

THE AMERICAN ECONOMY IN A NEW ERA



EXECUTIVE SUMMARY

Skills Alignment for the AI Economy: A Framework for US Labor Market Policy

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Introduction

Generative artificial intelligence (AI) is diffusing rapidly across the US economy, driving speculation about its likely impact on the labor market. In this paper, Robert Seamans presents timely evidence on the labor market effects of AI to date, finding strong task-level productivity gains and no evidence of broad employment declines. These findings imply the need for policies and interventions that help workers prepare and train for new skill demands, rather than those that assume there will be job losses. Seamans lays out a “Skills Alignment Framework,” focused on strengthening the institutions that connect employers, workers, and training providers rather than creating AI-specific assistance programs or slowing adoption of the technology through targeted taxes. He argues that better information, stronger employer engagement, and more responsive training systems will allow workers and firms to adapt together and mutually benefit as AI continues to evolve.

AI Adoption

AI is a general-purpose technology (GPT), similar to the steam engine, electricity, and personal computers. Historically, GPTs have taken time to diffuse, altered tasks within jobs before affecting employment, and impacted industries unevenly. The case of generative AI—and its implications for the labor market—may differ from past GPTs, however, in two ways. First, AI will likely affect occupations that involve cognitive tasks, and second, workers may informally experiment with these tools before firms formally adopt them. A close look at the data finds the following key trends:

Firm-level adoption is increasing but not universal. According to data from the US Census Bureau's Business Trends and Outlook Survey, as of August 2026, approximately 22 percent of firms use AI and 26 percent expect to use it within six months. Adoption rates vary significantly by industry, with Information and Professional, Scientific, and Technical Services serving as the leading industries.

Many workers use generative AI tools before the technology is formally implemented at the firm level. This “shadow AI” use suggests that workers may be learning to use AI tools faster than firms are learning how to reorganize around the technology. Furthermore, worker-level use can create productivity gains before human resources systems or occupational data can record this change. As a result, firm-level adoption rates are likely underestimating the extent to which AI has already entered production.

AI adoption varies across geographies and demographics. Microsoft telemetry data show a stark urban-rural divide in AI adoption rates: large metropolitan areas have approximately 33 percent adoption compared to 16 percent in rural counties. The data also show that counties with college towns—and therefore a larger number of young adults—tend to demonstrate higher adoption rates.

AI and Labor Market Effects

Official labor market data have not yet shown evidence of widespread AI-driven displacement. Recent layoff announcements have created a public impression that AI is already driving widespread job loss, but announced layoffs are not the same as realized separations, and firms may have an incentive to tie layoffs to AI rather than factors such as macroeconomic uncertainty or poor strategic planning. Notably, New York has required firms to report whether layoffs are attributable to AI since 2025, yet no company filing a layoff notice has ascribed the decision to the technology as of January 2026.

AI exposure is concentrated in cognitive, professional, and white-collar work. Because AI adoption is still unfolding, economists often rely on AI exposure measures to identify which sectors will be most impacted. These measures suggest that occupations with higher median salaries, greater educational requirements, and a higher emphasis on creative abilities are those most exposed.

Exposure measures broadly agree on which occupations are not exposed, disagree more on the magnitude of exposure among highly exposed occupations, and do not by themselves imply automation or job loss. High exposure could raise demand for labor if AI lowers prices and expands output, reduce it if the same output can be produced with fewer workers, or change the composition of tasks without changing headcount.

The evidence on whether AI is negatively impacting early-level employment is mixed. One study using payroll data finds that employment lagged for entry-level workers in AI-exposed industries following the release of ChatGPT. Other research points the opposite way: unemployment growth since 2022 has been concentrated in the least AI-exposed occupations, and another study finds that job postings in exposed occupations began declining in early 2022, prior to the release of ChatGPT.

Taken together, the evidence suggests that AI may already be affecting entry-level pathways, particularly in software and some professional services, while not yet causing widespread job loss.

AI increases individual productivity, particularly for less-experienced workers. Studies find that coders using GitHub Copilot, a generative AI software tool, completed a specified task approximately 50 percent faster, and customer support agents using a generative AI assistant saw a productivity increase of about 15 percent, with the largest gains in both cases accruing to less-experienced workers.

These task-level productivity gains do not automatically aggregate into employment, wage, or firm-level effects. For instance, a study of Danish workers finds widespread adoption in exposed occupations but negligible effects on earnings and hours. In the short run, AI is not causing large economic effects, and productivity gains often require time to emerge after adoption.

AI adoption will create new jobs and drive new business formation. Technological change has historically eliminated some occupations while creating others. Today, emerging AI-linked roles, such as data annotators and AI engineers, are among the fastest-growing job categories.

Generative AI tools can also lower the barriers to entry for new firms by reducing the costs associated with software development, market testing, and other processes. Indeed, new business applications by solo founders have been rising since late 2024, with the largest increases occurring in the sectors adopting AI most heavily.

The Skills Alignment Framework

The evidence summarized above suggests that the economy is not currently in the midst of a single, immediate labor market shock. Rather, the current challenge is that AI is changing tasks more quickly than institutions can observe and respond to. For this reason, policy should not simply compensate workers following displacement, but assist employers, workers, and training providers in identifying where skill demand is shifting.

The “Skills Alignment Framework” proposed by Seamans suggests that policies should focus on the institutions that workers and employers rely upon for information about which skills are economically valuable. That is, policies should aim to improve matching and adjustment rather than identify a single class of AI-displaced workers following a disruption event.

Policy Recommendations

Promote AI-enabled skill training. Given the consistent finding from the research that generative AI tools provide the largest productivity benefits to those with the least experience, AI-enabled training programs can be used to retrain workers in new skills and for new jobs relatively quickly and efficiently. While federal support will be necessary to scale such a program, implementation should be regional, both to reflect local employer demand and because workers move across geographies less frequently than a generation ago.

Scale proven existing workforce training models. Employer-linked workforce development programs, such as apprenticeships, sectoral partnerships, and customized job training, serve as a natural complement to AI-enabled training because they directly embed demand signals from firms. These programs address information asymmetries between workers and employers regarding skill demand, reduce firm underinvestment in training, and provide workers with a pathway to gain economically valuable skills. For instance, Tennessee's customized job training program, partly funded by state grants but designed and implemented by individual firms, raised worker earnings by approximately 3 percent per quarter over five years.

Modernize the Workforce Innovation and Opportunity Act (WIOA). WIOA is the federal workforce policy framework designed to help dislocated workers and other job seekers access employment services, career counseling, and occupational training. However, the program is highly fragmented—more than 7,000 providers and roughly 75,000 programs compete for a small pool of training dollars, and the average program serves only a few WIOA-funded individuals each year. Performance data is often missing or unreliable, making it difficult for participants to distinguish strong from weak programs. Modernization efforts should therefore focus on providing workers with clearer information, creating stronger incentives for providers to offer valuable programs, and increasing confidence that these programs produce usable skills.

Modernize unemployment insurance (UI). Modernization efforts should focus on both eligibility expansion and upgrades to UI systems. Eligibility should be expanded to better cover part-time workers, workers with variable hours, and workers with mixed W-2 and 1099 income, which represent an increasing share of the workforce. Upgraded systems would allow claims to be processed quickly, securely, and flexibly while enabling policymakers to monitor claims by occupation, industry, geography, age, and other characteristics in near real time.

Expand wage insurance. Wage insurance pays displaced workers a temporary subsidy tied to the size of their wage loss when they accept a lower-paying job, reducing the cliff workers face and making faster reemployment more attractive. While the academic literature on wage insurance remains limited, evidence from the Trade Adjustment Assistance program finds that wage insurance increased employment in the near term and raised cumulative earnings over four years. However, because wage insurance in itself does not provide information about which skills are demanded by employers, it should be paired with AI-enabled skill assessment and local labor market information.

Rely more heavily on capital taxation. The US tax system currently favors investment in capital over labor, which may distort a firm's choice between workers and machines. Effective US labor taxes are estimated to exceed 25 percent, while effective capital taxes on software and equipment were about 10 percent in the 2010s and fell to about 5 percent after the 2017 tax reforms. One approach would be to reduce taxes on labor, such as payroll and employer-side employment taxes, but this would have the effect of reducing revenue used to fund programs such as Social Security and Medicare during a period of high and rising federal debt.

Another approach is to raise the effective tax burden on capital income, such as by limiting the rate at which businesses can deduct capital expenses from taxes and by narrowing preferential treatment for capital gains and dividends compared to labor income. Such changes would likely slow adoption of some new technologies, which in the short term would provide some breathing room to put in place appropriate training and retraining programs. The slower adoption of some new technologies might also mean fewer immediate benefits from the technologies, and these tradeoffs would need to be weighed against the benefits of a less capital-biased tax system.

Avoid narrowly targeted labor market policies. Seamans cautions against pursuing both AI-specific assistance programs and an AI or robot tax. AI-specific assistance programs would require government agencies to determine whether a particular job loss was caused by AI, a judgment that is difficult to measure and that firms have incentives to over- or under-state. Additionally, implementing a robot tax risks penalizing productive investment, slowing the diffusion of efficiency-enhancing technologies, and inhibiting economic growth.

Improve data, research, and measurement infrastructure. US statistical agencies must be well-funded and well-supported, and AI-related questions should be asked consistently over time so that adoption curves can be linked to changes in employment, wages, and productivity. Seamans also urges integrating private company data into the national statistical infrastructure to accelerate the study of AI's labor market effects.

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Robert Seamans (PhD, UC Berkeley) is a Professor at New York University's Stern School of Business, Director of the NYU Stern Center for the Future of Management, and a nonresident Senior Fellow at the Brookings Institution. He has been a visiting scholar at MIT's FutureTech Lab and at Princeton's Center for IT Policy. In 2015, he was appointed as the senior economist for technology and innovation on President Obama's Council of Economic Advisers. Professor Seamans' research focuses on the economic consequences of AI, robotics and other advanced technologies. His research has been published in leading academic journals and been cited in numerous outlets including *The Atlantic*, *The Economist*, *Fox*, *Newsweek*, *The New York Times*, *The Wall Street Journal*, *Wired* and others.

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