

EPON KHALIL

inferendum.com · essaysbyepon.substack.com · github.com/eponkhalil

PROFILE

Economist specialising in causal inference and policy evaluation, with a focus on estimating how programme effects vary across groups rather than on averages alone. Trained in economics at the University of Glasgow, currently working remotely as Financial Management Officer at a UK-based non-profit organisation. Designer and sole developer of Inferendum, a deployed causal inference tool implementing doubly robust estimation, causal forests and automated robustness testing. Seeking doctoral research in applied economics.

RESEARCH INTERESTS

- Causal inference and causal machine learning in economics
- Digital inclusion and broadband policy
- Development economics
- Policy evaluation using econometric methods

EDUCATION

University of Glasgow, Glasgow, United Kingdom

January 2021 – January 2022

MSc Financial Economics (Merit)

- Dissertation: Impact of the Internet on Economic Growth in Developing Countries

North South University, Dhaka, Bangladesh

January 2016 – April 2020

BSc Economics, CGPA 3.54 / 4.00 (Cum Laude)

RESEARCH EXPERIENCE

Master's Dissertation, University of Glasgow

2021 – 2022

Supervisor: Dr Andrei Potlogea. (Manuscript available on request)

- Analysed the relationship between internet penetration and economic outcomes in developing countries using cross-country panel data.
- Applied pooled OLS, fixed-effects, random-effects and instrumental variable models.
- Built a cross-country dataset from World Bank and digital infrastructure indicators.
- Addressed endogeneity between internet adoption and GDP outcomes through an IV strategy.
- Examined effects on GDP per capita levels and on growth rates across model specifications.

Inferendum: Causal Inference Software

2026 – present

Founder, designer and sole developer. (inferendum.com)

- Deterministic causal inference tool, designed, built and deployed end to end.
- Doubly robust estimation of average effects (DML and AIPW) with cross-fitting.
- Causal forests for conditional average treatment effects, with Benjamini-Hochberg correction and simultaneous confidence intervals.
- Automated robustness layer: placebo and refutation tests, E-value and Oster sensitivity bounds, and an assumptions checklist.
- Synthetic twin routine that rebuilds the dataset with an effect of known size to verify the pipeline recovers it.
- Python engine (EconML, DoWhy, scikit-learn, statsmodels) with a Streamlit interface, deployed with seed and version provenance for reproducibility.

TECHNICAL SKILLS

- **Causal inference:** Difference-in-differences, instrumental variables, panel fixed effects, doubly robust estimation (DML, AIPW), causal forests and conditional average treatment effects, propensity score and overlap diagnostics
- **Robustness and inference:** Placebo and refutation testing, sensitivity analysis (E-value, Oster bounds), multiple testing correction (Benjamini-Hochberg), simultaneous confidence intervals, calibration against synthetic data with known ground truth
- **Software:** Python (EconML, DoWhy, scikit-learn, statsmodels, pandas), R, Stata
- **Engineering:** Git, pytest, reproducible pipelines with seed and version provenance, Streamlit, deployment

PROFESSIONAL EXPERIENCE

Financial Management Officer, The Whithorn Trust (United Kingdom)

July 2023 – present

Full-time, Remote

- Maintain the full financial ledger in QuickBooks Online, covering revenue and expenditure recording, reconciliation and month-end close.
- Administer payroll for two dozen staff, including tax withholdings and statutory deductions.
- Prepare management accounts and financial reports for trustees to support budgeting and planning decisions.
- Prepare and file VAT returns and maintain compliance with HMRC requirements.
- Investigate and resolve discrepancies in the accounts ahead of external audit.

EXTRA CURRICULAR ACTIVITIES

University of Glasgow Chess Society, Glasgow, UK

- General Member (July 2021 – December 2021)

NSU Finance Club, Dhaka, Bangladesh

- Sub-Executive (March 2018 – January 2019)
- Senior Member (January 2018 – March 2018)
- General Member (May 2017 – January 2018)

LANGUAGES AND INTERESTS

Languages

- English (fluent)
- Bengali (native)

Interests

- Blogging <https://essaysbyepon.substack.com>
- Football Won a regional tournament, trained with Bangladesh national coach, co-founded a local team in Dhaka
- Chess Took part in an international chess tournament as part of University of Glasgow Chess Society