

Abstract

A fast-growing literature shows that digital technologies are displacing labor from routine tasks, raising concerns that labor is racing against the machine. We develop a task-based framework to estimate the aggregate labor demand and employment effects of routine replacing technological change (RRTC), along with the underlying mechanisms. We show that while RRTC has indeed had strong displacement effects in the European Union between 1999 and 2010, it has simultaneously created new jobs through increased product demand, outweighing displacement effects and resulting in net employment growth. However, we also show that this finding depends on the distribution of gains from technological progress.