

Generative AI as Seniority-Biased Technological Change: Evidence from U.S. Résumé and Job Posting Data

Abstract:

We study whether generative AI (GenAI) constitutes *seniority-biased technological change*, disproportionately reducing demand for junior workers. We develop a conceptual framework in which GenAI adoption reduces junior labor demand through task displacement and labor-saving productivity gains. We test these implications using U.S. résumé data covering 62 million workers at more than 280,000 firms (2015--2025), allowing us to track firm-level employment by seniority. GenAI adoption is identified through text analysis that detects “GenAI integrator” job postings, signaling active GenAI implementation by firms. Following adoption, junior employment declines sharply in adopting firms relative to non-adopters, while senior employment trends remain largely unchanged. This decline is concentrated in occupations most exposed to GenAI, and within occupations, GenAI-exposed tasks are increasingly removed from junior job postings. The decline is driven primarily by slower hiring rather than increased separations.