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Education

PhD., Natural Resource Studies, University of Arizona, 2025

Dissertation Title: Risk Signals in the Southwest's Shifting Wildland Fire Regimes

M.S., Agricultural & Resource Economics, University of Arizona, 2015

A.B., Economics, University of Chicago, 2005

Professional Experience

2015-present Extension Economist (Economic Impact Analyst), University of Arizona
Cooperative Extension

2013-2015 Graduate Research Assistant, Department of Agricultural & Resource Economics,
University of Arizona

Publications

Peer Reviewed

1. Montaña, C., **Duval, D.**, & Frisvold, G. (2025). Measuring Arizona Agriculture's Export Contributions and Sensitivity to Trade Policy Shifts. *Journal of Regional Analysis & Policy*, 55(3): 91–96.
2. **Duval, D.**, Bickel, A., & Frisvold, G. (2024). Differential Effects of Drought on Arizona State Park Visits: Implications for Visitor Spending and Local Economies. *Journal of Regional Analysis & Policy*. 54(1).
3. Frisvold, G. & **Duval, D.** (2024). Agricultural Water Footprints and Productivity in the Colorado River Basin. *Hydrology*, 11(1): 5. <https://doi.org/10.3390/hydrology11010005>
4. **Duval, D.**, Bickel, A., and Frisvold, G. (2021). Effects of Reservoir Levels on Arizona National Recreation Area Visitation, Visitor Spending, and Local Economies. *Journal of the American Water Resources Association*, 1– 17. <https://doi.org/10.1111/1752-1688.12962>.
5. Bickel, A., **Duval, D.**, & Frisvold, G. (2019). Simple Approaches to Examine Economic Impacts of Water Reallocations from Agriculture. *Journal of Contemporary Water Research & Education*. Issue 168, pp 29-48. <https://doi.org/10.1111/j.1936-704X.2019.03319.x>
6. **Duval, D.**, Bickel, A., & Frisvold, G. (2018). Farm-to-School Programs' Local Foods Activity in Southern Arizona. *Journal of Agriculture, Food Systems, and Community Development*, 8(C), 53-72. <https://doi.org/10.5304/jafscd.2019.08C.001>
7. **Duval, D.**, Kerna, A., Frisvold, G., & Umeda, K. (2017). Water conservation and Cooperative Extension turfgrass programs in the Desert Southwest. *Golf Course Management*, August 2017, 74-77.
8. **Duval, D.**, & Colby, B. (2016). The influence of Colorado River flows on the upper Gulf of California fisheries economy. *Ecological Engineering*. <https://doi.org/10.1016/j.ecoleng.2016.05.017>

Extension Publications

1. **Duval, D.** (2025). Wildfire & Homeowners' Insurance Non-Renewals in Arizona. University of Arizona Cooperative Extension, Publication az2170, <https://extension.arizona.edu/sites/default/files/2025-10/az2170-2025-10-20-25-2.pdf>
2. Montaña, C. & **Duval, D.** (2025). How much of Arizona's agricultural production stays in-state? University of Arizona Cooperative Extension, Publication az2121. <https://extension.arizona.edu/publication/how-much-arizonas-agricultural-production-stays-state>
3. **Duval, D.**, Audoin, F., Dalke, A., Mayer, B., Antaya, A., Quintero, J., Blum, B., Lien, A. (2025). Foundations of Virtual Fencing: Economics of Virtual Fence (VF) Systems. University of Arizona Cooperative Extension, Publication AZ-2117. <https://extension.arizona.edu/sites/default/files/2025-03/az2117-2025.pdf>
4. Weiss, J., Halldorson, M., Rauluk, V., **Duval, D.**, & Sherman, J. (2023). Recurring Topics of Breakout Group Discussions at the 2023 Arizona Viticulture Summit. University of Arizona Cooperative Extension Publication az2068-2023.
5. **Duval, D.** (2023). Arizona's Seasonal Role in National Supply of Vegetable & Melon Specialty Crops. University of Arizona Cooperative Extension Publication az2064-2023.
6. Kerna, A., **Duval, D.**, Vautour, J., Houtkooper, L., Farrell, V., McCullough, L., & Misner, S. (2017). The University of Arizona Cooperative Extension Nutrition Network's Contribution to the Arizona Economy in 2014. University of Arizona Cooperative Extension Publication AZ1740-2017.
7. **Duval, D.**, Ruyle, G., & Dyess, J. (2017). Value of University of Arizona Cooperative Extension's Involvement in Immediate Post-Wallow Fire Grazing Recovery. University of Arizona Cooperative Extension Bulletin AZ1749, November 2017. <https://extension.arizona.edu/pubs/value-university-arizona-cooperative-extension%E2%80%99s-involvement-immediate-post-wallow-fire-grazing>
8. **Duval, D.**, Ruyle, G., & Howery, L. (2016). Economic Impact of Cooperative Extension Efforts in Rangeland Management for a Northern Arizona Ranching Allotment. University of Arizona Cooperative Extension Bulletin AZ1707, July 2016. https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1707-2016_0.pdf

Non-Refereed Technical Publications

1. Montaña, C. & **Duval, D.** (2025). Arizona Local Foods and North-South Food Pipeline. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5336502
2. Montaña, C., Frisvold, G., and **Duval, D.** (2025). The Contribution of Cotton to Arizona's Economy. Available at SSRN: <https://ssrn.com/abstract=5283625> or <https://dx.doi.org/10.2139/ssrn.5283625>
3. **Duval, D.**, Frisvold, G., Montaña, C. (2025). Effects of Depredation & Mexican Gray Wolf Presence on Ranch Returns: Case Study of a Representative Ranch in Available at SSRN: <https://ssrn.com/abstract=> and <https://extension.arizona.edu/publication/effects-depredation-mexican-gray-wolf-presence-ranch-returns-case-study-representative>
4. Montaña, C., **Duval, D.**, Frisvold, G. (2025). The Contribution of Agricultural Exports to Arizona's Economy. Available at SSRN: <https://ssrn.com/abstract=5187309> or <https://dx.doi.org/10.2139/ssrn.5187309>

5. **Duval, D.**, Montanía, C., Frisvold, G., Quintero, J. (2025). Economic Contribution of Yuma County Agriculture. Available at SSRN: <https://ssrn.com/abstract=5136559> or <http://dx.doi.org/10.2139/ssrn.5136559>
6. Montanía, C., **Duval, D.**, Quintero, J. and Frisvold, G. (2025). Arizona's Horse Racing Industry: An Economic Contribution Analysis. Available at SSRN: <https://ssrn.com/abstract=5136655> or <http://dx.doi.org/10.2139/ssrn.5136655>
7. Montanía, C., **Duval, D.**, and Frisvold, G. (2025). Arizona's Agribusiness System in the State Economy: An Economic Contribution Analysis for 2022 (February 13, 2025). Available at SSRN: <https://ssrn.com/abstract=5136861> or <http://dx.doi.org/10.2139/ssrn.5136861>
8. **Duval, D.**, Montanía, C., Bronstein, J., Soderberg, A., Frisvold, G. (2024). Visitor Impacts of Arizona Athletics Events. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://economics.arizona.edu/visitor-impacts-arizona-athletics-events>
9. Bickel, A.K., **Duval, D.**, Frisvold, G., Cuello, J., Didan, K., Farrell-Poe, K., Giacomelli, G., Li, H., & Kacira, M. (2023). The Bioeconomy & Circular Economy in Southern Arizona. <https://www.mapazdashboard.arizona.edu/article/bioeconomy-circular-economy-southern-arizona>
10. **Duval, D.**, Bickel, A.K., & Frisvold, G. (2022). The Fresh Produce Industry in Santa Cruz County, Arizona. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://economics.arizona.edu/fresh-produce-industry-santa-cruz-county-arizona>
11. **Duval, D.**, Bickel, A.K., Frisvold, G., & Zheng, W. (2021). The Nature-Based Restorative Economy in Santa Cruz County, Arizona. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://economics.arizona.edu/nature-based-restorative-economy-santa-cruz-county-arizona>
12. **Duval, D.**, Bickel, A. K., & Frisvold, G. (2021). Economic Contributions and Impacts of Arizona's State Parks. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://economics.arizona.edu/economic-contribution-and-impacts-arizonas-state-parks>
13. Bickel, A., **Duval, D.**, & Frisvold, G. (2021). Vineyards and Wineries in Arizona. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://economics.arizona.edu/vineyards-and-wineries-arizona>
14. Bickel, A., **Duval, D.**, & Frisvold, G. (2020). Paying for Prevention: Evaluating Arizona Rancher Spending to Avoid or Reduce Livestock Conflicts with the Mexican Gray Wolf. Proceedings of the Vertebrate Pest Conference, Vol. 29. <https://escholarship.org/uc/item/58w83458>
15. Bickel, A. K., **Duval, D.**, & Frisvold, G. (2020). Agriculture in Graham and Greenlee Counties: An Economic Contribution Study. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://economics.arizona.edu/agriculture-graham-and-greenlee-counties>
16. **Duval, D.**, Bickel, A. K. & Frisvold, G. (2020). County Agricultural Economy Profiles for Southern Arizona. Making Action Possible in Southern Arizona (MAP Dashboard) White Paper. Economic and Business Research Center, Eller College of Management, University of Arizona.
17. **Duval, D.**, Frisvold, G., & Bickel, A. (2020). The Economic Value of Trails in Arizona. University of Arizona Department of Agricultural & Resource Economics, Cooperative

Extension <https://economics.arizona.edu/economic-value-trails-arizona-travel-cost-method-study>

18. **Duval, D.**, Bickel, A., & Frisvold, G. (2019). Arizona's Tree Nut Industry and Its Contributions to the State Economy. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/arizonas-tree-nut-industry-and-its-contributions-state-economy>
19. **Duval, D.**, Bickel, A., & Frisvold, G. (2019). Potential Economic Impact of Cold Inspection Facility Upgrade. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/economic-impact-cold-inspection-facility>
20. **Duval, D.**, Bickel, A., Frisvold, G., Wu, X., & Hu, C. (2018). Contribution of Agriculture to the Maricopa County and Gila River Indian Community Economies. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/Maricopa-County-Gila-River>
21. **Duval, D.**, Bickel, A., & Frisvold, G. (2018). Mexican Fresh Tomatoes: Agribusiness Value Chain Contributions to the U.S. Economy. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/contribution-mexican-tomatoes>
22. Bickel, A., **Duval, D.**, & Frisvold, G. (2018). Contribution of On-Farm Agriculture and Agribusiness to the Pinal County Economy. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/contribution-farm-agriculture-and-agribusiness-pinal-county-economy>
23. Kerna, A., **Duval, D.**, & Frisvold, G. (2017). Arizona Leafy Greens: Economic Contributions of the Industry Cluster. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/arizona-leafy-greens-economic-contributions-industry-cluster>
24. Kerna Bickel, A., **Duval, D.**, & Frisvold, G. (2017). Arizona's Agribusiness System: Contributions to the State Economy. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/arizonas-agribusiness-system-contributions-state-economy>
25. **Duval, D.**, Kerna, A., Frisvold, G., and Avery, C. (2017). The Contribution of Small Grains Production to Arizona's Economy. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/contribution-small-grains-production-arizona%E2%80%98s-economy>
26. Kerna, A., **Duval, D.**, and Frisvold, G. (2016). Yuma Visitor Survey: Characteristics and Economic Impacts of Hotel Visitors. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. <https://cals.arizona.edu/arec/publication/yuma-visitor-survey-characteristics-and-economic-impacts-hotel-visitors>
27. **Duval, D.**, Kerna, A., Frisvold, G., Umeda, K., and Li, R. (2016). Contribution of the Golf Industry to the Arizona Economy in 2014. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension.

- <https://cals.arizona.edu/arec/publication/contribution-golf-industry-arizona-economy-2014>
28. Kerna, A., **Duval, D.**, and Frisvold, G. (2016). The Contribution of Arizona's Vegetable and Melon Industry Cluster to the State Economy. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension.
<https://cals.arizona.edu/arec/publication/contribution-arizona%E2%80%99s-vegetable-and-melon-industry-cluster-state-economy>
 29. **Duval, D.** and Kerna, A. (2016). Using Enterprise Software Data to Analyze the Economic Contributions and Impacts of University Programs With the IMPLAN Model. Proceedings of the Mid-Continent Regional Science Association.

Selected Conferences and Presentations

1. "Valuing Overlapping Risk After Catastrophic Fire: A Hedonic Analysis of the 2021 Telegraph Fire". UA-ASU Environmental and Energy Economics Workshop, April 18, 2025, Tucson, AZ.
2. "The Economics of Outdoor Recreation". Bureau of Land Management National Recreation Training Symposium. Economics Workshop. March 7, 2024, Phoenix, AZ.
3. "Climate Change Influence on National Park Visitation and Seasonal Employment in Arizona." Regional Science Contributions to Measuring Climate Change Impacts. ASSA-AEA Annual Conference, San Antonio, TX. January 5-7, 2024.
4. WRRRC Seminar Series: Severe Sustained Drought in the Colorado River Basin. Tucson, Arizona. April 12, 2023. <https://wrrc.arizona.edu/events/wrrc-seminar-series-severe-sustained-drought-colorado-basin-revisited>
5. "Paying for Prevention: Evaluating Arizona Rancher Spending to Avoid or Reduce Livestock Conflicts with the Mexican Gray Wolf." Vertebrate Pest Conference, Santa Barbara, CA, 2020.

Service

Hiring committees

University of Arizona GSPC Grants Reviewer 2025

University of Arizona Cooperative Extension Climate Working Group

Awards

- Agricultural & Applied Economics Association Distinguished Extension/Outreach Program Award – Group, 2025
- Cactus and Pine Golf Course Superintendents Association Service Award (with D. Duval and G. Frisvold), 2016/2017
- Outstanding Team Award, Economic Impact Analysis Team, University of Arizona Cooperative Extension, 2015
- Water Sustainability Graduate Student Fellowship Recipient, University of Arizona, Technology and Research Initiative Fund 2014/2015; Project titled "Economic Effects of

Freshwater Flows through the Colorado River Delta”