

# Peter Deffebach

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## Skills

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- Python, Stata, R, GIS, Julia
- Survey design and implementation
- Structural estimation of urban and trade economic models

## Education

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**Boston University, PhD, Economics** Sep 2019 – Jun 2025

- Development, Macroeconomics, and Urban Economics | Advised by David Lagakos, Yuhei Miyauchi, and Masao Fukui

**Princeton University, BA, Economics** Sep 2013 – Jun 2017

- Spanish Minor, *Cum laude*

## Work Experience

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**Pricing Economist at Wayfair** July 2025-present

- Design pricing experiments on online platform to optimally set the price of goods
- Power analysis and randomization, panel data analysis, and machine learning causal inference tools in R and Python
- Coordinate quarterly pricing releases while taking into account diverse interests across the organization

**Research Assistant — Prof. Gabriel Kreindler at Harvard University** Jan 2025–June 2025

- Developed a Julia package for designing optimal urban transportation networks in cities to be used by urban planners
- Implemented a parallel tempering optimization algorithm with distributed computing capabilities

**Research Assistant — Prof. Yuhei Miyauchi at Boston University** Jul 2020–Jun 2025

- Managed a rotating team of four Master's degree students, teaching data analysis skills to each cohort
- Reviewed recent research on urban infrastructure and income distribution in developing cities
- Cleaned and analyzed census and household survey data from cities across the world in Stata and R
- Built quantitative spatial urban model in R to assess effects of infrastructure improvements in developing cities

**Short Term Consultant — Poverty and Equity Global Practice Group at The World Bank** Jul 2023 – Feb 2024

- Measured increases in poverty between 2019 and 2023 in Sri Lanka using the SWIFT poverty diagnostic tool set
- Employed machine learning techniques in Stata to predict household poverty across surveys and years

**Computing Teaching Assistant — Prof. Yuhei Miyauchi at Boston University** Sep 2022 – Jan 2023

- Led recitations as only TA. Used GitHub Classroom to grade and give individual feedback via code reviews
- Taught R, terminal, Git, Performance Cluster use, optimization, dynamic programming, and bootstrapping

## Research

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**Development and the Spatial Distribution of Income in Cities** (w D. Lagakos, Y. Miyauchi, and E. Yamada)

- Methods: Agglomerated 30 person-level travel surveys from developing countries in Stata. Compared with administrative geo-spatial data in R. Built a quantitative urban spatial modeling in Julia
- Findings: Cities in poor vs. rich countries have different income sorting patterns, driven by differences in state capacity

**Labor Market Churn, Development, and Quits: Evidence from Urban Ghana**

- Methods: Conducted a panel survey of job-seekers and a survey of firms in Accra, Ghana. Analyzed differences between Ghana and USA using administrative data in Stata. Built a model of job search in Julia
- Findings: Job-seekers find jobs easily, but then quit at enormous rates. Wage work is a temporary tool to get through hard times

**Training Microentrepreneurs over Zoom: Experimental Evidence from Mexico** (w D. McKenzie, E. Davies, and L. Iacovone)

- Methods: Analysis of RCT. Designed heterogeneous treatment effect estimation using machine learning methods
- Findings: Zoom training improves business practices and profits in the short run, but effects fade over time
- Published in *The Journal of Development Economics*

## Other Professional Activities

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- **Journal Referee:** Review of Economic Dynamics, Journal of Development Economics
- **Grants and Awards:** Structural Change and Economic Growth (STEG) Small Research Grant (£15,000). International Growth Centre (IGC) Small Research Grant (£20,000), and Full Research Grant (£40,000). Manuel Abdala Award for IED Summer Fieldwork at Boston University

## Personal

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- Primary maintainer of the Julia language data manipulation package `DataFramesMeta.jl`
- Languages: English (native), Spanish (fluent)
- Citizenship: USA