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CONTACT INFORMATION
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REFERENCES

Alfonso Flores-Lagunes	David Popp
Vice President and Director of Research	Professor, Department of Public Administration and International Affairs
W.E. Upjohn Institute for Employment Research	Syracuse University
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CURRENT POSITION Adam Smith Career Development Fellow, University of Glasgow   2023-

EDUCATION
Syracuse University   2023
  Ph.D. in Economics
Duke University   2018
  M.A. in Economics
Nankai University   2015
  Bachelor of Economics

RESEARCH INTERESTS Labor Economics, Environmental Economics, Applied Econometrics

PUBLICATION **"Heat and Productivity: Evidence from Flight On-Time Performance"** *with Ying Shi*
Accepted in the Journal of the Association of Environmental and Resource Economists

We investigate the impact of high temperatures on productivity using microdata from the U.S. airline industry. By linking high-frequency on-time flight performance measures with meteorological data, we show that higher temperatures significantly reduce airline productivity by increasing cancellation and delay rates and lengthening delay times. Complementary analyses using a sample of transportation workers from the American Time-Use Survey (ATUS) suggest that higher temperatures reduce labor supply (fewer hours worked and greater worker absenteeism) and adversely impact well-being measures such as sleep quality, which may affect on-the-job-productivity.

"Air Pollution and Health at Work" (Job Market Paper)
Under review at the Journal of the European Economic Association

Air pollution, particularly PM2.5 and ozone, has been found to adversely affect human physical and cognitive functioning, leading to various subclinical symptoms. Despite pathophysiological evidence linking pollution and heat to human physical and cognitive functioning, relatively little is known about their effects on labor productivity, especially concerning safety and health at workplaces in high-income countries. My job market paper, "Air Pollution and Health at Work," fills this gap by investigating the causal effect of air pollution on worker health and workplace safety. I create a novel data set combining high-frequency PM2.5, ozone, and meteorology data with workplace injury information collected from Florida's administrative records of workers' compensation (WC) claims. To credibly pin down the causal effect, I leverage exogenous variations in air pollution driven by atmospheric temperature inversion episodes. I find evidence that PM2.5 significantly increases workplace injuries. The effect exhibits a nonlinear pattern, increasing with rising pollution levels, and shows a non-negligible impact even at mild pollution levels below the current regulatory standards. Specifically, I find that a one-unit increase in PM2.5 at 12 $\mu g/m^3$ is associated with an increase in WC claims per 1 million population by 0.8 percentage points (a 2% increase relative to the sample mean claim rate). This effect is significantly greater for PM2.5 at 30 $\mu g/m^3$, to be approximately 8 percentage points (21%). In comparison, the effect of ozone pollution is linear and relatively smaller compared to the effect of PM2.5. A 10-ppb increase in ozone is found to increase WC claims per 1 million population by 0.7 percentage points (2%). Complementary analyses evaluating the monetary costs associated with workplace injuries caused by air pollution suggest a substantial increase in WC payments due to air pollution. For instance, a single day with a 10 $\mu g/m^3$ increase in PM2.5 across Florida is estimated to cause 247 additional workplace injuries per 1 million population and result in an increase in WC costs of more than $200 million.

"Monopsony in Academia and the Gender Pay Gap: Evidence from California" *with Alfonso Flores-Lagunes*
Under review at the Journal of Human Resources

We investigate monopsony power in a highly-skilled labor market given by tenure-ranked faculty in the University of California system, and analyze differential monopsony power exposure by gender. We infer the campus-level labor supply elasticity by estimating the elasticity of separations utilizing individual-level faculty data and two instruments based on campus revenues and salary scales. We find that the "exploitation rate," a common measure of monopsony power, is 7% for tenure-ranked faculty. There is a statistically significant difference in the monopsony power experienced by male and female faculty, but it appears to account for a relatively small percentage of the observed gender pay gap.

"Carbon Footprint of Place-Based Economic Policies" *with Yao Wang and Sayahnika Basu*

We evaluate the environmental impact of Special Economic Zones (SEZs), a place-based policy designed to foster economic development in India. Specifically, we identify the unintended effects of the policy on firms' energy usage and carbon emissions. Leveraging extensive firm data and a spatial RD-DiD design, we find that SEZs lead to a significant 30% reduction in firms' carbon emissions. This substantial decline in emissions is predominantly driven by larger firms and those located in regions with access to cleaner energy. Complementary analyses indicate a shift among firms within SEZs from conventional energy to lower-carbon renewable alternatives, potentially contributing to the overall reductions in carbon emissions. These findings underscore the interplay between economic development and environmental conservation.

"Does Air Pollution Impair Work Safety? The Impact of PM2.5 on Severe Workplace Injuries"

Under review at the Oxford Bulletin of Economics and Statistics

I investigate the effects of air pollution, particularly PM2.5, on workplace safety using novel data on work-related severe injuries and air pollution in the contiguous United States from 2015 through 2018. I start by providing statistical evidence showing that the commonly used instrumental variables for air pollution, namely, wind direction and rainfall, violate the point identification assumptions for the workplace safety outcomes. Then, I leverage partial identification strategies using the same instruments to estimate bounds on the effect of air pollution. The partial identification method replaces the exclusion restriction with weaker assumptions, exploiting the exogenous variability induced by the instrumental variables while accounting for their invalidity. The estimated bounds on the effect of PM2.5 pollution are between 0.7 and 3.9 percentage points, equivalent to a 7 to 39% increase relative to the sample average accident rate. Based on these results, I consider the impact of air pollution on workers' compensation costs. A back-of-the-envelope calculation indicates that a one day increase in the annual number of days with PM2.5 pollution is estimated to raise annual total costs of workers' compensation by at least 0.9 billion dollars and up to 5.1 billion, equivalent to about 1 to 8% of total workers' compensation paid in 2018.

SELECTED WORK IN PROGRESS	**"The Effect of Tax Levies on Future Construction and Demolitions: The Importance of Zeros When Leveraging Voting Designs"** *with David Brasington and Alfonso Flores-Lagunes*

We investigate the effects of tax levies on future construction and demolitions. To estimate the effects, we leverage the voting that has taken place when a local government considers imposing the tax levies in a regression discontinuity design. Importantly we show that the results change dramatically based on whether one takes into account the incidence on zeros—localities where no construction or demolition took place—at the voting threshold. Furthermore, statistically accounting for those zeroes allows to disentangle two distinct effects that tax levies have: on the probability of observing non-zero construction or demolition, and on their conditional amount. Our results indicate that tax levies positively affect the amount of new construction. Estimates that do not account for the presence of zeros in the outcomes often have the opposite sign and are sometimes statistically significant.

"Revisiting the Texas Top 10% Policy: Application of Regression Discontinuity with Sample Selection" *with Alfonso Flores-Lagunes, Hugo Jales, and Maria Zhu*

SEMINAR & CONFERENCE	European Association of Environmental and Resource Economists Annual Conference	2024
	Scottish Economic Society Annual Conference	2024
	Royal Economic Society Annual Conference	2024
	Eastern Economic Association Annual Conference	2024
	(AERE-sponsored session)	
	Canadian Economics Association Conference (scheduled)	2023
	Western Economic Association Annual Conference	2023
	(AERE-sponsored session)	
	Association of Environmental and Resource Economists Summer Conference	2023
	American Society of Health Economists Annual Conference	2023
	The Lewin Group; The Ohio State University; University of Glasgow	2023
	Southern Economics Association Annual Conference	2022
	Syracuse University Applied Micro Seminar	2022
	Midwest Economics Association the 86th Annual Meetings	2022
	(Joint Session with the Society of Labor Economists)	

RESEARCH EXPERIENCE

	Research Assistant	
	Prof.Alfonso Flores-Lagunes; Prof.Maria Zhu	2021-2022
	Syracuse University	
	Prof.Jisung Park	2018
	University of California, Los Angeles	
	Prof.Sharon Belenzon; Prof.John Graham	2017-2018
	Duke University	

TEACHING EXPERIENCE

Undergraduate Level

Primary Instructor

Introduction to Statistics and Econometrics, Syracuse University (Asynchronous Online)	2021
Course Feedback: 5.67/6	

Teaching Assistant

Economic Statistics, Syracuse University	2021
Labor Economics, Syracuse University	2021
Introduction to Statistics and Econometrics, Syracuse University	2020
Intermediate Microeconomics, Syracuse University	2018, 2020
Introductory Microeconomics, Syracuse University	2019
Economic Ideas and Issues, Syracuse University	2019

Dissertation Supervisor

6 students, Economics Subject, University of Glasgow	AY 2023-2024

Graduate Level

Co-Instructor

Microeconometrics: Impact Evaluation and Causal Analysis, University of Glasgow	2023, 2024

Teaching Assistant

Mathematics for Economists, Syracuse University	Summer, 2019
Introduction to Mathematical Statistics, Duke University	Fall, 2017

REFEREEING SERVICE

Journal of Population Economics (4), Review of Development Economics (1)

AWARDS & SCHOLARSHIP

Research Excellence Doctoral Funding, Syracuse University	2021-2022
Maxwell School Summer Fellowship, Syracuse University	2018-2022
Graduate Assistantship, Syracuse University	2018-2020
The M.A Merit Scholar Award, Duke University	2017
Hezhan Scholarship, Nankai University	2012, 2014
The Excellent Undergraduate Scholarship, Nankai University	2013

SKILLS & LANGUAGES

Programming: Stata, Python, R, LaTeX, ArcGIS, Matlab
Languages: Mandarin (Native), English (Fluent)

Last Updated: October 23, 2024