

The Second Great Disruption? Artificial Intelligence, Technological Unemployment, and Policies for a Resilient Workforce – A literature Review

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Abstract

Artificial intelligence (AI) is becoming a general-purpose technology, like the steam engine or electrification. However, it is being used more quickly than ever before. This makes it harder for businesses, workers, and governments to make changes in a short amount of time. Public discourse typically depicts AI as a driver of extensive displacement; however, empirical evidence suggests a more intricate path. AI is more likely to change how people do their jobs than to take away jobs altogether. This is true in many countries and industries. This article situates AI within the historical narrative of technological unemployment, incorporates recent data on exposure, skills demand, and job quality, and evaluates policy frameworks that can transform productivity potential into broadly shared advantages. The International Labour Organization (ILO), the Organisation for Economic Co-operation and Development (OECD), the World Economic Forum (WEF), LinkedIn workforce analytics, and the McKinsey Global Institute all say that clerical work is where most people come into contact with AI. A lot of workers say they are happier at work when they use AI, but not enough people have the right skills. The study shows a "complement-then-substitute" path: AI improves human skills at first, but it could eventually replace some jobs without immediate retraining. To keep inequality from getting worse, policy needs to make lifelong learning more common, protect workers, and encourage countries to work together..

Keywords: job quality, social debate, lifelong learning, and technological unemployment

Introduction

Changes in technology, from the Industrial Revolution to electrification and digitization, have sometimes made labor markets very unstable. Every wave made people worry about a lot of people being out of work, but in the long run, economies usually found new jobs for workers who had to leave their old ones (Brynjolfsson & McAfee, 2014). The current surge in artificial intelligence appears both familiar and

novel: familiar due to its potential to transform our work processes, and novel because of its unprecedented utilization rate and scale. AI is different from advances in physical capital that require a lot of money because it is software-based, can be scaled up at a low marginal cost, and can be integrated across sectors in a matter of years, not decades (Brynjolfsson & Mitchell, 2017).

The primary inquiry is whether AI will ultimately collaborate with humans to enhance productivity and generate new employment opportunities, or whether it will significantly displace jobs, thereby transforming the labor market. Historical evidence and contemporary studies reveal a multifaceted situation: the obsolescence of routine clerical and administrative functions, a rising demand for sophisticated cognitive, managerial, and interpersonal competencies, and employee apprehension concerning long-term job stability (Frey & Osborne, 2017; Arntz, Gregory, & Zierahn, 2016).

This report provides a literature-based synthesis of the employment effects of AI, organized around three key questions: (1) What does the evidence say about exposure and changing tasks? (2) What are the changing needs for skills, and where are the limits starting to show? (3) What kinds of rules can help everyone get used to the change?

Historical Context and Technological Unemployment

People have been talking about technical unemployment since the 1800s. Mechanization took the place of artisanal work, but it also made work more productive and opened up new industries. The "Luddite fallacy" argument asserts that fears of prolonged unemployment are baseless; nevertheless, structural disparities and adjustment frictions may result in persistent dislocation (Susskind & Susskind, 2015).

Recent theories based on tasks show that technology doesn't usually get rid of whole jobs; it just automates some of them. Automated tasks take jobs away from workers, but they can be given new ones (Acemoglu & Restrepo, 2019). The net effect depends on how quickly tasks are made compared to how quickly people are moved, how well institutions help them, and how well policies are made.

A good example of this is AI. Frey and Osborne (2017) initially asserted that more than 50% of U.S. jobs were highly vulnerable to automation; however, subsequent analyses by Arntz et al. (2016) and OECD research revealed that only a restricted subset of tasks within jobs was suitable for automation. The ILO's (2023) research substantiates that entire jobs are unlikely to disappear; instead, the nature of employment will be reorganized.

AI Exposure, Job Quality, and Worker Experience

The ILO (2023) study found that only 1–4% of tasks in all jobs are strongly exposed to generative AI, except for clerical and administrative work. In clerical and

administrative jobs, on the other hand, 24% of tasks are very exposed and 58% are somewhat exposed. This means that a lot of things need to be changed.

Surveys of workers show a more complicated picture. The OECD (2023) says that 63% of people who used AI were happier at work. Most of the time, this was because AI did the boring work for them. A lot of people are worried that they will be out of work for a long time and that their skills will become out of date. So, workers think of AI as both a way to make their jobs better and a source of stress.

For employers, the availability of AI technologies is not as big of a problem as the skills of the workers. About 40% of employers said that it was harder to use AI when they didn't have the right AI skills (OECD, 2023). Bessen (2019) found something similar: that the need for workers who know how to use AI depends more on their other skills than on the technology itself.

The Evolving Skills Gap

AI changes the kinds of technical and social skills people need. According to the OECD (2024), 72% of jobs that use AI need management skills, 67% need business process skills, and more than half need social, emotional, or digital skills. The need for these skills grew by 8% from 2012 to 2022. Companies that used AI a lot didn't need these extra skills as much because AI systems could do them. Acemoglu and Restrepo (2019) referred to this as the "complement-then-substitute" pattern, which is what this situation is like.

The LinkedIn Work Change Report (2025) said that 70% of job skills will change. This shows how important it is to keep learning new things. In earlier waves of automation, Jaimovich and Siu (2020) said that job polarization happened. This is when jobs with high and low skills grow, but jobs with medium skills shrink. This means that AI could make polarization worse if nothing is done.

The Macro Picture: Job Loss and Creation

There are diverse opinions on how many occupations AI will take over. The WEF (2025) thought that automation may take away 85 million jobs by 2025 but potentially make 97 million new ones, which would mean a net gain of 12 million employment. The areas that are likely to increase are data analysis, AI and machine learning, the green economy, healthcare, and education.

The McKinsey Global Institute (2023) agreed that jobs will be lost, but they noted the main problem is how quickly the transition happens. If governments and businesses don't plan ahead, changes in the job market could have a big effect on how wealth is divided. Brynjolfsson and McAfee (2014) have said that AI will create new chances, but society need to spend money on education and being flexible to take advantage of them.

Inequality Within and Between Countries

AI could make inequality worse in the US and around the world. Women who work in clerical and administrative jobs are more likely to be exposed to these risks than other workers in the same country (ILO, 2023). People could become even more unequal if they don't get the right training. Advanced economies with good schools and internet access are using AI faster than developing economies, which could create a gap in technology (McKinsey Global Institute, 2023).

Frey and Osborne (2017) warn that economies that don't allow people to learn new skills may have higher unemployment rates. Susskind and Susskind (2015) also say that AI-driven restructuring will affect professionals in law, health, and education.

Countries need to work together to share technology, teach people how to use it, and make AI infrastructure available to everyone in order to close this digital gap.

Policy Architectures for a Resilient Transition

The research points to five main policy pillars:

Learning and getting new skills for life. For people to get training in the middle of their careers, governments need to make certification systems that are flexible (OECD, 2024).

Rights-based regulation. To stop too much surveillance and loss of freedom, AI adoption needs to be limited by protections (Susskind & Susskind, 2015).

Help for open positions in certain areas. Clerical workers, who are some of the most at risk, need new ways to learn about compliance, operations analytics, and customer service (ILO, 2023).

The public and private sectors working together. The World Economic Forum (WEF) says that businesses can't pay for training on their own, so the costs should be shared.

Working with people from other countries. Countries need to spend money on digital infrastructure and share what they know to keep inequality from getting worse (McKinsey Global Institute, 2023).

Conclusion

Artificial intelligence is neither a panacea nor a catastrophe for labor markets. The evidence suggests that AI will primarily reconfigure tasks rather than eliminate jobs outright. In the short run, AI augments human capabilities and raises job satisfaction for many workers. In the medium run, substitution risks emerge, particularly for clerical work and certain complementary skills, unless robust reskilling systems are in place.

The future trajectory is not technologically predetermined but institutionally shaped.

With well-designed lifelong learning, rights-based regulations, and inclusive cooperation, AI can deliver productivity with quality employment. Without these policies, AI risks deepening inequalities and destabilizing labor markets.

References

- [1] Acemoglu, D., & Restrepo, P. (2019). Automation and new tasks: How technology displaces and reinstates labor. *Journal of Economic Perspectives*, 33(2), 3–30. <https://doi.org/10.1257/jep.33.2.3>
- [2] Arntz, M., Gregory, T., & Zierahn, U. (2016). The risk of automation for jobs in OECD countries: A comparative analysis. *OECD Social, Employment and Migration Working Papers*, No. 189. OECD Publishing. <https://doi.org/10.1787/5jlz9h56dvq7-en>
- [3] Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), 3–30. <https://doi.org/10.1257/jep.29.3.3>
- [4] Bessen, J. E. (2020). AI and jobs: The role of demand. *Economics of Innovation and New Technology*, 29(3), 279–302. <https://doi.org/10.1080/10438599.2019.1689035>
(Replaces earlier NBER Working Paper citation.)
- [5] Brynjolfsson, E., & McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies. W. W. Norton & Company.
- [6] Brynjolfsson, E., & Mitchell, T. (2017). What can machine learning do? Workforce implications. *Science*, 358(6370), 1530–1534. <https://doi.org/10.1126/science.aap8062>
- [7] Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114, 254–280. <https://doi.org/10.1016/j.techfore.2016.08.019>
- [8] Georgieff, A., & Hye, J. (2024). Artificial intelligence and the future of work: Humans in control. *Philosophical Transactions of the Royal Society A*, 382(2289), 20240006. <https://doi.org/10.1098/rsta.2024.0006>
(New academic source replacing/strengthening Susskind & Susskind 2015 for professional work transformation.)
- [9] Jaimovich, N., & Siu, H. E. (2020). Job polarization and jobless recoveries. *Review of Economics and Statistics*, 102(1), 129–147. https://doi.org/10.1162/rest_a_00814
- [10] International Labour Organization (ILO). (2023). Generative AI and jobs: A global analysis of potential effects on job quantity and quality. International Labour Office. <https://www.ilo.org>
- [11] LinkedIn Corporation. (2025). Work Change Report 2025. LinkedIn. <https://linkedin.com/workchangereport2025>
- [12] McKinsey Global Institute. (2023). The future of work after COVID-19 and AI adoption. McKinsey & Company. <https://www.mckinsey.com>

- [13] Organisation for Economic Co-operation and Development (OECD). (2023). OECD Employment Outlook 2023: Artificial intelligence and the labour market. OECD Publishing. <https://doi.org/10.1787/19991266>
- [14] Organisation for Economic Co-operation and Development (OECD). (2024). Artificial intelligence and the changing demand for skills in the labour market. OECD Publishing. <https://doi.org/10.1787/19991266>
- [15] Susskind, R., & Susskind, D. (2015). The future of the professions: How technology will transform the work of human experts. Oxford University Press.
- [16] World Economic Forum (WEF). (2023). Future of Jobs Report 2023. World Economic Forum. <https://www.weforum.org>
- [17] World Economic Forum (WEF). (2025). Future of Jobs Report 2025. World Economic Forum. <https://www.weforum.org>
- [18] Zanatta, M., Salomone, S., & Solari, F. (2024). Artificial intelligence, workers, and the future of work skills: A systematic review. *Technological Forecasting and Social Change*, 199, 122591. <https://doi.org/10.1016/j.techfore.2024.122591>
(New peer-reviewed review article supporting “AI, job quality, and skills” sections.)