# Empirical Essays on Education and Health Policy Evaluation

Debbie Lau

### **ACADEMIC THESIS**

which has been duly authorized for defence in pursuit of the PhD degree at the School of Business, Economics and Law, University of Gothenburg, to be presented for public examination

Tuesday June 3rd, 10.15 am, Lecture hall B44,

Department of Economics, Vasagatan 1

Gothenburg 2020

#### **Abstracts**

## Impact of School Peers from the Same Region-of-Origin on Endogamy and Work Segregation: Evidence from Sweden

This study estimates how the quasi-random variation in the proportion of school peers from the same Region-of-Origin (ROO) affects the probability for an individual to have a partner from the same ROO (endogamy) and the proportion of colleagues from the same ROO in the same workplace later in life (work segregation). This is answered by a fixed effect regression model, together with a unique dataset that merges different register databases from Sweden. The dataset includes ROO background, education, labour market outcomes and multigenerational linkages of the universe of ninth graders from the school years 1988 to 2000. Main findings show both statistically and economically significant results for immigrants: one standard deviation increase in the proportion of same-ROO peers increases the probability of an immigrant to have a partner from the same ROO by over 7% and increases the probability of having same-ROO colleagues by over 12%.

### Impact of Salt Iodisation on Human Capital: Evidence from Sweden

The focus of this study is the heterogeneous causal impact of a nationwide information campaign of salt iodisation in 1936 on individuals with different socioeconomic status (SES) at birth, using a difference-in-differences regression model. This is made possible by using a novel dataset that merges the Swedish population registers with two unique historical data sources of pre-intervention iodine deficiency prevalence and SES at a highly disaggregated level, thereby being able to trace the educational attainment and labour market outcomes of these individuals during their adulthood. The results of this study, strikingly, show that while the intervention increased human capital for individuals from families with high SES, those from families with low SES did not benefit. While the intervention led to an 8% increase in an individual's probability of having a high-skill occupation, modest effects are found for an individual's education. The social gradients shown by these results are critical for governments who use salt iodisation to improve human capital in the population.

### Impact of Mother Tongue Education on Labour Market Outcomes and Educational Inequality

This study exploits a sharp policy change in Hong Kong when half of the secondary schools were mandated to change the teaching language from English to Chinese from the school year 1998-1999 onward. The policy impact is identified with regression discontinuity design and the main dataset is the census data in 2011. The results show that mother tongue education increases an individual's unemployment rate and decreases his or her likelihood of having high-paid occupation. However, due to limitation of the dataset, the study finds insignificant and imprecise estimates of the differential impact on the likelihood of university attendance between individuals with different socioeconomic status, which has been a controversial topic in the society in Hong Kong. The first set of results, nevertheless, warrants a discussion of whether mother tongue education enhances learning or worsens an individual's labour market outcomes.

**Keywords:** causal inference, register data, segregation, endogamy, iodine deficiency, information campaign, mother tongue education, inequality

JEL Classifications: 112, 115, 118, 121, 124, 126, J12, J13, J15, J24, J62, N34

ISBN: 978-91-88199-47-8 (printed) 978-91-88199-48-5 (PDF)

**Contact Information:** Debbie Lau, Department of Economics, School of Business, Economics and Law, University of Gothenburg, Box 640, 405 30 Gothenburg, Sweden. Email: debbie.lau@economics.gu.se