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# Institutional Environment: Property Tax Policy and Farm Property Tax Liability

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# Institutional Environment: Property Tax Policy and Farm Property Tax Liability

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## Introduction

This study determines factors to agricultural effective property tax rates for the North Central region. Secondly, we measure the effect to use-value assessment policies on non-ag revenue sources across the region. The purpose is to inform the policy debate of use-value assessment policies and distributional effects.

Conceptually, the determination of local ag property tax rates at the local level is a function of costs for local services, tax base, state and federal aid, and property tax policies. To model ag effective property tax rates we use reduced form and structural tax setting equations following the methods and framework of Brett and Pinkse (2000).

To estimate effective property tax rates for farms we use 2004-2012 USDA-ARMS data. We also use U.S. Census Bureau State and Local Finance Survey data and the Urban Institute-Brookings Institution Tax Policy Center for estimates on county house property tax rates.

The reduced form model includes county attribute variables that affect the costs for local government expenses (e.g. miles of local roads, population, square miles of local parks, etc.) and variables that measure state and local revenue sources (property taxes, state and local revenue sharing, non-property tax revenue, etc.).

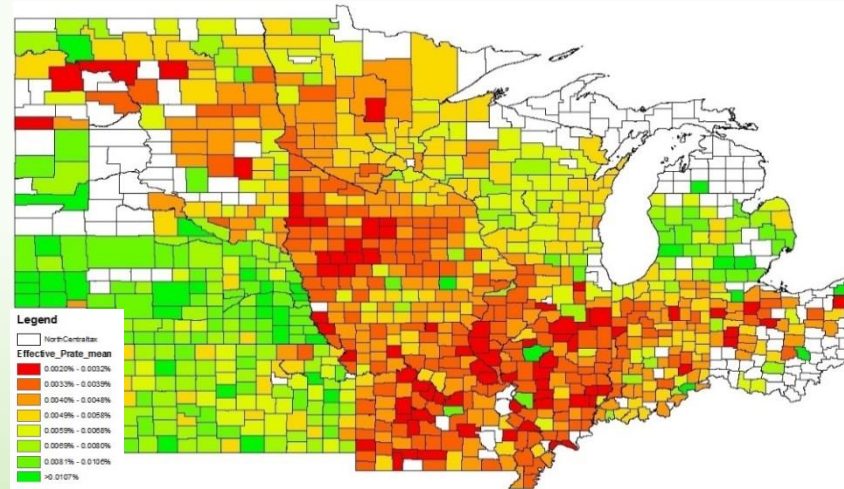
We control for policy by whether the state has adopted formula-based use-value assessment policies instead of using market value assessment values (Anderson and England, 2014). We define formula-based use-value assessment policies as mandatory, comprehensive use of crop and/or rental income and capitalization rates to assess ag property value for tax purposes. We test interaction terms of the formula-based use-value policy with state revenue and residential tax rates to measure a potential shift in ag property tax liability to non-ag revenue sources (e.g. Chicoine and Hendricks, 1985).

## Objectives

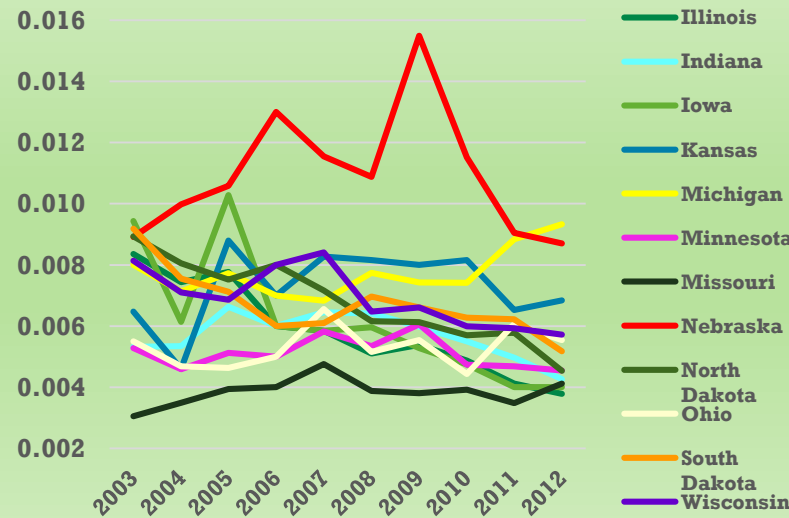
### 1. Determinants to Agricultural Effective Property Tax Rates

- Measure Tax Shifts from Use-Value Assessment Policies
- County Attributes that Raise Costs to Public Services and Require Higher Local Ag Property Tax Rates

## Effective Ag Property Tax Rates: USDA- ARMS 2010-2012



## Mean Effective Ag Property Tax Rates by State: USDA- ARMS 2003-2012



## Methods and Results

Reduced form model. Dependent=Effective Ag Property Tax. F value= 4.7 Instrumental Variable Analysis

Parameters	Coefficient	S.E.	t-value
Non-ag Revenue rates	.079	.05	1.34
<b>Seniors (% of pop)</b>	<b>-2.46*</b>	<b>1.44</b>	<b>-1.7</b>
Park (sq miles)	-.011	.008	-1.38
Road (miles)	-.000	.000	-1.23
<b>Grain Farm</b>	<b>.002***</b>	<b>.000</b>	<b>3.15</b>
Use-Value Policy	-.054	-1.03	-1.03
Household Income	-.000	.000	-1.49
<b>Policy*Grain/Livestock</b>	<b>-.004***</b>	<b>.001</b>	<b>-3.35</b>
<b>Policy*State Revenue Aid</b>	<b>-.095*</b>	<b>.053</b>	<b>-1.79</b>

## Preliminary Findings

- Formula-Based Use-Value policies Significantly Lower Effective Ag Property Tax Rates
- Grain Farms significantly benefit from the formula based Use-value Policy
- Formula Based Use- Value Policies significantly shift Farm Property Tax Liability to Other Sources of State Funding

## References

Anderson, John E., and Richard W. England. *Use Value Assessment of Rural Land in the United States*. Cambridge: Lincoln Institute of Land Policy, 2014.

Brett, Craig, and Joris Pinkse. "The determinants of municipal tax rates in British Columbia." *Canadian Journal of Economics/Revue canadienne d'économique* 33.3 (2000): 695-714.

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