

THOR DODSON

Transportation Economist experienced in conducting research and applied analysis, maintaining and developing models, combining dissimilar datasets, and providing guidance on a wide variety of projects.

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🔗 dobothor.github.io in linkedin.com/in/thor-dodson

CAREER

Economist: Federal Highway Administration

2021-Present

Core Responsibilities

- National Highway Construction Cost Index (NHCCI)
 - Lead research program on highway construction cost estimation
 - Calculate and publish quarterly NHCCI value. Maintain and update code
 - Conduct analysis on cost factors to produce quarterly narrative article
 - Oversee peer review panel for analysis of NHCCI and related cost indices
 - Answer questions and analysis requests regarding highway costs
- Externality Cost Assessment Tool (ECAT)
 - Lead research program on highway externality cost estimation
 - Maintain and develop tool and associated models
 - Expand application of tool and stay up to date on the state of the practice
- Benefit Cost Analysis (BCA)
 - Review and revise BCA for highway discretionary grant applications
 - Contribute to research on updates of USDOT BCA Guidance
- Supporting Other Projects
 - Providing technical expertise on data, econometrics, and methodologies
 - Highway Revenue Forecasting, Highway Cost Allocation, Mobility Trends, Marginal Cost of Highway Use, Mile-Based User Fee, various NCHRP projects

Notable Accomplishments

- NHCCI
 - Automated the quarterly NHCCI calculation procedure, saving time and reducing risk of user error. Coordinated data stream for repeated analysis
 - Developed new automated procedures for input data quality checks, discovering and correcting several issues in the source data
- ECAT
 - Updated the methodology for quantifying the cost of highway noise and air pollution using advances in the field
 - Developed the Inequity Identification Tool (IIT), quantifying disparities in exposure to highway externalities at the county level for the US
 - Conducted a symposium on highway externality cost estimation, bringing together experts and State DOT and MPO practitioners

Economics PhD Program

University of Washington

📅 2015–2021 📍 Seattle, WA

Independent Instructor

- Intro and Intermediate Economics, Industrial Organization and Price Analysis

Dissertation Research Papers

- The US Interstate Highway's Effect on Agglomeration
- Roads as Economic Environment: An Agent Based Spatial Economic Model
- Roads and the Economy: Location Theory, Economic Geography, Cost-Benefit Analysis, Market Access, and Graphs

COMMUNITY

Eagle Scout, Master Gardener, OCF Recycling Crew Volunteer, Green Seattle Partnership Land Restoration, Student Mentor, Ashland Streets for Everyone Volunteer

EDUCATION

PhD Economics

University of Washington

📅 Sep 2015–2021 📍 Seattle, WA

Dissertation Topic: Roads and Economy

Relevant Coursework: Micro and Macro Economic Theory, Econometric Theory and Application, Time Series, Game Theory, Contract Theory, Natural Resource Management, Public Policy

M.A. Economics

University of Washington

📅 Sep 2015 - Sep 2017 📍 Seattle, WA

Focus: Microeconomic Theory and Time Series

B.A. Economics

Oregon State University

📅 Sep 2011–Dec 2014 📍 Corvallis, OR

Minor in Mathematics, Thesis: Exploring Maslow's Hierarchy of Needs Empirically

SKILLS

Programming

Python

R

GIS Software

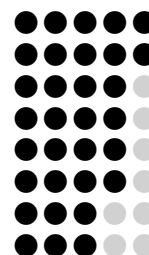
GitHub

SAS

STATA

Java

MS SQL Server



Machine Learning

Lasso

Random Forest

Neural Net

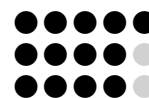


Soft Skills

Research and Support

Team Leader

Presentation



OTHER INTERESTS

Tennis, Piano, Traveling, Gardening, Philosophy, Community, riding my motor-bike on less used US State Highways and country roads, camping, appreciating nature, neighborhood potlucks