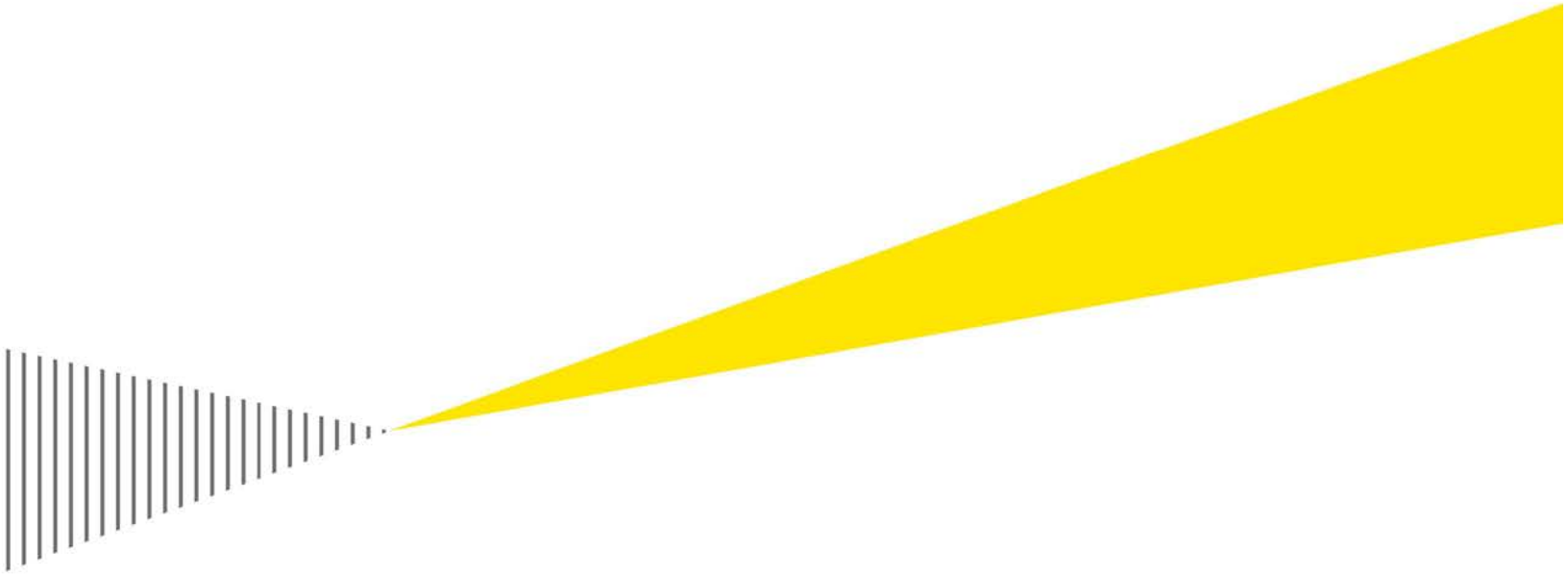


Kent State University

Economic contributions of Kent State University in FY17

February 26, 2018



Building a better
working world

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Executive summary

The State of Ohio has 14 public university systems with 24 regional campuses. Kent State University is the third largest system in Ohio with eight campuses, a location in Summit County, two program locations in Cuyahoga County, an airport, and international programs that serve in total more than 44,000 enrolled students. The mission of the Kent State System, “To transform lives and communities through the power of discovery, learning, and creative expression in an inclusive environment,” unites the campus system around a common purpose.

Kent State retained EY to perform a comprehensive study of the economic and fiscal contributions that the campus system brings to its local communities, the Northeast Ohio region, and the entire state of Ohio. This report looks at five components of the university’s economic and fiscal contributions:

- Operations
- Capital investments
- Visitor spending
- Student spending
- Alumni earnings

In FY17, Kent State spent money educating students, paying its employees, purchasing goods and services from regional suppliers, constructing new buildings, and renovating existing structures. Visitors and students spent money in Northeast Ohio at hotels, restaurants, gas stations, and retail shops. EY estimated three types of economic and fiscal (tax) contributions:

- ▶ **Direct contribution.** Direct economic contribution includes the university’s total full-time and part-time employees and labor income (wages, salary, and benefits) received by Kent State employees. Economic output is measured as payroll and non-payroll expenditures by Kent State University in FY17. Direct taxes are the sales, property, income, and other taxes paid by Kent State employees.
- ▶ **Indirect contribution.** The indirect economic contribution is attributable to purchases by Kent State from local suppliers. The indirect contribution also captures the additional input purchases from those businesses supplying companies that directly benefited from the university’s purchases. These additional purchases create subsequent rounds of indirect effects.
- ▶ **Induced contribution.** The induced contribution includes the spending by university and supplier employees at local businesses including grocery stores, restaurants, and service providers.

A summary of Kent State’s economic and tax contributions in Northeast Ohio in FY17 is shown in Table ES-1. EY estimates that the Kent State System contributed nearly 11,800 jobs, \$550 million of labor income, more than \$1 billion of economic output, and \$60 million in state and local taxes in Northeast Ohio in FY17.

The direct operational expenditures by the university is the largest contributor to employment, labor income, and economic output, supporting more than 9,300 jobs in Northeast Ohio, \$453.5 million in salary and benefits, \$817.3 million in economic output, and \$45.5 million in state and local taxes. Capital investments by Kent State in 2017 supported nearly 960 direct (construction-related), indirect (supplier), and induced jobs in the region and \$52.8 million of labor income. Visitors to the campus in Kent, Ohio supported an economic output of \$3.4 million for the county in 2017 and \$400,000 of state and local taxes. The contributions of student expenditures, due to international and out-of-state students brought to Northeast Ohio because of Kent State programs, contributed an estimated \$10.7 million in state and local taxes—mainly sales taxes—and supported more than 1,460 jobs and \$43.3 million in labor income. See Table ES-1 below.

Table ES-1. Summary of total economic and tax contributions of Kent State System in Northeast Ohio, FY17

Actual employment; Amounts in millions; Direct, indirect, and induced contributions

	Total employment	Total labor income	Total economic output	Total state and local tax
Operational expenditures	9,334	\$453.5	\$817.3	\$45.5
Capital investments	959	\$52.8	\$97.7	\$4.1
Visitor expenditures*	41	\$0.9	\$3.4	\$0.4
Student expenditures	1,463	\$43.3	\$157.6	\$10.7
Kent State System total in FY17	11,798	\$550.4	\$1,076.0	\$60.7

*Visitor expenditures were estimated for day-trip and overnight visitors to the Kent Campus for theatre, music, and fashion show events, student visitor days, conferences, and athletic events. The economic and tax contributions shown are for the jobs, labor income, and output supported at businesses due to these expenditures in Kent.

Note: Numbers may not sum due to rounding.

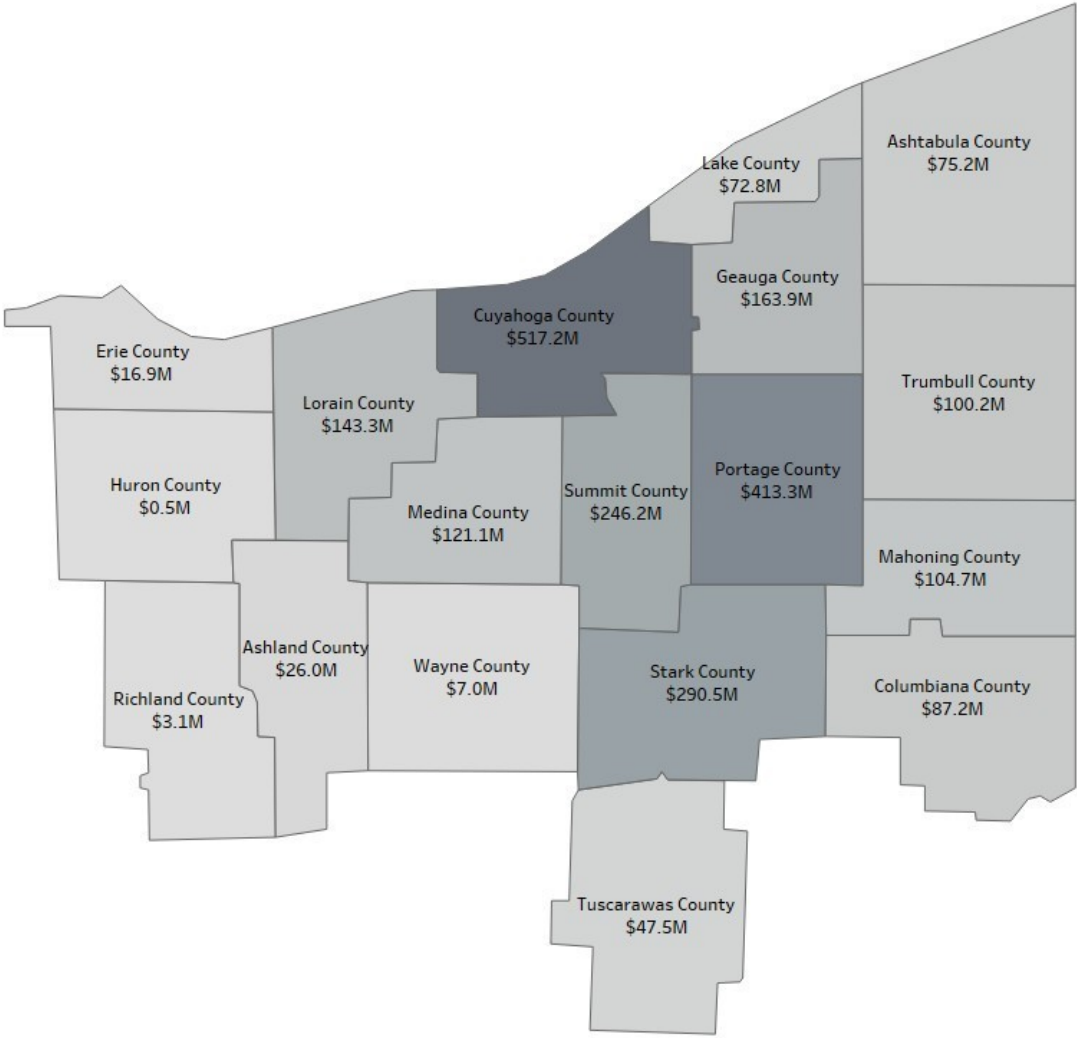
Source: EY analysis using Kent State University data; IMPLAN 2015

In 2017 there were 108,668 Kent State alums living in Ohio. Many Kent State graduates remain in the Northeast Ohio region upon earning their associates, bachelor’s, professional, or advanced degree. Using aggregated information from Kent State University’s alumni office on the year of graduation, degree earned and current zip code of alumni, EY modeled the average earnings of Kent State alumni living in Ohio in 2017. This allowed for a comparison of earnings of alumni with an associates or bachelor’s degree to the earnings of a similarly-aged worker with only a high school diploma. For Kent State alums with professional and advanced degrees, the comparison was made to a worker whose highest degree earned was a bachelor’s degree. The difference in earnings between these two types of workers with different educational attainment is the “additional earnings” due to a Kent State degree.

Figure ES-1 shows the estimated additional earnings of Kent State alumni in the Northeast Ohio region in 2017. Kent State alumni earned \$2.4 billion more in 2017 than what they would have earned at lower educational attainment levels. Kent State alumni living in Cuyahoga County had estimated additional earnings of more than \$517 million while alumni living in Portage County

earned more than \$413 million. Combined, these two counties make up almost 40% of the additional earnings in the Northeast Ohio region.

Figure ES-1. Kent State additional alumni earnings by county in Northeast Ohio, 2017
Total for Northeast Ohio: \$2.4 billion



Source: EY analysis using data provided by Kent State University.

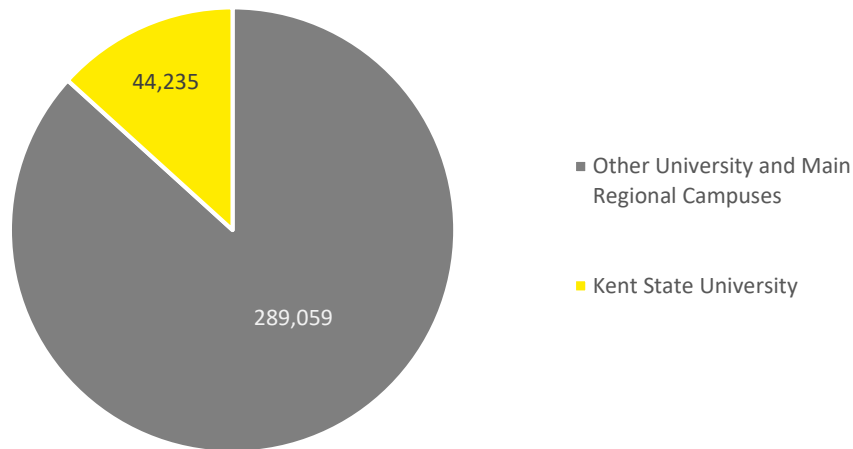
1. About Kent State University

1.1 Overview of Public Higher Education in Ohio

In 2016, Ohio's higher public education system educated more than 501,000 students. Of these students, approximately two-thirds (330,000) were enrolled in four-year university while the remaining one-third (171,000) were enrolled in a community college. Enrolled students in Ohio's public higher education system has grown 6% in the past decade (since 2007).

The public university system in Ohio consists of 14 university systems with 24 regional campuses. Kent State is the third largest system in Ohio. Kent State enrolled 44,235 students in 2016. Enrollment at Kent State University represents over 13% of all university main and regional campus enrollment in Ohio and is nearly twice the average 2016 enrollment across all university main and regional campuses.

Figure 1. Kent State enrollment as a part of Ohio public university enrollment, 2016



Note: Preponderant enrollment shown, where students are assigned to a campus based on where they predominantly take their classes.

Source: Kent State University, Ohio Department of Higher Education.

1.2 Description of Kent State University

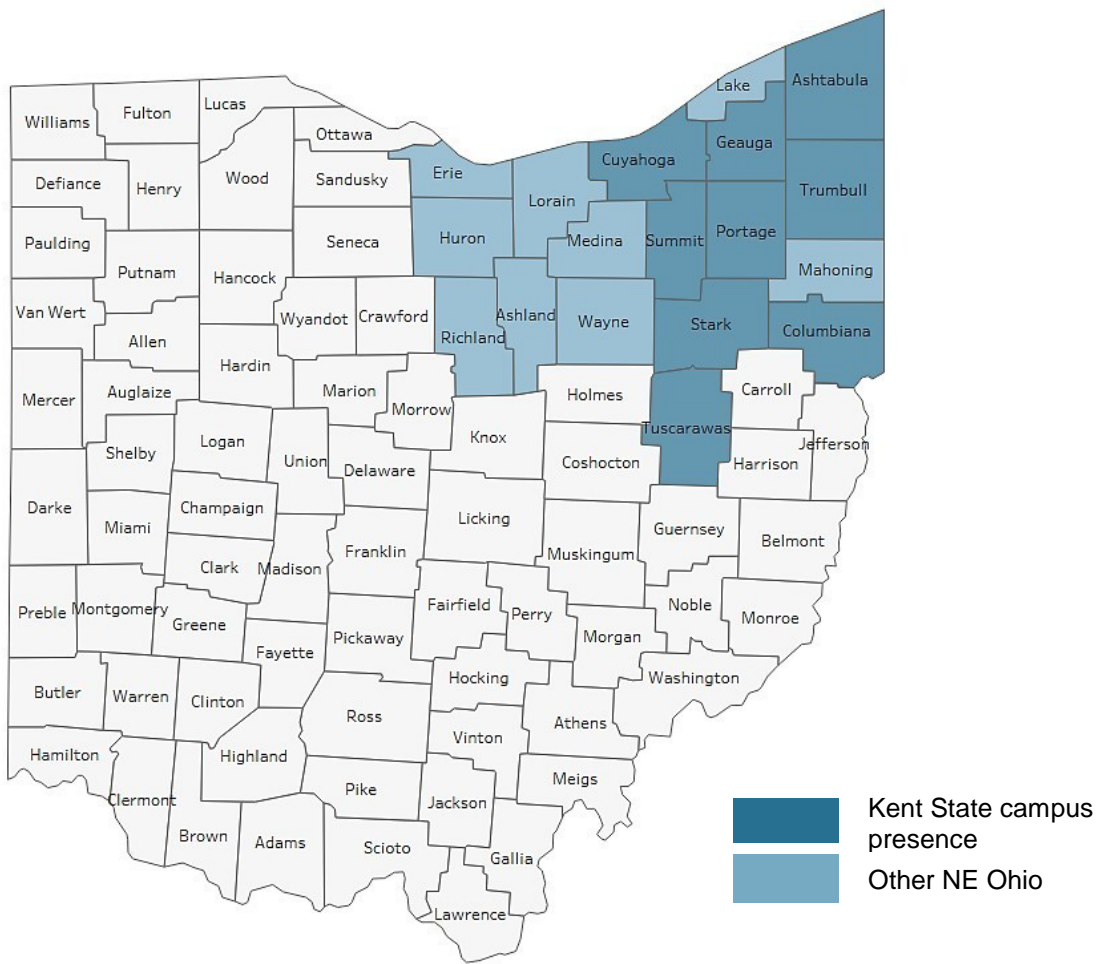
The Kent State System includes eight Ohio campuses, the Cleveland Urban Design Collaborative, a location in Twinsburg, an airport, as well as two other locations outside Northeast Ohio and international locations in Florence, Geneva, China, and India. Kent State's eight regional campus system creates a significant presence in Northeast Ohio, as demonstrated in Figure 2. The 18-county Northeast Ohio region that Kent State serves covers the same square miles as the state of New Jersey.

Uniting these campuses is a common vision and mission of Kent State. Serving different student populations in counties with different economic conditions, the vision of Kent State is, "To be a community of change agents whose collective commitment to learning sparks epic thinking,

meaningful voice and invaluable outcomes to better our society.” Similarly, the mission of Kent State reflects the university’s commitment to transforming communities and the lives of its students: “We transform lives and communities through the power of discovery, learning and creative expression in an inclusive environment.”

Since Kent State is comprised of eight separate campuses with different student populations and needs, each campus works to uniquely serve their population under the common vision and mission by providing learning opportunities suited to their students’ academic and career interests. The specialized and unique programs include the music technology program at the Stark Campus, the computer design, animation, and game design program at the Tuscarawas Campus, and health programs at the Salem, East Liverpool, and Trumbull campuses.

Figure 2. Kent State University system’s presence in Northeast Ohio

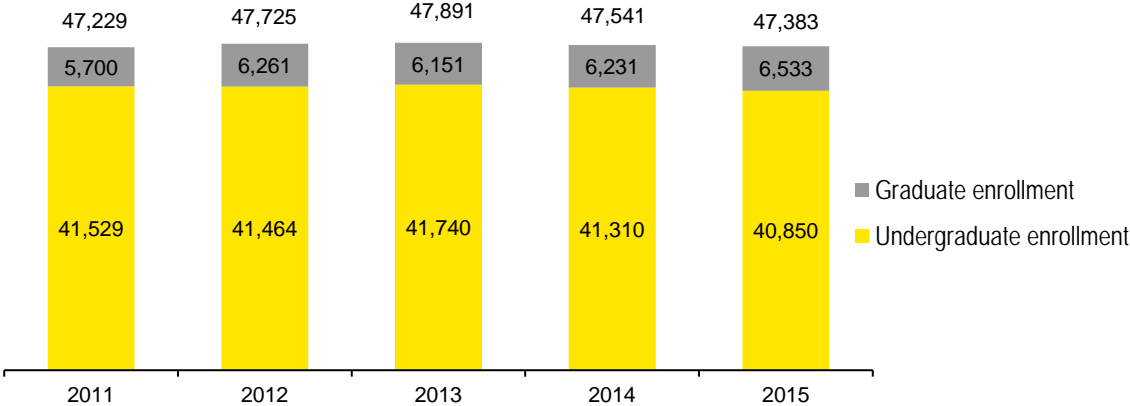


Source: EY Analysis.

Student population

Between 2011 and 2015, Kent State’s annual enrollment was approximately 47,000 across all campuses. While the total number of students has remained relatively constant, the number of graduate students has increased from 5,700 students in 2011 to 6,533 students in 2015, as shown in Figure 3. Concurrent enrollment is shown in the figure below, meaning that a student who attends more than one campus is counted twice. This data source and enrollment definition is used to show the trend in Kent State student enrollment.

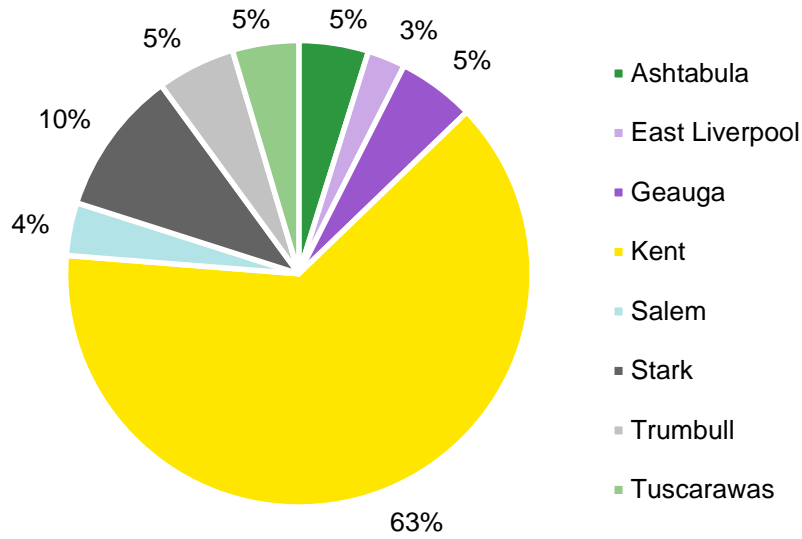
Figure 3. Kent State System student enrollment, 2011-2015



Note: Historical enrollment data is from IPEDS and shows concurrent enrollment, or where a student who attends more than one campus is counted twice.
 Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

The majority of students at Kent State are located at the Kent Campus in Portage County (63% of students in 2016). The second-largest campus by enrollment is the Stark Campus, comprising 10% of students in 2016, as shown in Figure 4. Students are fairly evenly distributed across the other campuses, accounting for approximately 27% of students.

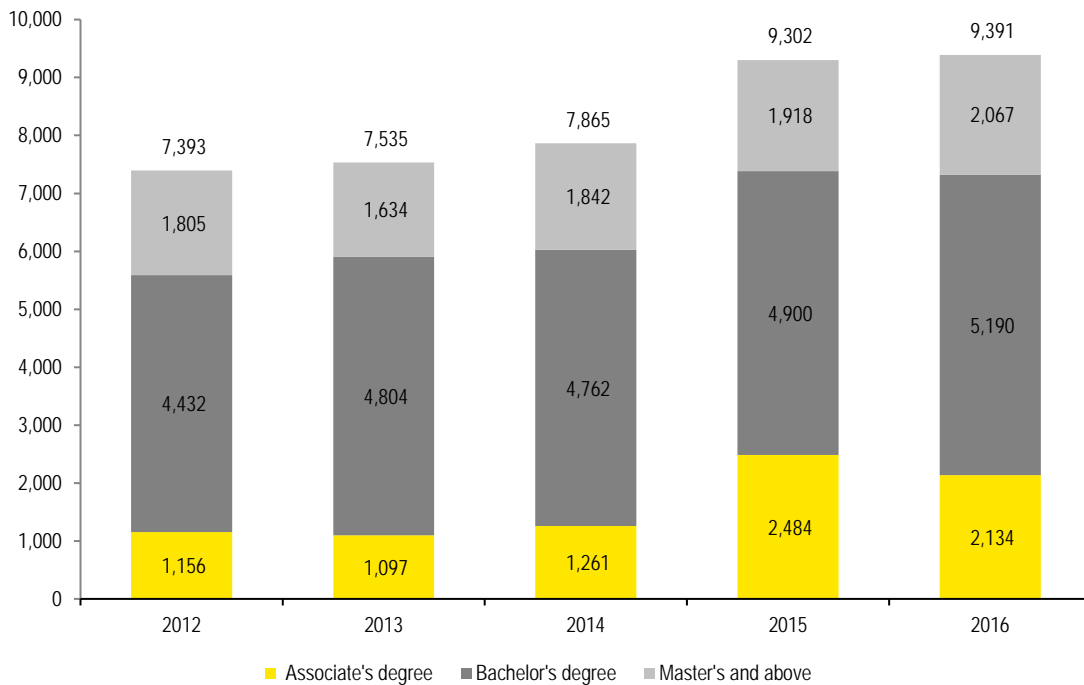
Figure 4. Kent State enrollment by campus, 2016



Note: Preponderant enrollment.
Source: Kent State University, EY Analysis.

Kent State has experienced a growth in the number of graduates each year from 2011 to 2015, as shown in Figure 5. The number of students graduating with an associates degree has grown from around 1,100 between 2012 and 2014 to more than 2,000 in 2016.

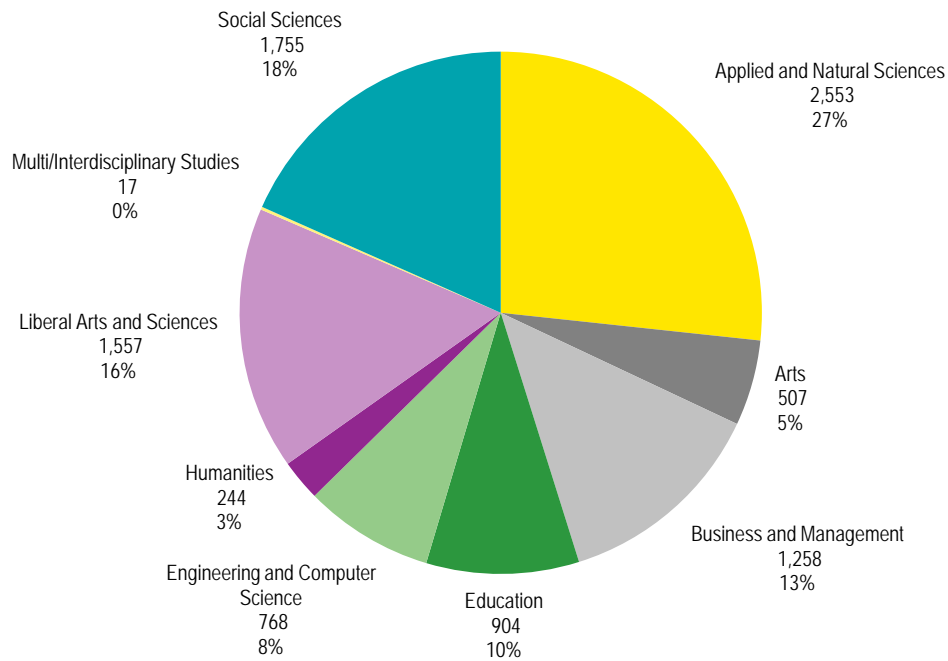
Figure 5. Kent State graduates by type of degree, 2012-2016



Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

Students at Kent State graduate with a wide variety of degrees. The top three categories by number of graduates are social sciences (32%), applied and natural sciences (27%), and liberal arts and sciences (16%), as shown in Figure 6.

Figure 6. Kent State graduates by major category, 2016

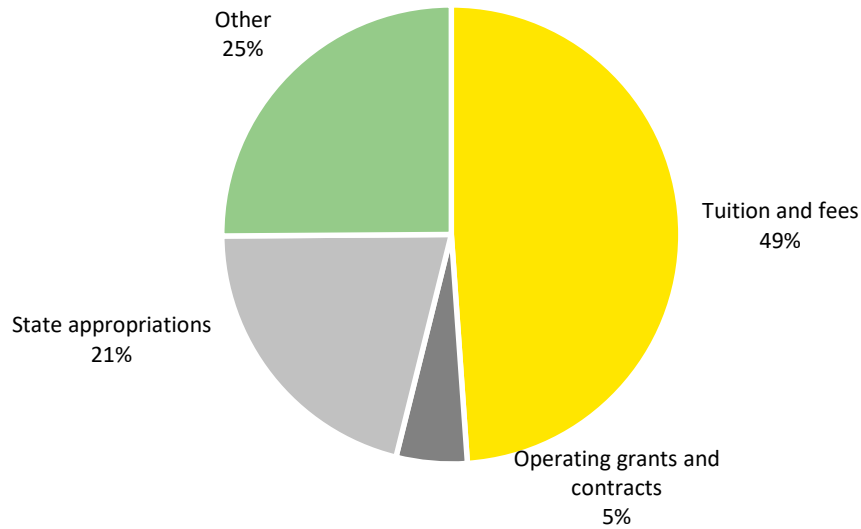


Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

Operations

The revenue of Kent State University comes from tuition and fees, government appropriations, and other sources that include gifts, investment income, and grants. Tuition and fees are the largest source of revenue, representing 49% of FY16 revenue, as shown in Figure 7. State appropriations contributed 21% of revenue while operating grants, which includes federal grants, provided 5% of revenue.

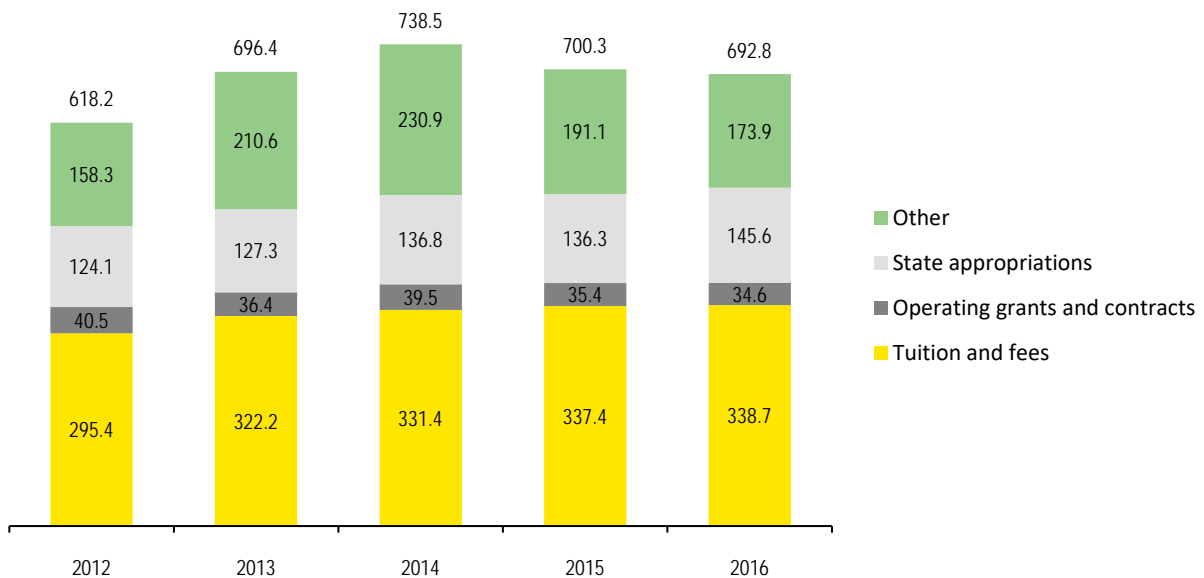
Figure 7. Kent State revenue sources, FY2016



Note: "Other" includes gifts, investment income, and other non-operating income
 Source: Kent State University

Kent State's revenue has fluctuated from 2011 to 2015, from \$618.2 million in 2012 to \$738.5 million in 2014, as shown in Figure 8. The largest part of revenue is tuition and fees, which has experienced consistent growth due to increased enrollment from \$275.0 million in 2011 to \$337.4 million in 2015.

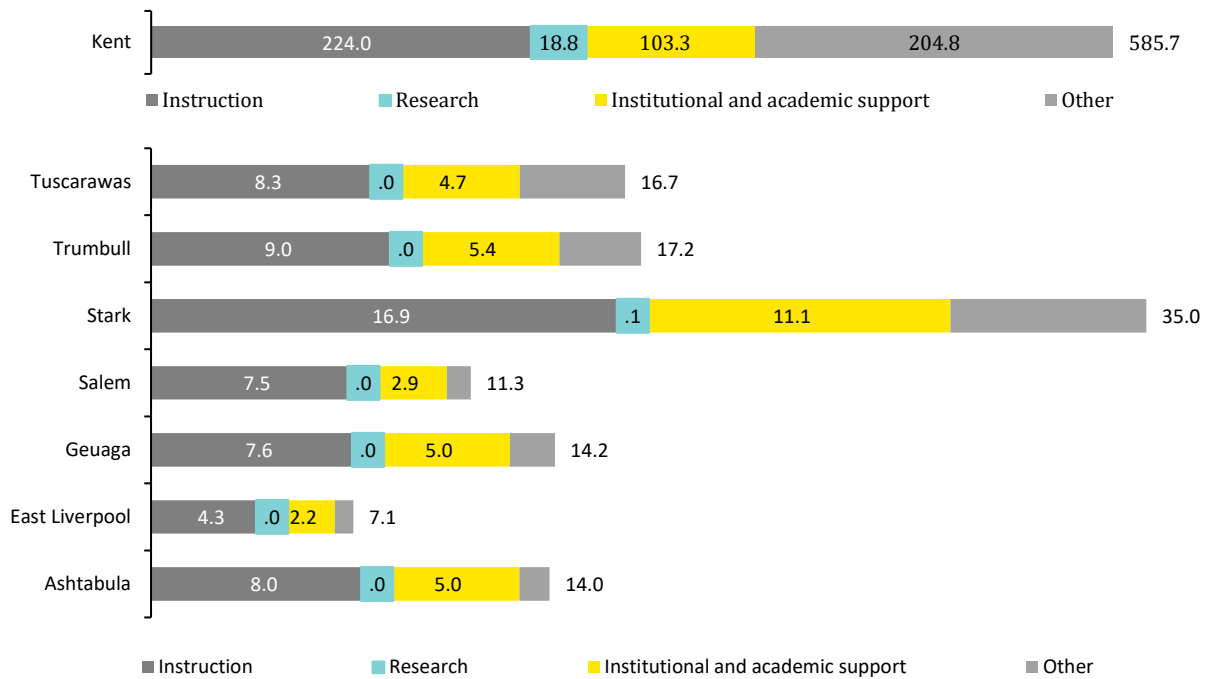
Figure 8. Kent State System revenue sources, FY2012-2016
Dollars in millions



Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, Kent State University

Kent State’s expenses vary by campus, broadly related to their student population. The Kent Campus has the highest expenses, at \$585.7 million, and the campus with the second-highest expenses is Stark, at \$35.0 million, as shown in Figure 9. Expenses support a variety of functions including instruction, research, institutional and academic support, and other.

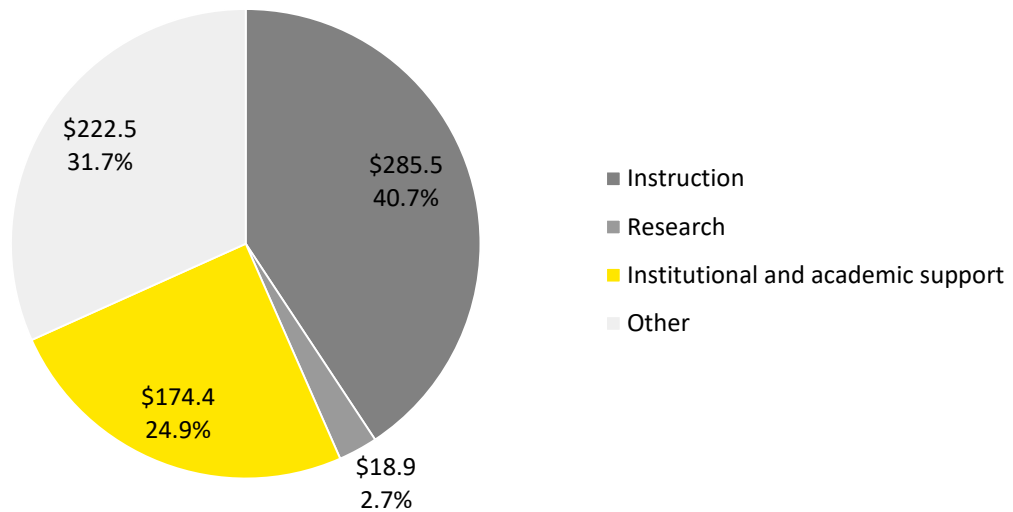
Figure 9. Expenditures by campus, 2016 (Kent Campus on a different scale)
Dollars in millions



Note: “Other” includes public service, student services, scholarships/fellowships expenses, and auxiliary enterprises.
 Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

The Kent State System’s largest category of expenditures is for instruction at \$285.5 million in 2016, as shown in Figure 10. Research accounted for \$18.9 million in expenses in 2016, and institutional and academic support accounted for \$174.4 million.

Figure 10. Kent State expenditures by functional expense, FY2016
Dollars in millions

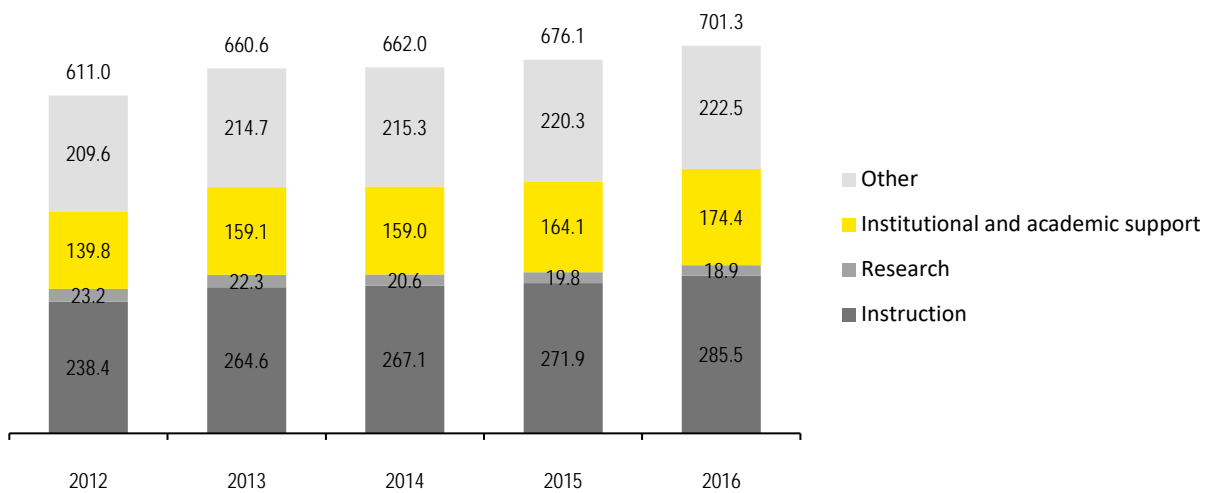


Note: Research is narrowly defined in the IPEDS data. A more comprehensive definition of research expenditures as reported to the National Science Foundation is shown in later figures. "Other" includes public service, student services, scholarships/fellowships expenses and auxiliary enterprises.

Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

Expenditures for the Kent State University System have increased from \$611 million in 2012 to \$701 million in 2016, as shown in Figure 11. The largest category of expense is for instruction of students.

Figure 11. Expenditures for Kent State System, FY2012-2016
Dollars in millions



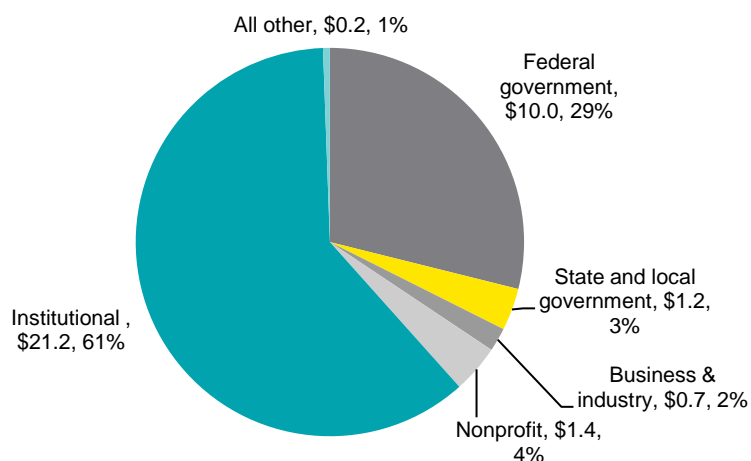
Note: "Other" includes public service, student services, scholarships/fellowships expenses and auxiliary enterprises.

Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

Research and development activity

Kent State spent \$34.7 million on research and development activities in FY16.¹ Figure 12 shows the breakdown of the source of R&D funds. The largest source of funding came from allocated Kent State institutional funds (61% or \$21.2 million). The federal government provided \$10.0 million (29%) of funding while nonprofits provided \$1.4 million (4%), state and local governments provided \$1.2 million (3%), and business and industry provided just 2% of R&D funding.

Figure 12. Kent State System source of research and development (R&D) funding, FY16
Dollar amounts in millions; Total = \$34.7 million



Note: NSF HERD Survey definition for R&D is more expansive than the research category reported in IPEDS.
Source: Kent State University, National Science Foundation Higher Education Research and Development Survey, FY16

Federal sources provided funding for 29% of total R&D expenditures in FY16. The breakdown of R&D expenditures by field is shown in Table 1. A little more than one-third of the \$10 million in federal funding went towards research in the physical sciences, which includes chemistry, material sciences, physics, and astronomy, among others. Research in the life sciences, social sciences, and non-science and technology fields all received more than 12% of total Kent State System federal funding. On the non-federal funding side, which includes university, government, nonprofit, and business and industry, slightly less than half (46.4%) of the \$24.6 million in total funding went towards non-science and engineering research fields that include business, communications, education, law, humanities, social work, and visual and performing arts. Research in the physical sciences received 17.6% of non-federal funding. Almost all of the R&D expenditures are associated with the Kent Campus.

¹ This includes basic, applied, and experimental development research, as defined by the National Science Foundation (NSF). This is a more expansive definition than IPEDS data presented in previous figures.

Table 1. Kent State University system R&D expenditures by source and field, FY16
Amounts in thousands

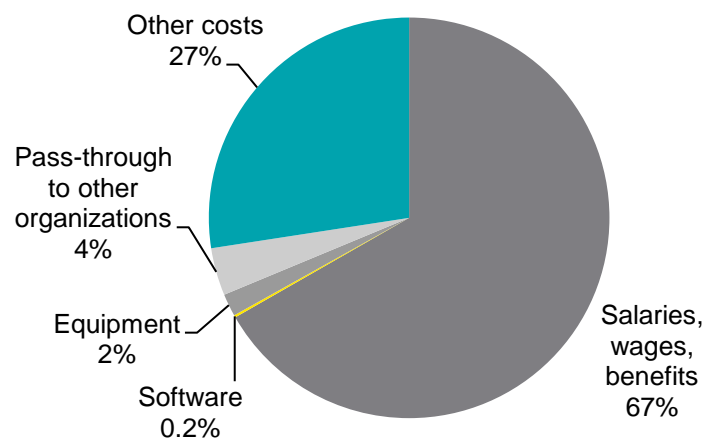
	Federal R&D	Percent of total	Non-federal R&D	Percent of total
Computer and information	\$152	1.5%	\$389	1.6%
Engineering	\$707	7.1%	\$445	1.8%
Geosciences, atmospheric, and ocean sciences	\$202	2.0%	\$392	1.6%
Life sciences	\$1,352	13.5%	\$2,559	10.4%
Mathematics and statistics	\$399	4.0%	\$135	0.5%
Physical sciences	\$3,662	36.6%	\$4,330	17.6%
Psychology	\$879	8.8%	\$1,750	7.1%
Social sciences	\$1,380	13.8%	\$2,989	12.1%
Other sciences	\$0	0.0%	\$229	0.9%
Non-Science and engineering	\$1,280	12.8%	\$11,430	46.4%
Total all fields	\$10,013	100.0%	\$24,648	100.0%

Note: Numbers may not sum due to rounding.

Source: Kent State University, National Science Foundation Higher Education Research and Development Survey, FY16

Figure 13 shows the breakdown of research expenditures by type of cost in FY16. Two-thirds of expenditures went towards the salaries, wages, and benefits of faculty and staff at Kent State University for their time spent on R&D. Very little was spent on software (0.2% of total), equipment (2%), or pass-through funding to other universities or organizations. The remaining cost category includes other direct and indirect costs not categorized.

Figure 13. Kent State System R&D expenditures by type of cost, FY16
Breakdown of \$34.7 million



Source: Kent State University, National Science Foundation Higher Education Research and Development Survey, FY16

Tech commercialization activity

University R&D with commercial applications can provide a source of licensing revenue for the university. Table 2 shows the number of provisional patents filed, invention disclosure forms filed, and patents issued for university-sponsored R&D activity. In the past three years, an average of 20 provisional patents have been filed, 20 invention disclosures have been filed, and 7 patents have been issued.

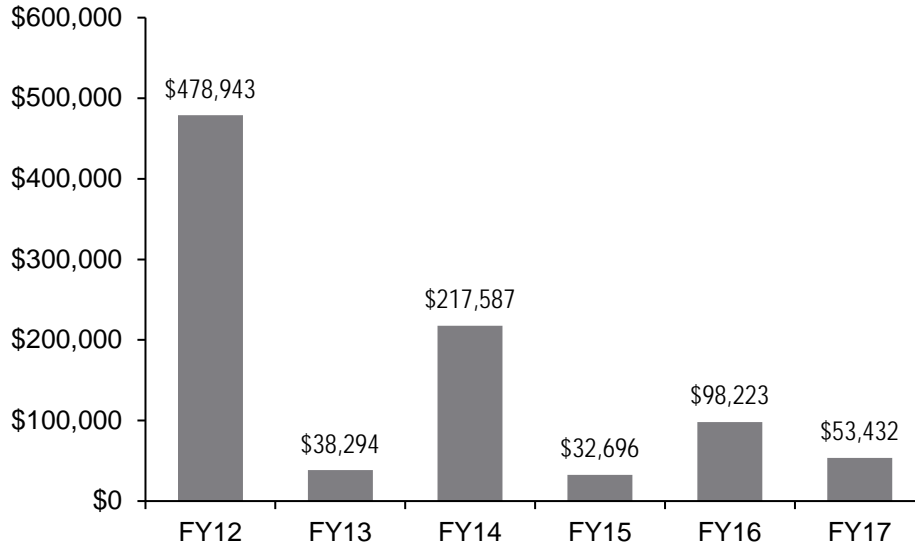
Table 2. Kent State University technology commercialization activity, 2015-2017

Innovation Submissions	2015	2016	2017	Average
Provisional patent filed	22	21	16	20
Invention disclosure forms filed	24	22	14	20
Patents issued	7	9	5	7

Source: Kent State University

Figure 14 shows university licensing revenue received. The university receives a small amount of licensing revenue on patents that it holds. Before FY13, the university had a liquid crystal display (LCD) patent that generated licensing revenue from a local business. This patent expired in FY13.

Figure 14. Kent State University System licensing revenue, FY12-17



Source: Kent State University.

2. Kent State University System Economic Contributions

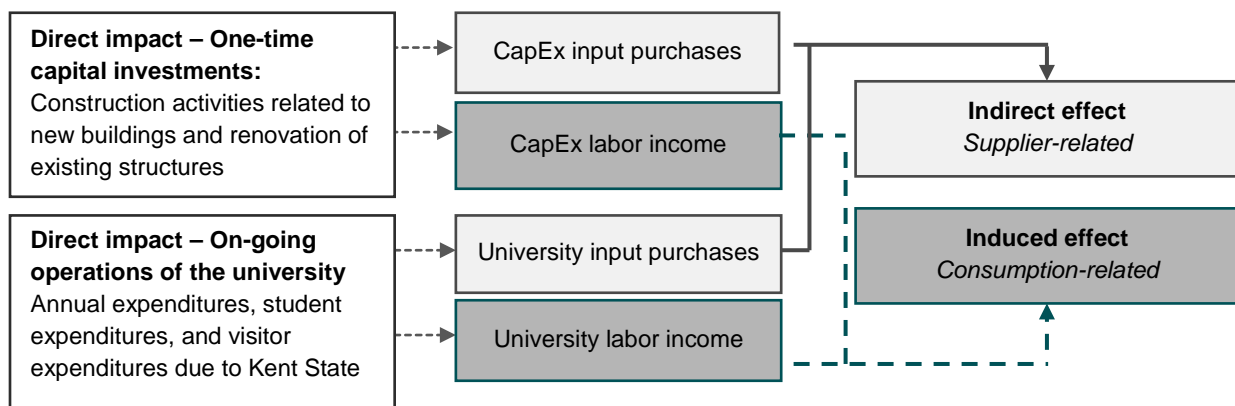
2.1 Economic contribution methodology

Kent State spends money as it pays its employees, purchases goods and services from regional suppliers, constructs new buildings, and renovates existing structures. EY estimated three types of economic contributions. These contributions are described below and shown in Figure 15.

- ▶ **Direct contribution.** Direct economic contribution includes the university's total full-time and part-time employees and labor income (wages, salary, and benefits) received by Kent State employees. Economic output is measured as payroll and non-payroll expenditures by Kent State in FY17.
- ▶ **Indirect contribution.** The indirect economic contribution is attributable to purchases by Kent State from local suppliers. The indirect contribution also captures the additional input purchases from those businesses supplying companies that directly benefited from the university's purchases. These additional purchases create subsequent rounds of indirect effects.
- ▶ **Induced contribution.** The induced contribution includes the spending by university and supplier employees at local businesses including grocery stores, restaurants, and service providers.

Two different components of economic contributions are shown in the figure below. The university's *one-time* capital investments that generate temporary construction jobs, labor income, and economic output, and the *on-going (annual) operations* of the university.

Figure 15. Overview of the components of economic contributions



This report shows the university's economic contributions in several geographies. Most impacts are shown for the eighteen county Northeast Ohio region. This is where most of Kent State's employees and staff live. We also show specific impacts of each Regional Campus on the county in which they are located. Finally, in the appendix, we show the university's economic contributions to the entire state of Ohio economy.

Estimates of state and local tax contributions are also presented in this report. In most cases, a ratio of tax collections to personal income by tax type is used to estimate average state and local taxes on the economic activity generated by the university. In 2016, average state and local tax collections in Ohio as a percentage of personal income was 10%. Since the university is exempt from paying certain types of taxes, such as sales taxes on purchases or property taxes, the direct taxes shown in this report are for university employees. For visitor and student purchases, sales taxes were calculated on the purchase using the applicable county sales tax rate.

2.2 Components of economic contribution

Annual operational expenditures

As described in the previous section, Kent State spends money paying faculty and staff and acquiring goods and services in its maintenance of its facilities, instruction of students, and support of research. Table 3 shows a summary of expenditures by broad category of expense in FY17. Three different geographies are shown: counties where Kent State has a presence in Northeast Ohio (nine counties), the entire eighteen county Northeast Ohio region, and total expenditures that went to faculty, staff, and vendors located in Ohio. The Kent State System spent close to \$600 million in FY17, and a significant portion (73%) of these expenditures went to faculty, staff, and vendors located in Ohio. Of the \$437.5 million of expenditures that went to employees and vendors in Ohio, 89% or \$390.6 million remained in the nine-county region in which Kent State has a physical presence.

Table 3. Summary of Kent State University System expenditures in Northeast Ohio and State of Ohio, FY17
Amounts in millions

Expense category	Counties with physical Kent State location total	Northeast Ohio total	Total Ohio
Wages and salaries	\$261.1	\$285.4	\$288.6
Health benefits	\$55.1	\$59.7	\$60.4
Other employee benefits	\$37.9	\$41.5	\$42.0
Utilities	\$9.7	\$9.7	\$9.7
Office furniture and supplies	\$3.7	\$3.7	\$6.1
Warehousing and transportation	\$4.1	\$4.1	\$4.1
Accommodations and food	\$2.5	\$2.5	\$2.5
Professional services	\$13.9	\$13.9	\$18.9
Dues	\$2.5	\$2.5	\$5.2
Total	\$390.6	\$423.2	\$437.5
<i>Memo: Kent State System total expenditures</i>	<i>\$602.7</i>		

Note: Expenditures for payroll and to vendors of goods and services for the university is different than expenditures as recorded in IPEDS, which includes depreciation and other definitional differences

Source: EY analysis using data provided by Kent State University

The largest category of expense was for wages and salaries for faculty and staff. In FY17, the Kent State System paid employees that lived in Ohio \$288.6 million. Health benefits totaled \$60.4 million while other employee benefits (payroll taxes, retirement contributions, etc.) totaled \$42.0 million for employees living in Ohio. Other categories of expense are shown in Table 3 and consist of utilities, professional services, office supplies and furniture, and food and accommodations expenses.

The economic impact of the university’s expenditures in Northeast Ohio (\$423.2 million) is shown in Table 4. Using the detailed data provided by Kent State, and an IMPLAN model of the Northeast Ohio region, EY estimates that the Kent State System contributed 9,334 jobs to the region, of which almost 6,500 were direct, nearly 250 were related to regional suppliers of goods and services for the university, and 2,600 were related to induced employment generated through university and supplier employee spending at local businesses such as grocery stores, restaurants, and retail stores. These employees earned an estimated \$453.5 million in labor income (wages and benefits) for an average compensation of \$48,583 in FY17. Economic output, the value of both payroll and non-payroll expenditures by the university generated a total impact of \$817.3 million in FY17. State and local taxes generated by Kent State’s employees, suppliers, and other regional businesses are estimated to be \$45.5 million in FY17. The tax estimate using average state and local income taxes for the state of Ohio to estimate the magnitude of tax contributions associated with the university’s operations.

Table 4. Economic and tax contributions of Kent State System’s operational expenditures in Northeast Ohio, FY17
Actual employment; Dollars in millions

	Employment	Labor income	Economic Output	State and local tax
Direct (university)	6,487	\$327.0	\$423.2	\$32.8
Indirect (suppliers)	244	\$13.8	\$40.4	\$1.4
Induced (consumption-related)	2,603	\$112.7	\$353.8	\$11.3
Total	9,334	\$453.5	\$817.3	\$45.5

Note: Numbers may not appear to sum due to rounding.

Source: EY analysis using data provided by Kent State University, IMPLAN 2015

Capital investments

The previous section described Kent State’s annual expenditures for annual operations. Table 5 shows the university’s capital investments of new and renovation projects between FY13 and FY17. A five-year period is shown since in certain years some of the regional campuses did not have any projects. The five-year period highlights the level of activity and where improvements to existing buildings and construction of new facilities occurred. During the five year period, the Kent State System spent \$310 million. Most (87%) of these expenditures occurred on the Kent Campus. Of the regional campuses, the Stark Campus experienced the most investment with \$22.8 million of capital investments between FY13 and FY17.

Table 5. Capital expenditures by Kent State campus, FY13-17
Amounts in millions, 2016 dollars

	2013	2014	2015	2016	2017	Campus Total
Ashtabula	\$0.8	\$2.4	\$0.0	\$0.1	\$1.7	\$5.0
East Liverpool	\$0.0	\$0.0	\$0.0	\$0.0	\$0.5	\$0.5
Geauga	\$0.5	\$1.0	\$0.5	\$0.0	\$0.4	\$2.4
Kent	\$83.2	\$104.0	\$25.5	\$16.2	\$40.2	\$269.1
Salem	\$0.0	\$0.0	\$1.9	\$0.5	\$0.0	\$2.4
Stark	\$0.7	\$13.0	\$0.3	\$0.9	\$7.9	\$22.8
Trumbull	\$0.0	\$2.6	\$0.0	\$1.3	\$1.4	\$5.3
Tuscarawas	\$0.9	\$0.0	\$1.0	\$0.4	\$0.2	\$2.5
Total	\$86.2	\$123.0	\$29.1	\$19.5	\$52.3	\$310.1

Note: Capital expenditures for new and renovation projects. Building maintenance is included in operational expenditures. Numbers may not appear to sum due to rounding.

Source: EY analysis using data provided by Kent State University

Table 6 shows the economic impact of the Kent State System’s capital investments during the five-year period (FY13-17). Kent State spent money building new campus structures and renovating existing buildings such as upgrading residence halls, building a new facility for the College of Architecture and Environmental Design, building a new Center for the Visual Arts, and construction of the Stark Fine Arts building. These expenditures supported an average of 1,180 jobs annually in the Northeast Ohio region between FY13 and FY17. An estimated 621 construction jobs were directly supported (e.g. contractors) and another 261 in industries that supplied goods and services for these buildings. Another 307 jobs are estimated to have been supported due to induced activity. Workers received more than \$292 million in wages and benefits and supported \$584 million of economic output in the region.

Table 6. Economic contributions of capital investments in Northeast Ohio, FY13-17 totals
Actual employment; Dollars in millions

	Total employment (one-year jobs)	Average annual employment	Total labor income	Economic output	State and local tax
Direct (construction)	3,106	621	\$156.0	\$314.3	\$9.0
Indirect (suppliers)	1,304	261	\$70.2	\$140.2	\$7.1
Induced	1,537	307	\$66.5	\$129.5	\$6.7
Total	5,947	1,189	\$292.7	\$584.0	\$22.8

Source: EY analysis using data provided by Kent State University, IMPLAN 2015.

Visitor expenditures

Visitors to the Kent Campus for athletic events, admission visit days, conferences, and fashion, music, and theatre performances spent money on food, beverages, gas, and hotel rooms. EY

modeled day trip and overnight visitors to the Kent Campus during the academic year 2016-2017. Estimated expenditures during the 2016-2017 academic year are shown in Table 7.

Kent State provided data on the origin of visitors. Out-of-state visitors and visiting athletic teams that stayed overnight in a hotel were allocated as overnight visitors. Campus visitors from outside Portage County, but still from within Ohio, were allocated as day trip visitors. Based on campus data, EY estimates 26,731 day-trip visitors and 6,881 overnight visitors for the events shown in the table below. Per person spending profiles for day trip and overnight visitors were constructed using information from Ohio Travel and the federal government’s reimbursement rates for Ohio. Certain adjustments were made depending on the number of visitors per party. For example, athletes were assumed to share a hotel room.

Table 7 shows the result of this analysis. In FY17, it is estimated that visitors spent \$3.8 million in Portage County. Of this total, day-trip visitors spent an estimated \$2.2 million and overnight visitors \$1.6 million.

Table 7. Estimated visitor expenditures in Portage County due to select Kent State events, FY17

Total expenditures shown in millions

Events	Number of visitors		Per person spend		Total day trip spend	Total overnight spend	Total spend
	Day trip	Overnight	Day trip	Overnight			
Admission visits	22,455	2,843	\$79	\$206	\$1.8	\$0.6	\$2.4
Athletics football		840		\$275	\$0.0	\$0.2	\$0.2
Athletics - other		2,634		\$258	\$0.0	\$0.7	\$0.7
Fashion show	312	192	\$104	\$206	\$0.0	\$0.0	\$0.1
Music events	503	58	\$104	\$206	\$0.1	\$0.0	\$0.1
Theatre events	1,998	314	\$104	\$206	\$0.2	\$0.1	\$0.3
Conferences	1,463		\$104		\$0.2	\$0.0	\$0.2
TOTAL	26,731	6,881	\$83	\$234	\$2.2	\$1.6	\$3.8

Note: Events were identified by Kent State University along with ticket sale information or number of attendees.

Source: EY analysis using data provided by Kent State University; Ohio Travel publications and federal government reimbursement rates.

Table 8 shows the economic and tax contributions of visitor expenditures shown in Table 7. Expenditures at hotels, restaurants, gas stations, and general retail stores supported an estimated 41 jobs in Portage County, nearly \$1 million in labor income, \$3.4 million of economic output, and nearly \$400,000 in state and local taxes. These estimates reflect that many of the suppliers for goods and services that businesses purchased in Portage County are located outside the county.

Table 8. Economic and tax contributions of visitor expenditures in Portage County due to Kent State events, FY 17
Actual employment; Amounts in millions

	Employment	Labor Income	Output	State and local tax
Direct	35	\$0.6	\$2.5	\$0.4
Indirect	4	\$0.1	\$0.5	\$0.0
Induced	3	\$0.1	\$0.4	\$0.0
Total	41	\$0.9	\$3.4	\$0.4

Source: EY analysis using Kent State University data, Ohio Travel publication, IMPLAN 2015.

Student expenditures

Most of Kent State University's students are from Northeast Ohio. According to Kent State data, 71% of enrolled students had a permanent address in the Northeast Ohio region. The remaining 29%, or nearly 13,000 students, came from other parts of Ohio, other US states, or from other countries. International students made up 8% of Kent State's student body in 2016-2017.

The expenditures of students living in Northeast Ohio because they were attending a Kent State program were estimated in FY17. Based on data from Kent State, students were divided into graduate and undergraduate students. Freshmen and sophomore undergraduates at the Kent Campus are required to live on campus. Upper classmen and graduate students were assumed to live off campus. Using Bureau of Labor Statistics consumer expenditure data, and a recent housing study on rental prices in Kent, Ohio, expenditure profiles were constructed for the students. The analysis assumed expenditures of \$15,000 per undergraduate student and \$25,000 per graduate student based on publicly data such as the BLS Consumer Expenditure Survey.² In total, new students to the Northeast Ohio because of Kent State University spent an estimated \$163.5 million in counties where Kent State had a campus in FY17.³

Expenditures were divided into commodity categories that included housing, groceries, food consumed at restaurants, books, gasoline, and other miscellaneous retail items. Some of the goods purchased by students within each of the counties of the Regional Campuses are produced within the counties while others are not. IMPLAN takes this into account when modeling the economic contributions of these expenditures to the Northeast Ohio economy. Table 9 shows the category of expenditures by new students to the Northeast Ohio region due to Kent State University and the whether the expenditure is subject to the state and local sales tax or the motor fuels excise tax.

² Bureau of Labor Statistics, Consumer Expenditure Survey, 2016. City of Kent and Kent State University, "Comprehensive Community Housing Study and Needs Analysis," December 2015.

³ Some of the students attending programs in Cuyahoga County are classified as part of the Kent Campus in the administrative data. We did not separate out these students in this analysis.

Table 9. Modeled student expenditures and sales taxes for students spending money in Northeast Ohio due to Kent State presence, FY17
Amounts in millions

Expenditure Category	Total expenditure	Sales and motor fuels taxes	Taxable
Housing	\$58.0	\$0.0	Exempt
Food - groceries	\$18.9	\$0.0	Exempt
Food - restaurants	\$15.4	\$1.1	Sales tax
Books	\$16.2	\$1.2	Sales tax
Gasoline	\$19.3	\$2.2	Motor fuels
General retail	\$35.8	\$2.6	Sales tax
Total	\$163.5	\$7.1	

Source: EY analysis using Bureau of Labor Statistics Consumer Expenditure survey, Kent State University data, tax information

Table 10 shows the estimated economic contributions in Northeast Ohio due to student expenditures in the region that would not have occurred except for the presence of the university system. Student expenditures are estimated to have contributed more than 1,460 jobs, \$43 million in labor income, more than \$157 million in economic output and \$10.7 million in state and local taxes in FY17.

Table 10. Economic contributions of Kent State student expenditures in NE Ohio, FY17
Actual employment, Dollars in millions

	Employment	Labor Income	Economic output	State and local tax
Direct	977	\$24.1	\$97.5	\$8.8
Indirect	224	\$9.4	\$29.4	\$0.9
Induced	262	\$9.8	\$30.8	\$1.0
Total	1,463	\$43.3	\$157.6	\$10.7

Source: EY analysis using data provided by Kent State University; IMPLAN 2015

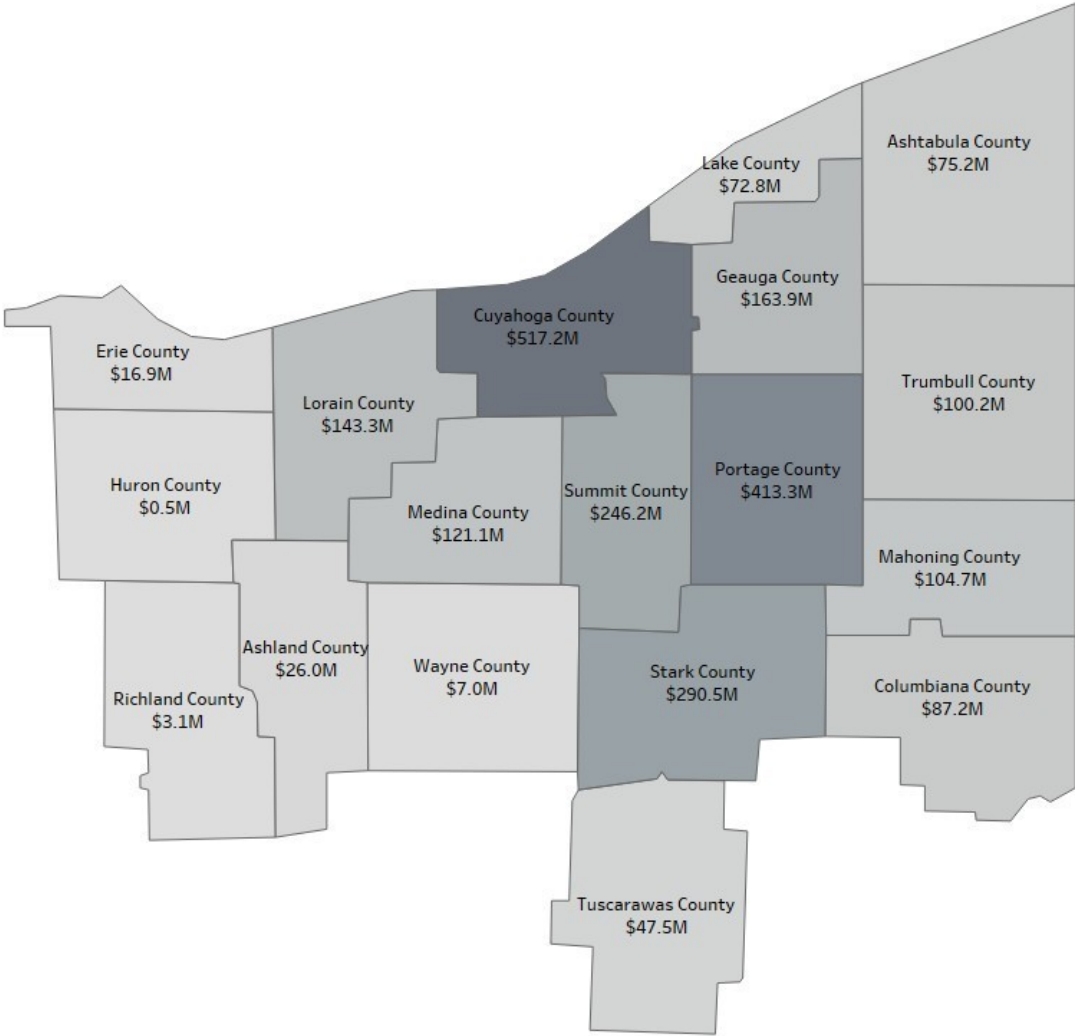
Alumni earnings

Many Kent State University graduates remain in the Northeast Ohio region upon earning their associates, bachelor's, professional, or advanced degree. Workers with a bachelor's degree earn more than their counterparts with just a high school diploma, on average. Using aggregated information from Kent State University's alumni office on the year of graduation, degree earned, and current address (zip code) of alumni, EY modeled the average earnings of alumni in 2017. This allowed for a comparison of earnings of alumni with an associates or bachelor's degree with a worker of the same age whose highest level of education was a high school diploma. For

professional and advanced degrees, the comparison was with a worker whose highest degree earned was a bachelor’s degree. In other words, the wages and salaries of Kent State alumni above what they would otherwise be earning with only a high school or bachelor’s degree were modeled.

Figure 16 shows the estimated additional earnings of Kent State alumni in Northeast Ohio. Kent State alumni earned an additional \$2.4 billion in earnings in 2017. Kent State alumni living in Cuyahoga County had estimated additional earnings of over \$517 million while alumni living Portage County had estimated additional earnings of more than \$413 million. Combined these two counties make up almost 40% of the additional earnings in Northeast Ohio. In 2017 there were 108,668 Kent State alums living in all of Ohio with an estimated \$2.8 billion in additional earnings. Appendix Table 1 shows additional alumni earnings across the entire state.

Figure 16. Kent State additional alumni earnings by county in Northeast Ohio, 2017
Total for Northeast Ohio: \$2.4 billion



Source: EY analysis using data provided by Kent State University, US Census data, Payscale data

Total Kent State System economic contributions in FY17

The total contributions of the Kent State University system to regional employment, labor income, output, and state and local taxes is summarized in Table 11. This table presents together the separate results shown in previous tables in this section of the report. The direct operational expenditures by the university is the largest contributor to employment, labor income, and economic output supporting more than 9,000 jobs in Northeast Ohio, \$453 million in labor income, \$817 million in economic output and more than \$45 million in state and local taxes. Student expenditures, primarily due to international and out-of-state students attending Kent State in Portage County, contributed an estimated \$10.7 million in state and local taxes and supported nearly 1,500 jobs in the region.

Table 11. Summary of economic contributions of Kent State System in Northeast Ohio, FY17

Actual employment; Amounts in millions

	Total employment	Total labor income	Total economic output	Total state and local tax
Operational expenditures	9,334	\$453.5	\$817.3	\$45.5
Capital investments	959	\$52.8	\$97.7	\$4.1
Visitor expenditures	41	\$0.9	\$3.4	\$0.4
Student expenditures	1,463	\$43.3	\$157.6	\$10.7
Total in FY17	11,798	\$550.4	\$1,076.0	\$60.7

Source: EY analysis using Kent State University data; IMPLAN 2015.

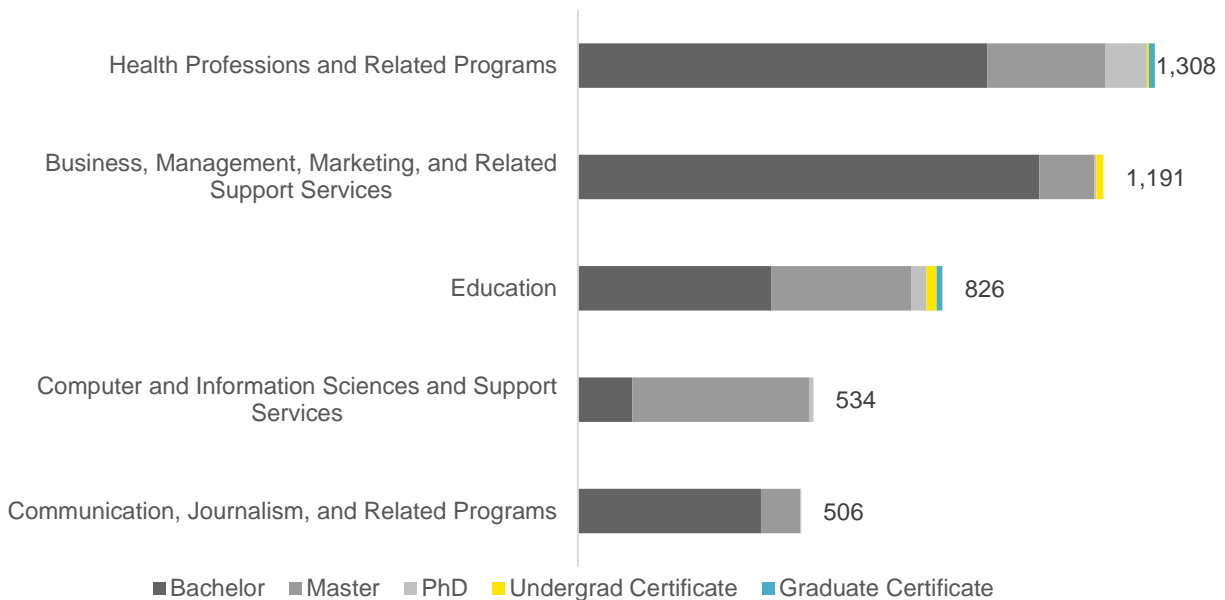
3. Kent Campus Economic Contributions

3.1 Campus location

Kent State University's main campus is located in Portage County. The 2016 county population was nearly 162,000, with an unemployment rate of 5%.⁴ In 2016, more than 82,000 people in the county were employed, with the biggest employers in trade, transport and utilities, manufacturing, and leisure and hospitality industries.⁵

In 2016, the Kent Campus had student enrollment of more than 31,000, with nearly 24,000 undergraduate students and over 7,000 graduate students. Nearly 70% of Kent State's 7,213 graduates in 2016 earned bachelor's degrees, and 25% of graduates earned master's degrees. The remaining graduates received doctoral degrees and certificates. The Kent Campus has the most extensive course offering among all campuses. As shown in Figure 17, the most popular majors for graduates in 2016 were in the fields of health professions, business, education, computer and information science, and education.

Figure 17. Kent State graduates by major category and type of degree earned at Kent Campus in 2016



Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

⁴ See U.S. Census Bureau, Population Estimates Program (PEP) and U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

⁵ See U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

3.2 Economic contributions

Table 12 summarizes the economic contributions of Kent State University on the Portage County economy in FY17. Total contributions, which include direct, indirect, and induced components, are shown in the table below. In FY17, it is estimated that Kent State’s activities in Portage County supported more than 5,200 jobs, nearly \$240 million of labor income, \$493.7 million of economic output, and \$29.4 million of state and local taxes. The largest component of this impact is the university’s operations, including payments to local vendors and salaries, wages, and benefits paid to faculty and staff who lived in Portage County. Capital expenditures, which totaled more than \$40.2 million in FY17 (see Table 5) supported nearly 400 temporary jobs related to construction in FY17 and more than \$16 million of labor income. Expenditures by students who lived in Portage County due to Kent State when they otherwise would not have lived in the county supported more than 1,100 jobs and \$29 million of labor income, including an estimated \$8.8 million of state and local taxes. A large component of the tax piece for students is sales taxes on goods purchased in the county.

Table 12. Summary of Kent State’s total economic contributions in Portage County, FY17
Actual employment, dollars in millions, total (direct, indirect, and induced) contributions

Category	Total employment	Total labor income	Total economic output	Total state and local tax revenue
Operational expenditures	3,656	\$191.8	\$316.1	\$19.3
Capital investments	394	\$16.6	\$56.4	\$1.2
Visitor expenditures	41	\$0.9	\$3.4	\$0.4
Student expenditures	1,135	\$29.0	\$117.8	\$8.8
Total	5,226	\$238.3	\$493.7	\$29.6

Source: EY analysis using data provided by Kent State University, IMPLAN 2015

3.3 Alumni earnings in Portage County

According to Kent State’s alumni office, there are 14,666 Kent State alumni living in Portage County. EY modeled average annual earnings for the alumni based on their year of graduation and type of degree earned. We compared earnings for those with an associates or bachelor’s degree to earnings of those with just a high school diploma. We compared advanced degree holders with earnings of those with a bachelor’s degree. Based on this analysis, we estimate that Kent State alumni in Portage County had additional earnings of \$413 million in 2017.

3.4 Airport

The Kent State University Airport serves Summit and Portage counties both as a working airport for corporate and recreational flying and as a teaching location. The airport has been serving the community for a century and was acquired by Kent State in 1943. Through its operations, the Kent State University Airport supports jobs and businesses in the surrounding area. The airport

is a workplace for 33 full-time equivalents working in airport management, fixed base operator, vendors, and the Federal Aviation Administration and other governmental entities. The airport is also a workplace for nine full-time equivalents supported by construction and visitor expenditures. Along with operating the airport, Kent State University uses the airport for its flight training program, with seven degree concentrations enrolling more than 580 students, making the program one of the largest in Ohio. Community involvement is another important component of the Kent State University Airport, providing tours to educate and promote aviation and offering aviation camps and fairs. The Ohio Aviation Association recognized the work of the Kent State University Airport in 2017, naming it the Airport of the Year.

The economic contributions of the Kent State Airport due to the airport’s annual operations and capital investments are included in the Kent State System totals and in county totals for Portage and Summit counties.

3.5 Kent State University Hotel and Conference Center

The Kent State University Hotel and Conference Center provides accommodation, dining and meeting facility services adjacent to the Kent State University campus. The hotel provides around 5,000 square feet of meeting space for conferences and nearly 100 boutique-style guest rooms. The hotel also has a restaurant and lounge in its premises that serves as a dining and special events space for the Kent community. The hotel was established as a result of the planning and collaboration between Kent State alumni, city of Kent officials and the Kent State University Foundation.

In 2017, the Kent State Hotel spent money in Portage County paying employees and purchasing goods and services from local vendors. According to data provided by the Hotel, 45% of expenditures were from local vendors. Table 13 summarizes the economic and tax contributions of the Kent State Hotel in Portage County in FY17. It is estimated that the hotel supports 47 jobs, \$1.3 million of labor income, \$1.9 million of economic output, and \$0.5 million of state and local taxes.

Table 13. Economic and tax contributions of Kent State Hotel in Portage County, FY17
Actual employment; Amounts in millions

	Employment	Labor income	Economic output	State and local tax
Direct	43	\$1.1	\$1.4	\$0.5
Indirect	0	\$0.0	\$0.1	\$0.0
Induced	4	\$0.1	\$0.5	\$0.01
Total	47	\$1.3	\$1.9	\$0.5

Note: This analysis removes the university business (25%) to avoid double-counting.
 Source: EY analysis using Kent State Hotel data and IMPLAN 2015.

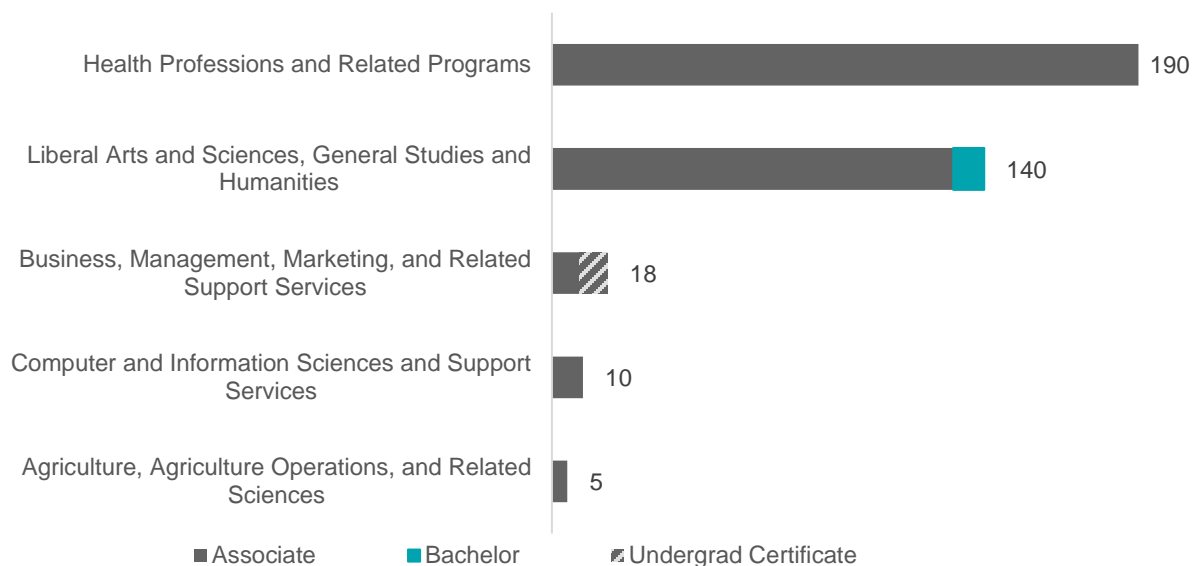
4. Kent State University at Ashtabula

4.1 County economy and demographics

Kent State University at Ashtabula is located in Ashtabula County, the largest geographic county in Ohio situated at the northeast tip of the state on Lake Erie. The county had a population of slightly more than 98,000 in 2016.⁶ Ashtabula County's unemployment rate was 6% in 2016, which was 1.15 percentage points higher than the national unemployment rate.⁷ More than two-thirds of the employment in Ashtabula County was in the manufacturing, education and health services, and trade, transportation and utilities industries.⁸

In 2016, the Ashtabula Campus had 190 graduates in health professions and related programs, which includes majors in nursing, physical therapy assistance, occupational therapy assistance, radiologic technology, respiratory therapy, and healthcare management (see Figure 18). Nearly 38% of graduates in 2016 received associate and bachelor's degrees in English, psychology and communications in addition to general technical and applied studies. The Ashtabula Campus is unique in its offering of enology and viticulture degrees. Kent State Ashtabula is one of the 18 Viticulture Enology Science and Technology Alliance (VESTA) partner institutions in the United States.

Figure 18. Graduates by major category and type of degree earned at Ashtabula Campus in 2016



Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

⁶ See U.S. Census Bureau, Population Estimates Program (PEP).

⁷ See U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

⁸ See U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

4.2 Economic contributions

The major components of Kent State’s economic impact in Ashtabula County are described in this section. Kent State contributes to economic activity in the county through its expenditures for its annual operations to educate students, through capital investments, student expenditures, and alumni living in the county.

Annual operations

Table 14 shows the employment, labor income, economic output, and state and local taxes supported by Kent State Ashtabula’s expenditures in FY17. Last year, 136 employees lived in the county earning \$5.7 million in salaries, wages, and benefits, not including health benefits. Most suppliers of goods and services that Kent State purchased are not located in Ashtabula County, hence the small indirect (supplier) related benefits. However, employees spent money at businesses located in the county, supporting an estimated 28 induced jobs and nearly \$900,000 in labor income at businesses like local restaurants and grocery stores. Total economic output is estimated to be \$10.1 million for the Ashtabula Campus. Estimated state and local taxes supported by university employees, and supplier and induced activity, is nearly \$700,000 in FY17. This includes income, sales, property, license, and specific excise taxes.

Table 14. Economic contributions of Kent State operational expenditures in Ashtabula County, FY17

Actual employment; Dollars in millions

	Employment	Labor Income	Economic Output	State and local tax
Direct (university & employees)	136	\$5.7	\$6.8	\$0.6
Indirect	2	\$0.1	\$0.2	\$0.0
Induced	28	\$0.9	\$3.1	\$0.1
Total	165	\$6.6	\$10.1	\$0.7

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Capital investments

Table 15 shows the economic benefits associated with \$5.1 million of capital expenditures in Ashtabula County by Kent State between FY13 and FY17. An estimated 54 one-year jobs were supported along with \$1.6 million in labor income and \$6.7 million of economic output.

Table 15. Economic contributions of capital expenditures in Ashtabula County, FY13-17 totals

Actual employment; Dollars in millions; 2016 dollars

	Employment	Labor Income	Economic output
Direct	39	\$1.2	\$5.1
Indirect	9	\$0.3	\$0.9
Induced	6	\$0.2	\$0.7
Total	54	\$1.6	\$6.7

Note: State and local tax contributions are small given the exemption of construction materials from sales taxation and other tax exemptions for the university

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Student expenditures

Student expenditures were modeled in Ashtabula County for those students who came from outside Northeast Ohio to attend Kent State University. In FY 2017, data provided by Kent State estimates that 163 students attending Kent State in Ashtabula were from outside Northeast Ohio. EY estimates that these students spent \$2.1 million in FY17. The estimated state and local tax contributions of student expenditures were nearly \$108,000 in FY17.

Alumni earnings

There are 4,326 Kent State alumni living in Ashtabula County. The estimated additional earnings in 2017 from these alumni is \$75.2 million.

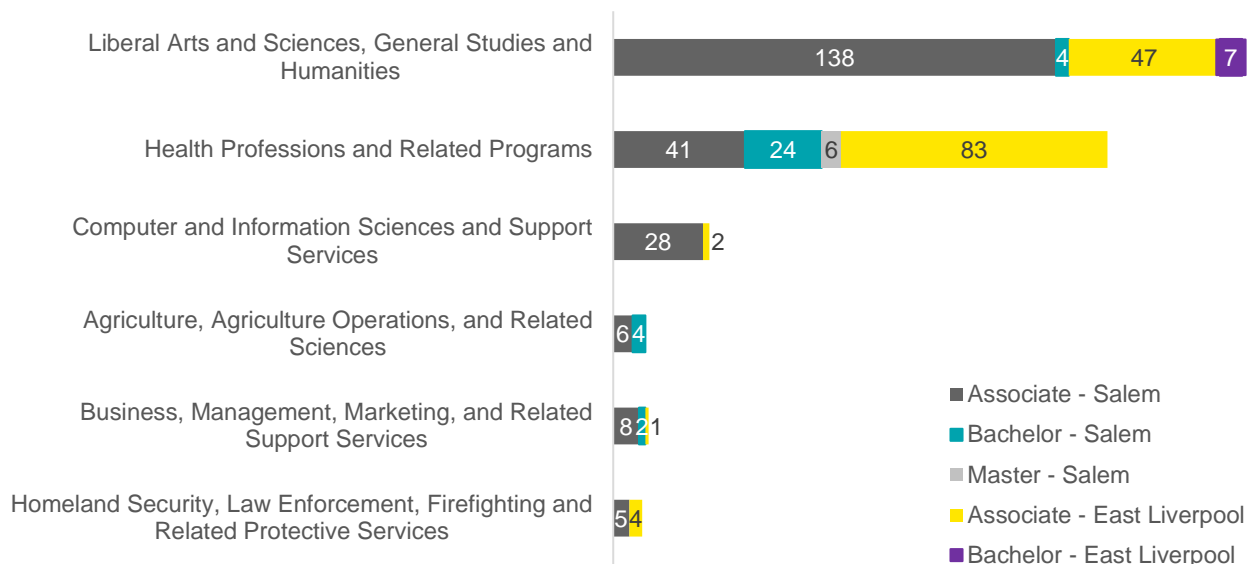
5. Kent State University at East Liverpool and Salem

5.1 County economy and demographics

Kent State University East Liverpool and Salem are both located on the eastern edge of Ohio in Columbiana County. The county had a population of nearly 104,000 in 2016 and an unemployment rate at 6.6% in 2016, well exceeding the national unemployment rate (4.8%).⁹

In 2016, nearly 1,300 students were enrolled at the Salem Campus, while nearly 700 students were enrolled at the East Liverpool Campus. While both campuses offer degrees in English, nursing, psychology, computer and information science, and justice studies, the Salem Campus has a wider offering of programs. At the Salem Campus, diversified technology degrees such as horticulture technology, early childhood education technology, and office technology are offered. However, most students at this campus receive associates degrees in the liberal arts and sciences, general studies, and humanities. The East Liverpool Campus is more focused on preparing students for health professions with programs in nursing, occupational therapy assistance, and physical therapy assistance. Nearly 60% of students pursue health related majors at this campus.

Figure 19. Graduates by major category and type of degree earned at East Liverpool and Salem campuses in 2016



Source: EY analysis using data from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics

⁹ See U.S. Census Bureau, Population Estimates Program (PEP) and U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

5.2 Economic contributions

Table 16 shows the employment, labor income, economic output, and state and local taxes supported by Kent State’s East Liverpool and Salem campus expenditures in FY17. Last year, 221 Kent State employees lived in Columbiana County earning \$8.3 million on salaries, wages, and benefits, not including health benefits. Most suppliers of goods and services that Kent State purchased are not located in Columbiana County, hence the small indirect (supplier) related benefits. However, employees spent money at businesses located in the county, supporting an estimated 40 induced jobs and \$1.3 million in labor income at local businesses. Total economic output is estimated to be \$14.7 million in Columbiana County. Estimated state and local taxes supported by university employees, and supplier and induced activity was \$1.0 million in FY17.

Table 16. Economic impact of Kent State operational expenditures in Columbiana County, East Liverpool and Salem Campuses, FY17

Actual employment; Dollars in millions

	Employment	Labor income	Economic output	State and local tax
Direct (university)	221	\$8.3	\$9.8	\$0.8
Indirect	3	\$0.1	\$0.3	\$0.0
Induced	40	\$1.3	\$4.6	\$0.1
Total	264	\$9.6	\$14.7	\$1.0

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Capital investments

Table 17 shows the economic benefits associated with \$3.0 million of capital expenditures in Columbiana County by Kent State between FY13 and FY17. An estimated 30 one-year jobs were supported along with \$1.1 million in labor income and \$4.1 million of economic output in Columbiana County.

Table 17. Economic impact of capital expenditures in Columbiana County, FY13-17 totals

Actual employment; Dollars in millions; 2016 dollars

	Employment	Labor Income	Economic output
Direct	20	\$0.7	\$3.0
Indirect	5	\$0.2	\$0.7
Induced	4	\$0.1	\$0.5
Total	30	\$1.1	\$4.1

Note: State and local tax contributions are small given the exemption of construction materials from sales taxation and other tax exemptions for the university.

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN.

Student expenditures

Student expenditures were modeled in Columbiana County for those students who came from outside Northeast Ohio to attend Kent State University. In FY 2017, data provided by Kent State estimates that 213 students attending Kent State programs in Columbiana County were from outside Northeast Ohio. EY estimates that these students spent \$2.8 million in FY17. The estimated state and local tax contributions of student expenditures were nearly \$145,000 in FY17.

Alumni earnings

There are 4,772 Kent State alumni living in Columbiana County. The estimated additional earnings in 2017 from these alumni is \$87.2 million.

6. Kent State University at Geauga

6.1 County economy and demographics

Kent State Geauga is located in Burton in Geauga County, with a county population of just over 94,000.¹⁰ The county is directly east of Cuyahoga County where Cleveland is located. The unemployment rate in Geauga County in 2016 was 4.4%, which was below both the Ohio state unemployment rate (5.0%) and the national unemployment rate (4.9%) for the year.¹¹ Nearly three-quarters of the employers in Geauga County are in the following industries: manufacturing, trade, transportation and utilities, education and health services, and professional and business services.¹²

A satellite of the Geauga Campus is the Regional Academic Center (RAC), which is located in Twinsburg in Summit County. The RAC is housed in a 44,000 square foot state-of-the-art academic building which was inaugurated in 2012 and offers associate, bachelor's, and master's degrees along with executive training programs, continuing education and workforce development and job training. This section presents estimates of economic activity in Summit County as well as Geauga County.

In 2016, the Geauga Campus had enrollment of slightly more than 1,600 students. In 2016, 90 students graduated with a bachelor's degree in nursing, a program with links to the University Hospitals Geauga Medical Center. Business administration, middle childhood education and computer technology are other popular majors.

6.2 Economic contributions

Table 18 shows the employment, labor income, economic output, and state and local taxes supported by Kent State campus expenditures in Geauga County in FY17. Last year, 227 Kent State employees lived in Geauga County earning \$11.0 million in salaries, wages, and benefits, not including health benefits. Most suppliers of goods and services that Kent State purchased are not located in Geauga County, hence the small indirect (supplier) related benefits. However, employees spent money at businesses located in the county, supporting an estimated 44 induced jobs and \$1.4 million in labor income. Total economic output is estimated to be \$18.4 million in Geauga County. Estimated state and local taxes supported by university employees, and supplier and induced activity was \$1.3 million in FY17.

¹⁰ See U.S. Census Bureau, Population Estimates Program (PEP).

¹¹ See U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

¹² See U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Table 18. Economic impact of Kent State operational expenditures in Geauga County, FY17

Actual employment; Dollars in millions

	Employment	Labor Income	Economic Output	State and local tax
Direct (university)	227	\$11.0	\$12.8	\$1.1
Indirect	3	\$0.1	\$0.4	\$0.0
Induced	44	\$1.4	\$5.3	\$0.1
Total	274	\$12.6	\$18.4	\$1.3

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Table 19 shows the employment, labor income, economic output, and state and local taxes supported by Kent State campus expenditures in Summit County in FY17. Last year, 878 Kent State employees lived in Summit County earning \$43.5 million in salaries, wages, and benefits. Most suppliers of goods and services that Kent State purchased are not located in Summit County, hence the small indirect (supplier) related benefits. However, employees spent money at businesses located in the county, supporting an estimated 296 induced jobs and \$12.9 million in labor income. Total economic output is estimated to be \$94.1 million in Summit County. Estimated state and local taxes supported by university employees, and supplier and induced activity was \$5.8 million in FY17.

Table 19. Economic impact of Kent State operational expenditures in Summit County, FY17

Actual employment; Dollars in millions

	Employment	Labor Income	Economic Output	State and local tax
Direct (university)	878	\$43.5	\$51.7	\$4.4
Indirect	20	\$1.1	\$3.0	\$0.1
Induced	296	\$12.9	\$39.3	\$1.3
Total	1,194	\$57.4	\$94.1	\$5.8

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Capital investments

Table 20 shows the economic benefits associated with \$2.4 million of capital expenditures in Geauga County by Kent State between FY13 and FY17. An estimated 26 one-year jobs were supported along with \$1.0 million in labor income and \$3.5 million of economic output in Geauga County.

Table 20. Economic impact of capital expenditures in Geauga County, FY13-17 totals

Actual employment; Dollars in millions; 2016 dollars

	Employment	Labor Income	Economic output
Direct	18	\$0.7	\$2.4
Indirect	5	\$0.2	\$0.7
Induced	3	\$0.1	\$0.4
Total	26	\$1.0	\$3.5

Note: State and local tax contributions are small given the exemption of construction materials from sales taxation and other tax exemptions for the university

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Student expenditures

Student expenditures were modeled in Geauga County for those students who came from outside Northeast Ohio to attend Kent State University. In FY 2017, data provided by Kent State estimates that 81 students attending Kent State Geauga were from outside Northeast Ohio. EY estimates that these students spent \$1.1 million in FY17. The estimated state and local tax contributions of student expenditures were nearly \$54,000 in FY17.

Alumni earnings

There are 5,721 Kent State alumni living in Geauga County. The estimated additional earnings in 2017 from these alumni is \$163.9 million. There are 8,689 alumni living in Summit County with estimated additional earnings of \$246.2 million in 2017.

7. Kent State University at Stark

7.1 Overview of campus

Kent State University's second largest campus by enrollment is located in Stark County. Stark County has a population of nearly 374,000.¹³ The largest employers in the county are education and health services, and trade, transportation and utilities companies.¹⁴ Stark County has six institutions of higher education, the third largest of which is Kent State University at Stark.

The Stark Campus had an enrollment of more than 4,400 students in 2016, which included 51 international students. In 2016, 18 students graduated with a bachelor's degree in music technology, a program unique to the Stark Campus. The most popular majors at the campus include psychology, nursing and business management, general studies, and humanities.

The Stark Campus is also home to the Kent State Stark Theatre, a part of the Department of Fine Arts on campus. The theatre regularly hosts student plays and other events that are open to the general public. The Stark Campus also has three art galleries that regularly host cultural events and art exhibits that are accessible to the community free of charge. The School of Music at Kent State Stark offers six undergraduate degrees and also conducts numerous free recitals, performances and lectures throughout the academic year. Additionally, the Stark Campus houses a conference center with conference halls, computer labs, videoconferencing equipment and dining rooms that are available to the community for a charge. These different schools and amenities add to Kent State Stark's connection to the local community.

7.2 Economic contributions

Table 21 shows the employment, labor income, and economic output supported by Kent State campus expenditures in Stark County in FY17. Last year, 590 Kent State employees lived in Stark County earning nearly \$25 million in wages and benefits. Most suppliers of goods and services that Kent State purchased are not located in Stark County, hence the small indirect (supplier) related benefits. However, employees spent money at businesses located in the county, supporting an estimated 180 induced jobs and \$6.7 million in labor income. Total economic output is estimated to be \$55.3 million in Stark County. Estimated state and local taxes supported by university employees, and supplier and induced activity was \$3.2 million in FY17.

¹³ See U.S. Census Bureau, Population Estimates Program (PEP).

¹⁴ See U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Table 21. Economic impact of Kent State operational expenditures in Stark County, FY17
Actual employment; Dollars in millions

	Employment	Labor Income	Economic Output	State and local tax
Direct (university)	590	\$24.9	\$31.5	\$2.5
Indirect	11	\$0.5	\$1.5	\$0.0
Induced	180	\$6.7	\$22.2	\$0.7
Total	781	\$32.1	\$55.3	\$3.2

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Capital investments

Table 22 shows the economic benefits associated with \$23 million of capital expenditures in Stark County by Kent State between FY13 and FY17. An estimated 237 one-year jobs were supported along with \$10.5 million in labor income and \$35.9 million of economic output in Stark County. Estimated state and local taxes paid by construction workers in the county, suppliers, and local businesses benefiting from employee and supplier expenditures is \$800,000.

Table 22. Economic impact of capital expenditures in Stark County, FY13-17 totals
Actual employment; Dollars in millions; 2016 dollars

	Employment	Labor Income	Economic output	State and local tax
Direct	141	\$6.6	\$23.0	\$0.4
Indirect	43	\$1.9	\$6.3	\$0.2
Induced	54	\$2.0	\$6.7	\$0.2
Total	237	\$10.5	\$35.9	\$0.8

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Student expenditures

Student expenditures were modeled in Stark County for those students who came from outside Northeast Ohio to attend Kent State University. In FY 2017, data provided by Kent State estimates that 275 students attending Kent State Stark were from outside Northeast Ohio. EY estimates that these students spent \$3.6 million in FY17. The estimated state and local tax contributions of student expenditures were \$198,000 in FY17.

Alumni earnings

There are 11,433 Kent State alumni living in Stark County. The estimated additional earnings in 2017 from these alumni is \$290.5 million.

8. Kent State University at Trumbull

8.1 County economy and demographics

Trumbull County lies on the eastern border of Ohio, just south of Ashtabula County. With a population of nearly 202,000, Trumbull County has the highest unemployment rate in northeast Ohio (6.7%).¹⁵ Nearly 80% of employment in the county is in the trade, transportation and utilities; manufacturing; and education and health services industries.¹⁶

The Kent State Trumbull Campus is the third largest campus with 1,800 students enrolled in associate, bachelor's and master's degrees. In 2016, more than three-quarters of graduates studied liberal arts and sciences, general studies and humanities, including majors such as Psychology and English. The remaining students earned degrees in engineering, business, computer and information sciences, and criminal justice studies.

8.2 Economic contributions

Table 23 shows the employment, labor income, and economic output supported by Kent State campus expenditures in Trumbull County in FY17. Last year, 175 Kent State employees lived in Trumbull County earning \$7.6 million in wages and benefits. Most suppliers of goods and services that Kent State purchased are not located in Trumbull County, hence the small indirect (supplier) related benefits. However, employees spent money at businesses located in the county, supporting an estimated 42 induced jobs and \$1.5 million in labor income. Total economic output is estimated to be \$14.7 million in Trumbull County. Estimated state and local taxes supported by university employees, and supplier and induced activity was \$0.9 million in FY17.

Table 23. Economic impact of Kent State operational expenditures in Trumbull County, FY17

Actual employment; Dollars in millions

	Employment	Labor Income	Economic Output	State and local tax
Direct (university)	175	\$7.6	\$9.4	\$0.8
Indirect	3	\$0.1	\$0.3	\$0.0
Induced	42	\$1.5	\$5.0	\$0.2
Total	221	\$9.3	\$14.7	\$0.9

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

¹⁵ See U.S. Census Bureau, Population Estimates Program (PEP) and U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

¹⁶ See U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Capital investments

Table 24 shows the economic benefits associated with \$5.4 million of capital expenditures in Trumbull County by Kent State between FY13 and FY17. An estimated 60 one-year jobs were supported along with \$2.3 million in labor income and \$7.8 million of economic output in Trumbull County.

Table 24. Economic impact of capital expenditures in Trumbull County, FY13-17 totals
Actual employment; Dollars in millions; 2016 dollars

	Employment	Labor Income	Economic output
Direct	39	\$1.5	\$5.4
Indirect	11	\$0.4	\$1.2
Induced	10	\$0.4	\$1.2
Total	60	\$2.3	\$7.8

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Student expenditures

Student expenditures were modeled in Trumbull County for those students who came from outside Northeast Ohio to attend Kent State University. In FY 2017, data provided by Kent State estimates that 84 students attending Kent State Trumbull were from outside Northeast Ohio. EY estimates that these students spent \$1.1 million in FY17. The estimated state and local tax contributions of student expenditures were \$56,000 in FY17.

Alumni earnings

There are 4,749 Kent State alumni living in Trumbull County. The estimated additional earnings in 2017 from these alumni is \$100.2 million.

9. Kent State University at Tuscarawas

9.1 County economy and demographics

Tuscarawas County, the least populated county in northeast Ohio, is home to a Kent State regional campus. With a population of 92,000, the main industries employing workers in the county are manufacturing; trade, transport and utilities; and education and health services.¹⁷

The Tuscarawas Campus offers associate and bachelor's degrees, and certificate programs. In 2016, students graduating from the Tuscarawas Campus pursued degrees in English, psychology, nursing, mechanical and electrical engineering, and early childhood education. The Tuscarawas Campus is the only campus that offers degrees in kindergarten and preschool education, a program that enrolled 19 students in 2016. Other unique degrees offered on campus include degrees in Agribusiness and Medical Billing Information Technology.

The Tuscarawas Campus is home to the Ohio Small Business Development Center which assists small businesses in Tuscarawas and other counties. The Performing Arts Center hosts musical, theatrical and other variety shows that are open to the Tuscarawas community. Both the campus's academic offerings and infrastructure provide amenities for Tuscarawas County residents.

9.2 Economic contributions

Table 25 shows the employment, labor income, economic output, and state and local taxes supported by Kent State campus expenditures in Tuscarawas County in FY17. Last year, 163 Kent State employees lived in Tuscarawas County earning \$5.1 million in wages and benefits. Most suppliers of goods and services that Kent State purchased are not located in Tuscarawas County, hence the small indirect (supplier) related benefits. However, employees spent money at businesses located in the county, supporting an estimated 28 induced jobs and \$0.9 million in labor income. Total economic output is estimated to be \$10.4 million in Tuscarawas County. Estimated state and local taxes supported by university employees, supplier, and induced activity was \$0.6 million in FY17.

Table 25. Economic impact of Kent State operational expenditures in Tuscarawas County, FY17

Actual employment; Dollars in millions

	Employment	Labor Income	Economic Output	State and local tax
Direct (university)	163	\$5.1	\$6.9	\$0.5
Indirect	2	\$0.1	\$0.3	\$0.0
Induced	28	\$0.9	\$3.2	\$0.1
Total	193	\$6.1	\$10.4	\$0.6

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN.

¹⁷ See U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Capital investments

Table 26 shows the economic benefits associated with \$2.5 million of capital expenditures in Tuscarawas County by Kent State between FY13 and FY17. An estimated 26 one-year jobs were supported along with \$1.3 million in labor income and \$3.8 million of economic output in Tuscarawas County.

Table 26. Economic impact of capital expenditures in Tuscarawas County, FY13-17 totals

Actual employment; Dollars in millions; 2016 dollars

	Employment	Labor Income	Economic output
Direct	15	\$0.9	\$2.5
Indirect	5	\$0.2	\$0.6
Induced	5	\$0.2	\$0.6
Total	25	\$1.3	\$3.8

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Student expenditures

Student expenditures were modeled in Tuscarawas County for those students who came from outside Northeast Ohio to attend Kent State University. In FY 2017, data provided by Kent State estimates that 321 students attending Kent State Tuscarawas were from outside Northeast Ohio. EY estimates that these students spent \$4.2 million in FY17. The estimated state and local tax contributions of student expenditures were \$217,000 in FY17.

Alumni earnings

There are 2,787 Kent State alumni living in Tuscarawas County. The estimated additional earnings in 2017 from these alumni is \$47.5 million.

10. Kent State's Presence in Cuyahoga County

While Kent State University does not have a regional campus in Cuyahoga County, the university has a significant presence in the county. Located on Lake Erie, Cuyahoga is the largest county in northeast Ohio with a population of 1.2 million and home to the city of Cleveland.¹⁸ The Cleveland Urban Design Center and the College of Podiatric Medicine are both located in the county. In addition, many Kent State faculty and staff and a number of the university's vendors reside in the county.

10.1 Cleveland Urban Design Collaborative

The Cleveland Urban Design Collaborative (CUDC) is the result of a partnership between the Urban Design graduate program at Kent State University and the College of Architecture and Environmental Design at the university. CUDC offers five different types of design programs including professional degrees in Architecture and a master's degree in Urban Design. CUDC has five full-time and two part-time staff and has 33 students currently enrolled in its graduate programs.

In addition to providing graduate education, the collaborative functions as a non-profit urban design practice which executes client-based projects, conducts applied research, and focuses on advocacy to impact urban design decisions. The CUDC's professional staff of designers provide technical design expertise to projects that re-develop neighborhoods, revitalize old communities and build new ones, encourage ecological integrity in design initiatives and provide thinking around historic preservation problems. The center also often hosts open houses and puts on public programming and lectures to benefit the community. The center's activities are supported partially by the university and partially by the revenue earned from completing client-based projects.

10.2 College of Podiatric Medicine

The Kent State University College of Podiatric Medicine is a graduate-level medical college and one of only nine accredited podiatry colleges in the nation. The 101-year-old institution currently employs 74 full-time staff and enrolls 430 students seeking the degree Doctor of Podiatric Medicine. The college also offers residency programs to podiatric physicians and provides education in highly specialized fields of Podiatry. The College of Podiatric Medicine merged with Kent State University in 2012 and since then, the students have had the opportunity to complete additional degrees such as Masters in Public Health and Ph.D. programs in various sciences, while enrolled in the D.P.M. program.

The Cleveland Foot and Ankle clinic is the college's teaching facility. It has been providing comprehensive podiatric care to patients in Northeast Ohio for 100 years and served nearly 10,000 patients in the 2016-2017 academic year alone. Additionally, the College of Podiatric Medicine faculty and students team with Care Alliance Health Center in downtown Cleveland to serve additional patients pro bono. Since 2015, more than 97% of the college's graduates have

¹⁸ See U.S. Census Bureau, Population Estimates Program (PEP)

placed into residency programs for post grad education. 23.8% of the college's students in the school are permanent residents of Ohio, 3% of the students are international and the rest hail from other US States. The College has graduated over 6,000 podiatrists since 1916.

Employment and expenditures in Cuyahoga County by the College of Podiatric Medicine is shown in Table 27 as the direct impact. According to Kent State, the College of Podiatric Medicine employed 74 faculty and staff and supported \$7.3 million of labor income. Total economic contributions include 111 jobs, \$9.1 million in labor income, \$13.7 million in economic output, and \$0.9 million in state and local taxes.

Table 27. Economic contributions of Kent State operational expenditures in Cuyahoga County, FY17

Actual employment; Dollars in millions

	Employment	Labor income	Economic output	State and local tax
Direct (university)	74	\$7.3	\$8.5	\$0.7
Indirect	2	\$0.1	\$0.4	\$0.0
Induced	34	\$1.7	\$4.8	\$0.2
Total	110	\$9.1	\$13.7	\$0.9

Note: Numbers may appear not to sum due to rounding.

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

10.3 Economic contributions

Table 28 shows the employment, labor income, and economic output supported by Kent State campus expenditures in Cuyahoga County in FY17. Last year, 595 Kent State employees lived in Cuyahoga County earning \$29.9 million in wages and benefits. Indirect and induced activity supported another 214 employees and 10.8 million in labor income. Total economic output is estimated to be \$76.6 million in Cuyahoga County. Estimated state and local taxes supported by university employees, and supplier and induced activity was \$4.1 million in FY17.

Table 28. Economic contributions of Kent State operational expenditures in Cuyahoga County, FY17

Actual employment; Dollars in millions; Includes College of Podiatric Medicine

	Employment	Labor Income	Economic Output	State and local tax
Direct (university)	595	\$29.9	\$46.0	\$3.0
Indirect	33	\$2.0	\$5.3	\$0.2
Induced	181	\$8.8	\$25.3	\$0.9
Total	809	\$40.7	\$76.6	\$4.1

Source: EY analysis using data provided by Kent State University; 2015 IMPLAN

Appendix

Appendix Table 1. Kent State University additional alumni earnings by county in Ohio, 2017
Amounts in millions

County	Additional earnings	Number of alums	County	Additional earnings	Number of alums
Adams County	\$0.2	9	Licking County	\$8.3	294
Allen County	\$3.0	112	Logan County	\$1.1	36
Ashland County	\$26.0	902	Lorain County	\$143.3	4,696
Ashtabula County	\$75.2	4,326	Lucas County	\$18.3	637
Athens County	\$2.5	96	Madison County	\$0.2	9
Auglaize County	\$1.2	45	Mahoning County	\$104.7	4,696
Belmont County	\$6.1	227	Marion County	\$0.3	14
Brown County	\$1.1	36	Medina County	\$121.1	4,087
Butler County	\$12.1	394	Meigs County	\$0.2	9
Carroll County	\$31.9	1,607	Mercer County	\$0.9	32
Champaign County	\$2.8	100	Miami County	\$3.6	118
Clark County	\$5.4	194	Monroe County	\$0.8	28
Clermont County	\$10.0	342	Montgomery County	\$11.3	401
Clinton County	\$1.8	62	Morgan County	\$1.4	46
Columbiana County	\$87.2	4,772	Morrow County	\$3.5	127
Coshocton County	\$12.7	727	Muskingum County	\$3.1	115
Crawford County	\$5.2	198	Noble County	\$0.2	6
Cuyahoga County	\$517.2	17,333	Ottawa County	\$4.5	151
Darke County	\$1.1	34	Paulding County	\$0.1	6
Defiance County	\$2.3	95	Perry County	\$0.4	16
Delaware County	\$52.4	1,784	Pickaway County	\$0.6	22
Erie County	\$16.9	565	Pike County	\$0.4	16
Fairfield County	\$21.6	784	Portage County	\$413.3	14,666
Fayette County	\$0.7	32	Preble County	\$0.4	13
Franklin County	\$101.0	3,664	Putnam County	\$0.2	8
Fulton County	\$1.4	59	Richland County	\$3.1	109
Gallia County	\$0.5	19	Ross County	\$0.1	3
Geauga County	\$163.9	5,721	Sandusky County	\$2.5	87
Greene County	\$11.3	382	Scioto County	\$1.0	33
Guernsey County	\$5.3	253	Seneca County	\$1.9	64
Hamilton County	\$18.1	639	Shelby County	\$0.1	3
Hancock County	\$4.1	146	Stark County	\$290.5	11,433
Hardin County	\$0.4	17	Summit County	\$246.2	8,689
Harrison County	\$6.1	389	Trumbull County	\$100.2	4,749
Henry County	\$0.4	15	Tuscarawas County	\$47.5	2,787
Highland County	\$0.0	1	Union County	\$0.0	2
Hocking County	\$0.6	22	Van Wert County	\$0.5	15
Holmes County	\$4.7	268	Vinton County	\$0.1	5
Huron County	\$0.5	20	Warren County	\$7.9	275
Jackson County	\$1.9	72	Washington County	\$2.7	92
Jefferson County	\$10.4	430	Wayne County	\$7.0	258
Knox County	\$4.3	160	Williams County	\$0.2	10
Lake County	\$72.8	2,499	Wood County	\$6.1	227
Lawrence County	\$0.3	12	Wyandot County	\$0.3	14
Licking County	\$8.3	294	Total Ohio	\$2,865.1	108,668

Source: EY analysis using Kent State University alumni data; US Census data

Appendix Table 2. Economic contributions of Kent State System’s operational expenditures in State of Ohio, FY17

	Employment	Labor income	Economic Output	Average state and local tax
Direct (university)	6,648	\$330.6	\$437.5	\$33.2
Indirect (suppliers)	264	\$15.0	\$45.2	\$1.5
Induced (consumption-related)	2,668	\$115.7	\$369.3	\$11.6
Total	9,580	\$461.3	\$851.9	\$46.3

Source: EY analysis using data provided by Kent State University, IMPLAN 2015.