

MARIA 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

“Are Solar Panels and Electric Vehicles Complements or Substitutes?”

Many state and federal policies target climate change by incentivizing the adoption of electric vehicles (EVs) and residential solar panels (PVs). Knowledge of whether the two goods are complements or substitutes can be used to design policies that target environmental externalities more efficiently by incorporating interactions between the two markets. I use California household-level data to estimate a structural demand model for PVs and EVs. I find that consumers view PVs and EVs as complements, with the degree of complementarity varying with vehicle size and household income. Counterfactual policy experiments reveal that complementarity between EVs and PVs significantly increases bundled product purchases. Leveraging this complementarity can achieve emission reduction targets at lower cost.

“Booms, Busts, and Endogenous Rigidities: Evidence from Containerships” with Nicholas Vreugdenhil and Nahim Bin Zahur

This paper investigates how endogenous rigidities inhibit efficient physical capital reallocation. We focus on the role of contract duration - a classic example of an adjustment rigidity. We argue that when agents choose to sign longer contracts in booms when asset markets are thin, they generate a contracting externality which further reduces available capacity and amplifies market thinness. This causes equilibrium contracts to be inefficiently long in booms and inhibits the adjustment of these markets to productivity shocks. We show evidence for these mechanisms in the market for containership leasing contracts. We provide a framework that captures the details of the market and illustrates the tradeoffs conceptually. Overall, the results have implications for policies in this industry like shipping subsidies, as well as the fragility of the supply-chain to shocks.

Work in Progress

“Socially Efficient Choice Architecture for Electricity Markets” with Nicolai Kuminoff and Nicholas Vreugdenhil

Using proprietary data from a large utility provider in Phoenix Arizona, we examine how the design of residential electricity plans affects plan choice, electricity consumption, and the adoption of energy-efficient technologies. We aim to provide insights that can help electricity providers design better demand response programs that

incentivize consumers to shift their electricity consumption patterns. Furthermore, by predicting the impact of a counterfactual menu of price plans on consumption patterns, we hope to shed light on the potential benefits to consumers of alternative price plans as well as their impact on grid stability and the implications for emissions externalities generated during electricity production.

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

2024 AERE Summer Conference

2023 NBER Design and Regulation of Transportation Markets Meeting, NCSU Camp Resources, Berkeley/Sloan Summer School in Environmental and Energy Economics, AERE Sessions at the Western Economic Association Conference

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

Salt River Project, 2024-2025. \$68,866. For “Predicting Commercial and Industrial Electricity Load” *with Nicolai Kuminoff and Nicholas Vreugdenhil*

Salt River Project, 2023-2024. \$50,042. For “Predicting Residential Price Plan Enrollment and Energy Use” *with Nicolai Kuminoff, Spencer Perry, and Nicholas Vreugdenhil*

ADDITIONAL INFORMATION

Languages: English (fluent), Russian (native)

Programming: Stata, Python, MATLAB, Latex