ABDOULAYE NDIAYE

CONTACT INFORMATION	New York University Leonard N. Stern School of Business abdou.ndiaye@nyu.edu Henry Kaufman Management Center Office 7-72 www.abdoulayendiaye.com 44 West 4th Street +1-857-241-7251 New York, NY 10012

CURRENT APPOINTMENT

Assistant Professor of Economics, **New York University, Stern School of Business**, July 2019 - present

Public Finance Theme Leader, **Structural Change and Economic Growth Consortium**, 2024-present

Research Affiliate, **Centre for Economic Policy Research**, Public Economics, 2021-present

Research Network Affiliate, **CESifo**, 2024-present

PRIOR EMPLOYMENT

Senior Advisor to the **Minister of the Economy, Planning and Cooperation of Senegal,** 2021 (leave)

Research Economist, **Federal Reserve Bank of Chicago**, 2018-2019 (postdoc)

EDUCATION

Ph.D., Economics, **Northwestern University**, Evanston, Illinois, 2013-2018
    Fields: Macroeconomics, Public Finance
    Dissertation: *"Essays on optimal taxation and retirement policies"*
    Committee Chairpersons: Professors Alessandro Pavan and Guido Lorenzoni

Diplôme d'Ingénieur, Mathematics, **École Polytechnique**, Paris, France, 2010-2013

Classes Préparatoires, Math-Physics*, **Lycée Louis-le-Grand**, Paris, France, 2008-2010

VISITING POSITIONS

Visiting Scholar, **Becker Friedman Institute at University of Chicago**, Spring Quarter 2025

Distinguished Visiting Scholar, **Duke University**, October 2024

Guest Visitor, Center for Economic Studies, **LMU Munich**, Summer 2024

Visiting Scholar, **Cowles Foundation for Research in Economics, Yale University,** Spring 2020, 2023

Visiting Scholar, **Einaudi Institute of Economic and Finance,** Summer 2022

Junior Visitor, **Federal Reserve Bank of Atlanta**, Spring 2021

Visiting Scholar, **Opportunity and Inclusive Growth Institute, Federal Reserve Bank of Minneapolis**, Fall 2020,2024

Visiting Scholar, **Central Bank of the West African Economic and Monetary Union,** December 2019

Short-Term Visitor, **Federal Reserve Bank of Minneapolis**, November 2018

Visiting Student, **Department of Economics, Sciences Po Paris,** Summer 2017

Visiting Student, **Julis-Rabinowitz Center for Public Policy and Finance, Princeton University,** Summer 2016

Visiting Scholar, **Department of Economics, Harvard University,** Spring Term 2013

Economics Affairs Analyst, **United Nations**, New York Headquarters, 2012

FELLOWSHIPS & AWARDS

Sui Foundation Research Award, Spring 2024

Stern Center for Global Economy and Business Research Grant: Fall 2019, Fall 2020

Graduate Fellowship, Northwestern University, 2014-2018

Full Fellowship, Ecole Polytechnique, 2010-2013

Merit Scholarship, Senegalese Ministry of Education, 2007-2013

National Champion, FDA French Debating Championship, 2013

Third Prize, National Physics Competition (Concours Général), 2007

RESEARCH INTERESTS	Primary: Macroeconomics Secondary: Public Economics, Development, Political Economy

WORKING PAPERS

1. **Property Taxes and Housing Allocation under Financial Constraints**
   Minneapolis FED OIGI Working Paper #19230, Submitted.
   Joshua Coven, Arpit Gupta, Sebastian Golder, and Abdoulaye Ndiaye

2. **Bonus Question: How Does Incentive Pay Affect Wage Rigidity?**, August 2024,
   NBER Working Paper #31722, Submitted.
   Meghana Gaur, John Grigsby, Jonathon Hazell, and Abdoulaye Ndiaye

3. **Mispricing Narratives after Social Unrest**
   NBER Working Paper #32730
   Bocar A. Ba, Abdoulaye Ndiaye, Roman G. Rivera, and Alexander Whitefield

4. **Why Bitcoin and Ethereum Differ in Transaction Fees: A Theory of Blockchain Fee Policies**,
   February, 2024
   CEPR Discussion Paper #18890
   Abdoulaye Ndiaye

5. **Relative Pricing and Efficient Allocation in Blockchains**, Working Paper, November 2024,
   Abdoulaye Ndiaye

UNDER REVISION

6. **Flexible Retirement and Optimal Taxation**
   *Reject & Resubmit, **Quarterly Journal of Economics***
   Abdoulaye Ndiaye

7. **A Theory of International Boycotts**, February 2024
   *Revise & Resubmit, **Journal of International Economics***
   Abdoulaye Ndiaye

PUBLICATIONS

8. **How to Fund Unemployment Insurance with Informality and False Claims: Evidence from Senegal**, October 2024
   *Forthcoming at **Journal of Monetary Economics***
   Abdoulaye Ndiaye, Kyle Herkenhoff, Abdoulaye Cisse, Alessandro Dell'Acqua, and Ahmadou A. Mbaye
   https://doi.org/10.1016/j.jmoneco.2024.103699
   Abstract: This paper studies the welfare effects from the provision of unemployment insurance (UI) benefits in a context where formal workers represent only a small proportion of the labor market and informal workers can submit fraudulent claims for UI benefits. We model these features and allow for varying degrees of enforcement and different funding sources. We then estimate the model's key parameters by conducting a custom labor force survey in Senegal. Our findings show that the liquidity gains are large and the moral hazard response to the UI benefits among workers is relatively small: an extra dollar of UI benefits yields a consumption-equivalent gain of 60–90 cents, which exceeds comparable estimates from U.S. calibrations by a factor of three to sixteen. We then show that the welfare gains depend on the program design: UI funded through payroll taxes delivers the greatest welfare gains but becomes infeasible when there are few formal workers and high rates of fraudulent claims. On the other hand, UI funded through consumption taxes delivers lower welfare gains but remains feasible with high informality and false claims.

9. **Redistribution with Performance Pay**
   ***Journal of Political Economy Macroeconomics**, vol. 1, num. 2, pp. 371-402, June 2023*
   Pawel Doligalski, Abdoulaye Ndiaye, and Nicolas Werquin
   https://doi.org/10.1086/724511

Abstract: Half of the jobs in the U.S. feature pay-for-performance. We derive novel incidence and optimum formulas for the overall rate of tax progressivity and the top income tax rate, when such labor contracts arise from moral hazard frictions within firms. Our first main result is that the sensitivity of the worker's compensation to performance is roughly invariant to tax progressivity. This is because the direct crowding-out of private insurance is offset by a countervailing crowding-in due to endogenous labor effort responses. Our second main result is that the optimal tax schedule is strictly less progressive than in standard models that treat pre-tax earnings risk as exogenous. This is because the negative welfare consequences of the crowd-out channel outweigh those of the crowd-in. Quantitatively, we find that the crowd-in offsets 92% of the crowdout, and that the welfare cost of not accounting for these effects when choosing tax progressivity is 0.3 percent of consumption.

10. **Blockchain Price vs. Quantity Controls**
*Forthcoming in **ACM FC 2024**: Proceedings of the International Conference on Financial Cryptography and Data Security*
Abdoulaye Ndiaye
https://doi.org/10.48550/arXiv.2405.00235

Abstract: This paper studies the optimal transaction fee mechanisms for blockchains, focusing on the distinction between price-based ($\mathcal{P}$) and quantity-based ($\mathcal{Q}$) controls. By analyzing factors such as demand uncertainty, validator costs, cryptocurrency price fluctuations, price elasticity of demand, and levels of decentralization, we establish criteria that determine the selection of transaction fee mechanisms. We present a model framed around a Nash bargaining game, exploring how blockchain designers and validators negotiate fee structures to balance network welfare with profitability. Our findings suggest that the choice between $\mathcal{P}$ and $\mathcal{Q}$ mechanisms depends critically on the blockchain's specific technical and economic features. The study concludes that no single mechanism suits all contexts and highlights the potential for hybrid approaches that adaptively combine features of both $\mathcal{P}$ and $\mathcal{Q}$ to meet varying demands and market conditions.

TEACHING

Professor, New York University
Undergraduate: Economics of Global Business, F2019, F2020, Sp2022, Spr2024, F2024
MBA: The Global Economy, F2022
PhD: Macro Public Finance, F2020, F2022

Instructor, Ministry for the Economy, Planning and Cooperation of Senegal
Macro-Development for Policymakers

Teaching Assistant, Northwestern University, 2014-2016
Undergraduate: Introduction to Macroeconomics, Introduction to Microeconomics, Econometrics
PhD: Math Camp

Teaching Assistant, Lycée Louis-le-Grand, 2011-2012
Undergraduate: Real Analysis. Algebra

INVITED PRESENTATIONS & CONFERENCES

2025 (including forthcoming): Ecole Polytechnique - CREST, NYU Abu Dhabi

2024 (including forthcoming): Carnegie-Rochester-NYU Conference, Financial Crypto '24, UVA, NBER Spring Aging Meetings, CMU Blockchain Conference, Drexel, World Bank, Africa Meeting of the Econometric Society, CESifo Public Economics Week, EIEF Pizzanomics, SED Meetings, a16z Summer Infra Mechanism Design Workshop, Minneapolis Fed, Northwestern IPA & GPRL Research Conference, Wayne State University, University of Toronto, Minneapolis Fed OIGI Conference, Office of Financial Research - Dept of Treasury, CUNY, CEPR Fintech and Digital RPN Workshop Gerzensee, JHU Carey Finance Conference, Workshop on Changing Demographics and Housing Demand - Philly Fed, Duke Public, NYU (scheduled), Micro Macro Household Finance workshop (scheduled), SED Winter Meeting (scheduled), Stony Brooks (scheduled).

2023: University of Laval, Stanford, Twelfth Annual JRCPPF Conference at Princeton, Richmond Fed, Albany, Michigan, NYU Macro Lunch, NBER Summer Institute, a16z crypto, Columbia Junior Micro/Macro Labor Conference, Webinar in Finance and Development, NBER Fall Public Economics Meetings, NTA meetings, Dartmouth Mini-Conference in Macroeconomics, NYU Stern Blockchain Lab, Columbia Crytoeconomics Conference, Zurich 8th Conference in Public Finance in Developing Countries

2022: University of Cologne, MIT Sloan, Wharton Finance, University of Florida, CUNY, Society for Economic Dynamics, Einaudi Institute of Economics and Finance, a16z crypto, Atlanta Fed Junior Conference, Berkeley Macro, Brown, Boston University

2021: AEA Meetings, Royal Holloway, Oxford, Atlanta Fed, Michigan State University, Yale University, CREST, Minneapolis Fed, Paris School of Economics, Society for Economic Dynamics, University of Toronto, Western Economic Association Meeting, SEA Meetings

2020: NYU Abu Dhabi Macroeconomics Workshop, Barcelona GSE Summer Forum, New York University, Berkeley Public Finance, Yale Law and Macroeconomics Conference,, NYU Law Colloquium, SEA Meetings, Columbia, NBER Business Taxation in a Federal System, Econometric Society Winter Meetings

2019: AEA Meetings, University of Montreal, Federal Reserve Bank of Atlanta, Federal Reserve Bank of St-Louis, Federal Reserve Bank of Richmond, Notre Dame, University of Frankfurt, Ecole Polytechnique Paris, University of Munich, Columbia Law School Tax Policy Workshop, Asian Meeting of the Econometric Society, China International Conference in Macroeconomics, Society for Economic Dynamics, National Tax Association Meetings, Ohio State University, Central Bank of West African States

2018: Toulouse School of Economics, Sciences Po, Purdue, University of Michigan, Penn State, UCSB, UCLA, NYU Stern economics, Bocconi, DePaul University, Midwest Macro Meetings, Society for Economic Dynamics, Africa Meeting of the Econometric Society, NBER Summer Institute, Annual Congress of the European Economic Association, LAEF Conference in Macroeconomics and Business Cycles, Carnegie Mellon, Harvard, University of Chicago, National Tax Association Meetings, MIT, UQAM, Federal Reserve Bank of Minneapolis

2017: Northwestern, Lake Forest College, Illinois Economic Association Meetings, National Tax Association Meetings, Federal Reserve Bank of Chicago

DISCUSSIONS

"Expansion of Piped Water and Sewer Networks: The Effects of Regulation" by Bruna Morais Guidetti and Carolina Tojal Ramos dos Santos, National Tax Association Meetings 2023

"Taxing Water Usage in Developing Countries: Theory and Evidence from Mexico" by Alejandro Estefan, National Tax Association Meetings 2023

"Optimal Fiscal Policy in a Model with Uninsurable Idiosyncratic Shocks" by Sebastian Dyrda and Marcelo Pedroni, National Tax Association Meetings 2021

"Larger transfers financed with more progressive taxes? On the optimal design of taxes and transfers" by Ferriere, Grubener, Navarro, and Vardishvili, National Tax Association Meetings 2021

"Politics and Income Taxes: Progress and Progressivity" by Marcus Berliant and Pierre Boyer, National Tax Association Meetings 2020

"The Taxation of Couples" by Felix Bierbrauer, Pierre Boyer, Andreas Peichl, and Daniel Weishaar, National Tax Association Meetings 2020

"Capitalist Human Capital" by Vincenzo Quadrini, Qi Sun, and Yicheng Wang, Tsinghua Workshop in Macroeconomics 2019

"Politically feasible reforms of non-linear tax systems" by Felix J. Bierbrauer and Pierre C. Boyer, Fourth Taxation Theory Conference 2018

"Inverse December Fever" by Zareh Asatryan, Andreas Peichl, Thomas Schwab, and Johannes Voget, National Tax Association Meetings 2017

"Income Taxation, Firing Costs and Insurance within Firm" by Pawel Doligalski, National Tax Association Meetings 2017

REFEREE SERVICE	American Economic Journal: Macroeconomics, American Economic Journal: Microeconomics, American Economic Review, Econometrica, International Economic Review, Journal of Economic Theory, Journal of the European Economic Association, Journal of Money, Credit, and Banking, Journal of Public Economics, Quarterly Journal of Economics, Review of Economic Dynamics, Scandinavian Journal of Economics
CONFERENCE AND SEMINAR ORGANIZATION	Structural Transformation and Economic Growth Annual Conference 2025 NYU Macroeconomics Workshop, 2019-present NYU Macroeconomics Lunch Seminar, 2019-present Junior Virtual Macro Conference 2020
PROGRAM COMMITTEE	Society for Economic Dynamics Meetings 2019, 2020, 2021, 2022 Africa Meeting of the Econometric Society 2021 Mechanism Design for Social Good 2021 ACM conference on Equity and Access in Algorithms, Mechanisms, and Optimization 2021, 2022 National Tax Association Meetings 2021 International Institute of Public Finance Congress 2022, 2023, 2024, 2025 CBER Conference 2024
LANGUAGES	English (fluent), French (native), Wolof (native), Turkish (intermediate), Arabic (intermediate) Matlab, Python
PRO BONO ACTIVITIES AND MENTORING	Board Member at EconNect Africa Faculty Mentor at Graduate Admissions International Network Academic Supervisor at Stern Program in Undergraduate Research
PERSONAL	Senegalese citizen. US Permanent Resident. Married with one child (born 2023).