Akio Yamazaki

Department of Economics
University of Calgary
2500 university Drive, NW
Calgary, Alberta, T2N 1N4
Canada

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Cell: +1 (403) 990-0583
Email: ayamazak@ucalgary.ca
Web: akioyamazaki.weebly.com

CITIZENSHIP: Japan; Canada (Permanent Resident)

RESEARCH INTEREST

Environmental Economics, Public Economics, and Applied Microeconomics.

EDUCATION

Ph.D Economics, **University of Calgary**, AB Canada — Expected 2019

M.A. Economics, **University of Southern California**, Los Angeles, CA, U.S.A — 2012

B.A. Economics, ***Highest Honor*** **University of California, Davis**, CA, U.S.A — 2009

A.A. Transfer, ***Highest Honor*** **City College of San Francisco**, CA, U.S.A — 2007

REFERENCES

Dr. **M. Scott Taylor** (Supervisor)
Professor & Canada Research Chair
Research Associate NBER ITI & EEE Programs
Dept. Economics, University of Calgary
Tel: +1(403)220 - 8912
Email: mstaylor@ucalgary.ca

Dr. **Kenneth J. McKenzie** (Committee member)
Professor
Dept. Economics, University of Calgary
Tel: +1(403)220-4605
Email: kjmckenz@ucalgary.ca

Dr. **Stefan Staubli**
(Committee member & Placement officer)
Associate Professor
Faculty Research Fellow NBER AG Program
Dept. Economics, University of Calgary
Tel: +1(403)220-6180
Email: sstaubli@ucalgary.ca

Dr. **Jared C. Carbone**
Associate Professor
Division of Economics & Business
Colorado School of Mines
Tel: +1(303)273-3416
Email: jcarbone@mines.edu

Administrative Contact: Joann Weston – jweston@ucalgary.ca +1(403)220-4091

PUBLICATION

"Jobs and Climate Policy: Evidence from British Columbia's *Revenue-Neutral* Carbon Tax,"
Journal of Environmental Economics and Management, 83 (2017) pp. 197-216
– **Best second year paper** ($1,000), University of Calgary (2015)

This paper examines the employment impact of British Columbia's revenue-neutral carbon tax implemented in 2008. While all industries appear to benefit from the redistributed tax revenues, the most carbon-intensive and trade-sensitive industries see employment fall with the tax, while clean service industries see employment rise. By aggregating across industries I find the BC carbon tax generated, on average, a small but statistically significant 0.74 percent annual increases in employment over the 2007-2013 period. This paper provides initial evidence showing how a revenue-neutral carbon tax may not adversely affect employment.

WORKING PAPERS

"Environmental Taxes and Productivity: Lessons from Canadian Manufacturing" (**Job Market Paper**)
– **Best student paper** ($500), Canadian Resources and Environmental Economics Association (2018)

This paper investigates how an environmental tax affects manufacturing total factor productivity (TFP) by focusing on British Columbia's revenue-neutral carbon tax. I develop a new hypothesis, "Productivity Dividend Hypothesis," to show that an environmental tax can positively affect productivity by recycling tax revenues to reduce corporate income tax. By incorporating abatement investment into the TFP residual model, I demonstrate the revenue-recycling increase abatement investment, thus enhancing productivity. I empirically test this hypothesis using detailed confidential plant-level data and find that the carbon tax lowers productivity, although this is slightly offset by the revenue-recycling.

"Comparing Applied General Equilibrium and Econometric Estimates of the Effect of an Environmental Policy Shock," with Jared C. Carbone, Nicolas Rivers, and Hidemichi Yonezawa

–**Revise & Resubmit at *Journal of the Association of Environmental and Resource Economists***

We compare the employment effect of British Columbias carbon tax using two empirical methods, econometric model and counterfactual experiments conducted using an applied general equilibrium (CGE) model of the Canadian economy. The comparison allows us to test the theory-driven predictions of the CGE model and the identification strategy of our econometric model. Ex post, we find employment falling in the most carbon-intensive sectors and rising in the least carbon-intensive sectors. Ex ante, we predict employment responses of very similar sign and magnitude to our econometric measurements. We find no evidence to suggest that our econometric estimates are likely to be undermined by general equilibrium effects in this policy setting. Finally, we explore the use of the econometric estimates to deepen the empirical content of the CGE model.

"Do Carbon Taxes Kill Jobs? Firm-Level Evidence from British Columbia," **(*Under Review*)**

– with Deven Azevedo and Hendrik Wolff

This paper investigates the employment impacts of British Columbia's revenue-neutral carbon tax. We develop a revised approach to implementing the synthetic control method to firm-level data. This approach allows us to accurately estimate the heterogeneous employment effects across industries. We find that the employment effects vary across sectors, specifically small service firms see their employment increase, while employment of larger manufacturing firms decreases. We show that these results provide further evidence for the job-shifting hypothesis, especially from energy-intensive sectors to local small businesses. In contrast to previous papers, we find that the aggregate employment was unaffected by this policy.

"The Effect of Climate Policy on Performance of Manufacturing Plants"

– **Best paper award**, Canadian PhD and Early Career Workshop in Environmental Economics (2016)

POLICY PAPERS

"It's Not a Job Killing Policy – The Case of BC's Revenue Neutral Carbon Tax," *Smart Prosperity Institute Research Note*, January 2016 (formerly Sustainable Prosperity)

RESEARCH FUNDING

Principal Investigator, "Environmental Taxes and Productivity: Lessons from Canadian Manufacturing" Productivity Partnership, McMaster University, 2017-2018 (CDN$28,000)

Co-Principal Investigator, "Do Carbon Taxes Kill Jobs? Firm Level Evidence from British Columbia," Economics and Environmental Policy Research Network, Environment Canada, 2017-2018 (CDN$28,000)

Principal Investigator, "The Effect of Climate Policy on Performance of Manufacturing Plants," Economics and Environmental Policy Research Network, Environment Canada, 2013-2016 (CDN$25,000)

PROFESSIONAL EXPERIENCE

INSTRUCTOR: Game Theory & Strategic Thinking for Social Science, University of Calgary 2016

TEACHING ASSISTANT:

Principles of Microeconomics, University of Calgary	2017
Econometrics II, University of Calgary	2017
Microeconomic Theory, University of Calgary	2016
Macroeconomic Theory, University of Calgary	2016
Economics and the Environment, University of Calgary	2013

RESEARCH ASSISTANT:

Professor M. Scott Taylor, University of Calgary	2015, 2018 – Present
Professor Jared Carbone, University of Calgary/Colorado School of Mine	2013–2015
Professor Trevor Tombe, University of Calgary	2013
Professor Kunio Tsuyuhara, University of Calgary	2012 - 2013
Professor Jeffrey Nugent, University of Southern California	2011–2012

FELLOWSHIP, AWARDS & HONORS

Arthur J.E. Child Memorial Bursary in Economics, University of Calgary ($14,000)	2018
SSHRC Pre-Doctoral Fellowship, Smart Prosperity Institute, University of Ottawa ($25,000)	2018
Outstanding Reviewer Award, Journal of Environmental Economics and Management	2018
Dissertation Award (honorable mention), University of Calgary	2018
Eyes High International Doctoral Scholarship, University of Calgary ($12,000 × 3)	2013, 2015, 2017
Canadian Natural Resources Ltd Graduate Scholarship, University of Calgary ($7,800)	2017
Thesis and Dissertation Research Grants, University of Calgary ($1,500)	2016
Chancellor's Challenge Graduate Scholarship, University of Calgary ($5,000)	2013
Ph.D Graduate Scholarship, University of Calgary (total of $116,000)	2012–2016

REFEREEING **"∗" indicates multiple reviews.**

Journal of Environmental Economics and Management*, Climate Policy, International Journal of Sustainable Economy

CONFERENCE AND INVITED SEMINAR PRESENTATION

"Environmental Taxes and Productivity: Lessons from Canadian Manufacturing"

2018 – Smart Prosperity Institute (University of Ottawa CANADA); National Institute for Environmental Studies (Tsukuba JAPAN–**(Invited)**); Canadian Economics Association Annual Conference (Montreal CANADA); Western Economic Association International meeting (Vancouver CANADA); Camp Resources XXV (North Carolina USA); Canadian Resource and Environmental Economics Conference (Montreal CANADA); Occasional Workshop in Environmental and Resource Economics (University of California, Santa Barbara USA); Southern Economic Association meeting (Washington, DC, USA)

"The Effect of Climate Policy on Performance of Manufacturing Plants"

2017 – Environment Canada Research Network Research Symposium (Ottawa CANADA–**(Invited)**)

2016 – Canadian Resource and Environmental Economics Conference (Banff CANADA); Canadian PhD and Early Career Workshop in Environmental Economics (Ottawa CANADA); Canadian Economics Association Annual Conference (Ottawa CANADA); Western Economic Association International meeting (Portland USA); University of Calgary (Calgary CANADA)

2015 – Institute of Environment, University of Ottawa (Ottawa CANADA–**(Invited)**)

"Jobs and Climate Policy: Evidence from British Columbia's *Revenue-Neutral* Carbon Tax"

2015 – Midwest Economic Association meeting (Minneapolis USA)

2014 – Environment Canada Research Network Research Symposium (Ottawa CANADA–**(Invited)**); Canadian Resource and Environmental Economics Conference (Saskatoon CANADA); University of Calgary (Calgary CANADA)

LANGUAGE

Japanese (Native); English (Fluent)