College Majors and Labour Market Mismatch

Michelle Rendall
Monash University

Satoshi Tanaka
University of Queensland

Yi Zhang
University of Queensland

This paper studies the extent of skill mismatch across college major-occupation combinations. We propose a general equilibrium framework to measure mismatch through output loss. The model relies on the estimation of college-occupation returns based on a Roy model. We use administrative tax panel data merging employment history and university degree information for 10% of the Australian workforce. We control for selection at the occupation choice by taking advantage of the regional variations in labor market conditions and changing government education policies. To estimate mismatch we exploit a policy change where subsidized university spaces became available to all Australian citizens and Permanent Residents irrespective of academic performance. Our results suggest that (1) STEM-related fields (IT, Commerce, and Engineering) are the main drivers of wage dispersion, but (2) Commerce, Health, and Education are the main driver of output loss, and (3) government education subsidies lead to larger mismatch and greater persistence of wage dispersion over the life-cycle.