

Qualifying and Quantifying Coal Supply Chain Impact for Lawrence and Scioto Counties

Prepared by Center of Economic Development and Community Resilience, the Voinovich School of  
Leadership and Public Service

November 2021

Clara Bone

## Table of Contents

Introduction .....	2
Identifying Coal Supply Chain Businesses in Lawrence and Scioto Counties.....	2
Impact of the Coal Economy Decline .....	4
Shift Share Conclusions.....	8
Reliance of the Coal Supply Chain Industries.....	8
Determining the Impact of Coal Supply Chain Reliance .....	9
Summary .....	13
Conclusion.....	13
Appendix A: List of Coal Supply Chain and Transportation Businesses in Lawrence and Scioto Counties .....	14
Appendix B: Wages and Employment by Industry Sector, Lawrence County, 2020 .....	20
Appendix C: Wages and Employment by Industry Sector, Scioto County, 2020 .....	21

## Introduction

In 2017, DP&L announced the closure of two coal-fired power plants closed in Adams County, Ohio. In May of 2018, the plants were officially closed. While Adams County faces the brunt of the impacts in terms of direct employment loss and tax revenue, the businesses in nearby counties have also been impacted. This study looks at the impact on these coal supply chain industries in Lawrence and Scioto Counties. The coal supply chain includes businesses in the mining, utilities, manufacturing, wholesale trade, and transportation industries. Additionally, the coal supply chain consists of Table 1 shows the highest related industries in the coal supply chain as according to the Appalachian Regional Commission.<sup>1</sup>

Table 1: Top Industry CIE Scores

Industry	2005 CIE Score	2005 Employment	2015 CIE Score	2015 Employment
Coal mining	1	47,140	1	36,535
Mining and oil and gas field machinery manufacturing	0.37	4,905	0.29	5,404
Primary smelting and refining of copper	0.04	149	0.16	19
Rubber and plastics hoses and belting manufacturing	0.24	2,191	0.13	1,890
Ground or treated mineral and earth manufacturing	0.15	483	0.1	595
Stone mining and quarrying	0.08	14,588	0.07	7,972
Commercial and industrial machinery and equipment rental and leasing	0.17	4,466	0.06	8,539
Oil and gas extraction	0.16	4,984	0.06	10,692
Water transportation	0.07	1,773	0.06	1,353
Construction machinery manufacturing	0.1	6,384	0.05	7,599

## Identifying Coal Supply Chain Businesses in Lawrence and Scioto Counties

For this study, a list of related NAICS Codes for the coal supply chain was identified. Table 2 shows the selected NAICS Codes and Meanings. A full list of identified businesses can be found in Appendix A. While thorough, the list is not comprehensive of every coal supply chain business in the two counties and it is likely some were left off due to data suppression. Rather, this list was used as a reference for identifying businesses to conduct interviews with and/or aid BRE visits conducted in the counties. Below lists all the relevant NAICS codes for the coal supply chain and the number of businesses in the two county area. Additionally, Appendix A separates the businesses by county.

---

<sup>1</sup>Source: CIE dependence, impact, and risk scores for Ohio's counties in the Appalachian area. Jackson and Jarosi (2018)

Table 2: Coal Supply Chain NAICS Codes and Businesses in Lawrence and Scioto<sup>2</sup>

NAICS CODE	Description	Number of Businesses
333131	Mining equipment manufacturers	2
333132	Oil and gas field machinery manufacturing	0
332322, 332313	Coal chutes	0
332922	Coal conveyors	0
326220	Rubber and plastics hoses and belting manufacturing	0
213113	Exploration	0
212311, 212312, 212313, 212319	Stone mining and quarrying	0
211130	Natural gas extraction	2
212111, 212112, 212113	Coal mining	0
454310	Fuel wholesalers	9
423520	Coal wholesalers	1
423320, 424690	Coal tar wholesalers	6
424690	Chemical wholesalers	3
324121	Asphalt Paving mixtures & blocks	1
325194	Gum & Wood chemicals	3
331410	Primary smelting and refining of copper	1
324199	Coal products manufacturing	3
325211	Plastics Material and Resin Manufacturing	3
327992	Ground or treated mineral and earth manufacturing	0
221	Utilities	7
484	Transportation	72
4832	Water Transportation	4
486	Pipeline Transportation	0

<sup>2</sup> Data pulled from NexisUni database, 2020.

Working with the local economic developers in the county, we provided this list and aided with interviews during BRE visits. During the visits, specific questions to gauge the reliance on coal and the potential impact of the closure of the DP&L plant were asked. The questions included the following:

- What industries do you serve?
- Do you produce intermediate goods or final goods?
- Where are your primary customers located?
- What percentage of your sales goes to a single purchaser?
- What are the capabilities of your business?
- Where are your critical suppliers located?
- Is their potential value or use of your waste stream(s)?
- What would increase your operational efficiency?

From these questions we were able to gather the following information. The businesses interviewed identified the serving the following industries: steel, rail, heavy machinery, coal mining and the coal industry in general, industrial, automotive, petrochemicals, and maritime transportation. Of the businesses interviewed 50% produced intermediate goods and 33% produced final goods with some businesses falling into both categories. Additionally, another 33% of the businesses identified as providing a service rather than a good. These businesses belonged to the transportation industry. While a few companies noted they had customers around the country and even internationally, the majority of businesses interviewed had more local customers, located in Kentucky, Ohio, and West Virginia. Likewise, while a few businesses had an even split amongst several purchasers, there were also a few that identified one main purchaser or that over 50% went to a single purchaser. Most of the businesses interviewed said they did not have a waste stream. Two of the businesses noted that they had unused scrap metal, but that it had been taken to be recycled. The need for more employees and employees of a high quality, government incentives to buy newer equipment, funding for expansion, and easier permitting process were all identified as ways to that would help increase operational efficiency.

There is ongoing work between the local economic development organizations and GVS staff concerning BRE efforts, and the findings of this report was shared with them to aid in their efforts.

## Impact of the Coal Economy Decline

With the overall decline in the coal economy in the region and in particular the two coal-fired power plants that closed in 2018, this study attempts to quantify and qualify the impact of the coal economy decline. Firstly, a shift-share analysis was done for each of the two counties. Because of issues with data suppression, the shift-share analysis was completed at the 2-digit NAICS code level. Ideally, the analysis would have been done for the specific NAICS codes listed above.

Figure 1 shows the shift-share analysis for Lawrence County. The industrial mixed-effects shows the expected growth or decline of industry in the county based upon the growth rate of the industry at the national level. If the national growth rate is increasing, it can be expected for there to be growth in the region, and if there is not growth in the region, one can attribute it to a force outside the national trend. Table 3 shows the actual change in number of employees from 2018-2019 Lawrence. Combined with the

industrial mixed effects, this shows us that Lawrence County experienced a loss in employees in transportation while this industry was expected to grow according to the national trend. On the other hand, Lawrence County experienced a gain in employees in manufacturing while this industry was expected to decline according to the national trend. Utilities and wholesale trade followed according to the national trend for Lawrence County.

The national growth effect shows the expected number of jobs in each industry in Lawrence County would gain or lose if following along the national trend. For Lawrence County, we can see that for transportation and wholesale, the county is doing much worse than would be expected. For example, in wholesale, Lawrence County actually lost 50 jobs. However, if following the national trend, the loss would have only been 5 jobs. Also, for transportation, it would have been expected to see an increase in jobs, but we can see that Lawrence County experienced a loss. However, for manufacturing, Lawrence County is doing better than expected. Utilities remain consistent with what we would expect to see. From this, we can gather that something has had an impact that has isolated Lawrence County from the full impact of the national trend on at least these three industries.

The expected change takes into account the industrial mixed effects when estimating the change in the number of employees. Like the two indicators above, we see that Transportation was estimated for the county as a gain, while the county actually experienced a loss. This further indicates that there must be a reason for Lawrence County not to follow the national trends.

The competitive effect indicates how strongly the actual change in the number of employees is related to the county rather than the national trends. Additionally, the competitive effect indicates whether the county is under- or outperforming compared to the national trends. The large bars for the transportation, manufacturing, and wholesale trade industries indicates that factors unique to Lawrence County are more responsible to the change in employee numbers than the national trend in the industries. Additionally, the negative bars for transportation and wholesale trade indicate that Lawrence County is underperforming in these industries. Further, manufacturing is performing better than would be expected.

Figure 1: Shift Share Analysis for Lawrence County, 2019<sup>3</sup>

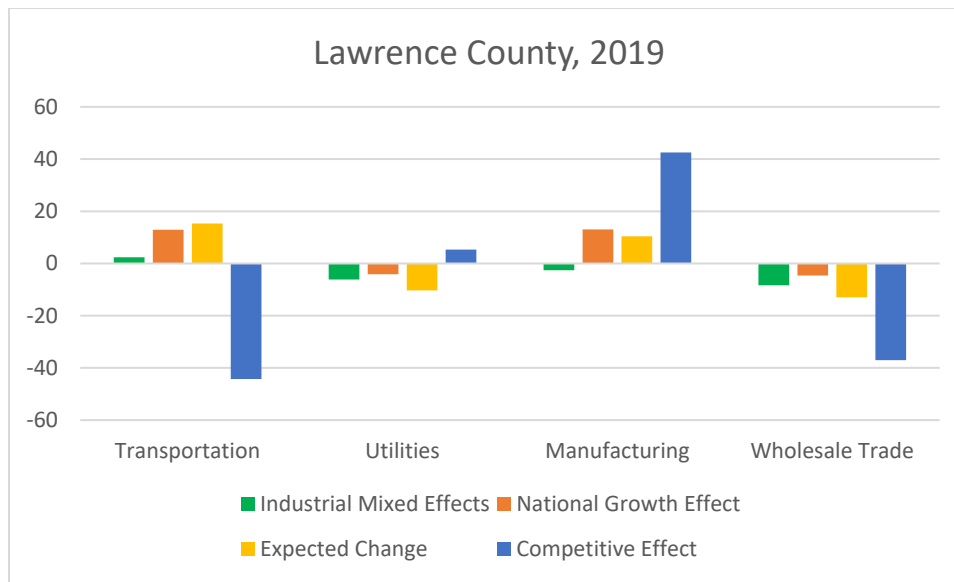


Table 3: Change in Number of Employees, Lawrence County, 2018-2019

	Number of employees		Change
	2018	2019	
Transportation	617	588	-29
Utilities	117	112	-5
Manufacturing	817	870	53
Wholesale Trade	259	209	-50

Figure 2 shows the shift-share analysis for Scioto County. The industrial mixed-effects show the expected growth or decline of industry in the county based upon the growth rate of the industry at the national level. If the national growth rate is increasing, it can be expected for there to be growth in the region, and if there is not growth in the region, one can attribute it to a force outside the national trend. Table 4 shows the actual change in the number of employees from 2018-2019. Combined with the industrial mixed effects, this shows us that Scioto County experienced a gain in employees in utilities while this industry was expected to decline according to the national trend. On the other hand, transportation, mining, manufacturing, and wholesale trade followed according to the national trend for Lawrence County.

The national growth effect shows the expected number of jobs in each industry in Scioto County would gain or lose if following along the national trend. Again, for utilities, it would have been expected to see a decrease in jobs, but we can see that Scioto County experienced a gain. Likewise, it would have been

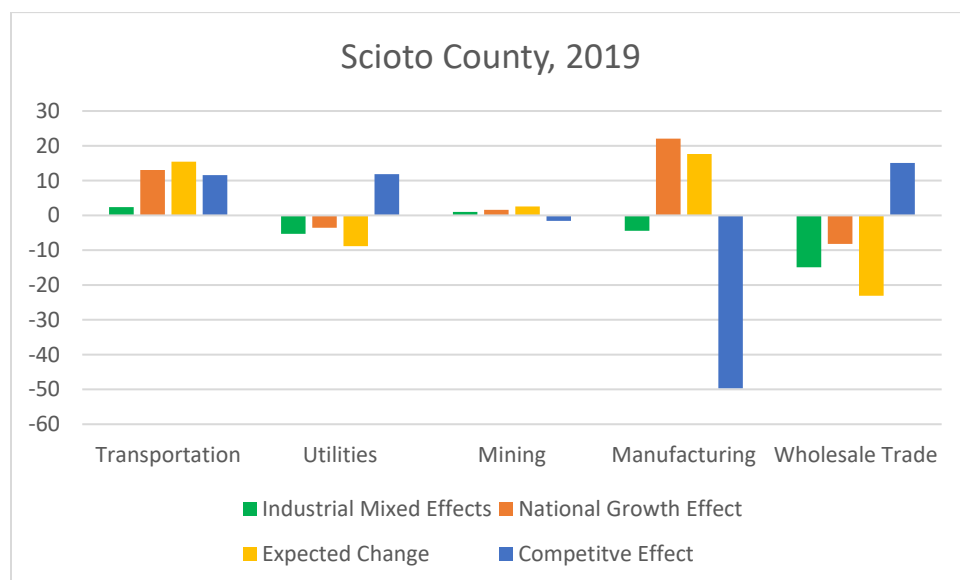
<sup>3</sup> Sources: US Bureau of Labor Statistics: Industry-Occupation Matrix; US Bureau of Labor of Statistics: Quarterly Census of Wages and Employment 2020; US Census: County Business Patterns 2019; Bureau of Economic Analysis: Gross Domestic Product by Industry and Input-Output Statistics 2020.

expected to an increase in jobs for manufacturing, but we can see that Scioto County experienced a loss. For mining, and wholesale trade, Lawrence County experienced either growth or loss as expected. However, the increase in jobs from transportation was about double as expected. From this, we can gather that something has had an impact that has isolated Lawrence County from the full impact of the national trend.

The expected change takes into account the industrial mixed effects when estimating the change in the number of employees. Like the two indicators above, we see that Manufacturing was estimated for the county as a gain, while the county actually experienced a loss. Similarly, we see that Utilities was estimated for the county as a loss, while the county actually experienced a gain. This further indicates that there must be a reason for Scioto County not to follow the national trends. However, the trends for wholesale, transportation, and mining are as expected.

The competitive effect indicates how strongly the actual change in the number of employees is related to the county rather than the national trends. Additionally, the competitive effect indicates whether the county is under- or outperforming compared to the national trends. The large bars for transportation, utilities, manufacturing and wholesale trade indicate that factors unique to Scioto County are more responsible to the change in employee numbers than the national trend in the industries. On the other hand, the relatively small bar for mining indicates that this industry is more influenced by the national trend than by unique factors in Scioto County. Additionally, the negative bars manufacturing indicate that Scioto County is underperforming in this industry. Further, transportation, utilities and wholesale trade are all performing better than would be expected. Even though wholesale trade experienced loss, they are considered outperforming due to the fact that they should have actually experienced more job loss if they were following the national trend.

Figure 2: Shift Share Analysis for Scioto County, 2019<sup>4</sup>



<sup>4</sup> Sources: US Bureau of Labor Statistics: Industry-Occupation Matrix; US Bureau of Labor of Statistics: Quarterly Census of Wages and Employment 2020; US Census: County Business Patterns 2019; Bureau of Economic Analysis: Gross Domestic Product by Industry and Input-Output Statistics 2020.



Table 4: Change in Number of Employees, Scioto County, 2018-2019

	Number of employees		Change
	2018	2019	
Transportation	566	593	27
Utilities	93	96	3
Mining	32	33	1
Manufacturing	1504	1472	-32
Wholesale Trade	380	372	-8

### Shift Share Conclusions

From the shift-share analysis, this study draws two conclusions. Firstly, that the mining industry in Scioto County has kept on trend with the national trend. Secondly, that the four most closely related coal supply chain industry are performing at odds with the national trends. In particular, transportation and wholesale trade in Lawrence County are underperforming as compared to national trends. On the other manufacturing is underperforming in Scioto County. As table 2 denotes, there are at least 76 transportation businesses, 19 coal-related wholesale businesses, and 10 coal-related manufacturing businesses in Lawrence and Scioto Counties. A decline in the coal economy will continue to have impacts for these two counties. Looking at the national level, the mining industry has experienced growth. However, as table 5 points out, the coal mining industry is expected to decrease by over 6% over the 10 years. It can be expected that if Scioto, Lawrence, and nearby counties continue to rely on the coal industry, they will continue to feel impacts in the other coal supply chain industries.

Table 5: Employment Projection for Mining Industry, 2020-2030<sup>5</sup>

	NAICS Code	Employment Percent Change 2020-2030
Mining, quarrying, and oil and gas extraction	21	17.1
Oil and gas extraction	211	-1.2
Mining (except oil and gas)	212	2.9
Coal mining	2121	-6.1
Metal ore mining	2122	8.1
Nonmetallic mineral mining and quarrying	2123	4.5
Support activities for mining	213	36.6

### Reliance of the Coal Supply Chain Industries

Next, this study looks at the reliance of Lawrence and Scioto Counties on the identified coal supply chain industries. Again, due to data suppression at the county level, some data is not available especially at more detailed NAICS Code levels. Tables 6 and 7 show how these four industry rank among the 19 two-

<sup>5</sup> Sources: US Bureau of Labor Statistics: Industry-Occupation Matrix

digit NAICS industries. While these industries are low for the number of establishments, the transportation and manufacturing industries are at the top for total employment. Additionally, these two industries contribute relatively a lot to the total wages earned in the county. Furthermore, utilities and manufacturing rank as having very high average wages. The ranking helps put into perspective how the two counties may rely on the coal supply chain industries. Further decline in the coal economy and other economic shocks only makes the dependence on a handful of industries and businesses more unstable.

Full tables detailing establishment numbers, average employment, and wages can be found in Appendix B and Appendix C for Lawrence and Scioto Counties, respectively.

Table 6: Coal Supply Chain Ranking for Lawrence County, 2020

Industry Sector	Establishment Rank	Employment Rank*	Total Annual Wages Rank*	Average Wage Rank*
Transportation	8 of 19	6 of 16	4 of 16	6 of 16
Utilities	16 of 19	12 of 16	7 of 16	1 of 16
Manufacturing	9 of 19	4 of 16	3 of 16	5 of 16
Wholesale Trade	11 of 19	10 of 16	10 of 16	7 of 16

\*Agriculture, Mining, and Construction industries suppressed for this data

Table 7: Coal Supply Chain Ranking for Scioto County, 2020

Industry Sector	Establishment Rank	Employment Rank*	Total Annual Wages Rank*	Average Wage Rank*
Transportation	12 of 19	5 of 17	7 of 17	8 of 17
Utilities	18 of 19	16 of 17	12 of 17	1 of 17
Manufacturing	9 of 19	4 of 17	3 of 17	3 of 17
Wholesale Trade	11 of 19	10 of 17	9 of 17	10 of 17

\*Agriculture and Mining industries suppressed for this data

## Determining the Impact of Coal Supply Chain Reliance

This study now examines the potential impact reliance on the coal supply chain could have for Lawrence and Scioto Counties. Tables 8 and 9 show the changes in employment and wages, respectively, from 2020-2030 if one were to assume that Lawrence and Scioto Counties followed the National trend estimates. If this were the case, one would expect a small increase in employment in the coal supply chain industries, roughly 104 more employees. Likewise, income earned in the coal supply chain industries increases almost 6.5 million dollars (assuming no inflation).

Table 8: Employment Projection for Coal Supply Chain Industries, 2020-2030<sup>6</sup>

NAICS CODE*	Description	Estimated number of employees 2020	Estimated Percent Change in Industry Employment 2020-2030	Estimated number of employees 2030
221	Utilities	62	-7.2	57.536
484	Truck Transportation	2,203	4.4	2,299.93
4832	Water Transportation	39	9.8	42.822
211 (130)	Natural gas extraction	5	-1.2	4.94
324 (121)	Asphalt Paving mixtures & blocks	23	4	23.92
324 (199)	Coal products manufacturing	129	4	134.16
325 (194)	Gum & Wood chemicals	92	1.6	93.472
325 (211)	Plastics Material and Resin Manufacturing	319	1.6	324.104
3314 (10)	Primary smelting and refining of copper	6	-0.4	5.976
3331 (31)	Mining equipment manufacturers	205	3.2	211.56
423 (320), 424 (690)	Coal tar wholesalers	15	3.4, 2.6	15.45
423 (520)	Coal wholesalers	6	3.4	5.796
424 (690)	Chemical wholesalers	9	2.6	9.234
4543 (10)	Fuel wholesalers	110	-10.5	98.45
<b>Total</b>	<b>All Identified Coal Supply Industries in Lawrence and Scioto Counties</b>	<b>3,223</b>	<b>–</b>	<b>3,327.35</b>

\*where data suppressed at too detailed NAICS code level, earlier NAICS Code was used as indicated by use of ()

<sup>6</sup> Sources: US Bureau of Labor Statistics: Industry-Occupation Matrix

Table 9: Estimated Total Wages from National Average Wage using Employment Projections, 2020-2030<sup>7</sup>

NAICS CODE*	Description	National Average Wage 2020	Total Wages 2020 (using 2020 employment estimate)	Total Wages 2030 (using 2030 employment estimate)	Change in Wages 2020-2030
221	Utilities	117,180	7,265,160	6,742,068	-523,092
484	Truck Transportation	55,903	123,154,309	128,572,987	5,418,678
4832	Water Transportation	83,106	3,241,134	3,558,765	317,631
211 (130)	Natural gas extraction	185,936	929,680	918,524	-11,156
324 (121)	Asphalt Paving mixtures & blocks	122,077	2,807,771	2,920,082	112,311
324 (199)	Coal products manufacturing	122,077	15,747,933	16,377,850	629,917
325 (194)	Gum & Wood chemicals	103,568	9,528,256	9,680,708	152,452
325 (211)	Plastics Material and Resin Manufacturing	103,568	33,038,192	33,566,803	528,611
3314 (10)	Primary smelting and refining of copper	71,455	428,730	427,015	-1,715
3331 (31)	Mining equipment manufacturers	75,576	15,493,080	15,988,859	495,779
423 (320), 424 (690)	Coal tar wholesalers	84,416, 78,201	1,219,628	1,256,216	36,589
423 (520)	Coal wholesalers	84,416	506,496	489,275	-17,221
424 (690)	Chemical wholesalers	78,201	703,809	722,108	18,299
4543 (10)	Fuel wholesalers	59,292	6,522,120	5,837,297	-684,823
<b>Total</b>	<b>All Identified Coal Supply Industries in Lawrence and Scioto Counties</b>	<b>–</b>	<b>220,586,298</b>	<b>227,058,558</b>	<b>6,472,261</b>

\*where data suppressed at too detailed NAICS code level, earlier NAICS Code was used as indicated by use of ()

However, one must remember the shift-share analysis, which indicated that none of the coal supply chain industries in either county follow the national trend. In order to adjust the employment and wage projections, three assumptions had to be held true:

Assumption one: the comparative effect for each county has remained constant from 2020-2030

Assumption two: the number of employees for each industry will remain stable from 2019-2030.

Assumption three: wages for a particular industry will stay constant, without adjustment for inflation from 2019-2030.

<sup>7</sup> Sources: US Bureau of Labor Statistics: Industry-Occupation Matrix

The shift-share analysis demonstrated how the coal supply chain industries do not locally follow the national trend, although the employment and wage projects can be predicted with three assumptions, 1.) the comparative effect for each county has remained constant from 2020-2030, 2.) the number of employees for each industry will remain stable from 2019-2030, 3.) wages for a particular industry will stay constant, without adjustment for inflation from 2019-2030.

Holding these three assumptions true, has significant impacts on the analysis. Assumption one impacts the analysis by not allowing for internal policy changes or other direct actions sought to actively diversify or change the business atmosphere in the county, nor allowing for external economic shocks at the national level, such as recession or new federal policies. It is unlikely that the comparative effect would remain constant for a period of ten years. However, in order to conduct the analysis, these potential variables had to be controlled. Assumption two impacts the analysis by not allowing in change in the 'actual employment' term in the analysis. This will likely make the estimates smaller than they should be. This should be noted when looking at the estimates. The final assumption impacts the analysis by keeping all dollar amounts in 2020 dollars. This will make for easier comparisons. However, it should be noted that inflation is likely to continue to rise over the next ten years and the wages will likely increase as a result.

Table 10 and 11 shows the estimated employment and total wages for each industry adjusted with the comparative effect for Lawrence and Scioto Counties, respectively. This indicates a loss of over 156 employees and over 7.8 million dollars in income earned in coal supply chain industries in Lawrence County in the ten-year period. For Scioto County, this indicates an even greater loss of over 190 employees and over 9.3 million dollars in income earned in coal supply chain industries in the ten-year period.

Table 10: Estimated Employment and Wages, adjusted by the Comparative Effect, for Lawrence County, 2020-2030

Industry Sector	Estimated 'actual employment' 2020	Estimated 'actual employment' 2030	Estimated change in employment, 2020-2030	Average Wage 2020	Total Wages 2020	Estimated Total Wages 2030	Change in Total Wages, 2020-2030
Transportation	588	511.372	-76.628	47,953	28,196,364	24,521,822	-3,674,542
Utilities	112	107.12	-4.888	102,369	11,465,328	10,965,767	-499,561
Manufacturing	870	847.31	-22.69	48,493	42,188,910	41,088,604	-1,100,306
Wholesale Trade	209	156.701	-52.299	47,918	10,014,862	7,508,799	-2,506,063
<b>Total</b>	<b>1,779</b>	<b>1,622.503</b>	<b>-156.497</b>	<b>_</b>	<b>91,865,464</b>	<b>84,084,991</b>	<b>-7,780,473</b>

Table 11: Estimated Employment and Wages, adjusted by the Comparative Effect, for Scioto County, 2020-2030

Industry Sector	Estimated 'actual employment' 2020	Estimated 'actual employment' 2030	Estimated change in employment, 2020-2030	Average Wage 2020	Total Wages 2020	Estimated Total Wages 2030	Change in Total Wages, 2020-2030
Transportation	593	571.967	-21.033	42,898	25,438,514	24,536,240	-902,274
Utilities	96	99.096	3.096	89,985	8,638,560	8,917,154	278,594
Manufacturing	1472	1311.936	-160.064	51,271	75,470,912	67,264,271	-8,206,641
Wholesale Trade	372	359.908	-12.092	40,436	15,042,192	14,553,240	-488,952
<b>Total</b>	<b>2533</b>	<b>2342.907</b>	<b>-190.093</b>	<b>_</b>	<b>124,590,178</b>	<b>115,270,904</b>	<b>-9,319,274</b>

## Summary

The coal supply chain includes industries that directly and indirectly provide goods and services to the coal industry and their suppliers including but limited to; mining, utilities, manufacturing, wholesale trade, and the transportation industries. The national growth effect demonstrated trends with Lawrence County having contrary outcomes based upon an isolating impact within transportation, wholesale, and manufacturing. The competitive effect demonstrated how Lawrence County is underperforming in wholesale trade and transportation. The coal supply chain reliance portrays the disruptions with the decline in the coal economy as well as other economic shocks that create a dependence on other industries and businesses which ultimately lead to more instability. The shift-share analysis demonstrated how the coal supply chain industries do not locally follow the national trend, although the employment and wage projects can be predicted with three assumptions, 1.) the comparative effect for each county has remained constant from 2020-2030, 2.) the number of employees for each industry will remain stable from 2019-2030, 3.) wages for a particular industry will stay constant, without adjustment for inflation from 2019-2030.

## Conclusion

Even though, the data is suppressed at the county level at more detailed NAICS codes, this analysis paints a very different picture than using the national trends and average to estimate in Lawrence and Scioto County. Without a federal policy change regarding the coal economy, it is likely that the coal economy will continue to decline. Likewise, counties like Lawrence and Scioto will be impacted as their coal supply chain-related industries and businesses are also impacted by the declining coal economy. Over the next ten years, it is estimated that Lawrence and Scioto Counties will lose 7.8 million and 9.3 million dollars, respectively, regarding the impacts of the coal economy on the supply chain businesses if no action is taken by the counties. However, work is underway to help transition workers and businesses away from coal economy jobs as well as to further diversify the economy in the counties.

Appendix A<sup>8</sup>: List of Coal Supply Chain and Transportation Businesses in Lawrence and Scioto Counties

NAICS Code	Coal Supply Chain Industry	Company Name	County	Number of Employees	Date of Establishment	Financial
333131	Mining equipment manufacturers	Engines Inc. of Ohio	Lawrence	65	2005	Income: \$12,895,328
333131	Mining equipment manufacturers	Jennmar McSweeney, LLC	Lawrence	140	2013	Income: \$42,217,504
333132	Oil and gas field machinery manufacturing	lexisnexis didn't list any in Lawrence + Scioto				
332322, 332313	Coal chutes	lexisnexis didn't list any in Lawrence + Scioto				
332922	Coal conveyors	lexisnexis didn't list any in Lawrence + Scioto				
326220	Rubber and plastics hoses and belting manufacturing	lexisnexis didn't list any in Lawrence + Scioto				
213113	Exploration	lexisnexis didn't list any in Lawrence + Scioto				
212311, 212312, 212313, 212319	Stone mining and quarrying	lexisnexis didn't list any in Lawrence + Scioto				
211130	Natural gas extraction	Motorcarbon Elements LLC	Lawrence	4	2018	
211130	Natural gas extraction	Altivia Chemicals LLC	Scioto	1	Not found	No sales listed on income statement
212111, 212112, 212113	Coal mining	lexisnexis didn't list any in Lawrence + Scioto				
454310, 423520	Fuel wholesalers	Lester and Sons Inc	Lawrence	1	2010	Annual sales: \$54,425
454310, 423520	Fuel wholesalers	Kezee Jr, Paul	Lawrence	4	1994	Annual sales: \$400,000
454310, 423520	Fuel wholesalers	Perry Holliday Inc	Lawrence	3	1960	Annual sales: \$375,363
454310, 423520	Fuel wholesalers	Arrick's Bottled Gas Service	Lawrence	13	Not found	No sales listed on income statement
454310, 423520	Fuel wholesalers	Arrick's Propane	Lawrence	3	2001	Annual sales: \$438,422

<sup>8</sup> Pulled from NexisUni Database

454310, 423520	Fuel wholesalers	M G Propane Resources	Lawrence	3	2015	Annual sales: \$193,664
454310, 423520	Fuel wholesalers	Weavers LLC	Scioto	4	2015	Annual sales: \$374,095
454310, 423520	Fuel wholesalers	Cox Bottled Gas Co	Scioto	25	1954 (in business 66 years)	Annual sales: \$11,541,000
454310, 423528	Fuel wholesalers	Arrick's Bottled Gas Service	Scioto	54	1952	\$1,000,000 in sales
423520	Coal wholesalers	Coal Network, Inc.	LAWRENCE	6	Not found	\$50,000,000 - \$74,999,999
423320, 424690	Coal tar wholesalers	Bce Materials Inc	Scioto	3	1984	\$529,296 in sales
423320, 424690	Coal tar wholesalers	Rocla Concrete Tie Inc	Scioto	2	2015	\$75,338 in sales
423320, 424690	Coal tar wholesalers	Lucasville Sand & Gravel	Scioto	Not found	Not found	\$1,595,000 in sales
423320, 424690	Coal tar wholesalers	Adkins Construction & Trucking Co	Scioto	4	1978	\$540,000 in sales
423320, 424690	Coal tar wholesalers	Appalachian Asphalt	Scioto	2	2014	\$197,683 in sales
423320, 424690	Coal tar wholesalers	Lewis Materials LLC	Scioto	4	2005	\$273,910 in sales
424690	Chemical wholesalers	Drug Detox and Alcohol Rehab	LAWRENCE	2	2016	\$74,023 in sales
424690	Chemical wholesalers	Airtite Mine Products, LLC	Lawrence	Not found	Not found	No sales listed on income statement
424690	Chemical wholesalers	The Wright Care Home Medical Supplies Inc	Scioto	7	1988	\$1,000,000 in sales
324121	Asphalt Paving mixtures & blocks	Mae Materials, LLC	Scioto	23	2012	\$5,000,000 in sales
325194	Gum & Wood chemichals	Americas Styrenics LLC	Lawrence	92	Not found	No sales listed on income statement
325194	Gum & Wood chemichals	Appalachian Mortuary Services LLC	Lawrence	1	2017	\$150,000 in annual sales
325194	Gum & Wood chemichals	Altivia Petrochemicals, LLC	Scioto	Not found	Not found	No sales listed on income statement
331410	Primary smelting and refining of copper	Swift Manufacturing Co Inc	Lawrence	6	2007 (13 years in business)	\$111,000 in sales
324199	Coal products manufacturing	Haverhill North Coke Company	Scioto	125	Not found	\$50,000,000 - \$74,999,999
324199	Coal products manufacturing	Falcon Fab and Finishes, LLC	Scioto	3	2005	\$80,000 in annual sales
324199	Coal products manufacturing	Dollarhide Supply Company, LLC	Scioto	1	2016	\$65,191 in annual sales



325211	Plastics Material and Resin Manufacturing	Minova USA Inc.	Lawrence	52	Not found	No sales listed on income statement
325211	Plastics Material and Resin Manufacturing	Americas Styrenics LLC	Lawrence	92	Not found	No sales listed on income statement
325211	Plastics Material and Resin Manufacturing	The Dow Chemical Company	Lawrence	175	Not found	No sales listed on income statement
327992	Ground or treated mineral and earth manufacturing	lexisnexis didn't list any in Lawrence + Scioto				
221	Utilities	American Electric Power Company, Inc.	Scioto	1	Not found	No sales listed on income statement
221	Utilities	Energy Control of Ohio & KY	Scioto	2	2012	Annual sales \$35,491
221	Utilities	AEP Power Marketing, Inc.	Scioto	6	Not found	No sales listed on income statement
221	Utilities	Village of South Point	Lawrence	16	Not found	\$446,386
221	Utilities	Vistra Energy Corp.	Lawrence	27	Not found	No sales listed on income statement
221	Utilities	Dynegy Hanging Rock II, LLC	Lawrence	Not found	Not found	No sales listed on income statement
221	Utilities	Duke Energy Corporation	Lawrence	10	Not found	No sales listed on income statement
484	Transportation	Adam J Wilds	Lawrence	1	2011	\$113,933 annual sales
484	Transportation	Bacorns Hauling & Snow Plow	Lawrence	1	2000	\$97,321 annual sales
484	Transportation	Baileys Trucking LLC	Lawrence	1	2018	
484	Transportation	Bryant Trucking LLC	Lawrence	2	2015	\$105,305 annual sales
484	Transportation	BWC Trucking Company Inc	Lawrence	10	Not found	\$2,000,000 revenue
484	Transportation	C & P Trucking Inc	Lawrence	1	2013	\$85,927 annual sales
484	Transportation	Dave Otworth Trucking	Lawrence	2	2010	\$78,386 annual sales
484	Transportation	Eugene Ferguson	Lawrence	1	2012	\$88,286 annual sales
484	Transportation	Ferguson KS Trucking LLC	Lawrence	1	2010	\$86,491 annual sales
484	Transportation	George R Harper	LAWRENCE	2	2012	\$137,796 annual sales
484	Transportation	H & W Holdings, LLC	Lawrence	50	HQ Founded 2001	No financial information found
484	Transportation	H & W Trucking Company Inc	Lawrence	2	2008	\$209,815 annual sales

484	Transportation	Hanshaws Trucking & Leasing LLC	Lawrence	2	2012	\$174,354 annual sales
484	Transportation	James Matney Trucking	Lawrence	2	2008	\$125,168 annual sales
484	Transportation	Johnson, Phillip/P & T Express	Lawrence	1	1996	\$80,000 annual sales
484	Transportation	Kb's Hauling LLC	Lawrence	2	2016	\$69,957 annual sales
484	Transportation	Klrs Trucking LLC	Lawrence	1	2018	\$57,815 annual sales
484	Transportation	Lally-Ries, LLC	LAWRENCE	4	2006	\$262,703 annual sales
484	Transportation	Lloyd W Damron	Lawrence	8	1992	\$515,342 annual sales
484	Transportation	Lockhart, Joyce Ann and William Lawrence II	Lawrence	3	2001	\$194,395 annual sales
484	Transportation	Lowell Moon Trucking	Lawrence	1	2001	\$87,538 annual sales
484	Transportation	Paul Lockard Trucking Inc	Lawrence	3	2005	\$181,218 annual sales
484	Transportation	Prestige Delivery Systems, LLC	Lawrence	8	Not found	
484	Transportation	Rowe J Rowe	Lawrence	1	2000	\$81,768 annual sales
484	Transportation	Rt White Trucking Co Inc	Lawrence	2	2011	\$95,2484 annual sales
484	Transportation	Sj Myers Trucking Inc	Lawrence	2	2009	\$132,926 annual sales
484	Transportation	Swain Truck & Accessories, Inc	Lawrence	1	2017	\$57,815 annual sales
484	Transportation	The Macgyvers	Lawrence	1	2014	\$68,310 annual sales
484	Transportation	Tkt Trucking LLC	Lawrence	4	2009	\$320,000 annual sales
484	Transportation	Waller Trucking	Lawrence	1	2000	\$115,250 annual sales
484	Transportation	Benjamin W Phipps	Scioto	2	2010	\$121,544 annual sales
484	Transportation	Bsf Trucking LLC	Scioto	1	2008	\$128,4842 annual sales
484	Transportation	Burnside Trucking Inc	Scioto	2	2011	\$103,864 annual sales
484	Transportation	C + K Trucking Wheelersburg Ohio	Scioto	4	2010	\$177,853 annual sales
484	Transportation	Carver Trucking LLC	Scioto	1	2016	\$76,953 annual sales

484	Transportation	CDK Trucking LLC	Scioto	1	2014	\$80,906 annual sales
484	Transportation	Charles E Smith	SCIOTO	1	2012	\$73,185 annual sales
484	Transportation	Cronin Trucking	Scioto	1	2003	\$145,070 annual sales
484	Transportation	Dubinsky Trucking LLC	Scioto	1	2014	\$68,952 annual sales
484	Transportation	Gckt Trucking Inc	Scioto	2	2013	\$117,034 annual sales
484	Transportation	GLC Trucking Ltd	Scioto	10	1980 - 40 years in business	\$1,263,000 in sales
484	Transportation	Hagen Trucking LLC	Scioto	1	2018	\$57,815 annual sales
484	Transportation	Helton Trucking LLC	Scioto	1	2012	\$120,250 annual sales
484	Transportation	Howard & Son's Trucking LLC	Scioto	2	2012	\$136,5484 annual sales
484	Transportation	Howard Whitt Jr	Scioto	1984	4	\$327,370 annual sales
484	Transportation	Jason Conley Truck and Trailer Sales Inc	Scioto	1	2019	\$57,815 annual sales
484	Transportation	Jay Fuller Tracking	Scioto	3	2008	\$163,539 annual sales
484	Transportation	John Dunn Truck'n LLC	Scioto	1	2015	\$52,196 annual sales
484	Transportation	John Thomas Trucking LLC	Scioto	1	2008	\$91,615 annual sales
484	Transportation	Jtp Trucking LLC	Scioto	1	2016	\$63,597 annual sales
484	Transportation	Jule 's' Enterprises, Inc.	Scioto	4	2015	\$135,098 annual sales
484	Transportation	K and R Trucking	Scioto	1	2012	\$84,584 annual sales
484	Transportation	Kmh Trucking LLC	Scioto	1	2013	\$74,703 annual sales
484	Transportation	L and L Sawmill, LLC	Scioto	1	2014	\$98,281 annual sales
484	Transportation	Luther Transfer Inc	Scioto	21	1957	\$4,200,000 revenue
484	Transportation	M and T Trucking Expediting LLC	Scioto	2	2018	\$67,732 annual sales
484	Transportation	M Lute Charles	Scioto	2	2012	\$90,569 annual sales
484	Transportation	Nk Hauling	Scioto	1	2017	\$59,961 annual sales

484	Transportation	Paul A Osborne	Scioto	2	2012	\$107,222 annual sales
484	Transportation	Pendleton Truck Sales LLC	Scioto	2	2013	\$130,860 annual sales
484	Transportation	Pirate Trucking Inc	Scioto	1	2012	\$89,765 annual sales
484	Transportation	R Scott Furniture Moving	Scioto	4	1997	\$253,672 annual sales
484	Transportation	Redoutey Custom Hauling	Scioto	2	2010	\$124,178 annual sales
484	Transportation	Robert Nichols	Scioto	2	2011	\$123,170 annual sales
484	Transportation	Ryan D Shope	Scioto	1	2016	\$57,815 annual sales
484	Transportation	Sandra Rowley Trucking Inc	Scioto	5	1999 - 21 years in business	\$92,000 in sales
484	Transportation	Shope Trucking Inc	Scioto	2	1997	\$161,564 annual sales
484	Transportation	Shultz Transport Inc	Scioto	Could not find in database		
484	Transportation	Smith Family Trucking LLC	Scioto	1	2018	\$57,815 annual sales
484	Transportation	Thomas Euton	Scioto	2	2007	\$131,144 annual sales
484	Transportation	Toft Trucks	Scioto	2	2009	\$142,536 annual sales
484	Transportation	Wade A Rosenberg	Scioto	2	2010	\$141,995 annual sales
4832	Water Transportation	Ingram Barge Company LLC	Lawrence	4	Not found	No financial information found
4832	Water Transportation	FORTE Industrial Equipment Systems, Inc.	LAWRENCE	32	2015	\$24,185,963 annual sales
4832	Water Transportation	Carande Marine Survey	Lawrence	1	2000	\$97,200 annual sales
4832	Water Transportation	General Helicopters International, Inc.	Lawrence	2	1991	
486	Pipeline transportation	lexisnexis didn't list any in Lawrence + Scioto				

Appendix B<sup>9</sup>: Wages and Employment by Industry Sector, Lawrence County, 2020

NAICS Sector	Annual Establishments	Annual Average Employment	Total Annual Wages	Annual Average Weekly Wage	Annual Wages per Employee
NAICS 22 Utilities	7	133	\$13,606,553	\$1,969	\$102,369
NAICS 51 Information	6	64	3,957,263	1,194	62,075
NAICS 55 Management of companies and enterprises	8	87	5,153,331	1,137	59,120
NAICS 54 Professional and technical services	54	231	11,807,425	982	51,041
NAICS 31-33 Manufacturing	38	918	44,504,700	933	484,493
NAICS 48-49 Transportation and warehousing	39	733	35,141,859	922	47,953
NAICS 42 Wholesale trade	34	212	10,142,600	921	47,918
NAICS 53 Real estate and rental and leasing	28	152	6,526,693	827	42,986
NAICS 56 Administrative and waste services	35	780	33,226,031	820	42,625
NAICS 52 Finance and insurance	51	233	8,990,259	741	38,516
NAICS 81 Other services, except public administration	91	277	10,355,086	720	37,417
NAICS 62 Health care and social assistance	157	2,952	102,767,067	670	34,819
NAICS 44-45 Retail trade	143	1,782	46,766,244	505	26,249
NAICS 71 Arts, entertainment, and recreation	13	29	558,158	372	19,358
NAICS 72 Accommodation and food services	69	1,173	19,127,010	314	16,308
NAICS 61 Educational services	9	87	1,220,211	269	13,999

<sup>9</sup> US Bureau of Labor of Statistics: Quarterly Census of Wages and Employment 2020;

Appendix C: Wages and Employment by Industry Sector, Scioto County, 2020<sup>10</sup>

NAICS Sector	Annual Establishments	Annual Average Employment	Total Annual Wages	Annual Average Weekly Wage	Annual Wages per Employee
NAICS 22 Utilities	5	93	\$8,376,110	\$1,730	\$89,985
NAICS 55 Management of companies and enterprises	8	94	5,262,423	1,077	55,983
NAICS 31-33 Manufacturing	50	1,4484	78,987,352	1,049	54,543
NAICS 54 Professional and technical services	85	493	25,677,790	1,001	52,067
NAICS 23 Construction	115	524	26,874,566	986	51,271
NAICS 62 Health care and social assistance	244	7,244	346,312,866	919	47,809
NAICS 52 Finance and insurance	70	371	16,559,504	858	44,605
NAICS 48-49 Transportation and warehousing	38	525	22,510,907	825	42,898
NAICS 51 Information	16	114	4,622,085	779	40,4845
NAICS 42 Wholesale trade	39	403	16,312,590	778	40,436
NAICS 53 Real estate and rental and leasing	46	224	7,473,224	641	33,325
NAICS 81 Other services, except public administration	117	473	14,321,428	582	30,278
NAICS 44-45 Retail trade	233	2,844	85,720,053	580	30,139
NAICS 56 Administrative and waste services	64	463	13,700,840	569	29,607
NAICS 61 Educational services	7	143	3,628,768	4847	25,346
NAICS 71 Arts, entertainment, and recreation	12	44	859,147	375	19,4849
NAICS 72 Accommodation and food services	129	2,254	36,447,459	311	16,169

<sup>10</sup> US Bureau of Labor of Statistics: Quarterly Census of Wages and Employment 2020;