CHUNGMANN KIM

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EDUCATION

University of Illinois at Urbana-Champaign, United States *May 2025 (expected)*
Ph.D. Candidate in Agricultural and Consumer Economics

Seoul National University, Republic of Korea *June 2019*
M.Sc. in Agriculture Technology

Handong Global University, Republic of Korea *Feb 2015*
B.Sc. in Environmental Engineering
Cum Laude Graduate

PUBLICATIONS

Y. Zhou, E. Lentz, H. Michelson, **C. Kim**, K. Baylis, **Machine Learning for Food Security: Principles for Transparency and Usability**, *Applied Economic Perspectives and Policy*, 2022, https://doi.org/10.1002/aepp.13214

A. Bandyopadhyay, C. Azzarri, B. Haile, **C. Kim**, C. Alvarez, A. Moltedo, A. Sattar, W. Bell, and B. Rogers, **Exploring the Association between Agricultural Production Systems and Household Diets in Viet Nam**, *Food Security*, 2022, https://10.1007/s12571-022-01276-x

C. Kim, P. Goldsmith, **The Economics of the Soy Kit as an Appropriate Household Technology for Food Entrepreneurs**, *Food and Nutrition Bulletin*, 2021, https://doi.org/10.1177/0379572120981183

Y. Joo, T. Kim, DK. Nguyen, **C. Kim**, **Vietnamese Preferences for Fresh Korean Ginseng with Labels of Certification, Nationality, Private Brands, and Shopping Places**, *Korean Agricultural Economics Association*, 2021, https://doi.org/10.24997/KJAE.2021.62.3.177

WORKING PAPERS

From Food Crisis to Resource Allocation: Tracking Humanitarian Aid in Afghanistan, *Job Market Paper, 2024* [Link to draft]
(Selected presentation at the UNU-WIDER Development Conference, 2025)

Abstract: This study examines the responsiveness of humanitarian aid to the Integrated Food Security Phase Classification (IPC) system in Afghanistan, focusing on the critical IPC Phase 4 designation, which indicates an acute food emergency requiring immediate action. A significant challenge in evaluating aid responses is the lack of systematically geo-coded data on aid flows. To address this, I apply a text-finding algorithm and Natural Language Processing (NLP) to create a geo-referenced and purpose-labeled aid flow dataset derived from the UN OCHA Financial Tracking Service (FTS). Utilizing a staggered difference-in-differences approach, I analyze changes in aid distribution following IPC Phase 4 escalations. The results show that while aid distributions increase post-escalation, per capita aid remains substantially insufficient for affected populations, highlighting critical gaps in the targeting and adequacy of current aid response. This study provides actionable insights for optimizing humanitarian aid allocation to better meet the needs in food crisis zones.

Hidden Hunger: Global Population of Acutely Hungry is Underestimated by $\frac{1}{4}$, with E. Lentz, H. Michelson, and K. Baylis, ***Revise and Resubmit at Nature Food, 2024*** [Link to draft][Replication Code]

Abstract: Acute hunger affects hundreds of millions of people worldwide with long-term consequences for health, development and security. The Integrated Food Security Phase Classification (IPC) system is the global method for classifying food insecurity severity and is used to allocate more than six billion dollars of humanitarian food assistance annually. Despite concerns that IPC estimates overstate globally food insecurity, our analysis of data from 2.8 billion people between 2017-2023 shows the opposite. We find that IPC assessments underestimate the number of acutely hungry people in the world, missing one in four. Using a non-parametric statistical approach, we find evidence of bunching or under-classification around the threshold that differentiates areas classified as 'stressed' from those 'in crisis'—a critical threshold intended to trigger humanitarian funding. Contrary to widely held assumptions, our findings suggest that the prevalence and severity of acute hunger is significantly higher than current global estimates.

"Early-Year Milk Price and Child Stunting in Zambia"
(Selected Presentation at the American Agricultural Economics Association 2022, European Association of Agricultural Economists 2023, Tata-Cornell Institute for Agriculture and Nutrition 2023)

When is a crisis a crisis? Assessing the internal consistency of the Integrated Food Security Phase Classification System, with E. Lentz, H. Michelson, and K. Baylis

Multidimensional Food Security Indicators: Evidence from Multiple Countries in Sub-Saharan Africa, with Kathy Baylis, E. Lentz, and H. Michelson
(Track Session - Innovations in Food Security Targeting and Assessment at the AAEA 2022)

POLICY REPORT

E. Lentz, K. Baylis, H. Michelson, **C. Kim**, "IPC Accuracy Study: Analyzing the Internal Consistency of IPC AFI and AMN Analyses", *IPC Departmental Report, 2024* [Link to report]

C. Kim, C. Alvarez, A. Sattar, A. Bandyopadhyay, C. Azzarri, A. Moltedo, B. Haile, "Production, Consumption, and Food Security in Viet Nam: Diagnostic Overview", *IFPRI, 2021* [Link to report]

J. Koo, **C. Kim**, "Mapping of Poultry Hotspots in Tanzania", *IFPRI Technical Note, 2018*[Link to report]

WORK EXPERIENCE

Food and Agricultural Organization of the United Nations *Feb 2024 – present*
Data Scientist & IPC Modelling Specialist

- Develop a *Data-Driven Risk Monitoring System* for early detection of food insecurity, identifying optimal thresholds for real-time indicators (conflict, agricultural productivity, food prices) to predict critical food security phase transitions and enable timely interventions.
- Contribute to assessing, calibrating, and integrating machine learning-based models into the IPC framework (e.g. Risk Monitoring System) as a member of the *Advanced Technology and Artificial Intelligence (ATARI)* Initiative

University of Illinois at Urbana-Champaign *Aug 2019 – present*
Teaching Assistant

- Teaching Assistant for ***ACE 251: The World Food Economy***, *an introductory course on global food demand and supply. The course explores topics such as population growth, food security, markets, resource use, trade, and policy.*
- Teaching Assistant for ***ACE 435: Global Agribusiness Management***, *leading discussion sessions and coordinating a course focused on economic and strategic management within the global food system and agribusiness sectors. Topics include the global business environment, organizational strategies, and operations.*

International Fund for Agricultural Development *Sep 2023 – Jan 2024*
Impact Assessment Specialist

- Provide technical support to the impact assessment
- Retrieve and harmonize remote sensing and socio-economic data, including travel time, rainfall, EVI, income, assets, dietary diversity, and food security for impact assessment studies

Food and Agricultural Organization of the United Nations *Oct 2022 – Aug 2023*
Food Security Analyst

- Assess the accuracy of Acute Food Insecurity (AFI) and Acute Malnutrition (AMN) classifications by compiling and cleaning diverse data sources and conducting detailed descriptive and statistical analyses.

Seoul National University, Republic of Korea *Mar 2019 – Jun 2019*
Research Assistant

International Food Policy Research Institute (IFPRI), US *Oct 2018 – Jan 2019*
Research Intern, Environment and Production Technology Division

Canaan Farmer School, Korea & Tanzania *Jan 2015 – Dec 2017*
Project & Training Officer

SKILLS

Programming Languages	Python (Advanced), R (Advanced), Stata (Advanced), QGIS, LaTeX
Languages	English (Fluent), Korean (Native), Chinese (Intermediate)

REFERENCE

Kathy Baylis Professor and Vice-Chair, Department of Geography
University of California, Santa Barbara
baylis@ucsb.edu

Erin Lentz Associate Professor, Lyndon B. Johnson School of Public Affairs
University of Texas, Austin
erinclentz@utexas.edu

Hope Michelson Associate Professor, Department of Agricultural and Consumer Economics
University of Illinois, Urbana-Champaign
hopecm@illinois.edu