MORGAN HOLLAND

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EDUCATION

Florida State University, COSSPP   *2022 (expected)*
Doctorate of Philosophy in Economics

University of South Carolina, Moore School of Business   *2015*
Master of Arts in Economics

Mississippi College, School of Business   *2010*
Bachelor of Science in Business Administration

RESEARCH EXPERIENCE

Economics of Automation

- Crafted literature reviews on the economics of automation, substitution between labor and capital in economic models, and optimal capital taxation
- Developed task-based growth models investigating the relationship between automation, political economy, and economic growth and inequality.
- Investigated the relationship between automation and real business cycles using a dynamic stochastic general equilibrium (DSGE) model.
- Used log-linearization and value function iteration solution methods for DSGE models

The Option Value of Intermediate Payments in Relationship Banking

- Developed a multiperiod optimal debt model to investigate the role of intermediate payments
- Employed numerical techniques to solve the model, including

  * adaptive Gauss-Kronrod and adaptive cubature algorithms for numerical integration
  * Newton with Trust Region and BFGS algorithms for maximizing continuous functions
  * Nelder-Mead algorithm for maximizing discontinuous functions

Other Research

- Investigated trends and links between availability and use of credit and real business cycles using multivariate time-series methods.
- Analyzed factors contributing to recidivism in South Carolina prisons using survival analysis methods.

TEACHING EXPERIENCE

Analysis of Economic Data   4 semesters

- Developed custom instruction materials for statistics focusing on economic data and preparation for Introduction to Econometrics
- Integrated R programming to teach students data management and statistical analysis.
- Taught fundamental knowledge needed to understand data, including probability theory, graphical and sample techniqes for generating hypotheses, hypothesis testing using sample means, and using linear regression.
- Engaged with students using real-world examples of using data analysis to answer economic questions

Introduction to Econometrics   2 semesters

· Introduced students to using linear regression in econometric analysis
· Taught hypothesis testing in linear regression, including the fundamental assumptions needed for causality
· Explored alternative methods to ameliorate violations of the linear regression assumptions
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WORK EXPERIENCE

Florida State University   May 2017 - June 2021
Instructor/Teaching Assistant   *Tallahassee, FL*

· Taught undergraduate level statistics and econometrics in person and online.
· Integrated statistical software with course materials.
· Developed custom instruction materials for statistics focusing on economic data and econometric analysis.
· Assisted faculty in developing course materials, class management, and grading.

Florida State University   August 2015 - May 2019
Research Assistant   *Tallahassee, FL*

· Proposed and developed economic research projects both individually and in collaboration with faculty.
· Compiled, cleaned, and analyzed data from Federal and international agencies to generate and investigate research hypotheses. Data analysis methods included

   * Single and multivariate time series methods for detecting trends and relationships between economic indicators
   * Panel methods for causal analysis, including fixed effects and difference-in-differences
   * Nonlinear methods including limited dependent variables (i.e Tobit, Probit, logistic regression) and hazard modelling (nonproportional Weibull models)
· Developed mathematical economic models for research projects investigating

   * The relationship between
   * The relationship between Real Business Cycles and automation.
   * Moral hazard and monitoring in relationship banking.
· Employed numerical techniques to solve economic modelling problems. Methods include

   * Adaptive Gauss-Kronrod quadrature for single-variable numerical integration,
   * Adaptive cubature for multivariate integration
   * Newton with trust region, BFGS algorithms for local optimization of continuous functions
   * Nelder-Mead algorithm for local optimization of discontinuous functions
   * Log-linearization and value function iteration techniques for solving dynamic stochastic general equilibrium models

University of South Carolina   September 2013 - December 2013
Research Assistant   *Columbia, SC*

· Located and retrieved ownership data from Initial Public Offering (IPO) prospectuses.
· Constructed custom spreadsheets of IPO data.
· Performed literature searches for scholarly articles on several subjects related to corporate finance.

South Carolina Office of Regulatory Staff   July 2012 - September 2013
Auditor   *Columbia, SC*

· Advocated on behalf of the public in utility rate case proceedings before the South Carolina Public Service Commission.

- Audited utility rate case filings to verify the accuracy of financial data.
- Recommended adjustments to test-year revenue requirement analyses based on company financial data and rate case filings.
- Crafted written testimony to be filed with the South Carolina Public Service Commission.
- Reviewed nuclear plant construction invoices for compliance with the South Carolina Base Load Review Act and consistency with company financial documents.
- Examined telecommunications company filings and financial documents for compliance with telecommunications law.

Mississippi Department of Finance and Administration
Accountant/Auditor

January 2011-July 2012

Jackson, MS

- Pre-audited payments to State Treasurer for errors.
- Assisted state agencies in completing payments to the State Treasury.
- Approved transactions in a computerized accounting system.
- Verified accuracy of daily deposits to the State Treasury.

COMPUTER PROFICIENCIES

Programming

- *Expert*: R, Julia
- *Intermediate*: Matlab, Stata
- *Beginner*: Python (Numpy, Pandas)

Spreadsheet and Database

- *Intermediate*: Excel
- *Beginner*: SQL, MongoDB, JSON

Document and Presentation Creation, Literate Programming

- LaTeX, Lyx, Rweave, Rmarkdown, Jupyter, Word, Powerpoint

Version Control

- GitHub

ACADEMIC RESEARCH

Working Papers

- *Growth, Income Distribution, and Political Economy Implications of Automation* (With Manoj Atolia and Jonathan Kreamer)
- *The Option Value of Monitoring in Relationship Banking*

Works in Progress

- *The Effect of the Americans with Disabilities Act on Earnings and Employment Outcomes for People with Disabilities: An Intersectional Approach*