# JULIA MINK

October 2021

#### CONTACT INFORMATION

Department of Economics Sciences Po Paris 28 rue des Saints-Pères 75007 Paris

#### REFERENCES

**Olivier Allais** (supervisor) Senior economist, INRAE Head of research unit ALISS olivier.allais@inrae.fr +33 (0)1 49 59 69 31

### Yann Algan

Associate Dean of Pre-experience Programs, HEC Professor of Economics algan@hec.fr +33 (0)6 76 12 77 66

**APPOINTMENTS** 

Postdoctoral Researcher at INRAE

#### **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

Phone: +33 (0)7 50 88 77 86 Email: julia.mink@sciencespo.fr French and German citizenship juliamink.eu LinkedIn

**Etienne Wasmer** (supervisor) Professor of Economics New York University in Abu Dhabi ew1555@nyu.edu +971 (0)50 475 0160

Sergei Guriev (placement officer) **Professor of Economics** Sciences Po, Department of Economics sergei.guriev@sciencespo.fr +33(0)621662044

November 2021

# JOB MARKET PAPER

#### Putting a price tag on air pollution: the social healthcare costs of air pollution in France

I estimate the causal effects of air pollution on healthcare costs in France by combining administrative data on healthcare reimbursements with reanalysis data on air pollution concentrations and weather conditions. I adopt an instrumental variable approach where I exploit daily postcode-level variation in nitrogen dioxide, ground-level ozone and particulate matter concentrations induced by variation in wind speed. I explore effect heterogeneity by patient and location characteristics and by medical speciality. This study presents evidence for substantial healthcare costs caused by exposure to pollution levels that are predominantly situated below current European legal limits. The effects are several orders of magnitude larger than those estimated in the previous literature, suggesting that the healthcare costs of air pollution have been severely underestimated. 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

#### $\mathbf{2021}$

Spring Meeting of Young Economists EuHEA Seminar Series Fall 2021 European Winter Meetings of the Econometric Society Sciences Po Doctoral Seminar

#### $\mathbf{2020}$

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

### $\mathbf{2019}$

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

# $\boldsymbol{2018}$

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

### $\boldsymbol{2017}$

INRAE Seminar, Ivry-sur-Seine, FR

### REFEREEING ACTIVITIES

Food Policy

# TEACHING AND WORK EXPERIENCE

<b>Public Economics</b> - Lecturer Sciences Po School of Public Affairs, Graduate course	Fall 2020, 2021	
<b>Trade and International Finance</b> - Teaching assistant Sciences Po, Undergraduate course, Professor Philippe Martin	Spring 2021	
<b>Perspectives in Economics and Sociology</b> - 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, Undergrad- uate course, Professors Yann Algan, Kerstin Holzheu and Jeanne Commault		
<b>The Economics of the Media: A Global Perspective</b> - Teaching assistant Sciences Po, Graduate course, Professor Julia Cagé	Fall 2018	
<b>Principles of micro- and macroeconomics</b> - Graduate Student Instructor Sciences Po, Undergraduate course, Professors Yann Algan and Guillaume Plantin	Fall 2018, 2017	

# LANGUAGES AND PROGRAMMING SKILLS

German (native), English (fluent), French (fluent), Portuguese (work proficiency), Chinese (beginner) Stata, R, Python, SAS