DOHYO JEONG

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RESEARCH INTERESTS

Research Topic: Public Resources, Public Health, Finance, Public Policy Analysis,
Methodology Topic: Spatial-Temporal Causal Inference, Bayesian Inference, Machine Learning, GIS

EDUCATION

2025	**University of Texas at Dallas, Texas, USA** Ph.D. Candidate on Public Policy and Political Economy
2025	**University of Texas at Dallas, Texas, USA** Master of Geospatial Information Sciences
2019	**SUNGKYUNKWAN UNIVERSITY, SEOUL, KOREA** Master of Public Administration (GPA: 4.45/4.5) *Thesis Title: Factor Affecting the Distribution of National Subsidies in Korean Local Governments: Focusing on Rhodes' Power-Dependence Model (Advisor: Professor SUHO BAE)*
2017	**SEOKYEONG UNIVERSITY, SEOUL, KOREA** Bachelor of Arts in Philosophy & Public Administration (GPA: 4.34/4.5)

PUBLICATIONS

[5] **DOHYO JEONG**, Hanson-DeFusco, J., Kim, D., & Lee, C. K. (2024). Digital Mass Hysteria during Pandemic? A Study of Twitter Communication Patterns in the US during the Stages of COVID-19 Vaccination. *Behavioral Sciences*, *14*(5), 389. https://doi.org/10.3390/bs14050389 *(IF: 2.6)*

- Research Topic: Analysis of changes in public sentiment regarding vaccine supply policy
- Design/Method: Text Sentiment Analysis and Interrupted Time Series Analysis.

[4] Hong, S., **DOHYO JEONG**, & Kim, P. (2024). Have offender demographics changed since the COVID-19 Pandemic? Evidence from money mules in South Korea. *Journal of Criminal Justice*, *91*, 102156. *https://doi.org/10.1016/j.jcrimjus.2024.102156 (IF: 5.5)*

- Research Topic: Exploring the Influence of the COVID-19 Pandemic on Crime Patterns
- Design/Method: Interrupted Time Series Analysis.

[3] **DOHYO JEONG**., Kim, D., Mohiuddin, H., Kang, S., & Kim, S. (2023). Regional Disparity in the Educational Impact of COVID-19: A Spatial Difference-in-Difference Approach. *Sustainability*, *15*(16), 12514. *https://doi.org/10.3390/su151612514 (IF: 3.9)*

- Research Topic: Analyzing regional disparities in transitioning to online classes.
- Design/Method: Spatial Difference-in-Difference.

[2] Odusola, A. O., **DOHYO JEONG**, Malolan, C., Kim, D., Venkatraman, C., Kola-Korolo, O., ... & Nwariaku, F. E. (2023). Spatial and temporal analysis of road traffic crashes and ambulance responses in Lagos state, Nigeria. *BMC public health*, *23*(1), 2273. *https://doi.org/10.1186/s12889-023-16996-8 (IF: 4.7)*

- Research Topic: Comparing traffic accident patterns based on time, and regional characteristics.
- Design/Method: Geospatial mapping and Hotspot Analysis.

[1] Ogbudebe Chidubem, **DOHYO JEONG**, OdumeBethrand ….. (2023). Editorial Decision/Comments on "Identifying Hotspots of Tuberculosis in Nigeria using Early Warning Outbreak Recognition System: Retrospective Analysis of Implications for Active Case Finding Interventions. *JMIR Public Health and Surveillance, 9 (1), e40311. https://publichealth.jmir.org/2023/1/e40311/ (IF: 8.5)*

- Research Topic: Evaluation of the effectiveness of tuberculosis early warning program
- Design/Method: Kernel density and Getis-Ord Gi* Hot Spot Analyses.

Publications in Korea

[6] CHANG-JIN KIM, **DOHYO JEONG**, (2022). Factors Influencing Public Officials Innovative Behavior for Platform Governance. *The Journal of Korea Policy Research*. Vol.22 No.3: 141-171.

- Research Topic: Analyzing innovation factors in public sector platform governance.
- Design/Method: Platform governance and Factors influencing innovative behavior.

[5] **DOHYO JEONG**, Sangho Moon, SUHO BAE. (2019). Factors Affecting the Distribution of National Subsidies in Korean Local Governments: Focusing on Rhodes' Power-Dependence Model. *The Korea Journal of Policy Analysis and Management*, Vol.29 No3: 21-53.

- Research Topic: Factors in central subsidy allocation to local governments
- Design/Method: Panel Corrected Standard Errors (PCSE) model and Prais-Winsten procedure.

[4] **DOHYO JEONG**, CHANG-JIN KIM, SUHO BAE. (2019). A Study on Determinants of Tax Attitude: Focusing on Slippery Slope Framework*, Korea Public Policy Review,* Vol.33 No.3: 43-72.

- Research Topic: Examining the Impact of Tax Compliance and Taxpayer Attitude
- Design/Method: Decision tree model and neural network model.

[3] CHANG-JIN KIM, **DOHYO JEONG**, SUNG-WOO HONG. (2019). The Effects of Decentralization Perception on the Recognition of Intergovernmental Relationship: Focusing on Mediating Effect of Dispute Settlement System - *Journal of Local Government Studies*.Vol.31 No.3: 1-35.

- Research Topic: Government Perception and Decentralization
- Design/Method: Ordered Logit Model and Structural Equation Model (SEM).

[2] **DOHYO JEONG**, YOUNGKYU LEE, SEONGYOUNG JEONG. (2018). An Analysis of the Effect of the Tax Rate on the Financial Efficiency of Local Governments. *The Korea Journal of Local Government Studies*, Vol.22 No.3: 415-443.

- Research Topic: Local Tax Flexibility and Fiscal Efficiency
- Design/Method: Difference-in-Difference analysis, Panel Corrected Standard Errors model.

[1] Dae-yong Hyun, **DOHYO JEONG**, (2017). Analysis of differences in perception of administrative values among civil servants and general civil servants: Focused on Suwon City Government Officials. *Suwon Research Institute*. No. 12: 119-141.

- Research Topic: Comparing administrative values between City officials and general civil servants.
- Design/Method: Ordered Logit Model.

Under Review

[2] **DOHYO JEONG**. (2024). Medical Resource Optimization Model Analysis for Vulnerable Areas of Emergency Medical Service Using Spatial Machine Learning: A Case Study on Korea. *(During peer reviewing).*

- Research Topic: Identification of areas with imbalanced medical resources and optimal allocation
- Design/Method: ST-Graph Convolutional Network and Maximal Covering Location Problem.

[1] **DOHYO JEONG**. (2024). The Patterns of COVID-19 Therapeutics Supply and Demand in Texas: A Spatial-Temporal INLA Approach. *(During peer reviewing).*

- Research Topic: Identifying medical resource supply and demand imbalance and determining factors
- Design/Method: Spatial-Temporal Integrated Nested Laplace Approximations (INLA).
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CONFERENCE PRESENTATION

[6] **DOHYO JEONG**. (2023). Differential Side Effects of COVID-19 Response Policies on the U.S. Labor Market: A Spatial-Temporal Analysis. APPAM (Association for Public Policy Analysis and Management) 2023 Annual Conference. Nov. 2023.

[5] **DOHYO JEONG**. (2023). The Patterns of COVID-19 Therapeutics Supply and Demand in Texas: A Spatial-Temporal INLA Approach. APHA (American Public Health Association) 2023 Annual Conference. Nov. 2023.

[4] **DOHYO JEONG**. (2023). Regional disparity in the uninsurance rate impact of COVID-19: a spatial machine learning approach. ASPA (American Society for Public Administration) 2023 Annual Conference. 21. March. 2023.

[3] **DOHYO JEONG**. (2023). Digital Mass Hysteria? during Pandemics: A Case Study of Twitter Communication Patterns in the US during COVID-19 Period. Conference On Public Process Research. 12. Jan. 2023.

[2] **DOHYO JEONG**. (2022). A comparison of the spread trend prediction model according to the government's COVID-19 response policy change and its influence, 2022 Korean Public Administration International Conference. Korea. 22 June. 2022.

[1] **DOHYO JEONG**. (2021). The effect of the government's vaccination management plan on the change of sentiment toward vaccines, 2021 Global Disastronomy Workshop. Texas. USA. 17 Dec. 2021.

Presentation in Korea

[5] **DOHYO JEONG**, Chang-jin Kim. SUHO BAE. (2019). A Study on the Factors Affecting the Taxation Attitude of General Taxpayers. Korean Association for Local Government Studies Winter Conference. Seoul. KOREA. 14 Feb. 2019

[4] Chang-jin Kim. **DOHYO JEONG**, SUHO BAE. (2019). The Mediation Effect of Dispute Settlement System in the Perception of Regional Dispersion and Intergovernmental Relations. Korean Association for Local Government Studies

Winter Conference. Seoul. KOREA. 14 Feb. 2019.

[3] **DOHYO JEONG**, YOUNGKYU LEE, SUHO BAE. (2018) An Analysis of the Effect of the Tax Rate on the Financial Efficiency of Local Governments. Korea Association of Local Administration Summer Joint Conference Chungcheong-do. KOREA. 20 Jul. 2018

[2] **DOHYO JEONG**. (2017). The Effects of Tax Recognition on the pros and cons of Welfare Policy. Seoul Association of Public Administration Fall Conference. Seoul. KOREA. 3 Nov. 2017

[1] Dae-yong Hyun, **DOHYO JEONG**. (2017). A Study on the Policy Diffusion of Local Government in Korea: focusing on Resident Participation Budget System. Korea Association of Local Administration Summer Joint Conference. Gyeonggi-do. KOREA. 18 Aug. 2017

AWARDS, SCHOLARSHIPS AND HONORS

May 2024	Dean of Graduate Education Dissertation Research Award in The University of Texas at Dallas
Apr 2024	2nd prize in Student Paper Award Issued by Section on Korean Public Administration of American Society for Public Administration (ASPA)
Fall 2023	President Travel Award for Association for Public Policy Analysis and Management (APPAM), The Korean Association for Policy Studies
Spring 2023	Awarded Government and Political Science Fellowship in The University of Texas at Dallas
Spring. 2023	Nominated for President's Teaching Excellence Awards in The University of Texas at Dallas
Sep. 2022	Awards 3rd prize in the treatise contest by the Korea Institute of Public Finance
Feb. 2019	Awards for Excellent Records, Sungkyunkwan University, South Korea
Nov. 2018	Awards The 3rd Report for Korea National Tax Administration Policy Proposal Contest Participation Prize, National Tax Service
Fall 2018	Academic Excellence Scholarship, Sungkyunkwan University, South Korea
Spring 2018	Academic Excellence Scholarship, Sungkyunkwan University, South Korea
Fall 2017	Academic Excellence Scholarship, Sungkyunkwan University, South Korea
Spring 2017	Encouragement of Research Scholarship, Sungkyunkwan University, South Korea
Fall 2016	An Excellent-grade Scholarship, Seokyeong University, South Korea
Spring 2016	An Excellent-grade Scholarship, Seokyeong University, South Korea
Fall 2015	Grade(extra) Scholarship, Seokyeong University, South Korea
Spring 2015	An Excellent-grade Scholarship, Seokyeong University, South Korea Recommendation of Department Scholarship, Seokyeong University, South Korea
Fall 2014	Special Scholarship, Seokyeong University, South Korea
Fall 2011	An Excellent-grade Scholarship, Seokyeong University, South Korea

RESEARCH EXPERIENCE

Feb. 2023 - Dec. 2023	**Medical Resource Optimization Model Analysis for Vulnerable Areas of Emergency Medical Service Using Machine Learning: A Case Study on Korea.** **- Research, University of Texas at Dallas** • Traffic accident case data collection and mapping. • Demand-supply imbalance analysis for medical resources. • Optimization model calculation through machine learning. • Policy proposals and reports for optimizing medical resources.
December. 2021 – June. 2022	**Identifying Hotspots of Tuberculosis in Nigeria using EWORS: Implications for Active Case Finding and Intervention.** **- Research Assistant, University of Texas at Dallas** • Combining and managing Nigerian tuberculosis data • Disease distribution mapping and pattern analysis • EWORS system effectiveness analysis and evaluation • System effect mapping and geospatial analysis
Aug. 2021 – Dec. 2022	**Emergency Medical Services (EMS) Policy Implementation Evaluation and Efficiency Analysis in Nigeria** **- Research Assistant, University of Texas at Dallas** • Nigeria traffic accident information mapping and data management • Ambulance Reaction Time Patterns and Statistical Analysis • Analysis and evaluation of traffic policy effects
Mar. 2017 – Feb. 2019	**Pursuing an Empathic Government Through Convergent Leadership Development Program** **- Research Assistant, SUNGKYUNKWAN UNIVERSITY/NATIONAL RESEARCH FOUNDATION OF KOREA** ・ Party of support: National Research Foundation of Korea ・ Responsibilities: 1. Diagnosis and development of problems in interdisciplinary convergence research ・ Compare the concept of 'Publicity' in the West and the East, and study the definition of publicity in Korean Public Administration ・ Compare the bureaucracy theory of the Oriental administration Philosopher Han Feizi and the bureaucracy theory of Max Weber in the West, and derive various implications for application to modern bureaucracy 2. Analysis and evaluation of the influence of government trust Study the influence of tax recognition and government trust on the welfare policy attitude

TEACHING

2024 Winter	Big Data Analysis and Machine Learning for Social Science • Korea Social Science Data Archive at Seoul National University • This course aims to establish theoretical foundations to understand how machine learning techniques, actively developed and applied in recent years in science and engineering, can be utilized to analyze big data constructed in the social sciences. After grasping the basic structures of representative supervised and unsupervised learning

	methods, our main objective is to conduct practical exercises using R packages with various examples. • Instructor Evaluation: 9.70/10
2023 Fall	EPPS 2302. Methods of Quantitative Analysis in the Social and Policy Sciences (Fall, 2023) • The University of Texas at Dallas • This course introduces basic concepts and methods of statistical analysis used in different fields of social and policy science research to better understand human relationships and the impacts of government action on them. Topics include data description, using probability to assess the reasonableness of claims about the world based on sample data, exploring cause-effect interactions through regression models, and application of software to ease visualization and calculation. Students completing this course will be good consumers of statistical information and have a solid foundation for pursuing further study of quantitative analysis. • Syllabus • Instructor Evaluation: 4.75/5

GUEST LECTURES

2024 Spring	SOC 4385 Global Health and Society (Spring, 2024) • The University of Texas at Dallas • In this guest lecture for the Global Health and Society course, I introduced the concepts of spatial statistics and mapping as they apply to the social sciences. The lecture was designed to provide theoretical knowledge and practical skills, focusing on the use of GeoDa software. This lecture began with an overview of spatial statistics, discussing its importance and relevance in analyzing geographic and demographic data. Following the theoretical introduction, we transitioned to a hands-on session using GeoDa, a user-friendly spatial data analysis software. This lecture explored how to create various types of maps, such as choropleth maps, to visualize data distributions and identify spatial patterns. The practical session included exercises on how to apply spatial statistical methods to real-world data, allowing students to gain a deeper understanding of the techniques discussed earlier.

TEACHING ASSISTANTS

2023 summer	Advanced GIS and Spatial Statistics · Korea Social Science Data Archive at Seoul National University · Rating: 9.84/10

2023 summer	Introductory GIS and Spatial Statistics ・ Korea Social Science Data Archive at Seoul National University ・ Rating: 9.54/10
2024 Spring	EPPS 7316. Regression and Multivariate Analysis Instructor: Dr. Patrick Brandt
2023 Spring	EPPS 7316. Regression and Multivariate Analysis Instructor: Dr. Patrick Brandt
2022 Fall	EPPS 7313. Descriptive and Inferential Statistics Instructor: Dr. Dohyeong Kim
2022 Spring	PPPE 6321. Economics for Public Policy Instructor: Dr. Dohyeong Kim

WORK EXPERIENCE

Jan. 2020 – May. 2020	**Gyeonggi Research Institute, Korea** *Researcher, Economic and Social Research Lab* Responsibilities 1. Local industry geographic distribution data collection and analysis. 2. Establishment and analysis of strategic plans for regional strategic industries. 3. Industry policy evaluation and report.
Apr. 2019 – JAN. 2020	**Sustainable Urban Development Institute (SUDI) SUNGKYUNKWAN UNIVERSITY, SEOUL, KOREA** *Researcher, the Center for Urban Policy Studies* ・ Responsibilities: 1. Diagnosis of problems of local autonomy and decentralization, and development of improvement measures ・ Assessment of local government's fiscal soundness and efficiency 2. Policy development for sustainable local government and rational creation of finance ・ Study on applicability of flexible taxes, tax competition, evaluation of local fiscal reconciliation system, and allocation of government subsidies 3. Database city information and utilize that information for city research and policy development data Research and application of statistics package such as STATA, SPSS, AMOS, and SAS

VOLUNTARY/ EXTRACURRICULAR ACTIVITIES

Sep. 2023 – Aug. 2024	**UT Dallas Korean Student Association (Committee Chair)** ・ Responsible for student council member management and external cooperation communication
Aug. 2016 – Aug. 2016	**Educators Without Borders , Seoul, Korea** *Participant* ・ Completion of the curriculum on cooperation in international education development
Mar. 2015 – Aug. 2015	**Ministry of Foreign Affairs, Seoul, Korea** *Supporter* ・ Friends of Ministry of Foreign Affairs (MOFA): Policy promotion and write articles
Feb. 2015 – Feb. 2015	**Seokyeong University, Seoul, Korea** *A member of student monitoring team*

	· Analysis and Evaluation of School Curriculum and Educational Conditions

CERTIFICATES & SKILLS

Computer	Word-processor credentials Computer Specialist in Spreadsheet & Database
Others	• ArcGIS pro • QGIS • R statistical package • STATA statistical package • Python statistical package • SPSS statistical package AMOS statistical package • SAS statistical package • DEA statistical package • HLM statistical package

ADDITIONAL REMARKS

I hereby certify that above detailed statements are all true and correct.

Signed by, **DOHYO JEONG**