A General Equilibrium Approach to Decomposing the Wage Inequality

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Abstract

This paper develops a model of schooling investment and labor search that generates a distribution of skills and frictional wage differentials as equilibrium objects. We use the model to shed light on how educational choices and labor market uncertainty interact in shaping wage inequality. We provide a novel decomposition of wage inequality into the variation driven by returns to education, unobservable productivity differences and matching frictions. Moreover, we are able to distinguish the role of education as a process that enhances worker's productivity from one that merely sorts workers by their productivity into the labor market. We calibrate our model to the U.S. data and quantify the contribution of each component to standard measures of between- and within-group inequality. Our findings indicate that the higher the educational attainment, the more important the role of workers' heterogeneity in shaping between-group wage differentials. In addition, the role of schooling as a process that enhances productivity is more important for college graduates than for college dropouts. With respect to within-group differentials, we find that labor market uncertainty is more important to account for this type of inequality, although its importance also decreases with educational attainment. However, in contrast with the between group differentials, the part of within-group dispersion explained by workers' heterogeneity is mostly driven by the positive sorting mechanism of the educational process.

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