



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

***AGRICULTURAL LENDERS
AND FARMLAND
APPRAISERS
DISAGREEMENT ON
FARMLAND VALUE
EXPECTATIONS***

Chad Fiechter and Dr. Todd Kuethe

When farmland value is expected to increase:

- Farmland prices will increase (Brown and Brown, 1984)
- Ag lenders provide more credit to the ag sector (Briggeman, Gunderson, and Gloy, 2009)
- Farmland owners purchase more farmland (Weber and Key, 2015)

Findings

1. Indiana farmland experts under-predict farmland value growth
2. Ag lenders under-predict more than appraisers
3. Ag lenders and appraisers have less dispersed expectations than professional farm managers

*Farmland Value Expectations are **NOT** rational*

Qualitative and/or Aggregate Data

(Tegene and Kuchler, (1991); Zakrzewics, Brorsen, and Briggeman, (2013); Kuethe and Hubbs, (2017); Kuethe and Oppedahl, (2021))

Aggregate Quantitative Data

Kuethe, Brewer, and Fiechter (*forthcoming*).

Purdue Land Value and Cash Rent Survey

2003 - 2017

Three Quality Grades – Top, Average, and Poor

- What was the market price of bare farmland in the *previous* December?
- What is the *current* (June) market price of bare farmland?
- What do you *expect* the market price of bare farmland to be in the coming December?

Year	Appraiser	Farm Lender	Farm Manager	Other	Total
2003	46	161	42	30	279
2004	39	172	36	25	272
2005	47	172	36	24	279
2006	35	147	35	37	254
2007	43	176	40	41	300
2008	52	183	33	27	295
2009	54	181	27	24	286
2010	52	165	30	29	276
2011	54	159	34	27	274
2012	45	123	32	42	242
2013	27	86	31	37	181
2014	43	113	38	22	216
2015	55	66	43	39	203
2016	42	67	20	22	151
2017	74	102	34	38	248

Purdue Land Value and Cash Rent Survey

Observed Growth Rate vs. Predicted Three Quality Grades

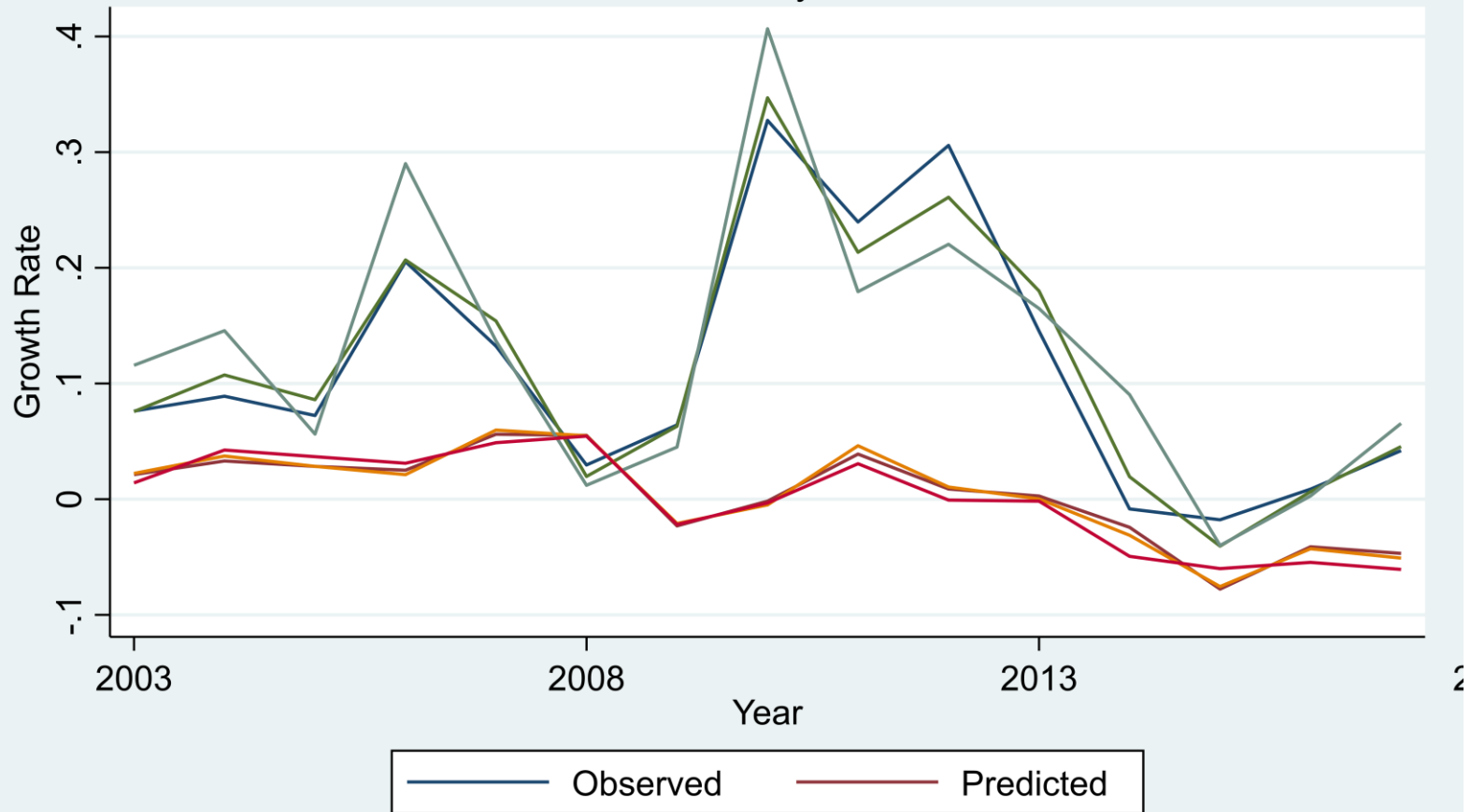


Table 1: HAC Standard Errors

	Clustered	Newey-West
Constant	0.016 *** (0.009)	0.016 *** (0.012)
	Occupation	
Apprasier	<i>omitted</i>	
Lender	0.031 *** (0.004)	0.031 *** (0.009)
Farm Manager	0.021 *** (0.005)	0.021 * (0.009)
Other	0.018 *** (0.005)	0.018 (0.010)

$$\begin{aligned}
 & (\text{forecast error}) \\
 & = \alpha + \phi_{cg}(\text{occupation}) \\
 & + \theta_{cg}(\text{region}) + \gamma_t(\text{year}) \\
 & + \psi_q(\text{quality}) + \epsilon_{tqc}
 \end{aligned}$$

(Davies and Lahiri, 1995)

Table 1: HAC Standard Errors: *Continued*

	Region	
North	<i>omitted</i>	
Northwest	-0.014 ** (0.004)	-0.014 * (0.007)
West Central	-0.002 (0.004)	-0.002 (0.007)
Central	-0.022 *** (0.004)	-0.022 ** (0.010)
Southwest	-0.012 ** (0.004)	-0.012 (0.010)
Southeast	-0.043 *** (0.008)	-0.043 ** (0.015)
	Land Quality	
Top	<i>omitted</i>	
Average	0.000 (0.004)	0.000 (0.008)
Poor	0.012 ** (0.004)	0.012 (0.008)
N	1050	1050
R ²	0.49	
Year Fixed Effects	yes	yes

Table 2: Forecast Dispersion

	With "Other"	Without "Other"
Constant	0.057 *** (0.009)	0.059 *** (0.009)
	Occupation	
Appraiser	<i>omitted</i>	
Lender	-0.001 (0.005)	0.000 (0.005)
Farm Manager	0.021 *** (0.007)	0.021 *** (0.007)
Other	0.014 ** (0.007)	

$$\begin{aligned}
 & (\text{interquartile range}) \\
 & = \alpha + \phi_{cg}(\text{occupation}) \\
 & + \theta_{cg}(\text{region}) + \gamma_t(\text{year}) \\
 & + \psi_q(\text{quality}) + \epsilon_{tqc}
 \end{aligned}$$

Table 2: Forecast Dispersion: *Continued*

	Region	
North	<i>omitted</i>	
Northwest	-0.021 ** (0.010)	-0.022 * (0.011)
West Central	-0.034 *** (0.010)	-0.030 *** (0.011)
Central	-0.018 * (0.011)	-0.020 * (0.011)
Southwest	-0.019 * (0.011)	-0.027 ** (0.012)
Southeast	-0.059 *** (0.010)	-0.073 *** (0.015)
	Land Quality	
Top	<i>omitted</i>	
Average	0.003 (0.005)	0.003 (0.005)
Poor	0.007 (0.009)	0.01 (0.009)
N	1050	1050
R ²	0.49	
Year Fixed Effects	yes	yes

THANK YOU

cfiechte@purdue.edu

References

1. Zakrzewicz, Christopher J., B. Wade Brorsen, and Brian C. Briggeman. "Accuracy of Qualitative Forecasts of Farmland Values from the Federal Reserve's Land Value Survey." *Journal of Agricultural and Applied Economics* 45, no. 1379-2016-113790 (2013): 159-170.
2. Briggeman, Brian C., Michael A. Gunderson, and Brent A. Gloy. "The financial health of agricultural lenders." *American Journal of Agricultural Economics* 91, no. 5 (2009): 1406-1413.
3. Brown, Keith C., and Deborah J. Brown. "Heterogenous expectations and farmland prices." *American Journal of Agricultural Economics* 66, no. 2 (1984): 164-169.
4. Tegene, Ababayehu, and Frederick R. Kuchler. "A description of farmland investor expectations." *The Journal of Real Estate Finance and Economics* 4, no. 3 (1991): 283-296.
5. Weber, Jeremy G., and Nigel Key. "Leveraging wealth from farmland appreciation: Borrowing, land ownership, and farm expansion." *Land Economics* 91, no. 2 (2015): 344-361.
6. Kuethe, Todd H., and Todd Hubbs. "BANKERS' FORECASTS OF FARMLAND VALUES: A QUALITATIVE AND QUANTITATIVE EVALUATION." *Journal of Agricultural and Applied Economics* 49, no. 4 (2017): 617-633.
7. Kuethe, Todd H., and David Oppedahl. "Agricultural bankers' farmland price expectations." *European Review of Agricultural Economics* 48, no. 1 (2021): 42-59.
8. Kuethe, Todd H., Brady Brewer and Chad Fiechter. "Loss Aversion in Farmland Price Expectations." *Land Economics*, (forthcoming).
9. Deaton, Angus. "Panel data from time series of cross-sections." *Journal of econometrics* 30, no. 1-2 (1985): 109-126.
10. Davies, Anthony, and Kajal Lahiri. "A new framework for analyzing survey forecasts using three-dimensional panel data." *Journal of Econometrics* 1, no. 68 (1995): 205-227.

