TECHNOLOGY ADOPTION, TURBULENCE AND THE DYNAMICS OF UNEMPLOYMENT

Georg Duernecker
University of Mannheim

Abstract
Starting in the late 1970s, European unemployment began to increase while US unemployment remained constant. At the same time, capital-embodied technical change began to accelerate, and the US adopted the new capital much faster than Europe. I argue that these two facts are related. The main idea is that if there is capital-embodied technical change, then the unemployment rate depends critically on how obsolete the installed capital stock is compared to the frontier. In particular, European workers initially worked with relatively obsolete capital, and so they lacked the skills required to work with frontier capital. When they lost their jobs they therefore stayed unemployed for longer than their American counterparts. I find that this channel accounts for about 70% of the discrepancy between the behavior of unemployment rates in Europe and the US. (JEL: E24, J24, J63, O33)