

Impacts of a Changing Rural Economy on Farm Businesses and Households

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Overview

- **A review of linkages between the agricultural economy and the rural economy**
- **A case study of these linkages from southern US agriculture**
- **Implications for rural development policy influencing the farm economy**

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The Changing Rural Economy

- The President in one of his first televised news conferences argued that “jobs” were the metric by which US citizens would know when the economy will be on the rebound
- However, there are many metrics for measuring economic performance
- Output, GDP (value-added), employment, labor income etc.

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The Changing Rural Economy

- **With historical and more recent Farm Bills continuing to be “farm focused” as opposed to “rural” focused, how has farm sector performance impacted the both the farm and non-farm rural job performance?**

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The Changing Rural Economy

- For several years, we have heard that when one evaluates those rural counties that are the most farm dependent, they are also typically the counties with greatest population loss
- Given the declining influence of farming on overall economic contribution, what trends do we see between the linkage between farm economic performance (earnings) and farm employment?

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Farm Economic Contribution to the Rural Economy

- Choose to evaluate farm contribution using farm earnings (mostly owner and proprietor income of farmers and wages and salaries of hired farm labor) as a percentage of total county earnings
- Also evaluate farm employment relative to overall county employment
- Evaluate the change over time and the similarities/differences in the two metrics

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Median Change in Relative Economic Contribution of Farm Sector

1970-2006	Real Farm Earnings Change	Farm Employment Change	Real Farm Earnings Change - Farm Employment Change
All Counties	-5.88%	-7.87%	0.18%
All Non-Metro	-8.47%	-9.40%	-0.20%
All Non-Metro Adjacent	-6.95%	-9.03%	0.27%
All Non-Metro Non-Adjacent	-10.57%	-9.85%	-1.05%
Smallest Non-Metro	-16.77%	-13.35%	-2.70%
Farm Dependent	-18.73%	-14.79%	-4.41%

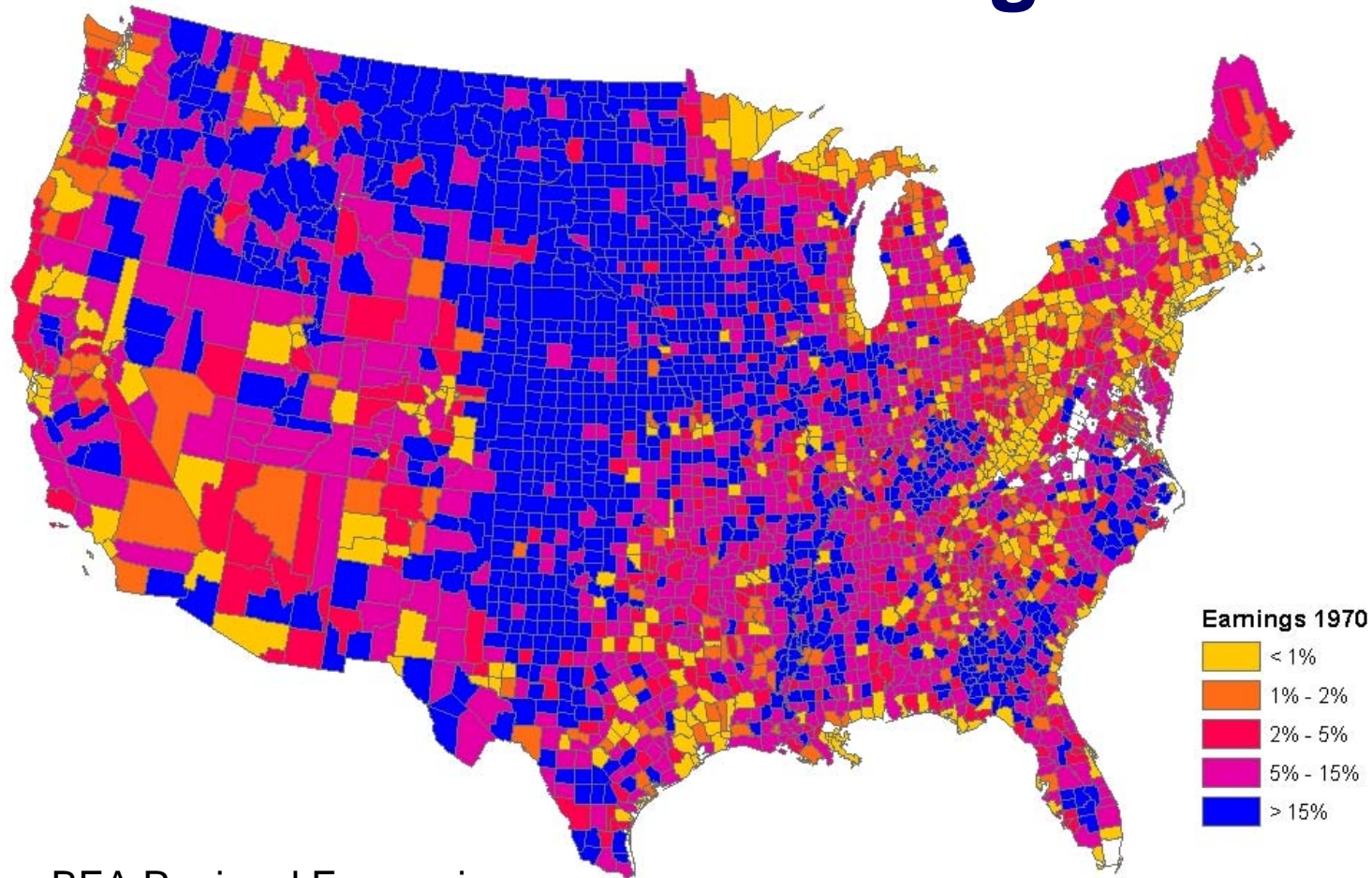
Source: BEA Regional Economic Information System

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Percent Farm Earnings - 1970



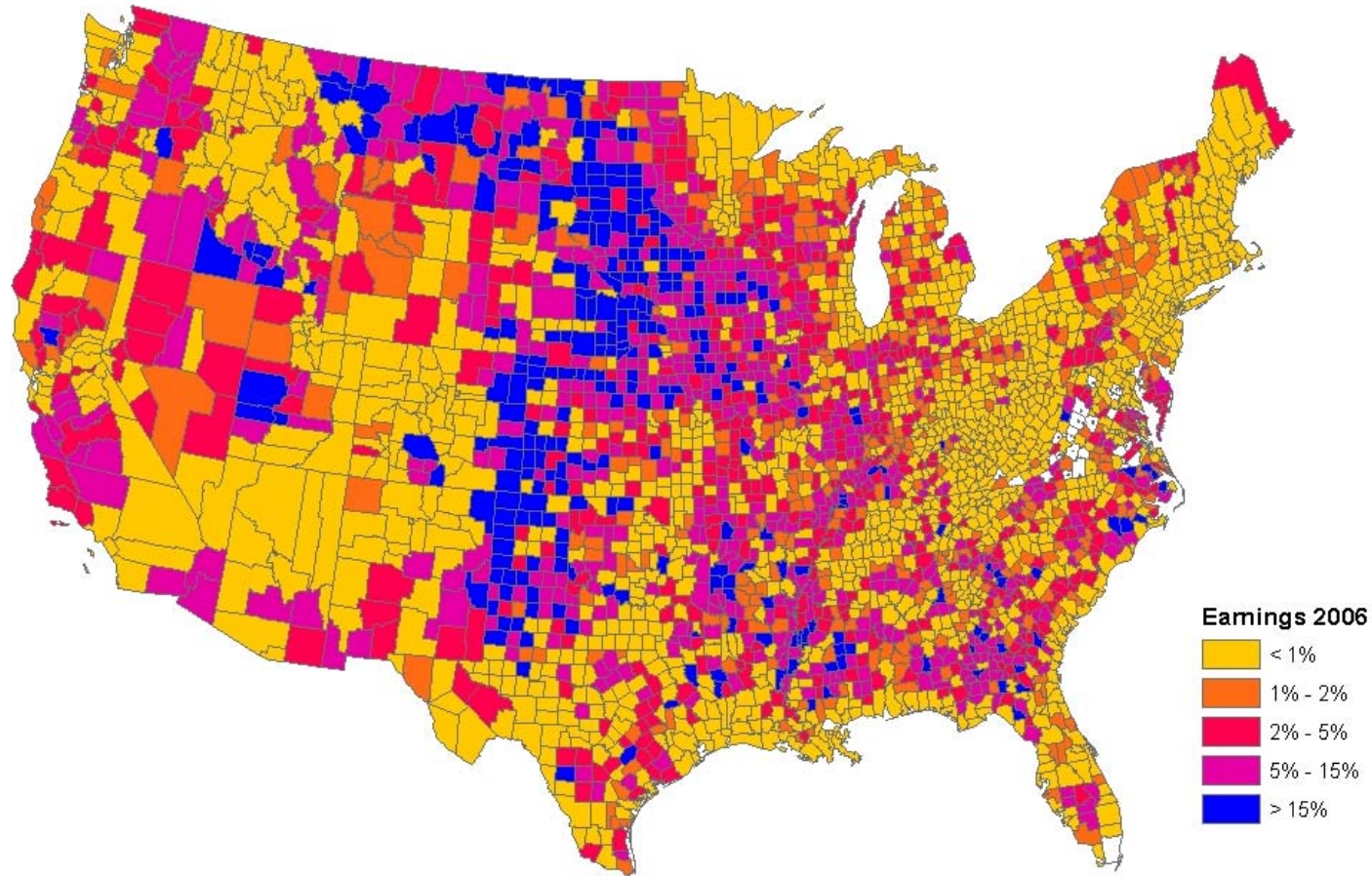
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Percent Farm Earnings - 2006



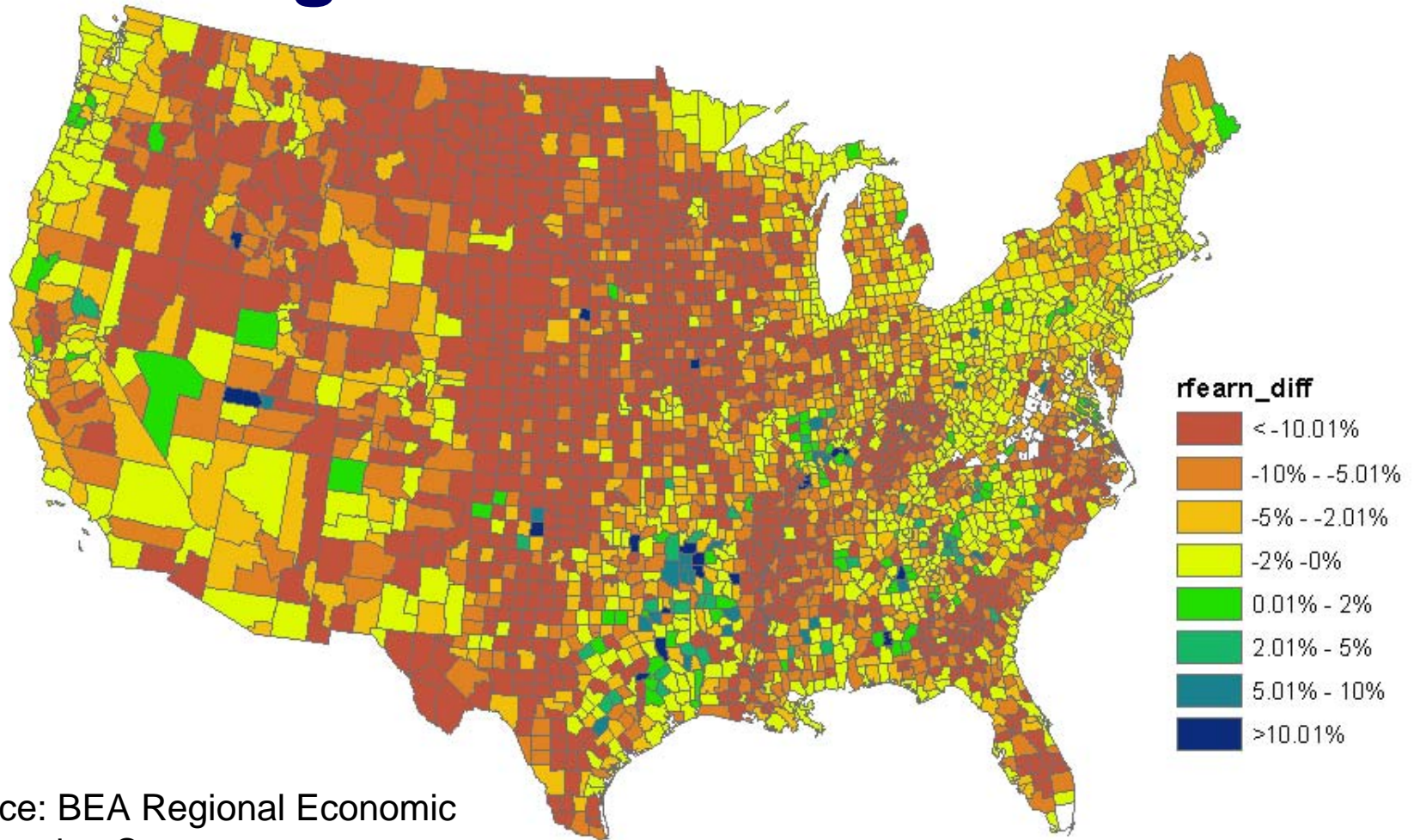
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Earnings Difference – 1970 - 2006



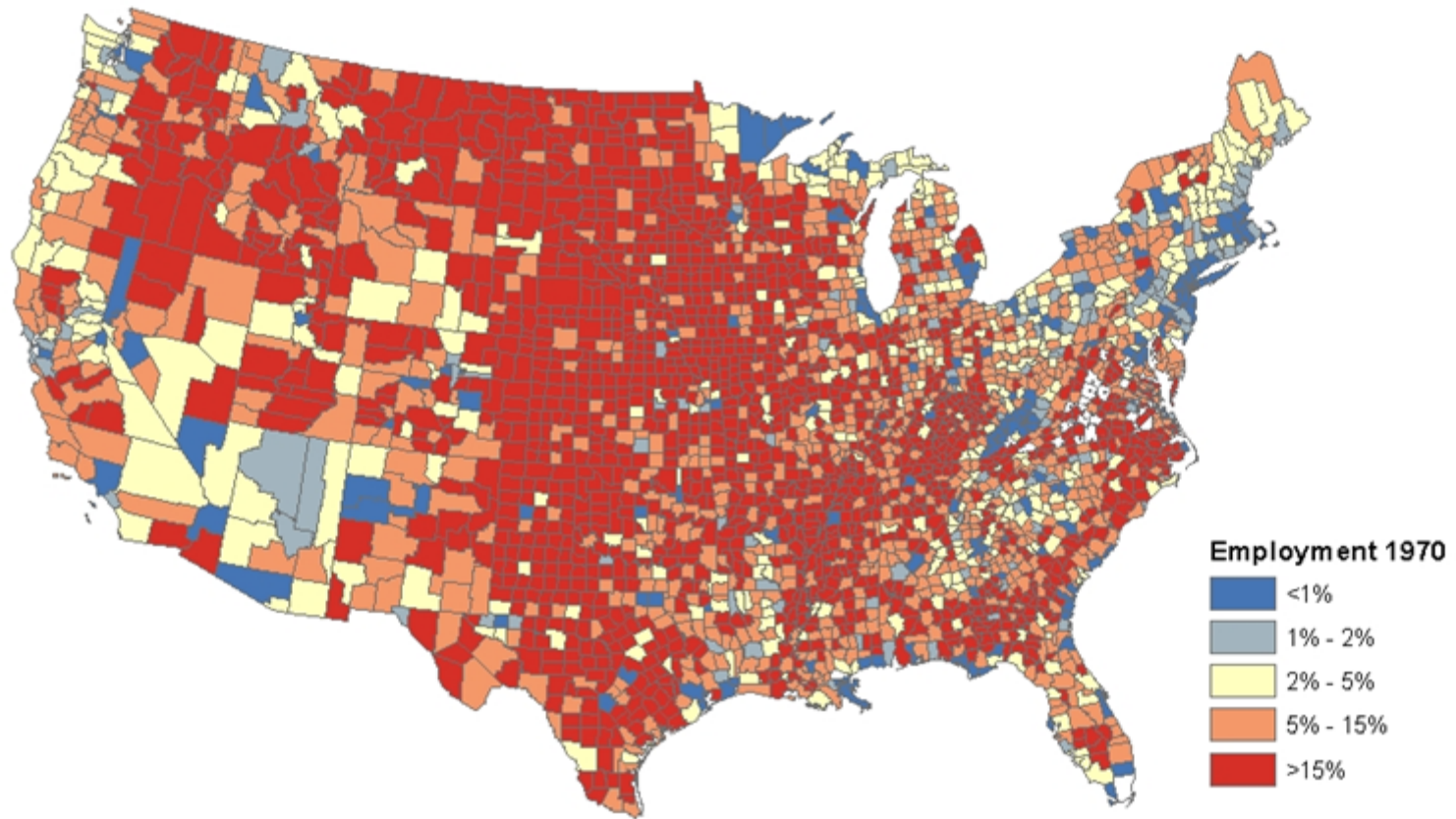
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Percent Farm Employment - 1970



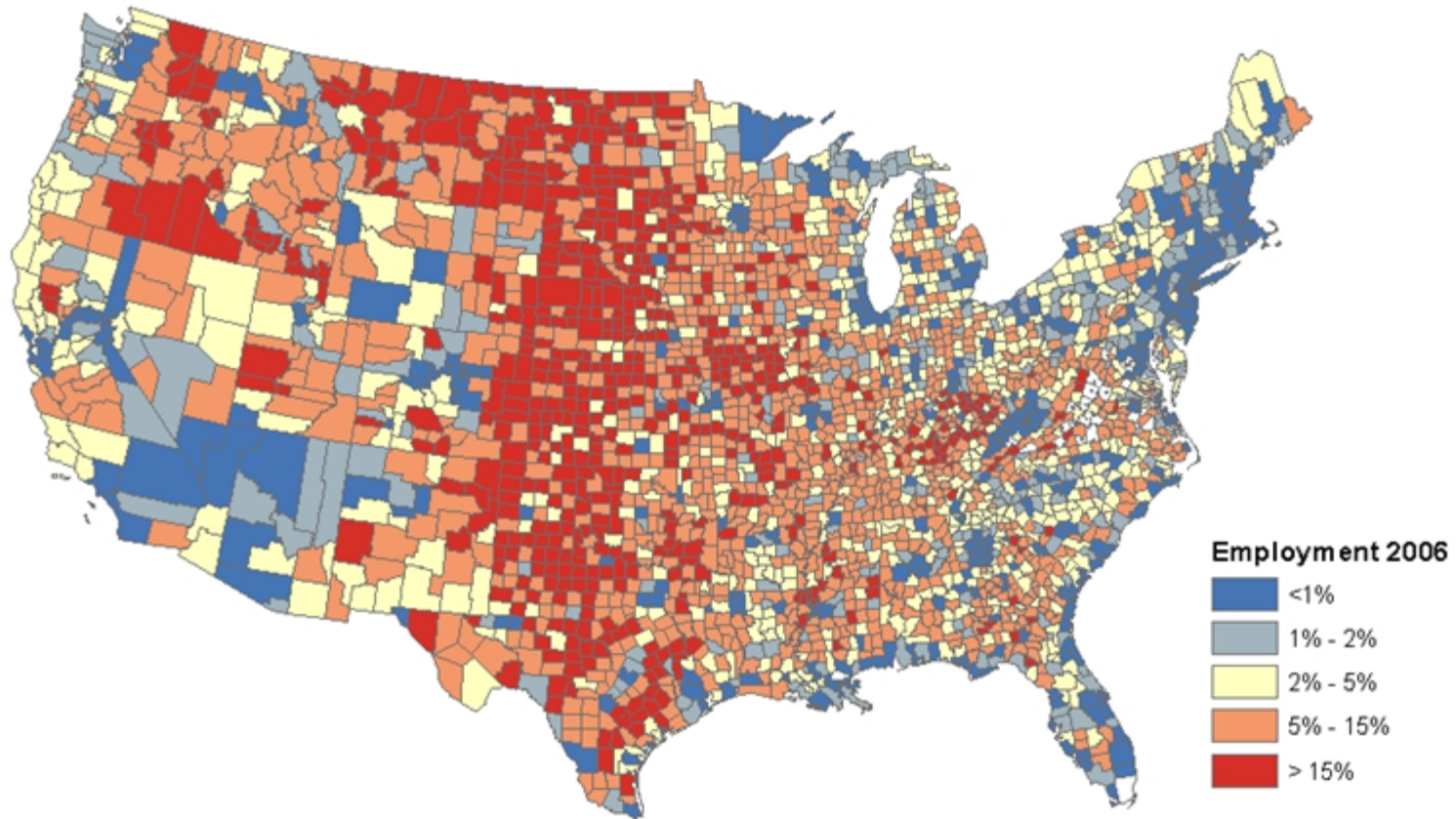
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Percent Farm Employment - 2006



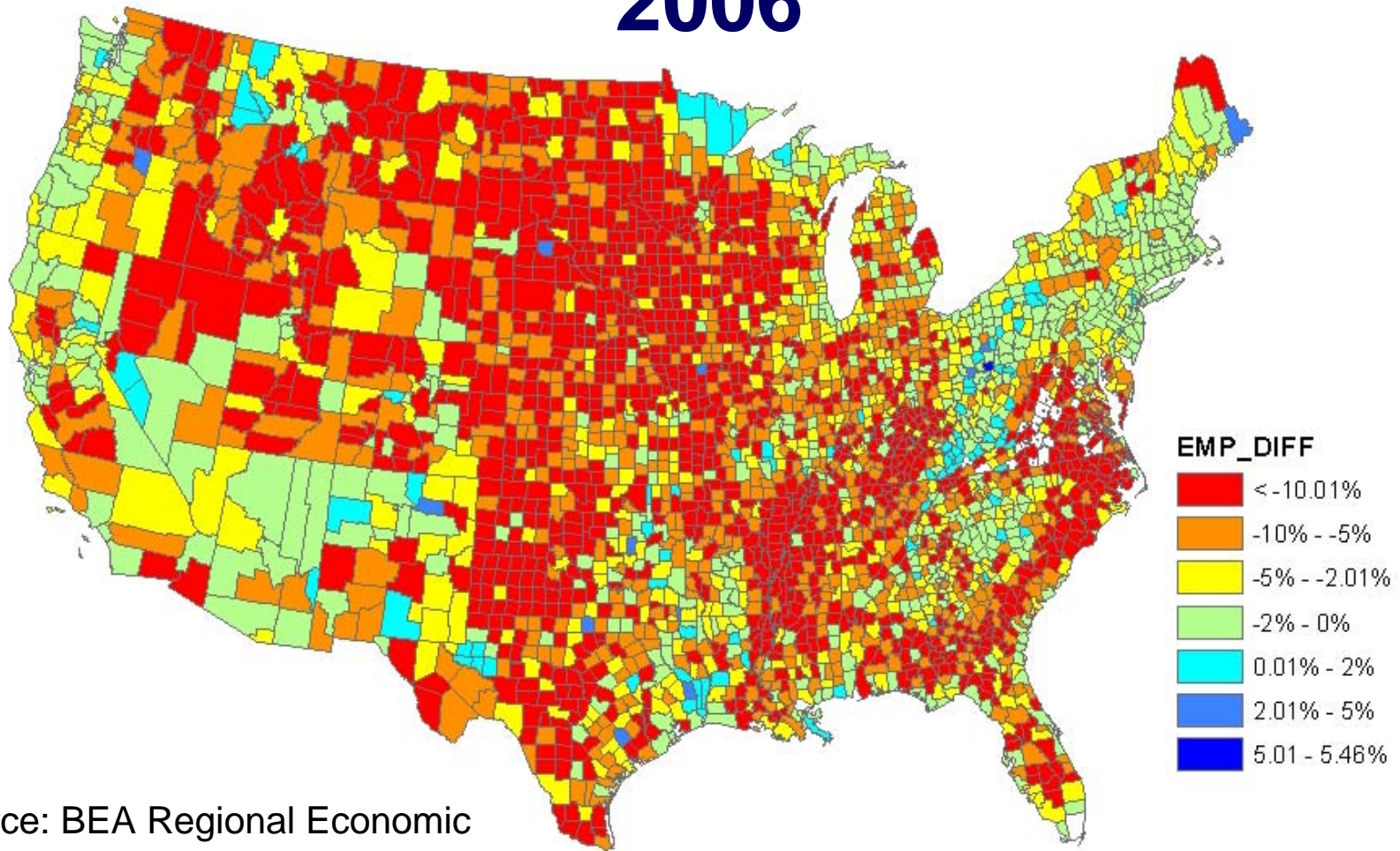
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Employment Difference – 1970 - 2006



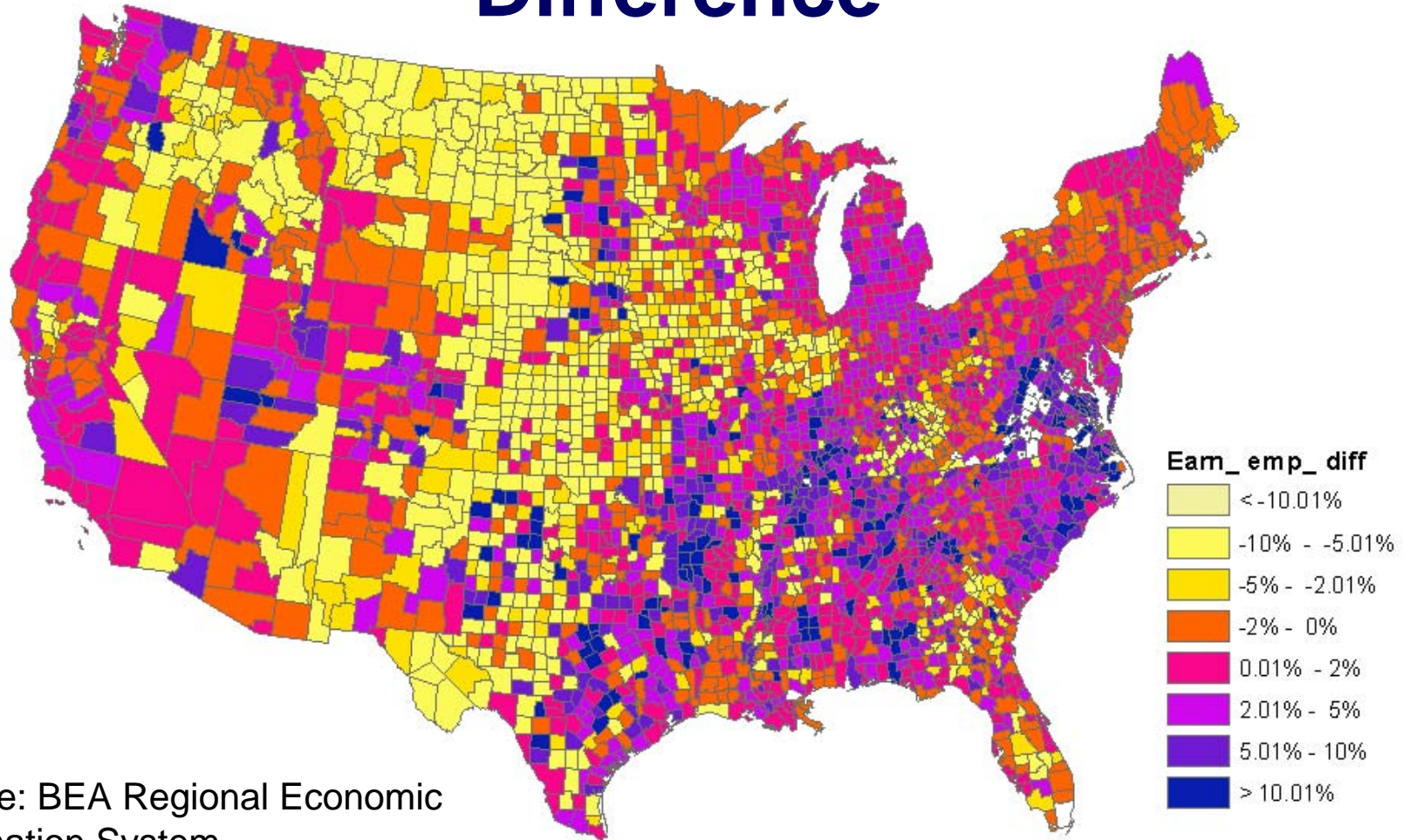
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Earnings Difference – Employment Difference



Source: BEA Regional Economic Information System

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Synthesis

- **Farm Employment and Farm Earnings becoming a smaller proportion of total earnings and employment for most US counties (nothing new)**
- **There is a dichotomy of contracting economic contribution of the farm sector – some more earnings driven, others employment driven**
- **Those counties with the largest percentage of farm dependence also saw some of the largest drops in relative farm contribution**

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A Case Study

- **A case study from southern US Agriculture:**
 - **Cotton Ginning**
- **One of the oldest processing sectors in the US**
 - **Originated with Eli Whitney's invention in 1793**

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Cotton Ginning

- Cotton ginning considered a support activity for agriculture – not a manufacturing sector
- NAICS 115111 – part of the aggregate Agriculture, Forestry, Fishing, and Hunting Sector (NAICS 11)
- Why? Unlike many other agricultural commodities, the farmer never transfers ownership of the cotton to the gin owner

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Cotton Ginning

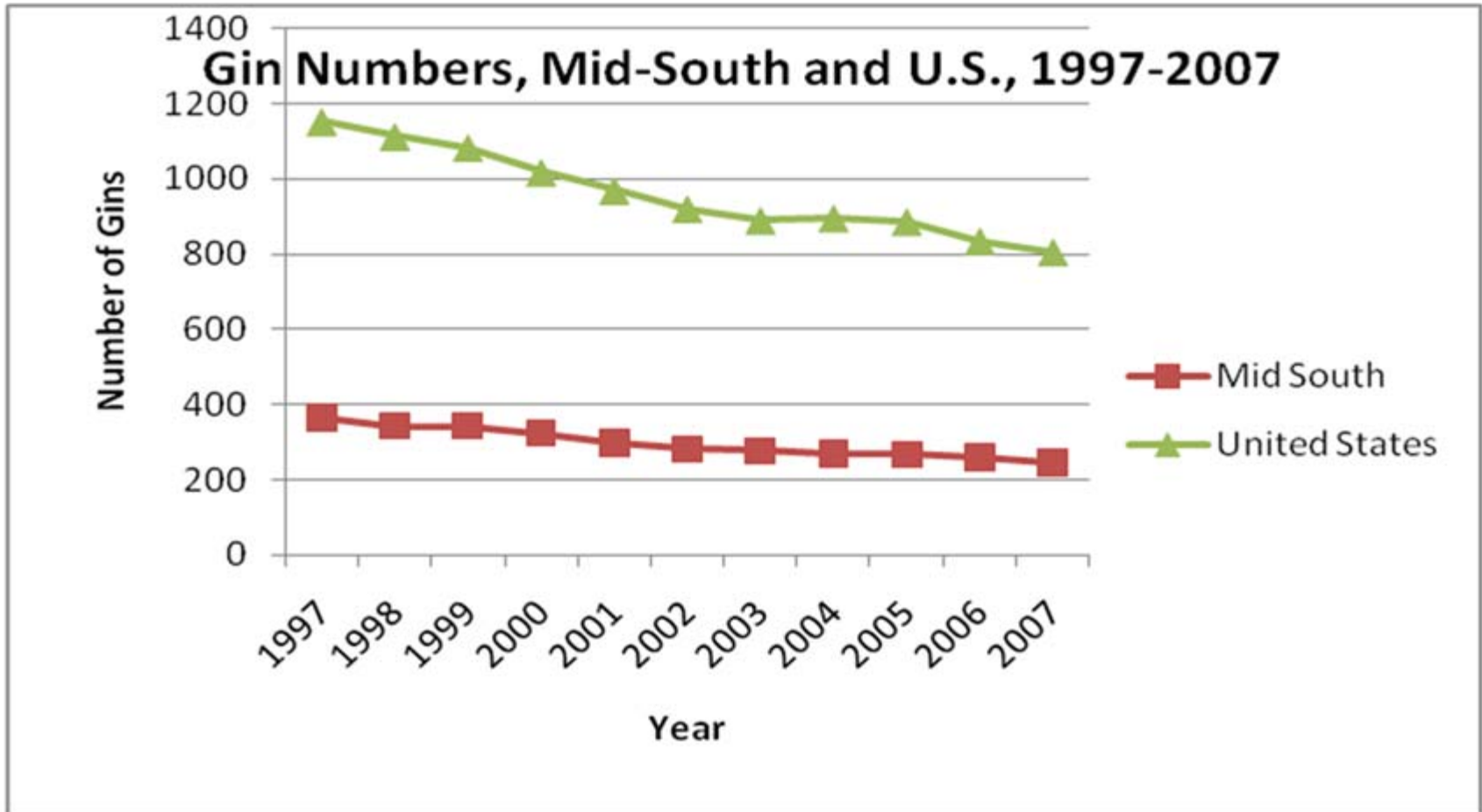
- **The cotton belt – the overall cotton producing region that spreads west from the Carolinas to California, is typically considered having four sub-regions, Southeast, Mid-South, Plains, and West**
- **Cotton acreage in each region is influenced by many factors – but most recently by the price of alternative agricultural commodities**

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Recent Cotton Gin Trends



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Mid-South Cotton Production

State	2005	2006	2007	2008 est.	% Change	Bale Change
AR	2,073,600	2,373,150	1,806,050	1,226,650	-40.84%	-846,950
LA	1,105,650	1,249,000	695,800	279,500	-74.72%	-826,150
MO	860,650	898,950	783,100	698,600	-18.83%	-162,050
MS	2,088,550	2,028,100	1,270,050	654,350	-68.67%	-1,434,200
TN	1,062,650	1,176,950	586,400	520,950	-50.98%	-541,700
Mid-South	7,191,100	7,726,150	5,141,400	3,380,050	-53.00%	-3,811,050

Source: NASS Cotton Ginnings, 2008.

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Cotton Ginning Costs

- **Cotton and ginning costs have become more material input and service intensive – particularly with increased costs on energy and transportation**
 - **Energy costs represent 21% of total variable gin costs**
 - **Transportation costs represent 17% of total variable gin costs**
 - **Seasonal labor represents 24% of total variable gin costs**

Rural Economy Interactions with Cotton Ginning

- Two major areas where rural economy has created challenges for the cotton ginning industry:
 - Transportation costs
 - Labor supply

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Rural Economy Interactions with Cotton Ginning

- **Transportation costs**
 - **Local and state maintained roads and bridges in rural areas deteriorating causing logistical challenges for moving modules from field to gin**
 - **Increased enforcement to maintain remaining road infrastructure**
- **Both dimensions adding to travel distance thereby increasing costs to ginners**

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Rural Economy Interactions with Cotton Ginning

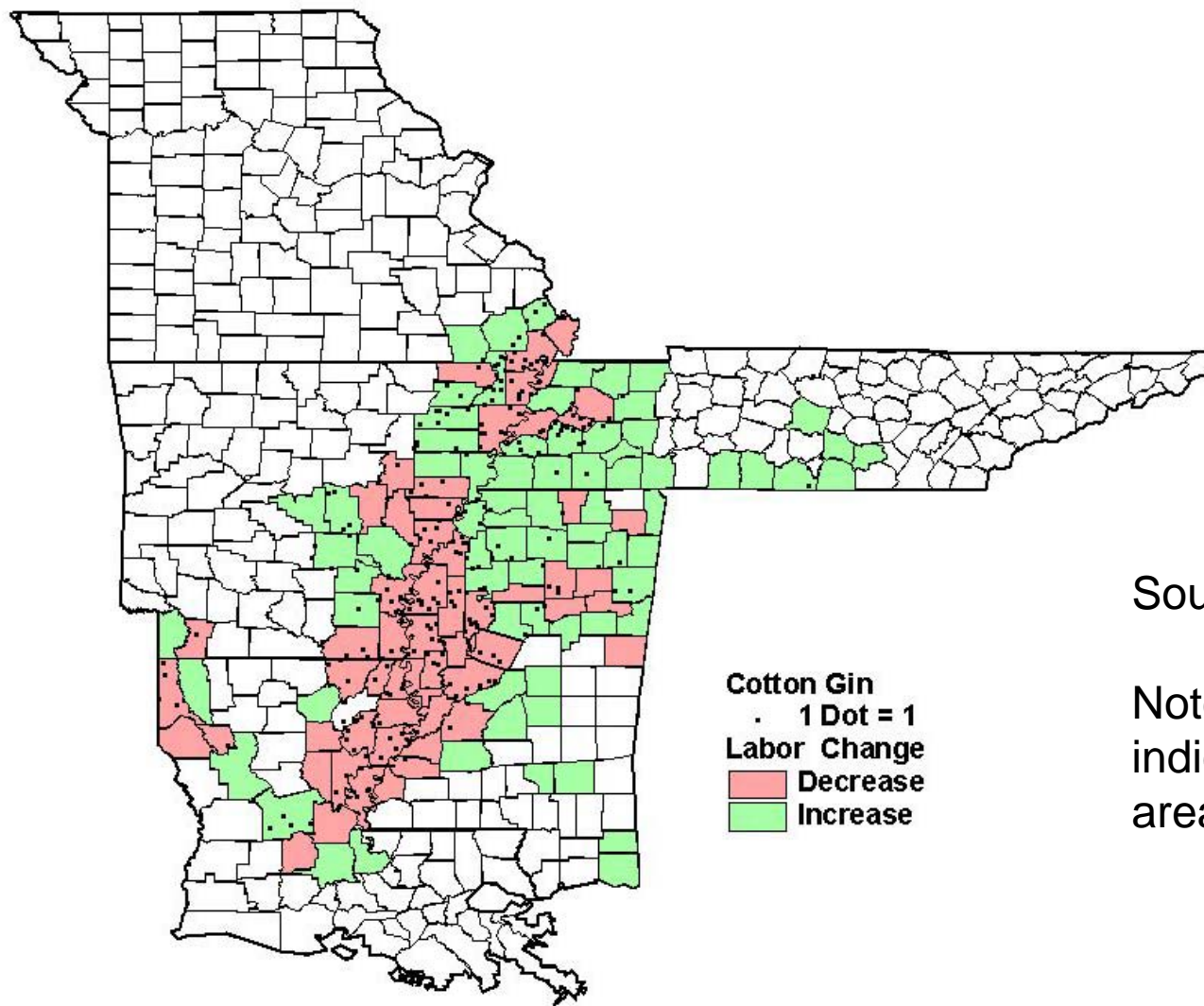
- **Labor Supply**
 - **Decreasing local domestic seasonal labor supply increasing the use of migrant labor**
 - **For many ginners in the Mid-South, migrant labor represents over 80% of total seasonal labor**

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Labor Supply Change 1985-2005



Source: BLS and NASS.

Note: Counties shaded indicate cotton producing areas.

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Rural Economy Interactions with Cotton Ginning

- **Labor Supply**
 - Yet, seasonal migrant labor is expensive through transaction costs. Approximately 92 item check off list required of ginners before they can employ migrant labor
 - To attract migrant labor, many ginners supply housing
 - When migrant labor is too costly, some ginners use inmate labor by participating with sheriffs in county work release programs

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Rural Economy Implications from Cotton Ginning

- In the short-term, we will see additional substitution of capital for labor
 - Tilt value-added distribution more towards owners of capital and away from labor
 - Less of an issue for the rural economy impacted by cotton ginning since over 75% of cotton gin ownership is in the same county as the gin establishment
- Gins that are fully depreciated or less efficient are likely to continue to shut down from a combination of labor supply constraints and transportation cost challenges

Rural Economy Implications from Cotton Ginning

- In the long term, inter-generational transfer of ownership will result in a larger percentage of remaining gins being owned by non-local residents creating more leakages on the local economy
- If reduced gin numbers create a processing capacity gap, then fewer commodity production alternatives for farmers potentially reducing long-term earnings potential for rural communities

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Concluding Points for Rural Farm Economy Interaction

- **Even with current global economic conditions, the two most important factors in my mind that the non-farm rural economy can do to improve the rural farm economic conditions long term:**
 - **Reduce transportation costs**
 - **Improve labor supply retention**

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Long-Term Rural Non-Farm Strategy: Transportation Costs

- **Transportation Costs**
 - **Conceptual framework (Von Thunen)**
 - **Reduce transportation costs through infrastructure investment**
 - **Identify new higher “value-added” niche commodities or production practices that can increase the percentage of farm earnings extracted from urban residents**

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Long Term Rural Non-Farm Strategies to Support the Farm Economy

- Labor supply retention
- Conceptual framework (Kilkenny's 1998 version of Krugman Core-Periphery Model)
 - Increase attractiveness of rural communities to retain and attract new residents
 - Tailor policy towards mid-size rural communities to help maintain threshold level of services and labor force

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Conclusion

- **Farm economy and rural economy interconnected**
- **Rural development policy should consider a strategy that focuses not just on how non-farm rural investments benefits the non-farm rural economy but also the farm economy**

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The End

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