Rachel Paya

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ESSEC Business School
3 Av. Bernard Hirsch,
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EDUCATION

ESSEC Business School *2022 – 2027 (expected)*
Ph.D. in Finance
Advisors: Laurent Bach and José-Miguel Gaspar

Columbia Business School *Jan. 2026 – May 2026*
Visiting Fulbright Scholar
Sponsor: Simon Oh

Paris School of Economics *2018 – 2021*
M.Res. in Analysis and Policy in Economics

King's College London *2015 – 2018*
B.Sc. in Philosophy, Politics, and Economics

RESEARCH INTERESTS

Corporate Finance, Public Economics, Energy and Climate Policy

JOB MARKET PAPER

Investment Under Mandated Energy Efficiency: Evidence from Real Estate (with O. Denagiscarde)

Do energy efficiency mandates with distant deadlines speed up green investment, and at what cost to asset values? We study a French mandate requiring commercial buildings above 1,000 square meters to cut their energy consumption by 40% by 2030 compared with a past reference level. We exploit the size threshold in a regression discontinuity design and leverage novel administrative data on building characteristics, renovation permits, energy consumption, and transactions. In the five years following the enactment of the mandate, regulated buildings are 46% more likely to undergo a major renovation and reduce their energy consumption per square meter by 6% more than control buildings. These effects emerge after mandatory reporting made the policy credible and are concentrated among buildings approaching their normal renovation cycle. We find no significant effect on transaction probability or prices. A real options model with a non-compliance cost rationalizes these results: a sufficiently low non-compliance cost can bring forward the investments of owners already close to renovating without lowering building values.

REFERENCES

Laurent Bach
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José-Miguel Gaspar
Professor of Finance
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Antoine Bozio
Professor of Economics and Director of the IPP
Paris School of Economics
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WORKING PAPERS

Does Subsidizing Green Equipment Make Firms Greener? (with L. Bach, P. Dutronc-Postel, and A. Guillouzouic) *Submitted*

We study manufacturing firms' decisions to invest in carbon-abating equipment, leveraging a one-billion-euro subsidy program for biomass-based energy in French manufacturing. Using eleven cohorts of subsidized projects, we show that subsidies raise green investment, reduce fossil fuel use, and increase biomass consumption. Plant-level CO_2 emissions fall by 21%, with no change in activity. Many selected projects are later abandoned, partly due to energy price shocks and financial fragility. We compute the implied cost per ton of CO_2 avoided, highlighting interactions with emissions trading and alternative biomass carbon accounting.

WORK IN PROGRESS

Can Boosting Corporate Investment Benefit the Environment? Evidence from France

Climate Risks in the US Electric Utility Sector

POLICY REPORTS

Bach, L., Fize, E., and Paya, R. (2026). Impact de la distribution des Fonds Bpifrance Entreprises sur l'accès des ménages au capital-investissement [Household Access to Private Equity through Bpifrance Entreprises Funds]. *IPP Report 69* (in French).

Bach, L., Fize, E., Guillouzouic, A., de Lachapelle, L., Malgouyres, C., and Paya, R. (2025). Réindustrialisation et prélèvements obligatoires en France [Reindustrialization and Compulsory Levies in France]. *IPP Report 58* (in French).

Astier, N., Bach, L., Dutronc-Postel, P., Guillouzouic, A., Ollivier, H., and Paya, R. (2024). Évaluation des aides à la décarbonation du plan France Relance [Evaluation of Decarbonization Subsidies in the France Relance Plan]. *IPP Report 50* (in French).

Bach, L., Dutronc-Postel, P., Guillouzouic, A., Malgouyres, C., and Paya, R. (2024). Les émissions de CO_2 de l'industrie française et le "ciblage carbone" des politiques publiques [CO_2 Emissions of French Industry and the Carbon Targeting of Public Policy]. *IPP Policy Brief 102* (in French).

Hubert, R., Paya, R., Hilke, A., and Cardona, M. (2022). Scenario Analysis of Transition Risk in Finance: Towards Strategic Integration of Deep Uncertainty. *I4CE Climate Report.*

GRANTS AND AWARDS

Amundi PhD Scholarship	*2026-2027*
Fulbright Visiting PhD Student Scholarship	*2026*
Pre-EFA PhD Program Travel Grant	*2026*
ESSEC Research Day Best Poster Presentation Award	*2025*
ESSEC International Mobility Grant	*2025*
CY Cergy-Paris University International Mobility Grant	*2025*
ESSEC PhD Scholarship	*2022–2026*

PRESENTATIONS

2026: Green Finance Research Advances (Paris, scheduled), AFSE-Trésor Annual Conference on Public Policy Evaluation (Paris, scheduled), International Symposium on Climate, Finance, and Sustainability (Paris), Pre-EFA PhD Program (Ghent), HEC Finance PhD Workshop (Paris), ESSEC Brown Bag Seminar (Cergy)

2025: 24^{th} Journées Louis-André Gérard-Varet (Marseille), French Ministry of Ecological Transition internal seminar (Paris), ESSEC Research Day (Cergy), ESSEC Student Research Seminar (Cergy)

2024: European Sustainable Finance PhD Workshop (discussant, Augsburg, 2024), GRASFI PhD Workshop (Paris), ESSEC Student Research Seminar (Cergy)

2023: IPP Budget Conference (Paris), ESSEC Brown Bag Seminar (Cergy)

TEACHING

Financial Mathematics, ESSEC Business School, Lecturer — *Spring 2027 (scheduled)*
Refresher in Finance, ESSEC Business School, Lecturer — *Fall 2025*
Evaluating Decarbonization Policies, École Normale Supérieure PSL, Lecturer — *March 2025*
Public Policy Analysis and Evaluation, Sciences Po Paris, TA for Etienne Fize — *Fall 2023, 2024*

NON-ACADEMIC PROFESSIONAL EXPERIENCE

Research Economist, Institut des Politiques Publiques (Paris) — *Nov. 2021 – Dec. 2025*
Research Assistant, World Inequality Lab (Paris) — *Feb. 2021 – Oct. 2021*
Research Analyst, I4CE – Institute for Climate Economics (Paris) — *Mar. 2020 – Oct. 2020*
Junior Economist, Société Générale (Paris) — *Sept. 2019 – Feb. 2020*

SKILLS

Programming: R, Stata, LaTeX
Data: French administrative data (CASD), Compustat, DealScan, US EIA data, SEC filings
Languages: French (native), English (fluent, C2), Spanish (beginner, A2)
Citizenship: French