Less than a quarter of firms report that introducing AI has led to a loss of jobs

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Less than a quarter of firms introducing AI technology over the past five years believe it has led to a net loss of jobs, a new survey led by academics at the University of Warwick and the University of Sussex Business School reveals.

A similar proportion of firms told the survey that the recent introduction of AI technology had actually led to more jobs being created while more than half of participating companies said that new AI tech had had no net impact on job numbers.

The study, newly published in *Research Policy*, did find the introduction of AI technology to be more disruptive to job numbers than the introduction of other non-AI based technology but even more likely to be a job creator than other technology as well.

Compared to the introduction of other technology, the introduction of AI is 28.4 percentage points more likely to be associated with job creation and 26.6 percentage points more likely to be associated with job destruction, the study found.

The study is the first survey of its kind in the UK dedicated to capturing the introduction of AI and other new technologies in organizations and focused on jobs.

Dr. Wil Hunt, Research Fellow at the University of Sussex Business School, said: "Discussions about AI's potential impact on jobs have tended to focus on potential job loses as AI is increasingly capable of automating complex tasks. And while there does seem to be some evidence of that, our research shows that AI is as likely to lead to net job creation in companies introducing AI as it is to lead to net destruction.

"While we can't say for sure how many jobs will be created or destroyed from the research, it is likely that the automation of some tasks may mean fewer people are needed to perform some jobs but that increased productivity may reduce costs stimulating sales and demand for workers overall. This of course is likely to depend upon the specific AI-technology used and what employers hope to achieve by using it.

"While our study data precedes the impacts of Coronavirus, adoption of these kinds of technology is only likely to accelerate following the start of the pandemic as more and more work moves online."

Sudipa Sarkar, senior research fellow in the Institute for Employment

Research at the University of Warwick, said: "Advances in AI have reignited debates about the impact of technology on the future of work, raising concerns about massive job losses. However, current evidence supporting this is beset by methodological limitations and there is very little analysis of what actually happens in organizations introducing AI-enabled technologies.

"Drawing on a new UK employer survey, our study reveals that organizations introducing AI have higher rates of both job creation and destruction compared to organizations introducing non-AI technology. The findings of our study also suggest a slightly higher association between AI introduction and job creation than job destruction, but the difference, when tested is not statistically significant. This implies that AI is equally likely to be associated with job creation as job destruction compared to other non-AI technology."

The research authors point out that studies to date tend to be flawed because they are based on what might happen in organizations introducing AI or what happens in organizations introducing technology more broadly. Alternatively, they ignore the economic, social and cultural factors that influence a firm's new technology adoption rates.

By contrast, the new study explicitly reveals what is happening within organizations that have adopted AI-enabled technologies specifically and allows employers to give a clearer picture about what is happening within a company.

The Investment in Work Technology Survey was designed by the authors in collaboration with the Chartered Institute for Personnel and Development and was administered by YouGov, achieving 759 eligible responses.

Professor Chris Warhurst, director of the Institute for Employment

Research at the University of Warwick, said: "In the absence of a natural experiment and longitudinal data it is impossible to attempt to estimate the causal effect of AI adoption on employment creation or reduction. Instead, our research demonstrates how such a methodology helps understand the extent of AI use within organizations at a given point in time and is a step towards understanding how the introduction of AI-enabled technology can have different implications for organizations compared to other technologies."

More information: Wil Hunt et al, Measuring the impact of AI on jobs at the organization level: Lessons from a survey of UK business leaders, *Research Policy* (2021). DOI: 10.1016/j.respol.2021.104425

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