

# HYESEON SHIN

## PERSONAL INFO

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|---------------|---|--------------|--|
| <b>Office</b> | 327 Ag Admin Building<br>2120 Fyffe Rd., Columbus, OH 43210 | <b>Email</b> | <a href="mailto:shin.774@osu.edu">shin.774@osu.edu</a> |
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## EDUCATION

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|   |                                  |
|---|----------------------------------|
| <b>The Ohio State University</b><br>Ph.D. <i>candidate</i> , Agricultural, Environmental, and Development Economics | Ohio, USA<br>2019 - current      |
| <b>Seoul National University</b><br>M.A. in Economics, Agricultural and Resource Economics Major                    | Republic of Korea<br>2017 - 2019 |
| <b>University of Groningen</b><br>Exchange Student, Economics and Business Economics                                | The Netherlands<br>2015 - 2016   |
| <b>Seoul National University</b><br>B.A. in Economics, Agricultural and Resource Economics Major [Cum laude]        | Republic of Korea<br>2013 - 2017 |

## RESEARCH INTERESTS

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**International Trade, Climate Change, Agricultural and Environmental Economics, Labor Economics**

## WORKING PAPERS

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1. **"Agriculture, Trade, Migration and Climate Change"** (*Job market paper*)

*Abstract:* Given the agricultural sector's substantial contribution to both GDP and employment in many developing economies, the climate shock to agricultural productivity has the potential to reshape inter-regional and inter-sectoral labor reallocation as well as agricultural production. I build and quantify a dynamic spatial general equilibrium model incorporating farmers' optimal crop choices, household migration, and international trade to understand the implications of agricultural productivity shocks induced by climate change around the globe. The model is quantified for 35 major crops and 120 countries until year 2100, and simulation exploits the high-resolution spatial data, from the Global Agro-Ecological Zones v4 project. The model projects the dynamic changes in the optimal crop production quantities, prices, and crop consumption around the world under the impact of different climate change scenarios.

2. **"Dynamics of Global Emission Permit Prices under Noncooperation"**  
(with Yongyang Cai and Khyati Malik)

*Abstract:* What is the dynamic equilibrium price of emission permits in a global cap-and-trade system where countries abide by their emission commitments for the future? We build a dynamic multi-region model of climate and economy with emission permit trading, where 12 aggregated regions make choices of emission abatement, international permit purchases, and economic growth through capital investment. We solve the dynamic Nash equilibrium in a noncooperative setting, where each region aims to maximize its welfare based on the optimal choices of other regions, under the emission cap constraints following commitments set under the Paris Agreement in 2015. The emission permit price will reach \$300 per ton of carbon by the year 2050, resulting in a global temperature rise of 1.8 Celsius above the pre-industrial level by 2100. Therefore, meeting the global target of 1.5 Celsius requires a stronger push towards emission mitigation.

3. **"Upgrading Food Product Quality: The Impact of Tariffs and Standards"**  
- Revise and Resubmit to *Journal of Agricultural and Resource Economics*  
(with Jihyun Eum, Ian Sheldon, and Stanley Thompson)

*Abstract:* In this paper, the effect of non-tariff measures (NTMs) on efforts to upgrade food product quality is analyzed. Based on a multi-sector Schumpeterian model, three channels, threat of entry, compliance costs, and monopoly profits, NTMs are predicted to have heterogeneous effects on product quality upgrading. Using disaggregated data for 14 European Union countries across 18 food industries for the period 2008-2019, NTM enforcement is found to deter quality upgrading for products distant from the quality frontier due to compliance costs. Conversely, NTM enforcement stimulates quality upgrading for products close to the quality frontier, driven by an increased probability of capturing monopoly profits.

#### 4. "Offshoring, Worker Heterogeneity, and Employment" (with Ian Sheldon)

*Abstract:* How does the labor market impact of offshoring differ between different types of workers? We provide a theoretical model identifying three distinct channels through which offshoring costs affect domestic firm-level employment, with a focus on heterogeneous effects on production and nonproduction workers. We use Korean firm-level data over the period 2006–2019 to empirically analyze the heterogeneous impacts of offshoring cost on the labor market, where the offshoring cost is measured by input tariffs. The findings suggest there is theoretically and empirically consistent evidence of labor market heterogeneity—between offshoring and non-offshoring firms, and between production and nonproduction employment.

### PRESENTATIONS

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|---|------|
| 1. International Agricultural Trade Research Consortium (IATRC) 2023 Annual Meeting, Florida<br>- "Agriculture, Trade, Migration and Climate Change"  | 2023 |
| 2. Interdisciplinary Research Fall Forum: Computational Approaches for a Just and Sustainable World,<br>The Ohio State University<br>- "Dynamics of Global Emission Permit Prices under Noncooperation", with Y. Cai and K. Malik | 2023 |
| 3. The Heartland Environmental and Resource Economics Workshop, University of Illinois UC<br>- "Dynamics of Global Emission Permit Prices under Noncooperation", with Y. Cai and K. Malik   | 2023 |
| 4. Interdisciplinary PhD Workshop in Sustainable Development (IPWSD), Columbia University<br>- "Agriculture, Trade, Migration and Climate Change"   | 2023 |
| 5. Annual Meetings of the 87th Midwest Economics Association (MEA), Cleveland<br>- "Agriculture, Trade, Migration and Climate Change"   | 2023 |
| 6. Annual Meetings of the 86th Midwest Economics Association (MEA), Minneapolis<br>- "Offshoring, Worker Heterogeneity, and Employment", with I. Sheldon  | 2022 |

### RESEARCH EXPERIENCE

#### The Ohio State University

Graduate Research Assistant for Prof. Ian Sheldon

2020–2023

#### Seoul National University

Graduate Research Assistant for Prof. Hanho Kim

2017–2019

### NON-REFEREED PUBLICATIONS \*

\* Project participation as a research assistant

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| 1. "Korean Food Safety Management System: Organizational and Legal Improvement Plans"<br>- Research funded by <i>Ministry of Agriculture, Food and Rural Affairs, Republic of Korea.</i> | 2019 |
| 2. "Reformulating FTA Compensation Plans for Agriculture Industry"<br>- Research funded by <i>Korea Rural Economic Institute, Republic of Korea.</i>                                     | 2017 |
| 3. "Improving Mutual Benefits: Korea - New Zealand FTA"<br>- Research funded by <i>Ministry of Agriculture, Food and Rural Affairs, Republic of Korea.</i>                               | 2017 |

### AWARD AND GRANTS

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| Travel Grant, IPWSD-Columbia University                                  | 2023                   |
| University Fellowship, The Ohio State University                         | 2019-2020              |
| Lecture and Research Scholarship, Seoul National University              | 2017                   |
| Scholarship, Hans' Scholarship Foundation                                | 2016, 2018             |
| Minister of Agriculture, Food and Rural Affairs Award (Best Paper Award) | 2016                   |
| OIA Outgoing Exchange Student Scholarship, Seoul National University     | 2015                   |
| Merit-based Scholarship, Seoul National University                       | 2014, 2015, 2017, 2018 |
| Scholarship, Samsung Welfare Foundation                                  | 2014                   |
| Scholarship, Kwanak Corporation  | 2014                   |

**TEACHING EXPERIENCE**

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**The Ohio State University**

Lab Instructor | Econometric Application in Ag. Business and Applied Econ. [SEI 4.5/5]  
 Teaching Assistant | Managerial Records and Analysis

Spring 2023  
 Fall 2020

**Seoul National University**

Teaching Assistant | Macroeconomics (undergraduate level)

Fall 2017

**OTHER SKILLS**

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**Software & Tools  
 Languages**

GAMS, STATA, Matlab, ArcGIS, Python, R, L<sup>A</sup>T<sub>E</sub>X  
 English (fluent), Korean (native)

**PROFESSIONAL REFERENCES**

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**Ian Sheldon (advisor)**

Professor

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Dissertation Committee Chair

The Ohio State University

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 Development Economics

Andersons Chair of Agricultural Marketing,  
 Trade and Policy

**Yongyang Cai**

Professor

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