



SPEARS
SCHOOL OF BUSINESS

County Employment Growth in Oklahoma

by

Hongbo Wang

Associate Director

Center for Applied Economic Research

Oklahoma State University

Focus of Analysis

- Examine total employment growth at the county level
- Calculate growth rates over history and for forecasts
- County forecasts based on forecasts of national employment and energy prices and historical statistical relationships to county employment; historical QCEW data through 2015Q1
- Long-run trends not related to national employment or energy prices projected forwards

Periods Examined

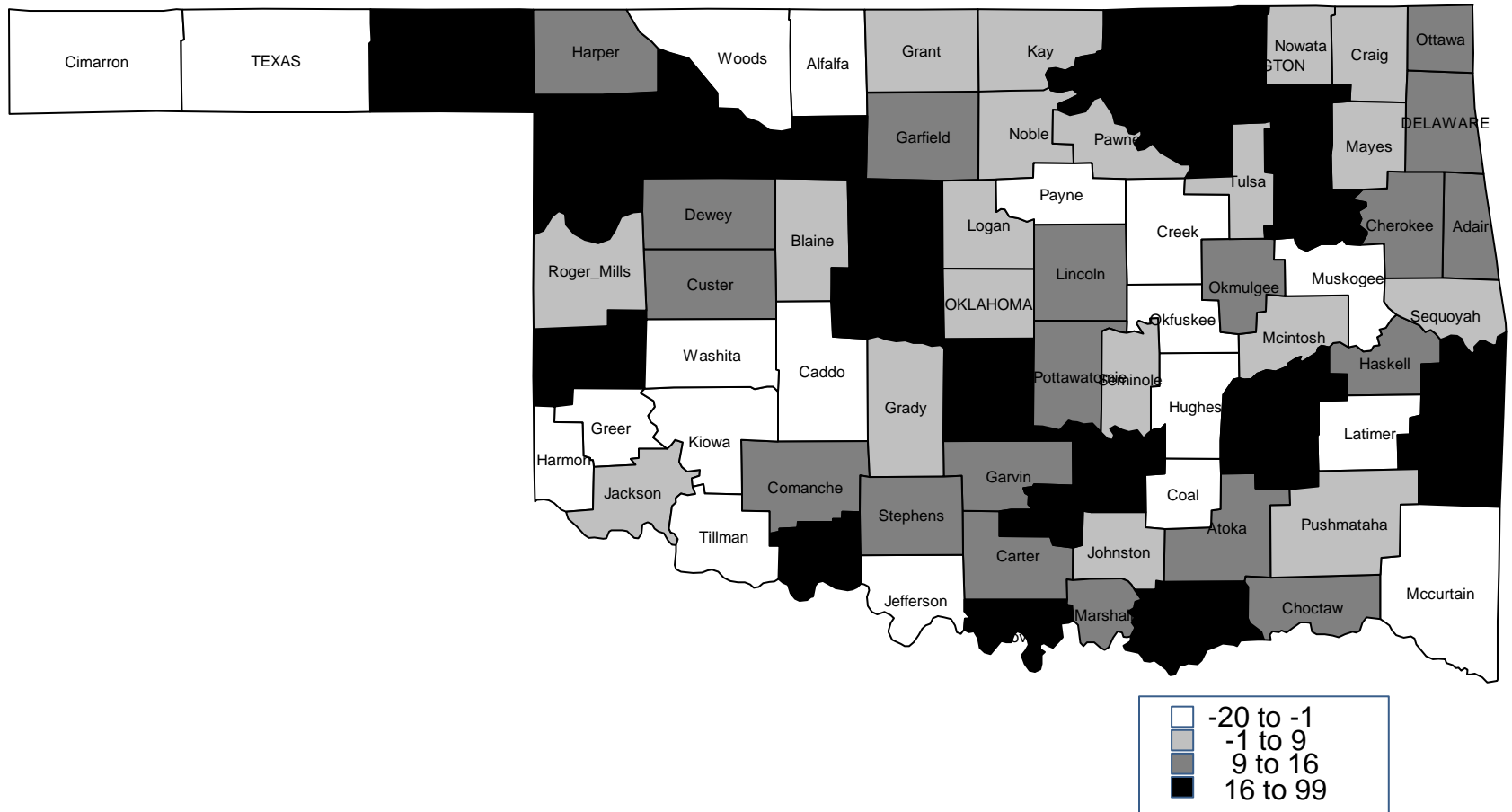
- 2001-2008: prior U.S. economic expansion
- 2008-2010: recession period
- 2010-2014: current economic expansion
- 2014-2016: short-run forecasts
- 2016-2025: long-run forecasts

Correlations of County Growth between Periods

	2001-2008	2008-2010	2010-2014	2014-2016	2016-2025
2001-2008	1.00				
2008-2010	0.02	1.00			
2010-2014	0.23	0.12	1.00		
2014-2016	0.45	0.01	0.32	1.00	
2016-2025	0.82	0.23	0.61	0.57	1.00

- Pattern during expansion (2001-2008) uncorrelated with that during recession (2008-2010) ($r=0.02$)
- 2001-2008 pattern slightly correlated with 2010-2014 pattern ($r=0.23$), more so with 2014-2016 ($r=0.45$) and highly correlated with 2016-2025 ($r=0.82$)
- Forecast is for past growth patterns to re-emerge in the long-run

2001-2008 Employment Growth (%)



2001-2008 Analysis

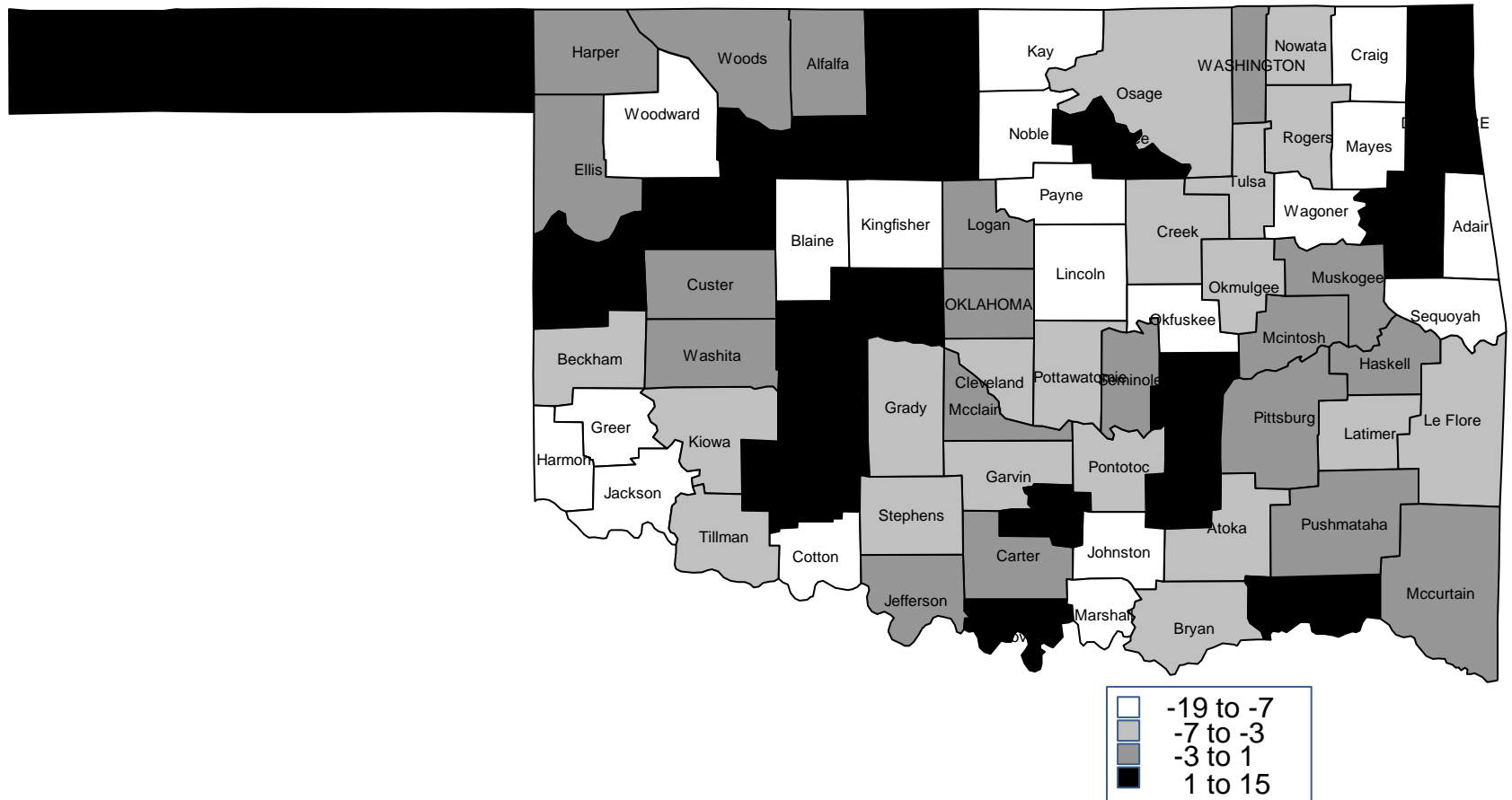
County	Percent
Statewide Average (77)	10.01
Oklahoma County	2.13
OKC Metro	10.74
Tulsa County	2.15
Tulsa Metro	12.91
Lawton Metro	14.44
Nonmetro-Metro Adjacent (25)	7.83
Farm (15)	5.40
Energy (16)	7.31
Manufacturing (12)	15.07
Federal/State Government (14)	11.61
Persistent Poverty (14)	2.01

Strongest Growth: Metros and Manufacturing Counties

Weakest Growth: Oklahoma and Tulsa Counties; Persistent Poverty Counties

Energy Counties had below average growth, horizontal drilling (fracking) took off nationally in 2005

2008-2010 Employment Growth (%)



2008-2010 Analysis

County	Percent
Statewide Average (77)	-2.81
Oklahoma County	-2.51
OKC Metro	-3.53
Tulsa County	-5.31
Tulsa Metro	-5.34
Lawton Metro	3.99
Nonmetro-Metro Adjacent (25)	-4.82
Farm (15)	-1.79
Energy (16)	-1.23
Manufacturing (12)	-4.31
Federal/State Government (14)	-2.58
Persistent Poverty (14)	-2.32

Hardest Hit by Recession: 25 counties adjacent to metro areas; Tulsa metro

Manufacturing Counties lost growth advantage

Hurt the Least: Lawton Metro Area; Energy Counties

2010-2014 Analysis

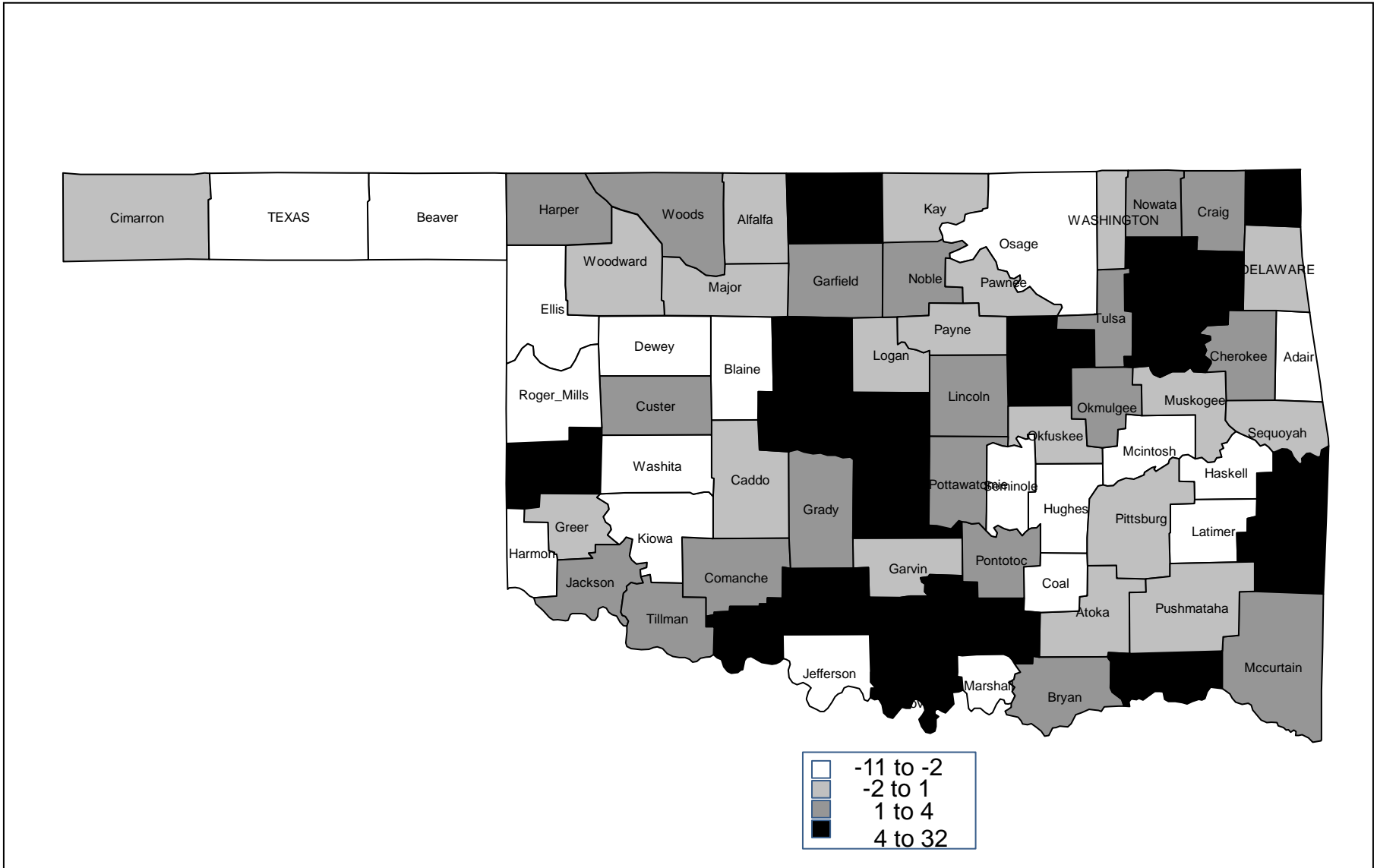
County	Percent
Statewide Average (77)	6.59
Oklahoma County	8.00
OKC Metro	9.74
Tulsa County	4.63
Tulsa Metro	9.65
Lawton Metro	-0.53
Nonmetro-Metro Adjacent (25)	1.48
Farm (15)	8.45
Energy (16)	12.28
Manufacturing (12)	7.95
Federal/State Government (14)	3.10
Persistent Poverty (14)	0.14

OKC and Tulsa metros
outperform state; Energy
Counties perform the best

Lawton is the only area to
decline

Persistent Poverty Counties
once again performing worse

2014-2016 Forecasted Employment Growth (%)



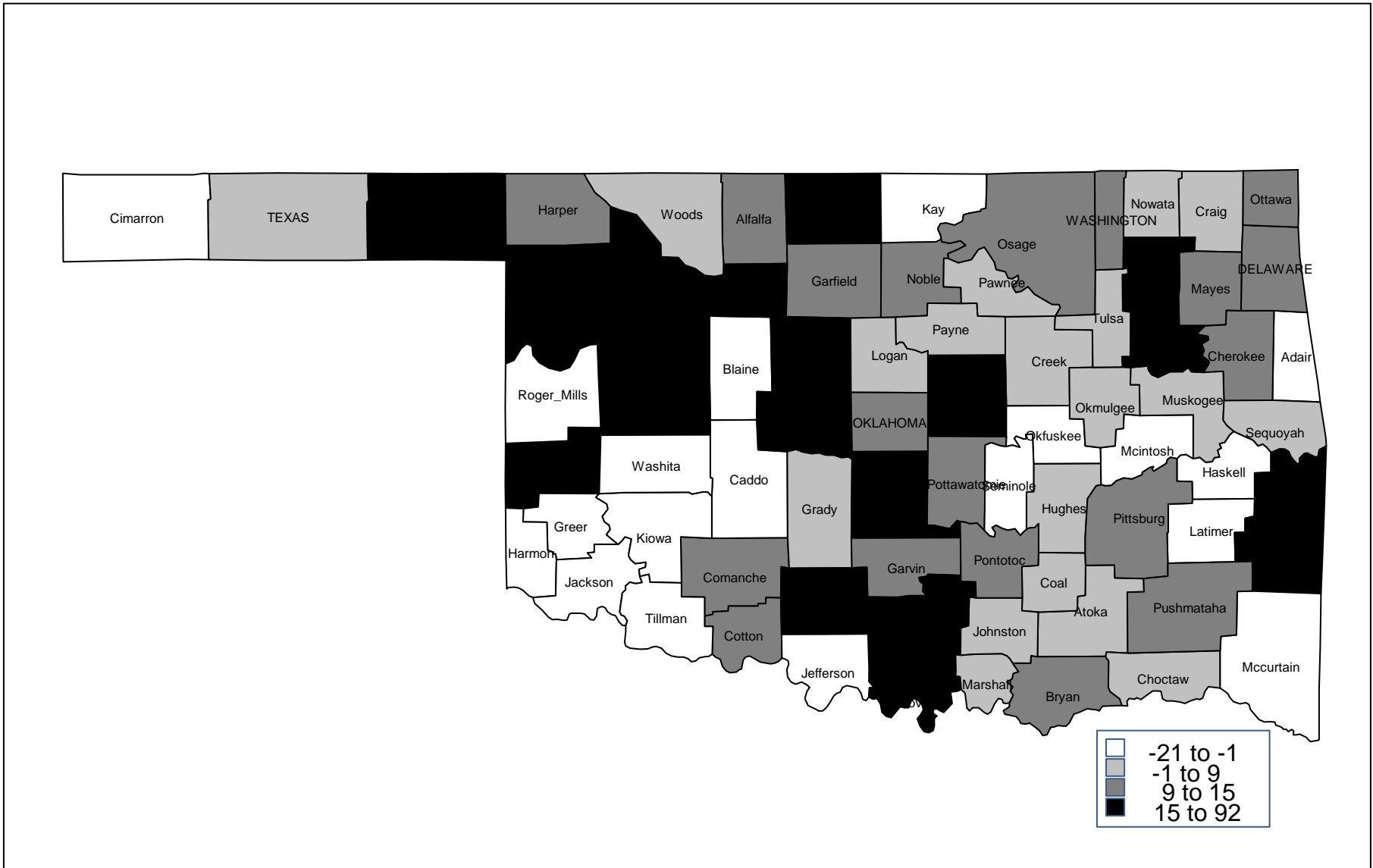
2014-2016 Analysis

County	Percent
Statewide Average (77)	1.27
Oklahoma County	4.43
OKC Metro	3.19
Tulsa County	3.36
Tulsa Metro	1.96
Lawton Metro	3.15
Nonmetro-Metro Adjacent (25)	1.27
Farm (15)	0.48
Energy (16)	1.47
Manufacturing (12)	2.97
Federal/State Government (14)	2.21
Persistent Poverty (14)	-1.32

Stronger growth: Oklahoma and Tulsa counties; Metros on average stronger; Manufacturing Counties fare well

Weakness in Energy and Farm counties, and metro-adjacent counties; Decline in Persistent Poverty Counties

2016-2025 Forecasted Employment Growth (%)



2016-2025 Analysis

County	Percent
Statewide Average (77)	10.29
Oklahoma County	9.43
OKC Metro	16.93
Tulsa County	5.71
Tulsa Metro	12.11
Lawton Metro	10.78
Nonmetro-Metro Adjacent (25)	5.12
Farm (15)	5.02
Energy (16)	11.70
Manufacturing (12)	15.27
Federal/State Government (14)	10.84
Persistent Poverty (14)	-0.07

2001-2008 (longer run)
growth patterns re-emerge

OKC Metro dominates
growth; Strong growth in
Manufacturing Counties

Energy Counties slightly out-
perform state; Weak growth in
Tulsa County and Farm
Counties; Persistent Poverty
Counties do not grow

Discussion and Conclusion

- Energy counties generally are not adjacent to (or part of) metro areas
- Persistent poverty counties: low population shares of college educated
- Tulsa and OKC metros: large shares of college educated

Discussion and Conclusion

- Generally stronger growth in counties with higher levels of natural amenities
- No measurable effect of past immigration trends; large immigration shares in Oklahoma and Tulsa counties
- Long-run trends and historical relationships may change, but forecasts give a glimpse of what lies ahead based on current knowledge

Thank you !