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Título

Technological change, routinization and job polarization evidence from a middle-income country

Resumo

Job polarization has been pervasive in several OECD countries. Technology is the main candidate for explaining the phenomena, in the form of Routine Biased Technological Change (RBTC). In this paper we address polarization in Portugal using a matched employer-employee dataset, which allow us to explore firm size and sector dimensions of RBTC.

Conteúdo

Technology has been thought to favor skilled labor due to its complementarity. However, evidence from the 1990s shows technology benefiting both high-skilled and low-skilled, while middle-skilled labor is disappearing -- job polarization. Polarization has been identified in several OECD countries and the mostly agreed explanation is based in Routine Biased Technological Change (RBTC). RBTC rely on the fact that human can be substituted by computer capital in some tasks - routine tasks - while other tasks must still be performed by humans.

We address polarization in an European country were firms have access to the same technologies than EU counterparts, but has lower wages and lower skilled labor Portugal. Using a matched employer-employee dataset, we explore the evolution of employment and wages from 1986 to 2007. Using task measures computed from O*NET dataset, we test the routinization hypothesis -- technology intensive capital displaces workers in routine jobs.

The results show a polarization trend, especially during 1995-2007, in both wages and employment. Using measures of routine jobs, makes clear that those jobs present a different nature regarding wages and employment. Wages and employment estimations show a rise in the relative employment and wages for abstract, while for routine cognitive employment decreases, but not wages. We argue that technological change interacts with changes in the firms' internal organization, which can lead to this result. As so, we present a nuanced version of the routinization hypothesis, while exploring firm size and sectors dimensions.

CV

Mestre em Engenharia e Gestão Industrial, pelo Instituto Superior Técnico em 2011. Frequentou neste momento o programa doutoral em Engenharia e Gestão sob orientação dos professores Francisco Lima (IST), Sónia Pereira (Columbia University) e Pedro Faria (University of Groningen). Os seus interesses de investigação focam-se em mudança tecnológica, inovação e microeconomia.