## JUNGHWAN KIM

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# **EDUCATION**

#### SEOUL NATIONAL UNIVERSITY

Seoul, Republic of Korea

Master of Public Policy (M.P.P.) (GPA: 4.08/4.3)

Mar 2018 – Aug 2020

B.A. in Economics and Business Administration

Mar 2012 – Aug 2016

- Valedictorian, Entire Undergraduate College (GPA: 4.23/4.3)
- Samsung Full Scholarship for Junior Frontier Leaders (2012 2016)
- Selected Quantitative Coursework
  - Linear Algebra, Differential Equations, Mathematical Analysis, Statistics, Mathematical Finance

## PROFESSIONAL EXPERIENCE

#### COMMITTEES IN THE NATIONAL ASSEMBLY

**Research Analyst** – Senior Deputy Director

2022 - present

 Directed comprehensive budget and policy evaluations using institutional datasets and micro-level big data, supporting legislative oversight in key parliamentary committees Special Committee on Budget and Accounts (2022-2025)

Standing Committee on Trade, Industry, Energy, SMEs, and Startups (2025)

#### NATIONAL ASSEMBLY BUDGET OFFICE

**Economic Analyst** – Deputy Director

2016-2022\*

- Conducted evaluations of market-based instruments such as disaster risk insurance, as well as household and labor market dynamics; proficient in R, Stata, and MATLAB
- Coordinated cross-divisional research efforts to ensure a coherent and policy-relevant narrative; concurrently served as *Chief Coordinator* (2021-2022)
  - \* On military leave, served as Public Relations Officer (2018 2021)

#### RESEARCH INTERESTS WITH INDEPENDENT PROJECTS

Labor economics with emphasis on structural shifts in industries and demographic change

- [1] Labor Hour Spillovers and Crowd-out of Educational Spending: Evidence from Korea's Work Hour Reform [View Paper]
  - Estimated inter-firm spillover effects of labor hours using instrumental-variable techniques, based on KLIPS micro-data from approximately 12,000 surveyed households.
  - Developed an overlapping generations (OLG) model to analyze implications for fertility and education spending

Public finance in relation to market-oriented instruments

- [2] Pricing Redistribution: Optimal Income Taxation with a Fair-Pricing Constraint [View Paper]
  - Integrated a fair-pricing constraint into the standard Mirrlees optimal taxation framework and derive conditions under which the optimal marginal income tax schedule flattens
  - Conducted numerical simulations in Python showing that, even under a lognormal skill distribution, the marginal tax rate can exhibit an upward-sloping, inverted-U profile

#### **PUBLICATIONS**

#### < Empirical Research – NABO >

## [3] Disaster Insurance Implementation and Financial Management Analysis

Solo-authored; published in NABO Policy Report 2017 [View Translated Summary] [Full Paper]

• Applied expectation maximization algorithms and logistic regression models to assess financial soundness of government reinsurance programs and distributional equity of insurance benefits

#### [4] Potential Risks from COVID-19 Responses and Liquidity Expansion

With Jin Ick (NABO), et al.; published in 2021 [View Translated Summary] [Full Paper]

• Conducted comparative analysis of fiscal policy responses across countries

## [5] Employment Conditions in Small and Medium-Sized Cities

Solo-authored Industrial Trends & Issues (2018) pp.25–37 [View Translated Summary] [Full Paper]

- Used linear probability and Heckman selection models to assess disparities in employment and wages between growing and shrinking cities
- **Media coverage**: "Workers in population-growing cities earned, on average, 350,000 KRW more per month than those in shrinking cities." *Kyunghyang Shinmun*, April 10, 2018
- < Selected Fiscal Evaluation Reviews Special Committee on Budget and Accounts > Solo-authored official budget and implementation reviews [View Summarized Versions]
  - Structural Bias in Evaluating the Economic Validity of Build-Transfer-Lease (BTL) Programs.
    2025 Annual Budget Review, Nov 2024
  - Policy Implications of the Government's Preference for Interest Subsidies over Direct Loans.
    2023 Program Implementation Review, Aug 2024

### **HONORS**

- Commendation, Deputy Prime Minister of Economy (2022)
  - For outstanding contribution to legislative fiscal analysis
- Commendation, Chief of Staff, Republic of Korea Army (2021)
- Commendation, President of Seoul National University (2016)
  - Valedictorian, Entire Undergraduate College, Summer 2016
- Youngest-ever qualifier, National Legislative Civil Service Examination (2014)
  - 22 selected out of 5,632 applicants (Top 0.4%)

### PUBLIC SERVICE & ENGAGEMENT

• Policy Officer, Task Force for Wildfire Disaster Response

Apr 2025 – Present

- Advised on recovery policies for SMEs in the Wildfire Recovery Special Committee
- Mentor, Seoul Community Childcare and Learning Center

Nov 2020 - Dec 2021

- Taught mathematics to underprivileged students
- Captain, Republic of Korea Army Headquarters

2018 - 2021

- Managed strategic communications, and internal messaging at Army HQ level

#### **ABSTRACTS**

# [1] Labor Hour Spillovers and Crowd-out of Educational Spending: Evidence from Korea's Work Hour Reform

In 2018, the South Korean government implemented a 52-hour workweek limit, initially targeting large enterprises with 300 or more employees, to curb excessive working hours. This policy creates a quasinatural experiment by introducing exogenous variation in labor hours among employees in large firms, which in turn may influence workers in small and medium-sized enterprises (SMEs) to adjust their labor supply and household behavior in response to industry-wide norms. Using panel data, I identify a spillover effect: reductions in working hours at large firms indirectly lead to lower labor hours among SME employees. This reduction in labor hours also leads to crowding-out of household educational spending. Building on this empirical insight, I develop a general equilibrium overlapping generations model that incorporates both spillover and crowd-out mechanisms. The model demonstrates that prolonged working hours, driven by spillover effects, constrain fertility choices and lead to excessive educational spending in the broader economy.

## [2] Pricing Redistribution: Optimal Income Taxation with a Fair-Pricing Constraint

This paper incorporates the no-arbitrage condition from financial economics into the design of optimal income taxation. Workers diversify wage risk through institutional and contractual arrangements such as unemployment insurance, employer-sponsored pensions, wage compression, and intra-household transfers. Under the veil of ignorance, these mechanisms imply a complete market for wage-risk options in which government redistribution must satisfy a no-arbitrage constraint. I analyze a two-bracket system combining a wage subsidy and a proportional tax, showing that the optimal upper-bracket tax rate increases with the marginal social welfare weight placed on lower-income groups. Extending the framework to a continuous schedule introduces a correction term to the standard sufficient-statistics formula, raising optimal marginal tax rates in proportion to the wedge between average and marginal rates. Simulations under a lognormal skill distribution show that enforcing the fair-pricing constraint flattens or even inverts conventional rate profiles, consistent with the empirically observed tendency toward flatter rate schedules in major economies.

#### [3] Disaster Insurance Implementation and Financial Management Analysis

This study evaluates government-subsidized disaster insurance programs in South Korea, focusing on the distributional impact of premium rates and the fairness of risk-sharing between the government and private insurers. Using a logistic regression model on data from the Farm and Fishing Household Economy Survey, the analysis finds that low-income and small-scale farm owners are less likely to participate in disaster insurance programs. In addition, the government provides relatively generous reinsurance terms to insurers. Simulations using random loss ratios, fitted to historical data with exponential and mixed gamma distributions, estimate average annual fiscal losses of KRW 25.1–54.9 billion for crop insurance and KRW 38.9–48.0 billion for aquaculture insurance. This reinsurance scheme may facilitate rent extraction by global re-reinsurance firms, given the low retention rates and high reliance on overseas cessions that characterize South Korea's general insurance market.

## [4] Potential Risks from COVID-19 Responses and Liquidity Expansion

This study analyzes the global economic and financial environment following the COVID-19 pandemic, with a focus on risks associated with liquidity expansion. It highlights that fiscal and monetary responses were generally more active and large in scale in major developed economies. This disparity, combined with unequal vaccine availability and distribution, has contributed to diverging recovery paths. Using a time-varying linear trend model applied to price level data from major countries, the study finds that current inflation rates generally remain below their short-term trends, suggesting that inflationary pressures could emerge as price levels return to trend. The study argues that monetary tightening in response to inflation in advanced economies may undermine the recovery prospects of developing countries, which have faced constraints in fiscal spending and vaccine rollout. Furthermore, a dynamic panel analysis of OECD countries from 1996 to 2019 reveals that increases in M3 are significantly associated with higher income inequality, indicating a potential distributional consequence of expansionary monetary policy.

### [5] Employment Conditions in Small and Medium-Sized Cities

This analysis examines demographic and labor market trends in 100 small and mid-sized cities in Korea with populations under 200,000 as of 2017. Among these, 69 cities experienced population decline over the five-year period from 2012 to 2017. These shrinking cities show a higher proportion of elderly residents (26.3%) and a total dependency ratio of 57.4%, levels comparable to the projected national average in the early 2030s. In addition, cities with increasing populations show higher youth employment rates and hourly wages compared to those with declining populations. For example, the average monthly wage of workers in growing cities is 220.5 thousand KRW, compared to 208.3 thousand KRW in shrinking cities, and youth employment is 4.1 percentage points higher. Wage gaps also vary by industry and region. The findings highlight the need for differentiated policy strategies: improving youth employment in declining cities, and strengthening economic linkages and regional hubs in growing cities through initiatives such as the Innovation City 2.0 program.