

MARIA GARCIA-OSIPENKO

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EDUCATION

Arizona State University	Doctor of Philosophy, Economics	Expected May 2026
Arizona State University	Master of Science, Economics	December 2022
Siberian Federal University	Bachelor, Economics	June 2020
University of Minnesota	Exchange Student, Economics	2017-2018

RESEARCH FIELDS

Environmental Economics, Energy Economics, Industrial Organization

RESEARCH

Published Papers

“Green Economy as a Labor Productivity Factor in the Manufacturing Industry of European Union Countries” with Vladislav N. Rutskiy, *Financial Journal*, 2020

Working Papers

[“Technology Complementarities and Subsidy Policy: Evidence from Electric Vehicle and Solar Panel Adoption”](#)

Revise and Resubmit, Journal of the Association of Environmental and Resource Economists

Government policies target air pollution and climate change by incentivizing adoption of electric vehicles (EVs) and/or residential solar panels (PVs). Knowledge of whether these goods are complements or substitutes can be used to design policies that target environmental externalities more efficiently. I use California household-level data to estimate a structural multi-product demand model. I find that consumers view PVs and EVs as complements, with the degree of complementarity varying with vehicle size and income. Counterfactual experiments reveal that complementarity significantly increases bundled EV-PV purchases. This complementarity can be leveraged to design policies that achieve emission targets at lower cost.

[“Endogenous Rigidities and Capital Misallocation: Evidence from Containerships”](#) with Nicholas Vreugdenhil and Nahim Bin Zahur

Revise and Resubmit, Journal of Political Economy

We investigate how endogenous rigidities inhibit physical capital reallocation. We focus on the role of contract duration - a classic example of an adjustment rigidity. We argue when agents sign longer contracts in booms when markets are thin, they generate a contracting externality which further amplifies thinness and impedes the adjustment of markets to shocks. We develop a framework with booms and busts where agents search and choose match duration. Applying the framework to the containership leasing market, we find substantial misallocation from endogenous rigidities, particularly in the transition after a crash. We also quantify implications for designing industrial policy.

[“Optimal Second-best Menu Design: Evidence from Residential Electricity Plans”](#) with Nicolai Kuminoff, Spencer Perry, and Nicholas Vreugdenhil

Submitted

Utilities increasingly sell electricity using complex menus of time-constant and time-varying price schedules. We study how to design such a menu to maximize social welfare in a second-best environment where the marginal private and external costs of generating electricity vary over time, institutional constraints prevent

mandating time-varying pricing, and consumer behavior is distorted by frictions. We develop a model of plan choice, consumption, and intertemporal substitution with time-varying marginal social costs, and estimate it using administrative data from a large utility. We provide evidence of substantial intertemporal substitution in response to time-varying price incentives, and selection across plans based on multidimensional heterogeneity. While the current menu's time-varying plans substantially shift consumption from high-price to low-price hours, we find that they reduce social welfare. This loss is mitigated by information frictions. We show how to redesign the menu to simultaneously improve outcomes for consumers, the utility, and the environment.

RESEARCH EXPERIENCE

Arizona State University

August 2023 - Present: Research Assistant for Nicolai Kuminoff

May 2022 - Present: Research Assistant for Nicholas Vreugdenhil

Siberian Federal University

Dec 2016 - May 2017: Research Assistant for Vladislav N. Rutskiy and N N Tarun Chakravorty

ACADEMIC PRESENTATIONS

2025 Environmental and Energy Economics Workshop at the University of Arizona

2024 SWEEP at Georgia Tech University, Energy Camp at UC Berkeley, AERE Summer Conference

2023 NCSU Camp Resources, Berkeley/Sloan Summer School in Environmental and Energy Economics, AERE Sessions at the Western Economic Association Conference, Arizona Workshop on Environment, Natural Resources, and Energy Economics

TEACHING EXPERIENCE

Instructor

Microeconomic Principles

Teaching Assistant

Public Economics, Industrial Organization and Competition Policy, Environmental Economics, Business Statistics, Macroeconomic Principles

AWARDS

Spring 2023: Rondthaler Emeritus Award "Most Deserving Graduate Student in the Program", ASU Econ Dept

Spring 2023: "Best Progress Towards Dissertation", ASU Econ Dept

June 2020: Graduation with Honors, Bachelor's in Economics

May 2019: 2nd place in the International Statistical Competition, Plekhanov Russian University of Economics

Fall 2017- Spring 2018: Finalist of the YEAR (Year of Exchange in America for Russians) program sponsored by the U.S. government

April 2017: 2nd place in the Nationwide Competition on State Regulation of the Economy at Novosibirsk State University

September 2015 - June 2020: Academic Excellence Scholarship, Bachelor's in Economics

GRANTS

Predicting Commercial and Industrial Electricity Load. PhD Student Investigator. 2024-2025. Salt River Project, \$68,866 (*PI: Nicolai V. Kuminoff, Co-PI: Nicholas Vreugdenhil*)

Predicting Residential Price Plan Enrollment and Energy Use. PhD Student Investigator. 2023-2024. Salt River Project, \$50,042. (*PI: Nicolai V. Kuminoff, Co-PI: Nicholas Vreugdenhil*)

ADDITIONAL INFORMATION

Languages: English (fluent), Russian (native)

Programming: Stata, Python, MATLAB, Latex