# Jared P. Hutchins


CONTACT INFORMATION

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EDUCATION

**University of Wisconsin-Madison**, Madison, WI
Ph.D., Agricultural and Applied Economics, *Expected:* 2020
*Primary Field:* Agricultural Economics, Production Economics

**American University**, Washington, DC
B.S., Economics, May 2013

JOB MARKET PAPER

**"Milked for All They Are Worth: Livestock Replacement in a Dynamic Discrete Choice Model"**


This paper examines animal replacement behavior for over 1,000 Wisconsin dairy farms during the period 2011-2014 and analyzes the rationale for high replacement rates. I model the replacement decision using a dynamic discrete choice model and incorporate unplanned mortality as a source of uncertainty that drives farmers to replace dairy cows before they maximize production. The empirical model incorporates cow and herd heterogeneity in mortality rates to back out the implied cost of cow mortality. Using the conditional choice probability method, I estimate the cost of mortality at 1,800 USD per death, 800 dollars more than estimates based on simulation studies. Utilizing farm size heterogeneity, I also find that mortality costs are three times higher on small dairies than on larger ones. In a counterfactual estimation, dairy farmers were willing to pay 1,300 USD to eliminate mortality risk completely for first year dairy cows. These results suggest that genetic selection in U.S. dairy favors relatively large farms and may be accelerating the exit of small farms.


PUBLICATIONS

Hutchins, J., B. Hueth, and G. Rosa (2019) "Quantifying Heterogeneous Returns to Genetic Selection: Evidence from Wisconsin Dairies" NBER Working Paper 26417, Forthcoming in *NBER: Economics of Research and Innovation in Agriculture* ed. Petra Moser (Chicago: University of Chicago Press, 2019)

WORKING PAPERS

**"Supply Response in Dairy Farming: Evidence from Monthly, Cow-Level Data"**
2018 *with Brent Hueth*


Supply response on dairy farms to milk price and ration cost are almost always found to be small in the short run. Such studies, however, are usually done at the herd and quarterly level where the mechanisms of supply response cannot be distinguished. Using a monthly, animal level data set, we analyze supply response at the animal level which isolates the intensive margin response, that is use of more inputs, subject to the production process. In our empirical analysis of over ten million animal records, we reject the null hypothesis of no response, finding that milk price and slaughter price do indeed explain deviations from the Wood lactation curve. In particular, we find that milk price lagged two months and slaughter prices have the most explanatory power at the level of the lactation curve.

**"Production Credit Associations and Agricultural Productivity Change in the United States, 1920-1940"** 2018 *with Brent Hueth*

We study the impact of Production Credit Associations (PCAs) during the decade-long period shortly after their introduction as one component of the 1916 Federal Farm Loan Act. Using county distances to PCAs as a proxy for cost of access to credit, we examine the effects of credit expansion on county-level crop yield, crop revenue, and input use. Despite serving only about 7% of U.S. farmers during the period we study, we estimate that counties 100 kilometers closer to a PCA had roughly 10% higher crop revenue per acre. We also find that counties closer to PCA locations experienced significantly higher growth rates in tractor and fertilizer utilization, relative to more distant counties. In years prior to the arrival of PCAs, farms in relatively close-by counties earn on average less revenue and use fewer purchased inputs than farms in counties further away. This relationship *reverses* in subsequent years, suggesting that the mechanism for identifying PCA locations targeted less well-off counties.

## Current Projects

"Willingness to Pay for Breeding Technology: Evidence from A Survey of Senegalese Dairy Farmers" *with Karen Marshall and Ayao Missohou*

## Professional Experience

**Research Assistant** — May 2015 to present
Department of Agricultural and Applied Economics
University of Wisconsin-Madison
Supervisor: Brent Hueth

**Consultant** — December 2018 to May 2019
Inter-American Development Bank
Washington, DC

**Research Intern** — January to May 2013
Inter-American Development Bank
Washington, DC
Supervisor: Paul Winters

**Document Management Intern** — May 2012 to August 2013
Wage and Hour Division, U.S. Department of Labor
Washington, DC
Supervisor: Dan Daly

**Research Intern** — August to December 2011
Fundación América Solidaria
Santiago, Chile

## Teaching Experience

**Shepherd's Cross with Njala University** — March 2019
Small Ruminant Animal Husbandry and Herd Health — Njala, Sierra Leone
Instructor and Facilitator

**University of Wisconsin-Madison** — Spring 2017
AAE 322 Commodity Markets with Xiaodong Du — Madison, WI
Teaching Assistant

**Dominico American Society of Queens** — May to July 2011
Basic English — New York, NY
ESL Instructor

## Awards and Honors

Traisman Agribusiness Graduate Scholarship — October 2019
Agricultural and Applied Economics
University of Wisconsin-Madison

Best Paper Presentation, PhD — December 2017
Student Research Colloquium
Agricultural and Applied Economics
University of Wisconsin-Madison

Barbara and Thomas Lyon Scholarship — May 2017
UW Center for Cooperatives
Agricultural and Applied Economics
University of Wisconsin-Madison

## Conference Presentations

"Quantifying Heterogeneous Returns to Genetic Selection: Evidence from Wisconsin Dairies" — May 2019, Washington, DC
Paper presented at NBER conference on
Economics of Research and Innovation in Agriculture

"Production Credit Associations and Agricultural Productivity Change in the United States, 1920-1940" — October 2018, St. Louis, MO
Paper presented at NC-1177 Conference

"Supply Response in Dairy Farming: Evidence from Monthly Cow-Level Data" — July 2018, Washington, DC
Poster presented ar AAEA Annual Meeting

## Service

Student Research Colloquium Coordinator — September 2018 - May 2019
Agricultural and Applied Economics — Madison, WI
University of Wisconsin - Madison

Contributor to **econtools**
Econometrics Python Package
https://github.com/dmsul/econtools

## Languages

English, Spanish
Python, Stata, R, Latex, Git, Matlab, SQL, Unix Shell

## References

Brent Hueth (Advisor)
Associate Professor — 608-890-0924
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