Omer Kara — *Curriculum Vitæ*

CONTACT INFORMATION	Eskisehir Osmangazi University College of Economics and Administrative Sciences Department of Economics, Office A1-21 Eskisehir, 26040 Turkey
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RESEARCH INTERESTS
Primary: Spatial Econometrics, Panel Data Econometrics, Time-Series Econometrics, Data Science
Secondary: Applied Microeconomics, Applied Macroeconomics, Agricultural Economics, Cryptoeconomics

INDUSTRY INTERESTS
Primary: Econometrician, Data Scientist, Consultant
Secondary: Quantitative Analyst, Software Developer

ACADEMIC APPOINTMENTS

Faculty Member, Ph.D. January 2019 – Present
Department of Economics
Eskisehir Osmangazi University, Eskisehir, Turkey

Postdoctoral Researcher May 2018 – August 2018
Department of Economics
North Carolina State University, Raleigh, NC, USA

EDUCATION

Ph.D., Economics May 2018
North Carolina State University, Raleigh, NC, USA
- Dissertation: *Three Essays in Applied Spatial and Time Series Econometrics* 🔓
- Advisor: Dr. Barry Goodwin
- Area of Study: Time Series Econometrics and Spatial Econometrics

M.S., Agricultural and Resource Economics August 2012
North Carolina State University, Raleigh, NC, USA

B.A., Economics July 2008
Bahcesehir University, Istanbul, Turkey

INDUSTRY EXPERIENCE

Software Developer January 2022 – Present
CHS Inc., Inver Grove Heights, MN, USA
- Job: Building the "Crack Spread Platform", a shiny web app (in progress)
- Tools: R, R Markdown, shiny, HTML, CSS, Azure DevOps, Git, ETL, EDA

Software Developer August 2021 – Present
CHS Inc., Inver Grove Heights, MN, USA
- Job: Building the "Hog Crush Platform", a shiny web app (in marketing)
- Tools: R, R Markdown, shiny, HTML, CSS, Azure DevOps, Git, ETL, EDA

Data Scientist June 2023 – December 2023
The World Bank, Washington, DC, USA
- Job: Sierra Leone CEM - Agriculture Sector Deep Dive
- Tools: FAOSTAT, R, R Markdown, ETL, EDA

Data Scientist and Econometrician July 2022 – January 2023
CHS Inc., Inver Grove Heights, MN, USA
- Job: Churn Loss Analysis
- Tools: Statistics, Econometrics, Machine Learning, R, R Markdown, ETL, EDA

REFEREED JOURNAL PUBLICATIONS	[1] Acaroğlu, H., Najafi, A., **Kara, Ö.**, & Yürük, B. (2021). An Economic and Technical Review for the Utilization of HVDC in Turkey and in the World. *Konya Journal of Engineering Sciences*, 9(3), 809–835. doi **TR Dizin** ⌚ [2] Acaroğlu, H., Baykul M. C., & **Kara, Ö.** (2025). A Life-Cycle Cost Analysis on Photovoltaic (PV) Modules for Türkiye: The Case of Eskisehir's Solar Market Transactions. *Sustainability*, 17(24), 11023. doi **SSCI** **SCIE** ⌚
CONFERENCE PRESENTATIONS	[1] **Kara, Ö.** (2020). Price Dynamics and Structural Breaks in Speculative Markets: A Case Study of Cryptocurrency. *International Conference on Economics (EconTR2020@Eskişehir)*, Eskişehir, Türkiye, 10–12 September 2020. [2] **Kara, Ö.** (2020). Identifying and Understanding the Structural Break in Meat Demand in the USA. *International Conference on Economics (EconTR2020@Eskişehir)*, Eskişehir, Türkiye, 10–12 September 2020.
OTHER PUBLICATIONS	[1] **Kara, Ö.** (2018). Emek piyasası, İstihdam ve İşsizlik. *Makroekonomi: Politika ve Uygulama* (pp. 544–570). Ankara: Nobel Yayın Dağıtım. *Book Chapter Translation.*
WORKING PAPERS	• "Dynamics of U.S. Housing and Primary Building Materials in the Presence of Structural Break" • "The Impact of Religion on Environmental Performance: Applied Spatial Econometrics" • "Price Dynamics and Structural Breaks in Speculative Markets: A Case Study of Cryptocurrency" • "Structural Break in U.S. Meat Demand: Evidence from the LA/AIDS Model" • "The Effect of the Quality of Institutions on Agricultural Productivity" • "A Novel Perspective for Productive Manufacturing of Photovoltaic (PV) Cells in Eskisehir, Türkiye" (with Dr. Hakan Acaroğlu and Dr. Mevlana Celalettin Baykul) • "Economic, Social, Environmental, and Institutional Factors Shaping Onshore Wind LCOE in Europe: Evidence from Spatial Panel Models" (with Dr. Hakan Acaroğlu)
WORKS IN PROGRESS	• "Economic Consequences of Foreign Player Restriction in European Soccer Leagues" • "Price Dynamics Between Cryptocurrency, Fiat Money, Stocks, Gold, and Oil: Before and After COVID–19" (with İlknur Büşra Çakır) • "The Impact of the Quality of Institutions on Income: Evidence from a Dynamic Spatial Panel Model with Common Factors" (with Selen Serenay Silvan)
ACADEMIC SERVICE	**Erasmus Coordinator** January 2019 – Present Department of Economics Eskisehir Osmangazi University, Eskisehir, Turkey **Editorial Service** • English Language Editor, Eskişehir Osmangazi Üniversitesi İktisadi ve İdari Bilimler Dergisi **Referee Service** • Çankırı Karatekin Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi
WORKHOPS GIVEN	**Shiny mini BootCamp** May 2024 Department of Business and Quantitative Studies University of Naples Parthenope, Naples, Italy • During the Erasmus+ KA131 Teaching Mobility program. • Two days of Shiny bootcamp given to undergraduate students in Dr. De Luca's lecture. • Developed and lectured theoretical teaching materials and hands on application files. • Detailed Information: Shiny mini BootCamp

R mini BootCamp   February 2018
Department of Economics
North Carolina State University, Raleigh, NC, USA
- Three days of R bootcamp given to undergraduate students in NCSU.
- Developed and lectured theoretical teaching materials and hands on application files.
- Detailed Information: R mini BootCamp

TECHNICAL SKILLS
- **Programming:** R, Python, SQL, Stata, SAS, MATLAB, GAUSS
- **Data Science:** Statistics, Econometrics, Machine Learning, Web Scraping, ETL, EDA
- **GIS:** Geo–Spatial Data, ArcGIS, QGIS, GeoDa
- **Digital Typesetting:** LaTeX, Markdown
- **Other Skills:** R Markdown, shiny, Shell, Git, Azure DevOps, Reproducible Research

CERTIFICATIONS AND CERTIFICATES

Certifications
- Data Scientist Associate Certification, DataCamp ⓘ   January 2023 – January 2025

Certificates
*Only selected certificates are shown. More information can be found on my web site.
- Data Scientist Professional with R, DataCamp
- Data Scientist with R, DataCamp
- Data Analyst with R, DataCamp
- R Programmer, DataCamp
- Data Scientist with Python, DataCamp
- Data Analyst with Python, DataCamp
- Python Programmer, DataCamp
- Statistical Inference, Coursera
- Reproducible Research, Coursera
- Exploratory Data Analysis, Coursera
- Getting and Cleaning Data, Coursera
- R Programming, Coursera
- The Data Scientist's Toolbox, Coursera
- Maps and the Geospatial Revolution, Coursera and PennState
- SAS Programming 2: Data Manipulation Techniques, SAS
- SAS Programming 1: Essentials, SAS
- SAS Programming Introduction: Basic Concepts, SAS

SCHOLARSHIPS FELLOWSHIPS HONORS AND AWARDS

- **Graduate Research Assistantship**   August 2016 – January 2017
  North Carolina State University, Raleigh, NC, USA

- **Graduate Teaching Assistantship**   August 2013 – May 2018
  North Carolina State University, Raleigh, NC, USA

- **Scholarship for Graduate Education in the U.S.**   August 2010 – August 2017
  Ministry of National Education, Ankara, Turkey
  Full–tuition scholarship including stipend, health insurance, and travel expenses.

- **Grant for Outstanding Academic Performance**   September 2005 – June 2007
  Bahcesehir University, Istanbul, Turkey
  Stipend for attaining a GPA of at least 3.8 for four semesters.

- **Scholarship for Undergraduate Education**   September 2003 – June 2008
  Bahcesehir University, Istanbul, Turkey
  Full–tuition scholarship including stipend.

RESEARCH EXPERIENCE	**Postdoctoral Researcher**	May 2018 – August 2018

Department of Economics
North Carolina State University, Raleigh, NC, USA
- Project Details:
  - Funding: USDA Forest Service
  - Supervisor: Dr. Barry Goodwin and Dr. Jeffrey Prestemon
  - Project Title: "Understanding Global Forest Product Market Effects of Trade Measures to Address Illegal Wood Fiber Sourcing"
- Created a collaborative reproducible research environment using Git, R, R Markdown.
- Accelerated data collection/cleaning and statistical/exploratory data analysis steps with flexible user–written R functions and check procedures.

Research Assistant   August 2016 – January 2017

Department of Economics
North Carolina State University, Raleigh, NC, USA
- Project Details:
  - Funding: North Carolina State University
  - Supervisor: Dr. Barry Goodwin
  - Project Title: "Dynamics of U.S. Housing and Primary Building Materials in the Presence of Structural Breaks"
- Created a conceptual framework, collected data in a reproducible way, and performed a through econometric analyses on R and GAUSS.

TEACHING EXPERIENCE   **Independent Instructor**   January 2019 – Present

Department of Economics
Eskisehir Osmangazi University, Eskisehir, Turkey
- Created course design, lecture format, course materials, and online assessment materials.
- Authored course materials are available at the Akademi Ekonometri Web Site.
- Course videos are available on Akademi Ekonometri YouTube Channel.
- Courses in English: Economics
- Courses in Turkish: Econometrics I, Econometrics II, Econometrics, Time Series Analysis, Econometric Research I, Econometric Research II, Economics, Introduction to Economics I, Econometric Modelling and Time Series Analysis - Masters, Financial Econometrics - Masters, Semester Project - Masters

Teaching Assistant   January 2017 – May 2018

Department of Economics
North Carolina State University, Raleigh, NC, USA
- Assisted Dr. Margolis and Dr. Fiori with grading assignments and exams.
- Courses: Intermediate Microeconomics, Macro Fundamentals

Independent Instructor   August 2014 – May 2016

Department of Economics
North Carolina State University, Raleigh, NC, USA
- Created course design, lecture format, and assessment materials.
- Developed and lectured course materials.
- Mentored students providing individualized learning support and online assignments.
- Courses: Fundamentals of Economics, Principles of Microeconomics

Teaching Assistant   August 2013 – May 2014

Department of Economics
North Carolina State University, Raleigh, NC, USA
- Assisted Dr. Hyman as head teaching assistant and lab instructor.
- Developed and lectured lab materials independently.
- Improved students' performance by implementing a collaborative learning environment.
- Courses: Fundamentals of Economics

LANGUAGES	• English (C2 Proficiency - fluent) • Turkish (native)
POPULAR MEDIA	• Founder of Akademi Ekonometri Website and Akademi Ekonometri YouTube Channel.
MORE INFORMATION	More information and auxiliary documents can be found on my web site.

REFERENCES

Dr. Barry Goodwin
William Neal Reynolds Distinguished Professor
Agricultural and Resource Economics
North Carolina State University
Raleigh, NC 27695-8109
☎ : +1 (919) 515-4620
✉ : bkgoodwi@ncsu.edu
ℹ : Dr. Goodwin was my graduate advisor and post doctoral supervisor.

Dr. Walter Thurman
William Neal Reynolds Distinguished Professor
Agricultural and Resource Economics
North Carolina State University
Raleigh, NC 27695-8109
☎ : +1 (919) 515-4545
✉ : wally_thurman@ncsu.edu
ℹ : Dr. Thurman was a member of my doctoral committee.

*More references are available upon request.

Dr. Jeffrey Prestemon
Adjunct Professor
Forestry and Environmental Resources
North Carolina State University
Raleigh, NC 27695-8109
☎ : +1 (919) 549-4033
✉ : jprestemon@fs.fed.us
ℹ : Dr. Prestemon was a member of my doctoral committee.