

# Selective Migration, Occupational Choice, and the Wage Returns to College Majors

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Tyler Ransom\*

Duke University

## Abstract

I examine the extent to which the returns to college majors are influenced by selective migration and occupational choice across locations in the US. To quantify the role of selection, I develop and estimate an extended Roy model of migration, occupational choice, and earnings where, upon completing their education, individuals choose a location in which to live and an occupation in which to work. In order to estimate this high-dimensional choice model, I make use of machine learning methods that allow for model selection and estimation simultaneously in a non-parametric setting. I find that selection in location and occupational choice can have large effects on earnings differences across majors, but that the effect is small in most locations. Using estimates of the model, I characterize the migration behavior of different college majors and find that migration flows are driven by cross-location differences in both wage returns and availability of related occupations. This finding has important implications for local governments seeking to attract and retain educated workers.

**JEL Classification:** I2, J3, R1

**Keywords:** College major, migration, occupation, Roy model

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\*Contact: Social Science Research Institute, Duke University, Box 90989, Durham, NC 27708-0989. E-mail: [tyler.ransom@duke.edu](mailto:tyler.ransom@duke.edu)