# Yvonne R Ng | Applied Economist

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## Skills

- **Coding:** Python (NumPy, pandas, matplotlib, geopandas, SciPy); SQL; Stata; SAS
- **Tools:** Latex; Microsoft Excel, PowerPoint, Word; Tableau
- **Data Analysis and Modeling:** data validation, cleaning, manipulation, visualization, summary statistics; regression models (OLS, logistic, quantile, 2SLS, difference-in-differences); instrumental variables; GMM; causal inference

## Experience

**U.S. Federal Housing Finance Agency**, Economist Intern 05/2024 - 02/2025

- Built a method using SAS that incorporated COVID-19 loan forbearance outcomes to increase the modeling power of the FHFA Mortgage Analytics Platform (FMAP) for stress-testing and assessing risk exposure of millions of loans in Fannie Mae's and Freddie Mac's single-family mortgage portfolios.
- Identified time-varying sources of endogeneity and bias in the econometric modeling design of FMAP to improve FMAP's credit loss predictions for informing capital policy.

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

- Analyzed how limited firm access to imports and the structure of supply chain networks affect firm market power and pass-on price effects in a developing African country.
- Transformed a panel dataset with millions of monthly firm sales and prices into sparse matrices to reduce computation time by several folds for GMM 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 firm market power.

**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 30-40 undergraduates.

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

- Consulted for consumer finance litigation by drafting and auditing expert reports.
- 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.
- Cleaned and analyzed datasets with millions of transactions 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.
- Calculated restitution using consumer account overdraft data and ensured restitution methodology complied with federal regulations for a case filed by the CFPB and the OCC against a national U.S. bank.

## 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*

## Expected Research 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)
  - Studied investment property owners' substitution between Airbnb and the residential rental housing supply for investment using COVID-19 pandemic as a natural experiment.
  - Found a policy implication that municipalities should impose stricter regulations on short-term vacation rentals to address the upward pressure of the supply of Airbnb rentals on residential housing rents.
  - Modeling Methods: Regression models (OLS, 2SLS, difference-in-differences with a continuous treatment), instrumental variables, causal inference
  - Coding Skills: Python (pandas, matplotlib), Stata
  - Working paper: https://econ.washington.edu/sites/econ/files/documents/job-papers/20241122_Ng_JMP.pdf
- *Housing Affordability, Supply, and Spatial Misallocation* with Eric S. Wang (University of Washington)
  - Conducted a cost-benefit analysis of a City of Seattle tax incentive program for rental housing developers that evaluates the City's trade-off between incentivizing new construction and providing affordability to building and neighborhood residents
  - Modeling Methods: Parametric and nonparametric spatial difference-in-differences
  - Coding Skills: Python (NumPy, pandas, matplotlib, geopandas), Stata
  - Abstract: https://econ.washington.edu/sites/econ/files/documents/research/Abstract.pdf

## References

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