

Kyohun Joo

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Education

KAIST Moon Soul Graduate School of Future Strategy

PhD in Engineering, 2018 - Present

Thesis: Essays on Energy Policy in the Theory of Economics and Physics (tentative title)

KDI School of Public Policy and Management

MA in Development Policy, 2015 - 2017

Department of Economics, State University of New York at Albany

BA in Economics, 2007 - 2014

Research Interests

Energy Policy, Macroeconomics

Publication

Market efficiency of the crude palm oil: Evidence from quantum harmonic oscillator

Lee G H, Joo K, Ahn K, Journal of Physics: Conference Series (Forthcoming)

Safety evaluation of silicon carbide and zircaloy-4 cladding during the LBLOCA

Ahn K, Joo K, Park S, Energies 11(12), 3324, 2018

Working Papers

Impact of the global financial crisis on the crude oil market (with Suh J, Lee D, Ahn K), In Revision

This study examines the effect of global financial crisis on the crude oil market. To characterize the changes in the oil market properties (i.e., market efficiency, long-term equilibrium and collective phenomena) by the financial crisis, we use the Hurst exponent, Shannon entropy and scaling exponent. Although oil market volatility after the crisis remained at the same level as before, we find the scale invariant property of oil market has changed after financial crisis, and it has negatively influenced market properties in terms of efficiency and long-term equilibrium.

Energy mix and social welfare: Evidence from South Korea (with Chu Z, Seo Y, Ahn K), Under Review

This article examines the effects of the energy mix on social welfare under a dynamic general equilibrium framework in South Korea. To assess the social welfare effects, we focus on the energy mix as an energy policy target and incorporate two factors, energy price and nuclear disaster, into the model. The results suggest that the increase in the proportion of nuclear energy in the energy mix promotes social welfare in the long run because the positive effect of the cost-efficiency from nuclear energy use outweighs the negative effect of a higher risk of nuclear disaster on social welfare. We also find that the rise in energy policy uncertainty decreases output and consumption through delaying investment.

Work in Progress

Energy transformation and social welfare: Evidence from South Korea

Market efficiency of Shanghai crude oil market: Evidence from quantum harmonic oscillator

Research Experience

Yonsei University
Research Assistant, Prof. Kwangwon Ahn, 2019 - Present

KAIST
Research Assistant, Prof. Kwangwon Ahn, 2017 - 2019

Korea Labor Institute
Research Assistant, Dr. Sanghoon Oh, 2017
Research Assistant, Dr. Se-Um Kim, 2016

Korea Development Institution
Research Assistant, Prof. Seulki Choi, 2016

Korea Institute for International Economic Policy
Research Assistant, Dr. Changjae Lee 2015

Teaching Experience

Teaching Assistant
Yonsei University
Investment Information Engineering (Fall 2019)

KAIST
Research Methods on Futures Studies and Strategy (Fall 2018)
Strategic Foresight for Future Challenges (Summer 2018)
Foresight in Practice: Process and Methods (Spring 2018)
Future Strategy (Spring 2018)

Course Assistant
KAIST
Advanced Econometrics (Fall 2018)
Quantitative Methods (Spring 2018)
KDI School
Labour Market Institution and Practices (Spring 2016)

Seminar and Conference Presentations

2020
International Association for Energy Economics, Auckland, University of Auckland
International Conference on Applied Physics and Mathematics, Tokyo, Chuo University

2019
Department of Investment Information Engineering, Seoul, Yonsei University
Korean Institute of Industrial Engineering: Fall Meeting, Seoul, Korea
Korean Association for Public Administration: Summer Meeting, Busan, Korea
Korean Association for Policy Studies: Summer Meeting, Seoul, Korea

2018
Korean Association for Public Administration: Spring Meeting, Seoul, Korea
Graduate School of Future Strategy, Daejeon, KAIST

Honors and Awards

KAIST Scholarship, 2018 - Present
Academic Excellence Scholarship, KDI School of Public Policy and Management, 2016
Academic Excellence Scholarship, KDI School of Public Policy and Management, 2015
Dean's list, State University of New York at Albany, 2013 - 2014

Other Employment

Oversea Sales Department, Young Electronic Corp., 2014

Skills

Languages

Korean, Fluent in English

Computer Languages and Statistical Packages

STATA, R, MATLAB, Origin

Database

CEIC, Bloomberg

Editing Skills

Tex

Services

Ad Hoc Reviewer

Chaos, Solitons Fractals, Transportation Economics

Military Services

Republic of Korea Air Force, 2009 - 2011

References

Kwangwon Ahn

Assistant Professor, Yonsei University

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Jonghwan Suh

Assistant Professor, GyungSang National University

jonghwan.suh@gnu.ac.kr; +82-55-772-1537

Daeyong Lee

Assistant Professor, Iowa State University

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Changyong Choi

Professor, KDI School

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