New and emerging technologies pose a serious challenge for the future of employment. As machines learn to accomplish increasingly complex production tasks, the concern arises that automation will wipe out a great number of jobs. This paper investigates the relationship between the risk posed by the automation of jobs and individual-level occupational mobility using a representative German household survey. It provides an overview of current trends and developments on the labor markets due to the automation of jobs. It also describes the most recent dynamics of self-employment and relates it to the challenges of work and labor in the digital age. By revolutions in education and in technology, the very nature of work will have changed radically—but only in economies that have chosen to invest in education, technology, and related infrastructure. Some classes of jobs will be handed over to the ‘immigrants’ of AI and Robotics, but more will have been generated in creative and curating activities as demand for their services grows exponentially while barriers to entry continue to fall. AI and robotics will be a niche, with a few leading applications such as banking, retailing, and transport. The risks of error and the imputation of liability remain major constraints to the application of these technologies to the ordinary landscape.

Argument #5: Our social, legal, and regulatory structures will minimize the impact on employment. To understand how technological change will affect employment in the coming decades, we need to extrapolate beyond existing, backwards-facing data. We have identified four major streams of debate around the future impact of technology on the labor market. Some researchers argue that the effect of technology on the future of jobs is overblown. Robert Gordon, for example, argues that the "post 1972 pace of technological change peaked in 1996–2000." Other trends—demographic shifts, declining labor force participation, and increasing productivity—will minimize the impact on employment. The authors also raise questions about how rapidly the development, acceptance, and diffusion of labor-displacing technologies is likely to occur. In the empirical portion of the chapter, the authors examine the evidence on the rate of occupational change from 1870 to 2015. Using an index of dissimilarity as the metric, the authors find that the rate of occupational change from 1870 to 2015 does not provide evidence of a sharp uptick in the rate of occupational shifts in the information age. Instead, the rate of occupation shifts has been declining slowly throughout the second half of the twentieth century. Thus, the issues and results discussed here suggest that imminent massive employment displacement is not a foregone conclusion.
educational attainment, and the rising ratio of debt to GDP—are far more significant. Debate #2: Specific Tasks Matter The second strand of the future-oriented conversation is more focused on specific tasks. Even while technologies replace some jobs, they are creating new work in industries that most of us cannot even imagine, and new ways to generate income. One-third of new jobs created in the United States in the past 25 years were types that did not exist, or barely existed, in areas including IT development, hardware manufacturing, app creation, and IT systems management. The net impact of new technologies on employment can be strongly positive. A 2011 study by McKinsey's Paris office found that the Internet had destroyed 500,000 jobs in France in the previous 15 years—but at the same time ha The authors critique the “task replacement” methodology that underlies the most powerful and specific predictions about the impact of technology on employment in particular occupations. There are a number of reasons why assuming a correspondence between task replacement and employment declines is not warranted. Jacobs, J.A. and Karen, R. (2019), “Technology-Driven Task Replacement and the Future of Employment”, Vallas, S.P. and Kovalainen, A. (Ed.) Work and Labor in the Digital Age (Research in the Sociology of Work, Vol. 33), Emerald Publishing Limited, pp. 43-60. https://doi.org/10.1108/978-1-78973-211-1201900153-004. Download as .RIS. Publisher.