2018

EMPLOYMENT CHANGE, Phase III: A Comparison of Two Oklahoma Border Counties' Employment Dynamics, Including Adjacent In-State and Out-of-State Counties

January 2014 to June 2017





Oklahoma Employment Security Commission Economic Research and Analysis Division

EMPLOYMENT CHANGE, Phase III: A Comparison of Two Oklahoma Border Counties' Employment Dynamics, Including Adjacent In-State and Out-of-State Counties, January 2014 to June 2017

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May 2018

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Introduction

This is the third phase of our three stage research and reports, examining the reasons for the large historically different employment change, in two different Oklahoma geographical border counties. As in the two previous phases of this investigation, McCurtain County and Texas County are the two counties compared in this phase. The findings of the previous Phase I and Phase II of this study answered some questions, but also led to new questions, related to the historical differences in employment change rates, for these two counties.

Reasons for Additional Research

Examples of new questions arising from the analysis in the two previous phases are as follows. The Phase I analysis determined that employee and firm characteristics only slightly explained employment change in the two areas. The analysis in Phase II found that construction employment in the two areas did not appear be related to employment change, which did not eliminate the possibility that other industries might be related to employment change. During the analysis in Phase II it was noticed that, in each of the two areas, the employment in surrounding Oklahoma counties was often correlated to the unemployment rate of the areas' central county. Also found was that the unemployment rates of these same counties were in every case correlated to the unemployment rates of the areas' central county. Could this also be the case for the employment and unemployment rates in surrounding counties in other nearby states, also being related to the unemployment rates of the two areas' central counties? Finally the analysis in Phase II determined that various size employers, in particular those with highly volatile employment located in and out of the central county, are related to employment change. Since this is the case, perhaps employers in different industries with highly volatile employment, when controlled for size, might better explain employment change than either factor alone? Therefore the two Oklahoma geographical areas described in the Phase II analysis, one with McCurtain County and the other with Texas County as central counties are expanded in this Phase III analysis to also include the counties in adjacent states surrounding these two central counties. Henceforth, in this Phase III report, the two geographical areas, each including the counties in adjacent states will be referred to as the "McCurtain County area" and the "Texas County area", respectively.

Hypotheses Tested

Three new hypotheses were proposed for testing in the Phase III analysis. The first hypothesis is that in each of the two geographical areas, the surrounding counties in other states adjacent to the areas' central counties will have employment and unemployment rates related to the central counties' unemployment rate. The second hypothesis is that employers, both within and out of the central area counties, have employment related to the unemployment rates of surrounding counties in each area and even those in adjacent states. The third hypothesis is that employers with highly volatile employment, both within and out of the central area counties, are related to the unemployment rates of surrounding counties in each area, including those in adjacent states. The fourth hypothesis is that when controlled for employer industry and size, both in-county and out-county employment is related to the unemployment rates in surrounding counties and even those in adjacent states.

Description of the Data and Methods

The same three data sets that were used in the Phase II analysis were also used in the Phase III analysis, with one slight subtraction and an addition. The first data set is our own agency's administrative unemployment insurance (UI) claim records for the first quarter of 2016 were used, but not used were those for the first quarter 2015. The second set of data is the Quarterly Census of Employment and Wages (QCEW) employment data for each of the two counties central to each geographical area, over the time interval of the 42 months from January 2014 through June 2017. The third set of data used is the Local Area Unemployment Statistics (LAUS) labor force, employment and unemployment for the two comparison counties, and each of their surrounding and bordering counties in Oklahoma and adding those for the surrounding counties in other adjacent states.

The process of analysis was completed in six steps. The first step determined descriptive statistics for the employment and unemployment of each of the two areas' central counties (McCurtain and Texas Oklahoma counties) and their surrounding and bordering Oklahoma counties, with the addition of the surrounding counties in adjacent states. The results are reported as ranges, means and standard deviations, which are provided in Table 1 through Table 4 in Appendix F.

In the second step of Phase III of the methodological analysis, bivariate correlations are first determined between the employments of each county in the two geographical areas. This includes the employment of surrounding counties in adjacent states correlation with the areas' central counties unemployment rate. Secondly, the unemployment rates of each surrounding county in each of the two areas, including those in adjacent states, are correlated with the areas' central counties' unemployment rates. The results are reported in Appendix G, Table 5 through Table 8.

The third step of Phase III methodological process identified the location of each of the UI claimant employers in the two geographical locations. This was accomplished by linking them to their UI numbers, and afterward linking them with their QCEW workplace location(s). This determined if they are located in the central county (in-county) or out of the central county (outcounty). The employers' locations are coded according to three categories: all work locations in county are coded as 1, and all work locations out of county are coded as 2. After coding, the numbers for each of the two central counties are tabulated and the results are reported in Appendix H, Table 9.

Continuing Step 3 of Phase III, bivariate correlations for these UI claimant firm' employment according to their in-county and out-county locations (as identified in the previous paragraph) were determined with the unemployment rates of the areas' central county. Afterward, correlations were determined with the rates of the surrounding counties, including those in adjacent states. These same firms' employment was also correlated with each area's central county employment. The results for the two areas are reported in Appendix H, Table 10 through Table 14.

The fourth step of the Phase III analysis involved identifying UI claimant firms with highly volatile or high flexing employment in each of the two geographical areas, as also described in step four of the Phase II analysis. This is achieved by creating and examining graphs of their employment over the 42 months of this analysis. In each of the two areas, bivariate correlations for employment in these highly volatile-employment firms are determined with their correlation, both with the unemployment rates of both the surrounding Oklahoma counties and with the

surrounding counties in adjacent states in their areas. The results for the two geographical areas are tabulated and reported in Appendix H, Table 15 and Table 16.

In the fifth step of the Phase III analysis, the employment size of each of the UI claimant firms are identified by using SPSS analysis for the means of their employment over the 42 months of the analysis. The means of their employment are code according to the five firm sizes of: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 249 and Size5 = 250+ employees. Employers in these five firm sizes are selected into two groups by location: firms with all locations in-county and firms with all locations out-county. Bivariate correlations of the employment of these five employer firm sizes and by location are determined with the LAUS unemployment rates of the central county in the two Oklahoma geographical areas. Their correlations were also determined with the central county's surrounding and bordering Oklahoma counties unemployment rates and in the surrounding counties in adjacent state counties' unemployment rates. The results of these correlations are given in Appendix H, Table 17 through Table 20, at the end of this report.

In the sixth step of Phase III, the NAICS supersector of each of the UI claimant firms is determined and their employment categorized by the same five firm sizes described in the previous paragraph, and by the location of firms, according to all firms with locations in-county and all firms with locations out-county. Bivariate correlations of the employment of these five employer firm sizes and by location are determined with the LAUS unemployment rates of the central county in the two Oklahoma geographical areas. Their correlations were also determined for the central county's surrounding and bordering Oklahoma counties unemployment rates and in the surrounding counties in adjoining states counties' unemployment rates. The results of these correlations are given in four appendices at the end of this report. Appendix I, Table 21 though Table 29 reports these correlations for the McCurtain County area's in-county location firms. Appendix J, Table 30 though Table 39 reports these correlations for the Texas County area's in-county location firms. Appendix K, Table 40 though Table 48 reports these correlations for the McCurtain County area's out-county location firms. Appendix L, Table 49 though Table 58 reports these correlations for the Texas County area's out-county location firms.

The Findings of the Six Steps of Analysis

Table 1, on the next page, shows that in the McCurtain County area, Bowie County, Texas had the largest mean employment of 37,317, while also on the next page, Table 2 shows that in the Texas County area Seward County, Kansas had the largest mean employment of 10,126.

Table 1: McCurtain County, Oklahoma and Surrounding Counties
Descriptive Monthly Employment Statistics¹, January 2014 to June 2017²

Area	County	Minimum	Maximum	Mean	Std. Deviation	
	McCurtain LAUS	12,656	14,251	13,530	398	
Oklahoma	Choctaw LAUS	5,166	5,568	5,346	106	
Okla]	Le Flore LAUS	17,673	18,531	18,236	230	
	Pushmataha LAUS	4,173	4,692	4,445	127	
as	Little River LAUS	4,946	5,555	5,282	139	
Arkansas	Polk LAUS	7,328	8,137	7,797	170	
A ₁	Sevier LAUS	5,162	5,686	5,353	111	
Texas	Bowie LAUS	36,476	38,016	37,317	367	
Tex	Red River LAUS	4,384	4,872	4,652	117	

Note': Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Number of cases (months) in each of the counties is 42.

Table 2: Texas County, Oklahoma and Surrounding Counties
Descriptive Monthly Employment¹ Statistics, January 2014 to June 2017²

Area	County	Minimum	Maximum	Mean	Std. Deviation	
na	Texas LAUS	8,683	9,672	9,111	250	
Oklahoma	Beaver LAUS	2,678	3,086	2,889	124	
10	Cimarron LAUS	1,163	1,458	1,333	75	
S	Morton LAUS	1,226	1,491	1,357	69	
Kansas	Seward LAUS	9,399	10,845	10,126	471	
ŀ	Stevens LAUS	2,437	3,478	2,951	282	
	Hansford LAUS	2,715	3,282	2,977	153	
Texas	Ochiltree LAUS	4,031	5,535	4,831	501	
	Sherman LAUS	1,223	1,517	1,368	81	
00	Baca³ LAUS	1,756	2,177	1,988	118	

Note': Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Number of cases (months) in each of the counties is 42.

 $Note \ensuremath{^{3}\text{:}} Baca\ County, Colorado\ lacks\ only\ a\ few\ miles\ to\ border\ with\ Texas\ County,\ Oklahoma$

For the findings of step two of this analysis, Table 3, below, shows that in the McCurtain County area, Choctaw County had the highest mean unemployment rate of 7.7 percent.

Table 3: McCurtain County, Oklahoma and Surrounding Counties Descriptive Monthly Unemployment Rate¹ Statistics January 2014 to June 2017²

Area	County	Minimum	Maximum	Mean	Std. Deviation	
	McCurtain LAUS	5.5	13.1	7.5	1.19	
Oklahoma	Choctaw LAUS	5.4	10.3	7.7	0.84	
Okla	Le Flore LAUS	5.3	8.7	6.8	0.64	
	Pushmataha LAUS	5.8	9.0	7.4	0.69	
as	Little River LAUS	3.9	7.6	5.4	1.03	
Arkansas	Polk LAUS	4.0	7.1	5.5	0.87	
Ā	Sevier LAUS	3.6	9.7	5.8	1.28	
Texas	Bowie LAUS	4.0	7.4	5.3	0.83	
Te	Red River LAUS	5.3	9.6	6.5	1.00	

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Number of cases (months) in each of the counties is 42.

Table 4: Texas County, Oklahoma and Surrounding Counties Descriptive Monthly Unemployment Rate¹ Statistics January 2014 to June 2017²

Area	County	Minimum	Maximum	Mean	Std. Deviation	
na	Texas LAUS	2.8	4.3	3.5	0.42	
Oklahoma	Beaver LAUS	2.1	4.2	2.9	0.40	
OF	Cimarron LAUS	1.8	3.4	2.5	0.45	
S	Morton LAUS	3.1	5.2	4.1	0.52	
Kansas	Seward LAUS	3.0	5.3	4.1	0.58	
1	Stevens LAUS	2.7	4.9	3.7	0.66	
	Hansford LAUS	2.0	3.5	2.9	0.33	
Texas	Ochiltree LAUS	2.4	5.9	4.3	1.02	
-	Sherman LAUS	2.2	3.8	3.0	0.37	
co	Baca³ LAUS	1.3	4.0	2.1	0.58	

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Number of cases (months) in each of the counties is 42.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Table 4, on the previous page, shows that in the Texas County area, Ochiltree County, Texas had the highest mean unemployment rate of 4.3 percent.

Table 5, below, shows that Le Flore County is the only surrounding county in Oklahoma in the McCurtain County area with employment significantly negative correlated.

Table 5: McCurtain County, Oklahoma and Surrounding Counties Employment Correlations with McCurtain County's Unemployment Rates¹ January 2014 to June 2017²

Area	County	Correlation ³ with McCurtain County, OK Unemployment
_	McCurtain LAUS	514**
Oklahoma	Choctaw LAUS	0.180
Okla	Le Flore LAUS	464**
	Pushmataha LAUS	-0.041
as	Little River LAUS	505**
Arkansas	Polk LAUS	0.022
\mathbf{A}_{I}	Sevier LAUS	467**
Texas	Bowie LAUS	490**
	Red River LAUS	490**

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics.

Note²: Number of cases (months) in each of the counties is 42.

Note3: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

On next page, Table 6 displays that Cimarron County, Oklahoma is the only surrounding Oklahoma county in the Texas County area, with employment significantly correlated with Texas County's unemployment, while Sherman County, Texas is the only out-of-state county with employment significantly correlated with Texas County's unemployment rate.

Also, on the next page, Table 7 shows the McCurtain County area and its county unemployment rate correlations with the area's central McCurtain County unemployment rate, with all showing significant correlations.

Table 6: Texas County, Oklahoma and Surrounding Counties Employment Correlations with Texas County's Unemployment Rates¹ January 2014 to June 2017²

Area	County	Correlation ⁴ with Texas County OK Laus Unemployment
ma	Texas LAUS	577**
Oklahoma	Beaver LAUS	0.009
Ok	Cimarron LAUS	495**
Kansas	Morton LAUS	0.110
	Seward LAUS	0.265
I	Stevens LAUS	0.264
7.0	Hansford LAUS	0.279
Texas	Ochiltree LAUS	0.219
-	Sherman LAUS	.359*
CO	Baca³ LAUS	-0.025

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics.

Table 7: McCurtain County, Oklahoma and Surrounding Counties Unemployment Rate¹ Correlations, January 2014 to June 2017²

Area	County	Correlation³ with McCurtain County OK Laus Unemployment
ma	Choctaw LAUS	.706**
Oklahoma	Le Flore LAUS	.459**
Ok	Pushmataha LAUS	.543**
sas	Little River LAUS	.660**
Arkansas	Polk LAUS	.595**
\mathbf{A}_{I}	Sevier LAUS	.774**
Texas	Bowie LAUS	.424**
Te	Red River LAUS	.524**

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics.

Note²: Number of cases (months) in each of the counties is 42.

Note³: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Number of cases (months) in each of the counties is 42.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note⁴: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 8, below, shows that only three adjacent state counties in the Texas County area have unemployment rates significantly correlated with the areas central Texas County's unemployment rate; these are Morton County, Kansas; Sherman County, Texas; and Baca County, Colorado.

Table 8: Texas County, Oklahoma and Surrounding Counties Unemployment Rate¹ Correlations, January 2014 to June 2017²

Area	County	Correlation ⁴ with Texas County OK Laus Unemployment
noma	Beaver LAUS	.668**
Oklahoma	Cimarron LAUS	.861**
as	Morton LAUS	.386*
Kansas	Seward LAUS	0.152
1	Stevens LAUS	0.009
	Hansford LAUS	0.033
Texas	Ochiltree LAUS	-0.102
	Sherman LAUS	.585**
co	Baca³ LAUS	.496**

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics.

Note3: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

 $Note^4\hbox{:}* Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).$

The findings for step three of this analysis are displayed in Tables 9 through Table 14, all of which are given in Appendix H at the end of this report. Not shown in this report, but if interested, this appendix shows Table 9 with the numbers and percent of firms that are in-county and out-county in each of the two areas. Also, if interested, Table 13 gives the descriptive statistics of minimums, maximums, means and standard deviations for claimant employers' employment correlations with the area's central county and surrounding counties' unemployment in the McCurtain County area. Table 14 does the same for the Texas County area. The remaining Table 10, Table 11 and Table 12 findings are discussed below.

On the next page, Table 10 shows the UI claimant firm employment correlations with the central county's employment rates for the two areas, by in-county and out-county locations and significant negative and positive correlations number and percent. In the McCurtain County area, the percentages of significantly negative and positive correlations in the in-county and out-county locations vary relatively little, 21.1% to 29.9%. However in the Texas County area, the larger percentages are in the significantly positive correlations, both in the in-county and the out-county locations, with 29.4% and 28.1%, respectively.

Note²: Number of cases (months) in each of the counties is 42.

Table 10: McCurtain & Texas Counties' UI Claimant Firms Employment Correlations with County Employment¹, by In-County and Out-County Locations, First Quarter 2016²

	All	Location	ıs In Co	inty	All I	ocations				
	Negative Correlated ³		Positive Correlated		Negative Correlated		Positive Correlated		Total Correlated	
County	No.	%	No.	%	No.	%	No.	%	No.	%
McCurtain	22	29.7	20	27.0	27	29.3	24	26.1	69	41.6
	Possibl	e In Coun	ty Employe	rs = 74	Possible Out County Employers = 92				All Possible =166	
Texas	2	5.9	10	29.4	3	9.4	9	28.1	24	36.4
	Possibl	e In Coun	ty Employe	rs = 34	Possible Out County Employers = 32				All Possible = 66	

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Calculated from the unemployment insurance (UI) claims for the county for first quarter 2016.

Note3: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 11, below, shows the UI claimant firms' employment correlations with each surrounding county's unemployment rate for the McCurtain County area, by in-county and out-county, number and percent of significant positive and negative correlations. The most striking finding revealed in this table is that both the in-county and out-county UI claimant firms' employment is more often significantly correlated with the unemployment rates of surrounding counties in Texas and Arkansas than those in Oklahoma, including the area's central county.

Table 11: McCurtain County, Oklahoma UI Claimant Firms Employment Correlations with McCurtain and Surrounding Counties' Unemployment Rate¹ by Number and Percent January 2014 to June 2017²

		Al	l Location	s In Cou	nty	All	Locations	Out Cou	ınty		
		0	Negative Correlated ³		Positive Correlated		Negative Correlated		itive elated	Total Correlated	
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%
	McCurtain LAUS	19	25.7	11	14.9	14	15.2	17	18.5	61	36.7
Oklahoma	Choctaw LAUS	22	29.7	6	8.1	14	15.2	17	18.5	59	35.5
Okla	Le Flore LAUS	16	21.6	5	6.8	13	14.1	12	13.0	46	27.7
	Pushmataha LAUS	12	16.2	6	8.1	13	14.1	12	13.0	43	25.9
as	Little River LAUS	26	35.1	21	28.4	23	25.0	33	35.9	103	62.0
Arkansas	Polk LAUS	26	35.1	21	28.4	24	26.1	28	30.4	99	59.6
₹	Sevier LAUS	24	32.4	20	27.0	23	25.0	32	34.8	99	59.6
as	Bowie LAUS	24	32.4	17	23.0	22	23.9	27	29.3	90	54.2
Texas	Red River LAUS	28	37.8	21	28.4	23	25.0	29	31.5	101	60.8
		Possil	ble In Count	ty Employer	s = 74	Possibl	le Out Cour	ity Employe	rs = 92	All Poss	ible =166

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

 $Note^{2}: Calculated \ from \ the \ unemployment \ insurance \ (UI) \ claims \ for \ the \ county \ for \ first \ quarter \ 2016.$

 $Note^3; * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).$

Table 12: Texas County, Oklahoma UI Claimant Frims
Employment Correlations with Texas and Surrounding Counties' Unemployment Rate¹
by Number and Percent, January 2014 to June 2017²

		Al	l Locatior	s In Cou	nty	All	Locations	out Cou	ınty			
			ative		Positive Correlated		Negative		Positive			
	~ .		late d⁴			Correlated		Correlated		Total Correlated		
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%	
na	Texas LAUS	3	8.8	4	11.8	6	18.8	5	15.6	18	27.3	
Oklahoma	Beaver LAUS	10	29.4	3	8.8	5	15.6	4	12.5	22	33.3	
	Cimarron LAUS	3	8.8	8	23.5	5	15.6	4	12.5	20	30.3	
,	Morton LAUS	1	2.9	2	5.9	2	6.3	2	6.3	7	10.6	
Kansas	Seward LAUS	7	20.6	4	11.8	6	18.8	6	18.8	23	34.8	
	Stevens LAUS	11	32.4	6	17.6	9	28.1	9	28.1	35	53.0	
	Hansford LAUS	13	38.2	4	11.8	10	31.3	9	28.1	36	54.5	
Texas	Ochiltree LAUS	15	44.1	7	20.6	9	28.1	10	31.3	41	62.1	
	Sherman LAUS	4	11.8	2	5.9	6	18.8	2	6.3	14	21.2	
co	Baca³ LAUS	5	14.7	13	38.2	11	34.4	9	28.1	38	57.6	
		Possil	ble In Count	ty Employer	s = 34	Possible Out Cour		nty Employe	rs = 32	All Poss	ible = 66	

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics.

 $Note \ensuremath{^{2}\text{:}} \ensuremath{\text{Calculated from the unemployment insurance (UI) claims for the county for first quarter 2016.}$

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

 $Note^4{:}*\ Correlation\ is\ significant\ to\ the\ .05\ level, and\ **\ correlation\ is\ significant\ to\ the\ .001\ level\ (2-tailed).$

Table 12, above, shows the UI claimant firms' employment correlations with each surrounding county's unemployment rate for the Texas County area and by in-county and out-county, number and percent of significant positive and negative correlations. The pattern of significant correlations in this area is much different for the McCurtain County area, with one or two surrounding counties in each state having unemployment rates with higher percentages of significant correlations with UI claimant firm employment than for the other counties in the state. In the Texas County area the Oklahoma surrounding county with the highest percent of correlations with UI claimant firms' employment is Beaver County, with 29.4% of significant negative correlations in the in-county location category. The surrounding county in Kansas with the highest percent of correlations is Stevens County, with 32.4% significant positive correlations, also in the in-county location category.

In this same Texas County area in Table 12, the two Texas surrounding counties with the highest percent of correlations with UI claimant firms' employment are Hansford County and Ochiltree County, with significant negative correlations of 38.2% and 44.1%, respectively, also in the incounty location category. In this area, the single surrounding Colorado county with a high percent of correlations with UI claimant employer employment is Baca County, with significant positive correlation percent of 38.7% in the in-county location category. When looking at the table's 'Total Correlated' columns, the one or two surrounding counties in each of the other states having that state's highest percent of total correlations, also have percentages that are higher than any of the Oklahoma counties total correlation percentages.

The findings of step four of this Phase III analysis involved the results for UI claimant employers with highly volatile employment. These findings are reported on Table 15 below and Table 16 on the next page, also provide in Appendix H at the end of this report.

Table 15: McCurtain County, Oklahoma UI Claimant Employers with Flexing Employment¹ Correlations with McCurtain and Surrounding Counties' Unemployment Rate² by Number and Percent, January 2014 to June 2017³

		Al	l Location	s In Cou	nty	All	Locations	Out Cou	inty		
		Nega Corre	ative late d ⁴		Positive Correlated		Negative Correlated⁵		itive lated	Total Correlated	
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%
	McCurtain LAUS	9	37.5	4	16.7	2	8.0	2	8.0	17	34.7
Oklahoma	Choctaw LAUS	9	37.5	2	8.3	1	4.0	1	4.0	13	26.5
Okla	Le Flore LAUS	6	25.0	1	4.2	1	4.0	2	8.0	10	20.4
	Pushmataha LAUS	5	20.8	3	12.5	2	8.0	3	12.0	13	26.5
as	Little River LAUS	10	41.7	5	20.8	6	24.0	7	28.0	28	57.1
Arkansas	Polk LAUS	10	41.7	5	20.8	7	28.0	7	28.0	29	59.2
[A]	Sevier LAUS	10	41.7	5	20.8	7	28.0	8	32.0	30	61.2
as	Bowie LAUS	10	41.7	5	20.8	7	28.0	6	24.0	28	57.1
Texas	Red River LAUS	10	41.7	7	29.2	7	28.0	6	24.0	30	61.2
		Possil	ble In Count	ty Employer	rs = 24	Possibl	le Out Cour	ıty Employe	rs = 25	All Poss	ible =49

 $Note \cite{Continuous terms} \cite{Continuous terms}$

Table 15, above, shows that for the McCurtain County area UI claimant firms with highly volatile employment had their highest percent of significant correlations with each surrounding county's unemployment rate in the negative correlation in-county location categories. These highly volatile employment UI claimant firms in these in-county locations were more often significantly negative correlated with surrounding counties in adjacent states than they were with surrounding counties in Oklahoma.

 $Note {}^2\hbox{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note 3 : Number of cases (months) in each of the counties is 42.

Note4: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 16: Texas County, Oklahoma UI Claimant Employers with Flexing¹ Employment Correlations with Texas and Surrounding Counties' Unemployment Rate² by Number and Percent, January 2014 to June 2017³

		Al	l Location	ıs In Cou	nty	All	Locations	Out Cou	ınty		
			ative lated⁵		itive elated	Nega Corre	ative elated	Pos Corre	itive elated	Total Co	orrelated
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%
na	Texas LAUS	2	15.4	1	7.7	3	27.3	1	9.1	7	29.2
Oklahoma	Beaver LAUS	4	30.8	1	7.7	4	36.4	2	18.2	11	45.8
0	Cimarron LAUS	2	15.4	3	23.1	3	27.3	1	9.1	9	37.5
,	Morton LAUS	1	7.7	1	7.7	1	9.1	1	9.1	4	16.7
Kansas	Seward LAUS	3	23.1	2	15.4	1	9.1	3	27.3	9	37.5
	Stevens LAUS	3	23.1	2	15.4	2	18.2	4	36.4	11	45.8
	Hansford LAUS	6	46.2	2	15.4	2	18.2	4	36.4	14	58.3
Texas	Ochiltree LAUS	6	46.2	3	23.1	2	18.2	4	36.4	15	62.5
	Sherman LAUS	3	23.1	0	0.0	2	18.2	1	9.1	6	25.0
co	Baca ⁴ LAUS	3	23.1	5	38.5	5	45.5	2	18.2	15	62.5
		Possil	ole In Count	ty Employer	rs = 13	Possib	le Out Cour	nty Employe	rs = 11	All Poss	ible = 24

 $Note \ensuremath{^{1}}\xspace Employment were identified by graphs of employment, over the 42 months of the study's observation.$

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note4: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note5: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 16, above, displays the UI claimant firms with highly volatile employment in the Texas County area and their correlations with surrounding counties' unemployment rates, by in-county and out-county location. The table reveals that the surrounding counties in each state have one or two counties, with unemployment rates that have higher percent correlations than the others. In Oklahoma, the surrounding county with unemployment rate with the highest percent correlations is Beaver County, with 36.4% significant negative correlations of out-county highly volatile employment UI claimant employers. In Kansas, the surrounding county with unemployment rate with the highest percent correlations it is Stevens County, with significant positive correlation percent of 36.4% of these employers in the out-county location category. Texas has two surrounding counties, Hansford County and Ochiltree County, with unemployment percentages tied at 46.2% significantly negative correlations with these types of in-county located employers. Baca County, Colorado is slightly less in its 45.5% unemployment rate significant negative correlations with UI claimant firms, with highly volatile employment, in the out-county location.

Continuing the findings revealed in Table 16, looking at the 'Total Correlated' category under '%', the county with the highest percent of the surrounding area counties in Oklahoma is Beaver County with 45.8%. This is the same percent for the highest surrounding area county in Kansas, that of Stevens County. The surrounding area county in Texas with the highest percent of total

Note³: Number of cases (months) in each of the counties is 42.

correlated is Ochiltree County, with 62.5%. This is a tie with the single surrounding areas county in Colorado, Baca County. It is noteworthy that all of the highest percentage counties in total correlations in adjacent states, either tie with the highest in Oklahoma, like Kansas does, or are greater than Oklahoma, like in Texas and Colorado.

Step five of this Phase III analysis is concerned with UI claimant firms' employment by firm size, and each size's correlation with the surrounding counties in each of the two areas unemployment rates, including their correlations with the rates of the surrounding counties in adjacent states. Table 17, below, and Table 18 on the next page provide the results for in-county UI claimant employer employment.

The most apparent observation when looking at Table 17, below, is that UI claimant Size4 firms' employment in the McCurtain County area was not significantly correlated with the unemployment rates of any county, while none of these five sizes of firm employment was significantly correlated with Le Flore County's unemployment rate. Choctaw County, Oklahoma and Bowie County, Texas both had unemployment rates significantly correlated with UI claimant employer employment of Siz1 and Size2. The remaining surrounding counties in adjacent states all had more sizes of UI claimant employment significantly correlated with their unemployment rates than did the surrounding counties in Oklahoma. The highest level of significant correlations of any county's unemployment rate with UI claimant firm employment was negative .830 for Size2 in Bowie County, Texas.

Table 17: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain and Surrounding Counties¹ Unemployment Rate² by In County Location and Firm Size³. January 2014 to June 2017⁴

		All Firm Locations In McCurtain County							
Area	County	Firm Size 1	Firm Size 2	Firm Size3	Firm Size4	Firm Size5			
	McCurtain LAUS	.386*	394**	-0.152	-0.162	418**			
Oklahoma	Choctaw LAUS	.332*	540**	-0.107	-0.237	-0.260			
Okla	Le Flore LAUS	0.269	-0.247	-0.059	-0.130	-0.238			
	Pushmataha LAUS	0.236	-0.057	-0.171	-0.150	507**			
as	Little River LAUS	.617**	722**	465**	-0.083	324*			
Arkansas	Polk LAUS	.583**	552**	535**	-0.122	352*			
A	Sevier LAUS	.652**	613**	477**	-0.029	441**			
Texas	Bowie LAUS	.395**	830**	-0.235	-0.134	0.225			
Te	Red River LAUS	.526**	0.000	305*	-0.068	0.039			

 $Note \ensuremath{^{1:}} * Correlation is significant to the .05 level, and \ensuremath{^{**}} * correlation is significant to the .001 level (2-tailed).$

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note3: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁴: Number of cases (months) in each of the counties is 42.

Table 18, below, provides the step 5 results for in-county UI claimant firm size employment for the Texas County area. The most amazing results displayed in this table is that, when broken down by the five firm sizes, the in-county UI claimant firm employment does not significantly correlate with the unemployment rate of the county central to this area, that of Texas County. Moreover, several surrounding counties in adjacent states have unemployment rates significantly correlated with an equal or larger number of in-county UI claimant firm sizes, than the surrounding county in Oklahoma with the largest number of size correlations. This is Beaver County having this largest number with three firm sizes correlated with its unemployment rate. Only Morton County, Kansas and Sherman County, Texas with one size each, and Stevens County, Kansas, with two firm sizes, have less than Beaver County, Oklahoma's three sizes significantly correlating.

Table 18: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas and Surrounding Counties' Unemployment Rate² by In-County Location and Firm Size³, January 2014 to June 2017⁴

			All Firm Locations In Texas County							
Area	County	Firm Size 1	Firm Size2	Firm Size3	Firm Size4	Firm Size 5				
Oklahoma	Texas LAUS	0.124	0.032	-0.181	-0.051	-0.278				
	Beaver LAUS	341*	-0.237	335*	.346*	-0.174				
0	Cimarron LAUS	0.280	0.102	-0.026	-0.146	430**				
	Morton LAUS	-0.001	0.021	-0.100	0.226	551**				
Kansas	Seward LAUS	355*	-0.092	-0.170	.489**	375*				
	Stevens LAUS	521**	-0.238	-0.256	.550**	-0.117				
	Hansford LAUS	606**	332*	356*	.585**	-0.019				
Texas	Ochiltree LAUS	756**	492**	468**	.775**	0.108				
	Sherman LAUS	-0.120	-0.188	356*	0.234	-0.150				
co^5	Baca LAUS	.647**	.494**	0.208	653**	-0.144				

Note1: * Correlation is significant to the .05, and ** correlation is significant to the .001 level (2-tailed).

Table 19, on next page, displays the five sizes of out-county UI Claimants firms' employment correlations with surrounding counties' unemployment rates for the McCurtain County area. What is most readily apparent, when looking at this table, is that two of the surrounding counties in Oklahoma have unemployment rates not significantly correlated with any size of these out-county employers, Choctaw and Le Flore Counties. Also obvious is that all of the surrounding counties in adjacent states have unemployment rates significantly correlated with at least the two

Note²: Employment and Unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note¹: Number of cases (months) in each of the counties is 42.

Note³: Colorado, that lacks only a few miles cornering with Texas County, Oklahoma

firm Size1 and Size4, and one of these adjacent state counties' unemployment rate significantly correlated with a third Size3; that of Bowie County, Texas.

Table 19: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain and Surrounding Counties' Unemployment Rate² by Out-County Location and Firm Size³, January 2014 to June 2017⁴

		All Fi	m Location	ns Out of M	IcCurtain (County
Area	County	Firm Size1	Firm Size 2	Firm Size3	Firm Size4	Firm Size5
	McCurtain LAUS	0.142	0.130	0.083	.390*	0.160
Oklahoma	Choctaw LAUS	0.118	0.005	0.004	0.294	0.275
Okla	Le Flore LAUS	-0.066	-0.021	0.213	0.109	0.068
	Pushmataha LAUS	-0.061	0.150	.439**	0.178	0.008
as	Little River LAUS	.524**	0.081	-0.139	.693**	0.250
Arkansas	Polk LAUS	.405**	0.222	0.061	.661**	0.146
\mathbf{A}_{J}	Sevier LAUS	.484**	0.166	-0.034	.664**	0.253
Texas	Bowie LAUS	.396**	-0.235	443**	.384*	0.210
Te	Red River LAUS	.407**	-0.120	-0.293	.474**	0.223

Note1: * Correlation is significant to the .05 lewel, and ** correlation is significant to the .001 lewel (2-tailed).

Note3: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁴: Number of cases (months) in each of the counties is 42.

On the next page, Table 20 shows the five sizes of out-county UI Claimants firms' employment correlations with surrounding counties' unemployment rates, in the Texas County area. This table reveals that three counties, one in Oklahoma and two in Kansas have unemployment rates not correlated with any out-county UI claimant firm size. Also of note is that only two counties, Texas County in Oklahoma and Baca County in Colorado have unemployment significantly correlated with two sizes of these out-county UI claimant employer sizes.

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Table 20: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas and Surrounding Counties Unemployment Rates² by Out-County Location and Firm Sizes³, January 2014 to June 2017⁴

		All	Firm Locat	ions Out of	Texas Cou	inty
Area	County	Firm Size1	Firm Size 2	Firm Size3	Firm Size4	Firm Size5
ma	Texas LAUS	0.168	493**	0.180	307*	0.122
Oklahoma	Beaver LAUS	0.258	389*	-0.053	-0.134	0.011
O	Cimarron LAUS	0.156	-0.252	0.287	-0.144	0.173
S	Morton LAUS	0.040	-0.045	.571**	-0.034	-0.036
Kansas	Seward LAUS	-0.023	-0.030	0.259	0.134	0.006
F	Stevens LAUS	0.123	0.014	0.003	0.189	-0.105
	Hansford LAUS	0.126	-0.260	-0.142	.312*	-0.228
Texas	Ochiltree LAUS	0.294	-0.255	-0.237	.334*	-0.293
	Sherman LAUS	0.284	627**	-0.010	0.090	-0.247
co	Baca ⁵ LAUS	-0.259	-0.115	0.271	686**	.577**

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note3: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁴: Number of cases (months) in each of the counties is 42.

Note⁵: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Step six of this Phase III analysis addresses both in-county and out-county UI claimant firms' employment by NAICS supersectors and by the five firm sizes that were used in the analysis in previous step five; also with the significant correlations these may have with the center county and surrounding counties in each of the two areas: McCurtain County and Texas County. The tables for this step of the analysis are included in four appendices. Table 21 to Table 29 for incounty UI claimant firms in the McCurtain County area are provided in the end of this report in Appendix I. Table 30 to Table 39 for these in-county employers in the Texas County area provided in Appendix J. Table 40 to Table 48 for these out-county employers in the McCurtain County area provided in Appendix K. Table 49 to Table 58 for out-county UI claimant firms in the Texas County area are provided in Appendix L, at the end of this report.

There are a total of 38 tables reporting the analysis of this step, too many to include all of them with the text of this report. For the reader interested in the specifics of how in-county, outcounty, NAICS supersector by firm-size employment relates to the unemployment rates in these two border Oklahoma areas, all of these tables are included in these four appendices at the end of

this report. However in the interest of brevity, the major findings of step six of this analysis are here reported, in a reduced number of example tables.

Table 21, below, shows the in-county UI claimant firms' employment for McCurtain County, the central county in the area of that name, by NAICS supersector and firm size (employment range provided below tables). The total cells of supersector by firm sizes having significant correlations with county unemployment is seven, with 1011 Natural Resources and Mining in a tie with 1021 Trade, Transportation and Utilities, each having two sizes with significant correlations, the former supersector Size4 having the highest significant correlation of negative .532.

Table 21: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain County Unemployment Rate² by In-County Location, Supersector³ and Firm Size, ⁴January 2014 to June 2017⁵

	All Firm Locations In McCurtain County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	.380*	No Firms	No Firms	532**	No Firms	
1012 - Construction	0.184	No Firms	No Firms	-0.104	No Firms	
1013 - Manufacturing	0.292	No Firms	No Firms	458**	-0.075	
1021 - Trade. Transportation, and Utilities	.433**	436**	0.182	-0.227	-0.023	
1023 - Financial Activities	No Firms	No Firms	No Firms	No Firms	-0.192	
1024 - Professional and Business Services	0.288	No Firms	No Firms	.309*	No Firms	
1025 - Education and Health Services	No Firms	-0.255	-0.169	0.059	-0.297	
1026 - Leisure and Hospitality	No Firms	-0.077	0.069	No Firms	No Firms	
1027 - Other Services	-0.017	-0.122	No Firms	No Firms	No Firms	
1028 - Public Administration	-0.277	No Firms	343*	-0.117	No Firms	

 $Note \ensuremath{^{1}\text{:}} * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).$

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 100\ to\ 10$

Note⁵: Number of cases (months) in each of the counties is 42.

On next page, Table 22 shows the McCurtain County area and the in-county UI claimant firm employment for Choctaw County, by NAICS supersector and firm size. This is the surrounding Oklahoma county in this area, with the most significant correlations, having ten cells with

significant correlations. NAICS 1011 Natural Resources and Mining is again in a tie with NAICS 1021 Trade, Transportation and Utilities each having two sizes with significant correlation, the supersector Size4, in the former, having the highest significant correlation of negative .539.

Table 22: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Choctaw County, Oklahoma Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In McCurtain County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	.313*	No Firms	No Firms	539**	No Firms	
1012 - Construction	.306*	No Firms	No Firms	-0.193	No Firms	
1013 - Manufacturing	.482**	No Firms	No Firms	508**	0.099	
1021 - Trade. Transportation, and Utilities	.372*	403**	0.219	-0.188	0.165	
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	-0.181	
1024 - Professional and Business Services	0.206	No Firms	No Firms	0.259	No Firms	
1025 - Education and Health Services	No Firms	421**	-0.114	0.053	-0.262	
1026 - Leisure and Hospitality	No Firms	-0.258	0.098	No Firms	No Firms	
1027 - Other Services	0.012	-0.152	No Firms	No Firms	No Firms	
1028 - Public Administration	424**	No Firms	406**	-0.137	No Firms	

 $Note \ensuremath{^{1}\text{:}} * Correlation is significant to the .05, and \ensuremath{^{**}} * correlation is significant to the .001 level (2-tailed).$

 $Note {}^{2}\hbox{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 100\ to\ 10$

Note⁵: Number of cases (months) in each of the counties is 42.

In this same McCurtain County area, there are three surrounding counties in adjacent Arkansas tied for the area county with the highest number of in-county UI claimant firm NAICS supersector, by firm size employment with significant correlations, with their unemployment rates. These are Little River County, Pole County and Sevier County, each having 16 cells with significant correlations. Of three, the county having the cell with the highest significant correlation is Little River County, shown in Table 25 on next page, having a negative significant correlation of .856.

Not shown here, but is shown at the end of this report in Appendix I for the McCurtain County area, is Table 29, containing the in-county UI claimant employer NAICS supersector and firm sizes of employment correlations with Red River County, Texas unemployment rate. This latter is the county in the area having the highest significant correlation amount and with a total of fifteen cells showing significant correlations. This is in the NAICS supersector 1012 Construction, Size4 category, with a positive significant correlation of a remarkable .907, the highest in the areas.

Table 25: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Little River County, Arkansas Unemployment Rate² by In-County Location, Supersector³ and Firm Size⁴ January 2014 to June 2017⁵

	All Firm Locations In McCurtain County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	.567**	No Firms	No Firms	856**	No Firms	
1012 - Construction	.448**	No Firms	No Firms	0.077	No Firms	
1013 - Manufacturing	.753**	No Firms	No Firms	698**	0.249	
1021 - Trade. Transportation, and Utilities	.774**	782**	.348*	504**	-0.072	
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	503**	
1024 - Professional and Business Services	.668**	No Firms	No Firms	.466**	No Firms	
1025 - Education and Health Services	No Firms	-0.210	679**	0.101	527**	
1026 - Leisure and Hospitality	No Firms	-0.024	0.150	No Firms	No Firms	
1027 - Other Services	0.126	-0.045	No Firms	No Firms	No Firms	
1028 - Public Administration	-0.203	No Firms	448**	378*	No Firms	

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁵: Number of cases (months) in each of the counties is 42.

Step six of this Phase III analysis report continues for the Texas County area's in-county UI claimant firm employment the correlations for NAICS supersectors, by for the five firm sizes, with the unemployment rates of surrounding areas counties. In this area, the tables displaying the surrounding counties in general have a lower number of cells with significant correlations,

some with only one and two cells. The overall lower unemployment rates in this area meant that there were fewer unemployment claims, and also fewer UI claimant firms in this area.

In reporting Texas County area in-county UI claimant firm employment correlations, as described in the previous paragraph, the table for Texas County, the table for the surrounding Oklahoma counties with the highest number of cell with significant correlations and the table for the surrounding adjacent state counties with the highest number of cells with significant correlation will be shown in the actual report, with the remainder tables displayed in Appendix J at the end of this report, the same as was done for the McCurtain County area.

Table 30, below, shows the Texas County area in-county UI claimant firm NAICS supersector employment and firm size significant correlations with this area's central county unemployment rate, having the same name as the area, Texas County, Oklahoma.

Table 30: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas County Unemployment Rate² by In-County Location, Supersector³ and Firm Size, January 2014 to June 2017⁵

	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	0.039	No Firms	No Firms	No Firms	.307*	
1012 - Construction	0.092	No Firms	No Firms	No Firms	No Firms	
1013 - Manufacturing	0.058	No Firms	No Firms	No Firms	No Firms	
1021 - Trade. Transportation, and Utilities	0.115	No Firms	No Firms	-0.150	No Firms	
1024 - Professional and Business Services	No Firms	0.064	313*	No Firms	No Firms	
1025 - Education and Health Services	0.125	-0.075	No Firms	No Firms	482**	
1026 - Leisure and Hospitality	No Firms	-0.067	No Firms	No Firms	No Firms	
1028 - Public Administration	No Firms	No Firms	No Firms	0.044	No Firms	

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁵: Number of cases (months) in each of the counties is 42.

Table 30 shows that in the Texas County area, the in-county UI claimant firms employment for NAICS supersectors, has only three cells with significant correlations with the area's central Texas County unemployment, one firm size3 and two of firm size5. The highest significant correlation of these is 1025 Education and Health Services of .482 in size5.

Table 31 below, displays the results for Beaver County, Oklahoma in the Texas County area. Beaver County is the surrounding Oklahoma county in this area, with the most cells displaying significant correlation of its unemployment with the UI claimant firm NAICS supersector and firm sizes of employment, of eight cells. Size3 of 1025 Education and Health Services has the highest negative significant correlation of area surrounding Oklahoma counties of .404.

Table 31: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Beaver County, Oklahoma Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	Firm Loc	ations In T	Texas Cou	nty
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	341*	No Firms	No Firms	No Firms	.339*
1012 - Construction	-0.093	No Firms	No Firms	No Firms	No Firms
1013 - Manufacturing	-0.006	No Firms	No Firms	No Firms	No Firms
1021 - Trade. Transportation, and Utilities	372*	No Firms	No Firms	.354*	No Firms
1024 - Professional and Business Services	No Firms	0.068	0.071	No Firms	No Firms
1025 - Education and Health Services	348*	404**	No Firms	No Firms	384*
1026 - Leisure and Hospitality	No Firms	0.218	No Firms	No Firms	No Firms
1028 - Public Administration	No Firms	No Firms	No Firms	352*	No Firms

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to\ 24$

Note⁵: Number of cases (months) in each of the counties is 42.

Table 37 on next page, shows that in the Texas County area these in-county UI claimant firms when broken down by NAICS supersector and by five sizes employment have only nine cells with significant correlations with the area's central Texas County unemployment, the highest significant correlation is Size4, 1021 Trade, Transportation and Utilities, with an amazing .878 correlation.

The step six findings for the in-county UI claimant firm employment in the Texas County area determined that when considering this employment by NAICS supersector, by five firm sizes: with the exception of Beaver County, the surrounding counties in adjacent states more often have significant correlations with their unemployment rates, often higher correlations, than do the area surrounding counties in Oklahoma. However, the adjacent state counties surrounding the area's

central Texas County in a north northwest direction of Morton County, Kansas and in a south southwest direction of Sherman County, Texas, have an unusually low number of correlations of one and three significant correlations, respectively. One may also view Table 33 and Table 38 for these two counties, provided in Appendix J, at the end of this report for the exact super sector and firm sizes for these correlations. On the other hand, Baca County, Colorado, in a northwest direction has a high number of eight significant correlations.

Table 37: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Ochiltree County, Texas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	Firm Loc	ations In T	Texas Cou	nty
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	688**	No Firms	No Firms	No Firms	.368*
1012 - Construction	402**	No Firms	No Firms	No Firms	No Firms
1013 - Manufacturing	0.074	No Firms	No Firms	No Firms	No Firms
1021 - Trade. Transportation, and Utilities	802**	No Firms	No Firms	.878**	No Firms
1024 - Professional and Business Services	No Firms	-0.122	.415**	No Firms	No Firms
1025 - Education and Health Services	743**	687**	No Firms	No Firms	-0.083
1026 - Leisure and Hospitality	No Firms	0.215	No Firms	No Firms	No Firms
1028 - Public Administration	No Firms	No Firms	No Firms	644**	No Firms

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁵: Number of cases (months) in each of the counties is 42.

Step six of this Phase III analysis report is continued for the McCurtain County area's out-county UI claimant firm employment. This type of employment is examined by NAICS supersector, by five firm sizes, and their correlations with the unemployment rates of surrounding areas counties. Table 40, below, provides this information for this areas central McCurtain County. The table shows that seven supersectors and five sizes display a total of nine cells with significant correlations. The two NAICS supersectors of 1025 Education and Health Services and 1026 Leisure and Hospitality each have two sizes having significant correlations between the county's unemployment rate. The highest correlation of a negative .482 is with the former supersector in Size3.

Table 40: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain County Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firn	All Firm Locations Out of McCurtain County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	0.210	0.120	No Firms	.434**	No Firms	
1012 - Construction	0.049	-0.030	.407**	0.128	-0.292	
1013 - Manufacturing	-0.002	No Firms	-0.272	0.033	0.233	
1021 - Trade. Transportation, and Utilities	-0.071	-0.203	No Firms	No Firms	No Firms	
1022 - Information	No Firms	308*	No Firms	No Firms	0.056	
1023 - Fiscal Activities	385*	No Firms	No Firms	No Firms	No Firms	
1024 - Professional and Business Services	0.263	0.211	-0.278	.385*	0.106	
1025 - Education and Health Services	No Firms	0.171	482**	.338*	No Firms	
1026 - Leisure and Hospitality	No Firms	0.300	No Firms	310*	.421**	
1027 - Other Services	No Firms	0.141	-0.107	No Firms	No Firms	
1028 - Public Administration	No Firms	-0.020	-0.276	0.085	No Firms	

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to\ 24$

Note⁵: Number of cases (months) in each of the counties is 42.

On the next page, Table 41 shows the out-county UI claimant NAICS supersector, by five firm sizes, employment significant correlations with Choctaw County, Oklahoma's unemployment rates. This county is the area's surrounding Oklahoma county with the highest number of these correlations, fourteen in all. The three NAICS supersectors of NAICS 1013 Manufacturing, 1024 Professional and Business Services and 1025 Education and Health Services each have three sizes with these correlations. However 1026 Leisure and Hospitality with only one Size5, has the highest significant correlation of .582.

Table 41: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Choctaw County, Oklahoma Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations Out of McCurtain County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.216	0.018	No Firms	0.303	No Firms
1012 - Construction	0.030	-0.144	.447**	0.097	-0.146
1013 - Manufacturing	327*	No Firms	550**	0.026	.473**
1021 - Trade. Transportation, and Utilities	-0.216	382*	No Firms	No Firms	No Firms
1022 - Information	No Firms	-0.207	No Firms	No Firms	0.009
1023 - Fiscal Activities	562**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.415**	0.161	322*	.319*	-0.037
1025 - Education and Health Services	No Firms	.332*	433**	.448**	No Firms
1026 - Leisure and Hospitality	No Firms	0.271	No Firms	-0.016	.582**
1027 - Other Services	No Firms	0.092	449**	No Firms	No Firms
1028 - Public Administration	No Firms	0.070	-0.295	0.063	No Firms

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁵: Number of cases (months) in each of the counties is 42.

The analysis of the McCurtain County area's out-county UI claimant firm employment, by NAICS supersectors, by five firm sizes and their correlations with the unemployment rates of adjacent surrounding areas counties determined the following. All of the counties had 20 or 21 significant correlations. The three of these counties with 21 significant correlations are Bowie County, Texas; Red River County, Texas; and Little River County, Arkansas, the latter shown in Table 44 on the next page.

Table 44, on the next page, shows the results for Little River County, Arkansas. It displays that the out-county UI claimant firm NAICS supersector 1024 Professional Business Services employment in all five sizes is significantly correlated with the county's unemployment rate. This table also displays the highest significant correlation in the McCurtain County area of all

the surrounding counties unemployment rates correlations with out-county UI claimant firm employment. This is in NAICS supersector 1011 Natural Resources and Mining in Size4, with a positive .838 correlation. In general, the surrounding adjacent state counties in this area have more correlations and also generally containing the higher values correlations, than the surrounding counties in Oklahoma.

Table 44: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Little River County, Arkansas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴
January 2014 to June 2017⁵

	All Firm Locations Out of McCurtain County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.560**	-0.085	No Firms	.838**	No Firms
1012 - Construction	.383*	-0.238	.511**	0.276	722**
1013 - Manufacturing	422**	No Firms	608**	0.045	.321*
1021 - Trade. Transportation, and Utilities	-0.179	465**	No Firms	No Firms	No Firms
1022 - Information	No Firms	339*	No Firms	No Firms	-0.133
1023 - Fiscal Activities	483**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.603**	.598**	667**	.635**	.520**
1025 - Education and Health Services	No Firms	0.232	692**	.379*	No Firms
1026 - Leisure and Hospitality	No Firms	.711**	No Firms	-0.251	.503**
1027 - Other Services	No Firms	0.159	-0.279	No Firms	No Firms
1028 - Public Administration	No Firms	0.187	616**	-0.166	No Firms

 $Note \ensuremath{^{1}\text{:}} * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).$

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁵: Number of cases (months) in each of the counties is 42.

Step six of this Phase III analysis report continues for the Texas County area's out-county UI claimant firm employment, again by NAICS supersectors and by five firm sizes, with their correlations with the unemployment rates of surrounding areas counties. Table 49 below provides this information for this areas central Texas County. The overall lower unemployment rates in this area meant that there were fewer unemployment claims, and also fewer UI claimant

employers in this area. As with previous reporting of the step six analysis, the tables for the counties with the higher significant correlations will be displayed with the text of this report, with the remainder shown in Appendix L at the end of this report.

Below, Table 49 shows that there are seven significant correlations with the area's central Texas County unemployment rate. NAICS supersectors 1011 Natural Resources and Mining and 1012 Construction tied in number, each having two sizes significantly correlated. 1022 Information is the super sector in the county with the highest significant correlation, in fact the highest significant correlation of all the three Oklahoma counties in the Texas county area, with a negative .606 correlation. A total of seven cells in this table display significant correlations. Although not shown two Oklahoma counties in this area, Table 50 for Beaver County and Table 51 for Cimarron County, also have seven significant correlated cells.

Table 49: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas County Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	-0.027	-0.200	.334*	337*	No Firms
1012 - Construction	.391*	346*	0.167	-0.258	-0.263
1013 - Manufacturing	No Firms	No Firms	No Firms	513**	No Firms
1022 - Information	0.040	No Firms	No Firms	No Firms	606**
1023 - Fiscal Activities	0.068	.348*	No Firms	No Firms	No Firms
1024 - Professional and Business Services	-0.015	-0.240	No Firms	No Firms	0.084
1025 - Education and Health Services	-0.046	No Firms	No Firms	0.152	No Firms
1027 - Other Services	No Firms	-0.282	No Firms	No Firms	No Firms

 $Note \ensuremath{^{1:}} * Correlation is significant to the .05, and \ensuremath{^{**}} correlation is significant to the .001 level (2-tailed).$

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁵: Number of cases (months) in each of the counties is 42.

On next page, Table 58 shows the Texas County area out-country UI claimant firms' employment correlations with the adjacent state surrounding county of Baca County, Colorado's unemployment rate. As in the other tables displayed in this step six section of this report, this employment is by NAICS supersector and by five firm sizes. Altogether the table shows 13 cells

showing significant correlations. The supersector with the most significant correlations is 1011 Natural Resources and Mining, with all but Size5 showing these correlations.

Not shown, are the tables for two other Texas County area surrounding counties in adjacent states, each also having 13 cells with significant correlations. These are Table 54 for Stevens County, Kansas and Table 56 for Ochiltree County, Texas; which are shown in Appendix L at the end of this report. However the above Table 58 was chosen as representative, because it has the cell with the highest significant correlation in the Texas County area, that of NAICS supersector 1013 Manufacturing, Size4, with a negative .823 correlation.

Table 58: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Baca County², Colorado Unemployment Rate³ by Out-of-County Location, Supersector⁴ and Firm Size,⁵ January 2014 to June 2017⁶

	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	527**	546**	.617**	544**	No Firms
1012 - Construction	.700**	0.231	0.246	485**	496**
1013 - Manufacturing	No Firms	No Firms	No Firms	823**	No Firms
1022 - Information	-0.151	No Firms	No Firms	No Firms	-0.293
1023 - Fiscal Activities	-0.126	.751**	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.450**	466**	No Firms	No Firms	-0.059
1025 - Education and Health Services	555**	No Firms	No Firms	-0.125	No Firms
1027 - Other Services	No Firms	771**	No Firms	No Firms	No Firms

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note2: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note3: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note4: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county

Note5: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁶: Number of cases (months) in each of the counties is 42.

When comparing out-county UI claimant firms' employment by NAICS supersector and by the five firm sizes, and their correlations with the unemployment rates of the counties in the Texas County area, the same type of employment as previously reported for in-county employment is used. It is apparent that the overall numbers of significant correlations are not as many for out-county employment as was determined for in-county employment. However, both types of UI claimant firms' employment show similar patterns. The correlations for the surrounding counties in adjacent states most often are larger in numbers of significant correlations than

surrounding counties in Oklahoma, and those in adjacent states often have high correlation amounts. In both in-county and out-county employment, Morton County, Kansas located in this area, lying in a in a north northwest direction, and Sherman County, Texas in a south southwest direction from the area's central Texas County, have an unusually low number of correlations, than the other adjacent state surrounding counties. Note: See Texas County area map in Appendix F, page vii at the end of this report.

A Summary of the Findings

In summary, step one of the Phase III analysis found that the counties in the McCurtain County area generally had the larger employment than the Texas County area, with Bowie County, Texas having the largest employment level of 37,317 in the McCurtain County area, and Seward County, Kansas having the largest employment level of 10,129 in the Texas County area. Step two determined that of the counties in the McCurtain County area, almost all had higher unemployment rates than did the counties in the Texas County area, with Choctaw County, Oklahoma having the highest unemployment rate of 7.7 percent, in the former and Ochiltree County, Texas having the highest unemployment rate of 4.3 in the latter.

Continuing the findings for step two, when looking at the adjacent state county's employment correlations, Polk County, Arkansas was the only adjacent state county in the McCurtain County area not significantly correlated with the area's central county (McCurtain County) unemployment rate. On the other hand, Sherman County, Texas was the only adjacent state surrounding county in the Texas County area that was significantly correlated with that area's central county (Texas County) unemployment rate. Examining the adjacent state county's unemployment rate correlations, all of these counties in the McCurtain County area are significantly correlated with central McCurtain Counties unemployment rate; while in the Texas County area only one adjacent surrounding county in each state are significantly correlated with central Texas County's unemployment rate. These three counties are: Morton County, Kansas; Sherman County, Texas; and Baca County, Colorado.

Step three of the Phase III analysis examined the UI claimant employer in-county and out-county employment in each of the two areas according to their correlations with the employment and unemployment rates of the counties in each respective area. In the McCurtain County area, for both the in-county and out-county UI claimant firms' employment, the percent of both negative and positive significant correlations, with adjacent state surrounding counties' unemployment rates, was much higher than that for surrounding Oklahoma counties in the area. Although the same was most often also true with the adjacent state surrounding counties in the Texas County area, there were two adjacent state surrounding counties where this was not the case. These were Morton County, Kansas where none of these categories exceeded the significant correlations percentages of all of the Oklahoma counties in the same category and Sherman County, Texas where one of each category did not exceed the percentage of that of at least one Oklahoma surrounding county in the area, in that same category. This finding indicates that although both areas demonstrate aspects of true labor market areas, the Texas County area is not as employment dynamically integrated as is the McCurtain County area, at least in the case of the two directions of these two described counties, and their direction from the areas' central Texas County.

Step four of the Phase III analysis addressed the findings of UI claimant firms' employment with in-county or out-county located highly flexing or volatile employment and their correlations with the unemployment rates of the counties in each of the two areas. The patterns of distribution of

these correlations in these two areas were similar to the patterns discovered in step three for the McCurtain County area: the percentages of adjacent state counties correlations exceeded the percentages of the area's surrounding Oklahoma counties in the same category. However in the Texas County area, each state had a county with the higher total percentages of these types of correlations. That is, correlations between volatile employment firms and surrounding county unemployment rates. In Oklahoma, this was Beaver County with a total correlation percent of 45.8 percent. In Kansas, this was Stevens County with a total correlation percent of 45.8 percent. In Texas, this was Ochiltree County with a total correlation percent of 62.5 percent and in Colorado, Baca County tying with the highest Texas surrounding county of Ochiltree for the highest total correlation percent of all, 62.5 percent.

Step five of the Phase III analysis explored in-county and out-county UI claimant firms' employment and firm size correlations with each of the two areas' surrounding county unemployment rates. When comparing in-county UI claimant firms' employment, by firm size, with surrounding county unemployment rates in the McCurtain County area the following was determined. The adjacent state surrounding counties exceeded or matched the number of sizes significantly correlated, than the number of sizes correlations of Oklahoma surrounding counties, with one exception. Bowie County, Texas and Choctaw County, Oklahoma each had the two Size1 and Size2 firms that significantly correlated.

When examining the same type of correlations as described in the previous paragraph, for the Texas County area, all but three of the adjacent state surrounding counties exceeded or equaling all Oklahoma surrounding counties in the number of sizes with this type of correlations. These three were Sherman County, Texas with only Size3 having significant correlations, Morton County, Kansas with only Size5 and Stevens County, Kansas with the two Size1 and Size4. Strangely, in this area the central Texas County had no significant correlations for its unemployment rate, with in-county UI claimant firms' employment, when broken down by the five firm sizes.

The findings of step five of the Phase III analysis of out-county UI claimant firms' employment by five firm size correlations, with the unemployment rates of the counties in each of the two areas is summarized as follows. In the McCurtain County area, only two of the four Oklahoma counties had unemployment rates with significant correlations with the five firm sizes. These two had only one size in each county and the counties and sizes were McCurtain County in Size4, and Pushmataha County in Size3. In this same area, the unemployment rates of all adjacent state surrounding counties had two out-county UI claimant employment sizes with significant correlations, in Size1 and Size2, with Bowie County, Texas also having a third significant correlation with out-county UI claimant employment in Size3.

The findings of step five analyses of the Phase III analysis of out-county UI claimant firms' employment by firm size correlation for the Texas County area is as follows. The central Texas County in this area was the only Oklahoma county in the area that had an unemployment rate with two significant correlations with this type of UI claimant employment, in Size2 and Size4. The only other Oklahoma county in the area with a significant correlation, was Beaver County in Size2. Also in this same area the only adjacent state surrounding county with unemployment significantly correlated with out-county UI claimant employment in two sizes, was Baca County, Colorado, in Size4 and Size5. The rest had either none or one correlation.

The findings of step six of this Phase III analysis addresses both in-county and out-county UI claimant firms' employment by NAICS supersectors, by five firm sizes, and their correlations

with the unemployment rates of the counties in each of the two areas; McCurtain County and Texas County. A summary of these findings are as follows. In the McCurtain County area the in-county employment of this type had had a larger number of significant correlations with the unemployment rates of adjacent state surrounding counties than with those of surrounding Oklahoma counties. The highest number of significant correlations in surrounding Oklahoma counties in this areas was Choctaw County, with ten NAICS supersector and size correlations, while the range of significant supersector and size correlations for adjacent state surrounding counties in this area was from 13 to 16 correlations; oftentimes the size of the correlations being larger for adjacent surrounding state area counties than they were for Oklahoma area counties. The highest significant correlation was for Red River County, Texas unemployment rate with NAICS 1012 Construction of a positive .907.

As described in the preceding paragraph, the correlations for the same type of in-county employment correlations with the unemployment rates of the counties in the Texas County area are summarized as follows. Beaver County is the area's Oklahoma surrounding county having the largest number of significant correlations, with eight correlations. Of the area's two other Oklahoma counties, Texas county has three and Cimarron County has one significant correlation. However, the area's adjacent state surrounding counties have a range of significant correlations of three to nine significant correlations, most often with larger amount correlations than the area's Oklahoma counties. The adjacent state surrounding counties with the lower number of correlations are Morton County, Kansas with one significant correlation, the county laying in a northwest direction from the area's central county and Sherman County, Texas with three significant correlations, the county laying in a southwest direction from the central Texas County. Ochiltree County, Texas is the county in the Texas County area whose unemployment rate had the largest amount of significant correlation with in-county UI claimant NAICS supersector and size employment in 1021 Trade, Transportation and Utilities, Size4 with a positive .878 correlation.

Continuing summarizing the findings of step six of the Phase III analysis for out-county UI claimant employment by supersector and five sizes, the correlations with the unemployment rates for the counties in the McCurtain County area are as follows. The adjacent state surrounding areas' counties were determined to have much larger number of significant correlations than did the counties in Oklahoma in this area. The range for the Oklahoma counties was nine to 14, while all of the adjacent state counties had 20 of 21 significant correlations; the three with 21 significant correlations are Bowie County, Texas, Red River County, Texas and Little River County, Arkansas. In general, the surrounding adjacent state counties in this area more often have higher correlations values, than did the surrounding counties in Oklahoma. Little River County, Arkansas had the highest correlation value in this area in NAICS supersectorr 1011 Natural Resources and Mining in Size4, with a positive .838 correlation.

Finally, in summary of the step six of Phase III analyses for out-county UI claimant employment by supersector and five sizes, the correlations with the unemployment rates for the counties in the Texas County area are as follows. All the Oklahoma counties in this area had seven significant correlations. In general, the number of significant correlations of adjacent state surrounding counties in this area either equaled or exceeded the seven in Oklahoma area counties, with their range being from four to 14. The adjacent state surrounding counties with the lower numbers of significant correlations was Morton County, Kansas's four, laying in a

northwest direction from the area's central Texas County and Sherman County, Texas's seven laying in a southwest direction from the area's central county. This area's adjacent state counties also generally had higher significant correlation values, with the highest was in Baca County Colorado, with the NAICS supersector 1013 Manufacturing Size4 having a negative .823 correlation.

Conclusions

Four hypotheses were proposed and tested in Phase III analysis. The findings of the analysis for each are addressed.

The first hypothesis was that in each of the two geographical areas, the surrounding counties in other states adjacent to the areas' central counties will have employment and unemployment rates related to that same central counties' unemployment rate, as was found in the previous Phase II analysis for Oklahoma counties in each area. This hypothesis was upheld in both areas for most adjacent state counties. However not all adjacent counties in each area had employment and unemployment rates significantly correlated with those of the central county in each area. The McCurtain County area more often had significant correlations of its adjacent state surrounding county's employment and unemployment rates, with that of the area's central county, than was the case in the Texas County area.

The second hypothesis that both employers within and out of the central area counties have employment related to the unemployment rates of surrounding counties in each area, including those in adjacent states, is also upheld. In the McCurtain County area, both in-county and outcounty UI claimant firms' employment was more often correlated with the adjacent state counties unemployment rates than with the unemployment rates of Oklahoma counties in the area. In the Texas County area both in-county and out-county UI claimant firms' employment was more often correlated with the unemployment rates, than they were with the unemployment rates of area Oklahoma counties, in all but two adjacent state counties.

The third hypothesis that firms with highly volatile employment, both within and out of the central area counties, are related to the unemployment rates of surrounding counties in each area, including those in adjacent states, was also upheld. Again, in the McCurtain County area both in-county and out-county UI claimant firms with highly volatile employment are more often correlated with the adjacent state counties unemployment rates than with the unemployment rates of Oklahoma counties in the area. In the Texas County area, both in-county and out-county firm's with highly volatile employment are more often correlated with the unemployment rates of all but two adjacent state counties, than they were with the unemployment rates of area Oklahoma counties.

The fourth hypothesis, that when controlled for employer industry and size, both in-county and out-county employment is related to the unemployment rates in surrounding counties, even those in adjacent states, is also upheld. For the McCurtain County area, all adjacent state counties had a larger number of significant correlations with both in-county and out-county employment, when controlled by firm industry and size. For the Texas County area, all adjacent state counties had a larger number of significant correlations with in-county employer employment, when controlled by firm industry and size. The same was true in the Texas County area in all but two adjacent state counties, when controlled by firm industry and size. In both areas, the higher correlation amounts more often occurred with the adjacent state counties unemployment rates than with those of the area's Oklahoma counties.

There are three major finding of this Phase III analysis. The first is that in research addressing county employment change, Labor Market Areas' local employment dynamics must be taken into consideration. The reason for this is that a large portion of employees residing in the central county of study, or concern, have a high likelihood of actually working in adjoining counties. Using LAUS data, county of residence determines a workforce. When the portion of the county's employment working out of county become unemployed, they are then part of the LAUS estimate of the unemployed in their county of residence, thus are a major factor in determining the LAUS unemployment rates in their home county. In short, it is not simply employers located within a county that determine a county's unemployment rate, but depending on local commuter patterns, a county's unemployment rate may also depend on their employment at firms located in surrounding counties.

A second major finding of this Phase III analysis, related to the previous one, is that highly volatile employment firms also affect a county's unemployment rate. These highly volatile employment firms may be located either in-county or out of county; and in the case of state border counties, these employers may also be located in other states.

A third major finding of this Phase III analysis, related to the previous two, is that not just large firm sizes of these highly volatile employment employers affect the unemployment rates of counties, but other different firm sizes including small firm sizes may affect the unemployment change of counties.

APPENDIX F: Tables for Phase III, Employment and Employment Change McCurtain County and Texas County, Oklahoma Descriptive Statistics with Maps

Table 1: McCurtain County, Oklahoma and Surrounding Counties
Descriptive Monthly Employment Statistics¹, January 2014 to June 2017²

Area	County	Minimum	Maximum	Mean	Std. Deviation
Oklahoma	McCurtain LAUS	12,656	14,251	13,530	398
	Choctaw LAUS	5,166	5,568	5,346	106
	Le Flore LAUS	17,673	18,531	18,236	230
	Pushmataha LAUS	4,173	4,692	4,445	127
Arkansas	Little River LAUS	4,946	5,555	5,282	139
	Polk LAUS	7,328	8,137	7,797	170
	Sevier LAUS	5,162	5,686	5,353	111
Texas	Bowie LAUS	36,476	38,016	37,317	367
	Red River LAUS	4,384	4,872	4,652	117

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Number of cases (months) in each of the counties is 42.

Table 2: Texas County, Oklahoma and Surrounding Counties

Descriptive Monthly Employment¹ Statistics, January 2014 to June 2017²

Area	County	Minimum	Maximum	Mean	Std. Deviation
ma	Texas LAUS	8,683	9,672	9,111	250
Oklahoma	Beaver LAUS	2,678	3,086	2,889	124
	Cimarron LAUS	1,163	1,458	1,333	75
S	Morton LAUS	1,226	1,491	1,357	69
Kansas	Seward LAUS	9,399	10,845	10,126	471
I	Stevens LAUS	2,437	3,478	2,951	282
	Hansford LAUS	2,715	3,282	2,977	153
Texas	Ochiltree LAUS	4,031	5,535	4,831	501
	Sherman LAUS	1,223	1,517	1,368	81
00	Baca³ LAUS	1,756	2,177	1,988	118

Note²: Number of cases (months) in each of the counties is 42.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Table 3: McCurtain County, Oklahoma and Surrounding Counties Descriptive Monthly Unemployment Rate¹ Statistics January 2014 to June 2017²

Area	County	Minimum	Maximum	Mean	Std. Deviation
	McCurtain LAUS	5.5	13.1	7.5	1.19
Oklahoma	Choctaw LAUS	5.4	10.3	7.7	0.84
Okla	Le Flore LAUS	5.3	8.7	6.8	0.64
	Pushmataha LAUS	5.8	9.0	7.4	0.69
as	Little River LAUS	3.9	7.6	5.4	1.03
Arkansas	Polk LAUS	4.0	7.1	5.5	0.87
$\mathbf{A}_{\mathbf{I}}$	Sevier LAUS	3.6	9.7	5.8	1.28
Texas	Bowie LAUS	4.0	7.4	5.3	0.83
Tex	Red River LAUS	5.3	9.6	6.5	1.00

Table 4: Texas County, Oklahoma and Surrounding Counties Descriptive Monthly Unemployment Rate¹ Statistics January 2014 to June 2017²

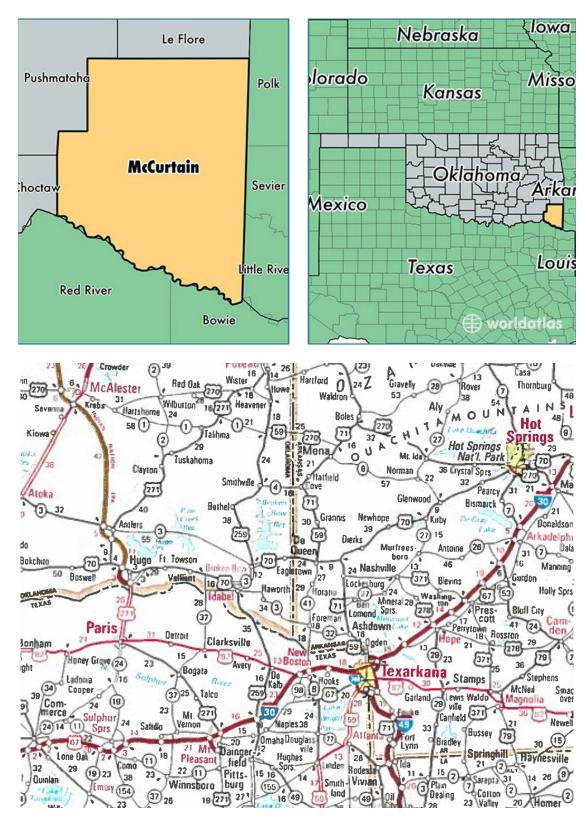
Area	County	Minimum	Maximum	Mean	Std. Deviation
ma	Texas LAUS	2.8	4.3	3.5	0.42
Oklahoma	Beaver LAUS	2.1	4.2	2.9	0.40
	Cimarron LAUS	1.8	3.4	2.5	0.45
S	Morton LAUS	3.1	5.2	4.1	0.52
Kansas	Seward LAUS	3.0	5.3	4.1	0.58
Y	Stevens LAUS	2.7	4.9	3.7	0.66
	Hansford LAUS	2.0	3.5	2.9	0.33
Texas	Ochiltree LAUS	2.4	5.9	4.3	1.02
_	Sherman LAUS	2.2	3.8	3.0	0.37
CO	Baca³ LAUS	1.3	4.0	2.1	0.58

 $Note \ensuremath{^{1}}\hbox{: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).}$

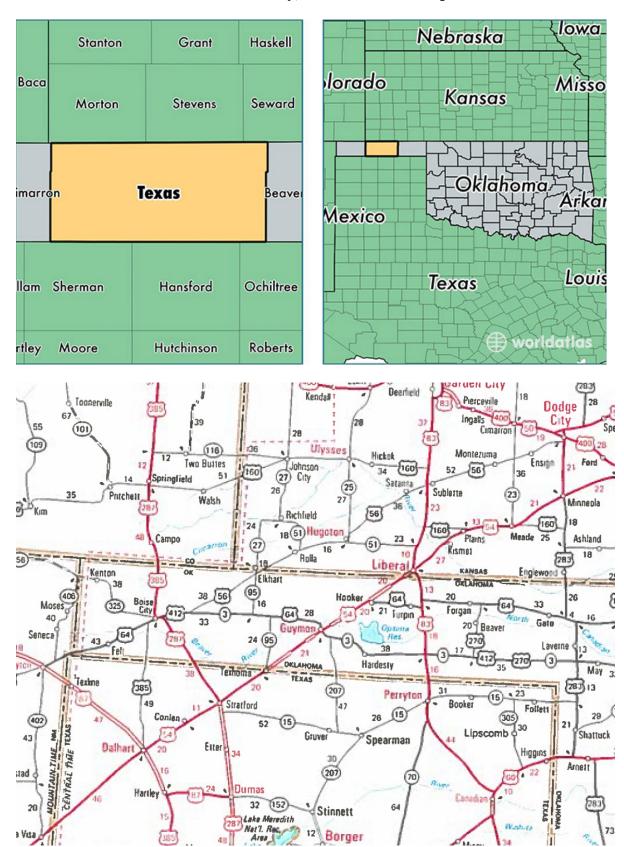
Note²: Number of cases (months) in each of the counties is 42.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

McCurtain County, Oklahoma Area Maps



Texas County, Oklahoma Area Maps



APPENDIX G: Tables for Phase III, Employment and Employment Change McCurtain County and Texas County, Oklahoma Employment and Unemployment Correlations

Table 5: McCurtain County, Oklahoma and Surrounding Counties Employment Correlations with McCurtain County's Unemployment Rates¹ January 2014 to June 2017²

Area	County	Correlation ³ with McCurtain County, OK Unemployment
	McCurtain LAUS	514**
Oklahoma	Choctaw LAUS	0.180
Okla	Le Flore LAUS	464**
	Pushmataha LAUS	-0.041
	Little River LAUS	505**
Arkansas	Polk LAUS	0.022
\mathbf{A}_{I}	Sevier LAUS	467**
Texas	Bowie LAUS	490**
Te	Red River LAUS	490**

Note²: Number of cases (months) in each of the counties is 42.

Note³: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 6: Texas County, Oklahoma and Surrounding Counties Employment Correlations with Texas County's Unemployment Rates¹ January 2014 to June 2017²

Area	County	Correlation⁴ with Texas County OK Laus Unemployment
ma	Texas LAUS	577**
Oklahoma	Beaver LAUS	0.009
10	Cimarron LAUS	495**
S	Morton LAUS	0.110
Kansas	Seward LAUS	0.265
I	Stevens LAUS	0.264
70	Hansford LAUS	0.279
Texas	Ochiltree LAUS	0.219
	Sherman LAUS	.359*
CO	Baca³ LAUS	-0.025

Note²: Number of cases (months) in each of the counties is 42.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note⁴: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 7: McCurtain County, Oklahoma and Surrounding Counties Unemployment Rate¹ Correlations, January 2014 to June 2017²

Area	County	Correlation ³ with McCurtain County OK Laus Unemployment
ma	Choctaw LAUS	.706**
Oklahoma	Le Flore LAUS	.459**
O	Pushmataha LAUS	.543**
as	Little River LAUS	.660**
Arkansas	Polk LAUS	.595**
\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Sevier LAUS	.774**
Texas	Bowie LAUS	.424**
Te	Red River LAUS	.524**

Note²: Number of cases (months) in each of the counties is 42.

Note³: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 8: Texas County, Oklahoma and Surrounding Counties Unemployment Rate¹ Correlations, January 2014 to June 2017²

Area	County	Correlation ⁴ with Texas County OK Laus Unemployment
noma	Beaver LAUS	.668**
Oklahoma	Cimarron LAUS	.861**
Si	Morton LAUS	.386*
\mid Ka \mid	Seward LAUS	0.152
	Stevens LAUS	0.009
70	Hansford LAUS	0.033
Texas	Ochiltree LAUS	-0.102
	Sherman LAUS	.585**
co	Baca³ LAUS	.496**

Note²: Number of cases (months) in each of the counties is 42.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note⁴: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

APPENDIX H: Tables for Phase III, Employment and Employment Change McCurtain County and Texas County Areas Tabulations and Correlations

Table 9: McCurtain & Texas Counties' UI Claimant Firms by Number, Percent and In, Out or Indeterminate County Locations First Quarter 2016¹.

		ntions In unty		ons Out of inty	Locations Out of		
County	Number Percent		Number	Percent	Number	Percent	Totals
McCurtain	74	39.4	92	48.9	22	11.7	188
Texas	34 42.0		32	39.5	15	18.5	81

Note1: Calculated from the unemployment insurance (UI) claims for the county for first quarter 2016.

Table 10: McCurtain & Texas Counties' UI Claimant Firms
Employment Correlations with County Employment¹, by In-County and
Out-County Locations, First Quarter 2016²

	All	Location	ıs In Co	unty	All I	ocations	s Out Co	ounty			
		ative lated³		Positive Correlated		Negative Correlated		itive elated	Total Correlated		
County	No.	%	No.	%	No.	%	No.	%	No.	%	
McCurtain	22	29.7	20	20 27.0		29.3	24	26.1	69	41.6	
	Possibl	e In Coun	ty Employe	ers = 74	Possible	Out Cour	nty Employ	vers = 92	All Possible =		
Texas	2	5.9	10	29.4	3	9.4	9 28.1		24	36.4	
	Possibl	e In Coun	ty Employe	ers = 34	Possible	Out Cour	ity Employ	vers = 32	All Possible = 66		

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Calculated from the unemployment insurance (UI) claims for the county for first quarter 2016.

Note3: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 11: McCurtain County, Oklahoma UI Claimant Firms Employment Correlations with McCurtain and Surrounding Counties' Unemployment Rate¹ by Number and Percent January 2014 to June 2017²

		Al	l Location	s In Cou	nty	All	Locations	Out Cou	ınty		
		Nega Corre	ative lated³	Posi Corre	itive elated	_	Negative Correlated		itive elated	Total Co	orre late d
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%
	McCurtain LAUS	19	25.7	11	14.9	14	15.2	17	18.5	61	36.7
Oklahoma	Choctaw LAUS	22	29.7	6	8.1	14	15.2	17	18.5	59	35.5
Okla	Le Flore LAUS	16	21.6	5	6.8	13	14.1	12	13.0	46	27.7
	Pushmataha LAUS	12	16.2	6	8.1	13	14.1	12	13.0	43	25.9
as	Little River LAUS	26	35.1	21	28.4	23	25.0	33	35.9	103	62.0
Arkansas	Polk LAUS	26	35.1	21	28.4	24	26.1	28	30.4	99	59.6
A	Sevier LAUS	24	32.4	20	27.0	23	25.0	32	34.8	99	59.6
as	Bowie LAUS	24	32.4	17	23.0	22	23.9	27	29.3	90	54.2
Texas	Red River LAUS	28	37.8	21	28.4	23	25.0	29	31.5	101	60.8
			ble In Count	y Employer		Possibl	le Out Cour	nty Employe	rs = 92	All Poss	ible =166

Note²: Calculated from the unemployment insurance (UI) claims for the county for first quarter 2016.

Note³: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 12: Texas County, Oklahoma UI Claimant Frims
Employment Correlations with Texas and Surrounding Counties' Unemployment Rate¹
by Number and Percent, January 2014 to June 2017²

		Al	l Location	s In Cou	nty	All	Locations	Out Cou	ınty		
		_	ative	Posi		_	ative	Posi			
			late d⁴		elated		elated		elate d	Total Co	
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%
na	Texas LAUS	3	8.8	4	11.8	6	18.8	5	15.6	18	27.3
Oklahoma	Beaver LAUS	10	29.4	3	8.8	5	15.6	4	12.5	22	33.3
0	Cimarron LAUS	3	8.8	8	23.5	5	15.6	4	12.5	20	30.3
	Morton LAUS	1	2.9	2	5.9	2	6.3	2	6.3	7	10.6
Kansas	Seward LAUS	7	20.6	4	11.8	6	18.8	6	18.8	23	34.8
	Stevens LAUS	11	32.4	6	17.6	9	28.1	9	28.1	35	53.0
	Hansford LAUS	13	38.2	4	11.8	10	31.3	9	28.1	36	54.5
Texas	Ochiltree LAUS	15	44.1	7	20.6	9	28.1	10	31.3	41	62.1
	Sherman LAUS	4	11.8	2	5.9	6	18.8	2	6.3	14	21.2
СО	Baca³ LAUS	5	14.7	13	38.2	11	34.4	9	28.1	38	57.6
		Possil	ole In Count	ty Employer	s = 34	Possib	le Out Cour	nty Employe	rs = 32	All Poss	ible = 66

Note2: Calculated from the unemployment insurance (UI) claims for the county for first quarter 2016.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note⁴: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 13: McCurtain County, Oklahoma UI Claimant Firms Employment Correlations with McCurtain and Surrounding Counties' Unemployment Rate', by Number, Range and Mean, January 2014 to June 2017².

					Al	l Location	s In Cou	nty							All I	Locations	Out of C	ounty			
		Sig	nificant N	legative C	orre latio	ns³	S	ignificant	Positive (Correlatio	n	Significant Negative Correlations Significant Positive Correlation						n			
Are	ea County	Number	Minimum	Maximum	Mean	Stand D.4	Number	Minimum	Maximum	Mean	Stand D.	Number	Minimum	Maximum	Mean	Stand D.	Number	Minimum	Maximum	Mean	Stand D.
_	McCurtain LAUS	19	0.317	0.552	0.415	0.068	11	0.337	0.759	0.453	0.136	14	0.308	0.541	0.403	0.075	17	0.315	0.519	0.392	0.062
Oklahoma	Choctaw LAUS	22	0.310	0.598	0.439	0.087	6	0.313	0.578	0.415	0.106	14	0.307	0.539	0.453	0.078	17	0.328	0.616	0.431	0.090
Okla	Le Flore LAUS	16	0.329	0.553	0.438	0.079	5	0.441	0.767	0.594	0.163	13	0.309	0.648	0.446	0.117	12	0.317	0.676	0.465	0.126
	Pushmataha LAUS	12	0.312	0.546	0.434	0.085	6	0.311	0.730	0.422	0.154	13	0.308	0.499	0.387	0.072	12	0.307	0.668	0.426	0.111
36	Little River LAUS	26	0.378	0.873	0.606	0.151	21	0.348	0.790	0.563	0.134	23	0.330	0.916	0.590	0.173	33	0.311	0.886	0.596	0.174
Arkansas	Polk LAUS	26	0.309	0.828	0.587	0.139	21	0.352	0.804	0.561	0.126	24	0.321	0.843	0.560	0.157	28	0.341	0.840	0.595	0.129
Ā	Sevier LAUS	24	0.373	0.844	0.624	0.126	20	0.382	0.742	0.573	0.120	23	0.330	0.871	0.577	0.163	32	0.307	0.868	0.585	0.159
Texas	Bowie LAUS	24	0.325	0.899	0.537	0.162	17	0.305	0.868	0.540	0.197	22	0.317	0.745	0.538	0.128	27	0.305	0.844	0.571	0.169
T	Red River LAUS	28	0.337	0.875	0.570	0.154	21	0.336	0.920	0.548	0.174	23	0.311	0.790	0.556	0.159	29	0.321	0.858	0.575	0.178
					Possi	ble In Count	y Employer	s = 74							Possib	le Out Cour	nty Employe	ers = 92			

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Number of cases (months) in each of the counties is 42.

Note3: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note : Standard Deviation

Table 14: Texas County, Oklahoma UI Claimant Firms Employment Correlations with Texas and Surrounding Counties' Unemployment Rate¹, by Number, Range and Mean, January 2014 to June 2017².

					Al	l Locatior	s In Cou	nty							All I	ocations	Out of Co	ounty			
		Sig	nificant N	legative C	Corre latio	ns4	S	ignificant	Positive (Correlatio	n	Sig	gnificant N	legative (Correlatio	ons	s	Significant Positive Correlation			
Area	County	Number	Minimum	Maximum	Mean	Stand D.5	Number	Minimum	Maximum	Mean	Stand D.	Number	Minimum	Maximum	Mean	Stand D.	Number	Minimum	Maximum	Mean	Stand D.
la I	Texas LAUS	3	0.313	0.482	0.372	0.095	4	0.307	0.633	0.402	0.155	6	0.337	0.606	0.421	0.112	5	0.307	0.611	0.405	0.120
Oklahoma	Beaver LAUS	10	0.326	0.721	0.448	0.128	3	0.328	0.353	0.340	0.013	5	0.323	0.536	0.417	0.101	4	0.321	0.412	0.366	0.045
0	Cimarron LAUS	3	0.305	0.574	0.398	0.153	8	0.314	0.532	0.432	0.087	5	0.366	0.563	0.461	0.070	4	0.322	0.487	0.413	0.079
	Morton LAUS	1	0.627	0.627	0.627	-	2	0.367	0.394	0.381	0.019	2	0.464	0.569	0.517	0.074	2	0.464	0.569	0.517	0.074
Kansas	Seward LAUS	7	0.309	0.643	0.480	0.129	4	0.433	0.592	0.498	0.073	6	0.329	0.585	0.438	0.111	6	0.416	0.600	0.503	0.062
	Stevens LAUS	11	0.308	0.688	0.517	0.140	6	0.327	0.639	0.457	0.122	9	0.308	0.709	0.498	0.116	9	0.327	0.683	0.483	0.123
	Hansford LAUS	13	0.309	0.686	0.493	0.116	4	0.368	0.692	0.485	0.143	10	0.403	0.568	0.493	0.063	9	0.338	0.569	0.433	0.087
Texas	Ochiltree LAUS	15	0.315	0.891	0.614	0.186	7	0.354	0.878	0.534	0.182	9	0.565	0.777	0.680	0.081	10	0.320	0.788	0.551	0.149
	Sherman LAUS	4	0.355	0.567	0.438	0.092	2	0.480	0.653	0.567	0.122	6	0.309	0.543	0.427	0.098	2	0.321	0.342	0.332	0.015
co	Baca³ LAUS	5	0.366	0.760	0.520	0.174	13	0.313	0.751	0.564	0.139	11	0.320	0.823	0.572	0.137	9	0.340	0.841	0.633	0.164
	F 1 1 1		Possible In County Employers = 34										Possib	le Out Cour	nty Employe	rs = 32					

Note¹: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note²: Number of cases (months) in each of the counties is 42.

Note³: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

 $Note ^4\colon \hbox{* Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).}$

Note : Standard Deviation

Table 15: McCurtain County, Oklahoma UI Claimant Employers with Flexing Employment¹ Correlations with McCurtain and Surrounding Counties' Unemployment Rate² by Number and Percent, January 2014 to June 2017³

		Al	l Location	s In Cou	nty	All	Locations	Out Cou	ınty			
		Negative Correlated⁴		Positive Correlated			ative elated⁵	Posi Corre	itive elate d	Total Correlated		
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%	
	McCurtain LAUS	9	37.5	4	16.7	2	8.0	2	8.0	17	34.7	
Oklahoma	Choctaw LAUS	9	37.5	2	8.3	1	4.0	1	4.0	13	26.5	
Okla	Le Flore LAUS	6	25.0	1	4.2	1	4.0	2	8.0	10	20.4	
	Pushmataha LAUS	5	20.8	3	12.5	2	8.0	3	12.0	13	26.5	
as	Little River LAUS	10	41.7	5	20.8	6	24.0	7	28.0	28	57.1	
Arkansas	Polk LAUS	10	41.7	5	20.8	7	28.0	7	28.0	29	59.2	
\mathbf{A}_{J}	Sevier LAUS	10	41.7	5	20.8	7	28.0	8	32.0	30	61.2	
as	Bowie LAUS	10	41.7	5	20.8	7	28.0	6	24.0	28	57.1	
Texas	Red River LAUS	10	41.7	7	29.2	7	28.0	6	24.0	30	61.2	
		Possil	ole In Count	ty Employer	s = 24	Possibl	le Out Cour	ty Employe	rs = 25	All Possible =49		

Note¹: Employers with flexing employment were identified by graphs of employment, over the 42 months of the study's observation.

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: Number of cases (months) in each of the counties is 42.

Note4: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 16: Texas County, Oklahoma UI Claimant Employers with Flexing¹ Employment Correlations with Texas and Surrounding Counties' Unemployment Rate² by Number and Percent, January 2014 to June 2017³

		Al	Location	s In Cou	nty	All	Locations	Out Cou	ınty		
		Nega			itive	Neg		Posi			
		Corre	late d ³	Corre	elated	Corre	elated	Corre	elated	Total Co	orrelated
Area	County	No.	%	No.	%	No.	%	No.	%	No.	%
na	Texas LAUS	2	15.4	1	7.7	3	27.3	1	9.1	7	29.2
Oklahoma	Beaver LAUS	4	30.8	1	7.7	4	36.4	2	18.2	11	45.8
0	Cimarron LAUS	2	15.4	3	23.1	3	27.3	1	9.1	9	37.5
	Morton LAUS	1	7.7	1	7.7	1	9.1	1	9.1	4	16.7
Kansas	Seward LAUS	3	23.1	2	15.4	1	9.1	3	27.3	9	37.5
	Stevens LAUS	3	23.1	2	15.4	2	18.2	4	36.4	11	45.8
	Hansford LAUS	6	46.2	2	15.4	2	18.2	4	36.4	14	58.3
Texas	Ochiltree LAUS	6	46.2	3	23.1	2	18.2	4	36.4	15	62.5
	Sherman LAUS	3	23.1	0	0.0	2	18.2	1	9.1	6	25.0
CO	Baca ⁴ LAUS	3	23.1	5	38.5	5	45.5	2	18.2	15	62.5
		Possil	de In Count	ty Employer	rs = 13	Possib	le Out Cour	nty Employe	rs = 11	All Poss	ible = 24

Note1: Employers with flexing employment were identified by graphs of employment, over the 42 months of the study's observation.

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: Number of cases (months) in each of the counties is 42.

Note⁴: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note5: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Table 17: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain and Surrounding Counties' Unemployment Rate² by In County Location and Firm Size³, January 2014 to June 2017⁴

		All I	Firm Locati	ions In Mc	Curtain Co	unty
Area	County	Firm Size1	Firm Size 2	Firm Size3	Firm Size4	Firm Size 5
	McCurtain LAUS	.386*	394**	-0.152	-0.162	418**
Oklahoma	Choctaw LAUS	.332*	540**	-0.107	-0.237	-0.260
Okla]	Le Flore LAUS	0.269	-0.247	-0.059	-0.130	-0.238
	Pushmataha LAUS	0.236	-0.057	-0.171	-0.150	507**
as	Little River LAUS	.617**	722**	465**	-0.083	324*
Arkansas	Polk LAUS	.583**	552**	535**	-0.122	352*
Aı	Sevier LAUS	.652**	613**	477**	-0.029	441**
Texas	Bowie LAUS	.395**	830**	-0.235	-0.134	0.225
Te	Red River LAUS	.526**	0.000	305*	-0.068	0.039

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

 $Note {}^{2}\hbox{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+ Note⁴: Number of cases (months) in each of the counties is 42.

Table 18: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas and Surrounding Counties' Unemployment Rate² by In-County Location and Firm Size³, January 2014 to June 2017⁴

			All Firm Lo	cations In T	exas County	7
Area	County	Firm Size1	Firm Size2	Firm Size3	Firm Size4	Firm Size 5
na	Texas LAUS	0.124	0.032	-0.181	-0.051	-0.278
Oklahoma	Beaver LAUS	341*	-0.237	335*	.346*	-0.174
0	Cimarron LAUS	0.280	0.102	-0.026	-0.146	430**
	Morton LAUS	-0.001	0.021	-0.100	0.226	551**
Kansas	Seward LAUS	355*	-0.092	-0.170	.489**	375*
	Stevens LAUS	521**	-0.238	-0.256	.550**	-0.117
	Hansford LAUS	606**	332*	356*	.585**	-0.019
Texas	Ochiltree LAUS	756**	492**	468**	.775**	0.108
	Sherman LAUS	-0.120	-0.188	356*	0.234	-0.150
ОО	Baca ⁵ LAUS	.647**	.494**	0.208	653**	-0.144

Note⁵: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁴: Number of cases (months) in each of the counties is 42.

Table 19: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain and Surrounding Counties' Unemployment Rate² by Out-County Location and Firm Size³, January 2014 to June 2017⁴

		All Fir	m Location	ns Out of M	IcCurtain (County
Area	County	Firm Size1	Firm Size 2	Firm Size3	Firm Size4	Firm Size 5
	McCurtain LAUS	0.142	0.130	0.083	.390*	0.160
Oklahoma	Choctaw LAUS	0.118	0.005	0.004	0.294	0.275
Okla]	Le Flore LAUS	-0.066	-0.021	0.213	0.109	0.068
	Pushmataha LAUS	-0.061	0.150	.439**	0.178	0.008
as	Little River LAUS	.524**	0.081	-0.139	.693**	0.250
Arkansas	Polk LAUS	.405**	0.222	0.061	.661**	0.146
 	Sevier LAUS	.484**	0.166	-0.034	.664**	0.253
Texas	Bowie LAUS	.396**	-0.235	443**	.384*	0.210
Te	Red River LAUS	.407**	-0.120	-0.293	.474**	0.223

Note¹: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

 $Note^3: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ and\ Size5=250+1000\ to\ 240\ to\ 240\ and\ Size5=250+1000\ to\ 240\ to\ 24$

Note⁴: Number of cases (months) in each of the counties is 42.

Table 20: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas and Surrounding Counties Unemployment Rates² by Out-County Location and Firm Sizes³, January 2014 to June 2017⁴

		All	Firm Locat	ions Out of	Texas Cou	unty
Area	County	Firm Size 1	Firm Size 2	Firm Size3	Firm Size4	Firm Size 5
ma	Texas LAUS	0.168	493**	0.180	307*	0.122
Oklahoma	Beaver LAUS	0.258	389*	-0.053	-0.134	0.011
0	Cimarron LAUS	0.156	-0.252	0.287	-0.144	0.173
S	Morton LAUS	0.040	-0.045	.571**	-0.034	-0.036
Kansas	Seward LAUS	-0.023	-0.030	0.259	0.134	0.006
F	Stevens LAUS	0.123	0.014	0.003	0.189	-0.105
	Hansford LAUS	0.126	-0.260	-0.142	.312*	-0.228
Texas	Ochiltree LAUS	0.294	-0.255	-0.237	.334*	-0.293
	Sherman LAUS	0.284	627**	-0.010	0.090	-0.247
ОО	Baca ⁵ LAUS	-0.259	-0.115	0.271	686**	.577**

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note3: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁴: Number of cases (months) in each of the counties is 42.

Note⁵: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

APPENDIX I: Tables for Phase III, Employment and Employment Change
McCurtain County, Oklahoma
All In-County Locations by Supersector and Size

Table 21: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain County Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All F	rm Locati	ons In Mc	Curtain C	ounty
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.380*	No Firms	No Firms	532**	No Firms
1012 - Construction	0.184	No Firms	No Firms	-0.104	No Firms
1013 - Manufacturing	0.292	No Firms	No Firms	458**	-0.075
1021 - Trade. Transportation, and Utilities	.433**	436**	0.182	-0.227	-0.023
1023 - Financial Activities	No Firms	No Firms	No Firms	No Firms	-0.192
1024 - Professional and Business Services	0.288	No Firms	No Firms	.309*	No Firms
1025 - Education and Health Services	No Firms	-0.255	-0.169	0.059	-0.297
1026 - Leisure and Hospitality	No Firms	-0.077	0.069	No Firms	No Firms
1027 - Other Services	-0.017	-0.122	No Firms	No Firms	No Firms
1028 - Public Administration	-0.277	No Firms	343*	-0.117	No Firms

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 22: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Choctaw County, Oklahoma Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Fi	irm Locati	ons In Mc	Curtain C	ounty
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.313*	No Firms	No Firms	539**	No Firms
1012 - Construction	.306*	No Firms	No Firms	-0.193	No Firms
1013 - Manufacturing	.482**	No Firms	No Firms	508**	0.099
1021 - Trade. Transportation, and Utilities	.372*	403**	0.219	-0.188	0.165
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	-0.181
1024 - Professional and Business Services	0.206	No Firms	No Firms	0.259	No Firms
1025 - Education and Health Services	No Firms	421**	-0.114	0.053	-0.262
1026 - Leisure and Hospitality	No Firms	-0.258	0.098	No Firms	No Firms
1027 - Other Services	0.012	-0.152	No Firms	No Firms	No Firms
1028 - Public Administration	424**	No Firms	406**	-0.137	No Firms

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 23: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Le Flore County, Oklahoma Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All F	irm Locati	ons In Mc	Curtain C	ounty
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.247	No Firms	No Firms	305*	No Firms
1012 - Construction	.333*	No Firms	No Firms	-0.041	No Firms
1013 - Manufacturing	.384*	No Firms	No Firms	566**	-0.025
1021 - Trade. Transportation, and Utilities	0.164	-0.229	0.232	-0.255	0.137
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	316*
1024 - Professional and Business Services	0.048	No Firms	No Firms	0.089	No Firms
1025 - Education and Health Services	No Firms	598**	-0.076	0.001	-0.270
1026 - Leisure and Hospitality	No Firms	-0.040	0.085	No Firms	No Firms
1027 - Other Services	0.104	-0.131	No Firms	No Firms	No Firms
1028 - Public Administration	460**	No Firms	348*	0.079	No Firms

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified

Table 24: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Pushmataha County, Oklahoma Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All F	irm Locati	ons In Mc	Curtain C	ounty
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.244	No Firms	No Firms	-0.242	No Firms
1012 - Construction	0.209	No Firms	No Firms	-0.078	No Firms
1013 - Manufacturing	0.138	No Firms	No Firms	523**	373*
1021 - Trade. Transportation, and Utilities	0.021	-0.177	0.179	310*	0.015
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	-0.191
1024 - Professional and Business Services	0.046	No Firms	No Firms	0.062	No Firms
1025 - Education and Health Services	No Firms	589**	-0.057	-0.001	-0.204
1026 - Leisure and Hospitality	No Firms	0.106	-0.138	No Firms	No Firms
1027 - Other Services	0.007	-0.099	No Firms	No Firms	No Firms
1028 - Public Administration	493**	No Firms	321*	-0.053	No Firms

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 25: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Little River County, Arkansas Unemployment Rate² by In-County Location, Supersector³ and Firm Size⁴ January 2014 to June 2017⁵

	All Fi	irm Locati	ons In Mc	Curtain C	ounty
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.567**	No Firms	No Firms	856**	No Firms
1012 - Construction	.448**	No Firms	No Firms	0.077	No Firms
1013 - Manufacturing	.753**	No Firms	No Firms	698**	0.249
1021 - Trade. Transportation, and Utilities	.774**	782**	.348*	504**	-0.072
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	503**
1024 - Professional and Business Services	.668**	No Firms	No Firms	.466**	No Firms
1025 - Education and Health Services	No Firms	-0.210	679**	0.101	527**
1026 - Leisure and Hospitality	No Firms	-0.024	0.150	No Firms	No Firms
1027 - Other Services	0.126	-0.045	No Firms	No Firms	No Firms
1028 - Public Administration	-0.203	No Firms	448**	378*	No Firms

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified

Table 26: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Pole County, Arkansas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In McCurtain County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.572**	No Firms	No Firms	786**	No Firms
1012 - Construction	.398**	No Firms	No Firms	0.074	No Firms
1013 - Manufacturing	.704**	No Firms	No Firms	775**	0.150
1021 - Trade. Transportation, and Utilities	.640**	740**	.408**	659**	-0.042
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	531**
1024 - Professional and Business Services	.586**	No Firms	No Firms	.458**	No Firms
1025 - Education and Health Services	No Firms	-0.250	740**	0.035	573**
1026 - Leisure and Hospitality	No Firms	0.094	0.135	No Firms	No Firms
1027 - Other Services	0.198	-0.118	No Firms	No Firms	No Firms
1028 - Public Administration	-0.232	No Firms	550**	380*	No Firms

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified

Table 27: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Sevier County, Arkansas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In McCurtain County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.614**	No Firms	No Firms	835**	No Firms
1012 - Construction	.439**	No Firms	No Firms	0.125	No Firms
1013 - Manufacturing	.656**	No Firms	No Firms	752**	0.113
1021 - Trade. Transportation, and Utilities	.734**	781**	.389*	567**	-0.029
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	494**
1024 - Professional and Business Services	.598**	No Firms	No Firms	.473**	No Firms
1025 - Education and Health Services	No Firms	-0.224	656**	0.146	481**
1026 - Leisure and Hospitality	No Firms	0.036	0.108	No Firms	No Firms
1027 - Other Services	0.175	-0.001	No Firms	No Firms	No Firms
1028 - Public Administration	-0.236	No Firms	504**	373*	No Firms

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified

Table 28: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Bowie County, Texas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In McCurtain County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.344*	No Firms	No Firms	690**	No Firms
1012 - Construction	.384*	No Firms	No Firms	0.029	No Firms
1013 - Manufacturing	.879**	No Firms	No Firms	453**	.718**
1021 - Trade. Transportation, and Utilities	.762**	597**	0.160	-0.275	0.127
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	462**
1024 - Professional and Business Services	.571**	No Firms	No Firms	.342*	No Firms
1025 - Education and Health Services	No Firms	-0.070	545**	-0.038	544**
1026 - Leisure and Hospitality	No Firms	-0.219	.396**	No Firms	No Firms
1027 - Other Services	0.099	-0.215	No Firms	No Firms	No Firms
1028 - Public Administration	-0.029	No Firms	-0.260	-0.120	No Firms

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified

Table 29: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Red River County, Texas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In McCurtain County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.779**	No Firms	No Firms	.498**	No Firms
1012 - Construction	0.080	No Firms	No Firms	.907**	No Firms
1013 - Manufacturing	630**	No Firms	No Firms	.587**	.742**
1021 - Trade. Transportation, and Utilities	706**	0.284	399**	0.165	521**
1023 - Fiscal Activities	No Firms	No Firms	No Firms	No Firms	.600**
1024 - Professional and Business Services	.416**	No Firms	No Firms	-0.157	No Firms
1025 - Education and Health Services	No Firms	616**	0.078	518**	-0.138
1026 - Leisure and Hospitality	No Firms	.370*	0.189	No Firms	No Firms
1027 - Other Services	-0.164	-0.141	No Firms	No Firms	No Firms
1028 - Public Administration	392*	No Firms	-0.153	0.000	No Firms

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

APPENDIX J: Tables for Phase III, Employment and Employment Change
Texas County, Oklahoma
All In-County Locations by Supersector and Size

Table 30: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas County Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.039	No Firms	No Firms	No Firms	.307*
1012 - Construction	0.092	No Firms	No Firms	No Firms	No Firms
1013 - Manufacturing	0.058	No Firms	No Firms	No Firms	No Firms
1021 - Trade. Transportation, and Utilities	0.115	No Firms	No Firms	-0.150	No Firms
1024 - Professional and Business Services	No Firms	0.064	313*	No Firms	No Firms
1025 - Education and Health Services	0.125	-0.075	No Firms	No Firms	482**
1026 - Leisure and Hospitality	No Firms	-0.067	No Firms	No Firms	No Firms
1028 - Public Administration	No Firms	No Firms	No Firms	0.044	No Firms

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 31: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Beaver County, Oklahoma Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	341*	No Firms	No Firms	No Firms	.339*
1012 - Construction	-0.093	No Firms	No Firms	No Firms	No Firms
1013 - Manufacturing	-0.006	No Firms	No Firms	No Firms	No Firms
1021 - Trade. Transportation, and Utilities	372*	No Firms	No Firms	.354*	No Firms
1024 - Professional and Business Services	No Firms	0.068	0.071	No Firms	No Firms
1025 - Education and Health Services	348*	404**	No Firms	No Firms	384*
1026 - Leisure and Hospitality	No Firms	0.218	No Firms	No Firms	No Firms
1028 - Public Administration	No Firms	No Firms	No Firms	352*	No Firms

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 32: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Cimarron County, Oklahoma Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.171	No Firms	No Firms	No Firms	0.166
1012 - Construction	0.212	No Firms	No Firms	No Firms	No Firms
1013 - Manufacturing	0.207	No Firms	No Firms	No Firms	No Firms
1021 - Trade. Transportation, and Utilities	0.301	No Firms	No Firms	-0.277	No Firms
1024 - Professional and Business Services	No Firms	0.137	315*	No Firms	No Firms
1025 - Education and Health Services	0.196	0.123	No Firms	No Firms	574**
1026 - Leisure and Hospitality	No Firms	-0.032	No Firms	No Firms	No Firms
1028 - Public Administration	No Firms	No Firms	No Firms	0.128	No Firms

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 33: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Morton County, Kansas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	-0.046	No Firms	No Firms	No Firms	0.016	
1012 - Construction	0.205	No Firms	No Firms	No Firms	No Firms	
1013 - Manufacturing	0.133	No Firms	No Firms	No Firms	No Firms	
1021 - Trade. Transportation, and Utilities	-0.100	No Firms	No Firms	0.132	No Firms	
1024 - Professional and Business Services	No Firms	0.157	-0.256	No Firms	No Firms	
1025 - Education and Health Services	-0.035	-0.015	No Firms	No Firms	627**	
1026 - Leisure and Hospitality	No Firms	0.102	No Firms	No Firms	No Firms	
1028 - Public Administration	No Firms	No Firms	No Firms	0.036	No Firms	

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 34: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Seward County, Kansas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	-0.273	No Firms	No Firms	No Firms	0.003	
1012 - Construction	0.031	No Firms	No Firms	No Firms	No Firms	
1013 - Manufacturing	-0.026	No Firms	No Firms	No Firms	No Firms	
1021 - Trade. Transportation, and Utilities	454**	No Firms	No Firms	.519**	No Firms	
1024 - Professional and Business Services	No Firms	0.246	0.113	No Firms	No Firms	
1025 - Education and Health Services	367*	-0.302	No Firms	No Firms	422**	
1026 - Leisure and Hospitality	No Firms	.390*	No Firms	No Firms	No Firms	
1028 - Public Administration	No Firms	No Firms	No Firms	-0.212	No Firms	

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 35: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Stevens County, Kansas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	422**	No Firms	No Firms	No Firms	0.133		
1012 - Construction	-0.184	No Firms	No Firms	No Firms	No Firms		
1013 - Manufacturing	0.051	No Firms	No Firms	No Firms	No Firms		
1021 - Trade. Transportation, and Utilities	566**	No Firms	No Firms	.639**	No Firms		
1024 - Professional and Business Services	No Firms	0.147	0.220	No Firms	No Firms		
1025 - Education and Health Services	518**	409**	No Firms	No Firms	-0.206		
1026 - Leisure and Hospitality	No Firms	.333*	No Firms	No Firms	No Firms		
1028 - Public Administration	No Firms	No Firms	No Firms	389*	No Firms		

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 36: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Hansford County, Texas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	501**	No Firms	No Firms	No Firms	0.261
1012 - Construction	-0.299	No Firms	No Firms	No Firms	No Firms
1013 - Manufacturing	0.056	No Firms	No Firms	No Firms	No Firms
1021 - Trade. Transportation, and Utilities	639**	No Firms	No Firms	.692**	No Firms
1024 - Professional and Business Services	No Firms	-0.100	0.296	No Firms	No Firms
1025 - Education and Health Services	586**	556**	No Firms	No Firms	-0.167
1026 - Leisure and Hospitality	No Firms	0.122	No Firms	No Firms	No Firms
1028 - Public Administration	No Firms	No Firms	No Firms	442**	No Firms

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 37: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Ochiltree County, Texas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	688**	No Firms	No Firms	No Firms	.368*	
1012 - Construction	402**	No Firms	No Firms	No Firms	No Firms	
1013 - Manufacturing	0.074	No Firms	No Firms	No Firms	No Firms	
1021 - Trade. Transportation, and Utilities	802**	No Firms	No Firms	.878**	No Firms	
1024 - Professional and Business Services	No Firms	-0.122	.415**	No Firms	No Firms	
1025 - Education and Health Services	743**	687**	No Firms	No Firms	-0.083	
1026 - Leisure and Hospitality	No Firms	0.215	No Firms	No Firms	No Firms	
1028 - Public Administration	No Firms	No Firms	No Firms	644**	No Firms	

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 38: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Sherman County, Texas Unemployment Rate² by In-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	-0.221	No Firms	No Firms	No Firms	.480**	
1012 - Construction	-0.124	No Firms	No Firms	No Firms	No Firms	
1013 - Manufacturing	0.202	No Firms	No Firms	No Firms	No Firms	
1021 - Trade. Transportation, and Utilities	-0.093	No Firms	No Firms	0.138	No Firms	
1024 - Professional and Business Services	No Firms	-0.220	-0.188	No Firms	No Firms	
1025 - Education and Health Services	-0.106	-0.266	No Firms	No Firms	435**	
1026 - Leisure and Hospitality	No Firms	394**	No Firms	No Firms	No Firms	
1028 - Public Administration	No Firms	No Firms	No Firms	-0.135	No Firms	

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 39: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Baca County², Colorado Unemployment Rate³ by In-County Location, Supersector⁴ and Firm Size,⁵ January 2014 to June 2017⁶

	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	.572**	No Firms	No Firms	No Firms	-0.245	
1012 - Construction	.442**	No Firms	No Firms	No Firms	No Firms	
1013 - Manufacturing	-0.264	No Firms	No Firms	No Firms	No Firms	
1021 - Trade. Transportation, and Utilities	.591**	No Firms	No Firms	760**	No Firms	
1024 - Professional and Business Services	No Firms	0.213	650**	No Firms	No Firms	
1025 - Education and Health Services	.734**	.408**	No Firms	No Firms	-0.025	
1026 - Leisure and Hospitality	No Firms	0.056	No Firms	No Firms	No Firms	
1028 - Public Administration	No Firms	No Firms	No Firms	.583**	No Firms	

Note²: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note³: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note4: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county

Note⁵: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

APPENDIX K: Tables for Phase III, Employment and Employment Change
McCurtain County Oklahoma
All In-County Locations by Supersector and Firm Size

Table 40: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with McCurtain County Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations Out of McCurtain County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	0.210	0.120	No Firms	.434**	No Firms	
1012 - Construction	0.049	-0.030	.407**	0.128	-0.292	
1013 - Manufacturing	-0.002	No Firms	-0.272	0.033	0.233	
1021 - Trade. Transportation, and Utilities	-0.071	-0.203	No Firms	No Firms	No Firms	
1022 - Information	No Firms	308*	No Firms	No Firms	0.056	
1023 - Fiscal Activities	385*	No Firms	No Firms	No Firms	No Firms	
1024 - Professional and Business Services	0.263	0.211	-0.278	.385*	0.106	
1025 - Education and Health Services	No Firms	0.171	482**	.338*	No Firms	
1026 - Leisure and Hospitality	No Firms	0.300	No Firms	310*	.421**	
1027 - Other Services	No Firms	0.141	-0.107	No Firms	No Firms	
1028 - Public Administration	No Firms	-0.020	-0.276	0.085	No Firms	

 $Note \ensuremath{^{2}}\xspace: Employment\ and\ unemployment\ rates\ are\ from\ Local\ Area\ Unemployment\ S\ tatistics\ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are:\ Size1=0\ to\ 19\ employees,\ Size2=20\ to\ 49,\ Size3=50\ to\ 99,\ Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ and\ Size5=250+1000\ to\ 240\ to\ 24$

Table 41: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Choctaw County, Oklahoma Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm	n Location	s Out of N	1cCurtain	County
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.216	0.018	No Firms	0.303	No Firms
1012 - Construction	0.030	-0.144	.447**	0.097	-0.146
1013 - Manufacturing	327*	No Firms	550**	0.026	.473**
1021 - Trade. Transportation, and Utilities	-0.216	382*	No Firms	No Firms	No Firms
1022 - Information	No Firms	-0.207	No Firms	No Firms	0.009
1023 - Fiscal Activities	562**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.415**	0.161	322*	.319*	-0.037
1025 - Education and Health Services	No Firms	.332*	433**	.448**	No Firms
1026 - Leisure and Hospitality	No Firms	0.271	No Firms	-0.016	.582**
1027 - Other Services	No Firms	0.092	449**	No Firms	No Firms
1028 - Public Administration	No Firms	0.070	-0.295	0.063	No Firms

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 42: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Le Flore County, Oklahoma Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm	n Location	s Out of M	1cCurtain	County
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.191	0.253	No Firms	0.010	No Firms
1012 - Construction	-0.120	-0.172	.509**	0.086	0.073
1013 - Manufacturing	-0.208	No Firms	571**	-0.172	.614**
1021 - Trade. Transportation, and Utilities	-0.026	331*	No Firms	No Firms	No Firms
1022 - Information	No Firms	-0.193	No Firms	No Firms	-0.055
1023 - Fiscal Activities	553**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.322*	0.158	-0.033	0.162	-0.300
1025 - Education and Health Services	No Firms	0.053	371*	.676**	No Firms
1026 - Leisure and Hospitality	No Firms	0.096	No Firms	0.280	.496**
1027 - Other Services	No Firms	0.067	648**	No Firms	No Firms
1028 - Public Administration	No Firms	0.212	-0.249	0.222	No Firms

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 43: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Pushmataha County, Oklahoma Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm	n Location	s Out of M	AcCurtain	County
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.066	.400**	No Firms	-0.033	No Firms
1012 - Construction	-0.124	-0.096	.600**	0.085	0.078
1013 - Manufacturing	0.090	No Firms	344*	-0.110	.520**
1021 - Trade. Transportation, and Utilities	0.160	0.016	No Firms	No Firms	No Firms
1022 - Information	No Firms	-0.276	No Firms	No Firms	0.092
1023 - Fiscal Activities	508**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	0.141	0.133	0.148	0.193	324*
1025 - Education and Health Services	No Firms	-0.058	434**	.668**	No Firms
1026 - Leisure and Hospitality	No Firms	-0.013	No Firms	0.131	.496**
1027 - Other Services	No Firms	.307*	385*	No Firms	No Firms
1028 - Public Administration	No Firms	0.171	-0.076	0.296	No Firms

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 44: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Little River County, Arkansas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm	n Location	s Out of M	AcCurtain	County
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.560**	-0.085	No Firms	.838**	No Firms
1012 - Construction	.383*	-0.238	.511**	0.276	722**
1013 - Manufacturing	422**	No Firms	608**	0.045	.321*
1021 - Trade. Transportation, and Utilities	-0.179	465**	No Firms	No Firms	No Firms
1022 - Information	No Firms	339*	No Firms	No Firms	-0.133
1023 - Fiscal Activities	483**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.603**	.598**	667**	.635**	.520**
1025 - Education and Health Services	No Firms	0.232	692**	.379*	No Firms
1026 - Leisure and Hospitality	No Firms	.711**	No Firms	-0.251	.503**
1027 - Other Services	No Firms	0.159	-0.279	No Firms	No Firms
1028 - Public Administration	No Firms	0.187	616**	-0.166	No Firms

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 45: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Poke County, Arkansas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm	n Location	s Out of M	IcCurtain	County
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.583**	0.075	No Firms	.708**	No Firms
1012 - Construction	0.295	-0.129	.560**	0.263	653**
1013 - Manufacturing	309*	No Firms	566**	0.069	.372*
1021 - Trade. Transportation, and Utilities	0.082	323*	No Firms	No Firms	No Firms
1022 - Information	No Firms	536**	No Firms	No Firms	-0.134
1023 - Fiscal Activities	547**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.492**	.642**	441**	.614**	.376*
1025 - Education and Health Services	No Firms	0.082	768**	.519**	No Firms
1026 - Leisure and Hospitality	No Firms	.613**	No Firms	0.006	.595**
1027 - Other Services	No Firms	0.254	-0.230	No Firms	No Firms
1028 - Public Administration	No Firms	0.263	486**	-0.085	No Firms

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 46: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Sevier County, Arkansas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firn	All Firm Locations Out of McCurtain County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	.568**	0.048	No Firms	.788**	No Firms		
1012 - Construction	.347*	-0.147	.534**	0.199	659**		
1013 - Manufacturing	-0.303	No Firms	556**	0.025	.341*		
1021 - Trade. Transportation, and Utilities	-0.048	385*	No Firms	No Firms	No Firms		
1022 - Information	No Firms	474**	No Firms	No Firms	-0.085		
1023 - Fiscal Activities	564**	No Firms	No Firms	No Firms	No Firms		
1024 - Professional and Business Services	.562**	.578**	555**	.657**	.425**		
1025 - Education and Health Services	No Firms	0.162	767**	.467**	No Firms		
1026 - Leisure and Hospitality	No Firms	.650**	No Firms	-0.263	.589**		
1027 - Other Services	No Firms	0.189	-0.228	No Firms	No Firms		
1028 - Public Administration	No Firms	0.153	576**	-0.117	No Firms		

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 47: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Bowie County, Texas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm	All Firm Locations Out of McCurtain County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	.579**	450**	No Firms	.705**	No Firms		
1012 - Construction	.335*	371*	0.196	0.219	614**		
1013 - Manufacturing	692**	No Firms	664**	-0.069	.305*		
1021 - Trade. Transportation, and Utilities	361*	785**	No Firms	No Firms	No Firms		
1022 - Information	No Firms	-0.118	No Firms	No Firms	317*		
1023 - Fiscal Activities	-0.243	No Firms	No Firms	No Firms	No Firms		
1024 - Professional and Business Services	.607**	.471**	745**	.388*	.505**		
1025 - Education and Health Services	No Firms	.392*	-0.300	0.120	No Firms		
1026 - Leisure and Hospitality	No Firms	.660**	No Firms	-0.115	0.239		
1027 - Other Services	No Firms	-0.156	435**	No Firms	No Firms		
1028 - Public Administration	No Firms	0.240	559**	-0.187	No Firms		

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Table 48: McCurtain County, Oklahoma UI Claimant Firm Employment Correlations¹ with Red River County, Texas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm	n Location	s Out of M	IcCurtain	County
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	.604**	-0.271	No Firms	.711**	No Firms
1012 - Construction	.319*	-0.283	.360*	0.220	623**
1013 - Manufacturing	636**	No Firms	753**	-0.035	.434**
1021 - Trade. Transportation, and Utilities	-0.280	710**	No Firms	No Firms	No Firms
1022 - Information	No Firms	-0.276	No Firms	No Firms	-0.226
1023 - Fiscal Activities	433**	No Firms	No Firms	No Firms	No Firms
1024 - Professional and Business Services	.695**	.516**	684**	.502**	.419**
1025 - Education and Health Services	No Firms	0.302	492**	.350*	No Firms
1026 - Leisure and Hospitality	No Firms	.657**	No Firms	-0.029	.405**
1027 - Other Services	No Firms	-0.114	520**	No Firms	No Firms
1028 - Public Administration	No Firms	0.211	652**	-0.183	No Firms

 $Note \ensuremath{^{2}}\text{: } Employment \ and \ unemployment \ rates \ are \ from \ Local \ Area \ Unemployment \ Statistics \ (LAUS).$

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

APPENDIX L: Tables for Phase III, Employment and Employment Change
Texas County, Oklahoma
All Out-County Locations by Supersector and Firm Size

Table 49: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Texas County Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	-0.027	-0.200	.334*	337*	No Firms		
1012 - Construction	.391*	346*	0.167	-0.258	-0.263		
1013 - Manufacturing	No Firms	No Firms	No Firms	513**	No Firms		
1022 - Information	0.040	No Firms	No Firms	No Firms	606**		
1023 - Fiscal Activities	0.068	.348*	No Firms	No Firms	No Firms		
1024 - Professional and Business Services	-0.015	-0.240	No Firms	No Firms	0.084		
1025 - Education and Health Services	-0.046	No Firms	No Firms	0.152	No Firms		
1027 - Other Services	No Firms	-0.282	No Firms	No Firms	No Firms		

Note²: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

Note4: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Table 50: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Beaver County, Oklahoma Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	0.270	-0.195	-0.189	0.063	No Firms	
1012 - Construction	-0.189	503**	-0.045	-0.090	0.112	
1013 - Manufacturing	No Firms	No Firms	No Firms	-0.182	No Firms	
1022 - Information	0.239	No Firms	No Firms	No Firms	344*	
1023 - Fiscal Activities	.395**	-0.266	No Firms	No Firms	No Firms	
1024 - Professional and Business Services	323*	0.162	No Firms	No Firms	.412**	
1025 - Education and Health Services	.412**	No Firms	No Firms	-0.103	No Firms	
1027 - Other Services	No Firms	.334*	No Firms	No Firms	No Firms	

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are:\ Size1=0\ to\ 19\ employees,\ Size2=20\ to\ 49,\ Size3=50\ to\ 99,\ Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to$

Table 51: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Cimarron County, Oklahoma Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	-0.124	-0.067	.471**	458**	No Firms	
1012 - Construction	.487**	-0.133	0.269	-0.082	366*	
1013 - Manufacturing	No Firms	No Firms	No Firms	459**	No Firms	
1022 - Information	0.072	No Firms	No Firms	No Firms	563**	
1023 - Fiscal Activities	0.151	.377*	No Firms	No Firms	No Firms	
1024 - Professional and Business Services	0.153	-0.175	No Firms	No Firms	0.151	
1025 - Education and Health Services	-0.250	No Firms	No Firms	0.229	No Firms	
1027 - Other Services	No Firms	-0.301	No Firms	No Firms	No Firms	

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are:\ Size1=0\ to\ 19\ employees,\ Size2=20\ to\ 49,\ Size3=50\ to\ 99,\ Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to$

Table 52: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Morton County, Kansas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County				
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5
1011 - Natural Resources and Mining	0.010	0.144	-0.111	366*	No Firms
1012 - Construction	-0.141	-0.217	.585**	-0.008	-0.079
1013 - Manufacturing	No Firms	No Firms	No Firms	-0.028	No Firms
1022 - Information	0.167	No Firms	No Firms	No Firms	406**
1023 - Fiscal Activities	0.244	-0.253	No Firms	No Firms	No Firms
1024 - Professional and Business Services	0.110	.423**	No Firms	No Firms	0.142
1025 - Education and Health Services	0.027	No Firms	No Firms	0.107	No Firms
1027 - Other Services	No Firms	-0.107	No Firms	No Firms	No Firms

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are:\ Size1=0\ to\ 19\ employees,\ Size2=20\ to\ 49,\ Size3=50\ to\ 99,\ Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to\ 240$

Table 53: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Seward County, Kansas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	0.140	-0.054	414**	0.157	No Firms	
1012 - Construction	585**	352*	0.282	0.186	0.210	
1013 - Manufacturing	No Firms	No Firms	No Firms	0.146	No Firms	
1022 - Information	0.303	No Firms	No Firms	No Firms	-0.072	
1023 - Fiscal Activities	.530**	643**	No Firms	No Firms	No Firms	
1024 - Professional and Business Services	-0.153	.622**	No Firms	No Firms	.527**	
1025 - Education and Health Services	.467**	No Firms	No Firms	-0.200	No Firms	
1027 - Other Services	No Firms	.416**	No Firms	No Firms	No Firms	

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to\ 24$

Table 54: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Stevens County, Kansas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	0.291	0.011	527**	.399**	No Firms		
1012 - Construction	595**	324*	0.027	0.151	.337*		
1013 - Manufacturing	No Firms	No Firms	No Firms	0.298	No Firms		
1022 - Information	.429**	No Firms	No Firms	No Firms	-0.013		
1023 - Fiscal Activities	.503**	688**	No Firms	No Firms	No Firms		
1024 - Professional and Business Services	308*	.556**	No Firms	No Firms	.534**		
1025 - Education and Health Services	.520**	No Firms	No Firms	-0.154	No Firms		
1027 - Other Services	No Firms	.683**	No Firms	No Firms	No Firms		

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to\ 24$

Table 55: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Hansford County, Texas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	.377*	-0.016	568**	.346*	No Firms		
1012 - Construction	568**	484**	-0.118	0.254	.462**		
1013 - Manufacturing	No Firms	No Firms	No Firms	.388*	No Firms		
1022 - Information	0.045	No Firms	No Firms	No Firms	0.253		
1023 - Fiscal Activities	0.180	573**	No Firms	No Firms	No Firms		
1024 - Professional and Business Services	403**	.317*	No Firms	No Firms	0.163		
1025 - Education and Health Services	.569**	No Firms	No Firms	-0.071	No Firms		
1027 - Other Services	No Firms	.568**	No Firms	No Firms	No Firms		

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to\ 24$

Table 56: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Ochiltree County, Texas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	.575**	0.025	777**	.489**	No Firms		
1012 - Construction	761**	585**	-0.205	0.297	.584**		
1013 - Manufacturing	No Firms	No Firms	No Firms	.444**	No Firms		
1022 - Information	0.219	No Firms	No Firms	No Firms	0.156		
1023 - Fiscal Activities	.320*	802**	No Firms	No Firms	No Firms		
1024 - Professional and Business Services	583**	.487**	No Firms	No Firms	0.294		
1025 - Education and Health Services	.788**	No Firms	No Firms	-0.201	No Firms		
1027 - Other Services	No Firms	.781**	No Firms	No Firms	No Firms		

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ to\ 24$

Table 57: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Sherman County, Texas Unemployment Rate² by Out-of-County Location, Supersector³ and Firm Size,⁴ January 2014 to June 2017⁵

	All Firm Locations In Texas County						
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5		
1011 - Natural Resources and Mining	0.207	0.023	0.163	-0.177	No Firms		
1012 - Construction	.342*	457**	-0.017	0.006	0.052		
1013 - Manufacturing	No Firms	No Firms	No Firms	-0.013	No Firms		
1022 - Information	-0.001	No Firms	No Firms	No Firms	-0.255		
1023 - Fiscal Activities	332*	0.256	No Firms	No Firms	No Firms		
1024 - Professional and Business Services	309*	400**	No Firms	No Firms	393*		
1025 - Education and Health Services	0.125	No Firms	No Firms	.321*	No Firms		
1027 - Other Services	No Firms	-0.112	No Firms	No Firms	No Firms		

Note2: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note³: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county locations identified.

 $Note^4: Firm\ sizes\ are: Size1=0\ to\ 19\ employees, Size2=20\ to\ 49, Size3=50\ to\ 99, Size4=100\ to\ 240\ and\ Size5=250+100\ to\ 240\ and\ Size5=250+1000\ to\ 240\ to\ 240\$

Table 58: Texas County, Oklahoma UI Claimant Firm Employment Correlations¹ with Baca County², Colorado Unemployment Rate³ by Out-of-County Location, Supersector⁴ and Firm Size,⁵ January 2014 to June 2017⁶

	All Firm Locations In Texas County					
Supersectors	Firm Size 1	Firm Size 2	Firm Size 3	Firm Size 4	Firm Size 5	
1011 - Natural Resources and Mining	527**	546**	.617**	544**	No Firms	
1012 - Construction	.700**	0.231	0.246	485**	496**	
1013 - Manufacturing	No Firms	No Firms	No Firms	823**	No Firms	
1022 - Information	-0.151	No Firms	No Firms	No Firms	-0.293	
1023 - Fiscal Activities	-0.126	.751**	No Firms	No Firms	No Firms	
1024 - Professional and Business Services	.450**	466**	No Firms	No Firms	-0.059	
1025 - Education and Health Services	555**	No Firms	No Firms	-0.125	No Firms	
1027 - Other Services	No Firms	771**	No Firms	No Firms	No Firms	

Note1: * Correlation is significant to the .05 level, and ** correlation is significant to the .001 level (2-tailed).

Note²: Baca County, Colorado lacks only a few miles to border with Texas County, Oklahoma

Note³: Employment and unemployment rates are from Local Area Unemployment Statistics (LAUS).

Note4: The supersectors listed are those for which there were UI Claimant employers with in-county or out-county

Note⁵: Firm sizes are: Size1 = 0 to 19 employees, Size2 = 20 to 49, Size3 = 50 to 99, Size4 = 100 to 240 and Size5 = 250+

Note⁶: Number of cases (months) in each of the counties is 42.

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