Measuring Return on Investment of Postsecondary Credentials: State vs. Local Earnings Thresholds

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SSTAR Lab

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Overview

- Brief background
- Data and tool
- Findings
- Summary

How is ROI used in policy?

- Earnings and economic return on investment (ROI) are central to higher education policy…but how should it be measured?
- Gainful Employment (GE) regulations is one effort…and has been contested over the years.
- "Threshold-based" measures are important for policymaking…and create winners and losers.

Potential ways to measure ROI

- Equitable Value Commission:
  - Effort by multiple higher education stakeholders to improve ROI definitions
  - Three key thresholds measured earnings at *state* level:

Minimum Economic Return	Earnings Premium	Economic Mobility
Median earnings of high school graduates in the state + the total net price amortized over 10 years	Median earnings for credential level based on institution's predominant degree awarded	Earnings high enough to enter 60th percentile or above regardless of credential level

Geographic differences in ROI

- Main reasons for using local earnings when calculating threshold-based ROI:
  - Adjusts for differences in cost-of-living
  - Captures more variation in earnings
  - Treats cross-state metro areas fairly
  - Students stay nearby, even after graduating
  - Local economy affects employment and earnings

Sources: *Chuan, 2022; Foote & Grosz, 2019; Peach & Adkisson, 2020*

Geographic differences in ROI

	High school earnings	Associates degree earnings	Bachelors degree earnings	60th percentile earnings
		State-level measure		
Minimum	$27,131	$34,959	$43,201	$40,069
Median	$30,997	$41,473	$55,935	$48,943
Maximum	$36,626	$52,439	$65,257	$64,802
Range	$9,495	$17,479	$22,056	$24,733
		Local-level measure		
Minimum	$19,440	$16,956	$27,001	$28,261
Median	$31,088	$40,060	$53,717	$48,072
Maximum	$46,612	$63,306	$88,176	$87,141
Range	$27,171	$46,349	$61,175	$58,880

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Geographic differences in ROI

Which institutions benefit from using local earnings when calculating ROI?

Data and measures

Data sources

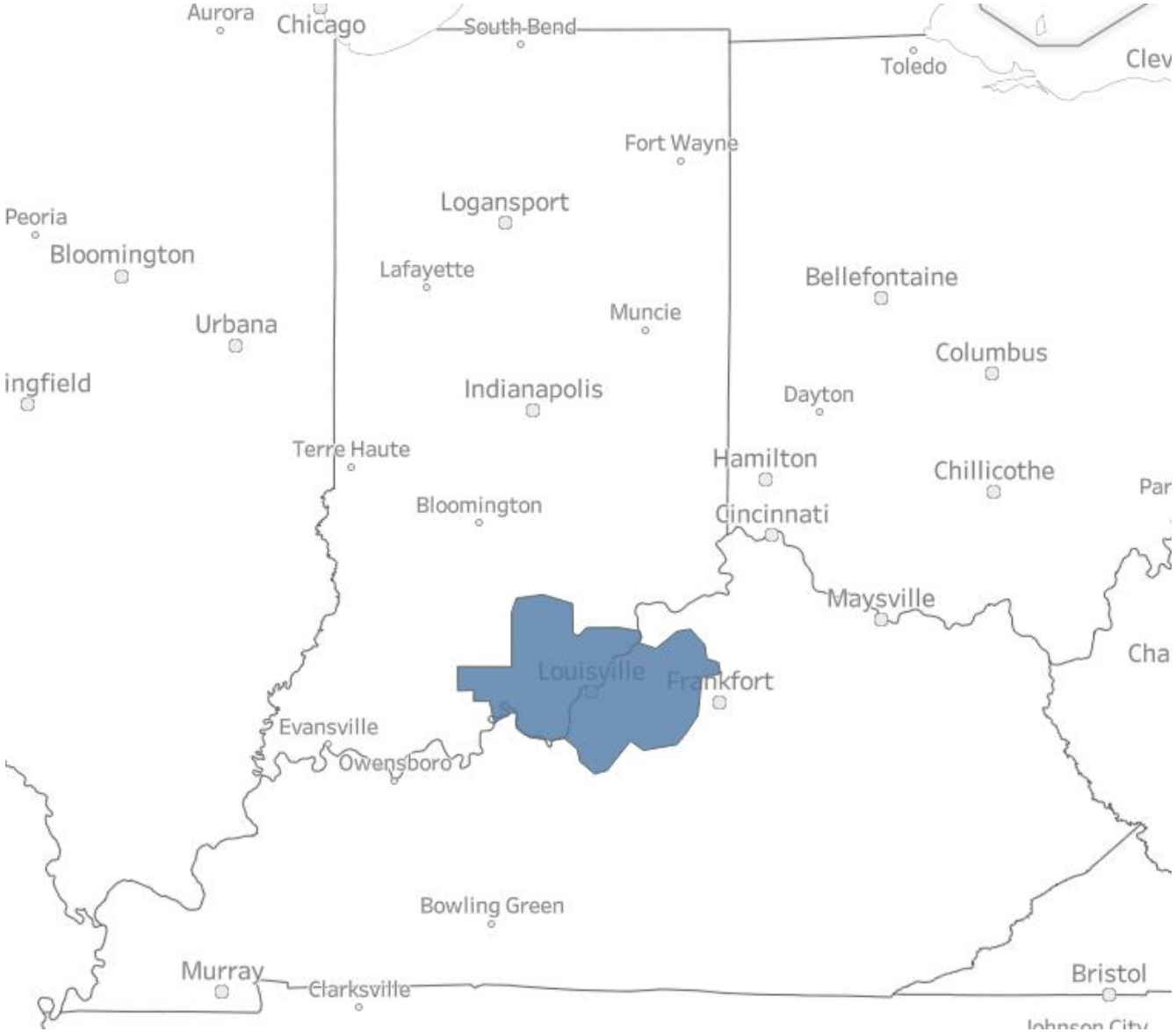
- Institutional data from IPEDS and the College Scorecard
- Comparison earnings data from the Census microdata extracted from IPUMS
  - Earnings of 22-40-year-olds not enrolled in any type of schooling, by highest degree earned (HS, AA, BA)
  - Crosswalk across geographies from Public Use Microdata Areas (PUMAs), to counties, to commuting zones
  - Weight earnings estimates based on age-specific population

Defining "local area"

- We use the U.S. Department of Agriculture's (USDA) commuting zones
  - Clusters of counties based on Census journey-to-work data
  - They represent an area with a shared labor market and economy

Total counts in sample

- Total # of Institutions with Earnings: 4,731
- Total # of Institutions with Costs: 4,363
- Total # of Commuting Zones: 625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Chillicothe
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Owensboro
Bowling Green
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Clarksville
Bristol
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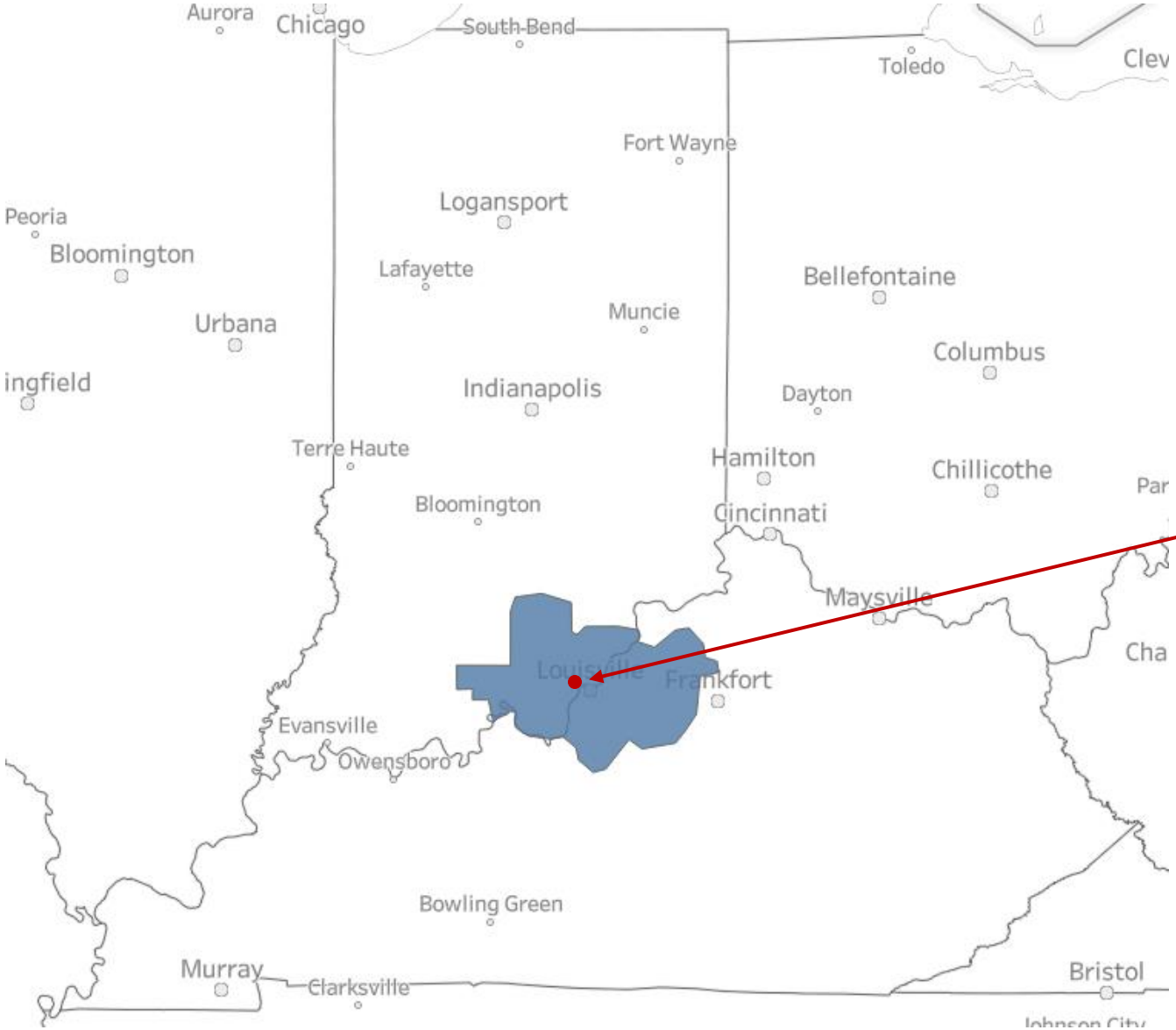
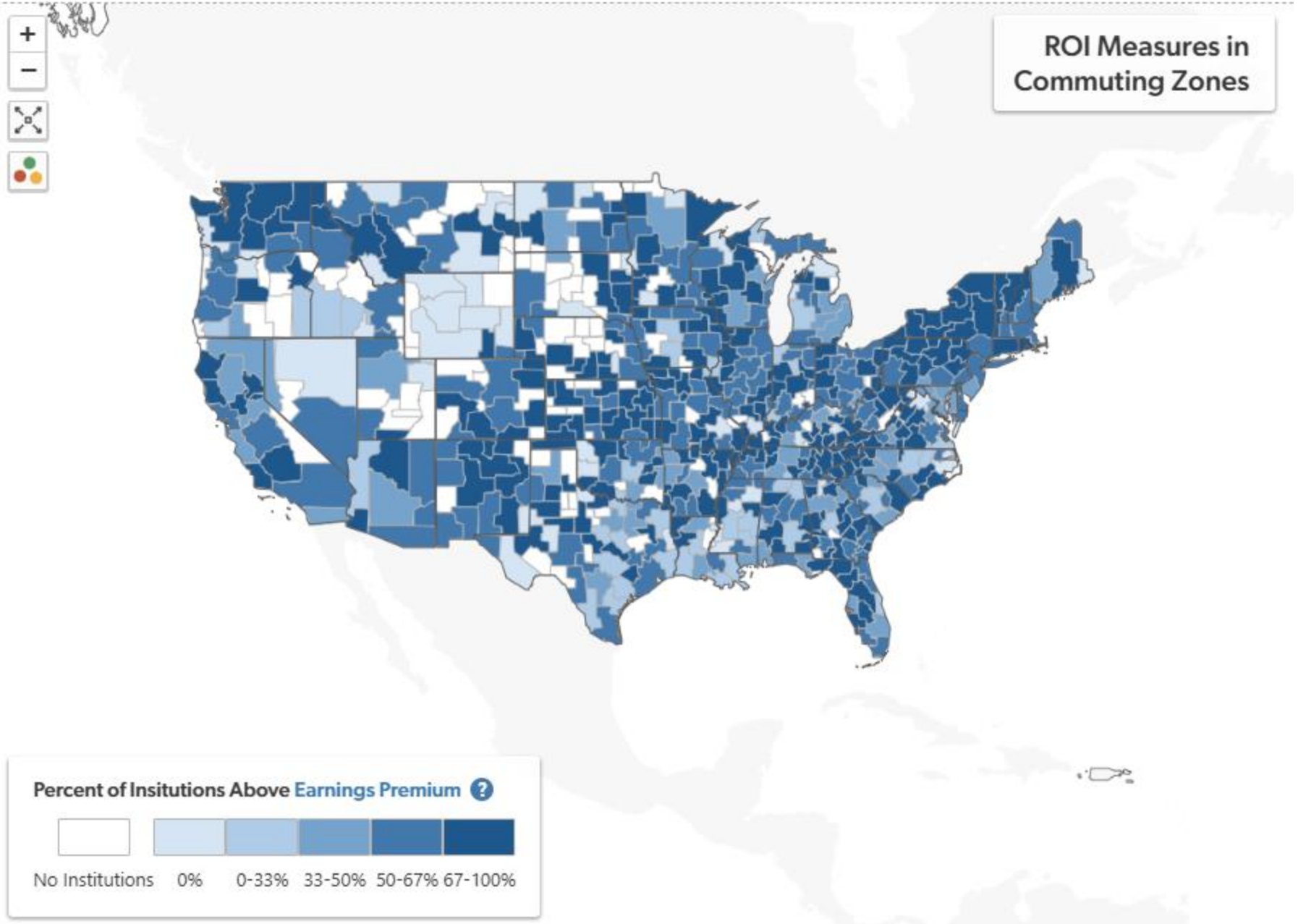
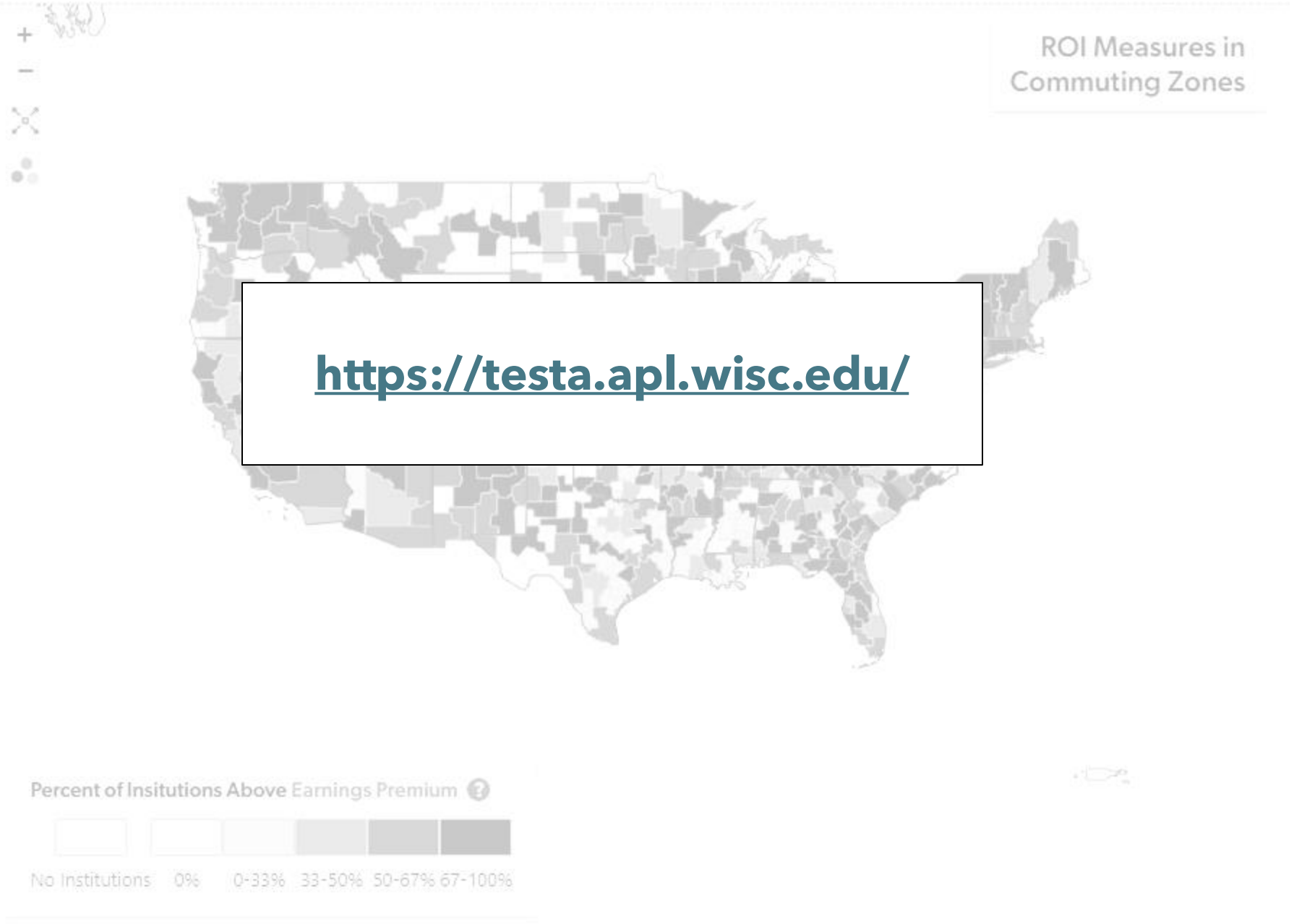


New Albany, Indiana


ROI Measures in Commuting Zones
Percent of Insitutions Above Earnings Premium
No Institutions
0%
0-33%
33-50%
50-67%
67-100%



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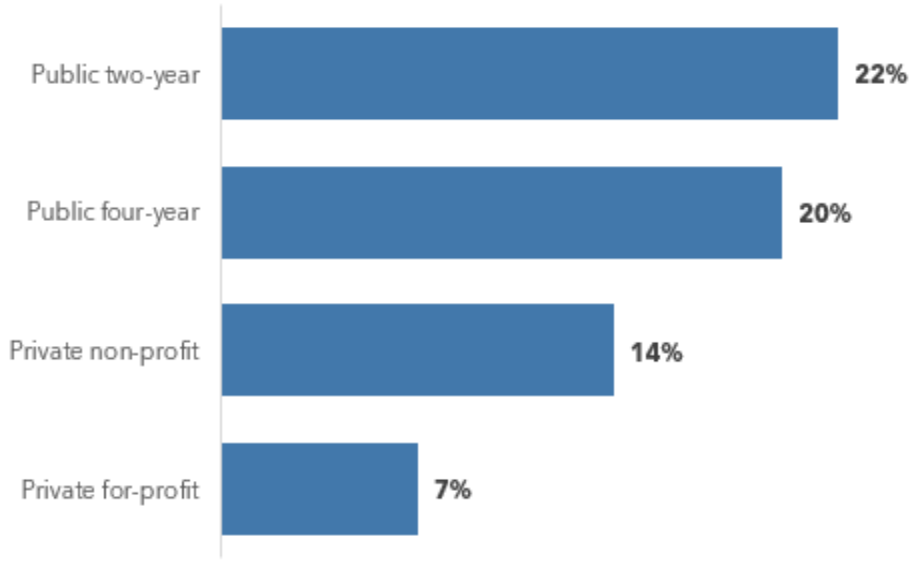
Finding #1: Local earnings affect hundreds of institutions…

- Nationwide, **751** institutions are positively affected by using local rather than state-level earnings when calculating the Equitable Value Commission's ROI metrics
- About **1 in 5** public institutions are positively affected

Share of institutions benefitting from using local earnings in ROI metrics



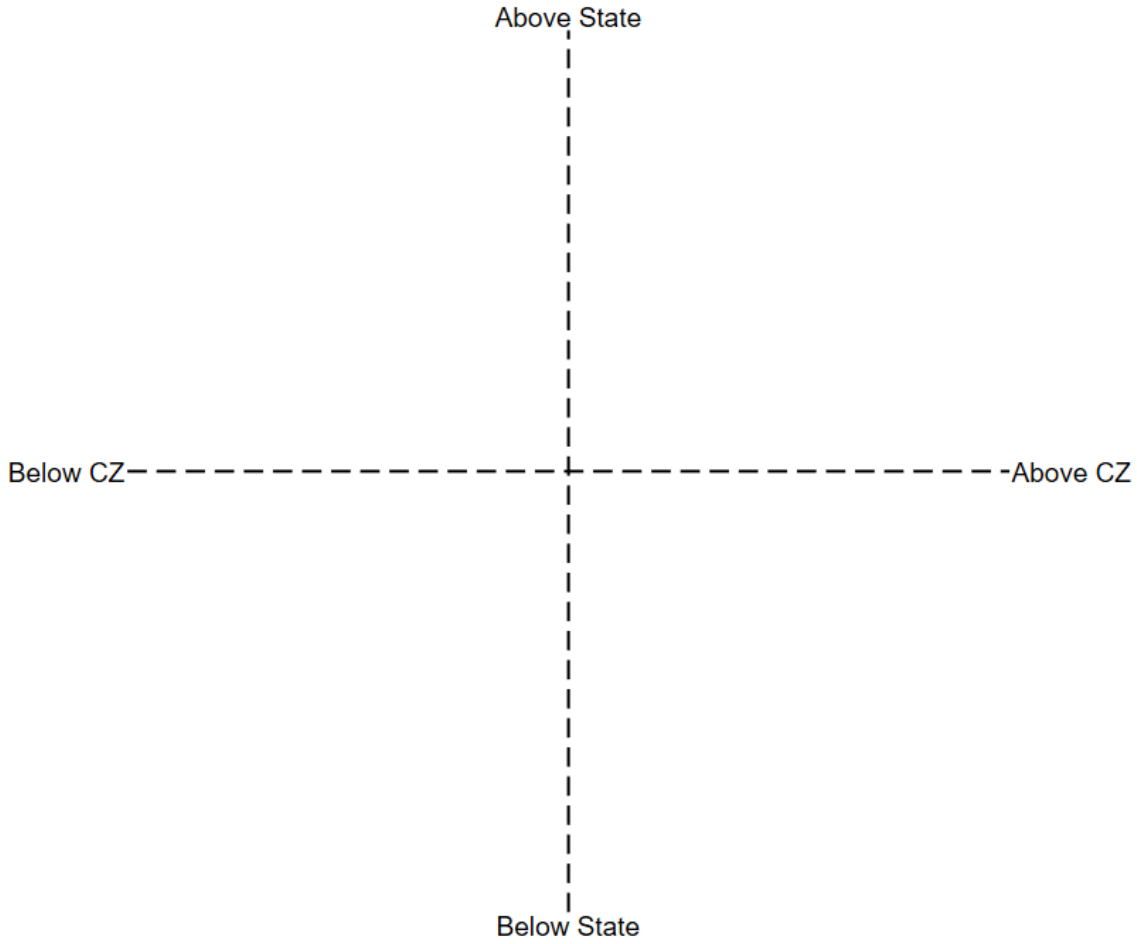
Finding #1: Local earnings affect hundreds of institutions…and almost every state

	Number of institutions	Number of states
Minimum Economic Return	82	32
Earnings Premium	440	44
Economic Mobility	322	43
Total (unduplicated)	**751**	**46**

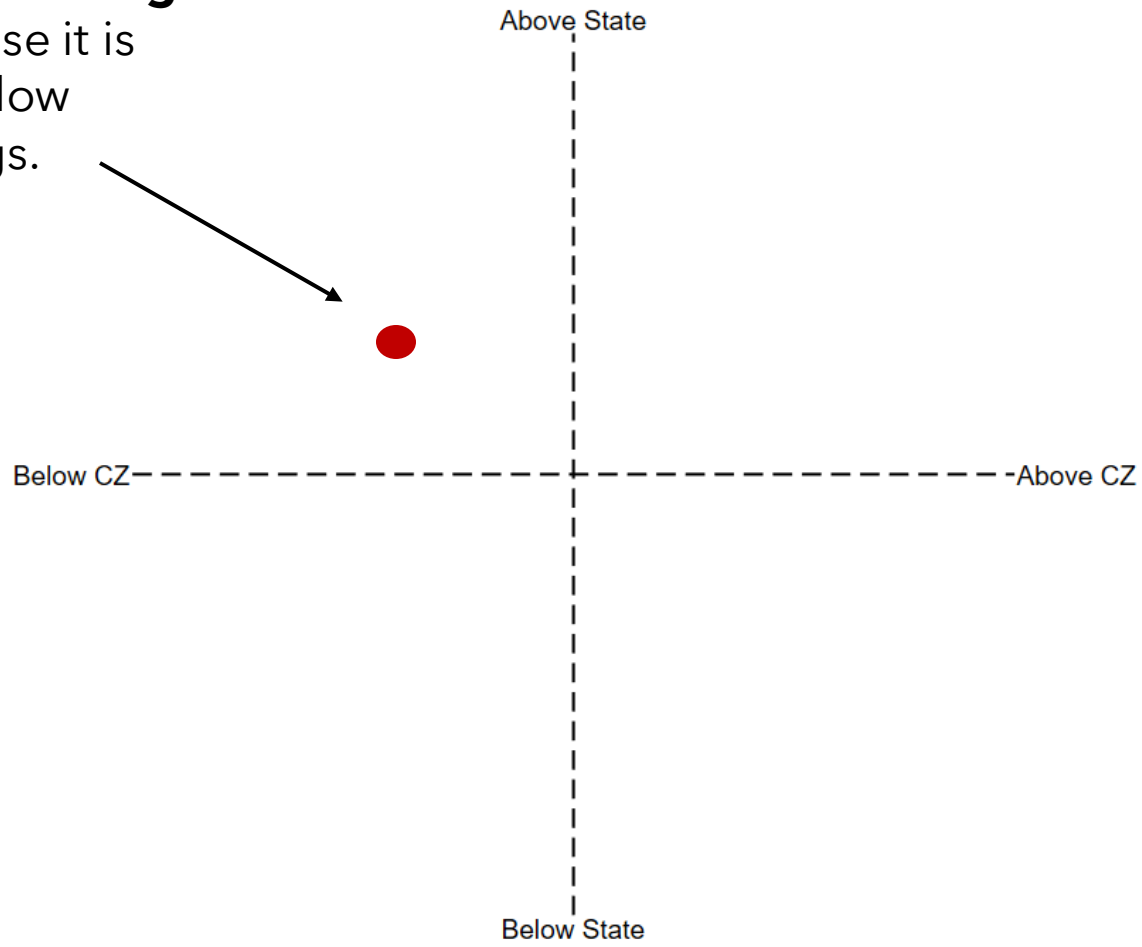
All but four states (AK, NV, RI, WY) have an institution positively affected by using local earnings measures

Finding #2: Thin margins can shape results

- Being **just $1 above or below** a threshold can make all the difference
- Most institutions will **always be above** or **always be below**, regardless of whether state or local earnings are used
- But for those on the margins, **local measures can help**


Above State
Below CZ
Above CZ
Below State

This institution **benefits from using state-level earnings** because it is above state median and below commuting median earnings.



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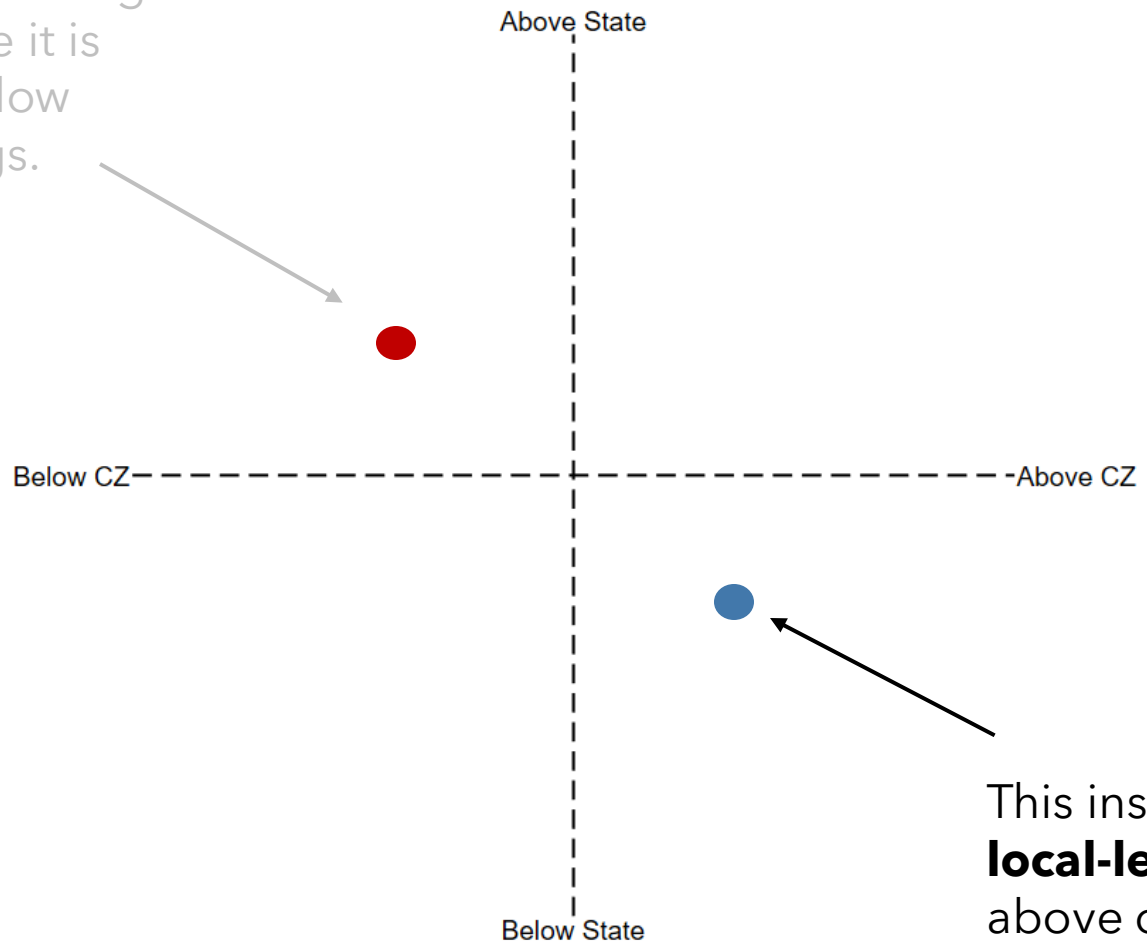
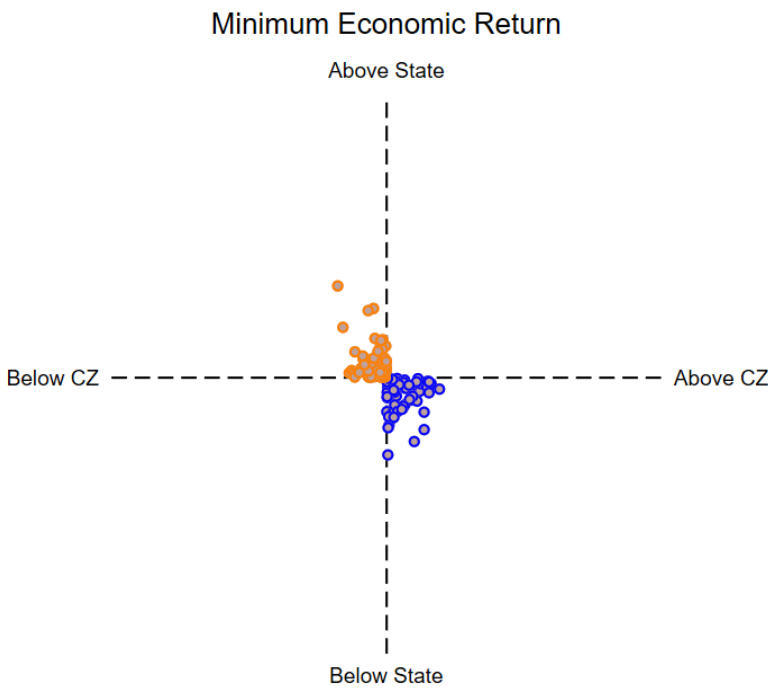
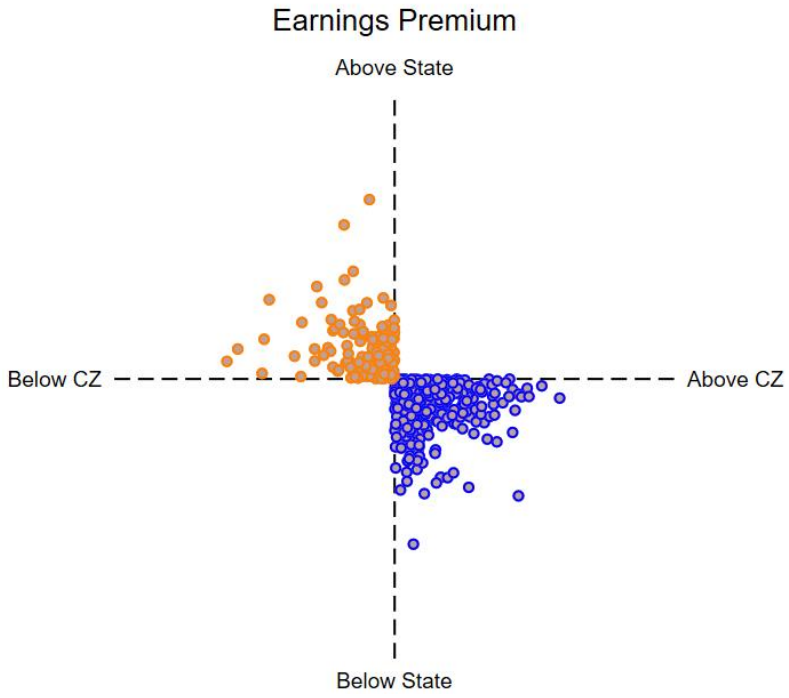
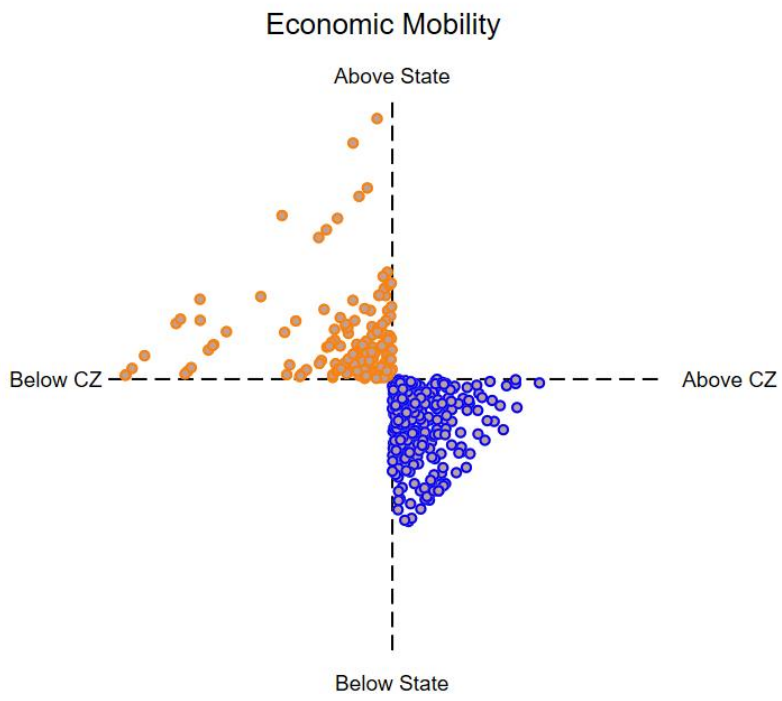


This institution **benefits from using local-level earnings** because it is above commuting zone median and below state median earnings.

Comparing state and local thresholds







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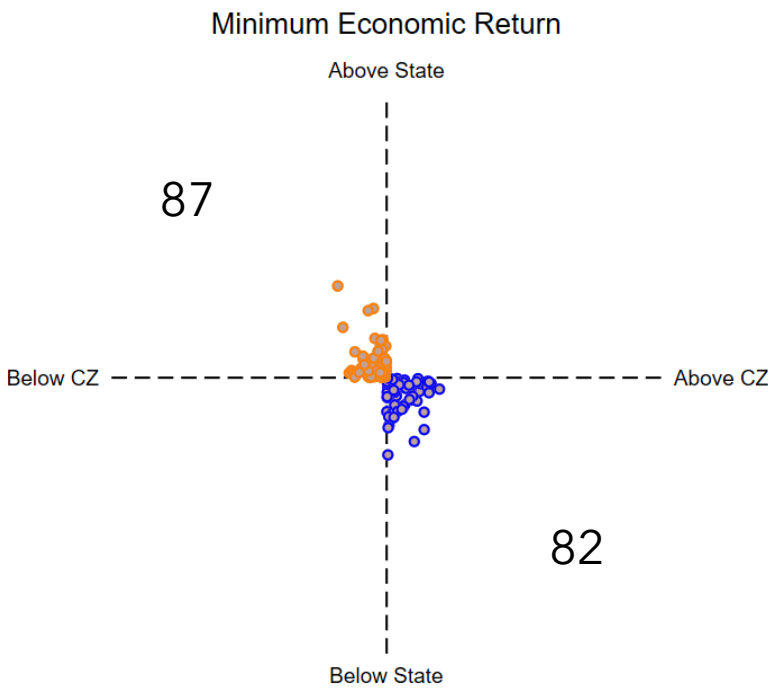

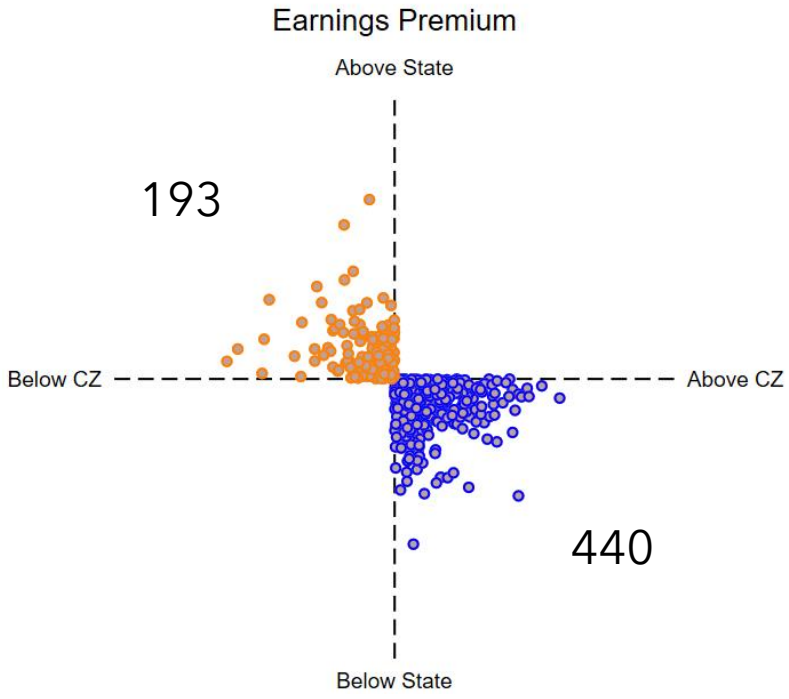

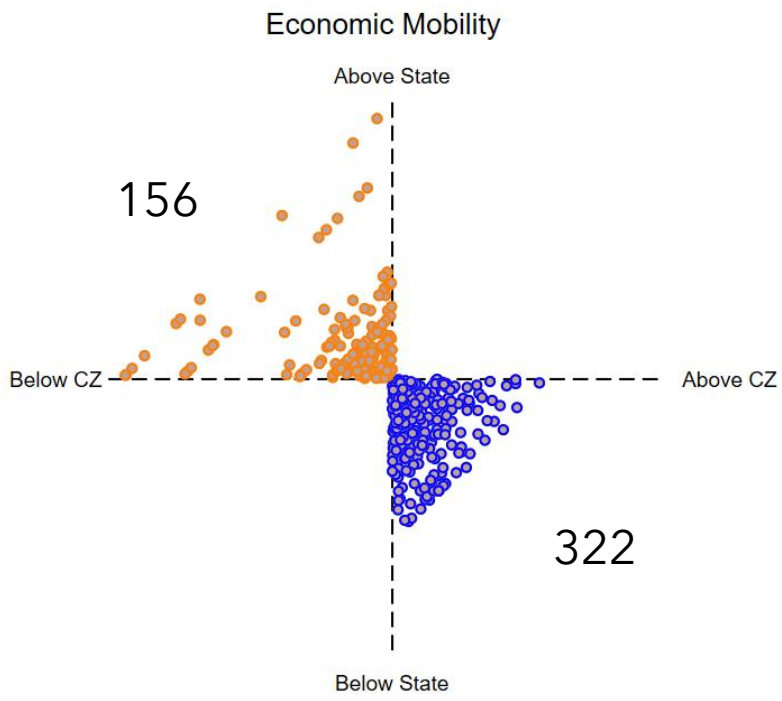

Finding #3: Using local earnings helps broad-access institutions

- Among those institutions benefitting from local earnings thresholds, we find **more community colleges**, **higher admission rates**, higher shares of **Pell Grant recipients**, and **lower net prices**
- These institutions are in **lower-income**, **higher-poverty** areas
- **Moderately rural areas** benefit especially from local earnings for the **earnings premium** and **economic mobility** thresholds

Institutions benefitting from using local earnings

	Minimum Economic Earnings	Earnings Premium	Economic Mobility
Total number of institutions	82	441	324
Public two-year	21	109	187
Public four-year	1	105	31
Private non-profit	17	157	64
Private for-profit	43	70	42
Minority Serving Institution	13	94	69
Average enrollment size	1,227	2,741	2,459
Admission rate	95.4%	87.8%	93.6%
Percent Pell	51.2%	44.0%	40.0%
Percent STEM majors	5.1%	9.2%	7.9%
Net price	$16,365	$15,309	$13,110
Median earnings (10 years post-entry)	$35,210	$45,601	$45,678

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Commuting zones benefitting from using local earnings

	Minimum Economic Earnings	Earnings Premium	Economic Mobility
Total number of commuting zones	54	226	184
High school earnings	$27,469	$29,133	$28,649
Associate degree earnings	$38,916	$37,801	$38,152
Bachelor's degree earnings	$47,749	$46,387	$45,782
60th percentile earnings	$43,159	$41,952	$40,786
Average population size	1,461,102	787,742	724,299
Share of population: Black	12%	11%	9%
Share of population: American Indian / Alaskan Native	3%	1%	2%
Share of population: Hispanic	15%	12%	12%
Share of population: Children in Poverty	21%	21%	20%
Share of population: Rural	31%	47%	55%

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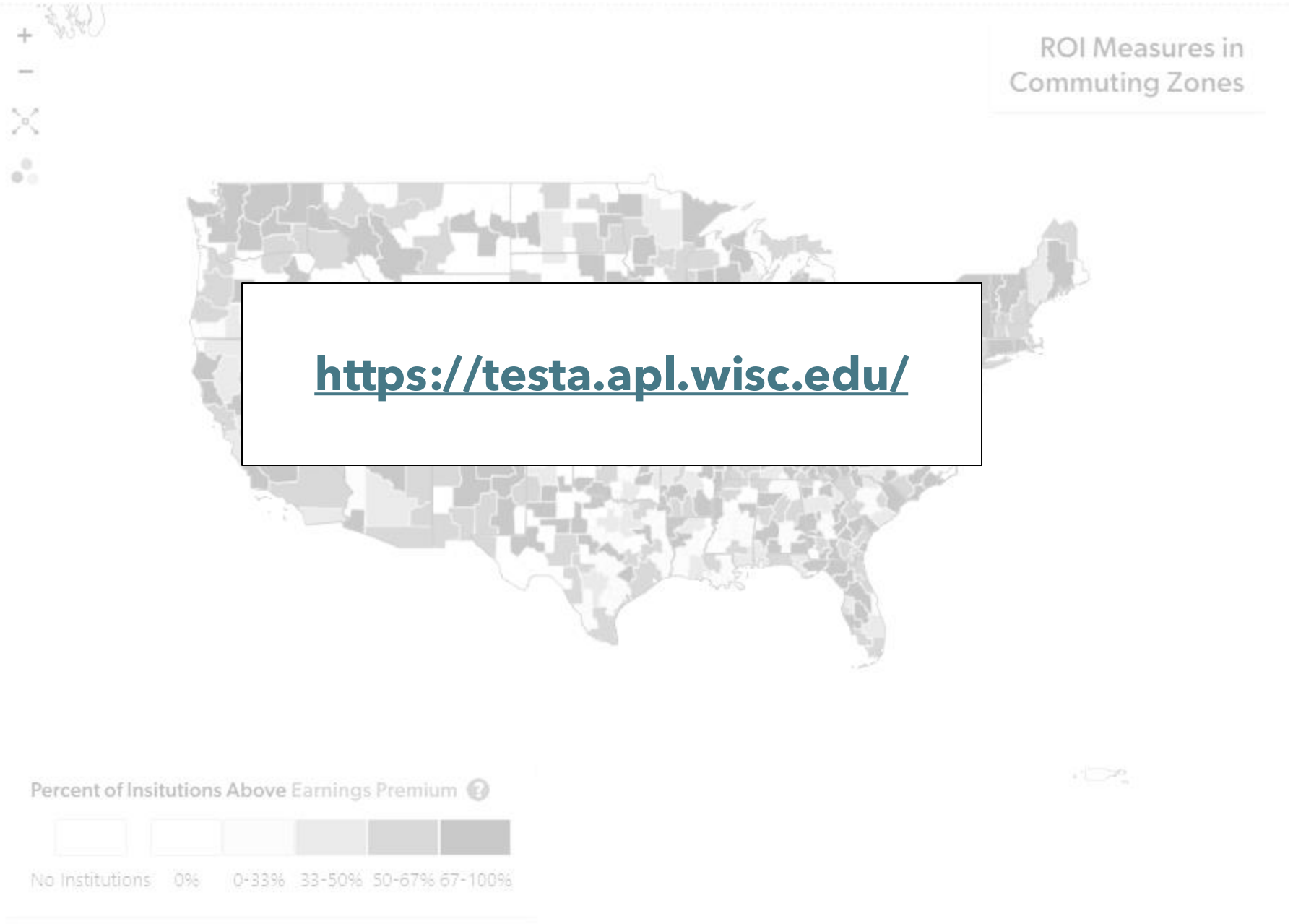

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Summary

Three main findings:

1. Using local earnings results in hundreds (~15%) of institutions nationwide and in 46 states "passing" ROI thresholds

2. Thin margins matter when calculating threshold-based ROI metrics, so erring on the side of "local" can help more than it harms

3. Public broad-access institutions in relatively low-income regions are often advantaged by using local earnings when calculating threshold-based ROI

Summary

- Policy considerations:
  - State-level earnings can be viewed as unfairly penalizing lower-income regions and their institutions
  - Alternative options:
    - Consider using local earnings as the default/primary measure
    - Consider "two-step" process, passing state and/or local measures
- Next steps:
  - Full report and finished web tool releases in October
  - Academic journal article examining the role of geography in explaining ROI and earnings variation coming soon

Thank you!

Please contact Nick Hillman, nwhillman@wisc.edu to follow up.