Wei Li

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EDUCATION

Sep 2021-Expected Aug 2025 Ph.D., Vrije Universiteit Amsterdam, Netherlands
Development Economics
Thesis Title: "Water-Energy-Food nexus in Beijing-Tianjin-Hebei region of China"
Supervisor:

Philip Ward	Lia van Wesenbeeck
Faculty of Science	School of Business and Economics
Vrije Universiteit Amsterdam	Vrije Universiteit Amsterdam
philip.ward@vu.nl	c.f.a.van.wesenbeeck@vu.nl

Sep 2018-Jul 2021 M.A., *Outstanding graduate*, Renmin University of China, China
Agricultural Economics and Management (GPA: 3.89/4, rank 1/53)
Supervisor: Xiaohui Tian

Sep 2014-Jul 2018 B.A., *Outstanding graduate*, Northwest Agricultural & Forestry University, China
Economics and Management of Agriculture & Forestry (GPA: 3.78/4, rank 1/67)

RESEARCH FIELD

Water-Energy-Food Nexus, Applied Econometrics, Resource Economics and Agricultural Economics

WORKING PAPER

Wei Li, Philip Ward and Lia van Wesenbeeck, Advances in water-energy-food nexus: a critical evaluation, under review in *Renewable & Sustainable Energy Reviews, 2023*

Abstract: The water-energy-food (WEF) nexus, a representative example of the holistic, integrated, and interdisciplinary system approach, has recently gained currency with academics and policymakers, due to its potential to help enhance resource security and realize global sustainable development. The essence of the WEF nexus lies in the mutual interactions between water, energy, and food resources, which are fundamental to detect trade-offs, uncover synergies and achieve integrated resource governance. To date, no studies have systematically evaluated the progress of WEF nexus research through the lens of resource interactions. This study presents a systematic review that critically evaluates the past progress of WEF nexus literature from the perspective of resource interactions. Using a novel classification, this review first classifies 781 WEF nexus interaction studies into four classes based on two axes: (1) the classification of the study (empirical application or theoretical study); and (2) whether the study examines all six resource interactions ('full' WEF nexus study) or fewer resource interactions ('partial' WEF nexus study). While WEF nexus studies have flourished since 2011, no significant progress has been made towards more resource interactions over time in both theoretical studies and empirical applications. Moreover, this study shows that: the number of resource interactions examined in empirical applications is much lower than in theoretical studies; physical resource interactions remain dominant; environmental considerations are biased towards water quality and carbon emission; and there is a misalignment between research question and empirical methodology.

Keywords: Water-energy-food nexus; Resource interaction; Nexus theory; Nexus application; System approach; Sustainable development goals

PUBLICATION

Xiaohui Tian, **Wei Li**, and Rong Li, The Environmental Effects of Agricultural Mechanization: Evidence from Agricultural Machinery Purchase Subsidy Policy, *Chinese Rural Economy*, 2021(09):95-109. (Top 1 journal in the field of *Agricultural Economics* in China; The full text is in Chinese with an English abstract)

Abstract: Based on China's agricultural production data at the county level and satellite remote sensing data, from the perspective of the implementation of the agricultural machinery purchase subsidy policy, this article takes the quasi-natural experimental characteristics of the policy as exogenous shocks of agricultural mechanization and uses the Difference-in-differences (DID) approach to measure the impacts of agricultural machinery purchase subsidy policy on polluting agricultural production behaviors and its mechanisms. The results show that the agricultural machinery purchase subsidy policy has significantly improved the level of

agricultural mechanization, and the impacts of the policy on polluting agricultural production behaviors are different and with a certain lag. Specifically, the policy has significantly reduced the use of plastic film in the current year and the next year and increased the number of straw-burning points in the next year after the policy started but had no significant impacts on the use of chemical fertilizer and pesticide. The mechanism analysis shows that the policy has changed the way farmers used polluting inputs and treated agricultural production waste by expanding the proportion of grain sown area and promoting the outflow of agricultural labor force, which has a corresponding impact on the ecological environment.

Keywords: Agricultural Mechanization; Production Behavior; Crop Structure; Labor Mobility; Difference-in-differences

RESEARCH EXPERIENCE

Aug 2023-Sep 2023 **Project：** Comprehensive Treatment and Control Strategy of Groundwater Overexploitation
Founder: Peking university, Renmin university of China, and Ministry of Science and Technology of the People's Republic of China
- Coordinate with local village cadres as one of team leaders
- Participated in the household survey of seven villages in Hebei Province, China

Jan 2019-Feb 2021 **Project：** Short-term Forecast and Analysis of Agricultural Product Market Prices
Founder: Ministry of Agriculture and Rural Affairs of the People's Republic of China
- Used the time series model to forecast the major agricultural products' price in China
- Developed the Self-adaptable Short-term Agricultural Prices Prediction System (SSAPP)
- Wrote four semi-annual reports
- The report of the first half of 2020 was approved by the Deputy Secretary-General of the National Development and Reform Commission of China

Feb 2019-Jan 2020 **Project:** Evaluation of Agricultural Modernization Level of National Modern Agricultural Demonstration Zone
Founder: Ministry of Agriculture and Rural Affairs of the People's Republic of China
- Participated in household survey, enterprise interview, government discussion in Shanghai, Jiangsu province and Anhui province of China
- Calculated the agricultural modernization scores at county level based on 25 specific indicators covering six aspects
- Drafted three comprehensive evaluation reports

SKILLS

Technical: STATA, R, Python, ArcGIS, SPSS, Eviews

Language: Chinese (Native), English (Proficient)

AWARDS AND GRANTS

July 2022-July 2025 Erasmus+ Mobility Grant-KA171
Sep 2021-Aug 2025 Government-sponsored Oversea Education by China Scholarship Council
Sep 2020 Excellent Paper in the 4th *Agriculture, Rural Areas and Farmers Forum* hosted by the editorial departments of *China Rural Economy* & *China Rural Observation*
Jun 2018 Honor Thesis in Management at Northwest Agriculture & Forestry University (awarded to top 100 theses from the whole university)
Nov 2017 National Outstanding Forestry Graduates in China (awarded to top 40 graduates nationwide)
Nov 2017 National Scholarship of China (awarded to the top 3%)
Nov 2016 National Scholarship of China (awarded to the top 3%)

TEACHING EXPERIENCE

Feb 2024-May 2024 *Advanced Macroeconomics,* Amsterdam University College, lecturer teaching with Professor Lia van Wesenbeeck
Apr 2023-Jul 2023 Bachelor thesis supervision for Janina Krupski, *China's Pilot Free Trade Zones: The Solution to Avoiding the Middle-Income Trap?*
Feb 2023-Mar 2023 *Macroeconomics I*, Vrije Universiteit Amsterdam, teaching assistant for Professor B.A. Bruegemann
Sep 2022-Oct 2022 *Economics Challenges*, Vrije Universiteit Amsterdam, teaching assistant for Professor

Commented [WL1]: Joris Klingen - Teaching (google.com) 参考这个，把教学经历精确到几年级，什么专业的学生

Roland Iwan Luttens

Mar 2021-Aug 2021 *Principles of Economics*, Renmin University of China, teaching assistant for Professor Xiaohui Tian