Elizaveta (Liz) Gonchar, PhD

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PROFESSIONAL SUMMARY

Applied economist (PhD, MS in GIS) focused on spatial dimensions of labor markets and trade, with a track record of building measurement approaches from scratch when standard geographic or occupational units don't fit the question. Work spans regional labor market adjustment, international trade flows, and supply chain disruptions.

EDUCATION

Georgia Institute of Technology   Atlanta, GA

PhD in Economics   *8/2017 – 8/2024*
MS in Geographic Information Science & Technology   *5/2022*
MS in Economics   *5/2019*

- **Dissertation:** "Spatial Dimensions of Economic Modeling: Interdisciplinary Approaches to Labor, Trade, and Networks"

- **Major Fields:** International Trade, Development Economics | **Minor Field:** Quantitative Psychology

- **Relevant Coursework:** Econometrics, Economic Development, International Economics, Psychometric Theory, Spatial Network Analysis, GIS System Design & Management

- **Awards:** Economics Graduate Student Instructor of the Year (2022), Senator of the Year (2021), Rookie Senator of the Year (2020), President's Fellowship – 4-year award (2017)

Indiana University   Bloomington, IN

MA in Economics   *9/2015 – 1/2018*

Barcelona School of Economics   Barcelona, Spain

MSc in Economics and Finance (Universitat Pompeu Fabra)   *9/2014 – 7/2015*

Arizona State University   Tempe, AZ

BS in Economics, Minors: Mathematics, German   *8/2011 – 8/2014*

SKILLS

Quantitative Methodologies

- Applied Econometrics, Spatial Autoregression, Causal Inference, Gravity Modeling, Spatial Network Analysis, Survey & Psychometric Data Analysis, Custom Metric Design.

Technical & Geospatial Tools

- *Programming & Statistical Software:* R, Python (Pandas, ArcPy), Stata, SQL

- *Geospatial Analysis:* ArcGIS Pro, QGIS, ERDAS Imagine, Gephi

- *Reporting & Visualization:* RShiny, LaTeX, Adobe InDesign, Adobe Illustrator

Languages

- *Proficient:* English, Russian | *Basic:* Ukrainian, German

WORK EXPERIENCE

Economic Research Consultant   Remote

Independent Contractor   *3/2025 – Present*

- Execute applied econometric research for academic and private clients, focusing on occupational mobility, skill transferability, and regional labor market adjustment.

- Estimate structural gravity models of bilateral trade across 174 countries, constructing population-weighted distance and satellite-derived nightlight metrics to correct standard prediction errors.

Research Analyst (Independent Contractor)   Remote

Carnegie Mellon University   *8/2023 – 2/2025*

- Co-authored an empirical assessment of regional labor market capacity for semiconductor manufacturing (CHIPS Act) by integrating O*NET skill profiles with OEWS employment data.

- Constructed an occupational sufficiency metric to map asymmetric skill-matching between occupation pairs, addressing a gap in conventional symmetric similarity measures.

- Programmed the Workforce Insights Tool (RShiny) to transition labor supply models into an interactive platform, allowing local policymakers to simulate occupational transitions across 380 U.S. MSAs.

Graduate Research Assistant   Atlanta, GA

Georgia Institute of Technology   *10/2022 – 8/2023*

- Designed the labor supply identification methodology for an NSF pilot mapping critical technology supply chains.

- Merged BLS, BEA, and Census datasets across NAICS/SOC classifications to evaluate baseline workforce capacities at the MSA and state levels.

- Authored the technical methods report and co-authored the semiconductor workforce chapter for the final framework delivered to federal sponsors.

Remote Consultant   Remote

University of Denver   *2/2022 – 2/2022*

- Processed and mapped raw data on African private mining operations using ArcGIS Pro and QGIS to support international development research.

Graduate Teaching Assistant   Atlanta, GA

Georgia Institute of Technology   *8/2017 – 8/2024*

- Instructed ECON 2101: The Global Economy and supported 20 additional courses, distilling complex micro and macroeconomic theory for 1,300+ non-technical students.

SELECTED APPLIED RESEARCH

- **Gonchar, Elizaveta**, Helfrich, Ian. 2025. *Trade in the Spotlight: Enhancing Gravity Model Predictions with Nightlights and Population-Weighted Distance Measures*.
  – Constructed satellite-derived nightlight and population-weighted distance metrics to estimate bilateral trade flows using PPML estimation with country-pair fixed effects.

- **Gonchar, Elizaveta**, Combemale, Christophe, Krishnan, Ramayya. 2025. *Build It and They Will Come? US Regional Labor Composition and Readiness to Meet Skill Demand Shocks from CHIPS and Science*.
  – Constructed a novel sufficiency metric to evaluate labor market readiness for semiconductor expansion, integrating O*NET data and observed transition patterns across 380+ U.S. metro areas.

- **Gonchar, Elizaveta**. 2024. *Effect of COVID-19 on Domestic Trade Flows: A Spatial Autoregressive Approach to Estimate the Response of Colombian Trucking Flows*.
  – Estimated the spatial propagation of supply chain disruptions using a spatial autoregressive model on Colombian trucking network data, isolating regional heterogeneity in shock transmission.