

MARIIA MURASHEVA

NOVA School of Business and Economics

GENERAL INFORMATION

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Nationality: Russia

Fields: Environmental economics

EDUCATION

PhD in Economics, **NOVA School of Business and Economics** *2015 – 2023*
(expected)

Research visit, **UC Berkeley, Berkeley, California, USA** *January – May*
2019

MSc in International Business, **Graduate School of Management, Saint-Petersburg State University** *2013 - 2015*

BSc in Physics, **Faculty of Physics, Saint-Petersburg State University** *2009 - 2013*

PAPERS

The Impact of Industrial Pollution Exposure on Hospital Admissions: Evidence from a Cement Plant in Russia

Ambient air pollution, in particular, industrial pollution, is among the environmental factors with the most significant impact on human health, especially on the health of local populations. This paper studies the effect of individual-level daily silicon dust (SiO₂) exposure from cement production on the probability of hospital admissions for respiratory and cardiovascular-related reasons. Silicon dust (SiO₂) belongs to the family of PM₁₀ pollutants. We estimate the impact for two types of silicon dust: with 20 – 70% and with less than 20% concentration of SiO₂. Our unique emissions dataset was collected on the cement plant "Malcovskii portland cement" in the city of Fokino, Bryanskii region, central Russia. The aerodynamic dispersion model provides the variability of the concentrations inhaled daily at the home address by the local community. We use a linear probability model to estimate the impact on the probability of hospital admissions due to cardiovascular and respiratory-related reasons. To identify possible non-linearities, we have divided the city into four areas based on the average concentrations inhaled between the hospital admissions. The concentration inhaled in city area four is twice more than in area one. We estimate that for males between 86 and 90 years old, 1 mg/m³ increase in exposure to silicon dust two days before the hospital admission increases the probability of the hospital admission due to Chronic Obstructive Pulmonary Disease (COPD) by 3,9%. Additionally, 1 mg/m³ increase leads to the increase of the probability of admission due to respiratory-related reasons by 0,2% on the day of the admission and 0,3% two days before the admission for the males between 2 and 5 years old. Moreover, for the elderly, we have identified a non-linear relationship between the silicon dust daily concentrations inhaled and the probability of hospital admission due to respiratory-related reasons. These results are obtained for the patients who live in the area of the city where the daily inhaled silicon dust concentration is twice the average level in the city. By using back-of-the-envelope calculations we find that by decreasing the daily inhaled concentrations of the silicon dust to the standard level of 60 micro/m³ around 2 million Russian roubles, representing 2,1% of the yearly budget of the region where the plant is located, could be saved. These results may inform policymakers when designing future environmental policies aiming to reduce local industrial air pollution.

WORKING PAPERS

The Impact of Industrial Pollution Exposure on Hospital Admissions: Evidence from a Cement Plant in Alverca, Portugal

The Impact of Traffic Pollution Exposure on Cognitive Abilities of Schoolchildren in Portugal (with Pedro Freitas)

CONFERENCES AND WORKSHOPS

NOVA Environmental and Health Knowledge centres seminars	2021
Spanish-Portuguese Association of Natural and Environmental Resource Economics (AERNA) Biannual Conference	2021
European Association of Environmental and Resource Economists Annual Conference	2020
American Association of Environmental and Resource Economists Annual Conference	2020
TWEEDS workshop	2020

SUMMER SCHOOLS

Econometrics of Survey Data, Stratification and Clustering with Professor Manuel Arellano, NIPE Summer School	2021
International Summer School on Geospatial Data Analysis and Modeling with R	2019
Panel Data Spatial Econometrics with Professor Badi H. Baltagi, NIPE Summer School	2018

TEACHING ASSISTANT

International Management, Prof. Ilya Okhmatovskiy	2018 - 2022
International Management, Prof. Milton Sousa	2015 - 2017
Applied Entrepreneurship, Prof. Miguel Duarte	2018 - 2022

RESEARCH ASSISTANT

Financial Research Project on Trade Credit, Prof. Miguel Ferreira	January – August 2017
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GRANTS AND FELLOWSHIPS

Social and Environmental Life Cycle Assessment of cement production: Case of Portuguese and Russian manufacturers, FCT Fellowship, Fundação para a Ciência e a Tecnologia	2017 - 2021
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SKILLS

Programming skills: R, QGIS, WRDS
Languages: English, Russian (native), Portuguese (upper-intermediate)

OTHER ACTIVITIES

Secretary, European Climate-KIC Alumni Association	2018 - 2019
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REFERENCES

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