful. Over the long term, the labor market would adjust in ways that create new jobs and augment the productivity of existing jobs, boosting real wages. But closely monitoring these developments and adapting, as needed, will be crucial.

In the event that GenAI results in a long-lasting boost to productivity growth, wages and economic activity could grow more than would otherwise be the case without putting upward pressure on inflation. At the same time, demand for capital would rise because of the strong business investment required to take advantage of the technology, putting upward pressures on interest rates, and household savings could fall due to expectations of stronger real wage growth and thus higher lifetime earnings, also putting upward pressure on interest rates. All of this would imply a higher setting for the policy rate when the economy is at equilibrium, or what monetary economists call r*. Indeed, last year I raised my long-term estimate of r* modestly because of higher productivity. Moreover, in the short term, investment in AI could be inflationary—for example, if electricity supply constraints from inefficiencies in the power grid collide with strong energy demand from the building of data centers. For all of these reasons, I expect that the AI boom is unlikely to be a reason for lowering policy rates.

Conclusion

In conclusion, I expect that AI will have a transformative effect on the economy and affect a large share of workers in ways that will challenge the ability of the private and public sectors to accommodate this adjustment. In the longer run, I expect AI will boost productivity and living standards, and it may even lead to new discoveries. Society will need to be nimble and bold to reduce the pain of short-term dislocations for workers and to ensure that the benefits are broadly shared. Widespread AI adoption will very likely lead to dramatic and sometimes difficult changes in the way many of us work and live, but the long-term benefits could be even more dramatic.