

Nelson Benjamin Villoria

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EDUCATION

2009	Ph.D. Department of Agricultural Economics, Purdue University
2000	M.Sc. Department of Applied, Resource, and Managerial Economics, Cornell University
1995	B.S. School of Agricultural Engineering (<i>Ingeniero Agrónomo</i>), Universidad Central de Venezuela

EXPERIENCE

Academic Appointments

Fall 2022	Visiting Professor, Department of Economics, Universidad Autonoma de Yucatan, Merida, Yucatan, Mexico.
2019 to present	Associate Professor, Department of Agricultural Economics Kansas State University, Manhattan, KS
2015 to 2019	Assistant Professor, Department of Agricultural Economics Kansas State University, Manhattan, KS
2013 to 2015	Associate Director for Educational Outreach and Strategy, Center for Global Trade Analysis (GTAP), Purdue University, West Lafayette, Indiana, Department of Agricultural Economics
2010 to 2015	Assistant Research Professor, Purdue University, West Lafayette, Indiana Department of Agricultural Economics
2009-2010	Post-doctoral Research Associate, Purdue University, West Lafayette, Indiana, Department of Agricultural Economics

Non-Academic Appointments

2002-2005	Project Manager, Andean Community General Secretariat, Lima, Perú
2000-2002	Project Executive, Center for International Development, Harvard University, Lima, Peru
1995-1998	Project Manager, Agroplan, Inc., Caracas, Venezuela

HONORS

Fulbright U.S. Scholar 2022-2023 (Brazil)
Associate Editor, *American Journal of Agricultural Economics* 2022-2024
Agricultural & Applied Economics Association, Quality of Research Discovery Award Honorable Mention, 2020.
Global Trade Analysis Project (GTAP), Research Fellow 2018-2021
Southern Agricultural Economics Association Emerging Scholar 2017.
Seed for Success, Excellence in Research Award, Purdue University, 2014.

JOURNAL ARTICLES

(Boldface denote students supervised during their graduate programs.)

Chen, Bowen and Nelson B. Villoria (2022). “Foreign Yield Shocks and Domestic Price Variability: The Case of Maize in Developing Countries.” *Environmental Research Letters*. DOI: 10.1088/1748-9326/aca7d5

Villoria, Nelson, Rachael Garrett, Florian Gollnow, and Kimberly Carlson (2022). “Leakage Does Not Fully Offset Soy Supply-Chain Efforts to Reduce Deforestation in Brazil.” *Nature Communications* 13, no. 1 (September 17, 2022): 1–10.
<https://doi.org/10.1038/s41467-022-33213-z>.

Hendricks, Nathan, Aaron Smith, Nelson B. Villoria, Matthieu Stigler (2022). "The Effects of Agricultural Policy on Supply and Productivity: Evidence from Differential Changes in Distortions." *Agricultural Economics*. DOI: [10.1111/agec.12741](https://doi.org/10.1111/agec.12741).

Yu, Jisang, Nelson B. Villoria, and Nathan Hendricks (2022). “The Incidence of Foreign Market Accessibility on Farmland Rental Rates.” *Food Policy*, 112, DOI: 10.1016/j.foodpol.2022.102343

Chen, Bowen, Nelson B. Villoria and Tian Xia (2020). “Trade Impacts of Tariff Quota Administration in China’s Grain Markets: An Empirical Assessment.” *Agricultural Economics* 51:2, pp. 191-206.

Villoria, N.B (2019) “Consequences of Agricultural Total Factor Productivity Growth for the Sustainability of Global Farming: Accounting for Direct and Indirect Land Use Effects.” *Environmental Research Letters*, Volume 14, Number 12, November 2019, <https://doi.org/10.1088/1748-9326/ab4f57>.

Ubilava, David, Nelson B. Villoria, and Jesse B. Tack. (2019) "Smooth Transitions Across Latitudes and Longitudes: An Application of a Nonlinear Panel Regression to the Climate-Economics Nexus." *Economic Letters*. Volume 182, September 2019, Pages 114-117.

Nuño, Jose and Nelson B. Villoria (2019) “Estimating International Trade Margins Shares by Mode of Transport for the GTAP Database.” *Journal of Global Economic Analysis*. Volume 4 (2019), No. 1, pp. 28-49.

Hertel, Thomas W., Thales A. P. West, Jan Börner, and Nelson B. Villoria (2019). “Global to Local to Global Analysis of Land Use Change and Leakage.” *Environmental Research Letters*, Volume 14, Number 5, May 2019. <https://doi.org/10.1088/1748-9326/ab0d33>

Villoria, N.B. (2019) “Technology Spillovers and Land Use Change: Empirical Evidence from Global Agriculture.” *American Journal of Agricultural Economics*. Volume 101, Issue 3,

April 2019, Pages 870–893, (Agricultural & Applied Economics Association, Quality of Research Discovery Award Honorable Mention, 2020.)

Garrett, Rachael., Samuel Levy, Kimberly Carlson, Toby Gardner, Javier Godar, Jennifer Clapp, Peter Dauvergne, Robert Heilmayr, Yann le Polain de Waroux, Ben Ayre, Barbro Dovre, Holly Gibbs, Simon Hall, Sarah Lake, Jeffrey Milder, Lisa Rausch, Rodrigo Rivero Castro, Ximena Rueda, Ryan Sarsfield, Britaldo Soares-Filho, Nelson Villoria (2019) “Criteria for effective zero-deforestation commitments.” *Global Environmental Change* Vol 54. January 2019, Pages 135-147.

Chen Bowen and Nelson B. Villoria (2019) “Climate Shocks, Food Price Stability and International Trade: Evidence from 76 Maize Markets in 27 Net-importing Countries.” *Environmental Research Letters*, Volume 14, Number 1, January 2019, <https://doi.org/10.1088/1748-9326/aaf07f>.

Song, Jingyu, Michael S. Delgado, Paul V. Preckel, and Nelson B. Villoria. (2018) “Downscaling of national crop area statistics using drivers of cropland productivity measured at fine resolutions.” *PLoS ONE* 13(10), October 2018: e0205152.

Villoria, N.B. and Jing Liu. (2018). “Using spatially explicit data to improve our understanding of land supply responses: An application to the cropland effects of global sustainable irrigation in the Americas.” *Land Use Policy* Vol. 75, June 2018, Pages 411-419.

Kalyanam Rajesh, Lan Zhao, Carol Song, Larry Biehl, Derrick Kearney, I Luk Kim, Jaewoo Shin, Nelson Villoria, Venkatesh Merwade (2018) "MyGeoHub - A Sustainable and Evolving Geospatial Science Gateway." *Future Generation Computer Systems* (<https://doi.org/10.1016/j.future.2018.02.005>.)

Villoria, N.B. and **Bowen Chen** (2018) “Yield Risks in Global Maize Markets: Historical Evidence and Future Projections in Key Regions of the World.” *Weather and Climate Extremes*, Vol. 19, March 2018, pp: 42-48

Villoria, Nelson B., Joshua Elliott, Christoph Müller, Jaewoo Shin, Lan Zhao, and Carol Song. (2018). “Web-Based Access, Aggregation, and Visualization of Future Climate Projections with Emphasis on Agricultural Assessments.” *SoftwareX*. Vol 7. January–June 2018, pp: 15-22.

Villoria, N.B. (2017). “R meets GEMPACK for a Monte Carlo Walk.” *Journal of Global Economic Analysis*. Vol 2, No. 2, pp: 128-154.

Villoria, N.B. and P. Preckel (2017) “Gaussian Quadratures vs. Monte Carlo Experiments for Systematic Sensitivity Analysis of Computable General Equilibrium Model Results.” *Economics Bulletin*, Vol. 37, No. 1 pp: 480-487.

- Akgul, Zeynep**, Nelson B. Villoria and Thomas W. Hertel (2016). “GTAP-HET: Introducing Firm Heterogeneity into the GTAP Model.” *Journal of Global Economic Analysis*. Vol. 1, No. 1, pp: 111-180.
- Villoria, Nelson B. and E. Mgheny (2016) “The impacts of India’s food security policies on South Asian wheat and rice markets.” *The World Bank Economic Review* Vol. 31, No. 3, pp: 730-746
- Villoria Nelson B., Joshua Elliott, Christoph Müller, Jaewoo Shin, Lan Zhao, and Carol Song. (2016). “Rapid aggregation of globally gridded crop model outputs to facilitate cross-disciplinary analysis of climate change impacts in agriculture.” *Environmental Modeling and Software*. Volume 75, Pages 193–201.
- Byerlee, Derek, James Stevenson, and Nelson B. Villoria (2014) “Does Intensification Slow Crop Land Expansion or Encourage Deforestation?” *Global Food Security* 3(2): 92-98.
- Villoria, Nelson B., Derek Byerlee and James Stevenson (2014) “The Effects of Technological Progress in Agriculture on Deforestation: What do we really know?” *Applied Economic Perspectives and Policy* 36(2):211-237.
- Stevenson, James, Nelson B. Villoria, Derek Byerlee, Timothy Kelley, and Mywish Maredia (2013) “Green Revolution research saved an estimated 18 to 27 million hectares from being brought into agricultural production.” *Proceedings of the National Academy of Sciences* 110(21):8363-8368.
- Villoria, N.B. (2012) “The effects of China’s growth on the food prices and the food exports of other developing countries.” *Agricultural Economics* 43(5):499-514.
- Villoria, N.B. and Thomas W. Hertel (2011) “Geography Matters: International Trade Patterns and the Indirect Land Use Effects of Biofuels.” *American Journal of Agricultural Economics* 93(4):919-935.
- Villoria, N.B (2009) “China and the Manufacturing Terms-of-Trade of African Exporters.” (2009) *Journal of African Economies* 18(5):781-823.
- Villoria, N.B (2009) “China’s Growth and the Agricultural Exports of Sub-Saharan Southern Africa.” *The European Journal of Development Research* 21(4):531-550.

UNDER REVIEW/WORK IN PROGRESS

Under Review

- Lobell, David B. and Nelson B. Villoria. Accounting for land use spillovers can greatly reduce the benefits of some climate-smart agricultural policies. (Under the second round of reviews with *Nature Sustainability*.)

Villoria, Nelson B. “International Trade and Domestic Price Stability in the Presence of Large Scale Climate Shocks.” Revise and resubmit, *AJAE*.

In Progress

Hinds, Alan, and Nelson B. Villoria. Fixed Effects Modeling of U.S. Sorghum Export Destinations During Multiple Trade Shocks of the U.S. – China Trade War.

Villoria, Nelson B. and Michael Delgado. “Teleconnected Climate and Global Food Security: A Geography of the Effects of ENSO on World Cereal Markets.”

Villoria, Nelson B., Shourish Chakravarty, and Michael Delgado. “Estimating the spatially heterogeneous elasticities of land supply to U.S. crop agriculture” (Working paper)

BOOK CHAPTERS

Villoria, Nelson B. 2019. “The Food Trade System: Structural Features and Policy Foundations.” In Encyclopedia of Food Security and Sustainability, edited by Pasquale Ferranti, Elliot Berry, and Anderson Jock, 1:64–73. Elsevier.

REFEREED WORKING PAPER SERIES

Stevenson, J., D. Byerlee, N.B. Villoria, T. Kelley and M. Maredia. “Agricultural technology, global land use and deforestation: A review and new estimates of the impacts of crop research.” *Consultative Group for International Agricultural Research, Independent Science and Partnership Council’s Standing Panel on Impact Assessment*, Green Cover series, 2011.

Villoria, N.B., T.W. Hertel, and A. Nin-Pratt. “China’s growth and the agricultural exports of Southern Africa.” *International Food Policy Research Institute discussion paper 00891*, 2009.

CONFERENCE PROCEEDINGS AND PRESENTATIONS:

Conference Proceedings

Villoria, N.B., A. Golub, D. Byerlee, and J. Stevenson. “Will Intensification of Oil Palm Production Reduce Green House Gas Emissions from Deforestation?” Proceedings of Winter Allied Social Science Associations Meeting, San Diego, CA, *American Journal of Agricultural Economics* 95(2013)5:1301-1308.

Kalyanam, R., L. Zhao, C.X. Song, Y.L. Wong, J. Lee, and N.B. Villoria. “iData: A Community Geospatial Data Sharing Environment to Support Data-Driven Science.” Second Annual Extreme Science and Engineering Discovery Environment (XSEDE) Conference. *Conference Proceedings*, San Diego, CA, July 22-25, 2013.

Zhao, L., C.X. Song, J. Lee, J.R. Kim, W. Feng, V. Merwade, and N.B. Villoria. "Bringing integrated GIS data and modeling capabilities into HUBzero platform." *Proceedings of the Second International Workshop on High Performance and Distributed Geographic Information Systems* (HPDGIS 2011).

Conference Papers and Posters (* presenter, if other than N.B. Villoria)

Villoria Nelson, Rachael Garrett, Florian Gollnow, and Kimberly Carlson "Demand-Driven Efforts to Stop Deforestation in Brazil's Soy Sector are Unlikely to be Offset by Cross-Border Leakage." Center for Climate, Regional, Environmental and Trade Economics Seminar. Department of Agricultural and Consumer Economics. University of Illinois Urbana-Champaign, Online, September 24, 2021.

Villoria, N.B., Shourish Chakravarty* and Michael Delgado. "Spatially Explicit Land Supply Responses in the US" Organized Symposium at the 2021 AAEA Annual Meetings. Austin, Texas. August 1-3, 2021.

Villoria Nelson, Rachael Garrett, Kimberly Carlson, and Florian Gollnow "Lack of Ambition, Not Leakage, is What Can Make Brazil's Soybean Supply-Side Deforestation Initiatives Ineffective." 24th Annual Conference of Global Economic Analysis, Online, June 24, 2021.

Hendricks, Nathan*, Aaron Smith, Nelson B. Villoria, and Matthew Stigler "The Effect of Agricultural Policy Distortions on Supply and Productivity" Agricultural Policy Conference 2020, October 16-17, 2020.

Yu, Jisang*, Nelson B. Villoria, and Nathan Hendricks. "The Incidence of Foreign Market Accessibility on Farmland Rental Rates." Agricultural Policy Conference 2020, October 16-17, 2020.

Villoria, N.B., Shourish Chakravarty* and Michael Delgado. "Land Supply Elasticity in the U.S. A Spatially Explicit Approach" Selected Paper at the 2020 AAEA Annual Meeting. Virtual. August 10-11, 2020.

Villoria, N.B., Shourish Chakravarty and Michael Delgado. "Land Supply Elasticity in the U.S. A Spatially Explicit Approach." *23rd Annual Conference on Global Economic Analysis. Virtual.* June 17-19, 2020.

Yu, Jisang*, Nelson B. Villoria, and Nathan Hendricks. "The Incidence of Foreign Market Accessibility on Farmland Rental Rates." NBER Agricultural Markets and Trade Policy Conference, Online due to COVID-19. April 30-May 1, 2020.

Chen Bowen* and Nelson B. Villoria. "Food Price Variability and Import Dependence: A Country Panel Analysis." Selected Paper at the 2019 AAEA Annual Meeting in Washington, D.C. August 5-7, 2019.

- Chen Bowen* and Nelson B. Villoria. "Import Protections in China's Grain Market: An Empirical Assessment." Selected Paper at the 2018 AAEA Annual Meeting in Washington, D.C. August 5-7, 2018.
- Hendricks, Nathan*, Aaron Smith And Nelson B. Villoria. "Global Agricultural Supply Response to Persistent Price Shocks." Selected Paper at the 2018 AAEA Annual Meeting in Washington, D.C. August 5-7, 2018.
- Villoria, Nelson B. "Sources of domestic food price volatility: An empirical investigation using structural gravity of maize markets." Selected Paper at the 2018 AAEA Annual Meeting in Washington, D.C. August 5-7, 2018.
- Chen, Bowen*, Nelson B. Villoria, and Tian Xia. Import Protections in China's Grain Markets: An Empirical Assessment. *International Agricultural Trade Research Consortium Annual Meeting*, Washington, D.C. December 3-5, 2017.
- Villoria, Nelson B. Sources of Domestic Food Price Volatility: An Empirical Investigation Using a Structural Gravity of Maize Markets. *International Agricultural Trade Research Consortium Annual Meeting*, Washington, D.C. December 3-5, 2017.
- Villoria, Nelson B. Technology Spillovers and Land Use Change: Empirical Evidence from Global Agriculture. Workshop on Land Use and Leakage. Robert Bosch Foundation. Berlin, November 9-10, 2017.
- Ubilava, David*, Jesse B. Tack, and Nelson B. Villoria. The Geography of the Growth Effect of ENSO: Smooth Transitions across Latitudes and Longitudes. 2nd *Conference on Econometric Models of Climate Change*. September 4-5, 2017. Nuffield College, University of Oxford, United Kingdom.
- Villoria, Nelson B. and Michael Delgado. Do Climate Teleconnections Translate in Economic Teleconnections? A Study of El Niño Southern Oscillation Effects on World Cereal Markets. *Agricultural and Applied Economics Association Annual Meeting*, Chicago, IL, July 30-August 1, 2017.
- Villoria, Nelson B. Technology Spillovers and Land Use Change: Empirical Evidence from Global Agriculture. *20th Annual Conference on Global Economic Analysis*. West Lafayette, IN. June 7-9, 2017.
- Chen, Bowen* and Nelson B. Villoria. Correlated Risks in Global Maize Markets: Historical Evidence and Future Projections. Poster presented at the *Conference on Applied Statistics in Agriculture*, Manhattan, KS. April 24-25, 2017.
- Huang, Whitney*, Hao Zhang, and Nelson B. Villoria. Spatial Basis Function Approach to Accommodate Teleconnection Patterns in Climate Data. *Conference on Applied Statistics in Agriculture*, Manhattan, KS, April 24-25, 2017.

- Villoria, Nelson B. Does Technological Progress in Agriculture Reduce Cropland Expansion? An Empirical Investigation Accounting for National and Regional Leakage. *Meetings of the Southern Agricultural Economics Association* (Emerging Scholars Session), Mobile AL. February 07, 2017.
- Song, Jingyu*, Michael S. Delgado, Paul V. Preckel, and Nelson B. Villoria. "Pixel Level Cropland Allocation and Marginal Impacts of Biophysical Factors." *Agricultural and Applied Economics Association Annual Meeting*, Boston, MA, July 31-August 2, 2016.
- Villoria, Nelson B. and Thomas Hertel. "Global Spillovers of Localized Technological Progress in Agriculture." *CAES & WAEA Joint Annual Meeting*, Victoria, British Columbia, Canada. June 21-23, 2016.
- Akgul, Zeynep*, Thomas Hertel and Nelson Villoria. "Heterogeneous Firms, Non-tariff Measures, and US Beef Trade." *19th Annual Conference on Global Economic Analysis*. Washington, DC. June 15-17, 2016.
- Lan Zhao*, Jaewoo Shin, Nelson Villoria, Carol X. Song. Making Large Climate Data Available for a Broad User Community. *The Hubzero Conference HUBBUB 2015*. Indianapolis, IN, September 14-16 2015.
- Song, Jingyu*, Michael S. Delgado, Paul V. Preckel, and Nelson B. Villoria. "Fine-scale land use allocation using maximum likelihood." *Agricultural and Applied Economics Association Annual Meeting*, San Francisco, CA, July 26-28, 2015.
- Villoria, Nelson B. and Thomas Hertel. "International trade and the land use effects of technological progress in agriculture." *International Agricultural Trade Research Consortium Annual Meeting*, San Diego, CA, December 8-10, 2014.
- Villoria, Nelson B. and Thomas Hertel. "International trade and the land use effects of technological progress in agriculture." *Agricultural and Applied Economics Association Annual Meeting*, Minneapolis, MN, July 27-29, 2014.
- Akgul, Zeynep*, Nelson B. Villoria and Thomas Hertel. "Introducing Firm Heterogeneity into the GTAP Model with an Illustration in the Context of the Trans-Pacific Partnership Agreement." *17th Annual Conference on Global Economic Analysis*, Dakar, Senegal, June 18-20, 2014.
- Villoria, N.B. "An introduction to GEOSHARE's cyberinfrastructure: Exchange and Analysis of Geo-Spatial Data through HUBZero." *Second Open Science Meetings of the Global Land Project*, Humboldt University, Berlin. March 19-21, 2014.
- Villoria, N.B. and D. Ubilava. "Global Food Security in a Teleconnected World: The Role of Variable Trade Policy and Early Warnings in Mitigating the Global effects of El Nino Southern Oscillation." *16th Annual Conference on Global Economic Analysis*, Shanghai, China, June 12-14, 2013.

- Villoria, N.B. and D. Ubilava. "Effects of El Niño Southern Oscillation on World Cereal Production." Selected Poster, *Agricultural and Applied Economics Association Annual Meeting*, Seattle, WA, August 12-14, 2012.
- Villoria, N.B. "Land Supply Elasticities in the Americas." Selected Poster, *Agricultural and Applied Economics Association Annual Meeting*, Seattle, WA, August 12-14, 2012.
- Villoria, N.B. "Land Supply Elasticities in the Americas." *15th Annual Conference on Global Economic Analysis*, Geneva, Switzerland, June 22, 2012.
- Villoria, N.B. "Effects of China's Growth on the Food Prices and Food Exports of Other Developing Countries." *International Agricultural Trade Research Consortium*, St. Petersburg, FL, December 11-13, 2011.
- Villoria, N.B. and R. McDougall. "An improved version of FlexAgg." *14th Annual Conference on Global Economic Analysis*, Venice, Italy, June 16-18, 2011.
- Villoria, N.B. "China's Growth and the World Food Markets." *European Trade Study Group Conference*, Rome, Italy, September 10-12, 2009.
- Villoria, N.B. "Bilateral Trade, Geography, and the Indirect Land Use Effects of Biofuel Policy." Selected Poster, *Agricultural and Applied Economics Association and American Council on Consumer Interests Joint Annual Meeting*, Milwaukee, WI, July 26-28, 2009.
- Villoria, N.B. "China's Growth and the World Food Markets." Selected Paper, *Agricultural and Applied Economics Association and American Council on Consumer Interests Joint Annual Meeting*, Milwaukee, WI, July 26-28, 2009.
- Villoria, N.B. and T.W. Hertel. "Bilateral Trade, Geography, and the Indirect Land Use Effects of Biofuel Policy." *12th Annual Conference on Global Economic Analysis*, Santiago, Chile, June 10-12, 2009.
- Villoria, N.B. "Estimation of Missing Intra-African Trade." *11th Annual Conference on Global Economic Analysis*, Helsinki, Finland, June 12-14, 2008.
- Villoria, N.B. "China and the Manufacturing Terms-of-Trade of African Exporters." Research seminar at the *International Food Policy Research Institute*, Washington, DC, August 17, 2007.
- Villoria, N.B. "China and the Manufacturing Terms-of-Trade of African Exporters." *10th Annual Conference on Global Economic Analysis*, West Lafayette, IN, June 7-9, 2007.
- Villoria, N.B. and D.R. Lee. "The Andean Price Band System: Effects on Prices, Protection, and Producer Welfare." Selected Paper, *Agricultural and Applied Economics Association Annual meeting*, Long Beach, CA, July 28-31, 2002.

EXTENSION/OUTREACH ACTIVITIES

Extension papers

Ekong, Olabisi, Elizabeth Gutierrez, and Nelson Villoria. "NAFTA What's next?" Kansas State University Department of Agricultural Economics Publication. May 1, 2018.

Software

Villoria, N.B., J. Elliott, H.J. Choi, and L. Zhao. CMIP5 Data Aggregator @ GEOSHARE. Available at <https://mygeohub.org/tools/climatetool>. September 2015.

Villoria, N.B., J. Elliott, H.J. Choi, and L. Zhao. "The AgMIP Tool: A GEOSHARE Tool for Aggregating Outputs from the AgMIP's Global Gridded Crop Model Intercomparison Project." <https://geoshareproject.org/tools/cropdatatool/>. 2014.

Villoria, N.B. and R. McDougall. "FlexAgg2.0: An Improved Version of the Data Aggregation Program FlexAgg." *GTAP 8 Data Base Documentation, Chapter 4*. Center for Global Trade Analysis, Purdue University, West Lafayette, IN, 2011.

Discussion, Background, and Working papers

Villoria, N.B. "Impact of India's food price management and food trade policies on South-Asia agricultural production, consumption, and trade." Prepared for *South Asia Sustainable Development Unit of the World Bank*, August 2014.

Villoria, N.B. "Impacts of agricultural research-led productivity on land-use change." For CGIAR Independent Science & Partnership Council's Standing Panel on Impact Assessment (SPIA) available at <http://impact.cgiar.org/>. April 2011.

Villoria, N.B. "Estimation of Missing Intra-African Trade." *GTAP Research Memorandum No. 12*. Center for Global Trade Analysis, Department of Agricultural Economics, Purdue University, West Lafayette, IN, June 2009.

Invited Talks/Principal Papers:

Villoria, Nelson B. "Consequences of Agricultural Total Factor Productivity Growth for the Sustainability of Global Farming: Accounting for Direct and Indirect Land Use Effects" Sustainable Agricultural Productivity Growth: COP27 and Beyond. Webinar. November 2, 2022.

Villoria, Nelson B. " International Trade and Domestic Price Stability in the Presence of Large-Scale Climate Shocks." US International Trade Commission Economics Webinar. Online, October 21, 2021.

Villoria, Nelson B. "The Incidence of Foreign Market Accessibility on Farmland Rental Rates." Agricultural Economics Departmental Seminar. Purdue University. West Lafayette, IN, March 5, 2020.

Villoria, Nelson B. Recent Advances in Applied General Equilibrium Modeling: Relevance and Application to Agricultural Trade Analysis. Discussant. *Annual Meetings of the International Agricultural Research Consortium*, Washington, DC. December 8, 2019.

Villoria, Nelson B. "Trade and price stability when weather shocks are correlated across countries." Applied and Consumer Economics Departmental Seminar. University of Illinois. Urban-Champaign December 6, 2019.

Villoria, Nelson B. "Technology Spillovers and Land Use Change: Empirical Evidence from Global Agriculture". Agricultural and Applied Economics Seminar. Department of Applied Economics. University of Minnesota. September 27, 2017.

Villoria, Nelson B. "Technology Spillovers and Land Use Change: Empirical Evidence from Global Agriculture". Invited research seminar. USDA Economic Research Service. Washington D.C. May 17, 2017.

Villoria, Nelson B. Climate Change and International Agricultural Trade in the Aftermath of COP21. Discussant Comments presented at the *Annual Meetings of the International Agricultural Research Consortium*, Scottsdale AZ. December 11, 2016.

Villoria Nelson B. Alternative estimates of land supply responses: Consequences for policy analysis. Risky Business: Managing Agribusiness Risk. Kansas Department of Agriculture, Manhattan, KS. September 17, 2015.

Villoria, N.B. "Some thoughts on Big Data (and on the applied economist as a data scientist)." Invited panelist. The 8th Annual Midwest Graduate Student Summit on Applied Economics, Regional, and Urban Studies (AERUS). West Lafayette, Indiana. April 11, 2015.

Villoria, N.B. "Effects of agricultural technological progress on deforestation: What do we really know?" Conference on Agricultural Productivity and the Environment co-sponsored by Farm Foundation, Global Harvest Initiative, and USDA Economic Research Service. USDA Economic Research Service. Washington D.C., March 12, 2015.

Villoria, N.B. "The AgMIP tool for global impact assessment of climate change." GEOSHARE Post-Pilot Workshop. Purdue University, West Lafayette, Indiana. September 10-11, 2014.

- Villoria, N.B. “Challenges predicting the spatial patterns of land conversion (And how GEOSHARE can help.)” GEOSHARE Post-Pilot Workshop. Purdue University, West Lafayette, Indiana. September 10-11, 2014.
- Villoria, N.B. “Economic Uncertainties on Modelling Land Use Supply.” Forestry and Agriculture Greenhouse Gas Modeling Forum. National Conservation Training Center, Shepherdstown, West Virginia. June 1-4, 2014.
- Villoria, N.B. based on work with David Ubilava. “Food Prices and Climate Teleconnections: The Role of Variable Trade Policy and Early Warnings in Mitigating the Global effects of El Nino Southern Oscillation.” Department of Agricultural Economics, Purdue University. Departmental Seminar. October 17, 2013.
- Villoria, N.B. based on work with Thomas W. Hertel. “GEOSHARE: Geospatial, Open-Source Hosting of Agriculture, Resources, and Environmental Data.” Invited presentation in the 2013 Spatial Production Allocation Model (SPAM) Workshop. International Food Policy Research Institute, Washington DC, June 6-7, 2013.
- Villoria N.B. and T. Hertel. “GEOSHARE: Geospatial Open Source Hosting of Agriculture, Resource and Environmental Data.” Presentation at the ILSI Research Foundation, Washington, D.C., May 14, 2013.
- Villoria, N.B. based on work with T.W. Hertel. “GEOSHARE and HUBzero: An Open Platform for Spatial Data Development and Analysis.” Presented in the Africa Agriculture GIS Week (AAGW) and Annual meeting of the CGIAR Consortium for Spatial Information (CGIAR-CSI). Addis Ababa, Ethiopia, March 12-14 2013.
- Villoria, N.B. and T. Hertel. “GEOSHARE: Geospatial Open Source Hosting of Agriculture, Resource and Environmental Data.” Presentation to the Global Policy Research Institute Annual Meeting, April 18, 2012.
- Villoria, N.B. “Poverty effects of technical change in Latin American agriculture.” Symposium on the Bio-economy in Latin America and the Caribbean organized and Sponsored by the International Association of Agricultural Economists (IAAE). Cali, Colombia. September 19-20, 2011.
- Villoria, N.B. and T. Hertel. “GEOSHARE: Geospatial Open Source Hosting of Agriculture, Resource and Environmental Data.” Seminar and discussion at the World Bank, April 25, 2011.
- Villoria, N.B. “Use of the CGE models to analyze the effects of climate change on crop agriculture: A review of selected works.” Agricultural Model Intercomparison Project (AgMIP) kick-off workshop. Long Island, CA. October 27-29, 2010.

Villoria, N.B. "China and the Manufacturing Terms-of-Trade of African Exporters." Research seminar at the International Food Policy Research Institute, Washington, D.C. August 17, 2007.

Villoria, N.B., A. Ahmed, and M. Horridge. "Running RunGTAP Better." Center for Global Trade Analysis, Department of Agricultural Economics, Purdue University. Curriculum materials for the GTAP Short Course consisting of Power Point presentation and 4 hours of hands-on computer labs, August 2014.

Golub, A. and N.B. Villoria. "GTAP-AEZ for the GTAP Short Course." Curriculum material consisting of a simplified RunGTAP version of the AEZ model and a brief document with notes to replicate several results in published papers, August 2013.

Hertel, T.W. and N.B. Villoria. "GEOSHARE: Geospatial Open Source Hosting of Agriculture, Resource & Environmental Data for Discovery and Decision." Purdue University, West Lafayette, IN, April 16, 2012.

Media Citations

- "Guidelines for soy don't protect tropical forests in Brazil." Futurity. November 2, 2022. <https://www.futurity.org/tropical-forests-brazil-soybean-farming-2823882-2/>
- "Are carbon markets helping to slow climate change? Maybe." The Washington Post. November 2, 2022. <https://www.washingtonpost.com/politics/2022/11/02/cop27-carbon-offsets-markets-climate/>
- "K-State ag economist studies impact of sustainability policies on deforestation." Morning Ag Clips. October 25, 2022. <https://www.morningagclips.com/k-state-ag-economist-studies-impact-of-sustainability-policies-on-deforestation/>
- "Was the Trans-Pacific Partnership Bad for the U.S.? Experts Take Sides." WalletHub. <https://wallethub.com/blog/was-the-trans-pacific-partnership-bad/33596/>. March 17, 2017.
- "Wheat Lag. Growth in yields of the cereal must double if the Green Revolution is to be put back on track." Nature Editorial. <http://www.nature.com/news/wheat-lag-1.14923>. March 26, 2014.
- "How El Niño will impact global food prices." National Public Radio, Marketplace, <http://www.marketplace.org/topics/sustainability/how-el-nino-will-impact-global-food-prices>. March 12, 2014.

RESEARCH ACTIVITIES

Active Grants:

- USDA-NIFA, AFRI Program (# 2022-10683). “Understanding the Role of Market Structure in Achieving Global Agricultural Sustainability: The Case of Soybeans” Co-Investigator: Juan Sesmero (Purdue University). Duration: 2023/05/01-2027/04/30. Total amount of award: \$649,981. Role: Project Director (responsible for \$336,109).
- USDA-Economic Research Service (ERS). "Improving the Capabilities of Global Models to Analyze Changes in Land Use/Land Cover and Greenhouse Emissions." Duration: Sept 2022-Sept 2024. Amount: \$180,000.
- USDA - Office of the Chief Economist (OCE). "The Role of Agricultural Trade and Spatial Correlation of Yield Shocks in Adaptation to a Changing Climate." Duration: Sept 2021-Sept 2022. Responsible for \$50,000.
- USDA-Economic Research Service (ERS). "Climate Impacts on Agricultural Markets: Using AgMIP Projections for Economic Models." Duration: Sept 2021-Sept 2023. Amount: \$50,000.
- USDA-NIFA, AFRI Program (# 2020-67023-30970). “The Impact of Better Access to Foreign Markets on The Returns to U.S. Agriculture” Co-Investigators: Jisang Yu and Nathan Hendricks (Kansas State University). Duration: 2020-2023. Total amount of award: \$485,597. Role: Co-PI (responsible for \$150,000).
- USDA-NIFA, AFRI Program (# 2019-67023-29679). “Economic Foundations of Long Run Agricultural Sustainability” Co-Investigators: Thomas Hertel (Purdue University). Duration: 04/01/2019-03/31/2022. Total amount of award: \$500,000. Role: Co-PI (responsible for \$150,000).

Completed Grants:

- National Science Foundation (# 1739253). “Assessing the Influence of Zero-Deforestation Supply-Chain Commitments on the Conservation of Ecosystems.” Co-Investigators Rachael D. Garrett, Boston University; Kimberly Carlson, University of Hawai’i Mānoa. Duration: 09/01/2017-08/31/2020. Total amount of award: \$413,232. Role: Co-PI (responsible for \$108,940).
- USDA-NIFA, AFRI Program (# 2016-67023-24637). “The Role of U.S. Agriculture in Global Food and Environmental Security: An Analysis Based on Global Supply Response in the Long Run.” Co-Investigators Nathan Hendricks, Kansas State University; Aaron Smith, University of California-Davis, Duration: 1/1/2016 – 12/31/2019. Total amount of award: \$498,396. Role: Co-PI (responsible for \$29,787).
- USDA-NIFA, AFRI Program (# 2015-67023-23109). “The Role of International Trade in Adapting U.S. Agriculture to Increased Global Climate Variability in the Presence of

Spatially Correlated Cross-Country Supply Shocks.” Duration: 11/01/2015-1/31/2020. Total amount of award: \$434,199. Role: Project Director (responsible for \$319,051).

- National Socio-Environmental Synthesis Center (SESYNC) "Supply-Chain Commitments." Duration: 2016-2018. Role: Collaborator.
- National Science Foundation. “CIF21 DIBBs: Integrating Geospatial Capabilities into HUBzero.” (2014-2017) Total amount of award: \$4,543,420.00. Role: Co-PI (responsible for \$64,000, while at KSU).
- The World Bank. “Impact of India’s Food Price Management and Food Trade Policies on South-Asia Agricultural Production Consumption, and Trade.” January-December 2014. Total amount of award: \$70,090.00. Role: PI.
- Purdue Global Policy Research Institute (Incentive Award). “Global Food Price Volatility and Climate Change: Understanding Policy Options and Their Trade-Offs.” February 2012-February 2013. Total amount of award: \$40,000. Role: PI.
- USDA/ERS. “GEOSHARE: Geospatial Open Source Hosting of Agriculture, Resource and Environmental Data.” September 2011-September 2014. Total amount of award: \$100,000. Role: Co-PI.
- Department for International Development, UK Government. “GEOSHARE: Geospatial Open Source Hosting of Agriculture, Resource and Environmental Data.” Duration of Funding: March 2012-December 2014. Total amount of award: \$400,000. Role: Co-PI.
- Electric Power Research Institute. “Global Agriculture and Forestry Greenhouse Gas and Renewable Energy Research.” October 2010-November 2012. Total amount of award: \$180,000. Role: Co-PI.
- ILSI Research Foundation. “Developing Cyber-Infrastructure for GEOSHARE: Geospatial Open Source Hosting of Agriculture, Resource & Environmental Data for Discovery and Decision Making.” Total amount of award: \$163,000.00. Role: Co-PI.
- Purdue Global Policy Research Institute Seed Grant. “GEOSHARE Kick-Off Workshop.” Total amount of award: \$40,000. Role: Co-PI.
- Standing Panel on Impact Assessment of the Consultative Group for International Agricultural Research. “Impact Assessment of Crop Genetic Improvement.” August-December 2010. Total amount of award: \$30,000. Role: PI.

- International Food Policy Research Institute. “China and the Agricultural Exports of Southern Africa.” 2008. Amount: \$6,000. Role: PI.
- USAID Linkage, Collaboration between the International Food Policy Research Institute and Purdue University (with T. Hertel). “Challenges and Opportunities from South-South Linkages: How Will India and China Affect Other Developing Countries?” 2006. Amount: \$20,000.

PROFESSIONAL SERVICE

Journal of Agricultural and Resource Economics. Member of the Editorial Council (started March 2018-September 2019).

Referee for:

American Journal of Agricultural Economics
 Journal of the Association of Environmental and Resource Economists
 Food Policy
 Journal of Global Economic Analysis
 Journal of International Agricultural Trade and Development
 Applied Economic Perspectives & Policy
 Climatic Change
 Journal of African Economies
 Agricultural Economics
 Review of International Economics
 Emerging Markets Finance and Trade
 Global Food Security
 ERS Reports
 World Development
 Journal of Agricultural and Resource Economics

Abstract reviewer:

- Annual Meetings of the Agricultural & Applied Economics Association (2015, 2017, 2018)
- Annual Conference on Global Economic Analysis (2010, 2011, 2013, 2014, 2015)

Departmental service:

- Undergraduate student advising (2015-2018; 26 students as of January 25th, 2018)
- Global Food Systems Faculty Advisory Team (Started on November 2017)
- Graduate Program Committee (Since January 2017)

- Agricultural Economics Preliminary Examination Committee (Preliminary Exams of Spring 2016, Fall 2016 and Spring 2017)

TEACHING ACTIVITIES

- AGEK 560 Data Analytics for Agricultural Economics. Agricultural Economics. Department of Agricultural Economics, Kansas State University, Spring 2021.
- AGEK840 International Trade and Agricultural Markets. MS in Agricultural Economics. Department of Agricultural Economics, Spring 2016, Fall 2017-2020.
- AGEK501 Data Analysis and Optimization. Agricultural Economics. Department of Agricultural Economics, Kansas State University, Spring 2016.
- Annual Short Course in Global Trade Analysis (Lead Instructor), Center for Global Trade Analysis, Department of Agricultural Economics, Purdue University, West Lafayette, IN, (2014, 2015); Bahçeşehir University, Istanbul, Turkey, 2013; George Mason University, Arlington, VA, 2012; Purdue University, West Lafayette, IN, 2011.
- Advanced Topics in Energy, Resource, and Environmental Economics PhD Seminar. Department of Agricultural Economics, Purdue University, West Lafayette, IN, Spring 2011-13.
- International Trade in Agricultural Products, Upper-Undergraduate Level, Universidad Del Pacífico, Lima, Peru, 2003-04.

Graduate Students and Post-Doctoral Associates

Major Professor

- Olabisi Ekong. PhD Student. Department of Agricultural Economics, Kansas State University. Fall 2018-December 2021. (Co-chair).
- Bowen Chen. PhD Student. Department of Agricultural Economics, Kansas State University. Fall 2015-Fall 2019. Output (as of September 2020). First placement: Postdoctoral fellow, Department of Agricultural and Consumer Economics, University of Illinois. Current placement: Data Scientist, Bunge Three journal articles, one paper invited for revision/resubmission, five conference papers.
- Akgul, Zeynep. PhD Student. Department of Agricultural Economics, Purdue University. (Co-chair). August 2010-May 2015. First placement: Postdoctoral fellow, Department of Agricultural Economics, Purdue University. Current placement: Research Economist, US International Trade Commission. Output (as of January 23, 2016): One journal article, two conference papers.

Post-doctoral Supervision

- Shourish Chakravarty. Post-doctoral Associate. Department of Agricultural Economics, Kansas State University. Role: Supervisor. (August 2014-August 2015.) Output (as of June 29, 2018): One journal article, three conference papers.
- Jing Liu. Post-doctoral Associate. Department of Agricultural Economics, Purdue University. Role: Supervisor. (August 2018-June 2019.) Output (as of January 15, 2021): two conference papers.

Committee Member

Department of Agricultural Economics, Kansas State University

- Lauren Benavides. (Graduated May 2022)
- Takesure Tozoneyi. PhD Student. (Current)
- Bryn Swearingen. (Graduated May 2021)
- Steven Ramsey. PhD Student. (Graduated December 2018)

Department of Economics, Kansas State University

- Eiman Aiyash. PhD Student. (Current)
- Ailun Li. PhD Student. (Current)
- Norikatsu Hiraide. PhD Student. (Graduated May 2020)
- Han Wang. PhD Student. (Graduated December 2019)

Department of Agricultural Economics, Purdue University.

- Jingyu Song. PhD Student. (Fall 2013- Fall 2017)
- Baldos, Uris. PhD Student. (Graduated August 2014)
- Remble, Amber. PhD Student. (Graduated in July 2014).

AFFILIATIONS

Agricultural & Applied Economics Association.
International Agricultural Trade Research Consortium.
Global Trade Analysis Project.