



HIGHLIGHTS from Chapter 2: ARTIFICIAL INTELLIGENCE, REAL IMPACT: LABOR MARKET IMPLICATIONS OF AI ADOPTION IN SOUTH ASIA

Key Points

- *Only 7 percent of South Asia's jobs are at risk of AI automation, while 15 percent of South Asian workers are in jobs that may experience productivity gains. Entry-level and upper-middle-skilled workers in professional services are most at risk of automation.*
- *AI skills are increasingly demanded by firms, with substantial growth in AI-related job postings and a wage premium of 30 percent relative to other white-collar jobs.*
- *The diffusion of AI has already begun to disrupt the white-collar labor market, with postings for the most substitutable jobs falling by 20 percent relative to less-exposed jobs following the release of ChatGPT. These job displacement effects have been concentrated in the business services sector and among entry-level and upper-middle-skilled jobs.*

Exposure to AI in South Asia. Labor market exposure to artificial intelligence in South Asia is lower than in other EMDEs, owing to the predominance of agricultural and manual jobs in the region. Only 7 percent of South Asia's jobs are highly exposed to AI without being complementary to its use, and thus at risk of automation—well below the 15 percent exposure in other emerging markets—while 15 percent of South Asian workers are in jobs with strong complementarities with AI and may experience productivity gains. Automation risk is highest for less-experienced, upper-middle-skilled workers.

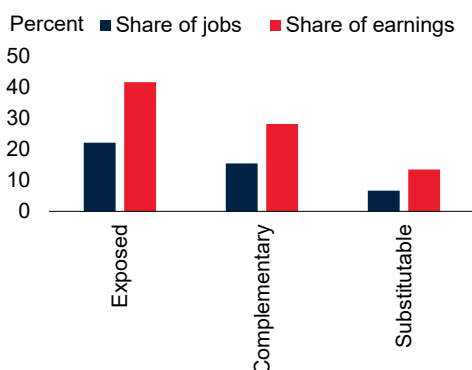
Growth in demand for AI skills. Employer demand for AI-related skills has expanded rapidly, with AI-related job postings growing 75 percent faster than other postings since 2023. AI skills earn a substantial wage premium of nearly 30 percent relative to other white-collar jobs, compared to just 12 percent for generic digital skills. AI job postings have been concentrated in India and Sri Lanka and, within India, in cities of the southern technology corridor.

Labor market impacts. Diffusion of AI technology has already led to a slowdown in hiring, with monthly job listings falling by around 20 percent, relative to other postings, for the most substitutable white-collar occupations following the introduction of ChatGPT. These impacts have been concentrated primarily among entry-level jobs and those not requiring a college degree. With a large share of highly substitutable jobs, the business services sector is particularly exposed to both productivity gains and job displacement from AI. Since the release of ChatGPT, job postings and wages in business services occupations have fallen by 35 and 8 percent, respectively, relative to trends in other sectors. However, a recent export surge in the sector shows no signs of slowing, suggesting productivity gains for outsourcing firms.

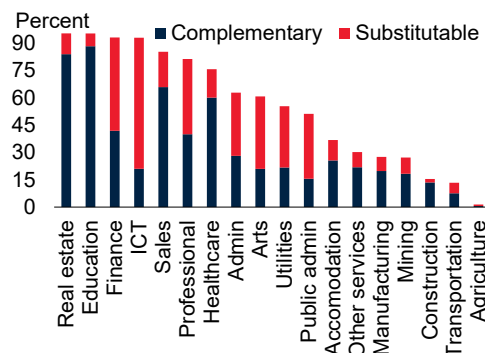
Policies. Previous technological revolutions—like computerization or industrial automation—led to both concentrated labor disruptions and aggregate productivity gains, and AI may produce similar dynamics. Benefiting from AI will require appropriate digital and energy infrastructure, expanded digital literacy, and an enabling environment for firms to adopt new technology.

FIGURE 1. Artificial intelligence exposure and impacts in South Asia

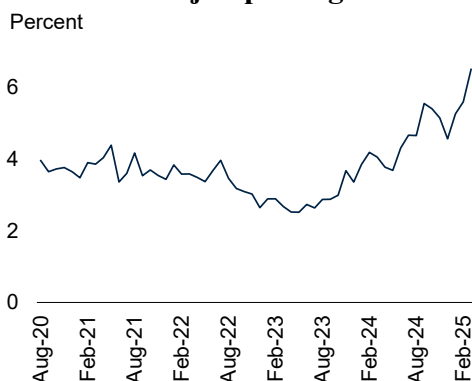
A. Share of jobs and labor earnings exposed to, and complementary with, AI in SAR



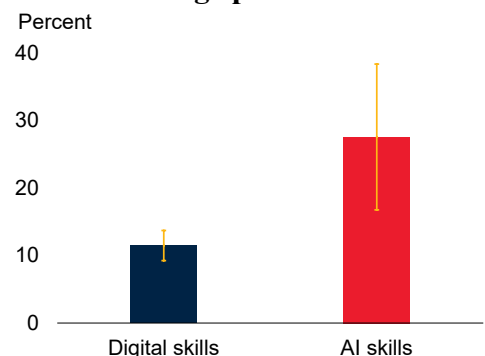
B. Share of total earnings exposed to AI by sector



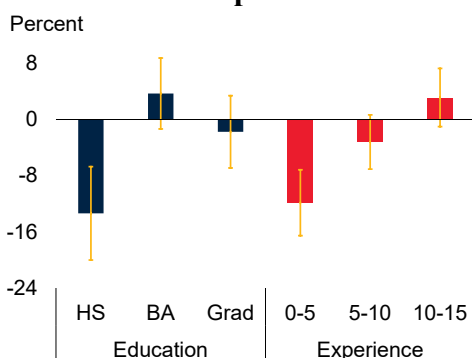
C. AI-related job postings over time



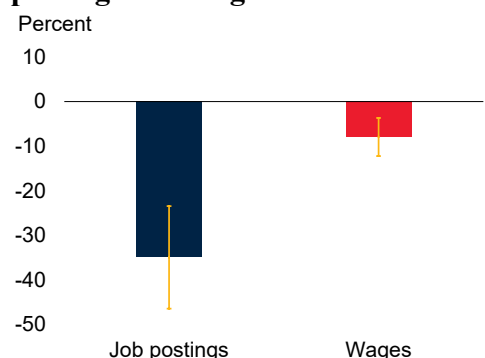
D. The AI wage premium



E. Impact of ChatGPT on job postings, by education and experience



F. Impact of ChatGPT on BPO job postings and wages



Sources: Felten, Raj, and Seamans (2023); Global Labor Database; Lightcast (database); Pizzinelli et al. (2023); World Bank.

Note: AI = artificial intelligence; ICT = information and communication technology; SAR = South Asia. All regional averages are weighted by working population (aged 15+). Exposure to AI is defined as a composite AI exposure score above the median across occupations. Complementary (substitutable) jobs are defined as a complementarity score above (below) the median across occupations and above-median exposure. Yellow whiskers represent 95 percent confidence intervals, with standard errors clustered at the occupation level. A. Bars show the share of jobs and total wage earnings exposed to AI, complementary to AI, or substitutable with AI.



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B. Bars show share of total labor earnings with differing levels of AI exposure by sector of activity. Sectors are defined as 1-digit ISIC sectors (sections)

C. Line shows the share of AI-related job postings in all Lightcast South Asia postings from August 2020 to February 2025.

D. Bars show the estimated wage premiums associated with digital and AI skills. Wage premiums are estimated from a job listing-level regression of log posted salaries on indicators for digital or AI skills, controlling for country-year, location, and occupation fixed effects.

E. Bars show coefficients from a difference-in-differences regression at the 4-digit occupation-by-month level. The log of total occupation-level job listings for each education and experience category is regressed on an indicator for post-ChatGPT release, with occupation and month fixed effects. Coefficients show impacts from a 1-standard deviation-increase in occupational exposure. HS = high school; BA = bachelors; Grad = graduate degree.

F. Bars show coefficients from occupation-month regressions of log of job postings and log of wages on the interaction between post-ChatGPT and a BPO-occupation indicator, conditional on occupation and month fixed effects.