

DEOKJAE JEONG

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EDUCATION

Ph.D. in Economics, University of California, Davis	2024
M.S. in Economics, University of Wisconsin, Madison	2018
M.A. in Economics, Sung Kyun Kwan University (Korea)	2012 (<i>coursework complete</i>)
B.A. in Law, Sung Kyun Kwan University (Korea)	2010

RESEARCH INTERESTS

Applied Microeconomics, Labor Economics, Trade, Tariff

RESEARCH EXPERIENCE

Korea Customs and Trade Development Institute <i>Research Fellow, Team Leader</i>	2025 ~ Present
Jeonbuk National University <i>Postdoc, Economics</i>	2024
Korea Institute of Public Finance Center for Performance Evaluation and Management <i>Research Associate</i>	2014 ~ 2015
Korea Development Institute Department of Human Resource Development Policy <i>Research Associate</i>	2012 ~ 2014

Published PAPERS

[How the Reduction of Temporary Foreign Workers Led to a Rise in Vacancy Rates in South Korea](#) (Forthcoming in the Journal of Human Capital)

Abstract: This study investigates the causal relationship between the reduction of low-skilled temporary foreign workers (TFWs) and job vacancies in South Korea's manufacturing sectors, utilizing the COVID-19 quarantine policy as a natural experiment. Employing a Difference-in-Differences methodology, the research reveals that sectors with high dependence on TFWs,

particularly for permanent positions, experienced significantly elevated vacancy rates for a two-year period following the onset of the pandemic. The inability of native workers to fill these positions highlights the critical role of foreign labor in mitigating labor shortages. Notably, vacancy rates began to decline only after the government relaxed quarantine restrictions, facilitating the re-entry of TFWs into the country. These findings are corroborated by local projection methods.

WORKING PAPERS

[Automation, Human Task Innovation, and Labor Share](#)

(Under Review, Journal of Economic Behavior and Organization)

Abstract: This study examines the impacts of robotic innovation (RI) and human innovation (HI) on labor share across nine EU countries. Using a general equilibrium model and novel shift-share instruments, we address endogeneity concerns by utilizing International Federation of Robotics data, US patents, and a Cognitive Tasks Index. Our findings show that until 2024, RI's negative impact has exceeded HI's positive effect on labor share. We estimate the elasticity of substitution between labor and non-robot capital at 0.52, and between labor and robots at 2.67. These results offer insights for policymakers addressing declining labor share, emphasizing the importance of fostering human innovation alongside technological advancement.

WORK IN PROGRESS

[The Causal Effects of Tariff-Rate Quota Policies on Agricultural Product Retail Prices](#)

(with Youngmi Kim)

Abstract: This study presents the first causal identification of the effects of tariff-rate quotas (TRQs) on retail prices. Employing a Local Projection Difference-in-Differences methodology to address the challenges of staggered implementation and heterogeneous shock intensity, we demonstrate that demand elasticity and import dependence constitute critical determinants in the transmission of TRQ effects to retail prices. When demand elasticity and import dependency exhibit conflicting influences, our analysis reveals that demand elasticity emerges as the dominant factor. Specifically, for products characterized by inelastic demand or high import dependence, a one percentage point reduction in tariffs generates approximately a four percent decrease in retail prices. Conversely, no statistically significant effects are observed for products exhibiting elastic demand or low import dependence. These empirical findings indicate that TRQ targeting strategies should prioritize product selection based on the dual criteria of demand elasticity and import dependence characteristics. However, caution is warranted, as establishing precise selection rankings based exclusively on demand elasticity

and import dependency remains challenging, given that this analysis was conducted with product-specific fixed effects controlled.

Measuring Routine and Cognitive Task Indices: Using Large Language Models to Analyze Occupational Change in the United States (with Tai Lee)

Abstract: This study proposes an innovative methodology for quantifying Routine Task Intensity (RTI) and Cognitive Task Intensity (CTI) using Large Language Models to analyze O*NET task descriptions. Employing these LLM-derived measures, we reveal a consistent decline in routine occupations across Service and Sales sectors, with Sales receiving limited attention in existing literature. Regression analysis indicates a significant upward trend in cognitive impact on wages for females, particularly in Service, Sales, and to a lesser extent, Management occupations, while routine coefficients remain stable across five decades. These results underscore the growing significance of cognitive skills, especially for women in the workforce. Despite limitations in LLM output reliability and replicability, our methodology offers a complementary perspective to existing approaches, enabling a comprehensive understanding of labor market transformations.

REFERENCES

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