Moustapha Thiam

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Education

Université du Québec à Montréal (UQÀM)
Ph.D. in Economics, 2027 (expected). Advisor: Charles Séguin.

INRAE (UMR SMART), Rennes, France
Visiting Scholar, 2024.

Université Paris Nanterre, France
M.A. in Analysis and Economic Policy, 2021.

Université Cheikh Anta Diop, Dakar, Senegal
B.Sc. in Economics and Management Sciences, 2019.

Fields

Primary: Environmental Economics; Agricultural Economics.
Secondary: Climate Change and Adaptation; Policy Evaluation.

Job Market Paper

Heat Stress, Damage Control, and Structural Maladaptation

I study why on-farm adaptation fails to offset the yield losses from extreme heat, using four major crops in Quebec over 1991–2022. Embedding a damage-control production technology in a model of phase-specific climate risk, I derive five predictions — defensive intensification, frontier disengagement, incomplete adaptation, cost escalation, and structural maladaptation — and test each on a thirty-two-year regional yield panel and three waves of a farm-level input survey. Input responses are sharply heterogeneous: cold crops intensify pesticide and fertilizer use, while soybeans disengage from variable-input markets as biological nitrogen demand collapses under reproductive heat stress, and unit production costs rise for every crop. The central result concerns barley — the only crop whose pest-pressure window differs from its yield-damage window: barley alone exhibits a significant negative interaction between yield-relevant heat stress and pesticide expenditure, implying that defensive investment is calibrated to the wrong agronomic threat — a structural maladaptation that persists even under fully rational, immediate behavioral adjustment.

Working Papers

Do Pesticide-Reduction Policies Work? Endogenous Adoption and Instrument Choice in a New Cross-Country Panel.

Using a new hand-validated database of national plans, quantitative targets, IPM programmes, and taxes for 45 OECD and major agricultural economies (1990–2023), I show that the apparent success of information-based instruments is largely an artifact of selection: IPM's large raw effect collapses to zero once country-specific trends are allowed, and plans and targets have precisely-estimated null effects. Only the rarely-used tax robustly cuts use; consumption-footprint and bilateral-sourcing tests find no large trade leakage.

Pesticide Taxation and the Transition to Organic Agriculture: A Computable General Equilibrium Analysis for Quebec. *with Charles Séguin.*

We build a computable general equilibrium model of Quebec agriculture with conventional and organic farming as distinct technologies, parameters estimated from farm-level microdata. An 80% pesticide tax is needed to meet Quebec's 12% reduction target (elasticity −0.16). The revenue-recycling rule, not the tax itself, drives the outcome: directing revenues to organic farmers expands organic acreage by 19.3%, versus 3.55% (government retention) and 2.8% (household compensation). A competitiveness-adjusted border tax cuts import leakage by 5–8 points.

Do Prescription Mandates Reduce Pesticide Risk? Evidence from Quebec's 2018 Agronomic Reform. *with Komla Avoumatsodo, Isambert Leunga Noukwé, and Charles Séguin.*
We exploit Quebec's 2018 agronomic-prescription requirement as a natural experiment. Using compound-level data (1992–2022) with difference-in-differences, slope-break, and synthetic-control methods, we find the reform reallocated pesticide demand rather than reducing it: it accelerated atrazine's exit (≈39% per year faster than trend), had no detectable effect on neonicotinoids — its primary target — and coincided with a sharp rise in unregulated diamide insecticides, leaving the within-panel risk-weighted causal effect near zero.

Exit Dynamics from Organic Certification in Quebec. *with Komla Avoumatsodo. Revise and Resubmit, Canadian Journal of Agricultural Economics.*
In Quebec, organic-certification exits stayed high (5–7% per year, 2021–2025) while entries fell from 10.8% to 3.4%; by 2025 exits exceeded entries for the first time on record. We document three life-cycle facts — an inverted-U exit hazard peaking in year three, more than half of exits within five years, and lower risk for multi-category producers — and a calibrated dynamic model with heterogeneous time preferences and pest shocks reproduces them. An 80% pesticide tax raises ten-year survival from 81% to 89%.

Honors & Awards

ESG-UQAM Pedagogy Award, 2024 and 2025.

Teaching

Lecturer — Macroeconomic Analysis (ECO2400), 2024–2025.
Teaching Assistant — Econometric Foundations of Finance (ECO8600, graduate); Macroeconomic Analysis (ECO3023); Methods of Economic Analysis I & III (ECO1273, ECO3273), 2022–2024.

Conference Presentations

Canadian Economics Association (CEA) Annual Meeting; CEA Ph.D. and Early Career Workshop, 2026.
Société canadienne de science économique (SCSE), 63rd–65th Congresses, 2023–2025.
RQRAD Annual Congress, 2024–2026.
Graduate Student Symposium, ESG-UQAM, 2024.
Doctoral Seminar, Université du Québec à Montréal, 2023.

Service

President, Graduate Student Association in Economics (AECSE), UQÀM, 2023–2024.

Skills & Languages

GAMS, MATLAB, R, LaTeX; Social Accounting Matrix, GTAP.
French (native), English (fluent). Citizenship: Senegal.

References

Professor Charles Séguin *(Advisor)*
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