Accepted Manuscript

On the welfare implications of automation

Maya Eden, Paul Gaggl

PII: S1094-2025(17)30120-5
DOI: https://doi.org/10.1016/j.red.2017.12.003
Reference: YREDY 852

To appear in: Review of Economic Dynamics

Received date: 15 December 2016
Revised date: 14 November 2017

Please cite this article in press as: Eden, M., Gaggl, P. On the welfare implications of automation. Review of Economic Dynamics (2017), https://doi.org/10.1016/j.red.2017.12.003

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.
On the Welfare Implications of Automation

December 18, 2017

Abstract: We document that the decline in the labor income share since the 1950s has been countered by a rise in the income share of capital goods that embody information and communication technology (ICT). In parallel, there has been substantial reallocation of labor income from occupations relatively substitutable with ICT (routine) to ones relatively complementary (non-routine). These trends are consistent with the view that ICT allows for the mechanization of tasks that traditionally required labor, a process known as automation. Our calibration suggests that automation can account for half of the decline in the labor share, but that it is unlikely to be the sole driver of the decline in the routine labor income share. A representative agent framework suggests welfare gains of 4%.

JEL: E25, E22, J24, J31, O33

Keywords: job polarization, elasticity of substitution between capital and labor, elasticity of substitution between different types of labor, growth accounting

Maya Eden
Brandeis University
Department of Economics
415 South Street
Waltham, MA 02453
Email: meden@brandeis.edu

Paul Gaggl
University of North Carolina at Charlotte
Belk College of Business
Department of Economics
9201 University City Blvd
Charlotte, NC 28223-0001
Email: pgaggl@uncc.edu

1We would like to thank two anonymous referees as well as Greg Kaplan (the editor) for their extremely helpful comments. We are further grateful to Eric Bartelsman, Paul Beaudry, David Berger, Ben Bridgman, Aspen Gorry, Bart Hobijn, Roberto Fattal Jaf, Nir Jaimovich, Aart Kraay, Aitor Lacuesta, Juan Rubio-Ramirez, Ayşegül Şahin, Henry Siu, Michael Sposi, Nancy Stokey, Alan Taylor as well as seminar participants at the World Bank, Vanderbilt University, Duke University, the Stockholm School of Economics (SITE), American University, the U.S. Bureau of Economic Analysis, the ABCDE Conference on the Role of Theory in Development Economics, the 2014 NBER Summer Institute (CRIW), the 2014 SEA Meetings, the 2016 LAEF Macroeconomics and Business CYCLE conference (UCSB), the 4th WB-BE Research Conference on “Labor markets: Growth, Productivity and Inequality”, the 2016 Econometric Society NASM, and the 2016 Vienna Macro Cafe for extremely helpful comments and suggestions.
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات