JULIA MINK

October 2021

CONTACT INFORMATION

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REFERENCES

Olivier Allais (supervisor)
Senior economis, INRAE
Head of research unit ALISS
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Yann Algan
Associate Dean of Pre-experience Programs, HEC
Professor of Economics
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Etienne Wasmer (supervisor)
Professor of Economics
New York University in Abu Dhabi
ew1555@nyu.edu

Sergei Guriev (placement officer)
Professor of Economics
Sciences Po, Department of Economics
sergei.guriev@sciencespo.fr

APPOINTMENTS

Postdoctoral Researcher at INRAE — November 2021

EDUCATION

Ph.D. in Economics, Sciences Po — October 2021
Supervisors: Olivier Allais and Etienne Wasmer
including a visit at University of California, Berkeley (Fall 2019)

Master in Economics and Public Policy, Sciences Po, *Summa Cum Laude* — August 2016

Bachelor of Arts, Sciences Po, *Cum Laude* — August 2013
including an exchange at University of Warwick (2012/2013)

RESEARCH INTERESTS

Applied microeconomics, health and environmental economics, human capital formation, spatial economics.

PUBLICATIONS

The long-run effects of war on health: Evidence from World War II in France with Olivier Allais and Guy Fagherazzi, *Social Science & Medicine*, 2021 - doi.org/10.1016/j.socscimed.2021.113812

Associations between early-life food deprivation during World War II and risk of hypertension and type 2 diabetes at adulthood with Marie-Christine Boutron-Ruault, Marie-Aline Charles, Olivier Allais and Guy Fagherazzi, *Scientific Reports*, 2020 - doi.org/10.1038/s41598-020-62576-w

Changes in food purchases at retirement in France with Olivier Allais and Pascal Leroy, *Food Policy*, 2020 - doi.org/10.1016/j.foodpol.2019.101806

WORKING PAPERS

JOB MARKET PAPER

Putting a price tag on air pollution: the social health care costs of air pollution in France

I estimate the effects of air pollution on health care use and costs using administrative data on health care reimbursements in France and reanalysis data on concentrations of nitrogen dioxide (NO2), ozone (O3) and fine particles pollution (PM 10 and PM 2.5). To establish a causal relationship, I exploit daily variation in air pollution intensity induced by variations in wind speed, wind direction and periods of strikes in the public transport sector. I estimate that each 1 $\mu g/m^3$ increases in daily NO2 (7.2% of the average) results in an increase of €7.57 in daily health expenditure per postcode area, while each 1 $\mu g/m^3$ increase in daily O3 (1.8% of the average) results in an increase of €3.94, which corresponds respectively to a 1.5% and 0.8% increase in average daily expenditure. Summing across postcode areas and scaling the effects appropriately, this translates into an increase in health expenditure of €6.8 million per day or €2.5 billion per year. These costs are the result of exposure to pollution levels that are mostly well below the current regulatory levels. In addition, the estimates reflect only the costs of short-term exposure to air pollution while the potentially even larger effects of long-term exposure are not considered. These high costs from short-term exposure alone suggest that there are considerable benefits to reducing air pollution even further below current limit values. Finally, I find significant heterogeneity of effects across location and patient characteristics, indicating that air pollution reduction policies have the potential to reduce health inequalities. Full text available here.

Broken homes and empty pantries: The impact of partnership dissolution on household economic resources

This study investigates the impact of a couple's break-up on the economic resources of the household by studying changes in income and food purchases around the time of separation in a panel of French households. I estimate a household fixed effects model to account for unobserved time-invariant household characteristics while controlling for additional time-varying covariates. Household income and food purchases decrease suddenly and significantly at the time of separation and remain lower than pre-separation levels for several years after the break-up. The decrease in food purchases appears to translate into a slight decrease in the female partner's body mass index (BMI). The share of unhealthy food purchases increases shortly before, during and after separation, indicating that the composition of food purchases changes as well. The decline in food purchases and BMI mainly affects households in the lowest pre-separation income tercile, suggesting that these changes are due to insufficiency of financial resources. Full text available here.

WORK IN PROGRESS

Health outcomes of residential agricultural pesticide exposure: Causal modelling from observational data

with Olivier Allais, Philippe Caillou and Michèle Sébag

The goal of this study is to rigorously assess the adverse impact of residential pesticide diffusion on residents living close to agricultural lands, exposed to pesticides via spray drift and volatilising beyond the treated areas. This population is largely absent in studies to date. We exploit sensitive health data in combination with newly available data on pesticide pollution. For the sake of a clear focus, we will rely on the body of knowledge relating the exposure to some molecules at precise stages of the pregnancy, to the impaired development of specific cognitive and biological systems. Accordingly, the study will focus on the short and medium-term pesticide impact on newborns and children. We use

quasi-experimental methods and new machine learning approaches for causal inference to face the main challenges of non-linearity of the effects, high dimensionality of the potential causes (cocktail effect), data incompleteness, and hidden confounding factors. The innovative value of the study is twofold. In terms of application, we aims to assess the pesticide risk on health at birth and in childhood, a current major health and societal issue. In terms of methodology, we aims to build a general methodology applicable to the analysis of industrial risks, handling spatio-temporal data with their limitations, and rigorously establishing the nature and amounts of risks incurred − offering an alternative to waiting until lethal risk become undeniable.

Reactive or proactive? Capturing adaptation to climate change using machine learning and behavioral theories
with Fabien Forge

We study the determinants of climate change adaptation using both machine learning and economic theory. For farmers, crop choice is one of the most effective and cheapest way of mitigating the effects of climate change. Yet it is unclear whether farmers' adapt in reaction to past weather realisations or in anticipation of climate change. We attempt to answer this question by testing two theories: one in which farmers are only backward looking and a second in which they are also forward looking. Since these two behavioural models do not leave in the same parameter space, we follow Fudenberg et al. (2020) and measure how 'complete' each theory is by comparing their predictive performance to a predictive upper bound defined using machine learning.

Air pollution and choice of place of residence
with Olivier Allais and Antoine Nebout

We investigate whether individual preferences such as attitudes towards risk, time and ambiguity are correlated with an individual's exposure to air pollution through her choice of residence and how this impacts health outcomes. For this, we add a module with questions concerning individual preferences for the new wave of data collection of the French cohort study CONSTANCES. This project is currently at the data collection stage.

GRANTS

2021 - DataIA, Project HORAPEST, 2021-2024.
2019 - ANR, Project BeHealth, 2020-2023.
2019 - Sciences Po department of Economics mobility grant.
2017 - ANR, Project AlimaSSenS [ANR-14-CE20-0003-01].
2016 - Strategic Research Initiative NutriPerso from University Paris-Saclay.
2016 - INRA, Meta-programme DID'it.

SEMINARS, WORKSHOPS AND CONFERENCES

2021
Spring Meeting of Young Economists
EuHEA Seminar Series Fall 2021
Sciences Po Doctoral Seminar

2020
Sciences Po Doctoral Seminar, Paris, FR
Workshop INNOV, Toulouse, FR

2019
UC Berkeley Development Lunch Seminar, Berkeley, US
UC Berkeley Environment, Resource and Energy Economics Seminar, Berkeley, US
Italian Congress of Econometrics and Empirical Economics, Lecce, IT
Sciences Po Doctoral seminar, Paris, FR

2018
Sciences Po Doctoral Seminar, Paris, FR
Health and Food Economics Workshop, Toulouse, FR
LIEPP doctoral seminar, Paris, FR

2017
INRAE Seminar, Ivry-sur-Seine, FR

REFEREEING ACTIVITIES

Food Policy

TEACHING AND WORK EXPERIENCE

Public Economics - Lecturer *Fall 2020, 2021*
Sciences Po School of Public Affairs, Graduate course

Trade and International Finance - Teaching assistant *Spring 2021*
Sciences Po, Undergraduate course, Professor Philippe Martin

Perspectives in Economics and Sociology - Teaching assistant
Sciences Po, Undergraduate course, Professors Roberto Galbiati and Mirna Safi

Principles of micro- and macroeconomics - Coordinator & Teaching Assisant *Fall 2020, 2019*
Coordination between tutors, professors, administration, teaching assistance, Sciences Po, Undergraduate course, Professors Yann Algan, Kerstin Holzheu and Jeanne Commault

The Economics of the Media: A Global Perspective - Teaching assistant *Fall 2018*
Sciences Po, Graduate course, Professor Julia Cagé

Principles of micro- and macroeconomics - Graduate Student Instructor *Fall 2018, 2017*
Sciences Po, Undergraduate course, Professors Yann Algan and Guillaume Plantin

LANGUAGES AND PROGRAMMING SKILLS

German (native), English (fluent), French (fluent), Portuguese (work proficiency), Chinese (beginner)

Stata, R, Python, SAS