

Abstract

Recent theory stresses the role of new job types ('new work') in counterbalancing the erosive effect of task-displacing automation on labor demand. We study new work by building a novel nearly century-long inventory of new job titles linked to United States Census microdata. We estimate that the majority of contemporary employment is found in new job tasks added since 1940 but that the locus of new task creation has shifted--- from middle-paid production and clerical occupations in the first four post-WWII decades, to high-paid professional and, secondarily, low-paid services since 1980. We hypothesize that new tasks emerge in occupations where new innovations complement their outputs or market size expands, while conversely, employment contracts in occupations where innovations substitute for labor inputs. Leveraging a measure of occupational innovation exposure built from a century of patent data and harnessing occupational demand shifts stemming from trade and demographic shocks, we show that innovation predicts the growth of new occupational tasks and that new occupational tasks predict employment growth. We demonstrate that the forces of new task creation and task automation, as codified in patents, are positively correlated at the level of occupations and yet have opposing consequences for employment and wage growth.