

Skill-intensity of occupations, labor market polarization, and occupational allocation of college graduates.

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Abstract

The first chapter is motivated by a rapid expansion of higher education systems in Central European countries, where universities are largely state-funded and provision of higher education is a public policy decision. In this paper, I investigate an indicator of college skills usage – the fraction of college graduates employed in "college" occupations. Gottschalk and Hansen (2003) propose to identify "college" occupations based on within-occupation college wage premia; I build on their strategy to study the local-labor-market relationship between the share of college graduates in the population and the use of college skills. Empirical results based on worker-level data from Czech NUTS-4 districts suggest a positive relationship, thus supporting the presence of an endogenous influence of the number of skilled workers on the demand for them. Thus, the findings of this paper suggest that, in the long run, districts should be able to positively stimulate their labor markets by providing higher education to a larger fraction of their population.

In the second chapter, I propose a model-based measure of occupational skill-intensity -- a measure allowing to consistently track technological progress on occupational level or to derive the demand for educated labor within different groups of occupations. I use the March CPS data from 1983 to 2002 to estimate such a measure corresponding to occupation-specific relative productivities of college and high-school educated. With imperfect substitution across skill types, the measurement of relative productivities requires estimation of substitution elasticities, and I propose a simple strategy to obtain these. The resulting measure is used to shed light on the labor market polarization as documented by Goos and Manning (2007) and Autor et al. (2006). I show that in the 1980's the technological progress was equally distributed across occupations from all the spectrum of earnings distribution, but high earners sorted to more skill-intensive occupations and low earners sorted to less skill-intensive occupations. In the 1990's, there was no further reallocation and the least paying occupations experienced a greater technological progress.

The last chapter provides further analysis of the labor market polarization. I note that although much attention has been given to job polarization on national labor markets, there is little evidence on cross-country differences in the shape of employment changes distribution, which is used to picture polarization. This paper analyzes job polarization in 12 European countries using the skill-intensity measure developed in the second essay, which is independent of current labor supply conditions. I show that extensive north-south differences in the extent and skewness of polarization correspond to cross-countries dissimilarities in employment protection policies.