Jacob Loree

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Research Interests

Macroeconomics, labour economics, applied econometrics

Education

2020 (expected) - Ph.D., Economics, Ryerson University

Dissertation: "Essays in Occupational Skill Characteristics"

Committee: Derek Stacey (supervisor), Claustre Bajona, Kevin Fawcett

2015 - M.A., Business Economics, Wilfrid Laurier University

2014 - B.A., Honours Economics, University of Western Ontario

Teaching

Instructor at Ryerson

ECN301, Intermediate Macroeconomics I

CECN627, Econometrics I

ECN 627, Econometrics I

ECN210, Understanding Economics

ECN104, Introductory Microeconomics

Teaching Assistantships

EF9901, Micreoconomics I (Ph.D level)

EF9902, Macroeconomics I (Ph.D level)

EF9903, Econometrics I (Ph.D level)

EF9923, Econometrics II (Ph.D level)

EF8911, International Economics (M.A. level)

ECN801, Engineering Economics (undergraduate level)

Awards

2018 - Ontario Graduate Scholarship

2018 - Best Economics Seminar Presentation, PhD

2016 - Top PhD Candidate (2nd year)

2015 - Ryerson Graduate Scholarship

2014 - John Weir Master's in Economics Award

Presentations

2019 - University of Waterloo, Society of Economic Dynamics, Canadian Economics Association Conference, Doctoral Workshop in Applied Econometrics, Ryerson University

2018 - Canadian Economics Association Conference, Doctoral Workshop in Applied Econometrics, Ryerson University

2017 - Canadian Economics Association Conference, GRADShowcase, Graduate Student Research Conference, Ryerson University

References

Name	Derek Stacey (Supervisor)	**Name**	Claustre Bajona
University	University of Waterloo	**University**	Ryerson University
Position	Assistant Professor	**Position**	Associate Professor
Contact	dstacey@uwaterloo.ca	**Contact**	cbajona@ryerson.ca

Name	Kevin Fawcett
University	Ryerson University
Position	Assistant Professor
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Abstracts

Multidimensional Skill Accumulation and Mismatch Over the Lifecycle (Job Market Paper)

In this paper, I investigate occupation skills and how workers match their inherent ability to occupations over their lifecycle. I first present empirical results that suggest workers, on average, are not in occupations that make good use of their inherent ability when early in their careers. As they gain more experience, they typically do not correct this mismatch. 65% of workers use the same skill intensively over their career and 62% of those workers are using a skill in which they do not hold an initial comparative advantage. This skill immobility may be for one of two reasons. Workers may be involuntarily constrained or, due to skill accumulation, are rationally staying in an initial mismatch. Using a model of worker choice with heterogeneous worker skills and occupation skill intensities that has matching frictions and skill accumulation, I am able to account for these empirical trends. The model is calibrated to decompose

worker mismatch into voluntarily and involuntary mismatch. Finally, I impose a counterfactual and determine if skill accumulation is purely tenure based, average wages of occupation switchers fall by 18%.

Occupation Portfolios and Wages (Joint with Derek Stacey)

We develop a method for estimating occupation-specific skill portfolios that exploits variation in both wages and multidimensional skill ratings. We first present a model of occupational sorting to derive relationships between skills and wages across occupations. We then use these relationships to construct skill measures from wage and O*NET skill and ability data using interpolating polynomials. The resulting skill measures use a common interval scale in log wage units. This allows for straightforward comparisons across occupations, linear aggregation across skills, and an intuitive interpretation of the various components of each skill portfolio. The skill measures are then applied to worker-level data to ascribe skill portfolios to individual workers. In doing so, skill differentials across worker characteristics can be explained. Typically, the literature defines two distinct sets of skills for their analysis - cognitive and manual. We find that it is important to further decompose cognitive skills into two subcategories - analytical and interpersonal. Decomposing skills into these three categories can better explain the heterogeneity inherent in an occupational skill portfolio. We then compare our results to other common skill estimating methodologies.

The Occupational Skill Composition of the Gender Wage Gap

In this paper, I investigate the Current Population Survey from 2010-2018 for current evidence of the gender hourly wage gap. There exists a gender wage gap of roughly 18% after controlling for observable characteristics. This gap becomes insignificant when the skill characteristics of the occupation the worker is employed in is included - indicating that occupational skills are important in explaining the wage gap. I use a Lasso algorithm to choose a parsimonious set of skills to represent the entirety of the skill portfolio. This method finds returns to skills vary significantly with gender. This difference is particularly stark within cognitive skills. Women earn more for cognitive skills that rely on following rules but less for skills that rely on creative problem solving. This is not primarily due to occupation selection. This is demonstrated using results for observationally identical workers varying only in gender which show different returns to equivalent skill bundles in selected occupations. For instance, an observationally identical female preschool teacher earns 8% less per hour compared to their male counterpart - even though 97% of preschool teachers are women. This suggests that differing skill remuneration is an important factor when discussing the aggregate gender pay gap.