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I. Introduction: The Portfolio Economy

Artificial intelligence (AI) will inevitably and permanently alter the nature of work.[1] Where, how, and to what extent is unknown and, critically, unknowable.[2] Economists do not have a definitive test to determine which jobs are most likely to be disrupted nor when such disruption will occur. They also lack the means to reliably predict which corporations and industries will successfully integrate AI and which may struggle to do so.[3] This explains why, depending on the day, the public may come across headlines anticipating the rapid elimination of entire professions due to AI[4] or reports touting how AI development is creating jobs and leading to entire new fields of work.[5]

Technologists are similarly in the dark. They cannot precisely forecast the capabilities of future AI models.[6] They vary in their expectations about how and when AI will achieve "superintelligence" or achieve "AGI."[7] Their differences do not end there. Some contest whether those are definable concepts or concepts worth defining in the first place![8] Technologists even struggle to pin down the exact capabilities of existing models.[9] These numerous and vast gaps in knowledge will persist for the foreseeable future.[10] America's world-leading AI labs are exploring new training methods that will result in AI models that create even more capable and diverse AI tools.

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[1] *See, e.g.,* Lynda Gratton, AI Is Changing How We Learn at Work, Harvard Business Review (Dec. 22, 2025), https://hbr.org/2025/12/ai-is-changing-how-we-learn-at-work; Sunny Jiang et al., Artificial Intelligence Impact on Labor Markets, Int'l Economic Development Council (last accessed Dec. 28, 2025), https://www.iedconline.org/clientuploads/EDRP%20Logos/AI_Impact_on_Labor_Markets.pdf; Menaka Hampole et al., Artificial Intelligence and the Labor Market, NBER (Sept. 2025), https://www.nber.org/papers/w33509.

[2] Bharat Chandar, AI and Labor Markets: What We Know and Don't Know, Stanford Digital Economy Lab (Oct. 14, 2025), https://digitaleconomy.stanford.edu/news/ai-and-labor-markets-what-we-know-and-dont-know/.

[3] Leland Crane et al., Measuring AI Uptake in the Workplace, Board of Governors of the Federal Reserve System (Feb. 5, 2025), https://www.federalreserve.gov/econres/notes/feds-notes/measuring-ai-uptake-in-the-workplace-20240205.html.

[4] *See* Samantha Delouya, AI CEO says technology 'moving very quickly,' could soon replace more jobs, CNN (Sept. 17, 2025), https://www.cnn.com/2025/09/17/business/anthropic-warns-ai-could-soon-replace-jobs (sharing Dario Amodei's forecast for massive job displacement).

[5] Meghan Ostertag, AI's Job Impact: Gains Outpace Losses, ITIF (Dec. 18, 2025), https://itif.org/publications/2025/12/18/ais-job-impact-gains-outpace-losses/ ("In 2024, AI growth generated thousands of jobs, with estimates of more than 8,900 employees added to the U.S. economy to develop, train, and operate AI models, including machine learning engineers and data scientists.").

[6] *Compare* Peter Kafka, The godfather of Meta's AI thinks the AI boom is a dead end, Business Insider (Nov. 17, 2025), https://www.businessinsider.com/meta-ai-yann-lecun-llm-world-model-intelligence-criticism-2025-11 (detailing why Yann LeCun expects that the current LLM architecture will not achieve the sorts of capabilities predicted by others) *with* Nathan Garland, Can bigger-is-better 'scaling laws' keep AI improving forever? History says we can't be too sure, The Conversation (Nov. 26, 2025), https://theconversation.com/can-bigger-is-better-scaling-laws-keep-ai-improving-forever-history-says-we-cant-be-too-sure-270448 (investigating why some AI lab leaders anticipate that today's models will continue to improve at rapid rates).

[7] Benjamin Todd, Shrinking AGI timelines: a review of expert forecasts, 80000 Hours (Mar. 21, 2025), https://80000hours.org/2025/03/when-do-experts-expect-agi-to-arrive/.

[8] Hayden Field, It's the great AGI rebrand, The Verge (Dec. 18, 2025), https://www.theverge.com/ai-artificial-intelligence/845890/ai-companies-rebrand-agi-artificial-general-intelligence.

[9] Stephen Ornes, The Unpredictable Abilities Emerging From Large AI Models, Quanta Magazine (Mar. 16, 2023), https://www.quantamagazine.org/the-unpredictable-abilities-emerging-from-large-ai-models-20230316/.

[10] Abi Olvera, Why nobody can see inside AI's Black Box, Bulletin of the Atomic Scientist (Jan. 27, 2025), https://thebulletin.org/2025/01/why-nobody-can-see-inside-ais-black-box/.

Despite the litany of known unknowns and unknown unknowns in AI development and diffusion, it is generally agreed upon that AI will accelerate workforce trends that were already underway before ChatGPT. Work has been and will be increasingly skill-based, short-term, and independent. The future of work looks far more like the gig economy than a 30-year career with a single firm. It will soon be the norm, rather than the exception, that Americans are simultaneously performing work for several firms under a range of different employment arrangements.

Put differently, we have entered the first innings of a Portfolio Economy. Workers will strive to maintain a range of valuable skills and a stable of clients; they will have to regularly update both as AI continues to advance and the nature of human-AI collaboration shifts. This economic reality is the product of how AI seems likely to develop and diffuse. AI does not progress at the same rate across all tasks and domains; its capacity to handle a specific job function is highly variable.[11] AI experts commonly refer to this as the technology's "jagged frontier."[12]

Whether AI will augment how a human performs a specific function, take over that function, or have no ability to augment or automate that function is a guessing game. While some tasks have been and will be delegated to AI, others will remain the exclusive domain of humans or involve some human-AI collaboration.[13] This is precisely why those who warned that radiologists would soon be out of work have had to walk back their statements.[14] Across the spectrum of tasks performed by radiologists, only some are suitable to entirely delegate to AI.[15] For operational and legal reasons, many of the remaining radiological tasks must and will be performed by humans.[16]

Learning from the case study of radiologists, assessments of the future value of any one task or profession must consider the substantial technical limitations of AI as well as broader legal and institutional inertia. While technological hurdles and regulatory barriers may eventually be cleared, many jobs with even a high rate of "exposure" to AI—meaning that AI tools seem capable of taking on many of that job's tasks—will remain to be human-held positions. In some cases, AI augmenting or automating tasks may actually increase demand for the profession in question. A majority of firms with fewer than twenty employees expect that AI will cause them to hire more employees.[17] AI as a job creator makes intuitive

[11] Erik Vasilauskas & Michael Horrigan, AI Exposure and the Future of Work: Linking Task-Based Measures to U.S. Occupational Employment Projections, W.E. Upjohn Institute for Employment Research (Sept. 30, 2025), https://research.upjohn.org/cgi/viewcontent.cgi?article=1319&context=reports.
[12] Helen Toner, Taking Jaggedness Seriously, Rising Tide (Nov. 24, 2025), https://helentoner.substack.com/p/taking-jaggedness-seriously.
[13] *See* Sally Helm, AI is causing anxiety about the future of the workforce. But are there AI-proof jobs?, NPR (Sept. 19, 2025), https://www.npr.org/2025/09/19/nx-s1-5544378/ai-is-causing-anxiety-about-the-future-of-the-workforce-but-are-there-ai-proof-jobs (specifying the sorts of tasks and processes likely to maintain a high degree of human intervention).
[14] Steve Lohr, Your A.I. Radiologist Will Not Be With You Soon, N.Y. Times (May 14, 2025), https://www.nytimes.com/2025/05/14/technology/ai-jobs-radiologists-mayo-clinic.html.
[15] *Id.*
[16] *Id.*
[17] Robert Press, AI in Business, Office of Advocacy at 7 (Sept. 24, 2025), https://advocacy.sba.gov/wp-content/uploads/2025/09/Research-Spotlight-AI-in-Business-Small-Firms-Closing-In_-092425.pdf.

sense in many contexts. Consider the vast shortage of mental health professionals, for instance.[18] As AI allows therapists to take more accurate notes and handle administrative tasks—thereby reducing the cost of treatment,[19] more members of the public may seek out mental health support. More generally, AI can lower the costs of things like customer service that may have previously caused a customer to prefer larger firms to a smaller one.[20]

Of course, in other domains, the productivity gains induced by AI will cause some employers to demand fewer workers in that field.[21] It is fairly clear that there will be fewer court reporters in the future, for example.[22] There are only so many trials in so many courts, so as AI makes key tasks of that role more cost effective, court systems will simply hire fewer reporters.[23] Individuals in these sorts of fields will be formal members of the Portfolio Economy. They may spend a fraction of their time in their old, traditional W-2 role but will otherwise need to develop additional skills to market to other firms.

In this near-future, professional stability and economic security will look like having the means and opportunity to study new skills through private or public educational and vocational programs, train under mentors through apprenticeships, and work for a variety of firms around the world. Whether Americans thrive in the Portfolio Economy rests on whether labor and employment laws evolve to permit and encourage flexibility or maintain their current rigidity.[24]

Policymakers seeking to navigate this challenge by developing the flexible, adaptive laws required in the Age of AI should adhere to a few best practices. First, seek to understand the underlying technology. A foundational knowledge of the flaws and likely capabilities of AI models in the near- and medium-term is essential to sorting through conflicting and even contradictory reports of how AI will alter the economy

[18] Nathaniel Counts, Understanding the U.S. Behavioral Health Workforce Shortage, The Commonwealth Fund (May 18, 2023), https://www.commonwealthfund.org/publications/explainer/2023/may/understanding-us-behavioral-health-workforce-shortage.
[19] Felisha Adam, Therapists say AI can help them help you, but some see privacy concerns, CBC (Sept. 2, 2025), https://www.cbc.ca/news/canada/manitoba/winnipeg-therapists-ai-transcription-1.7621894; April Dembosky, Will AI Replace Your Therapist? Kaiser Won't Say No, KQED (Dec. 11, 2025), https://www.kqed.org/science/1999553/will-ai-replace-your-therapist-kaiser-wont-say-no.
[20] *See* Jordan Crenshaw, AI Is Transforming Small Business: A Colorado Success Story, U.S. Chamber of Commerce (Dec. 2, 2024), https://www.uschamber.com/technology/artificial-intelligence/ai-is-transforming-small-business-a-colorado-success-story (reporting on how small businesses in Colorado have leveraged AI).
[21] *See* Press, *supra* note 17, at 7.
[22] *See* Brad Nygard, N.D. State Committee Sets Stage for AI Court Transcriptions, Government Technology (Jan. 31, 2025), https://www.govtech.com/artificial-intelligence/n-d-state-committee-sets-stage-for-ai-court-transcriptions (walking through a plan by North Dakota to integrate AI transcription into court reporting); *see generally* Victor Li, Could automated transcription tools replace human court reporters?, American Bar Association (Mar. 13, 2024), https://www.americanbar.org/groups/journal/podcast/could-automated-transcription-tools-replace-human-court-reporters/ (detailing how AI may take over certain court reporter tasks).
[23] *See* Preparing for future workforce needs, National Center for State Courts (Aug. 11, 2025), https://www.ncsc.org/resources-courts/preparing-future-workforce-needs (analyzing how AI adoption may ease a shortage of court reporters).
[24] Kevin Frazier, Entrepreneurial Freedom in the Age of AI, Civitas Outlook (Jan. 12, 2026), https://www.civitasinstitute.org/research/entrepreneurial-freedom-in-the-age-of-ai [Appendix A]; *see* Kevin Frazier, Entrepreneurial Liberty in the Age of AI, Harvard Journal of Law & Technology Digest (Jan. 11, 2026), https://jolt.law.harvard.edu/digest/entrepreneurial-liberty-in-the-age-of-ai (specifying principles to guide Congress when updating New Deal era laws) [Appendix B].

and society, more generally.[25] Policymakers should also have a strong grasp of how and when AI can complement and augment humans rather than automate roles.[26] Technological literacy will go a long way toward sorting through sensationalistic AI claims that tend to dominate the headlines.[27]

Second, gather more information from the private sector about AI adoption plans and workforce needs.[28] Information on how small-, medium-, and large firms plan to integrate AI can inform both immediate retraining and upskilling initiatives as well as more long-term reforms to our educational and workforce development programs. This data will similarly help dispel hyperbolic claims about the imminent demise of entire industries and professions.

Third, develop and test policies crafted in response to a thorough understanding of AI and reliable data on its adoption. What it means to succeed in the Portfolio Economy is unclear and contingent on variable factors—including but not limited to the pace and nature of AI advances and the level of AI adoption by firms and laborers alike. Laws and regulations crafted to today's AI or based on the current use of AI by firms and laborers will rapidly become technologically obsolete.[29] Legislative tools such as sunrise clauses, retrospective review, and regulatory sandboxes are indispensable as lawmakers strive to make sure the United States is first to the future rather than the last to move on from the past.[30]

The remainder of this testimony provides initial guidance on each of those practices. This guidance is far from comprehensive and is soon to be out of date. In the same way that workers in the Portfolio Economy will have to continually update their menu of skills and services, policymakers will have to serially seek

[25] Bharat Chandar, AI and Labor Markets: What We Know and Don't Know, Stanford Digital Economy Lab (Oct. 14, 2025), https://digitaleconomy.stanford.edu/news/ai-and-labor-markets-what-we-know-and-dont-know/; *see* Tim O'Reilly, You Can't Regulate What You Don't Understand, O'Reilly (June 15, 2023), https://www.oreilly.com/radar/you-cant-regulate-what-you-dont-understand/ ("In the absence of operational detail from those who actually create and manage advanced AI systems, we run the risk that regulators and advocacy groups 'hallucinate' much like Large Language Models do, and fill the gaps in their knowledge with seemingly plausible but impractical ideas.").

[26] *See* Cecillia Kang & Adam Satariano, As A.I. Booms, Lawmakers Struggle to Understand the Technology (Mar. 3, 2023), https://www.nytimes.com/2023/03/03/technology/artificial-intelligence-regulation-congress.html; *cf.* Bryan Metzger, Politicians are slowly but surely starting to try out AI for themselves, Business Insider (Dec. 28, 2025), https://www.businessinsider.com/lawmakers-use-ai-chatgpt-grok-claude-themselves-2025-12 (exposing that several politicians have just recently started to use AI).

[27] Ramsi A. Woodcock, The Fourth Estate's Estate, 26 U. PENN. J. BUS. L. 863, 867-74 (2024).; Jeremy Arnold, What Anti-Tech Bias Looks Like, Saving Journalism (July 24, 2020), https://savingjournalism.substack.com/p/what-anti-tech-bias-looks-like?; Tess Buckley, AI News Narrative: Headlines Shape Knowledge, We and AI (Dec. 28, 2025), https://weandai.org/ai-news-narrative-headlines-shape-knowledge/.

[28] Chandar, *supra* note 25; Owen Davis, We Need Better Data on Workplace AI, Tech Policy Press (Oct. 2, 2024), https://www.techpolicy.press/we-need-better-data-on-workplace-ai/.

[29] Tatiana Rice et al., U.S. State AI Legislation, Future of Privacy Forum at 4-10 (Sept. 2024), https://fpf.org/wp-content/uploads/2024/09/FINAL-State-AI-Legislation-Report-webpage.pdf (parsing different state AI proposals and assessing the extent to which there are definitional similarities); *cf.* Brad A. Greenberg, *Rethinking Technology Neutrality*, 100 MINN. L. REV. 1495, *passim* (2016) (assessing the extent to which drafts to tech technologically-neutral copyright laws appear to have failed); Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 UNIV. PENN. L. REV. 1, 6 n.12 (2014) (examining how congressional inaction with respect to updating the Federal Communications Commission for new technologies has forced the agency to stretch its existing statutory authority); *see id.* at 18, 18-19 n.60 (noting that Congress has delayed updating energy-related policy questions despite substantive changes to underlying technologies).

[30] Kevin Frazier, Seven Deadly Sins of AI Policy, MONT. L. REV. *passim* (forthcoming 2026).

out new information on AI capabilities, AI adoption, and the regulatory tools most responsive to technological progress and its diffusion.

II. Understanding the Technology: The Technical Reasons Why AI Will Transform the Nature of Work

Study of prior general purpose technologies, such as the steam engine and electricity, indicates a two-stage process to the transformation of the economy. In the first phase, the technology is applied to existing processes—often with little or marginal effects.[31] In the second phase, systemic changes take place as entire institutions and processes develop around the specific attributes of the emerging technology.[32]

A historical case study helps illustrate the difference between task-based adoption of technology and systemic reorientation around new technology. A large percentage of people may think of the steam engine as being invented in the 1800s.[33] Yet, Thomas Newcomen developed such a system in 1710.[34] The reason for the wide discrepancy? Significant technical limitations meant that the Newcomen engine wasn't of much use outside of pumping water out of flooded mines.[35] Firms found it cheaper to stick with coal than to upend their workflows around this early iteration of the steam engine.[36] So while the Newcomen engine may have displaced a few miners who were no longer needed for the one-off task of addressing flooded mines, it fell far short of transforming mining or any other industry.[37] When technological adoption is in this first stage, it's best to assess its societal and economic impacts on a more granular basis. It will never be the case that a new technology achieves its full potential in the days and months following its initial introduction. Cultural, economic, legal, and political factors all shape and slow technological diffusion.

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[31] *See* Sampsa Samila, IESE's Sampsa Samila in conversation with Joshua Gans, IESE (Nov. 8, 2023), https://www.iese.edu/insight/articles/artificial-intelligence-between-promise-and-adoption-joshua-gans/ (interviewing Joshua Gans); Tim Harford, Why didn't electricity immediately change manufacturing?, BBC (Aug. 20, 2017), https://www.bbc.com/news/business-40673694 (studying the operational and technological barriers to more transformative uses of electricity in the early days of the technology).
[32] *See* Samila, *supra* note 31 (interviewing Gans).
[33] More substantive and successful uses of the technology emerged after the 1700s. *See* Richard Cavendish, George Stephenson's First Steam Locomotive, 64 History Today (July 2014), https://www.historytoday.com/archive/george-stephensons-first-steam-locomotive (sharing one such success); *see also* A Dream Too Lofty: Why the Steam Engine Failed in the 18th Century, The History Corner (last accessed Dec. 29, 2025), https://www.thehistorycorner.org/articles-by-the-team/a-dream-too-lofty-why-the-steam-engine-failed-in-the-18th-century (probing some of the reasons why steam power did not deliver transformative results for several decades following its first uses) [hereinafter, The History Corner].
[34] The History Corner, *supra* note 33.
[35] The Newcomen engine and its role in Britain's industrial revolution, National Museum of Scotland (last accessed Dec. 29, 2025), https://www.nms.ac.uk/discover-catalogue/the-newcomen-engine-and-its-role-in-britains-industrial-revolution [hereinafter, Newcomen NMS].
[36] The History Corner, *supra* note 33.
[37] Newcomen NMS, *supra* note 35.

AI is in many ways in its Newcomen stage. The vast majority of firms have yet to adopt AI.[38] Barely more than twelve percent of large firms are using AI.[39] Smaller firms, those under 250 employees, report even less use—below ten percent.[40] Across the U.S. workforce, just one in ten employees regularly engage with AI; the majority of workers sparingly turn to AI for assistance.[41] Many workers—about one in four—are unsure of whether their company has an AI policy or strategy.[42]

Even among the firms that have formally adopted AI, it's likely that they are generally doing so to handle or augment discrete tasks; systemic redesign seems years (and millions of dollars) away. Small and large firms that use AI tend to do so for just two specific tasks, such as developing marketing materials.[43] Critically, these more AI-forward firms have yet to even attempt to reorient their entire operations around AI. Among small firms that have adopted AI, half have made no substantive investments in staff training, consultants, or operational updates.[44] Only slightly more large firms have made AI-related investments.[45] This dearth of investment suggests that it will be quite some time before AI causes systemic changes to the nature of work. Technologists expect that for every one dollar spent by a firm on AI they will have to invest nine more on intangible human capital.[46] Firms have clearly yet to follow that ratio. While some may excuse underinvestment as a strategy to save costs, economists expect that firms willing to invest in AI and related institutional changes will experience greater productivity gains from AI sooner.[47]

Cultural factors may also be slowing the workplace effects of AI. Reports of so-called AI stigma—a sense that colleagues may look down on co-workers for using AI—is pervasive.[48] An unwillingness to use AI among a firm's employees may reduce the usefulness of even highly reliable AI tools and delay any potential productivity gains. Stigmatization may also cause workers to engage in riskier uses of AI because of a hesitancy to seek out information on how to properly use AI. When I travel the country talking to lawyers about AI, for instance, many attendees tell me after the fact that they rarely share how they use AI with colleagues because so many lawyers fear that they will become the subject of the next story detailing a lawyer submitting a brief with a hallucinated citation.[49] Lawyers aren't alone in feeling

[38] Andy Kemp, AI Use at Work Rises, Gallup (Dec. 14, 2025), https://www.gallup.com/workplace/699689/ai-use-at-work-rises.aspx.
[39] Press, *supra* note 17, at 1.
[40] *Id.*
[41] Kemp, *supra* note 38.
[42] *Id.*
[43] Press, *supra* note 17, at 3.
[44] *Id.* at 5.
[45] *Id.*
[46] Marcus Weldon, Centaurs, Canaries and J-Curves: Pitfalls and Productivity Potential of AI, Newsweek (Dec. 18, 2025), https://www.newsweek.com/nw-ai/centaurs-canaries-and-j-curves-pitfalls-and-productivity-potential-of-ai-11214666; *see* Nicolas de Bellefonds, Where's the Value in AI?, BCG (Oct. 24, 2024), https://www.bcg.com/publications/2024/wheres-value-in-ai (suggesting a similar ratio for successful adoption).
[47] Weldon, *supra* note 46 (sharing economic analysis of the relationship between firm investments in AI and resulting productivity).
[48] Bruce Crumley, Employees Fear the Stigma of Using AI at Work, According to a Study, Inc. (May 12, 2025), https://www.inc.com/bruce-crumley/employees-fear-the-stigma-of-using-ai-at-work-according-to-a-study/91187736.
[49] Kevin Frazier, What I say to lawyers about AI, Appleseed AI (May 22, 2025), https://appleseedai.substack.com/p/what-i-say-to-lawyers-about-ai.

as though they have to hide their AI use. So-called secret cyborgs—employees clandestinely using AI—exist in many companies.[50]

Technical limitations additionally explain why AI adoption has generally been confined to taking over or assisting with discrete tasks. Evaluations of the extent to which AI tools have "economically relevant capabilities" show that AI has a long way to go before outpacing workers on each of their tasks.[51] OpenAI's GDPval, which assesses the performance of AI tools across 1,320 specialized tasks relevant to 44 occupations, indicates that leading AI tools demonstrate near expert-level performance on about 48 percent of key tasks.[52] Certain tasks—though involving "know-what" or judgement, wisdom, and intuition--will likely remain beyond the capabilities of AI tools for quite some time.[53] That said, today's AI is the worst AI we will ever use.

Several likely technical advances in the short- to medium-term may hasten the ability of AI to augment or automate a broader suite of tasks as well as to assist in the redesign of entire processes. Agentic AI systems—tools capable of autonomously performing any tasks someone could do on their computer--loom on the horizon.[54] In short, whereas most AI tools today require the user to continually prompt or instruct the tool, AI agents can pursue goals set by the user with little to no intervention.[55] While early agentic systems are already available, they tend to struggle on especially complex or long-lasting tasks.[56] AI developers expect that these shortcomings can and will be addressed in the near future--heralding the second phase of AI-driven transformation of the economy.

AI agents will allow for a new kind of business—companies designed entirely around AI rather than simply turning to AI to aid humans with current obligations.[57] AI-native firms will differ from today's firms in meaningful ways. First, they will require fewer humans relative to competitors that refrain from altering their processes. Second, AI-native firms will operate in a nimbler fashion. AI agents do not tire; they work 24/7/365. AI agents can also quickly be re-tasked at minimal expense, whereas humans may need time and training to become productive in a new line of work.[58] Third, these firms can easily move

[50] Ethan Mollick, Detecting the Secret Cyborgs, One Useful Thing (June 18, 2023), https://www.oneusefulthing.org/p/detecting-the-secret-cyborgs.
[51] Measuring the performance of our models on real-world tasks, OpenAI (Sept. 25, 2025), https://openai.com/index/gdpval/.
[52] *Id.*
[53] Weldon, *supra* note 46.
[54] *See* Seb Murray, AI agents, tech circularity: What's ahead for platforms in 2026, MIT Sloan (Nov. 3, 2025), https://mitsloan.mit.edu/ideas-made-to-matter/ai-agents-tech-circularity-whats-ahead-platforms-2026 (summarizing forecasts of leading AI experts for 2026).
[55] Mark Purdy, What Is Agentic AI, and How Will It Change Work?, Harvard Business Review (Dec. 12, 2024), https://hbr.org/2024/12/what-is-agentic-ai-and-how-will-it-change-work.
[56] Ivan Belcic & Cole Stryker, AI agents in 2025: Expectations vs. reality, IBM (last accessed Dec. 24, 2025), https://www.ibm.com/think/insights/ai-agents-2025-expectations-vs-reality.
[57] Steven Rosenbush, AI-Native Companies Are Growing Fast and Doing Things Differently, WSJ (Feb. 7, 2025), https://www.wsj.com/articles/ai-native-companies-are-growing-fast-and-doing-things-differently.
[58] *See* Paul Downs, Why Training Workers Costs More Than You Think, N.Y. Times (Dec. 4, 2012), https://archive.nytimes.com/boss.blogs.nytimes.com/2012/12/04/why-training-workers-costs-more-than-you-think/ (providing an explicit analysis of costs associated with training a worker from the perspective of a small business owner); *cf.* Press Release, New Economics Foundation, Employers spending a fifth less on employee training than a

in and out of different markets, so long as regulatory and technical systems facilitate such cross-border activity. As an aside, progress in robotics will allow for greater use of AI agents in sectors such as manufacturing where AI use is less common today relative to the knowledge sector, for instance.[59] It is likely that developments in world models—a new set of AI tools that "predict what will happen next in the world, modeling how things move, collide, fall, interact and persist over time"[60] —will accelerate this progress.[61] As the sophistication of world models improves, robots will be able to take on a greater range of tasks with lower error rates and for longer periods of time.[62] For these reasons and more, there will be a strong incentive for firms in many sectors to become more and more oriented around AI agents.

Yet not all sectors are amenable to a systemic overhaul around AI. The most common AI tools have significant limitations in certain domains due to their inherent technical features. As described by John Pavlus, today's AI tools learn "scores of disconnected rules of thumb that can approximate responses to specific scenarios, but don't cohere into a consistent whole."[63] In other words, the usefulness of today's AI is highly context dependent. If AI has not been trained on relevant, up to date data, then it will struggle in that domain.[64]

This is due to the probabilistic nature of generative AI tools. In a very simplified sense, today's AI tools predict the next best word in response to a user's prompt based on their training data, the AI developer's instructions for how to prioritize certain information or responses over others, and safeguards that the AI developer may have imposed to limit the generation of illegal or harmful outputs.[65] Fields lacking data for AI to train on—think everything from the massage industry to crisis response management—will likely not experience a systemic reorientation around AI.

The unpredictability of how AI will advance means that there is no definitive timeline for how these stages will play out in different sectors. The best path forward is to develop agile and adaptive frameworks that facilitate two tasks: first, gathering information about how and to what extent (e.g. for

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decade ago (Mar. 19, 2024), https://neweconomics.org/2024/03/employers-spending-a-fifth-less-on-employee-training-than-a-decade-ago (reporting on the barriers to firms in the UK investing more in worker retraining).

[59] *Cf.* Ainsley Lawrence, AI's Impact on Robots in Manufacturing, American Machinist (Sept. 10, 2024), https://www.americanmachinist.com/automation-and-robotics/article/55138472/the-impact-of-ai-powered-robots-on-manufacturing-efficiency-and-quality-control-automation-technology; *contra* Sean McLain, Even the Companies Making Humanoid Robots Think They're Overhyped, WSJ (Dec. 25, 2025), https://www.wsj.com/tech/ai/humanoid-robot-hype-use-timeline.

[60] Ina Fried, AI's next act: World models that move beyond language, Axios (Nov. 17, 2025), https://www.axios.com/2025/11/17/ai-world-models-digital-twins.

[61] Peter Bowman-Davis, World Models and the Sparks of Little Robotics, a16z (2024), https://a16z.com/world-models-and-the-sparks-of-little-robotics/.

[62] *Id.*

[63] John Pavlus, 'World Models,' an Old Idea in AI, Mount a Comeback, Quanta Magazine (Sept. 2, 2025), https://www.quantamagazine.org/world-models-an-old-idea-in-ai-mount-a-comeback-20250902/.

[64] Katharine Miller, Data-Centric AI: AI Models Are Only as good as Their Data Pipeline, Stanford HAI (Jan. 25, 2022), https://hai.stanford.edu/news/data-centric-ai-ai-models-are-only-good-their-data-pipeline; Hard Fork, Where Is All the A.I.-Driven Scientific Progress?, N.Y. Times (Dec. 26, 2025), https://www.nytimes.com/2025/12/26/podcasts/hardfork-ai-science.html.

[65] *See* Anil Ananthaswamy, New Theory Suggests Chatbots Can Understand Text, Quanta (Jan. 22, 2024), https://www.quantamagazine.org/new-theory-suggests-chatbots-can-understand-text-20240122/ (elaborating on recent research that shows AI tools do more than merely spit out the next best or most likely word).

augmentation, automation, or systemic redesign) AI is being adopted in different sectors; and, second, based on that information, updating labor laws as necessary to permit workers to meaningfully contribute to existing and new tasks and sectors.

III. Measuring Adoption: The Key Information Necessary to Determine How AI is Actually Changing the Economy

Congress cannot help American workers thrive in the Age of AI if it is operating with outdated, incomplete, or inaccurate data about the aforementioned phases of AI adoption into the economy.[66] Yet, the Federal Government's current approach to learning about private sector use of novel technology and complex scientific and technological matters in general is highly reactionary and fragmented.[67] Notably, these issues predated the current AI policy conversation. "Congress is science-poor," concluded Martha Kinsella & Maya Kornberg in 2023.[68] They continued, "The lack of scientific understanding and expertise cramps policymaking, with terrible effects on the country. Congress can fill this gap itself, and it must."[69] Absent changes, Congress will lack the information necessary to properly evaluate and, if necessary, respond to economy-wide trends emerging from AI.

In theory, a lawmaker focused on identifying the tasks and roles their constituents should seek out in the Portfolio Economy could gather information from the following sources: tax returns that may provide indirect evidence of the intensity of corporate investment in AI development and adoption; SEC disclosures that refer to corporate AI strategies; notices of layoffs that may have been driven by AI as compelled by the Worker Adjustment and Retraining Notification (WARN) Act; and, responses to AI-related Census and other recurring survey questions. In practice, that lawmaker will find themself woefully uninformed about the nature of AI adoption.

These information sources are either too narrow, too broad, or too infrequent to provide Congress with an accurate picture of AI capabilities and the extent to which those capabilities are being adopted by private actors. For instance, the WARN Act was enacted to provide state and federal officials with more information about large-scale factory closures, which differ from the timing and nature of AI-induced layoffs.[70] More generally, the aforementioned sources generally do not require explicit and ongoing reporting about AI use by the private sector. Even if several agencies attempted to collect such AI-related

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[66] *Cf.* John Neumann & Sterling Thomas, Science and Technology: GAO's Support for Congress, GAO (Mar. 2025), https://www.gao.gov/assets/gao-25-107724.pdf (explaining why and how the GAO attempts to provide Congress with more timely reports on emerging technology to inform legislative action).

[67] Peter Andrey Smith, Congress used to evaluate emerging technologies. Let's do it again., MIT Tech Review (Feb. 19, 2025), https://web.archive.org/web/20250330074929/https://www.technologyreview.com/2025/02/19/1111573/congress-office-technology-assessment-emerging-innovation/; Martha Kinsella & Maya Kornberg, Science-Poor Congress Needs More than Google Searches for Tech Legislation, Brennan Center (Dec. 14, 2023), https://www.brennancenter.org/our-work/analysis-opinion/science-poor-congress-needs-more-google-searches-tech-legislation.

[68] Kinsella & Kornberg, *supra* note 67.

[69] *Id.*

[70] Kevin Frazier, Modernizing the WARN Act to Protect US Workers from AI Displacement, Tech Policy Press (Sept. 12, 2024), https://www.techpolicy.press/modernizing-the-warn-act-to-protect-us-workers-from-ai-displacement/.

metrics, the resulting information would still be of limited value. There is no standard agreement among these various agencies nor within the applicable statutes as to how to define AI, AI adoption, and related terms that would be of interest to the lawmaker in question.[71] Reporting requirements may also elicit too much as well as too little information. On the one hand, not all firms of interest are captured by these disparate collection mechanisms and not all firms may invest the same level of resources to accurately respond to such inquiries; on the other, firms may opt to flood agencies with information to reduce the odds of the meaningful kernels being identified.[72] Congress and receiving agencies may also lack the capacity to meaningfully analyze what may be troves of data on AI development, diffusion, and adoption.[73]

Absent significantly more accurate and timely data, it is highly likely that Congress will be tempted to legislate in response to anecdotes rather than based on evidence. That's a solvable problem. Rather than rush to regulate AI and hope that the chosen statutory response will work as intended, Congress needs to thoroughly examine and improve how the Federal Government learns about AI use across the economy. Notably, this will mark an improvement upon how the government has previously responded to information gaps related to emerging technology—consider that there was a twelve year gap (2005 to 2017) between formal reports on the state of the contingent and alternative work arrangements,[74] well after the rise of this key part of the economy.[75] As late as 2024, such reports did not even include specific analysis of app-based work arrangements.[76] Assuming that Congress corrects for this lag in the context of AI, a few key principles should guide any information gathering proposal.

First, collected AI-related information should generally be anonymized when submitted and aggregated when shared so that companies are incentivized to provide the most accurate and comprehensive data possible. If companies are coerced into making their AI adoption plans fully known to the public, they may face popular scrutiny for merely attempting to adjust to the Age of AI.[77] This will have the pervasive effect of slowing AI adoption, resulting in U.S. firms being technological laggards and, consequently, slower to create the products, services, and jobs of the future. Lawmakers seeking to develop educational

[71] *See* Ayesha Gulley & Airlie Hilliard, Lost in Transl(A)t(I)on: Differing Definitions of AI, Holistic AI (Feb. 19, 2024), https://www.holisticai.com/blog/ai-definition-comparison (reviewing disparate definitions of AI across several frameworks, statutes, and proposals); Greta Kerkhoff et al., Coloradans are feeling the effects of AI as the state's legislative deadlock over regulation continues, The Colorado Sun (Dec. 29, 2025), https://coloradosun.com/2025/12/29/colorado-legislature-ai-law-debate-2025/ (reporting on some of the reasons why Colorado's AI Act has been criticized).
[72] Wendy E. Wagner, *Administrative Law, Filter Failure, and Information Capture*, 59 DUKE L. J. 1321, *passim* (2010).
[73] Jonathan G. Pray, *Congressional Reporting Requirements: Testing the Limits of the Oversight Power*, 76 U. COLO. L. REV. 297, 299-300 (2005).
[74] Nicholas Kacher & Stephan Weiler, Inside the Rise of the Gig Economy, Colorado State (Apr. 2017), https://csuredi.org/redi_reports/inside-the-rise-of-the-gig-economy/.
[75] *Id.*; *see* Liya Palagashvili & Revana Sharfuddin, A Fresh Look at the Independent Workforce with New BLS Data, Labor Market Matters (Nov. 26, 2024), https://www.labormarketmatters.com/p/a-fresh-look-at-the-independent-workforce.
[76] Palagashvili & Sharfuddin, *supra* note 75.
[77] *See, e.g.,* Emma Roth, Amazon CEO says it will cut jobs due to AI's 'efficiency', The Verge (June 17, 2025), https://www.theverge.com/news/688679/amazon-ceo-andy-jassy-ai-efficiency (framing Amazon's AI adoption plans in a negative light due, in part, to related plans to lay off workers).

and workforce development programs for the Portfolio Economy can do so with broader measures of AI adoption rates by firm size and industry type, for instance.

Second, information sharing processes should be as automatable as possible to reduce the costs and operational burdens associated with compliance, an especially key concern for small businesses. The costs to comply with even straightforward regulations are disproportionately high for small and medium-sized businesses.[78] Some may accordingly call for businesses under a certain threshold being omitted from any mandatory AI adoption information scheme. However, the omission of smaller companies will deprive Congress of critical information when it comes to preparing for the Portfolio Economy.

Startups and small businesses are often on the vanguard of creating and offering new products and services. They also are engines of economic opportunity and dynamism—facilitating the sort of churn that will allow workers to build out a larger portfolio of client companies.[79] Congress must have a strong grasp of the state of AI across firms of all sizes. To accomplish this goal, policymakers should explore the use of AI to gather this information from private stakeholders and should mandate that agencies collecting any relevant data use standard forms and definitions.[80]

Third, companies that make a good faith effort to comply with any such reporting requirements should be given the opportunity to cure any incorrect or late disclosures.[81] This regulatory safe harbor will have the dual benefit of increasing the odds of companies submitting information in the first place and, therefore, providing Congress with a more complete picture of the AI landscape and state of the Portfolio Economy.[82]

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[78] Mark Dalton, Regulations Can Create the Monopolies They're Meant to Prevent, The Dispatch (Nov. 18, 2025), https://thedispatch.com/article/regulations-compliance-cost-barriers-to-entry/; Francesco Trebbi & Miao Ben Zhang, The Cost of Regulatory Compliance in the United States, NBER (Nov. 2022), https://www.nber.org/papers/w30691.

[79] *See* Michael Peters, America Must Rediscover Its Dynamism, F&D Magazine (Sept. 2024), https://www.imf.org/en/publications/fandd/issues/2024/09/america-must-rediscover-its-dynamism-michael-peters (explaining the economic significance of firm-to-firm reallocation).

[80] Cullen O'Keefe & Kevin Frazier, Automated Compliance and the Regulation of AI, LawAI Paper Series, No. 1-2026; *see* Paul Ohm, Toward Compliance Zero: AI and the Vanishing Costs of Regulatory Compliance, Network Law Review (2025), https://www.networklawreview.org/ohm-ai-regulation/; *cf.* How AI is poised to reshape compliance functions, KPMG Law (2025), https://assets.kpmg.com/content/dam/kpmgsites/xx/pdf/2025/07/how-ai-is-poised-to-reshape-compliance-functions.pdf (exploring how AI may be able to assist firms in their compliance tasks); *see also* Graham Tasman et al., AI helps institutions comply with confidence, Grant Thornton (Oct. 14, 2024), https://www.grantthornton.com/insights/articles/banking/2024/banks-see-benefits-of-ai-in-regulatory-compliance (identifying an example of a sector benefiting from AI tools in compliance tasks).

[81] It is not uncommon for regulated entities to miss disclosure deadlines. *See, e.g.,* Eli Bartov & Yaniv Konchitchki, *SEC Filings, Regulatory Deadlines, and Capital Market Consequences*, 31 ACCT. HORIZONS 109 (2017).

[82] Federal agencies have explored or adopted cure periods to ease and facilitate compliance with different regulatory frameworks. *See, e.g.,* Walter Ramsden, FERC Commissioners Phillips, Clements Call for "Cure Periods" in Interconnection Procedures (Feb. 13, 2024), https://foleyhoag.com/news-and-insights/blogs/energy-and-climate-counsel/2024/february/ferc-commissioners-phillips-clements-call-for-cure-periods-in-interconnection-procedures/ (discussing a cure period proposal by two commissioners on the Federal Energy Regulatory Commission); Ning Chiu, Nasdaq Provided Limited Discretion to Allow Cure Periods for Non-Compliance with Annual Meeting Requirements (Feb. 17, 2016), https://www.davispolk.com/insights/client-update/nasdaq-provided-limited-discretion-allow-cure-periods-non-compliance-annual (explaining a cure period approved by the SEC).

Fourth, any information collection schemes should be subject to a sunset clause. Congress should have to regularly reexamine whether it still requires certain information. This will reduce the odds of America's companies being saddled by increasingly onerous, duplicitous, or antiquated information reporting requirements.[83] Additionally, this recurring investigation of the need for specific information will force Congress to clearly think through why certain information may or may not be necessary for its regulatory goals. It's highly likely that the metrics that matter most for informing AI policy will shift as the technology and its inputs evolve. By way of example, demands for information on the training data used by AI labs may be less legally important if labs begin to instead train on synthetic data—data generated by another AI.

Adherence to these principles will put Congress and the entire Federal Government in a much stronger position to see how the Portfolio Economy is emerging in real-time. In turn, policymakers can develop responsive policies that help Americans navigate this new economic reality. That said, Congress should not wait to begin to study how to proactively set Americans up for success in a more dynamic and fluid labor market.

IV. Planning for the Portfolio Economy

As previously mentioned, AI is compounding several trends that were already straining labor laws better suited to technologies and market forces in place in the 1920s than the 2020s.[84] A few such trends are especially relevant to the Portfolio Economy. For one, it's far from a new phenomenon that more Americans are working in a continent or alternative work arrangement.[85] Somewhere between ten and thirty percent of US workers derive their primary income from a nontraditional work arrangement.[86] Despite that vast span, it is evident that such arrangements have become more common in the 2000s.[87] Numerous signals suggest this trend will not abate.[88]

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[83] *Cf.* Annie Brett, *Rethinking Environmental Disclosure*, 112 CAL. L. REV. 1535, *passim* (2024) (questioning the efficacy of numerous information-forcing statutes in the context of environmental regulations).

[84] David Weil, *Understanding the Present and Future of Work in the Fissured Workplace Context*, 5 J. SOC. SCI. 147, *passim* (Dec. 2019); John Hagel III, Navigating the future of work: Can we point business, workers, and social institutions in the same direction?, 21 Deloitte Review (July 31, 2017), https://www.deloitte.com/us/en/insights/topics/talent/navigating-new-forms-of-work.html; *see* Future of Work, The End of the Full-Time Job: How Fractional Work Finally Liberates Us (with WSJ Best-Selling Author Edie Goldberg, SHRM Foundation), FlexOS (Oct. 27, 2023), https://www.flexos.work/learn/end-of-full-time-job-fractional-work-liberates-wsj-best-selling-author-edie-goldberg-shrm-foundation (spotting continued fractionalization of work in the early days of the Age of AI).

[85] Lawrence F. Katz & Alan B. Krueger, The Rise and Nature of Alternative Work Arrangements in the United States, 1995-2015, NBER (Sept. 2016), https://www.nber.org/papers/w22667.

[86] Liya Palagashvili, Understanding Nontraditional Work Arrangements and the Policy Landscape for Self-Employed Workers and the Gig Economy, AEI at 2 (July 2023), https://www.aei.org/wp-content/uploads/2023/06/Understanding-Nontraditional-Work-Arrangements-and-the-Policy-Landscapes-for-Self-Employed-Workers-and-the-Gig-Economy.pdf?x85095.

[87] *See id.* at 5, 8 (using non-employer business statistics as a proxy for assessing the growth of alternative work arrangements).

[88] *See* Kelly Monahan & Alexanda Levit, Rigid work models won't survive AI. Here's what will., Fortune (Mar. 18, 2025), https://fortune.com/2025/03/18/ai-disruption-flexible-workforce-talent-skills/.

The jagged frontier of AI means that which tasks are in demand will vary in a rapid fashion.[89] New tools will be deployed with minimal notice and innovators will devise creative ways for humans to leverage AI. The net effect of these two facts is a shifting menu of highly sought after skills.[90] Firms, especially following recent overhiring,[91] are rightfully cautious of hiring too many people in fields that may soon be eliminated or altered;[92] increased uncertainty as to the value of different skills will only further entrench their preference for alternative work arrangements over traditional W-2 agreements.[93]

Workers, too, increasingly seek out flexible work arrangements. Following the pandemic, businesses that tolerate a wider range of hours, schedules, and work locations have seen an uptick in interest by applicants and retention among employees.[94] The next generations of workers may place an even higher premium on bespoke work arrangements. Members of Gen Z have signaled a strong demand for anything other than 9-5 work.[95] Forecasters expect Gen Alpha will seek out similarly flexible job opportunities.[96]

In this fluid, shifting, and skill-specific labor market, there's also a strong mutual interest among employers and workers alike for efficacious upskilling and retraining programs. All else equal, employers stand to benefit from a deeper labor pool--both in terms of the absolute number of qualified workers[97] and the range of skills held by the average worker.[98] Workers with more skills or a proven ability to quickly

[89] Jean Xiao Timmerman, Educational Exposure to Generative Artificial Intelligence, Board of Governors of the Federal Reserve System (Feb. 26, 2025), https://www.federalreserve.gov/econres/notes/feds-notes/educational-exposure-to-generative-artificial-intelligence-20250226.html; Your Undivided Attention, AI and the Future of Work, Center for Humane Technology (Dec. 4, 2025), https://centerforhumanetechnology.substack.com/p/ai-and-the-future-of-work.
[90] Sue Duke, AI is changing work — the time is now for strategic upskilling, World Economic Forum (Apr. 4, 2025), https://www.weforum.org/stories/2025/04/linkedin-strategic-upskilling-ai-workplace-changes/ ("The skills needed for work are expected to change by 70% by 2030 too. That massive shift is being accelerated by AI.").
[91] Jacob Zinkula, The year Big Tech job market cracked, Business Insider (Dec. 12, 2025), https://www.businessinsider.com/big-tech-job-market-hiring-cracked-layoffs-amazon-microsoft-2025-12.
[92] *Cf.* Alicia Wallace, Americans have a new thing to worry about: A stuck job market with no quick fix, CNN (Dec. 19, 2025), https://www.cnn.com/2025/12/19/economy/us-labor-market-outcomes (examining why firms may be especially cautious around hiring amid technological uncertainty).
[93] *See* Freelancing Meets Gen Z Modern Work Needs, Upwork (May 14, 2024), https://www.upwork.com/research/gen-z-work-requirements (pinpointing several reasons why there is an expected long-term increase in demand for flexible workers).
[94] *See* John Manuel Barrios, In the Wake of the Pandemic, Flexible Work Arrangements Made Workers Less Likely to Start Their Own Businesses, Yale Insights (Aug. 12, 2025), https://insights.som.yale.edu/insights/in-the-wake-of-the-pandemic-flexible-work-arrangements-made-workers-less-likely-to-start.
[95] Freelancing Meets Gen Z Modern Work Needs, Upwork (May 14, 2024), https://www.upwork.com/research/gen-z-work-requirements.
[96] Dan Black, It's already time to start preparing the workplace for Gen Alpha, Fast Company (July 8, 2024), https://www.fastcompany.com/91149762/its-already-time-to-start-preparing-the-workplace-for-gan-alpha.
[97] Roy Maurer, Talent Scarcity, Skills Gaps Challenge Recruiting, SHRM (Apr. 12, 2024), https://www.shrm.org/topics-tools/news/talent-acquisition/talent-scarcity-skills-gaps-challenge-recruiting.
[98] *See* Jacob Clemente, Will AI Make Jobs Less Specialized?, TIME (Sept. 9, 2025), https://time.com/charter/7315480/will-ai-make-jobs-less-specialized/ (reviewing the extent to which firms may favor generalists over specialists).

pick up skills will allow firms to easily shift between AI, humans, and human-AI teams as the technology, culture, and regulations evolve.[99]

Relatedly, workers have an obvious interest in maintaining and, when possible, increasing their skill portfolio. In an economy that turns quickly to reward certain skills,[100] the workers with a wide range of skills and the capacity to apply them in different contexts will fare better.[101] Employers may soon look for evidence that workers are capable of adding immediate value to small and large businesses as well as to businesses operating in different sectors and even in different countries; in other words, the capacity to adapt and to problem solve will likely become even more valuable as the economy and technology continue to evolve.

Crucially, the Federal Government also has an interest and role to play in a skills-based economy. In an international market for skills, employers may turn to workers in other countries to tackle specific short-term efforts if they cannot find domestic talent.[102] When companies come to rely more and more on foreign talent, the domestic economy will struggle, which has obvious negative ramifications on the government. Rather than attempt to interfere in dictating the specific skills workers ought to learn and the precise means to do so, the Federal Government can instead ensure the proper market and legal structures exist that achieve the following: first, make it as easy as possible for workers to accurately signal their skills to employers; second, ensure workers and employers alike have plenty of opportunities to learn new skills and to provide ongoing training opportunities, respectively; and, third, design labor laws such that workers can easily shift between different employers and projects and participate in lifelong learning and apprenticeship opportunities.

This is an ambitious but necessary agenda. In the same way that the successful business of the future will find ways to reorient their processes around AI rather than merely improve existing systems, success on this agenda will turn on the extent to which policymakers are willing to reinvent the wheel. The recommendations below are presented at a high level to facilitate this sort of bold thinking—the goal is to prevent the sort of piecemeal, fragmented approach that may take place through one-off amendments to current frameworks.

A. Skill Signaling Reform

[99] *See* Tracy Brower, The most important career skill to build in 2026, Fast Company (Dec. 29, 2025), https://www.fastcompany.com/91456491/the-most-important-career-skill-to-build-in-2026 (touting the importance of workers learning to adapt).
[100] *See* Orianna Rosa Royle, Gen Z could wave goodbye to résumés because most companies have turned to skills-based recruitment—and find it more effective, research shows, Fortune (Dec. 29, 2025), https://fortune.com/article/gen-z-no-resumes-companies-turning-to-skills-based-recruitment/ (providing an overview of skills-based hiring, which has become increasingly popular among private actors).
[101] Jessica A. Kent, How to Keep Up with AI Through Reskilling, Harvard Division of Continuing Education (July 8, 2025), https://professional.dce.harvard.edu/blog/how-to-keep-up-with-ai-through-reskilling/#Why-Reskilling-is-Essential-for-Career-Longevity.
[102] Darie Nani, US Hiring Drought Forces Companies to Look Beyond Borders for Tech Talent Solutions, Sovereign Magazine (July 10, 2025), https://www.sovereignmagazine.com/hr-recruiting/us-hiring-drought-forces-companies-look-beyond-borders/.

The transition to a Portfolio Economy will falter if workers lack credible, low-cost ways to signal what they can do—and if employers lack reliable tools to identify that talent. Today's dominant signals of worker competence—grades, formal educational degrees, and static certifications—are increasingly ill-suited to a labor market defined by rapid skill turnover, short-term engagements, and shifting patterns of human-AI collaboration.[103] Grade inflation has eroded the informational value of transcripts.[104] Degree requirements frequently function as blunt proxies for aptitude rather than evidence of job-relevant skills. At the same time, a proliferation of fast-moving credentials and training programs has added noise rather than clarity to the labor-matching process.[105]

In the Portfolio Economy, skill signaling systems should communicate competence as well as encourage and shape future investment. Workers are more likely to pursue retraining when they can credibly document and monetize new skills. Employers are more likely to fund training when those investments are applicable across projects and teams for varying periods of time. Absent more accurate and dynamic signals of skills, both sides of the labor market will underinvest in upskilling, slowing adaptation at a time when economic dynamism is of extreme importance.

For these reasons, Congress should prioritize reforms that modernize how skills are documented, verified, and shared. While traditional credentialing mechanisms may continue, they should no longer occupy favored status in terms of federal funding and value in the labor market. A revised, skills-based, standardized skills signaling system can supplement—and over time improve upon—traditional credentials with more precise, continuously updated, and trustworthy signals that better align with the realities of portfolio-based work.

1. Initiate a study and pilot program for a Cryptographic Curriculum Vitae.

Congress should direct the Department of Labor, in coordination with the Department of Education and the National Institute of Standards and Technology, to study the feasibility of providing each American worker with a cryptographic curriculum vitae (C-CV)—a secure, portable, and serially updated record of verified skills, competencies, and work experiences. A C-CV would allow workers to document what skills they possess and both how and where those skills were acquired and applied, including through formal education, apprenticeships, short-term contracts, and on-the-job learning.

For employers operating in the Portfolio Economy, C-CVs would significantly reduce the transaction costs associated with identifying the right talent for discrete tasks or time-limited projects. Rather than relying on coarse proxies such as degrees or job titles, firms could examine more reliable sources of information, such as whether a worker has demonstrated proficiency in specific tools, methods, or

[103] Richard Vedder, The Pernicious Effects of Grade Inflation, Martin Center for Academic Renewal (Nov. 28, 2025), https://jamesgmartin.center/2025/11/the-pernicious-effects-of-grade-inflation/ (noting the diminished value of college degrees due to grade inflation); Jon Marcus, Credential chaos: Growing "maze" of education credentials is confusing consumers and employers, Hechinger Report (Dec. 24, 2021), https://hechingerreport.org/credential-chaos-consumers-employers-struggle-to-make-sense-of-a-maze-of-education-credentials/ (assessing the "maze" of different credentials, many of which are unknown to employers); Matthew Bone et al., *Skills or degree? The rise of skill-based hiring for AI and green jobs*, 214 TECH. FORE. & SOC. CHANGE (2025) (weighing the comparative value of skills-assessments versus degrees in hiring processes in growing fields).
[104] Vedder, *supra* note 103.
[105] Marcus, *supra* note 103.

workflows. For workers, C-CVs would lower barriers to entry across firms and sectors, enabling them to market discrete skills to multiple employers simultaneously and to update their profiles as their capabilities evolve.

At a minimum, the study should address:

- How to evaluate and record skill proficiency across K–12 education, higher education, apprenticeships, and professional settings in ways that are comparable without being rigid or exclusionary.
- How to incorporate evidence of real-world application—such as project outcomes, employer attestations, or peer validation—while protecting sensitive or proprietary information.
- Which governance structures are best suited to oversee a C-CV Exchange—where employers and workers can post opportunities and share their skills, including clear standards for privacy, cybersecurity, and antidiscrimination compliance.
- A phased rollout strategy, including pilot programs in select states, regions, or industries, to assess adoption, usability, and labor-market effects.
- Whether, and under what conditions, recipients of federal education or workforce development funds should be required to participate in the C-CV Exchange to ensure interoperability and broad access.

2. Convene competitive, employer-validated skill assessment frameworks.

Federal legislators and regulators should authorize and fund convenings that bring together employers, educators, workforce development organizations, and technologists to design multiple, competing skill evaluation tools.[106] Rather than imposing a national standard, the Federal Government should facilitate experimentation and then collect data on which assessments employers find most predictive of job performance and most accurate in terms of worker expertise across various domains. These convenings ought not crowd out the work that is already being done in this space but rather fuel it. The Markle Group has collaborated with others to create a "Job Posting Skillitizer."[107] Hiring managers can use this tool to craft skills-based job descriptions that lend themself to a skills-based approach to labor matching.[108] While it's a useful product, it could likely benefit from ongoing scrutiny by labor market participants—that's where such convenings could come in handy. Iterative assessment of this kind could occur across all aspects of the labor market.

This competitive, information-driven process would allow ineffective or noisy assessments to fall out of use while rewarding those that accurately capture job-relevant skills. Over time, this feedback loop would improve the quality of skill signals available to both workers and firms, ensuring that educational and

[106] *Cf.* Empowering the Workforce in the Context of a Skills-First Approach, Empowering the Workforce in the Context of a Skills-First Approach, OECD at 7-8 (2025), https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/06/empowering-the-workforce-in-the-context-of-a-skills-first-approach_0e3be363/345b6528-en.pdf?utm_source=chatgpt.com (stressing the importance of multi-stakeholder efforts to create means for defining, measuring, and verifying skills).
[107] Job Posting Generator for Employers, Markle Foundation (last accessed Dec. 30, 2025), https://www.markle.org/job-posting-generator-employers/.
[108] *Id.*

training programs evolve in response to actual labor-market demand rather than static credentialing norms.

3. Align federal education and workforce funding with improved skill transparency.

Even if Congress were to follow the first two recommendations, there will be an ongoing need to create and share skill evaluation tools. If Congress determines that the private sector is not sufficiently developing and adopting such evaluations, then it ought to commission an analysis of the extent to which traditional grading and credentialing systems fall short of employers' and workers' needs in a skills-based labor market. This rigorous examination is pivotal to deterring students and workers from chasing credentials with little to no economic return on investment. Of the hundreds of thousands, if not millions of badges, certificates, and other credentials,[109] many fail short of qualifying as "credentials of value,"[110] or credentials that "equip recipients for strong career trajectories, improve their earnings opportunities, align with high-demand jobs offered by . . . employers," and propel recipients to "earn enough within 10 years to pay for the cost of their education[.]"[111] That analysis should inform the imposition of conditions on federal education and workforce development funds and grants, with the aim of encouraging—though not abruptly mandating—the adoption of more granular, skills-based reporting mechanisms.

By tying federal support to improved skill transparency rather than to particular credentials, Congress can help institutions orient toward outcomes that matter in the Portfolio Economy without dictating curricular content or instructional methods. To be blunt, ongoing direct and indirect support of educational and vocational programs that do little to help workers show their capabilities and employers find the best workers represents a poor allocation of federal funds given superior alternatives.

4. Establish a legal safe harbor for skills-based hiring and signaling.

Congress should enact a statutory safe harbor clarifying that employers who hire based on the C-CV Exchange and otherwise rely in good faith on validated, skills-based signals—rather than degree requirements or pedigree-based proxies—will not face heightened liability under federal employment or civil rights laws, provided those tools are demonstrably job-related and nondiscriminatory in design.

This reform would remove a significant legal disincentive to modernizing hiring practices. Many employers may default to degree requirements when hiring because they are familiar and legally safe more so than due to the informational value of degrees.[112] A clear safe harbor would accelerate the shift

[109] Counting Credentials 2025 Report, Credential Engine (last accessed Dec. 30, 2025), https://credentialengine.org/all-resources/2025-counting-credentials/.
[110] Matt Krupnick, Non-degree 'badges' are booming. Are they really useful?, PBS (Nov. 16, 2018), https://www.pbs.org/newshour/education/non-degree-badges-are-booming-are-they-really-useful.
[111] Ensuring Students Attain Credentials of Value, DataBridge (May 29, 2025), https://databridge.highered.texas.gov/credentials-of-value/.
[112] *See* Barbara A. Butrica & Stipica Mudrazija, Skills-Based Hiring and Older Workers, Urban Institute (Mar. 2022), https://www.urban.org/sites/default/files/2022-03/Skills-Based%20Hiring%20and%20Older%20Workers.pdf (studying whether a move to skills-based hiring may disproportionately favor younger workers); Steve Taylor & Jonathan Wolfson, Skills-Based Hiring Is Catching On. Outdated Laws Are Holding It Back., Governing (Oct. 3, 2025), governing.com/workforce/skills-based-hiring-is-catching-on-outdated-laws-are-holding-it-back (looking into potential legal barriers to skills-based hiring).

toward skills-first hiring, expanding opportunity for workers whose competencies were acquired outside traditional pathways and improving labor-market matching efficiency.

Application of these reforms would strengthen the informational infrastructure of the labor market. Workers would be better positioned to invest in new skills with confidence that those investments can be credibly signaled and rewarded. Employers would gain faster, cheaper, and more accurate access to talent. And policymakers would support a labor market that rewards adaptability, continuous learning, and demonstrated competence—the core attributes required to thrive in a Portfolio Economy shaped by rapid technological change.

B. Increasing Skill Development Opportunities

The Portfolio Economy will reward workers who can repeatedly acquire, apply, and redeploy skills across shifting tasks, firms, and industries. Yet much of federal labor and education policy still reflects a linear model of work: education occurs upfront, retraining is episodic and reactive, and employer-provided training is treated as a discretionary benefit rather than an operational necessity.[113] Those assumptions create avoidable friction. They raise the cost of entering learning-oriented roles, make it harder to finance mid-career pivots, and discourage both workers and firms from investing in skills that will be valuable precisely because they are adaptable and portable.[114]

Congress need not and should not attempt to forecast which skills will matter most. The jagged frontier of AI makes such predictions unreliable.[115] A more durable federal role is to remove legal and financial barriers that prevent workers and employers from responding to shifting skill demand in real time, while building in mechanisms for learning and course correction.[116] The proposals below are intended to expand the range of lawful, practical pathways through which Americans can build skills through formal

[113] Robert Maxim, No Helping Hand: Federal Worker-Retaining Policy, Council on Foreign Relations *passim* (Jan. 2026), https://cdn.cfr.org/sites/default/files/book_pdf/RA-NoHelpingHand%20%281%29.pdf?; *see* David Burton, A Guide to Labor and Employment Law Reforms, The Heritage Foundation (Oct. 9, 2020), https://www.heritage.org/jobs-and-labor/report/guide-labor-and-employment-law-reforms (probing the origins and original purposes of several key labor laws); *cf.* Sophie Caldwell, The 9 to 5 schedule is 'really archaic,' HR expert says: Employees are 'tired of being told what to do', CNBC (Aug. 25, 2025), https://www.cnbc.com/2025/08/25/the-9-to-5-schedule-is-really-archaic-hr-expert-says.html (reporting on the outdated use of a 9-to-5 schedule).

[114] *Cf.* Josh Bivens & Ben Zipperer, Unbalanced labor market power is what makes technology--including AI--threatening to workers, EPI (Mar. 28, 2024), https://www.epi.org/publication/ai-unbalanced-labor-markets/ (reviewing how various frictions in the labor market can inhibit the ability of workers to find the best job and transition to that role).

[115] *See* Michael S. Barr, Artificial Intelligence and the Labor Market: A Scenario-Based Approach, Board of Governors of the Federal Reserve System (May 9, 2025), https://www.federalreserve.gov/newsevents/speech/barr20250509a.htm (citing uncertainty around the economic effects of AI as reason for using a scenario-based approach to related policy decisions); *cf.* Experts cut through the noise to clarify AI's actual economic impact, Stanford Report (Dec. 4, 2025) https://news.stanford.edu/stories/2025/12/ai-facts-siepr-policy-forum-fei-fei-ling-mark-kelly (summarizing proceedings in which economists and other experts acknowledged uncertainty around the economic implications of AI diffusing across various sectors).

[116] *See* Bivens & Zipperer, *supra* note 114 (calling for mechanisms that ease worker transitions to new roles).

education, vocational programs, and on-the-job learning—without imposing unnecessary federal mandates or rigid national standards.

1. Ease the creation of more trainee opportunities for young Americans.

Young Americans have found the current economic churn particularly hard to navigate.[117] The combination of a shifting labor market and inadequate incentives for firms to gamble on entry-level workers with unknown capabilities has resulted in a troublingly high rate of unemployment among recent graduates and other young Americans.[118] Failure to help these Americans find their economic footing may have dire long-term consequences. The first few years of a worker's career go a long way toward shaping their future professional path. If they find themselves underemployed for prolonged periods, then they may never find their way to more appropriate and remunerative forms of employment.[119]

That's why it is necessary to amend the 90 calendar-day youth minimum wage exception under the Fair Labor Standards Act (FLSA) to 180 days,[120] subject to a two-year sunset clause. The labor-market logic behind this proposal is simple: many entry-level, learning-oriented positions require more than a brief introductory period before a worker becomes productive; yet firms face an uncertain return on investment in expending resources on training opportunities. Extending the youth minimum window reduces the marginal cost to employers of offering longer trainee roles and increases the likelihood that youth work experiences generate durable, transferable skills rather than short-term, low-skill churn.[121] Moreover, this longer term can foster more meaningful work-trial periods over which the worker and employer can determine if there's a good fit for a longer-term, more permanent role.

Because the risks of abuse of this extension are real[122]—particularly substitution of lower-cost youth labor for adult labor or the creation of extended low-wage roles with little skill accumulation—Congress should require retrospective evaluation of such programs by the Department of Labor during the two-year pilot period. That evaluation should focus on measurable outcomes rather than compliance formalities: rates of participation, wage progression after the exception ends, duration of employment, transition into apprenticeships or higher-wage roles, and any displacement effects. This sunset clause will force Congress to revisit the policy in light of evidence and to narrow, expand, or terminate it accordingly.

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[117] Courtenay Brown, Young America faces an economic crisis, Axios (Sept. 10, 2025), https://www.axios.com/2025/09/10/jobs-young-adults-labor-market.
[118] Jennifer Liu & Zachary Green, Why it's so hard for Gen Z to find a job right now: 'None of us are really thriving.', CNBC (Dec. 8, 2025), https://www.cnbc.com/2025/12/08/how-recent-grads-are-dealing-with-the-shrinking-pool-of-entry-level-jobs.html.
[119] Kamaron McNair, College grads who land better jobs right out of school still earn more than their peers 5 years into their careers, study finds, CNBC (Oct. 29, 2025), https://www.cnbc.com/2025/10/29/study-shows-your-first-job-after-college-can-have-a-lasting-impact.html.
[120] 29 U.S.C. §206(g).
[121] Jon Marcus, Looking for internships? They are in short supply, Hechinger Report (Dec. 17, 2024), https://hechingerreport.org/looking-for-internships-they-are-in-short-supply/; Jon Marcus, Apprenticeships are a trending alternative to college — but there's a hitch, Hechinger Report (Dec. 17, 2024), https://hechingerreport.org/apprenticeships-are-a-trending-alternative-to-college-but-theres-a-hitch/.
[122] Nina Mast, Youth subminimum wages and why they should be eliminated, EPI (Jan. 8, 2024), https://www.epi.org/blog/youth-subminimum-wages/.

Relatedly, a minor, yet strategic adjustment to the Trump Account (TA) framework[123] by Congress to allow employers who hire student trainees under 18 to contribute directly to those trainees' accounts can contribute to ongoing flexibility and training. Specifically, pursuant to the TA, employers should be permitted to reallocate the existing $2,500 credit available to dependents of employees to eligible student trainees—so long as the employee does not claim it or affirmatively waives it.[124] This would strengthen early skill development while avoiding the creation of a new entitlement program or a large new administrative apparatus. Though the potential benefits of this policy change will not be realized for some time, it's nevertheless a wise strategic investment in a more flexible labor force down the road.

Finally, the Department of Labor should launch a pilot program that encourages firms to launch apprenticeship roles with an income-sharing agreement (ISAs) as the primary basis for covering the cost of the training. Fear of runaway apprentices—trainees benefiting from the time and expertise of a mentor, then fleeing for another role—understandably chills development of apprenticeships.[125] ISAs curtail that concern by allowing firms to recoup apprenticeship costs and, depending on the ISA terms, even profit from running particularly effective programs. This initial pilot of two or three years should then inform agency guidance to firms looking to offer such programs.

2. Create a narrowly tailored FLSA trainee pathway for students aged 17 and older in hazardous occupations, with strict safety constraints and time-limited authorization.

The FLSA should be amended to allow students aged 17 and older to work in hazardous occupations in bona fide trainee roles.[126] Many of the most economically valuable, labor-constrained, and AI-resistant skills—advanced manufacturing, energy infrastructure, logistics, and skilled trades—cannot be developed solely through classroom learning.[127] A categorical prohibition reduces exposure to high-demand fields and delays skill accumulation in sectors where experience is itself a credential.

This reform should be deliberately narrow. Congress can initiate this reform by authorizing a time-limited pilot that applies only to clearly defined trainee roles and requires safeguards that are practical, yet not overly burdensome: supervision requirements; restrictions on the most dangerous task categories; mandatory safety instruction consistent with industry norms; and reporting of serious incidents and program completion rates. The aim is to expand opportunity in the fields of the future, albeit taking the requisite steps to guard against the exception becoming a loophole that places youth in unsafe settings.

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[123] Trump Accounts, IRS (last accessed Dec. 30, 2025), https://www.irs.gov/trumpaccounts.
[124] Press Release, IRS, Treasury, IRS issue guidance on Trump Accounts established under the Working Families Tax Cuts; notice announces upcoming regulations (Dec. 2, 2025), https://www.irs.gov/newsroom/treasury-irs-issue-guidance-on-trump-accounts-established-under-the-working-families-tax-cuts-notice-announces-upcoming-regulations.
[125] Gail Heriot, Apprenticeships: Useful Alternative, Tough to Implement, Cato (Nov. 17, 2016), https://www.cato.org/policy-analysis/apprenticeships-useful-alternative-tough-implement.
[126] What jobs are off-limits for kids?, Wage & Hour Division (last accessed Dec. 30, 3035), https://www.dol.gov/agencies/whd/child-labor/what-jobs-are-off-limits; Fact Sheet #43: Child Labor Provisions of the Fair Labor Standards Act (FLSA) for Nonagricultural Occupations, Wage and Hour Division (Dec. 2016), https://www.dol.gov/agencies/whd/fact-sheets/43-child-labor-non-agriculture.
[127] *See* Neal Rothschild, The 10 jobs least and most threatened by AI, Axios (July 31, 2025), https://www.axios.com/2025/07/31/top-ai-jobs-replace (listing hands-on professions as among the least threatened by AI).

After the pilot period, Congress should evaluate whether the pathway increased entry into apprenticeships and high-demand skilled roles without adverse safety outcomes and, if so, how best to make such pathways more available and permanent.

3. Continue expanding Pell Grant flexibility to cover high-quality vocational and short-term training, while hardening guardrails against low-value programs.

Following the recent expansion of permissible Pell Grant uses,[128] Congress should further broaden eligible Pell Grant recipients to vocational and short-term training opportunities, including bootcamps and training programs. The Portfolio Economy requires training that is modular, stackable, and accessible in short intervals—particularly for workers who cannot afford to exit the labor market for multi-year programs. It is likely that entities other than higher education institutions—currently off the table for Pell recipients—are best suited to provide such training.[129] Pell Grants recipients should not be unduly forced to spend their funds on less efficacious opportunities.

At the same time, Congress should recognize that expanding financing without quality safeguards risks subsidizing credential mills and further degrading skill signals.[130] Any expansion should therefore be coupled with outcome-focused guardrails that are administrable and technology-neutral, such as transparent completion rates, job placement measures where appropriate, and earnings or advancement indicators. This preserves flexibility while ensuring federal dollars support programs that plausibly improve a worker's labor-market prospects.

4. Modernize overtime rules to permit voluntary conversion of overtime pay into training comp time.

Rigid approaches to how overtime is calculated and rewarded deprive workers of more autonomy over their preferred means of compensation.[131] Here, again, the FLSA requires amendment. Congress should update how employers may alter overtime policies to allow workers, by voluntary agreement, to convert overtime compensation into compensatory time that can be used for qualifying skill development opportunities. This is especially well-suited to the Portfolio Economy because it acknowledges time—

[128] Budget Bill Expands Pell Eligibility: What's Next for Students and Providers?, Jobs for the Future (July 3, 2025), https://www.jff.org/blog/budget-bill-expands-pell-eligibility-whats-next-for-students-and-providers/.
[129] Steve Lohr, These Job-Training Programs Work, and May Show Others the Way, N.Y. Times (Oct. 3, 2022), https://www.nytimes.com/2022/10/03/business/these-job-training-programs-work-and-may-show-others-the-way.html; *see* Gregory Ferenstein, Jobs training programs are rarely flexible enough to succeed, Brookings (Sept. 16, 2019), https://www.brookings.edu/articles/jobs-training-programs-are-rarely-flexible-enough-to-succeed/ (specifying common shortcomings with traditional job training programs).
[130] *See* Degree Mills: An Old Problem & A New Threat, Council for Higher Education Accreditation (last accessed Dec. 30, 2025), https://www.chea.org/degree-mills-old-problem-new-threat; Addressing Credential Fraud in Higher Education, National Student Clearinghouse (Oct. 13, 2025), https://www.studentclearinghouse.org/nscblog/addressing-credential-fraud-in-higher-ed/.
[131] The Future of Wage Laws: Assessing the FLSA's Effectiveness, Challenges, and Opportunities Before the Subcomm. on Workforce Protections of the H. Comm. on Education and Workforce, 119th Cong. (2025) (testimony of Tammy McCutchen, Senior Affiliate, Resolution Economics); *contra* Lonnie Golden, Comp time bills off target, EPI (Apr. 17, 2003), https://www.epi.org/publication/briefingpapers_comp/.

rather than only money—as a significant constraint on retraining. Many workers can finance a course but cannot attend one without sacrificing wages or risking job loss.

To prevent abuse, Congress can task the Department of Labor with spelling out rules that facilitate worker opt-in, prohibit coercion by employers, and, if deemed necessary, set reasonable caps on total comp time accrual. Congress may also direct Labor to study whether comp time should be portable or usable across multiple employers within a defined period, recognizing that workers increasingly move between short-term engagements.[132]

5. Permit a vocational education exception to early withdrawal penalties from Trump Accounts.

Disparate access to training opportunities among workers has long hindered America's total productive capacity. Though AI and other technologies such as virtual reality and artificial reality will eliminate some of the geographic and quality barriers that have contributed to access gaps, many Americans may still face financial hurdles to enrolling in the best training opportunities.[133] This marks a key spot for congressional action, such as permitting TA holders to access their funds early without penalty for qualifying vocational and workforce training. In a labor market defined by workers experiencing numerous career and employer transitions,[134] restricting savings vehicles to narrow categories of "traditional" education or penalizing mid-career use undermines the very flexibility the Portfolio Economy requires.

This exception should be structured to reduce fraud and misuse by tying eligibility to clearly defined categories of qualifying programs (including apprenticeships and accredited vocational programs) and by requiring basic documentation of expenditures. Congress should authorize a review period to evaluate whether the exception increases training participation and whether it is used primarily for bona fide skill acquisition.

6. Revise the Internal Revenue Code to expand write-offs for worker training and increase per-worker caps.

Employer-based training opportunities can serve as a win-win: firms benefit directly from a workforce that can integrate new tools—especially AI-enabled systems—and can move between tasks as workflows change.[135] Yet training is often underprovided due to free-rider dynamics, accounting constraints, and

[132] Jarah Euston & Isabelle Leliaert, Why flexible work is the new standard in hourly jobs, World Economic Forum (June 3, 2025), https://www.weforum.org/stories/2025/04/why-flexible-work-is-the-new-standard-in-hourly-jobs/.
[133] Ferenstein, *supra* note 129; 10 Transformational Pathways for States, National Governors Association (last accessed Dec. 30, 2025), https://www.nga.org/futureworkforce/pathways/remover-barriers-to-education-and-training/.
[134] Keith A. Bailey & James R. Spletzer, Using Administrative Data, Census Bureau Can Now Track the Rise in Multiple Jobholders, Census Bureau (Feb. 3, 2021), https://www.census.gov/library/stories/2021/02/new-way-to-measure-how-many-americans-work-more-than-one-job.html; Christopher Goetz et al., Business Owners and the Self-Employed: 33 Million (and Counting!), Census Bureau (Sept. 2025), https://www2.census.gov/library/working-papers/2025/adrm/ces/CES-WP-25-60.pdf.
[135] Report: Employers Reap Benefits of Employee Training When Done Right, SHRM (Aug. 19, 2022), https://www.shrm.org/topics-tools/news/organizational-employee-development/report-employers-reap-benefits-employee-training-done-right; *see* Robert Lerman, Do firms benefit from apprenticeship investments?, IZA (2019),

legal uncertainty.[136] Federal policy can address these structural barriers by making training easier to finance, easier to offer, and less legally fraught—without dictating training content or imposing rigid national standards.

Congress should revise the Internal Revenue Code to allow firms to more fully write off expenses for training workers for new roles and to increase caps on training-related deductions where they limit participation. Present policy effectively discourages employers from supporting workers who want to upskill by participating in a program of study that will qualify the employee for a new trade or business.[137] In short, the tax code limits employer support to the bare minimum of education that is required for a worker to perform their current role. What's more, deductible employer support is capped at around $5,000, which may not meaningfully assist with more substantive training opportunities.[138]

Updates to these policies make sense even if the Portfolio Economy is slower to emerge than expected. Employers have tremendous incentives to upskill their existing workforce rather than search for workers in the existing market. HR specialists estimate that recruiting and onboarding a new employee may involve about $7,000 to $28,000 in costs, as well as lost productivity associated with the myriad tasks associated with bringing a new person onto the team.[139]

This reform recognizes a basic reality: in an AI-influenced economy, training is not a perk but a recurring input into productivity. To ensure the policy is usable beyond large enterprises, Congress should prioritize administrative simplicity—clear eligibility standards, straightforward documentation, and minimal compliance burdens for small and medium-sized firms. Congress should also require the Treasury to report, in aggregate, on uptake by firm size and sector, enabling future refinement.

7. Fund Skill Development Opportunity Centers through competitive grants modeled on P-TECH, with local flexibility and measurable outcomes.

An economy that demands more agile workers would benefit from more agile educational and vocational institutions. Thankfully, Congress need not look far to find promising examples of educational institutions of the future. The P-TECH model in place in New York is a particularly compelling model.[140] These programs permit students of varied academic backgrounds to seek out a hybrid model of education--a mix

https://dls.maryland.gov/pubs/prod/NoPblTabMtg/AppCmsn2023/Firms-Benefit-from-Apprenticeship-Investments.pdf (devising an economic model for the expected returns firms can expect from apprenticeships).

[136] Allison Schrager, Why Companies Don't Train Workers Anymore, Bloomberg (Aug. 22, 2024), https://web.archive.org/web/20160311041226/https://www.bloomberg.com/news/articles/2014-08-22/is-on-the-job-training-still-worth-it-for-companies; *see* Daron Acemoglu & Jorn-Steffen Pischke, Why Do Firms Train? Theory and Evidence, NBER at 31-33 (1996), https://www.nber.org/system/files/working_papers/w5605/w5605.pdf (explaining the theoretical basis for minimal investment in training by US firms).

[137] Topic no. 513, Work-related education expenses, IRS (last updated Oct. 3, 2025), https://www.irs.gov/taxtopics/tc513.

[138] Employer-offered educational assistance programs can help pay for college, IRS (Aug. 7, 2024), https://www.irs.gov/newsroom/employer-offered-educational-assistance-programs-can-help-pay-for-college.

[139] Marie-Reine Pugh, From Recruitment to Onboarding, What's the True Cost of Hiring Employees?, Bamboo HR (June 22, 2023), https://www.bamboohr.com/blog/cost-of-onboarding-calculator.

[140] P-Tech 9-14 School Model, IBM (last accessed Dec. 30, 2025), https://www.nga.org/wp-content/uploads/2019/10/1706GES-02-03-Litow.pdf.

of classroom learning and on-the-job training--that culminates in students earning both their high school diploma and an associate degree.[141]

Yet, most Americans have few to no odds of enrolling in any similar program. Congress can make such institutions far more common by launching a grant program for local "Skill Development Opportunity Centers" in which employers, community colleges, and high schools collaborate to offer six-year pathways combining classroom learning with paid, work-based training. As with the P-TECH schools, successful participants should earn both a high school diploma and an associate degree. This structure directly serves the Portfolio Economy by embedding skill development within real work settings and by producing graduates with both credentials and demonstrated competence.

Critically, rather than forcing uniform design, recipients of any such federal funds should be encouraged to adapt to local labor-market conditions. Grant selection should prioritize employer engagement, evidence of regional skill demand, and credible placement pathways. The agency tasked with overseeing this grant program—presumably the Department of Education—should require periodic evaluation of outcomes—completion, placement, wage progression—and should retain the ability to reallocate funding toward the most effective education models over time.

C. Easing the Transition to the Portfolio Economy

As work becomes more task-based, short-term, and distributed across firms, the challenge facing policymakers is no longer simply how workers acquire skills, but how they use those skills across multiple jobs without incurring unnecessary legal, financial, or administrative penalties. For many Americans, participating in the Portfolio Economy will mean holding multiple roles at once—combining W-2 employment with contract work, pursuing training while actively working, or serving clients across state lines.[142] Yet core elements of federal labor, benefits, and tax law remain structured around exclusivity: one employer, one job, one benefits bundle, one jurisdiction.

That mismatch imposes real costs. Workers delay taking on additional clients for fear of losing benefits or triggering tax complexity. Employers refrain from offering support—such as benefits contributions or flexible arrangements—out of concern that doing so will alter worker classification. States erect licensing barriers that frustrate geographic and professional mobility. The net effect is to slow labor-market adjustment at precisely the moment when adaptability is most valuable.

The recommendations below focus on easing these transition costs. They are not intended to privilege portfolio work over traditional employment, nor to mandate new employment structures. Instead, they seek to ensure that federal law does not penalize workers and firms that operate across multiple engagements and that it provides clear, predictable rules for doing so.

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[141] *Id.*

[142] *See* Keith A. Bailey & James R. Spletzer, Using Administrative Data, Census Bureau Can Now Track the Rise in Multiple Jobholders, Census Bureau (Feb. 3, 2021), https://www.census.gov/library/stories/2021/02/new-way-to-measure-how-many-americans-work-more-than-one-job.html (indicating a surge in the number of Americans working multiple jobs).

1. Establish a portable benefits framework centered on worker-controlled Opportunity Accounts.

Bipartisan members of Congress have long called for a portable benefits framework suited to today's economy and the Portfolio Economy of the future. Now is the time for Congress to act on that bipartisan consensus by authorizing a portable benefits program. Pursuant to this program, employers—whether engaging workers as employees or independent contractors—may contribute to worker-controlled "Opportunity Accounts." These accounts would travel with the worker across jobs and clients and could be used for a defined set of purposes closely tied to portfolio work: qualifying education and vocational training; physical and mental health expenses for the worker and dependents; and relocation or travel costs associated with pursuing work in regions showing strong demand for the worker's skills.

The core advantage of this approach is structural neutrality. Opportunity Accounts would decouple benefits from long-term attachment to a single firm, while preserving flexibility in contribution levels and participation. Congress should design the program to be voluntary, administratively lightweight, and accessible to small firms, while requiring periodic evaluation to assess uptake, usage patterns, and effects on worker mobility and retention.

2. Adopt a single, clear federal standard for worker classification and specify that benefit provision is classification-neutral.

Legislators must also act on seemingly extensive congressional agreement when it comes to ongoing and unnecessary confusion as to worker classification. Congress should replace the current patchwork of federal worker-classification tests with a single, clear standard. At the same time, it should make explicit that the voluntary provision of benefits—whether through Opportunity Accounts or other portable mechanisms—does not weigh in favor of employee classification. This would align with efforts already underway at the state level, such as in Utah, and signal congressional dedication to identifying and improving ambiguous policies.

Classification uncertainty remains one of the most significant barriers to portfolio work. Firms frequently avoid offering benefits, training, or flexibility not because they oppose worker support, but because such actions risk reclassification and retroactive liability. Clarifying that benefits are neutral with respect to classification would reduce that chilling effect, expand access to support, and allow firms to compete on worker experience without fear of legal exposure. As with other recommendations, this reform should include an opportunity for Congress or the applicable regulator to revisit the standard after an initial implementation period to assess its effects on misclassification disputes and labor-market participation.

3. Direct Treasury to study simplified tax compliance for workers with multiple income streams.

As outlined from the start of this testimony, workers should not face disparate legal treatment or regulatory burdens simply because they opt for non-traditional work arrangements.[143] Taxes represent one of the most obvious gulfs between workers that opt for standard employment arrangements and those who

[143] *See* Jay R. McTigue, Jr., When it comes to taxes, there's a transparency gap in the gig economy, GAO (July 9, 2020), https://www.gao.gov/blog/when-it-comes-taxes%2C-theres-transparency-gap-gig-economy

carve a different path.[144] Congress can remedy this issue by directing the Department of the Treasury to examine options for simplifying tax compliance for workers earning income through multiple arrangements—such as combinations of W-2 employment, 1099 contracting, and short-term project work. Workers that lean into the Portfolio Economy frequently face higher compliance costs, uneven withholding, and greater risk of error, all of which discourage participation in flexible work.[145]

The study should evaluate mechanisms such as standardized withholding across income types, simplified quarterly payment systems, and consolidated reporting tools. Any reforms should be piloted and assessed before broad adoption, with particular attention to impacts on compliance rates and ease of filing (or lack thereof).

Conclusion: Entrepreneurial Liberty in the Portfolio Economy

The Portfolio Economy is unavoidable. It's an inevitable product of how AI develops, diffuses, and interacts with human work. Countries that attempt to steer around it will eventually run aground—and likely sooner than later. Countries that instead adapt to the economy of the near-future can thrive. The key to success is acknowledging and responding to a labor market in which individuals build durable economic security by cultivating skills, assembling projects, and moving fluidly across firms, sectors, and geographies. In such an economy, stability no longer comes from a single job title or employer, but from agency—the capacity to learn, adapt, and apply one's talents where they are most valued.

The central policy question, then, is not how to freeze work in a familiar form, nor how to preordain which jobs should exist and who may perform them. It is whether our laws expand or constrain the freedom Americans need to navigate constant change.

History counsels restraint. When lawmakers attempt to lock in outcomes amid technological uncertainty, they tend to protect incumbents, entrench inefficiency, and narrow opportunity. When they instead focus on enabling individual initiative—lowering barriers to learning, mobility, and experimentation—they create the conditions for broad-based prosperity.

This testimony has advanced a simple organizing principle: the Age of AI demands a renewed commitment to entrepreneurial liberty. That means protecting the freedom to study—by making skills legible, portable, and worth investing in. It means protecting the freedom to shadow—by expanding apprenticeships, trainee pathways, and real-world learning that lower the cost of entry into new fields. And it means protecting the freedom to work—by ensuring labor, tax, and benefits laws do not punish those who move between roles, clients, or places in pursuit of opportunity.

If Congress gets this right, Americans will not merely endure the transition to an AI-shaped economy; they will shape it themselves. The surest path to a future of work that is innovative, inclusive, and resilient is not to manage outcomes from the center, but to trust individuals with the tools, signals, and legal freedom to get ahead. That is how the American Dream has always been renewed—and how it can endure in the Portfolio Economy.

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[144] Kathleen DeLaney Thomas, *Taxing the Gig Economy*, 166 UNIV. PENN. L. REV. 1415, *passim* (2018).
[145] *Id.*; McTigue, *supra* note 143.

APPENDIX A

Entrepreneurial Freedom in the Age of AI

Your current “job” may be the last one you ever have.

Don’t panic. Americans can achieve economic security in the AI economy, even thrive, so long as we don’t get in our own way.

The future of work is skills-based, flexible, and fragmented. I refer to it as the “Portfolio Economy.” Workers who maintain a portfolio of skills—old and new, offer those skills to a wide range of clients—small and large, startups and incumbents, and do so on a project-by-project basis, will do well in 2026 and beyond.

The transition to the Portfolio Economy means the headlines predicting that AI will cause the end of work as we know it are partially right. It’s true that the nature of work is going to look drastically different, perhaps even soon, and certainly by the time Gen Alpha is entering the labor market. The 9-to-5, Monday to Friday, single-employer model is done, but that has been true for many years, if not decades.

The ties that used to bind one worker to one firm, and vice versa, have largely faded away. When firms could hire only local talent and workers could work only for local firms, the two parties had a mutual interest in forming long-term, mutually beneficial relationships. Firms were incentivized to invest in their workers, in their human capital, and in the surrounding community. The alternative of searching for out-of-town talent, recruiting them, and then onboarding them was far costlier than simply doing as much as possible to support the surrounding talent pool.

Workers, too, had reason to invest their prime working years in a single firm because they could move up a fixed career ladder by helping the company succeed. They knew the skills they had to master, the people they had to

please, and the metrics they needed to exceed. The longer they worked for that one firm, the more it made sense to stick around.

Those days are over.

Remote and hybrid work allows more firms to hire people in more places. It's no longer the case that geography dictates who can work for whom.

An increasingly wide range of educational and vocational opportunities means that workers do not have to rely solely on their employer to learn the skills of the future. When given the time and means, any average Joe or Jane can become an expert in a new domain and find an employer willing to compensate them accordingly.

And, perhaps most importantly, neither laborers nor firms know for certain what those skills of the future may be!

Firms have little reason to invest in their workers if those trainees soon flee to a more lucrative opportunity at the click of a button. Additionally, they are more eager to bring on independent contractors or short-term workers to handle discrete projects, knowing that AI and related technologies may soon be able to handle similar initiatives.

Workers have less cause to give their all to a single firm if that employer cannot offer a predictable path to more lucrative and meaningful work. They may also be slightly more cautious about making any substantive investment in a single course of study or career path. It's a costly gamble if your four-year degree or entry-level program is in a highly automatable field.

Both have plenty of reasons to be as nimble as possible given the jagged frontier of AI. Neither party knows which skills are best left to AI, human-AI teams, or just humans, because AI progresses at different rates across domains.

In sum, the incentives have shifted.

This reality doesn't have to result in a dystopian future. In fact, it can lead to a more inclusive economy that permits people the freedom to choose when they work, what they work on, and who they work for. The Portfolio Economy is tailored for innovators, entrepreneurs, and doers. That's supposed to be America, right?

The story goes that America is the nation that's first to the future because we're excited by the possibility of improving on the past. It's the American Dream to progress further, and it's the American Way to be unafraid of new horizons.

Yet our labor and employment laws are like rust on a bike — rigid legal requirements make it harder for entrepreneurial energy to translate into economic opportunity. The people primed to race forward are compelled to slow down, stay in their lane, and watch as workers in more dynamic labor environments shape the future. A few examples make this clear.

So long as benefits are largely tied to employers, rather than to work, then America's workers will find it harder to transition to the Portfolio Economy. Congress needs to move forward with portable benefits. As spelled out by researchers at the Brookings Institution, all workers should receive prorated benefits based on the work they do for any employer for any period of time. This would allow workers to diversify their "clientele." They could mark their respective skill portfolios to a range of actors and take on as many or as few hours as they see fit, accumulating benefits from each employer based on however many hours they end up working.

A move to portable benefits, however, is stymied by another vestigial feature of our labor and employment laws: ambiguous worker classification tests. Employers have long feared providing benefits to non-traditional workers, for fear that those workers would be classified as employees, resulting in a whole set of additional legal obligations. Here, again, Congress can and should step up and clarify that the provision of benefits is not a relevant factor in classification decisions. Utah has already moved in this direction. This should be the standard across the nation.

Making it easier for Americans to simultaneously work for more firms is only half the battle. For workers to thrive in the Portfolio Economy, they must have relevant skills. As mentioned above, firms have surprisingly little economic incentive to set up robust training programs. So if Congress wants to help Americans master the skills of the future, it must change the calculus for firms, make it easier for workers to enroll in formal or vocational education programs, or do both.

To encourage more firms to offer more training, Congress should look to the Internal Revenue Code. As things stand, firms can only deduct around $5,000 from efforts to upskill their workers. What's more, those funds cannot be spent on programs that prepare a worker for a new role or line of business. A larger cap and a more flexible mandate make a world of sense in the Portfolio Economy.

Next, Congress should get creative and explore means to revive the sort of apprenticeships that helped Americans quickly join new fields. For starters, Congress should revise the Trump Savings Account program created by the One Big, Beautiful Bill to allow workers to withdraw their funds early for qualifying apprenticeships. Legislators should also task the Department of Labor with issuing guidance to employers seeking to offer apprenticeships with income-sharing agreements (ISAs). If the apprentice leaves the firm soon after their training, ISAs will ensure the training firm is not left without some degree of financial compensation. These and related policies will make it easier for firms to develop and offer robust training initiatives.

More generally, it's time for the U.S. to champion the idea of Entrepreneurial Liberty. Americans can thrive in the Portfolio Economy if they enjoy the freedom to study at institutions — private or public, formal or vocational — from pre-K to pre-AARP age, the freedom to shadow through new apprenticeship and trainee models, and the freedom to work in flexible, temporary arrangements. If Congress shapes its agenda around those three freedoms, then America will extend its reputation for being the first to the future, rather than becoming the last place to move on from the past.

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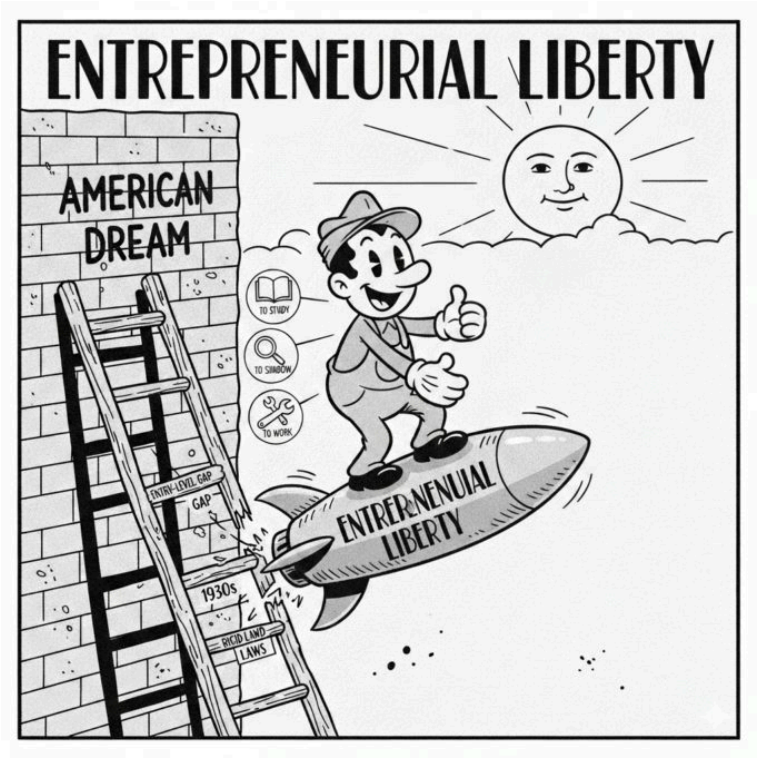
APPENDIX B



Entrepreneurial Liberty in the Age of AI

By Kevin Frazier - Edited by Shriya Srikanth

January 11, 2026

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Introduction

The American Dream is unattainable for too many hard-working men and women. It's not for lack of effort, will, or talent and it's not solely because of artificial intelligence. [1] Other factors are much more to blame. Congress must avoid the temptation to overreact to AI—the latest but not last general purpose technology (GPT) to introduce economic uncertainty—and should practice good governance by prioritizing foundational issues. The focus of this essay is on a select set of structural reasons for why so many Americans feel stuck and outlines three principles to guide legal reforms that will revive and sustain the American Dream. Absent such reforms, the "dream of a better, richer and happier life for all our citizens of every rank" will continue to go unrealized. [2]

Rigid laws that create pervasive incentives explain why Americans are struggling to get ahead and stay ahead amid technological change. In prior eras, Congress made adjusted educational and professional pathways to success in response to that era's GPT. [3] What's different now is the fervent defense of the status quo—as if the jobs of today will and must persist. [4] There's a reason you cannot find op-eds about the need to defend "horse pooper scoopers"—trust me, I've looked through *The New York Times*' archives. America's economic success has been and will be a product of our willingness to be the first to the future rather than the last to move on from the past.

AI should not be treated as a scapegoat for the high rate of entry-level unemployment nor as the bogeyman behind every negative economic headline. [5] While the generative AI tools in use today are new, the economic effects are compounding trends that were underway before ChatGPT [6]—increased demand and supply of alternative work arrangements, the need for modular educational opportunities, and the shortage of vetted training positions.

Congress must oversee an overdue transition from regulations created in the 1930s based on technologies from the 1920s to ensure all Americans enjoy Entrepreneurial Liberty—to study at institutions that align with their values, career goals, and schedule; to shadow a mentor in an emerging field; and, to work the job or jobs that align with their skill set and financial aims. [7]

In short, the pathways to the American Dream are broken. Congress can restore them by following three principles. First, if it doesn't work, don't fund it. Myriad reports have shown that federal retraining programs are ineffective, duplicative, and wasteful. [8] Whether Congress continues to fund existing or new programs should be contingent on rigorous assessment of their efficacy.

Second, there's no one right answer to empowering Americans to thrive in the Age of AI but there are many wrong ones. Rather than rush to regulate, Congress ought to err on the side of experimentation. Sunset clauses, regulatory sandboxes, regulatory holidays, and sunrise clauses are examples of the many tools that Congress can lean on to avoid today's bad laws from becoming tomorrow's near-permanent barriers. [9]

Third, if it's a barrier to any aspect of Entrepreneurial Liberty—to study, to shadow, or to do as Americans deem fit—reform it or, better yet, remove it. Creation of a vocational training exception that allows Americans to more easily make withdrawals from individual retirement accounts, such as Trump Accounts and 529 plans, is a good place to start. [10]

The remainder of this essay proceeds in two parts. The first part provides a brief overview of the relationship between Entrepreneurial Liberty and the American Dream. The second part further describes the freedoms associated with entrepreneurial liberty —to study, to shadow, and to work.

The American Dream and Entrepreneurial Liberty

The American Dream is well-known but rarely precisely defined. Specification of its terms and goals is important at a time when policymakers are rightfully concerned about the ability of Americans to secure a better life for themselves and their loved ones. James Truslow Adams coined the phrase in his 1931 book, *The Epic of America*. He described it as "a dream of a social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are, regardless of the fortuitous circumstances of birth or position." [11]

Contemporary officials have adopted and expounded upon Adams's definition. President Donald J. Trump, for instance, has championed the idea of an "ownership society." [12] This framing has received bipartisan support for several years, if not decades, and generally refers to the idea of "personal responsibility, possessive individualism and self-

reliance" [13]. President George W. Bush also touted an "ownership society," [14] and explicitly tied the concept back to the American Dream [15]. On the other side of the political spectrum, policies related to "self-sufficiency" [16] or "economic security" have been proposed to assist Americans in their pursuit of the Dream. [17] Across these different, yet connected interpretations, the Dream evokes the possibility of improving upon your family's station—making progress in domains ranging from education credentials to professional milestones. [18]

By any one of the commonly accepted measures of the American Dream, empirical analysis reveals it is in increasingly short supply. [19] Fewer and fewer Americans go on to earn more than their parents [20]. In fact, nearly one in five young adults live with their parents. [21] Worse yet, an increasingly large share of Americans find themselves in financial peril [22]—unable to take the sorts of risks and make the sorts of investments that are associated with American ingenuity.

The elusiveness of the American Dream did not happen by accident. Deliberate policy choices have contributed to its decline. That's precisely why Congress must recognize and prioritize Entrepreneurial Liberty and its three tenets.

The Three Freedoms of Entrepreneurial Liberty

Entrepreneurial Liberty—expressed by the three tenets detailed below—is a prerequisite for the American Dream. Realization of the freedom to study, shadow, and work will allow more Americans to achieve economic security and exercise liberty—national goals since 1776.

Freedom to Study

A commitment to advancing the core tenets of Entrepreneurial Liberty would set Congress on the proper policy path at a time when the American people need a federal response to changing and, for many, challenging economic conditions.

The first tenet is ongoing opportunities to study both the foundations of what makes for a good citizen in a republic—critical thinking, literacy, statistics, interpersonal skills—and the underpinnings of the fields of the future—those that require “know what” (think exercising judgment and applying lessons learned through experience) rather than merely “know how” (think completion of rote tasks) that AI can easily automate. [23] Policies aligned with this tenet will make it possible for more Americans to have a wide range of affordable, high-quality, and modular educational opportunities. These sorts of policies are especially necessary when a new general purpose technology, such as electricity or the Internet, emerges.

The same is especially true in the Age of AI. This technology is altering both how we can learn and what we need to learn to flourish in our personal and professional capacities. Now’s the time to critically examine how our education systems can be reformed to meet the needs of young and old Americans alike. This moment of transformation presents us with a chance to identify and do away with tired institutional assumptions and norms. For instance, given all of the evidence detailing the learning losses that transpire during the summer [24], it’s worth studying what’s required to provide young Americans with a school calendar tailored to the Intelligence Era, not the Agricultural Era. [25]

Holistic educational reforms in line with Entrepreneurial Liberty should and must span from pre-K to near-AARP membership. At the K-12 level, parents should have a chance to enroll their students in schools tailored to different skill sets, beliefs, and curriculums, such as charter schools that lean into AI or even micro-schools, akin to those that popped up during the COVID-19 pandemic. Implementation of the OBBB's tax credit for donations to 'scholarship granting organizations' (SGOs) in 2027 will make a big difference for many families currently unable to afford their preferred option. [26] However, the likely effectiveness of SGOs is unclear. States may opt not to recognize SGOs or may only recognize SGOs that plan to support specific kinds of schools. [27] It's likely that additional levers will need to be pulled to facilitate the introduction of new kinds of schools with new curriculums and varied approaches to using and teaching AI.

At the high school level, this should look like students again having a diversity of offerings in terms of curriculum, schedule, level and nature of AI exposure, and inclusion of practical learning experiences, such as internships and apprenticeships. It may also be worth challenging the idea that all students should be expected to maintain continuous enrollment in formal educational settings. [28] Certain students may benefit from prolonged leaves of absence or work releases for unique vocational opportunities [29].How best to allow for these 'practical sabbaticals' is another topic that merits ongoing study.

Beyond high school, there's an even greater need for flexibility. Many four-year programs and community colleges have long operated at a distance from the private sector. [30] For some programs, this distance may be demanded by the nature of the subject, such

as psychology. In other fields, however, a disconnect between private firms and educational experiences is cause for alarm. Students may be spending valuable time and scarce resources out of an expectation that they will be ready to step into a job upon graduation—of course, private firms hope for such an outcome. Yet, poor communication between innovators and educators may result in students learning the wrong skills and practices. There's tremendous room for improvement when it comes to involving the private sector in developing curriculums and designing evaluations.

Freedom to Shadow

Improved classroom experiences alone will not meaningfully advance Entrepreneurial Liberty and, by extension, the American Dream, if it is not paired with the sort of practical education necessary to add value in the private sector. Provision of this practical education by way of apprenticeships will not be easy but is far from a political pipedream. Apprenticeships used to be a far more common way of learning a trade in the United States . [31] The formalization of education and creation of specific guilds with various licensing requirements theoretically made apprenticeships less necessary by creating alternative pipelines to careers in those industries. In practice, it's becoming less and less clear that such educational programs serve as a viable substitute for the hands-on training afforded by apprenticeships. [32]

States more committed to broad reforms—allowing students real chances to partner with industry stakeholders and learn the skills most relevant to an emerging field—demonstrate the shortcomings of "experiential learning" done in the classroom. True experiential learning requires substantial investment

in both the proper facilities and relationships with the appropriate stakeholders.

Two examples make this point clear. Students at Middleton High School in Wisconsin can get true hands-on experience in mechanical fields that have gone "overlooked" in the digital age. [33] Thanks to a $90 million dollar investment in new facilities, Middleton students are preparing to become the next generation of ironworkers and boilermakers. [34] Similarly, students enrolled at a P-TECH institution have extensive opportunities to develop and apply practical knowledge. P-TECH institutions span from grades 9 to 14 and involve a high school, community college, and corporate partner. The trio collaborate to set forth "an academically rigorous and economically relevant curriculum." [35] Graduates earn both a high school diploma as well as a two-year associate degree—while also leaving with skills in high-demand in the surrounding area. [36] While experiential programs vary in rigor, quality, and relevance to the tasks or profession in question, they are generally imperfect substitutes for true shadowing experiences.

Other countries have managed to have greater success when it comes to setting up apprenticeship programs. Dual-track programs in Germany are a commonly cited case study of how to provide students with substantive professional experiences while also taking on traditional courses. [37] While some aspects of that approach are unlikely to translate to a U.S. context, they stand as proof that the status quo for most Americans need not be the standard approach going forward.

Congress ought to vigorously pursue policies that afford more Americans the sort of training that employers actually seek. Progress on this front looks

like more Americans having more opportunities at an earlier age and throughout their professional careers to participate in formal professional training as an apprentice, intern, or some other arrangement that involves explicit training and guidance. Ideally, such programs will also feature evaluations of skills that can be added to the participant's formal transcript and CV. [38] A move toward this sort of tracking—mastery of specific skills and tasks—will help educators determine whether a student needs to take certain courses and employers make hiring decisions based on more reliable signals than grades.

Success on this front would go a long way toward maintaining and spreading the American Dream. To the extent individuals struggle to find the formal educational opportunities right for their learning style and values, substitute means to convey an interest in and mastery of a relevant topic can open myriad doors.

Shadowing programs—be they internships, apprenticeships, or a hybrid—are all the more necessary in the Age of AI. The likely elimination of certain entry-level positions as a result of AI taking over a larger share of tasks typically assigned to those workers may remove rungs in the career ladder of many professions. [39] Put differently, as the demand for junior roles shrinks, recent graduates or new members of a field will find it harder to get their foot in the door and, perhaps even more importantly, to develop the skills necessary to move into roles that require wisdom and judgment.

The legal profession is a great example of this talent pipeline phenomenon. [40] There's been a decline in the number of junior associate roles. [41] These positions come with long hours, high expectations,

and, consequently, regular and formative meetings with more senior attorneys. It is time spent in these roles that have traditionally provided junior lawyers with the time to pick up best practices. There are few ways to gain such skills absent prolonged and diverse exposure to the relevant tasks and problems. Individual firms, however, may not have the necessary incentives to provide such basic training if it's unlikely that the worker will stick around. [42] There's also the issue of many more senior people not having the disposition, skills, or career incentives to invest in providing such training. [43]

These dynamics play out in other fields, too. So something has got to give if young Americans are going to find a way to professional success. The policy prescriptions here mark a strong starting point—they each promise to either increase the availability of younger Americans to take on apprenticeships or to spur employers to offer more trainee positions. Yet, creation of a strong apprenticeship policy framework does not resolve the question of whether Americans can then go on to earn a secure income. Many apprentices end up working in different fields or simply drop out of the program. [44] If it's assumed that these fields also have some degree of exposure to AI, then Congress must also address the freedom to work. This legislative agenda entails reforming outdated laws so that people can take on the job or jobs that align with an individual's skills and goals and to earn an adequate living while doing so.

Freedom to Work

Not all work is created equal under existing labor laws, tax provisions, and benefits packages. The same task performed by two different people carries the same value to the end recipient, yet those

individuals may receive different kinds and amounts of compensation . This reality stands out as particularly un-American given the insistence of the Founders on the value of economic independence, of entrepreneurial energy, and of small businesses [45] —a belief that has generally found at least some support over the course of every subsequent generation. [46]

Celebration of the little guy, the pioneer, and self-starter is as American as apple pie and is enshrined in other parts of our legal system. Patents aim to spark individual creation. Bankruptcy laws permit Americans to meaningfully start over if their first venture flounders. Flexible arrangements for investors to back founders make the U.S. the best place to have a good idea and the home to more leading AI firms than any other nation. Yet, for reasons that are better explained elsewhere, Americans are now very strongly steered toward specific types of employment.

The Freedom to Work calls on Congress to develop policies that do not force Americans to choose between the legal form of their work and the benefits that derive from that work. [47] This is far from the first time Congress has faced such pressures. [48] Many have called for alternative work arrangements to be more easily adopted by workers and employers [49], for tax simplicity and clarity [50], and for portable benefits [51]. If formalized into policy, Americans could generate more income from more skills and do so with greater flexibility and autonomy.

The positive benefits would not end there. Parents are especially likely to participate in alternative work arrangements—for obvious reasons, increased flexibility makes it easier for people to start or grow their families. Justified concern about diminished

birthrates have led to innovative and necessary policies at the state and federal level. The freedom to work represents another tangible step to encourage more Americans to launch families (in addition to side hustles and startups).

Furthermore, the creative projects launched under the freedom to work may be the seeds that blossom into the next best example of America's economic and entrepreneurial might. There's a reason that Google often permits its employees to pursue so-called "twenty percent projects." [52] Under this scheme, employees may spend up to a fifth of their working hours on an approved side project. [53] Most Americans do not have subsidized nor compensated time to tinker with their latest idea. The freedom to work would not be as generous as a twenty-percent project but could at least make it more likely that Americans take on a portfolio of initiatives and still return home with a reliable benefits package.

Pilots at the state level are real-time tests of the positive individual, communal, and economic benefits of policies aligned with the freedom to work. Utah prohibits state agencies from weighing whether an employer provides benefits to a worker as a factor in determining whether that worker is an employee. [54] This frees employers to offer unique benefits packages to part-time or seasonal workers without incurring the sorts of responsibilities and obligations that commonly attach to an employer-employee relationship. Americans would benefit from additional experimentation around how best to structure and encourage bespoke employer-worker arrangements that do not force workers to alter how they perform their work nor for whom based on concerns around benefits.

Congressional leadership on the freedom to work is especially necessary in the Age of AI because workers and employers alike are unsure of which jobs, products, goods and services are likely to be profitable over the long term. Advances in AI do not impact all tasks and, therefore, all jobs equally. The so-called “jagged frontier” of AI is a reflection of its uneven and uncertain pace of development in different domains. Professions deemed to have less exposure to AI today because existing systems have yet to reliably and accurately perform tasks typical of that job may not be as “AI proof” tomorrow. AI labs have yet to determine a clear path for AI capability development. The task of predicting which AI models can do what may become even harder in the near future as labs pursue novel training strategies and explore new AI architectures.

In this environment, as hinted at above, a worker keen to get ahead of AI may want to simultaneously hold several jobs. They may spend half of their time with a traditional employer, thirty percent on an Etsy-based knitting business, and the remaining twenty percent as an independent contractor for a party-planning company during the summer and for a ski photography outfit in the winter. Policies that further the freedom to work will ease and even encourage such a work portfolio.

* * *

The freedom to study, shadow, and work—collectively, Entrepreneurial Liberty—was necessary long before ChatGPT found its way into our lives. The diffusion of AI has simply made the systemic barriers that have long characterized and hindered education, apprenticeships, and flexible work arrangements more apparent. Now Congress must take steps to remove barriers to those freedoms and

empower individuals to chase and attain the American Dream.

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