The Shelf-life of Young Workers’ Skills in Times of Accelerating Technological Change. Evidence from a Reform of a Mandatory Training Regulation.

We investigate how incumbent workers’ careers respond to an increasing labor supply of graduates with modern IT skills during a period of accelerating technological change. We identify a supply shock of IT-skilled graduates by exploiting a reform of a mandatory training regulation that obligated all new apprentices in a large German manufacturing occupation to acquire in-depth IT skills. We use a difference-in-differences approach to analyze how this supply shock of IT-skills affected the careers of incumbent workers. The results show that even young incumbents experienced long-lasting earnings losses in form of lower wage growth after the IT-skilled graduates entered the labor market. Detailed analyses of the mechanisms reveal that IT-skilled graduates crowded incumbent workers out of their occupation, and suggest that incumbents forwent promotions in favor for IT-skilled graduates. However, incumbents experienced only little unemployment during a transition period and resumed a stable career in other occupations, even within their own firms. Moreover, we observe that incumbent workers the metal working industry or in other sectors, such as the service sector.