

Capucine CHAPEL

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Research Areas

Themes:

- Environmental Economics
- Urban & Regional Economics
- Development Economics

Méthodes:

- Microeconometrics
- Impact Evaluation
- Machine Learning
- Spatial Statistics

Professional Experience

Postdoctoral Researcher

October 2024 – Present

CERDI

Clermont-Ferrand, France

- Theme: Volcanic Economics
- Project PROXVOLC : “Explaining the Presence of Populations Near Volcanoes: Indirect Impacts of Volcanic Eruptions”
- Role: Project Leader
- Collaboration : Pascale Phélinas, Michaël Goujon, Sébastien Marchand et Johanna Choumert

Postdoctoral Researcher

October 2023 – September 2024

ERUDITE

Créteil, France

- Theme: Social housing externalities
- Project: “Housing Markets: Price Dynamics, Land Use Dynamics, Wealth Dynamics” within the Research Program “Land and Affordable Housing” of the Union Sociale pour l'Habitat and its partners
- Supervisors : Camille REGNIER et Kévin FOURREY

Ph.D. Researcher

October 2020 – September 2023

UMR CESAER-INRAE

Dijon, France

- Theme: Economic evaluations of green spaces
- Project PubPrivLand
- Supervisors: Julie Le Gallo and Mohamed Hilal
- Study dimensions and scales: urban/rural, France/Spain/Europe, Real estate/tourism market
- Methods: causal inference (Augmented Inverse Probability Weighted, Generalized Propensity Score Matching)

Research Assistant

June 2020 – August 2020

Fondation pour les études et recherches sur le développement international

Clermont-Ferrand, France

- Literature review on the taxation of renewable natural resources
- Reports for a steering committee and webinars on challenges of internal resource mobilization in the face of the COVID-19 crisis

Research Assistant

June 2019 - July 2019

Laboratoire d'Économie d'Orléans

Orléans, France

- Creation of databases and statistical analyses on STATA
- Report on the impact of environmental regulations on trade
- Organization of AFSE 2019
- Supervisors: Camelia Turcu and Thaís Núñez-Rocha

Visiting

Universidad Autónoma de Madrid

April 2022 – June 2022

3 mois

Madrid (Spain)

- Invited by Professor Coro Chasco and Regional Economics research group (ECONRES)
- Economic evaluation of the Natura 2000 network in Castilla y León

Education

Ph.D. in Economics

October 2020 – September 2023

Université de Bourgogne Franche-Comté

Dijon (France)

- Title: Three essays on the economic valuation of recreational amenities in green spaces
- Thesis defense: December 8, 2023
- Supervisors: Julie LE GALLO and Mohamed HILAL
- Jury: Florent Sari, Rosella Nicolini, Julien Salanié, Jeanne Dachary-Bernard, Vincent Viguié
- Certified under the European Doctorate label
- Agreenium International Research School doctoral programme

Abstract

This thesis analyses how individuals value the recreational amenities of green spaces, firstly in an urban environment in European (chapter 1) and French (chapter 2) cities, and secondly in rural areas (chapter 3). To meet this objective, we use methods for the economic evaluation of green spaces, drawing on the tools of applied microeconomics. More specifically, while chapter 1 is based on a life satisfaction approach, chapters 2 and 3 rely on a revealed preference approach and an impact assessment using propensity scores weighting.

In chapter 1, we examine the determinants of satisfaction with green spaces among city dwellers in major European cities, using data from the 2019 Flash Eurobarometer and the Urban Atlas, with a view to proposing public policies that are consistent with household preferences. We show that it is the improvement of green spaces rather than the current stock that has an impact on satisfaction, and that the accessibility of green spaces has a greater influence than availability.

Using data on rents from the Observatoires Locaux des Loyers and on parks from OpenStreetMap, chapter 2 examines the impact of different types of urban park size on rental rates in the French private rental market. We find that tenants value urban parks differently depending on their size and the uses they offer. More specifically, in descending order of preference, we show that individuals first value large parks, then small parks and finally medium-sized parks.

Finally, in chapter 3, we estimate the impact of areas protected by the Natura 2000 network on nature-based rural tourism in the Spanish region of "Castilla y León". We estimate the marginal willingness to pay for accommodation in a Natura 2000 area at an average of 1.09 euros per person per night. Thus, the implementation of such an initiative leads to the creation of value in the growing nature-based tourism market.

Magister's/Master's in Development Economics

September 2018 – June 2020

Université Clermont-Auvergne

Clermont-Ferrand (France)

With honors

Bachelor's in Economics

September 2015 – June 2018

Université Clermont-Auvergne

Clermont-Ferrand (France)

Top of the class, with highest honors

Publications and Works in Progress

Publication in peer-reviewed journals

- Chapel, C. (2022). Impact of official development assistance projects for renewable energy on electrification in sub-Saharan Africa. *World Development*, 152, 105784. [Rank A CNU05]

Abstract

While the African continent has one of the largest renewable energy potentials in the world, it remains the most deprived region for access to electricity. Official development agencies can provide the funds and experience necessary for the sustainable development of this sector to those countries that suffer from limited domestic resources. We estimate the impact of renewable energy aid projects implemented in 19 sub-Saharan African countries on access to electricity for communities in the region. By combining georeferenced data from aid projects in renewable energy from AidData and survey data from the Afrobarometer, we find, using different propensity score matching methods, a positive and significant impact of these projects on electrification of communities. A comparison with the same sample on non-renewable energy projects shows a better efficiency of eco-friendly projects. However, the effectiveness of these projects is heterogeneous and depends greatly on the type of donor, the location, and the initial level of development. Our results contribute to the scholarly debate on aid effectiveness and provide important political implications. Indeed, they suggest that international donors should favour sending funds for renewable energy projects in countries and regions lacking electrification as these funds contribute to better access to electricity while promoting environmentally friendly technologies.

Work under review

- **“Review and Challenges in the Economic Valuation of Green Spaces”** with Julie Le Gallo and Mohamed Hilal - *Under minor revision at Economics and Business Letters*

Abstract

Green spaces provide a variety of ecosystem services to society and the environment. This paper provides an overview of the literature on the valuation of green spaces, focusing on their advantages and limitations. We conclude with a number of challenges ahead.

- **“The Role of Stakeholders in Sustainable Electrification”** Chapter in the book “Wiring the Future: Exploring Challenges and Opportunities in the Sustainable Energy Transition”, *Palgrave-Macmillan*, edited by Thomas Walker, Moein Karami and Akram Sadati - *Under revision*

Abstract

In a global context marked by energy transition, electrification through renewable energies represents a major challenge. This chapter draws on recent studies and concrete examples to analyze the essential roles of the players involved, be they policymakers, the private sector, local communities or Non-Governmental Organizations (NGOs). Public authorities establish regulatory frameworks and promote international cooperation to facilitate this transformation, while businesses innovate and mobilize financing to accelerate the adoption of sustainable solutions. Community buy-in and citizen involvement strengthen the acceptance of these sustainable electrification projects, helping to transform individual behavior. As for NGOs, they play a catalytic role, raising awareness and actively supporting transition initiatives. This chapter looks at the challenges faced by each stakeholder, the strategies put in place and the obstacles likely to hinder their effectiveness in this journey towards greener energy.

- **“Economic Impact of Sustainable Electrification”** Chapter in the book “Wiring the Future: Exploring Challenges and Opportunities in the Sustainable Energy Transition”, *Palgrave-Macmillan*, edited by Thomas Walker, Moein Karami and Akram Sadati - *Under revision*

Abstract

This chapter examines the economic impacts of electrification and its energy transition through a literature review, concrete examples and statistical analyses. At the macroeconomic level, the energy transition has a profound influence on energy security, reducing dependencies while creating new vulnerabilities, transforming the job market with the rise of green sectors and the challenges of reconversion, and redefining the relationship between energy and economic growth in a context of opportunities and uncertainties. At the microeconomic level, it affects households and businesses differently depending on the context: in developed countries, the emphasis is on combating fuel poverty, while in developing countries, sustainable electrification remains an essential lever for reducing energy poverty. Finally, the chapter explores the strategic transformations of the financial, real estate and insurance sectors, which play an important role in financing and adapting to this global transition.

Work in Progress

- **“How Much is a Direct and Indirect Access to a Park Worth? An Application for Single-family Houses using a Causal Spatio-temporal Matching Approach.”** with Jean Dubé, Mohamed Hilal and Julie Le Gallo - *Submitted to Ecological Economics*

Abstract

Urban parks and green spaces are well known for their positive social and environmental impacts so that proximity to such infrastructures is usually internalized into higher real estate values. This paper proposes a careful spatio-temporal causal identification strategy to measure the willingness-to-pay (WTP) of exposure to different types of parks with particular attention on spatial confounding. Based on single-family house transactions in Québec City between 2004 and 2020, the estimation results suggest that the price premium differs according to the types of parks, proximity, and submarkets. The submarket of the first quantile transaction price displays a negative price premium, while a positive premium is found for the last quantile sale price, suggesting the presence of environmental inequities.

- **“Urban Green Satisfaction in European Cities: The Role of Availability, Accessibility, and Their Evolution”** with Sophie Legras.

Abstract

This study aims to identify the determinants of satisfaction with green spaces among residents of 72 European cities through a life satisfaction approach using Eurobarometer survey data in 2019 and the green land cover of the Urban Atlas. Using a linear probability model, we regress the satisfaction of city dwellers with regard to green spaces on indicators of availability and accessibility of green spaces at the city level, both in stock and in variation. We show that, in general, satisfaction with green spaces is determined by both their availability and, even more importantly, their accessibility. Furthermore, satisfaction is not driven by the current level of these two indicators, but rather by their improvement since 2012. We also identify heterogeneities in the determinants of satisfaction according to the socio-demographic characteristics of the individuals. In particular, individuals with financial difficulties or children value only the variation of the dimension of accessibility of green spaces whilst individuals who have not always lived in their current city of residence are also impacted by the current stock of accessibility. These results provide an indication of the dimensions to be prioritised for current and future public policies in favour of green spaces.

- **“Which size for urban green parks? French evidence of the rental market”**

Abstract

Faced with increasing urbanisation and climate crisis, the development of green spaces in cities has become a major issue for urban planners. While the need for proximity between housing and green spaces has been widely established in the literature, the question of the size to allocate to the latter is important in a context of strong pressure on land use. We explore this question by taking advantage of databases of the local rent observatories for rental prices and OpenStreetMap for parks. Using a generalised propensity score weighting method, we analyse the preferences between different typologies of park sizes in the private rental market of the largest French urban areas in 2017 and 2018. We show that on average, individuals value large parks more, followed by small and lastly by medium-sized parks. We also detect variations in this hierarchy of preference depending on flat size and its location. These results are of interest not only to property investors looking to increase their rental income, but also to political decision-makers looking to improve existing parks and propose new urban park development projects.

- **“Economic evaluation of the benefits of the Natura 2000 network in “Castilla y León” (Spain) through rural tourism”** with Coro Chasco, Mohamed Hilal, Julie Le Gallo and Javier Vélazquez

Abstract

The implementation of biodiversity protection initiatives such as the Natura 2000 network requires a trade-off between the ecosystem services generated and the costs and restrictions encountered by local populations and authorities. Using a doubly robust estimator, we conduct a causal economic evaluation of the impact of these protected areas in the Spanish region of “Castilla y León”. Through the prism of nature-based tourism, we show that individuals positively value the areas inside the Natura 2000 network. Therefore, the implementation of such an initiative leads to the creation of value in the growing nature-based market. These results have important implications for tourism stakeholders, public policies, and managers of Natura 2000 protected areas.

- **“Externalities of Social Housing on Housing Prices in France”** with Kévin Fourrey

Abstract

In the face of the housing crisis and pressures on property prices, this article examines the impact of new social housing on apartment sale prices in metropolitan France from 2010 to 2022. Our findings show no significant effects on territorial attractiveness or revitalization, regardless of factors like neighborhood type, housing size, or financing. These results align with related studies in France and suggest policymakers should avoid overestimating the potential negative impact of new social housing, particularly in affluent areas. Furthermore, social housing renewal alone may not significantly enhance the attractiveness of disadvantaged areas without broader economic improvements.

Responsibilities

Co-organizer of internal research seminars
CESAER, UMR 1041

October 2020 – November 2021
Dijon, France

Member of the organizing committee of AFSE 2019
Laboratoire d'Économie d'Orléans

June 2019
Orléans, France

Scholarships and prizes

- **2024 - 2026** : Post-doctoral fellowship at the International Research Center of Disaster Science and Sustainable Development
- **2022** : DGEP doctoral school mobility grant (1500€)
- **2022** : ERASMUS+ mobility grant (1600€)
- **2022** : Bourse de mobilité EIR-A (2500€)
- **2020 - 2023** : UBFC doctoral scholarship

Conferences and Seminars

Conferences

- Winter School in Urban Economics, *Dijon (France)* December 2024
- ESPI International Real Estate Conference, *Paris (France)* November 2024
- Annual Conference of EAERE, Leuven (Belgium) July 2024
- Environmental Economics : A Focus On Natural Resources, Orléans (France) April 2024
- ADRES Job Market Conference, ENS Paris-Saclay (France) January 2024
- Annual Conference of the FAERE, Montpellier (France) September 2023
- European Regional Science Association Congress, online August 2023
- Journées Louis-André Gérard-Varet (LAGV), Marseille (France) June 2023
- Journées de Microéconomie Appliquée (JMA), Strasbourg (France) June 2023
- Journées de Recherche en Sciences Sociales (JRSS), Clermont-Ferrand (France) December 2022

Seminars

- Séminaire "Acteur-Chercheur" : Foncier & Logement Abordables, *Puteaux (France)* October 2024
- École Thématique sur l'Évaluation des Politiques Publiques, *Aussois (France)* March 2024
- GATE Invited Seminar, Saint-Etienne (France) January 2024
- EIDER Invited Seminar (UMR TERRITOIRES - INRAE), Clermont-Ferrand (France) October 2023
- ERUDITE Internal Seminar, Créteil (France) October 2023
- FAERE Thematic Days "Cities & Environment", Champs-sur-Marne (France) June 2023
- FAERE Doctoral Days, Le Bourget du Lac (France) November 2022
- CESAER Internal Seminar, Dijon (France) October 2022
- CESAER Internal Seminar, Dijon (France) November 2020

Teaching

Application seminar: Territorial economics

2025

Université Clermont-Auvergne

Clermont-Ferrand, France

- Student Profile: Master 2 Territorial Economics
- Total Teaching Hours: 8 hours
- Role: Lecturer

Microeconomics: Intertemporal Behavior and Choices

2024

Université Paris-Est Créteil

Créteil, France

- Student Profile: Bachelor students in Economics (3rd Year)
- Total Teaching Hours: 30 hours
- Role: Teaching Assistant

Econometrics

2021 – 2023

Université Bourgogne Franche-Comté

Dijon, France

- Student Profile: Bachelor students in Economics (3rd Year)
- Total Teaching Hours: 90 hours
- Role: Teaching Assistant

Statistics

2021 – 2023

Institut Agro Dijon

Dijon, France

- Student Profile: Master 1 Agricultural Engineering
- Total Teaching Hours: 40 hours
- Role: Teaching Assistant

Microeconomics: Producer and consumer theory

2017 – 2019

Université Clermont-Auvergne

Clermont-Ferrand, France

- Student Profile: Bachelor students in Economic and Social Administration (2nd Year)
- Total Teaching Hours: 22 hours
- Role: University Tutor

Macroeconomics : Major functions and macroeconomic equilibrium

2017 – 2019

Université Clermont-Auvergne

Clermont-Ferrand, France

- Student Profile: Bachelor students in Economic (1st Year)
- Total Teaching Hours: 18 hours
- Role: University Tutor

Computer Science

2017 – 2019

Université Clermont-Auvergne

Clermont-Ferrand, France

- Student Profile: Bachelor students in Economic (1st Year)
- Total Teaching Hours: 24 hours
- Role: University Tutor

Other skills and activities

Computer Skills

- Programming: R, Stata, Qgis, Python, SQL
- Office and Presentation Software: \LaTeX , Canva, Open/Libre/Microsoft Office
- Version management and collaboration: Github, Overleaf

Languages

- French : Mother tongue
- English : Fluent (TOEIC : 900/990)
- German : Elementary
- Spanish : Beginner

Hobbies

- Board game
- Tennis

References

Julie LE GALLO, Full professor in Economics

- Centre d'Économie et de Sociologie appliqués à l'Agriculture et aux Espaces Ruraux (CESAER, UMR 1041)
- Institut Agro Dijon
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Sophie LEGRAS, Research fellow in Economics

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- INRAE
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Coro CHASCO YRIGOYEN, Full Professor in Economics

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Kévin FOURREY, Associate professor in Economics

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