

Economic Impact of Mercy Health on the State of Ohio

Prepared by the Economics Center

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SUMMARY OF IMPACTS

In 2016, Mercy Health operated 19 hospitals and a wide range of physician's groups, nursing homes, and other healthcare-related points of care and other facilities¹ in six networks across the State of Ohio. This report examines the economic impacts and related benefits of Mercy Health - Ohio.

The \$4.2 billion² in operating expenditures made by Mercy Health's six networks in 2016 generated a total economic output of \$9.2 billion. The 2016 operations impact of Mercy Health in the State of Ohio also included:

- \$3.4 billion in total household earnings
- A total employment impact of 75,573 jobs, 31,430 of whom are Mercy Health employees

When compared to operations spending in 2011, Mercy Health's 2016 total economic output experienced an increase of seven percent from its previous total output of \$8.6 billion. In 2016, total household earnings increased by approximately 10 percent from \$3.1 billion in 2011. Total employment was 29 percent higher from the previous level of 58,512 total jobs, of which 30,429 were Mercy Health employees in 2011.

To provide state-of-the-art healthcare for its patients, Mercy Health also made investments in facilities and capital equipment. Although there were fluctuations from year to year, Mercy Health made investments in the form of new construction and capital expenditures. By analyzing investments from the previous years (2014-2016), a three-year average investment level was identified.

From 2014 through 2016, Mercy Health's six networks directly spent an average of \$397.7 million annually on construction and capital investments, which produced a total annual economic output of \$831.2 million, including:

- \$283.4 million in annual household earnings
- An average of 5,709 jobs annually due to capital expenditures

In 2016, average, three-year output on capital investments was approximately 10 percent lower than the output of \$921.4 million in 2011. Total, average household earnings in 2016 decreased by less than one percent from 2011's \$284.8 million, and total annual employment was three percent lower from 5,912 jobs.

Mercy Health also produced several other benefits resulting from operations and capital expenditures in Ohio for 2016, some of which include:

- \$257.8 million in sales, income, property, and other tax revenue for the State of Ohio and local governments, and
- \$328.3 million in uncompensated care and other wellness benefits for Ohio citizens.

¹ "Points of Care" refers to facilities in which a patient can receive care from doctors, physicians, etc. "Other Facilities" refers to facilities that include fitness complexes, hospices, school-based health, etc.

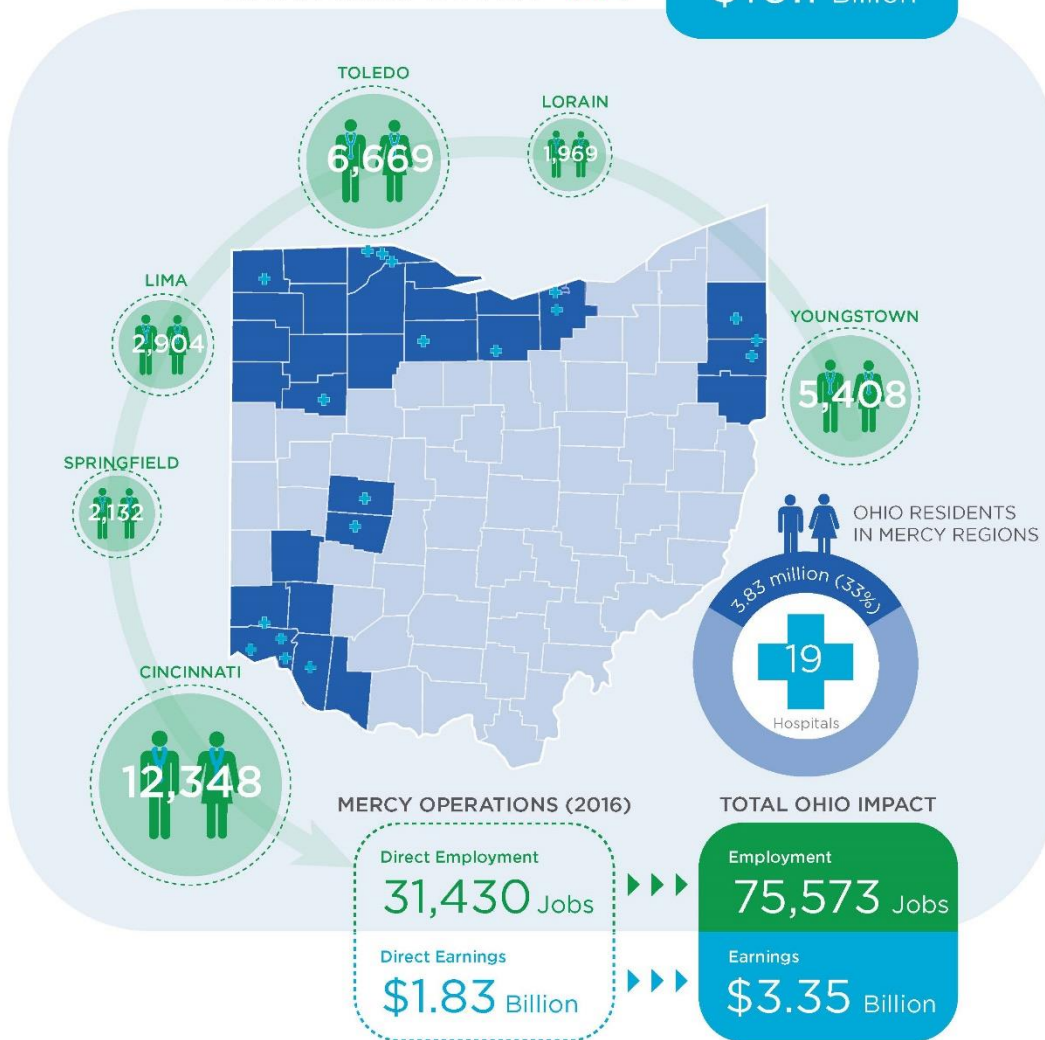
² All figures in this report are presented in 2016 dollar amounts.

The Economic Impact of Mercy Health on Ohio



TOTAL OHIO IMPACT >>>

\$10.1 Billion



MERCY HEALTH OPERATIONS

Size of Mercy Health's Operations

With six hospital-based regional networks³ in the State, Mercy Health provided quality healthcare across a wider portion of Ohio than any other health system. Collectively, Mercy Health's networks, which encompassed 26 of the State's 88 counties, included 33 percent of all Ohio residents (3.8 million of 11.6 million). In other words, one in every three Ohio residents is a past, present, or potential Mercy Health client. Through its integrated networks that include a wide range of healthcare points of care and services, from physicians to clinics to laboratories, Mercy Health offered a comprehensive response to the healthcare needs within the communities it served in 2016.

Mercy Health Employment and Earnings

Serving the healthcare needs of Ohio residents has made Mercy Health the largest employer in the central communities in four of its regions: Mahoning County, Lorain County, Allen County, and Clark County. In the Northwest Ohio region, it was the third largest employer. For the Southwest Ohio region, Mercy Health, including its Home Office, was the fourth largest employer.⁴

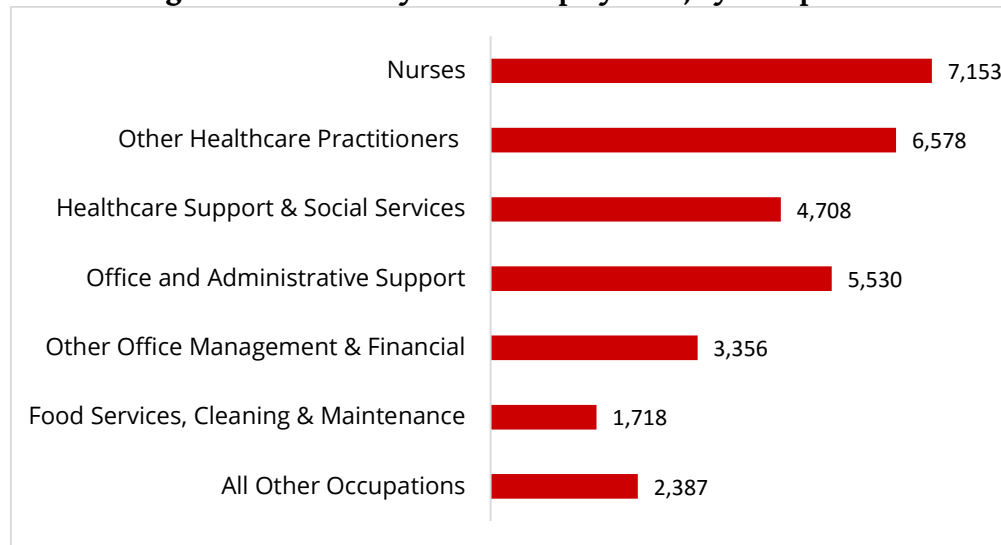
Statewide, Mercy Health employed 31,430 people in 801 points of care and other facilities, including 19 hospitals, as shown in Table 1 on the following page. According to the latest report from the Ohio Department of Development, this made Mercy Health the fourth largest employer in Ohio. Between 2012 and 2016, the number of persons directly employed by Mercy Health increased by three percent.

Based on the latest workforce characteristics in Ohio healthcare industries, as well as employment figures for each of its points of care and other facilities, an occupational profile of Mercy Health's employees was determined, as shown in Figure 1. Nurses accounted for 23 percent of Mercy Health employees, and another 36 percent were in some other type of healthcare occupation. Of this 36 percent, an estimated 1,284 individuals were physicians and surgeons, which are included in "Other Healthcare Practitioners".

³ These networks are primarily based in Allen, Clark, Hamilton, Lorain, Lucas, and Mahoning Counties.

⁴ All employer ranking information was obtained from the respective County's website, primarily through comprehensive annual financial reports.

Figure 1: 2016 Mercy Health Employment, by Occupation



Source: Employment data provided by Mercy Health

Table 1: Mercy Health Points of Care, Other Facilities, and Jobs in 2016, by Region

Region	Hospitals	Points of Care	Other Facilities	Jobs
Youngstown	3	110	22	5,408
Lorain	2	39	26	1,969
Toledo	6	222	4	6,669
Lima	1	31	8	2,904
Springfield	2	42	5	2,132
Cincinnati	5	243	30	12,348
Total	19	687	95	31,430

Source: Data provided by Mercy Health

Mercy Health paid its 31,430 employees \$1.8 billion⁵ in 2016, which resulted in an estimated average hourly wage of \$28.00. By comparison, this was 41 percent greater than the average State of Ohio hourly wage of \$19.93 for all workers.⁶

⁵ These earnings include only the wages and salaries of Mercy Health employees. Other personnel costs, which include benefits as well as wages paid to temporary and agency staff, were omitted.

⁶ 2016 State of Ohio wage information was obtained through the Occupation Overview through the Economic Modeling Specialists International (EMSI).

ECONOMIC IMPACTS

Operating Expenditures Impact

Operating expenditures by Mercy Health included employee payroll and benefits,⁷ non-employee personnel expenses, and spending on all supplies and services purchased from outside vendors.

Table 2 below details the size and types of expenditures for each network. Mercy Health Home Office spending in support of the six regions is listed separately.

Table 2: Mercy Health Operating Expenditures in 2016, by Region (2016\$)

Region	Hospital Operations	Other Operations	Total
Youngstown	\$509,965,355	\$154,611,051	\$664,576,406
Lorain	\$173,694,976	\$69,107,832	\$242,802,808
Toledo	\$674,341,628	\$249,595,748	\$923,937,376
Lima	\$264,807,914	\$120,463,070	\$385,270,984
Springfield	\$186,064,175	\$61,198,262	\$247,262,437
Cincinnati	\$745,901,449	\$387,755,206	\$1,133,656,655
<i>Home Office support for regions</i>		\$615,968,732	\$615,968,732
TOTAL	\$2,554,775,497	\$1,658,699,901	\$4,213,475,398

Source: Operations data provided by Mercy Health

Mercy Health's 2016 operating expenditures totaled \$4.2 billion, which generated an indirect output of \$5.0 billion in additional economic activity in Ohio. Put together in Table 3, a total economic output of \$9.2 billion was generated in 2016 from expenditures of all Mercy Health operations.

Table 3: 2016 Economic Output of Mercy Health Operations On the State of Ohio (2016\$)

	Output	Jobs	Earnings
Direct	\$4,213,475,398	31,430	\$1,830,368,256
Indirect	\$5,019,470,657	44,143	\$1,517,693,293
Total	\$9,232,946,055	75,573	\$3,348,061,549

Source: Economics Center calculations using RIMS II and EMSI industry multipliers

Wages paid to Mercy Health employees totaled \$1.8 billion. This spending supported another \$1.5 billion in indirect wages for the State of Ohio. This resulted in a total earnings impact of \$3.4 billion. Additionally, the spending of Mercy Health and its 31,430 employees generated another 44,143 indirect jobs, as this direct spending required other businesses to employ workers. Based on these earnings, indirect employees received an hourly wage of \$16.53, or an average salary of \$34,381.

⁷ These payroll and benefit earnings figures are detailed in Table 3, and are not incorporated into Table 2 operations.

Compared to spending levels in 2011, direct output increased by 15 percent from \$3.6 billion. Indirect output increased approximately one percent from the \$4.9 billion in 2011. Total economic output in 2016 was seven percent higher than the \$8.6 billion total output in 2011, illustrating a positive, overall growth in Mercy's spending for the regions in which it served. Direct household earnings also experienced an overall increase of six percent from \$1.7 billion in 2011, and indirect wages rose by 14 percent from \$1.3 billion. Overall, total household earnings experienced an approximate 10 percent increase from 2011's total earnings of \$3.1 billion. The percent change in employment impact by Mercy Health was also positive in all aspects: a three percent increase in direct employment from 30,429 jobs, a 57 percent increase in indirect employment from 28,083 jobs, and a 29 percent increase from 58,512 total jobs.

The indirect jobs from Mercy Health's expenditures were spread across a range of industries, as shown in Table 4. Real estate, retail trade, and administrative services were the three non-healthcare industries that indirectly benefitted most from Mercy Health's operating expenditures. Spending by employee households promoted employment in retail trade and real estate, while Mercy Health and its vendors were the primary purchasers of administrative services. In Ohio for the year 2016, those employed in the real estate industry earned an average hourly wage of \$26.62, retail trade workers earned an average hourly wage of \$15.68, and administrative service employees earned an average hourly wage of \$18.83.⁸

Table 4: 2016 Indirect Jobs Impact in Ohio, by Sector

Industry	Proportion (%)
Real Estate & Rental/ Leasing	14.5
Health Care & Social Services	12.3
Retail Trade	11.6
Administrative & Waste Mgmt. Services	9.7
Finance and Insurance	7.8
Food Service & Drinking Places	7.7
Professional, Scientific, & Technical Services	6.5
Manufacturing	5.6
Other Industry Sectors ⁹	24.3

Source: Economics Center calculations using RIMS II and EMSI industry multipliers

Capital Expenditures Impact

From 2014 to 2016, Mercy Health expanded and upgraded its facilities throughout the State to maintain its commitment to providing safe, affordable, high-quality healthcare. Along with this, there were investments in technology and equipment each year. Table 5 illustrates the level of annual,

⁸ 2016 wage information for the State of Ohio was obtained through the Industry Overview for Real Estate, Retail Trade, and Administrative and Waste Management Services through EMSI.

⁹ The other industry sectors are: Agriculture, forestry, fishing and hunting; Mining; Construction; Wholesale trade; Transportation and warehousing; Utilities; Information; Management of companies and enterprises; Educational services; Arts, entertainment, and recreation; Accommodation.

direct spending on capital expenditures for construction, information technology (IT), and other capital equipment across these three years.

Table 5: Mercy Health’s Capital Expenditures, 2014-2016 Average by Type and Region (2016\$)

Region	Construction	Information Technology	Other Capital Expenditures
Youngstown	\$26,084,092	\$1,453,466	\$19,298,725
Lorain	\$2,965,292	\$509,864	\$7,408,125
Toledo	\$18,025,705	\$775,483	\$42,001,414
Lima	\$2,168,652	\$280,833	\$8,882,729
Springfield	\$4,841,481	\$698,246	\$9,154,167
Cincinnati	\$65,206,625	\$3,254,634	\$43,376,230
<i>Home Office support for regions</i>	\$1,289,176	\$64,504,677	\$75,592,493
TOTAL	\$120,581,023	\$71,477,203	\$205,713,883

Source: Capital Expenditure data provided by Mercy Health

Mercy Health spent an average of \$397.7 million annually on capital expenditures between 2014 - 2016, which generated an average indirect output of \$433.4 million each year. Combined, the direct and indirect impacts amounted to an average total economic output of \$831.2 million annually from capital expenditures made by Mercy Health.

These capital expenditures generated an average total earnings impact of \$283.4 million between 2014 - 2016 and an average total employment impact of 5,709 jobs, as shown in Table 6. The average hourly wage of \$23.87 for these jobs in 2016 was nine percent greater than the State of Ohio average hourly wage of \$21.85¹⁰ for all employees.

Compared to the year 2011, Mercy Health spent slightly less on average, annual capital investments in 2016. Over this time period, direct output decreased by six percent and indirect output decreased by 13 percent. Total employment in 2016 was three percent lower from the 5,912 total jobs in 2011, with 2,524 being direct and 3,388 being indirect. From 2011 to 2016, there was a less than one percent decrease in total household earnings, with 2011 having \$284.8 million in total earnings from capital expenditures.

Table 6: 2014-2016 Average Economic Impact of Mercy Health’s Capital Expenditures (2016\$)

	Output	Jobs	Earnings
Direct	\$397,772,109	2,549	\$156,120,815
Indirect	\$433,397,355	3,160	\$127,325,112
Total	\$831,169,464	5,709	\$283,445,927

Source: Economics Center calculations using RIMS II and EMSI industry multipliers

¹⁰ The average hourly wage for Ohio from 2014-2016 was calculated through the Bureau of Labor Statistic’s QCEW.

Combined Economic Impact

When combined, Mercy Health’s 2016 operating and average annual capital expenditures from 2014 - 2016 consisted of a total economic output of approximately \$10.1 billion, which included more than \$3.6 billion in earnings. As detailed in Table 7, Mercy Health’s combined economic impact also included the generation of 81,345 jobs, an increase of roughly 26 percent compared with its 2011 employment impact.

Table 7: Combined Economic Impact of Mercy Health on the State of Ohio (2016\$)

	Output	Jobs	Earnings
Direct	\$4,611,247,507	33,979	\$1,986,489,071
Indirect	\$5,452,868,012	47,303	\$1,645,018,405
Total	\$10,064,115,519	81,282	\$3,631,507,476

Source: Economics Center calculations using RIMS II and EMSI industry multipliers

OTHER BENEFITS

Fiscal Impacts: Local and State Taxes

Mercy Health was a major generator of income, sales, and other taxes for local governments and the State of Ohio, as shown in Table 8. In 2016, Mercy Health’s fiscal impact from operating and capital expenditures was approximately \$257.8 million. This included \$174.2 million in State tax revenue and \$83.6 million in tax revenue accruing to local governments. In regards to the sales tax, these revenues are primarily produced by the household spending that resulted from Mercy Health’s economic output. Other taxes include local earnings taxes paid on Mercy Health wages and all indirect earnings, as well as property and corporate taxes paid by Mercy Health.

Table 8: State and Local Fiscal Impacts of Mercy Health (2016\$)

	Ohio	Local	Total
Sales Tax	\$88,622,100	\$18,014,200	\$106,636,300
Income Tax	\$85,527,475	\$57,053,286	\$142,580,761
Property Tax		\$5,605,722	\$5,605,722
Other Taxes		\$3,003,507	\$3,003,507
Total	\$174,149,575	\$83,676,715	\$257,826,290

Source: Economics Center calculations using data provided by Mercy Health

Diversity Spending

Mercy Health has made a concerted effort to change its purchasing practices to increase the proportion of its purchases that are made from vendors who are women or minority-owned

business enterprises (W/MBEs). In 2009, Mercy Health began to track its expenditures with these vendors, and in 2014, it added veteran-owned businesses to this diversity spending program.

Across its six regional networks in the State of Ohio, Mercy Health had more than doubled its diversity spending from an average of \$38.8 million during 2009 through 2011 to an average of \$94.2 million¹¹ over the past five years (2012-2016), more than two times the previous level.

Because approximately one-third of this spending goes to contractors on construction projects, Mercy Health's diversity spending varied significantly from year to year. In the past five years, construction spending with these vendors averaged \$32.4 million, but it ranged from \$20.4 to \$48.4 million. On the other hand, purchases of other supplies and services were more consistent, averaged at \$61.8 million and fluctuating between \$54.5 and \$68.5 million.

Purchases from veteran-owned businesses represented a small but growing piece of Mercy Health's diversity spending program. Although this part of the program was just getting started, spending increased from \$360,000 in 2014 to \$864,000 in 2016.

Community Benefits

In 2016, Mercy Health spent a total of \$328.3 million in the region, or more than \$6.3 million each week, on uncompensated care and other wellness benefits for the community. This amount was equal to approximately four percent of Mercy Health's total operating expenditures in the State of Ohio.

The impact of such spending directly benefitted the unemployed, low-income, and uninsured persons in the State. While such community impacts vary, spending such as this enhanced the general health and well-being of those residing in one of Mercy Health's regional networks. – or those without the ability to pay for care. In fact, roughly 76 percent of the community benefit spending made by Mercy Health was dedicated to uncompensated care. The remainder, which supported wellness programs and other efforts to help improve the community's health, accounted for nearly \$1.5 million per week in expenditures.

Although the Affordable Care Act and Medicaid expansion resulted in additional financial support for healthcare services provided to lower-income residents of Ohio, Mercy Health's financial commitment to this care actually increased slightly from the \$326.5 million (2016\$) spent in 2011.

New Money

While all Mercy Health hospitals have some patients who come from outside Ohio, such numbers tend to be quite small, normally amounting to one percent or less of all discharges.¹² However,

¹¹ The annual diversity spending data provided by Mercy Health from 2009-2011 and 2012-2015 was adjusted to 2016 dollar amounts.

¹² This statistic is based on patient data provided by Mercy Health.

because three of Mercy Health's regions were located in areas where Ohio borders other states, they attracted significantly larger percentages of out-of-state patients. Compared to the other three regions, Youngstown hospitals cared for four times as many out-of-state patients, Cincinnati hospitals cared for seven times as many, and Toledo hospitals cared for ten times as many out-of-state patients.

When hospitals care for out-of-state patients, they are exporting their services, which results in new money coming into the Ohio economy. In 2016, Mercy Health's hospitals provided \$316.0 million in such services. This amount is equivalent to having a 125 to 150 bed hospital that served only out-of-state patients. For the State of Ohio, these non-Ohio patients spent an average of 41 percent more than Ohio patients despite accounting for three percent of total patients.

Graduate Medical Education

A small but important aspect of Mercy Health's employment comes from Graduate Education Program. Through this program, staff at Mercy Health hospitals includes 367 medical residents,¹³ who received training from the doctors at these hospitals. During their training, these residents were able to experience the working in one of Mercy Health's regions, and some may choose to join Mercy Health or otherwise practice in one of these communities upon completion of their residency.

METHODOLOGY

Economic impact figures represent the effects that a given organization and its associated economic activities have upon a surrounding community. An organization and its employees circulate money within a local economy through spending on goods and services provided by local business, which are then spent at other establishments and by local households.

The Economics Center calculated the impact of the Mercy Health's construction and operations using estimates of these costs provided by the client. These data were used in an input-output model, which measures goods and services produced in each industry and the use of those goods and services by other industries and households.

Input-output models give a picture of the direct and indirect impacts of a given business or organization. The direct impacts of the project are measured in terms of the total output made by Mercy Health and in terms of the wages paid to employees hired with those monies. In turn, operating and investing in capital expenditures for the facilities supports jobs and spending in other industries. This consequent spending is the indirect impact of the project's activities. Finally, the direct and indirect impacts of inter-industry relationships create induced impacts due to the spending of private households.

Multipliers are figures that represent all the inter-industry and household economic relationships measured in the input-output model. For every dollar spent by a given organization in a particular

¹³ This refers to all occupations requiring a medical residency.

industry, multipliers reflect how many more dollars will be spent in a local economy by other businesses and households, thereby determining the total economic impact of a project or investment. The multipliers reflect two sets of economic impacts: First, the direct effect number of jobs and wages; and second, the final effects, which add the indirect and induced impacts to the direct ones.

For this project, multipliers were derived from an input-output model created by the Bureau of Economic Analysis (BEA), a part of the U.S. Department of Commerce. This model, its constituent tables, and resulting multipliers are part of the BEA's RIMS II project (Regional Industrial Multiplier System), which covers both the state and county levels throughout the United States.

Each industry in a given locale has its own multiplier, reflecting its relationship to the rest of the local economy. Operations of and capital investments in Mercy Health will attract activity in a number of different industries, and applying the relevant multipliers for each industry allowed the Economics Center to give a realistic picture of the economic impact of what the complex will add to the local economy.

For instance, Health Care and Social Assistance has an industry code of 62, and suppose it has a final-demand spending multiplier of 1.58. This means that for every \$1 million spent by that industry in its respective County, another \$580,000 of economic activity results. Additionally, suppose this industry has an employment multiplier of 6.4; so, for every \$1 million spent in Health Care and Social Assistance, approximately six jobs are supported annually in the rest of the economy.