

Yvonne R Ng | Applied Economist + Data Scientist + Analyst

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Skills

- **Languages:** Python (NumPy, matplotlib, pandas, geopandas, SciPy); SQL; Stata and SAS for data cleaning, manipulation, visualization, summary statistics, regressions (OLS, 2SLS, logistic, quantile, difference-in-differences)
- **Tools:** Latex; Microsoft Excel, PowerPoint, Word; Tableau for data visualization

Experience

U.S. Federal Housing Finance Agency, Economist Intern 05/2024 - Present

- Contributed to financial models and databases for assessing the risk exposure of Freddie Mac's and Fannie Mae's multi-trillion single-family mortgage portfolios to inform capital policy.
- Identified potential time-varying sources of endogeneity and bias in the econometric modeling design of the [FHFA Mortgage Analytics Platform \(FMAP\)](#), a tool for stress-testing and forecasting risk exposure.
- Devised a method to incorporate COVID-19 forbearance outcomes to forecast delinquencies for millions of mortgages, while examining how outcomes related to pre-pandemic delinquencies using SAS and Tableau.
- Discussed cutting-edge research on housing finance and affordability at conferences and seminars.

University of Oslo, Researcher 11/2022 - 12/2023

- Provided research support for a forthcoming paper by Alan Griffith, Yue Yu, and Jonas Hjort on how supply chain networks and limited firm access to imports affect Ugandan market competition.
- Transformed a panel dataset with millions of monthly firm sales and pricing observations into sparse matrices to reduce computation time by several folds for estimation results using NumPy and pandas in Python.
- Solved an optimization problem using Quasi-Newton methods and the Python SciPy package to implement a GMM estimation of a structural model of Ugandan market competition.

University of Washington, Instructor 2022 - 2023

- Independently taught Intermediate Microeconomics, introducing economics, business, finance, and other students to fundamental microeconomic models and theories.
- Designed and administered a course syllabus, lectures, and exams to a class of 30-40 undergraduates.

NERA Economic Consulting, Senior Analyst 06/2021 - 06/2022

- Consulted for consumer finance litigation by drafting and auditing reports submitted as expert testimony.
- Illustrated to regulators using Excel and Stata charts the process of a national U.S. bank's interest rate adjustments for calculating refunds on thousands of credit card accounts.
- Explicated to regulators the assumptions made in a national U.S. bank's refund calculations for credit card accounts to mitigate litigation risk.
- Managed and trained other researchers in data visualization, Stata, and effective documentation.

NERA Economic Consulting, Analyst 02/2017 - 06/2019

- Consulted for intellectual property (IP), antitrust, and consumer finance litigation by drafting and auditing reports submitted as expert testimony.
- Calculated restitution using consumer account overdraft data while ensuring methodology complied with federal regulations for a case filed by the CFPB and the OCC against a national U.S. bank.
- Cleaned and analyzed datasets with millions of observations to demonstrate that a multi-million dollar merger complied with the U.S. Department of Justice's standards for fair competition, allowing it to pass.
- Estimated patent valuation and damages worth hundreds of millions of dollars for alleged IP infringement.

Expected Publications

- [To Lease in the Short or Long Term? Homeowners' Sharing Economy Exit Decisions Amid COVID-19 Uncertainty](#), presented at the Western Economic Association International 99th Conference (June 2024)
- [Housing Affordability, Supply, and Spatial Misallocation](#) with Eric S. Wang (University of Washington)

Education

University of Washington, Seattle Seattle, WA

Ph.D. in Economics, specialized in applied microeconomics and causal inference Expected Graduation: 06/2025

M.A. in Economics

University of California, Berkeley Berkeley, CA

B.A. in Economics, *Departmental Honors*