

Professor's Information



Jung, Tae Yong (정태용)

Professor of Sustainable Development

- Ph. D. Economics, Rutgers, The State University of New Jersey, 1991
- Energy & Environment Economics, Sustainable Development

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Profile

Dr. Tae Yong Jung is currently a professor at the GSIS. Before he joined GSIS, he was a professor at the KDI School of Public Policy & Management. Prior to the KDI School, he was a Principal Climate Change Specialist at the Asian Development Bank. He was seconded to the Global Green Growth Institute (GGGI) located in the Republic of Korea as the Deputy Executive Director.

Before ADB, he was working at the World Bank as a senior energy economist. He was also formerly the Project Leader in Climate Policy Project at the Institute for Global Environmental Strategies (IGES) of Japan and Senior Fellow and Director at Korea Energy Economics Institute.

Educated at Seoul National University (BA) and at Rutgers, The State University of New Jersey (MA and Ph.D.), he was a Visiting Researcher at the US National Energy Laboratory, the Joint Global Change Research Institute, University of Maryland and a Joint Research Fellow at the National Institute for Environmental Studies (NIES), and a Visiting Fellow at Kyoto University Japan.

Education

- Ph. D. Economics, Rutgers, The State University of New Jersey, 1991
- MA. Economics, Rutgers, The State University of New Jersey, 1988
- BA. Economics, Seoul National University, 1985

Research and Academic Employment

- 2018. 4 – 2021. 2: Director, Research Center for Global Sustainability, Institute for Global Engagement & Empowerment (IGEE), Yonsei University, Republic of Korea
- 2015. 4 – 2018. 3: Deputy Executive Director, Institute for Global Sustainability (IGS), Yonsei University, Republic of Korea
- 2015. 3 – : Professor, Graduate School of International Studies (GSIS), Yonsei University, Republic of Korea
- 2013. 2 – 2013. 2: Professor, KDI School of Public Policy & Management, Republic of Korea
- 2007. 6 – 2013. 2: Principal Climate Change Specialist, East Asia Regional Department, Asian Development Bank (ADB), Philippines
- 2010. 12 – 2012. 6: Deputy Executive Director, Global Green Growth Institute (GGGI), Republic of Korea
- 2005. 12 – 2007. 6: Senior Energy Economist, ESMAP, Energy, Transport & Water Department, World Bank, USA

- 1999. 4 – 2005. 11: Project Leader, Climate Policy Project, Institute for Global Environmental Strategies (IGES), Japan
- 1992. 3 – 1998. 11: Senior Fellow & Director, Energy Modeling Division, Korea Energy Economics Institute (KEEI), Republic of Korea
- 1990. 8 – 1992. 2: Associate Manager, National Exchange Carrier Association, Whippany, USA

Professional Services

- Member, Evaluation Committee, Ministry of Unification, Republic of Korea (2016. 6 –)
- Vice President, Korea Society of Environmental Impact Assessment (2018. 1 – 2019. 12)
- Coordinating Lead Author, Intergovernmental Panel on Climate Change (IPCC), the 6th IPCC Assessment Report, UN (2018 -)
- President, Anmin Policy Forum (2018. 6 – 2019.12)
- Member, International Cooperation Committee, National Council on Climate and Air Quality (2019. 5- 2021. 5)
- Chair, Appeal Committee, Green Climate Fund (GCF) (2019. 8 - 2021. 7)
- Director, Sustainable Development Program, Ban Ki-moon Foundation (2019. 9 -)
- Advisor, Committee on Green New Deal, Ministry of Economy and Finance, Republic of Korea (2020. 7 -)

Courses and Current Research Area

- Sustainable Development and Environmental Policy, Seminar on Energy Policy Analysis, Sustainable Development and Energy Policy
- Energy, Environment, Climate Change, Sustainable Development, Economics of North Korea

Academic Publications

[Major Project Reports]

1. A Study on Economic Transition of Myanmar and its Implication to North Korea, Ministry of Strategy and Finance, Republic of Korea, 2015 (in Korean)
2. A Study on Korea's Differentiation Strategies for Post-2015 Climate Regime, Ministry of Foreign Affairs, Republic of Korea, 2015 (in Korean)
3. Sustainable Energy Online Education Module Development for Asian Development Bank, Korea Development Institute, 2016 (in English)
4. Climate Adaptation Policy for Vietnam, Ministry of Strategy and Finance, Republic of Korea, 2016 (in English)
5. Sustainable Energy System Development in Small Island Countries, Yonsei University & Sydney University, 2016 (in English)
6. Exporting Multi-linkage of ESS Development and Pilot Project for Special Environmental Regions, Ministry of Industry, Trade and Energy, Republic of Korea, 2016-2018 (in Korean)

7. Cooperation with North Korea through International Organizations and Multi-lateral Collaborations, Ministry of Unification, Republic of Korea, 2018 (in Korean)
8. Development of Decision-making System for Selecting Climate Adaptation Technologies, Ministry of Environment, Republic of Korea, 2018-2020 (in Korean)
9. Developing Productivity Innovation Strategy to Build Strong Business Ecosystem for Romania, Ministry of Economy and Finance, Republic of Korea, 2019 (in English)
10. Redesign our future The UN SDGs, 5 years and the next 10 years, Ban Ki-moon Foundation for Better Future, 2020 (in English)
11. Education for Sustainable Development in Higher Education, Yonsei University & Geneva University, 2021 (in English)

[Published Papers]

- 1) Economic Spillover Effects of Climate Change Industry, (with Kang, S. and Chung, Y.), Korea Energy Economic Review, Vol. 14. No. 1. pp. 143-174, 2015. 3 (in Korean)
- 2) Prediction of Heating and Cooling Energy Consumption in Residential Sector Considering Climate Change and Socio-Economic, (with Lee, M. and et al.), Journal of Environmental Impact Assessment, Vol. 24. No. 5, pp. 487-498, 2015. 10 (in Korean)
- 3) The Chinese Films in the Global Market: What Determined the Popularity? (with Kwak, J. and Chu, Y.), International Journal of Applied Business and Economic Research, Vol. 13, No. 4, pp.1737-1749, 2015. 10 (in English)
- 4) Estimating Climate Pollutants Emissions and Service Demands Considering Socio-economic Change: Residential, Commercial Sector, Transportation Sector, Industrial Sector (with Lee, Dong K, et al.), Journal of Climate Change Research, Vol. 6, No. 4, pp. 291~302, 2015. 12 (in Korean)
- 5) Climate Technology Promotion in the Republic of Korea, Advances in Climate Change Research, Vol. 6, pp. 229-233, 2015.12 (in English)
- 6) Assessment of the Vulnerability of Industrial Parks to Flood in South Korea, (With Ryu, J. and et al.), Natural Hazard, Vol. 82, pp 811-825, 2016.1 (in English)
- 7) A Critical Review of RPS (Renewable Portfolio Standard) in Korea, (With Kim, H.), International Journal of Energy Research, Vol. 40, pp 572-578, 2016. 3 (in English)
- 8) The Role of Distance in Inter-firm Learning for Global R&D Alliances (with Kwak, J. and Jiang, L.), International Journal of Applied Business and Economic Research, Vol. 14, No. 1, pp.191-208, 2016. 5 (in English)
- 9) Analysis of Rural Electrification with Low Carbon Options in Nigeria, (With Baek, Y.), New and Renewable Energy, Vol. 12, No. 3, pp 139-148, 2016. 9 (in English)
- 10) Regional Environmental Kuznets Curves and Their Turning Points for Air Pollutants in Korea, (With Kim, S. and Kang, S.), Korea and the World Economy, Vol. 17, No. 3, pp. 327-349, 2016. 12 (in English)
- 11) The Effect of an Urban Park View on the Price of Apartment, (with Baek, Y. and et al.), Journal

- of Environmental Impact Assessment, Vol. 25, No. 8, pp. 457-465, 2016. 12 (in English)
- 12) Joint Crediting Mechanism under the Paris Agreement and Its Implication to the Climate Policy in Korea, (With Sohn, J.), Journal of Climate Change Research, Vol. 7, No. 4, pp. 373-381, 2016.12 (in English)
- 13) Park Accessibility Impacts Housing Prices in Seoul, (With Park, J., et al.), Sustainability, Vol. 9, No.2, pp. 185-199, 2017. 2 (in English)
- 14) An Economic Analysis of a Hybrid Solar PV-Diesel-ESS System for Kumundoo, Maldives, (With Kim, Y. and Hyun, J.), Korea and the World Economy, Vol. 18. S1, pp. 109-134, 2017. 2 (in English)
- 15) Low-Carbon Scenario for the Power Sector in the Republic of Korea, (with Park, C.), Journal of Renewable and Sustainable Energy, Vol. 9, No. 2, 2017. 3 (in English)
- 16) Marginal Abatement Cost of CO2 Mitigation Options for the Residential Sector in Korea, (With Park C.), Korea and the World Economy, Vol. 18. 1, pp. 27-40, 2017. 4 (in English)
- 17) A New Paradigm Shift on Economic Cooperation between Two Koreas by Cooperation among ROK, PRC and Russia, (with Choi, C.), Sino-Soviet Affairs, Vol. 14, No. 2, pp67-96, 2017. 8 (in Korean)
- 18) A Study on a Hybrid Energy System to Reduce CO2 Emission in Mavuva Island, Fiji, (with Hyun, J, et al.), Journal of Environment Impact Assessment, Vol. 26, No. 4, pp. 217-226, 2017.9 (in English)
- 19) Capital Structure and Investment Financing of Small and Medium Sized Enterprises in Vietnam, (with Trinh, H., et al.), Global Economic Review, Vol. 43, No. 3, pp. 325-349, 2017. 9, (in English)
- 20) A Solar Energy System with Energy Storage System for Kandooma Island, Maldives, (with Kim, D.), Korea Energy Economic Review, Vol. 16. No. 2. pp. 33-56, 2017. 9 (in English)
- 21) Incorporating Uncertainty in Analyzing the Financial Feasibility of Solar Project in India, (With Moon, C.), Korea and the World Economy, Vol. 18, No.3, pp. 259-280, 2017. 12 (in English)
- 22) Investments to reverse biodiversity loss are economically beneficial, (with Sumalia, U, et al.), Current Opinion in Environmental Sustainability, vol. 29, pp. 82-88, 2017. 12 (in English)
- 23) A Study in the Agricultural Land Privatization Policy in Transition Countries - Focused on the Implication to North Korea -, (with Choi, C), Journal of Finance and Public Assets, Vol. 1, No. 2, pp. 86-111, 2017. 12 (in Korean)
- 24) Independent solar photovoltaic with Energy Storage Systems (ESS) for rural electrification in Myanmar, (with Kim, H.), Renewable and Sustainable Energy Reviews, Vol. 82, No. 2, pp. 1187-1194, 2018. 2 (in English)
- 25) Effects of Climate Change and Ozone Concentration on the Net Primary Productivity of Forests in South Korea, (with Park, J., et al.), Forests, vol. 9, pp. 112-130, 2018. 3 (in English)
- 26) A Study on the Location Conditions of Special Economic Zones in North Korea, (with Choi, C. and Kim, D.), National Strategies, vol. 24, 3, pp. 61-84. 2018. 8 (in Korean)

- 27) Estimation of the cost of greenhouse gas reduction in Korea under the global scenario of 1.5 °C temperature increase, (with Park, C.), Carbon Management, vol. 9, 5, pp. 503-513, 2018. 9 (in English)
- 28) Same Agenda, Different Governance: A Comparative Analysis of Climate Change Governance in China, Japan, and Korea, (with Lee, H. and Choi, C.), Korean Comparative Government Review, vol. 22, 3, pp. 73-96, 2018. 9 (in English)
- 29) A scenario analysis of solar photovoltaic grid parity in the Maldives: The case of Malahini resort, (with Kim, D. and et. al.), Sustainability, 10, 4045, 2018. 11 (in English)
- 30) A Study on Necessary Investment in North Korea for Economic Transition and Economic Growth, (with Kang, S. and Sohn, H.), Korean Unification Studies, vol. 22, 2, pp. 5-48, 2018. 11 (in Korean)
- 31) A Study on the Reopening of the Gaesung Industrial Complex in DPRK and Policy Initiatives, (with Choi, C. and Kim, D.), Korean Unification Studies, vol. 22, 2, pp. 87-126, 2018. 11 (in Korean)
- 32) Analysis of the Determinants of Economic Growth in Economic Transition Countries and Implications for North Korea's Transition, (with Kim, S. and Kang, S.), Korea and the World Economy, Vol. 19, No. 3, pp. 5-29, 2018. 12 (in Korean)
- 33) Risk Analysis for Optimal Independent Renewable Energy System, (with Kim, D., et. al.), New and Renewable Energy, Vol. 14, No. 4, pp 46-56, 2018. 12 (in English)
- 34) Low carbon scenarios and policies for the power sector in Botswana, (with Baek, Y. and Kang, S.), Climate Policy, vol. 19, 2, pp. 219-230, 2019, 2 (in English)
- 35) Price and Output Elasticities of Energy Demand for Industrial Sectors in OECD Countries, (with Chang, B., and Kang, S.), Sustainability, Vol. 11, 6, 1786, 2019.3 (in English)
- 36) Impacts of Climate Change, Income Change, and Mitigation Measures on CO2 Emission in the Korean Residential Sector in 2050, (with Park, Chan, et al.), Journal of Climate Change Research, Vol. 10, No. 1, pp. 9~21, 2019. 3 (in English)
- 37) Analysis on Socio-cultural Aspect of Willingness to Pay for Air Quality (PM10, PM2.5) Improvement in Seoul, (with Kim, J. and et al.), Journal of Environmental Impact Assessment, Vol. 28, No. 2, pp. 101-112, 2019. 4 (in English)
- 38) China and Sustainable Development Performance in Economic Transition, (with Kim, S., et. al.), Global Journal of Emerging Market Economies, DOI: 10.1177/0974910119887037, 2019. 12 (in English)
- 39) Evaluation criteria of independent hybrid energy systems, (with Kim, D., et al.), International Journal of Low-Carbon Technologies, Vol. 14, pp. 493-499, 2019. 12 (in English)
- 40) Estimation of the Social Discount Rate (SDR) with Climate Change Uncertainty: The Case of Korea, (with Kang, J., et. al.), Journal of Climate Change Research, Vol. 10, No. 4, pp. 255-263, 2019. 12 (in English)
- 41) Air Quality and Regional Cooperation in South Korea, Global Asia, Vol. 14, No. 4, pp. 28-33,

2019. 12 (in English)

42) Water-Energy-Agriculture Nexus for Sustainable Development: The Case of Iloilo Province, Philippines, (with Oh, H., et. al.), *The Southeast Asian Review*, Vol. 30, No.1, pp. 237-285, 2020.

2 (in English)

43) Renewable Energy Options for a Rural Village in North Korea, (with Kang, D.), *Sustainability*, 12, 2452, 2020. 3 (in English)

44) Analysis of Residential Lighting Fuel Choice in Kenya: Application of Multinomial Probability Models, (with Baek, Y. & Kang, S.), *Frontiers in Energy Research*, Vol. 8, article No. 70, 2020. 5 (in English)

45) Discovering primary indicators for evaluating defender's technical performance using multivariate statistics in football games, (with Do H. Kim, et. al.), *International Journal of Applied Sports Sciences*, Vol. 32, No. 1, pp. 27-36, 2020 (in English)

46) A critical review of Korea's long-term contract for renewable energy auctions: The relationship between the import price of liquefied natural gas and system marginal price, (with Moon, J.) *Utility Policy* 67, 101132, 2020 (in English)

47) Climate Change Uncertainty and the Classification of 226 Local Entities in Korea, (with Kim, J., Park, C., Moon, J. & Kang, D.), *Journal of Climate Change Research*, Vol. 11, No. 5-2, pp. 507~520, 2020. 10 (in Korean)

48) Multilevel Analysis of Civic Engagement and Effectiveness of Energy Transition Policy in Seoul: The Seoul Eco-Mileage Program, (with Kim, J. & Kim, Y.), *Sustainability*, 12, 9905, 2020. 11 (in English)

49) How to Design a Co-benefit Framework between Air Quality Improvement and Climate Policy: The Case of South Korea, *Georgetown Journal of International Affairs* (Online), 2020. 11 (in English)

50) A User-centered Decision Support System for Climate Change Adaptation Planning, *Journal of Climate Change Research*, (with Hyun, J. & et. al.), Vol. 11, No. 6-1, pp. 657~667, 2020. 12 (in Korean)

51) The Impact of Demographic Changes on CO2 Emission Profiles: Cases of East Asian Countries, (with Kim, Y. & Moon, J.), *Sustainability*, 13, 677, 2021. 1 (in English)

52) An Alternative Co-benefit Framework Prioritizing Health Impacts: Potential Air Pollution and Climate Change Mitigating Pathways through Energy Sector Fuel Substitution in South Korea, (with Phillips, D.), *Climate*, 101, 2021. 9 (in English)

53) Carbon pricing and supporting policy tools for deep decarbonization; case of electricity generation in Sri Lanka, (with Herath A.), *Carbon Management*, vol. 12, 5, 2021. 10 (in English)

[Books/Chapters]

1) Too Global to Fail, Chapter 8, (with Ester Choi), World Bank Group, 2015 (in English)

2) Climate Change: 27 Experts are answering, Part 5, Chapter 2, Geobook, 2016 (in Korean)

- 3) Economic Transition and North Korea (with Kang, S.), Korea University Press, 2017 (in Korean)
- 4) Sustainable Development Goals in the Republic of Korea, Editor, Routledge, London, 2018 (in English)
- 5) Analyses of Climate Change and Energy, Editor, Lambert Academic Publishing Co., 2018 (in English)
- 6) Korean Economy, Reflection of Chaos, Part 4, Chapter 1, 21st Century Books, 2019 (in Korean)
- 7) North Korean Economy, Co-editor and Chapter 10, Haenam Publishing Co., 2019 (in Korean)
- 8) Unhappy Presidents in Korea, Chapter 4, Param Publishing Co., 2020 (in Korean)
- 9) Development Prospects for North Korea, Co-editor, Routledge, London, 2020 (in English)
- 10) Understanding ESG, Chapter 4, Center for Free Enterprise, 2021 (in Korean)
- 11) Climate Crisis, 12 Debates, Editor, Bakyoungh Story, 2021 (in Korean)