

Feature Articles

This month's focus: AI and the Labor Market

The Impact of AI on Employment and Reskilling

Koichi Iwamoto

Contact point: iwamoto.koichi.u57@kyoto-u.jp

Currently, the relationship between AI and human intellectual work is a "complementary" relationship in which AI performs some of the tasks previously performed by humans. Eventually, with the advancement of AI technology, this will transition to a "substitutive" relationship in which AI replaces human intellectual work. The future relationship between AI and human intellectual work can be predicted with considerable accuracy. Therefore, it is crucial to consider and prepare countermeasures now. The best way to solve the AI employment problem is to create new industries that generate more jobs than those lost due to AI implementation. However, despite the reality of rapid job losses due to AI implementation, no new AI industries with significant job-absorbing capacity have emerged. Furthermore, the question of who will be responsible for reskilling and finding new jobs for those who have lost their jobs due to AI implementation remains unresolved. The importance of reskilling is being emphasized across many sectors. However, until now, the government has left skills training to individual companies. The consequences of this government inaction are now becoming apparent. I want to emphasize that the coexistence of AI and humans depends on reskilling.

The Economics of AI and Employment

Noritaka Kudoh / Hiroaki Miyamoto

The rapid diffusion of generative artificial intelligence (AI) and advances in robotics have significantly increased interest in the economic and social consequences of these technologies. Drawing on recent developments in the academic literature, this paper provides a nontechnical review of the effects of technological innovation, including AI, on employment from theoretical, empirical, and historical perspectives and offers an integrated overview of the current state of knowledge.

Task and Skill Changes after the Introduction of Traditional AI and Generative AI

Shinya Iwatsuki

This article presents a comparative analysis of changes in employees' tasks and skills following the introduction of traditional AI and generative AI. The findings suggest commonalities in task reorganization and its effects, tasks and skills related to handling hallucinations, and concerns about preserving basic skills. In contrast, generative AI was found to be associated with an expansion in the range of tasks and skills, as well as a decline in the value of certain skills. Based on these findings, the article identifies key issues for promoting collaboration between employees and AI technologies.

Feature Articles

AI and the Labor Market Through the Lens of Job Postings

Yusuke Aoki

Contact point: yaoki@indeed.com

This survey article examines how AI is reshaping labor markets, drawing on Indeed Hiring Lab analyses and a growing body of academic research that uses online job posting data. Across multiple independent studies, we examine four themes: occupational exposure to AI based on skill requirements, the contrasting dynamics of tech and AI-related postings in the US and Japan, the dynamic effects of AI on employment and productivity, and the role of workers' expectations about AI in shaping economic behavior. A polarization has emerged in the US: AI-related postings have surged, yet entry-level openings—particularly in tech—have declined sharply. In Japan, while adoption lags, the structural features of its labor market—chronic worker shortages and rigid employment practices—make AI more likely to complement labor than displace it. For investors, the key implication is that the AI productivity premium and shifts in workforce composition must be understood through a regionally differentiated lens.

Articles

An Empirical Analysis of Household Inflation Expectations: De-Anchoring from Deflation and Re-Anchoring to Inflation

Kei Ikeda

Contact point: ikeda47124@nissay.co.jp

Inflation expectations are one of the most important determinants of the medium- to long-term inflation trajectory. This paper focuses on household inflation expectations and examines recent developments by identifying a core component of households' inflation expectations that is less sensitive to fluctuations in contemporaneous headline inflation. The empirical analysis suggests that the core component, which had historically contributed to deflationary pressure, has recently begun to contribute to inflationary pressure. In other words, household inflation expectations may have become de-anchored from the deflationary regime of the past and may now be transitioning toward and gradually re-anchoring in an inflationary regime. Nevertheless, it is still premature to conclude that re-anchoring has been fully achieved. Going forward, it will be important to assess whether the core component of inflation expectations can continue to serve as a stable source of inflationary pressure without being affected by short-term price movements such as fluctuations in energy and food prices.

Articles

Do foreign Investors Promote Innovation in Japanese Firms? Evidence from Patent Applications and Citations

Kenichi Nagasawa / Tomonari Michiyama

Contact point: nagasawa_k@shunan-u.ac.jp

This study examines the effects of foreign investors on the innovation activities of Japanese firms using patent data. The results show that firms with high foreign ownership tend to have more patent applications but lower patent citation efficiency. These findings suggest that foreign investors promote the quantity of innovation while potentially diminishing its quality. Furthermore, higher foreign ownership may encourage firms to prioritize the development of existing products rather than undertaking highly innovative and risky research projects. Overall, the results highlight the importance of balancing the quantity and quality of innovation.

A GDP Forecasting Framework for Hiroshima Prefecture: Integrating an Unobserved Components Model with Machine Learning for Regional Financial Research

Hideaki Tanaka, CMA

Contact point: hideaki_tanaka77@yahoo.co.jp

Timely assessment of regional economic conditions is essential for regional finance, yet prefectural GDP statistics in Japan are released with a substantial delay, limiting their immediate practical use. This paper develops a two-stage forecasting framework for Hiroshima Prefecture that extracts the underlying trend using an Unobserved Components Model (UCM) and explains short-term fluctuations using external macroeconomic indicators and machine-learning techniques. The framework produces annual GDP growth forecasts and constructs a quarterly growth path using high-frequency indicators. The practical usefulness of the framework is assessed in terms of forecasting performance, robustness, and interpretability, demonstrating its usefulness for regional financial research.
