

# Three Essays on the Economics of Education and Inequality

PhD Thesis

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## Abstract

This thesis consists of three independent essays, unified by the common theme of inequality and education.

Chapter 2 uses harmonized national panels for Australia, the United States and Germany to measure the role of home ownership on income inequality, polarization and intergenerational mobility. Australia stands out as the only country where home ownership drastically changes all three measures. The results of this paper provide strong reinforcement of the Canberra Group's (2001) recommendations to include all in-kind income sources for cross-country comparisons of income distributions.

Chapter 3 continues exploring the topic of intergenerational persistence of income. It uses auction theoretical modelling to demonstrate a flaw in the centralized college admission system. The development of the test-preparation industry makes marks less informative about the underlying skills of the applicants. This is mainly due to the strategic interaction of applicants that inflates the marks. This, in turn, complicates sorting under the centralized college admission system for highly competitive colleges or specializations.

Chapter 4 continues exploring the topic of education. It identifies a demand shock on one specific type of college graduates on the Russian labor market in the early 1990s. The shock changed the structure of employed professionals and technicians, influenced income inequality, and provides a parsimonious explanation for the behavior of the college wage premium in Russia from 1985 to 2015. The nature of the demand shock indicates that firms were deploying organizational technologies in response to a rapid desertion of central planning.

## Certificate of original authorship

I, Sergey Alexeev, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Business School at the University of Technology Sydney. This thesis is wholly my own work unless otherwise indicated in the references or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution. This research was supported by the Australian Government Research Training Program.

Production Note:

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# List of Abbreviations

- CCA Centralized college admission
- CES Constant elasticity of substitution
- CNEF Cross National Equivalent File
- HE Higher education
- HILDA Household, Income and Labour Dynamics in Australia
- IGC Intergenerational correlation
- IGE Intergenerational elasticity
- IR Imputed rent
- IRC Intergenerational rank correlation
- lb* Law and business
- $\bar{lb}$  Except law and business
- OECD Organization for Economic Co-operation and Development
- OLS Ordinary least squares
- PSID Panel Study of Income Dynamics
- QR Quantile regression
- RLMS Russia Longitudinal Monitoring Survey
- SBTC Skill-Biased Technical Change
- SOEP German Socio-Economic Panel
- STEM Science, technology, engineering and mathematics
- TP Test-preparation
- TSK Test-specific knowledge