Thomas Thivillon

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Research fields:

Development Economics, Health Economics, Public Policy Evaluation.

EDUCATION

2017-2022	PhD in Economics, Université PSL – Université Paris Dauphine (expected) *Thesis title:* "*Essays in development and health economics"* *Supervisor:* Professor Philippe De Vreyer *Advisors:* Professor Elise Huillery and Dr Stéphanie Monjon
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

Professor Philippe De Vreyer
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PAST PROFESSIONAL EXPERIENCE

2012 – 2017	Head of Access to Energy Unit, Entrepreneurs du Monde, Paris.
2010 – 2012	Project Manager – Acess 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

2021-2022	Lecturer, Université Paris 1 Panthéon – Sorbonne (Graduate level). *"Microcredit and Development"*
2016-2019	Lecturer, Sciences Po - Paris School of International Affairs (Graduate level). *"Access to Energy in Developing Countries"*

PROFESSIONAL SERVICES

Referee: Fund for Innovation in Development (FID).

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

CONFERENCES AND SEMINAR PRESENTATIONS

2022	ADRES doctoral conference, Paris School of Economics, France (online).
2021	NCDE conference, Norwegian School of Economics, Norway (online). ICDE conference, Bordeaux School of Economics, France (online). Journées de Microéconomie Appliquée, Université de Savoie, France (online).
2020	DIAL seminar, IRD, France. Journées doctorales du Développement, Université Paris-Dauphine, France (online).
2019	DIAL seminar, IRD, France.

GRANTS AND SCHOLARSHIPS

2022	Inserm – ANRS, "*COVID4P: An investigation of the relationship between poverty, pollution, preventive actions and the progression of CoViD-19 in Burkina Faso*", co-PI with Adama Sana, Philippe De Vreyer, Hermann Badolo, Abdramane Berthé, Elodie Djemaï and Dramane Kania.	EUR 397,280
2020	AFD - PAIRES Program, "*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*", co-PI with Philippe De Vreyer and Elodie Djemaï.	EUR 380,000
2017	CIFRE PhD Scholarship (4 years)	

LANGUAGES

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

COMPUTER SKILLS

Stata, QGIS, LaTeX, ODK, SurveyCTO.

RESEARCH PAPERS

Saving lives with cooking gas? Unintended effects of targeted LPG subsidies in Peru

I evaluate the effect of the conversion of households from wood-fuel cooking to liquefied petroleum gas (LPG) cooking on infant mortality using data from sixteen waves of Peru's continuous Demographic and Health Survey. I exploit the sequential introduction of LPG subsidies targeting low-income households and compare early-treated districts to later or never treated districts using a staggered difference-in-difference estimation strategy. I find that infant mortality increased by 28,5% as a result of the massive fuel switch induced by the intervention, which corresponds to at least 5,900 additional infant deaths between 2010 and 2019. Subsidizing LPG also caused a higher incidence of symptoms of acute respiratory infections in children under five and of moderate or severe anemia among adult women, two conditions which are known to be induced by exposure to air pollution from cooking fuels. I show that these unexpected results are most likely explained by the fact that the switch to LPG led households who were previously cooking outdoors to start mainly cooking indoors, thus radically modifying the ventilation quality of their cooking area. These findings suggest that clean cooking interventions need to pay more attention to choices of cooking location and to cooking area ventilation.

Demand for informal care and human capital accumulation: Evidence from elderly adult deaths in Senegal

Women carry a disproportionate share of the burden of providing informal care to functionally dependent relatives such as old age adults. In developing economies, this burden tends to fall on the shoulders of female adolescents in particular for cultural and economic reasons. This paper uses original panel data from Senegal to evaluate the effect of caring responsibilities on girls' educational attainment. I exploit negative shocks of demand for care work following the death of an old age household member to identify this effect. I show that the death of an elderly household member results in 23% additional education completed over a period of 4 years. I present evidence that changes in demand for informal care within the household are one of the mechanisms at play. These results call for increased attention to specific forms of domestic child labor in public policies in order to reduce gender inequalities in education.

Wood fuel usage, air pollution and the prevalence of COVID-19 in Burkina Faso (with Philippe De Vreyer, Elodie Djemaï, Adama Sana, Dramane Kania, Hermann Badolo and Abdramane Berthé)

Air pollution leads to higher transmission rates of some infectious diseases whose pathogens may be borne by particulate matter. This is a source of concern for public health in countries where wood fuel is the main source of cooking energy because wood combustion emits high levels of fine particulate matter (PM2.5). This paper identifies the effect of individual exposure to PM2.5 on the probability of being infected by the SARS-CoV-2 virus during the first peak of the COVID-19 epidemic in Burkina Faso. We instrument for exposure to PM2.5 using a distance weighted average of wood consumption among households in the neighborhood of the individual of interest. We find that 12% of adults tested positive to SARS-CoV-2

antibodies in our study area in June 2021. Exposure to PM2.5 from wood fuel combustion significantly increases the risk of COVID-19. At the estimated mean 24-hour exposure of 220 µg/m3, our results predict an 8.3 percentage points increase in the probability of contracting the virus compared to a scenario without pollution. Converting households from wood to less polluting sources of energy may have benefits in terms of reduced coronavirus transmission.

WORK IN PROGRESS

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 (with Philippe De Vreyer and Elodie Djemaï)

[Data collection in progress]

We evaluate an intervention aimed at reducing air pollution in Burkina Faso by encouraging households to switch from wood or charcoal to gas as their main cooking fuel. We randomize 820 households to a credit treatment, a subsidy treatment and a control group. Treated households receive an offer to purchase a gas stove from a local retailer 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. We also generate estimates of the effects of the interventions on 24-hour individual exposure to fine particulate matters ($PM_{2.5}$).

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)

[Data collection completed]

This project investigates the determinants of CoViD-19 transmission in Burkina Faso with a focus on behavioural factors. We conduct a randomized experiment in which an information treatment aimed at addressing informational market failures is cross-randomized with unconditional cash transfers designed to incentivize households to adopt preventive actions (regular handwashing, wearing face masks, etc). Rapid COVID-19 serological tests are conducted in all adult individuals belonging to the sample before and after the intervention. We estimate the effect of access to information and cash transfers on serological status at endline.