

## Local Government Contribution Brief

### *Entity and Fiscal Year*

Wayne County, Ohio: 2014

### *Expenditures*

\$99,080,990

### *Local Purchasing Choice*

Buy local preferences

### *Electricity Choice*

Purchase standard electricity supply

## Contribution Summary

The pro forma economic contribution statement is shown below. The total projected contribution for this case is \$62.4 million in value added (gross local product), 981 full-time equivalent jobs, and \$39.6 million in earnings. The direct government expenditures ripple through the local economy, almost doubling household earnings compared to the direct contribution to county government employees. Total life cycle energy for the \$99 million in expenditures is 665,124 mmBtu, accounting for 97.4 million pounds of carbon dioxide equivalent emissions.

### Government Economic Contribution Statement

Prepared by Decision Commerce Group, LLC

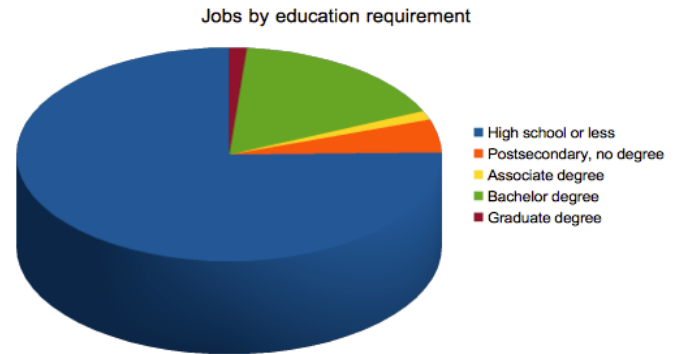
15 Nov 2018

Local Economic Contribution	Output	Employment	Value Added	Earnings
Direct	\$99,080,990	518	\$25,485,879	\$20,525,817
Life Cycle				
Industry Supply (Indirect)	\$72,386,716	463	\$36,960,264	\$19,075,040
Combined	\$171,467,706	981	\$62,446,143	\$39,600,857
Direct Effect Multipliers	1.73	1.89	2.45	1.93
Final Demand Multipliers	1.73	9.9	0.63	0.4

Regional Metrics	Amount
Local Income (\$)	\$46,140,364
Output Contribution Percentage (%)	1.28
Total Life Cycle Energy Use (mmBtu)	665,124
CO2 Emissions From Energy Use (lbs. CO2e)	97,357,618

## Workforce Contribution

Most of the contribution in jobs for this case are entry level jobs requiring a high school diploma or less. Of these jobs, 40% offer moderate- to long-term training or apprenticeships. Jobs requiring an Associate's degree or higher account for about 23% of jobs. The projected contribution in self-employment is 51 jobs. For this case, employment contribution is an estimated 2.4% of total full-time equivalent jobs in the local economy.



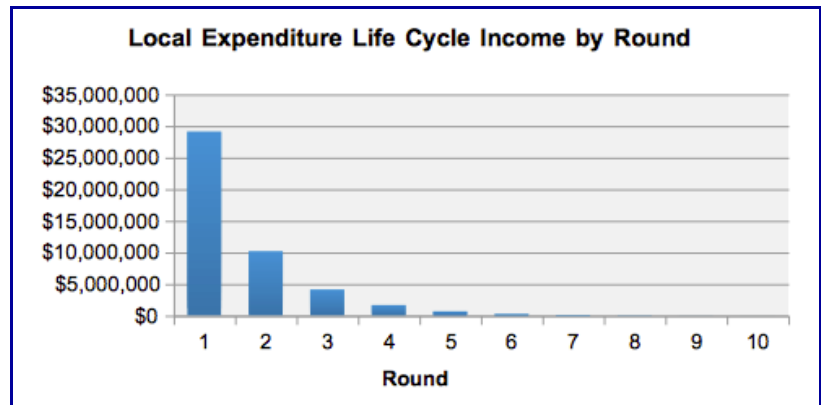
## Statement of workforce employment by occupation requirements

### Life Cycle Workforce Employment

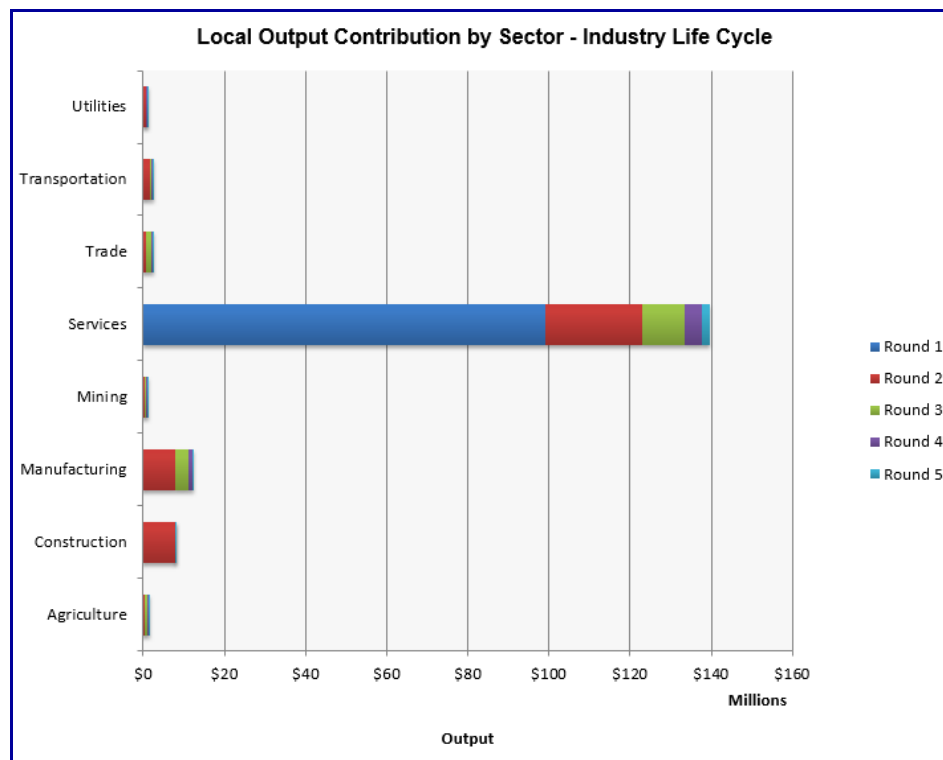
Occupation Requirements (Education - Experience - OTJ Training)	Current Local Workforce	Local Employment	Local Self Employment
<b>Associate's degree -- Total</b>	<b>1256</b>	<b>20.31</b>	<b>0.34</b>
Bachelor's degree - 5 years or more - None	758	19.05	1.17
Bachelor's degree - Less than 5 years - Internship/residency	2	0.1	0
Bachelor's degree - Less than 5 years - Moderate-term on-the-job training	5	0.55	0.03
Bachelor's degree - Less than 5 years - None	1126	33	1.59
Bachelor's degree - Less than 5 years - Short-term on-the-job training	8	0.12	0.01
Bachelor's degree - None - Internship/residency	147	2.5	0.22
Bachelor's degree - None - Long-term on-the-job training	8	2.46	0.54
Bachelor's degree - None - Moderate-term on-the-job training	476	25.85	1.92
Bachelor's degree - None - None	2487	85.66	3.58
Bachelor's degree - None - Short-term on-the-job training	22	6.93	0.07
<b>Bachelor's degree -- Total</b>	<b>5039</b>	<b>176.22</b>	<b>9.13</b>
<b>Doctoral or professional degree -- Total</b>	<b>708</b>	<b>15.23</b>	<b>2.44</b>
High school diploma or equivalent - 5 years or more - Long-term on-the-job training	1	0	0
High school diploma or equivalent - 5 years or more - Moderate-term on-the-job training	9	3.87	0.33
High school diploma or equivalent - 5 years or more - None	870	11.83	4.24
High school diploma or equivalent - Less than 5 years - Long-term on-the-job training	1	0.02	0
High school diploma or equivalent - Less than 5 years - Moderate-term on-the-job training	46	15.42	0.13
High school diploma or equivalent - Less than 5 years - None	1807	46.55	6.41
High school diploma or equivalent - Less than 5 years - Short-term on-the-job training	0	0	0
High school diploma or equivalent - None - Apprenticeship	672	19.86	2.69
High school diploma or equivalent - None - Long-term on-the-job training	2035	54.22	2.28
High school diploma or equivalent - None - Moderate-term on-the-job training	7239	213.63	6.44
High school diploma or equivalent - None - None	254	9.74	0.08
High school diploma or equivalent - None - Short-term on-the-job training	5300	163.16	3.48
<b>High school diploma or equivalent -- Total</b>	<b>18234</b>	<b>538.3</b>	<b>26.08</b>
Less than high school - Less than 5 years - Moderate-term on-the-job training	463	2.03	0.03
Less than high school - Less than 5 years - Short-term on-the-job training	0	0	0
Less than high school - None - Long-term on-the-job training	100	1.02	0.07
Less than high school - None - Moderate-term on-the-job training	425	9.37	1.9
Less than high school - None - None	165	0.73	0
Less than high school - None - Short-term on-the-job training	11055	129.16	8.46
<b>Less than high school -- Total</b>	<b>12208</b>	<b>142.31</b>	<b>10.46</b>
<b>Master's degree -- Total</b>	<b>435</b>	<b>17.17</b>	<b>0.49</b>
<b>Postsecondary non-degree award -- Total</b>	<b>2784</b>	<b>63.56</b>	<b>1.67</b>
<b>Some college, no degree -- Total</b>	<b>207</b>	<b>5.09</b>	<b>0.1</b>
<b>Grand Total</b>	<b>40871</b>	<b>978.19</b>	<b>50.71</b>

## Industry Contribution

The chart to the right shows the income contribution decay by round back through the supply chain after the initial direct contribution of local government. The ripple effect through the following three rounds represents a significant contribution to the local economy.



The following chart shows the local output contribution by sector back through five rounds of the supply chain. The direct contribution of local government is shown in blue, while the indirect contribution back through Rounds 2 through 5 of the supply chain are shown in the colors indicated in the legend. The largest indirect contribution to output is in the Services, Manufacturing, and Construction sectors.



The table below lists the top 30 industries for local output contribution. The three data columns list the output contribution to the local and state economies and in total. These contributions assume that the local government and its supply chain vendors prefer to buy locally if products and services are available. In addition to state and local government, the list includes supply chain industries such as financial services and insurance, construction and maintenance services, energy, transportation, and agriculture.

**List of projected contribution to output for top 30 industries**

<b>Industry</b>	<b>Life Cycle Local Production Potential</b>	<b>Life Cycle State Production Potential</b>	<b>Life Cycle Total Production Potential</b>
State and local general government	\$99,080,990	\$99,080,990	\$108,002,342
Insurance carriers	\$18,159,366	\$18,355,305	\$18,418,894
Nonresidential maintenance and repair	\$6,220,209	\$6,622,159	\$6,798,298
Insurance agencies, brokerages, and related activities	\$4,768,336	\$4,860,460	\$4,887,968
Other financial investment activities	\$3,210,027	\$3,374,633	\$3,395,222
Wholesale trade	\$1,907,705	\$3,184,783	\$3,576,802
Highways and streets	\$1,797,853	\$1,797,853	\$1,797,853
Monetary authorities and depository credit intermediation	\$1,726,279	\$2,038,114	\$2,170,638
Printing	\$1,687,800	\$1,812,985	\$1,899,781
Securities and commodity contracts intermediation and brokerage	\$1,671,591	\$1,867,264	\$1,924,172
Other real estate	\$1,670,711	\$2,055,356	\$2,388,744
Legal services	\$1,115,319	\$1,276,757	\$1,376,447
Management of companies and enterprises	\$1,080,528	\$2,103,983	\$2,262,717
Animal (except poultry) slaughtering, rendering, and processing	\$1,060,942	\$1,082,298	\$1,131,227
Truck transportation	\$976,941	\$1,317,432	\$1,406,098
Individual and family services	\$865,172	\$865,172	\$868,460
Oil and gas extraction	\$763,905	\$10,017,220	\$10,944,219
Electric power generation, transmission, and distribution	\$722,668	\$999,929	\$1,097,705
Automotive repair and maintenance	\$672,136	\$706,553	\$725,319
Other plastics product manufacturing	\$653,380	\$743,278	\$781,180
All other chemical product and preparation manufacturing	\$632,038	\$724,723	\$764,468
Architectural, engineering, and related services	\$619,269	\$843,996	\$1,045,564
Beef cattle ranching and farming, including feedlots and dual-purp†	\$560,240	\$581,925	\$608,416
Air transportation	\$550,298	\$629,988	\$672,691
Fluid milk and butter manufacturing	\$539,879	\$573,541	\$598,318
Nondepository credit intermediation and related activities	\$522,069	\$687,608	\$736,393
Services to buildings and dwellings	\$497,125	\$624,327	\$743,643
Transit and ground passenger transportation	\$490,080	\$1,098,491	\$1,150,146
Fruit and vegetable canning, pickling, and drying	\$488,136	\$497,234	\$519,358
Asphalt paving mixture and block manufacturing	\$468,296	\$472,244	\$491,354

## Top Supply Chain Connections

The following table lists the largest industry-to-industry connections back through the first four rounds of the supply chain. This listing provides a method to audit the pro forma contribution statement to provided either a) assurance that the statement resembles actual contribution, or b) that the assumption of buying local first overstates the actual contribution. If an audit is conducted and the pro forma amounts overstate the actual findings, then a new statement using a different local purchasing choice can be generated using current trade or industry location patterns as the basis of local purchasing decisions rather than a buy local first basis.

### List of largest industry-to-industry connections back through the supply chain

Industry	Commodity	Round	Local Production Requirements
Insurance carriers	Compensation of employees	1	\$3,733,975
Insurance carriers	Insurance agencies, brokerages, and related activities	1	\$3,355,205
Nonresidential maintenance and repair	Compensation of employees	1	\$2,131,817
Insurance carriers	Insurance carriers	1	\$1,443,232
Insurance agencies, brokerages, and related activities	Compensation of employees	2	\$1,018,344
Other financial investment activities	Compensation of employees	1	\$906,747
Insurance agencies, brokerages, and related activities	Insurance agencies, brokerages, and related activities	2	\$808,986
Highways and streets	Compensation of employees	1	\$659,403
Securities and commodity contracts intermediation and	Compensation of employees	1	\$506,085
Individual and family services	Compensation of employees	1	\$479,746
Insurance carriers	Compensation of employees	2	\$454,399
Printing	Compensation of employees	1	\$424,670
Insurance carriers	Insurance agencies, brokerages, and related activities	2	\$408,305
Insurance agencies, brokerages, and related activities	Compensation of employees	3	\$368,854
Management of companies and enterprises	Compensation of employees	2	\$338,555
Nonresidential maintenance and repair	Other retail	1	\$331,332
Animal (except poultry) slaughtering, rendering, and pro	Beef cattle ranching and farming, including feedlots and	1	\$308,651
Insurance agencies, brokerages, and related activities	Insurance agencies, brokerages, and related activities	3	\$293,023
Automotive repair and maintenance	Compensation of employees	1	\$289,308
Insurance carriers	Legal services	1	\$250,614
Securities and commodity contracts intermediation and	Compensation of employees	2	\$248,063
Wholesale trade	Compensation of employees	2	\$237,257
Fluid milk and butter manufacturing	Dairy cattle and milk production	1	\$225,386
Wholesale trade	Compensation of employees	1	\$223,313
Insurance carriers	Monetary authorities and depository credit intermediatio	1	\$211,400
Insurance carriers	Advertising, public relations, and related services	1	\$210,254
Legal services	Compensation of employees	1	\$188,555
Nonresidential maintenance and repair	Wholesale trade	1	\$187,054
Other computer related services, including facilities man	Compensation of employees	1	\$185,982
Other financial investment activities	Management of companies and enterprises	1	\$183,817



## Energy Use and Emissions

Total life cycle energy use for local government services and its local supply chain is 665,124 mmBtu. The carbon dioxide equivalent emissions associated with this energy use is 97.36 million pounds. The table to the right lists pro forma energy use and emissions by fuel from local output contribution for this case. The amounts assume that electricity is purchased from a standard generation portfolio for the region.

Fuel	Lifecycle Use (mmBtu)	Life Cycle Energy Emissions (lbs. CO2e)
Coal	146,515	30,419,458
Electricity	36,585	0
Fuel oil	46,329	7,514,056
Gasoline	218,931	34,398,520
Jet fuel	13,200	2,103,048
LPG	23,256	3,254,966
Natural gas	167,451	19,639,701
Nuclear	12,727	0
Other	26	4,551
Other bio	67	14,861
Other gas	0	60
Wood	37	8,397

## Regional System Contribution

Local government spending supports industries that play a role in making local economy resilient to disasters. The following table lists the top 20 contributions to local output in industries that play a resilience role.

Contribution in industries that play resilience role Industry	Local Output	Local Employment
Insurance carriers	\$18,159,366	71.76
Nonresidential maintenance and repair	\$6,220,209	52.2
Insurance agencies, brokerages, and related activities	\$4,768,336	31.54
Wholesale trade	\$1,907,705	11.87
Highways and streets	\$1,797,853	15.15
Monetary authorities and depository credit intermediatio	\$1,726,279	8.75
Animal (except poultry) slaughtering, rendering, and pro	\$1,060,942	4.2
Truck transportation	\$976,941	7.37
Individual and family services	\$865,172	25.07
Oil and gas extraction	\$763,905	0.81
Electric power generation, transmission, and distribution	\$722,668	1.61
Automotive repair and maintenance	\$672,136	11.72
All other chemical product and preparation manufacturin	\$632,038	1.94
Architectural, engineering, and related services	\$619,269	3.88
Beef cattle ranching and farming, including feedlots and	\$560,240	3.33
Air transportation	\$550,298	2.79
Fluid milk and butter manufacturing	\$539,879	1.35
Transit and ground passenger transportation	\$490,080	8.04
Fruit and vegetable canning, pickling, and drying	\$488,136	1.77
Asphalt paving mixture and block manufacturing	\$468,296	0.84

## Preparer's Notes

This brief was prepared using open checkbook data published at [waynecounty.ohiocheckbook.com](http://waynecounty.ohiocheckbook.com).

The workbook `deg20181102070042131043.xlsx` accompanies this brief. See this workbook for more details and definitions for life cycle accounting terms used in this brief.

For comparison, I show below the local impact of household spending for the equivalent amount of \$99 million in government spending. This comparison case provides the perspective of a tax cut, where the taxes that were collected by government and spent to provide services are no longer collected. Instead, with the tax savings, we assume that households would spend according to their typical patterns, with a preference for buying local. This comparison should only be considered for a marginal tax cut or tax increase, as any significant change may affect the pattern of spending by households.

<b>Economic Impact</b>	<b>Output</b>	<b>Employment</b>	<b>Value Added</b>	<b>Earnings</b>
Direct	\$99,080,990	1,072	\$63,000,431	\$27,470,475
Life Cycle				
Industry Supply (Indirect)	\$48,626,064	338	\$25,319,625	\$12,602,264
Combined	<u>\$147,707,054</u>	<u>\$1,410</u>	<u>\$88,320,056</u>	<u>\$40,072,739</u>
Direct Effect Multipliers	1.49	1.31	1.40	1.46
Final Demand Multipliers	1.49	14.23	0.89	0.40

When compared with the the economic contribution on the first page, earnings are around \$40 million in both cases. The local government case has higher average wages but lower number of jobs.