PhD position in assessing nonrenewable energy consumption and dependency by different farm activities in European agriculture

Your job

The INRAE-PSAE (Paris-Saclay Applied Economics) is hiring a PhD candidate (3 years full-time) to work on understanding how different farm activities (different crop production, animal rearing, etc) use fossil fuels and mineral fertilizers in their production process. The overarching goal of this PhD is to shed light on the EU's agricultural dependency on fossil-fuel-based inputs. The position is embedded in the Horizon Europe project "Analysing Fossil Energy Dependence in Agriculture to Increase Resilience Against Input Price Fluctuations - AgEnRes." The prospective PhD candidate will be part of a team of agricultural economists at INRAE (Paris-Saclay, and Rennes), the Swedish University of Agricultural Sciences in Uppsala, Wageningen University & Research, and the International Institute for Applied Systems Analysis (IIASA) in Vienna.

Your activities will include:

1. Creating an EU-wide database for energy quantities and costs for farm activities at different scales. The challenge is to allocate input quantities that are observed at the farm level in standard datasets to farm activities. You will focus on recent micro-econometric modelling approaches (Bayesian random parameters, EM algorithms) to conduct the analysis using EU-country-specific FADN.
2. Building a structural model (cost minimization/profit maximization) at the farm level for deriving the demand for energy-intensive inputs. This estimation will provide insights into farmers' response to marginal changes in energy prices. Accounting for the effects of energy price fluctuations in the demand for energy-intensive inputs would be required.

You will be supervised by Dr Hervé Dakpo (INRAE-PSAE, Paris Saclay), and Dr Alain Carpentier (INRAE – SMART, Rennes).

Your qualities

- The ideal candidate is expected to have (or will obtain within due course) a MSc degree in Economics (e.g., agricultural economics, environmental economics, quantitative economics), Mathematics, Statistics, or related fields with a proven interest in economics;
- Good knowledge of R programming;
- Strong interest in quantitative analysis;
- Good analytical and communication skills, both verbal and written;
- Fluency in English. Knowledge of French language is facultative.

Our unit and research

Paris-Saclay Applied Economics is the economic research unit of the French National Research Institute for Agriculture, Food, and the Environment (INRAE) in Paris-Saclay. INRAE is a public research establishment in France that hires more than 12,000 people in about 200 research units. The institute is among the world's agricultural, food, and environmental sciences leaders. INRAE's primary goal is to be a key player in the transitions necessary to address major global challenges. Through top scientific research, our research community pushes back boundaries and sets a course for the future that you can help shape. Click here for more information about our unit.[1]

What we offer

- We offer a full-time contract as a PhD for a period of 3 years. You will be enrolled as a PhD student in the doctoral school ABIES.
- The salary is based on French standards (Monthly gross salary 2 044,12 €).

[1] More information about Université Paris-Saclay can be found here.

- You will have up to 45 days of annual leave and can benefit up to 144 days of remote work per year.
- You will receive a bicycle allowance or a half reimbursement of public transport costs for commuting.
- Job Location: INRAE Paris-Saclay Campus (Palaiseau, 40 minutes by public transport from downtown Paris)

Want to apply?

- You can apply for this position by emailing Hervé Dakpo (k-herve.dakpo@inrae.fr) by April 30th, 2024 (by midnight Paris time).
- Your application should include (1) a cover letter, (2) a CV with names and contact information for two references, (3) a record of transcripts (Bachelor and Master degrees)
- The selection committee will review all of the applications as soon as possible after the application deadline. As soon as a decision has been made, we will inform you about the next steps in the selection procedure.

Summary

- Job duration: 3 years
- Application deadline: April 30th, 2024
- Starting date: June 2024/September 2024