

# Thomas Thivillon

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**Research fields:** Development Economics, Environmental Economics, Health Economics.

## ACADEMIC POSITIONS

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May 2025- Oct. 2026 **Postdoctoral researcher**, French National Research Institute for Sustainable Development (IRD).  
May 2023- Apr. 2025 **Postdoctoral researcher**, Bordeaux School of Economics, University of Bordeaux.

## EDUCATION

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Feb. 2023 Qualified for assistant professor positions in economics by the French Ministry of Research (CNU Section 05 – Qualification number : 23205389201).  
2017-2022 PhD in Economics, Paris Dauphine University - PSL  
Dissertation: *Essays on Household Production, Human Capital and the Environment in Developing Countries*  
Supervisor: Philippe De Vreyer (Dauphine – PSL)  
Dissertation Committee: Tanguy Bernard (U. of Bordeaux), Michael Grimm (U. of Passau), Elise Huillery (Dauphine – PSL), Sylvie Lambert (Paris School of Economics)  
2007-2008 MSc in Sustainable Development, HEC Paris  
2004-2005 MSc in Comparative Politics, London School of Economics  
2000-2004 BSc in Social Sciences, Sciences Po Grenoble – Université Grenoble Alpes

## REFERENCES

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### Philippe De Vreyer

Professor of Economics  
PSL - Université Paris-Dauphine  
Place du Maréchal de Lattre de Tassigny  
75016 Paris, France  
[philippe.devreyer@dauphine.psl.eu](mailto:philippe.devreyer@dauphine.psl.eu)

### Flore Gubert

Senior Research Fellow  
Institut de Recherche pour le Développement  
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75010 Paris, France  
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### Tanguy Bernard

Professor of Economics  
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33608 Pessac CEDEX, France  
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### Elise Huillery

Professor of Economics  
PSL - Université Paris-Dauphine  
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75016 Paris, France  
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## PUBLICATIONS

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SANA, A., E. DJEMAI, P. DE VREYER, T. THIVILLON, H. BADOLO, A. BERTHE, et D. KANIA. 2024. "Seroprevalence and Risk Factors for SARS-CoV-2 Infection in Middle-Sized Cities of Burkina Faso: A Descriptive Cross-Sectional Study." *PLOS ONE* 19 (8): e0305850.  
<https://doi.org/10.1371/journal.pone.0305850>

DE VREYER, P., E. DJEMAI, et T. THIVILLON. 2023. "Pollution de l'air et consommation de bois au Burkina Faso." *Revue d'économie du développement* 35 (3): 95-101.  
<https://doi.org/10.3917/edd.373.0095>

THIVILLON T. 2014. "L'expérience du Recho Mirak : retour sur trois décennies de promotion des foyers améliorés en Haïti", *Field Actions Science Reports* [Online], Special Issue 9.  
<http://journals.openedition.org/factsreports/2824>

## WORKING PAPERS

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### **Demand for informal caregiving and human capital accumulation: Evidence from elderly deaths in Senegal [R&R at Journal of Health Economics]**

This paper uses original panel data from Senegal to evaluate the effect of co-residence with elderly individuals on the educational attainment of female children. To identify this effect, I exploit the deaths of elderly co-residents which occur during the study period in an empirical strategy which relies on triple-differences with child fixed-effects. I show that an event of elderly death is associated with 23% additional education completed over a period of 4 years by affected girls. I present evidence that changes in demand for informal caregiving among older female children within the household are one of the mechanisms at play. These results highlight the importance of female teenagers in caregiving activities and suggest that policies that increase the availability of formal care for the elderly could reduce gender inequalities in education in contexts similar to Senegal.

### **Saving lives with cooking gas? Unintended effects of targeted LPG subsidies in Peru [submitted]**

*Program Chair Award in Climate/Pollution/Environment and Health, ASHEcon 2023.*

I study a nationwide gas stove program which aims to convert Peruvian households from wood-fuel cooking to liquefied petroleum gas (LPG) cooking. Using 16 waves of Peru's Demographic and Health Survey, I show that infant mortality increases by 15% on average as a result of the intervention. Subsidizing LPG also causes a higher incidence of symptoms of acute respiratory infections in under-5 children and of moderate or severe anemia among adult women. I provide suggestive evidence that these health impacts are due to an increase in total exposure to air pollutants and to unanticipated behavioral effects of the intervention.

### **Fuel stacking, rebound effects, and exposure to air pollution following the adoption of cleaner cooking technologies**

We evaluate an intervention aimed at reducing household air pollution in Burkina Faso by encouraging households to switch from wood or charcoal to liquefied petroleum gas (LPG) as their main cooking fuel. We randomize 805 urban households to a subsidy treatment, a credit treatment and a control group. Treated households receive an offer to purchase a gas stove from a local retailer either at a discounted price or at the market price with the option to pay in three installments. We estimate the effects of these capital costs subsidies and consumption loans on the adoption and intensity of use of LPG over a six-month period following treatment. Subsidies and access to credit increase the take-up of gas stoves by 54 and 28

percentage points respectively, suggesting both credit constraints and high price elasticity of demand. We find evidence of either selection or sunk-cost effects: higher usage rates in the credit group nearly offset the difference in take-up with the subsidy group. 6 months after the start of the interventions, 30% of the LPG stoves are in use on a given day but LPG use does not result in a decrease in the consumption of wood, the main baseline fuel. We also find no effect on cooks' exposure to fine particulate matter. We show that total useful energy consumption increases among treated households, suggesting that LPG acts as a complement rather than as a substitute to wood. Heterogeneity analyses show that the interventions lead to small reductions in both wood consumption and exposure among households which purchased their wood at baseline but have no effect among exclusive wood collectors. We conclude that financial incentives for LPG appliances should target populations without access to fuel collection areas.

## WORK IN PROGRESS

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**Tackling air pollution with electric cooking in Abidjan, Côte d'Ivoire**, with Delphine Boutin (U. Bordeaux), Madina Doumbia (UFHB), Cathy Liousse (CNRS), Olivier Marcy (IRD), Auriane Pajot (U. Bordeaux), Quentin Stoeffler (U. Bordeaux), and Véronique Yoboué (UFHB).

**Health impacts of air pollutant emissions from diesel power plants in Sub-saharan Africa**, with Tidjani Abakar (U. Bordeaux).

**Evaluation of the impacts of a microfinance program on gender inequalities in Guinea's agricultural sector**, with Camille Saint-Macary (IRD), Al-Mouksit Akim (IMF), Florence Lecuit (IRD) and Soumahila Bayo (U. Sonfonia).

**Wood fuel usage, air pollution and the prevalence of COVID-19 in Burkina Faso**, with Philippe De Vreyer (Dauphine-PSL), Elodie Djemaï (Dauphine-PSL), Adama Sana (IRSS), Dramane Kania (Centre Muraz), Hermann Badolo (ONSP) and Abdramane Berthé (UDOC).

**Poverty, preventive actions and the progression of COVID-19 in Burkina Faso**, with Philippe De Vreyer, Elodie Djemaï, Hermann Badolo, Abdramane Berthé, Dramane Kania and Adama Sana.

## PAST PROFESSIONAL EXPERIENCE

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2017 – 2022	CIFRE Researcher, Microfinance Solidaire SAS, Paris.
2012 – 2017	Head of Access to Energy Unit, Entrepreneurs du Monde, Paris.
2010 – 2012	Project Manager – Access to Energy and SMEs, Entrepreneurs du Monde, Paris.
2008 – 2010	Project Manager, Kantar Added Value – Sustainable Development Practice, Paris.
2006 – 2007	Project Officer, France Volontaires, Port-au-Prince, Haïti.

## TEACHING EXPERIENCE

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2024-	Lecturer, Bordeaux School of Economics (Graduate level, in English). <i>“Introduction to machine learning for economists with Python.” (15h)</i>
2021-	Lecturer, Université Paris 1 Panthéon – Sorbonne (Graduate level, in English). <i>“Microcredit, Financial Inclusion and Development.” (12h)</i>
2016-2019	Lecturer, Sciences Po - Paris School of International Affairs (Graduate level, in English). <i>“Access to Energy in Developing Countries.” (6h)</i>

*Master's thesis supervision:* Manon Bellot (M2 Development Economics, Université Paris 1 Panthéon-Sorbonne, 2023), Tidjani Abakar (M2 Development Economics, Bordeaux School of Economics, 2024).

## PROFESSIONAL SERVICE

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*Referee/external evaluator:* Fund for Innovation in Development (FID), Journal of Development Studies, Revue d'économie du développement, Revue d'économie politique.

*Member of the Scientific Council,* DIAL research team, LEDa, 2019-2023.

*Co-organiser,* DIAL seminar in development economics (IRD – Université Paris-Dauphine), 2018-2019.

*Member of the Scientific Committee,* APIMAMA Kids Project (University of Bordeaux – Félix Houphouët-Boigny University Abidjan), since 2023.

## CONFERENCES AND SEMINAR PRESENTATIONS

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| 2024 | University of Poitiers, German Conference on Development Economics (Hanover, Germany), Congress of the French Economic Association (AFSE, Bordeaux, France), International Conference on Development Economics – AFEDEV (Aix-en-Provence, France), Annual Workshop of the Sustainable Energy Transitions Initiative (SETI, online).                                                                                                                                                            |
| 2023 | ADRES (Paris, France), CSAE (Oxford, UK); Paris 1 Panthéon Sorbonne University; Midwest International Economic Development Conference (Houston, USA - declined), 1st Welfare and Policy conference (Bordeaux, France), 12 <sup>th</sup> annual conference of the American Society of Health Economists (ASHEcon 2023, St Louis, Missouri, USA), Congress of the French Economic Association (AFSE, Paris, France), International Conference on Development Economics – AFEDEV (Paris, France). |
| 2022 | ADRES (Paris, France - online); Departmental seminar, Dauphine – PSL (Paris, France); ENSAE Dakar (online); Stockholm School of Economics.                                                                                                                                                                                                                                                                                                                                                     |
| 2021 | NCDE conference (Bergen, Norway - online); ICDE conference (Bordeaux France - online); Journées de Microéconomie Appliquée (Chambéry, France - online).                                                                                                                                                                                                                                                                                                                                        |
| 2020 | Journées doctorales du Développement (Paris, France - online).                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## GRANTS AND SCHOLARSHIPS

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|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 2025 | Fund for Innovation in Development, “ <i>Tackling air pollution with electric cooking in Abidjan, Côte d'Ivoire</i> ”, pilot study (Stade 0), PI with Delphine Boutin (U. Bordeaux), Madina Doumbia (UFHB), Cathy Liousse (CNRS), Olivier Marcy (IRD), Auriane Pajot (U. Bordeaux), Quentin Stoeffler (U. Bordeaux), and Véronique Yoboué (UFHB). | EUR 50,000  |
| 2023 | <i>Program Chair Award</i> in Climate, Pollution, Environmental and health, ASHEcon 2023.                                                                                                                                                                                                                                                         |             |
| 2023 | AFD - PAIRES Program, “ <i>Impact of agricultural microcredit on the livelihood of small farmers in Guinea – Feasibility assessment</i> ”, co-PI with Al-Mouksit Akim (Mohammed VI U.), Camille Saint-Macary (IRD).                                                                                                                               | EUR 18,900  |
| 2022 | Inserm – ANRS, “ <i>COVID4P: An investigation of the relationship between poverty, pollution, preventive actions and the progression of CoViD-19 in Burkina Faso</i> ”, co-PI with Adama Sana (Centre Muraz), Philippe De                                                                                                                         | EUR 397,280 |

Vreyer (Dauphine-PSL), Hermann Badolo (Centre Muraz), Abdramane Berthé (Centre Muraz), Elodie Djemaï (Dauphine-PSL) and Dramane Kania (Centre Muraz).

2020	AFD - PAIRES Program, “ <i>REDGAS: A randomized evaluation of the demand for LPG stoves and of the associated effects on household air pollution, greenhouse gas emissions and well-being in Burkina Faso</i> ”, co-PI with Philippe De Vreyer and Elodie Djemaï.	EUR 380,000
2017	CIFRE PhD Scholarship (4 years)	

## **LANGUAGES**

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French (native), English (fluent), Haitian Creole (fluent), Spanish (can read), German (can read).

## **COMPUTER SKILLS**

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Stata, R, Python, QGIS, LaTeX, ODK, SurveyCTO.