

THE ECONOMIC VALUE

Of Owens Community College



JANUARY 2016

ANALYSIS OF THE ECONOMIC IMPACT & RETURN ON INVESTMENT OF EDUCATION

Owens Community College (OCC) creates value in many ways. The college plays a key role in helping students increase their employability and achieve their individual potential. It provides students with the skills they need to have a fulfilling and prosperous career. Further, it supplies an environment for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

The value of OCC influences both the lives of students and also the regional economy. The college serves a range of industries in the OCC Service District, supports local businesses, and benefits society as a whole in Ohio from an expanded economy and improved quality of life. The benefits created by OCC even extend to the state government through increased tax revenues and public sector savings.

The purpose of this study is to investigate the economic impacts created by OCC on the business community and the benefits that the college generates in return for the investments made by its key stakeholder groups—students, taxpayers, and society. The region the college serves is defined as Hancock, Lucas, and Wood counties, referred to hereafter as the OCC Service District. The following two analyses are presented:

- **ECONOMIC IMPACT ANALYSIS**
- **INVESTMENT ANALYSIS**

All results reflect student and financial data for Fiscal Year (FY) 2013-14. Impacts on the regional business community are reported under the economic impact analysis. Results are measured in terms of added income. The return on investment to students, taxpayers, and society are reported under the investment analysis. Both analyses are described more fully in the following sections.

ECONOMIC IMPACT ANALYSIS

OCC promotes economic growth in the OCC Service District in a variety of ways. The college is an employer and buyer of goods and services, and the living expenses of students benefit local businesses. In addition, OCC is a primary source of education to the OCC Service District residents and a supplier of trained workers to the OCC Service District industries.

OPERATIONS SPENDING IMPACT

OCC is an important employer in the OCC Service District. In FY 2013-14, the college employed 1,475 full-time and part-time faculty and staff. Of these, 81% lived in the OCC Service District. Total payroll at OCC was \$61.8 million, much of which was spent in the region for groceries, rent, dining out, clothing, and other household expenses.

OCC is itself a large-scale buyer of goods and services. In FY 2013-14 the college spent \$38.2 million to cover its expenses for facilities, professional services, and supplies.

OCC added \$83.4 million in added income to the region during the analysis year as a result of its day-to-day operations. This figure represents the college's payroll, the multiplier effects generated by the spending of the college and its employees, and a downward adjustment to account for funding that the college received from state sources.

TABLE 1. IMPACTS CREATED BY OCC IN FY 2013-14

ADDED INCOME	JOBS
\$83.4 MILLION	1,753
Operations spending impact	
\$2.4 MILLION	77
Student spending impact	
\$622.4 MILLION	8,856
Alumni impact	
\$708.3 MILLION	10,686
Total impact	

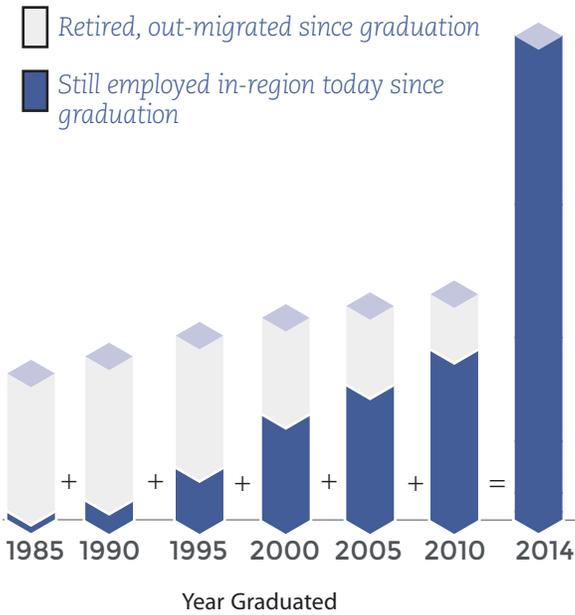
IMPACT OF STUDENT SPENDING

A number of in-region students would have left the area for other education opportunities if not for the existence of OCC. While attending the college, these retained students spent \$9.7 million to purchase groceries, rent accommodation, pay for transportation, and so on. A significant portion of these expenditures occurred in the region, generating \$2.4 million in added income in the region economy during the analysis year.

ALUMNI IMPACT

The education and training OCC provides for region residents results in the greatest impact. As shown in Figure 1, since the college was established, students have studied at OCC and entered the regional workforce with new skills. Today, thousands of former students are employed in the OCC Service District.

FIGURE 1. OCC ALUMNI WORKING IN-REGION TODAY



During the analysis year, past and present students of OCC generated \$622.4 million in added income for the region. This figure represents the higher earnings that students earned during the year, the increased output of the businesses that employed the students, and the multiplier effects that occurred as students and their employers spent money at other businesses.

TOTAL IMPACT

Without the presence of OCC, the OCC Service District would lose an annual \$708.3 million in added income, equal to the sum of the operations spending impact, the student spending impact, and the alumni impact. The OCC \$708.3 million impact is equal to approximately 2.1% of the GRP of the OCC Service District. This is an impact that wouldn't have occurred without the presence of OCC, as explained below:

In order to remain conservative, various counterfactual scenarios are implemented, with the results being subtracted from the total impact. These counterfactuals include the scenario where school funding is spent by taxpayers instead of the college, resulting in certain levels of prosperity not contingent upon the college's presence; how a portion of the students would attain similar educations without OCC; and lastly, how employers would still fill a portion of their talent pipelines without the OCC's valuable alumni. Because these alternate routes to added income are viable without OCC, this income that would have occurred anyway is subtracted from the gross impact, with the \$799 million OCC impact as the remainder. The \$799 million, therefore, truly represents what wouldn't have been generated without the presence of the college.

The total impact is also expressed in terms of the jobs supported by the added income; they are calculated by jobs-to-sales ratios specific to each industry. Overall, the \$708.3 million impact supports 10,686 jobs.

A portion of the total \$708.3 million is broken out into an industry-by-industry impact ordered by added income. Table 2 outlines the top industries impacted by OCC. Because industries have different jobs-to-sales ratios, the associated jobs supported by the OCC impact differ by industry. Nonetheless, these are impacts that would not have been generated without the college's presence.

TABLE 2. OCC IMPACT BY INDUSTRY

INDUSTRY	ADDED INCOME (THOUSANDS)	JOBS
Public Administration	\$177,070	2,860
Manufacturing	\$122,285	704
Health Care and Social Assistance	\$88,229	1,685
Professional and Technical Services	\$31,033	530

INVESTMENT ANALYSIS

Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and is considered unprofitable. This study considers OCC as an investment from the perspectives of students, taxpayers, and society. The backdrop for the analysis is the entire Ohio economy.

STUDENT PERSPECTIVE

In FY 2013-14, OCC served 22,294 credit students, 21,656 of whom were credit seeking. In order to attend college, students paid for tuition, fees, books, and supplies. They also gave up money that they would have otherwise earned had they been working instead of attending college. The total investment made by OCC's students in FY 2013-14 amounted to \$156.2 million, equal to \$41.5 million in out-of-pocket expenses plus \$114.8 million in forgone time and money.

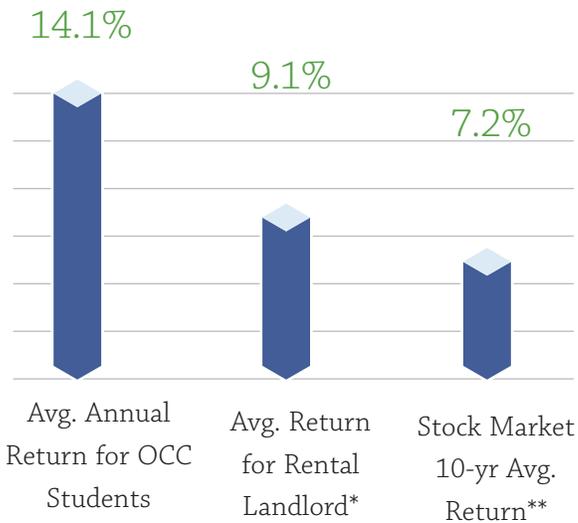
In return for their investment, OCC's students will receive a stream of higher future earnings that will continue to grow through their working lives. As shown in Figure 2, mean earnings levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. For example, the average associate's degree completer from OCC will see an increase in earnings of \$10,700 each year compared to someone with a high school diploma or equivalent.

FIGURE 2. HIGHER EARNINGS BY EDUCATION LEVEL AT CAREER MIDPOINT IN THE OCC SERVICE DISTRICT



Source: EMSI complete employment data.

FIGURE 3. STUDENT RATE OF RETURN



*RealtyTrac's Q3 2014
**Forbes' S&P 500, 1994-2014.

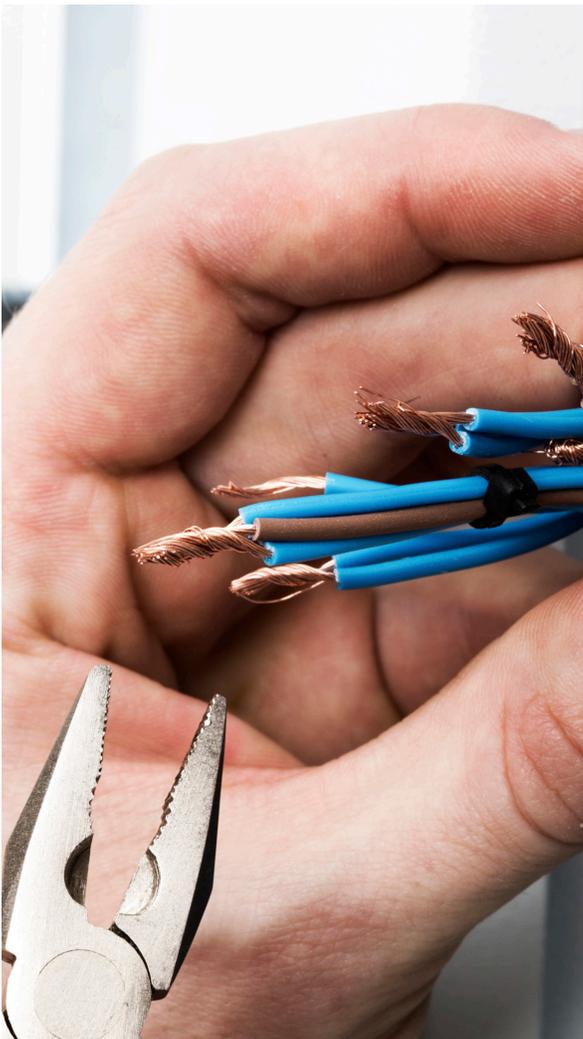
The present value of the higher future earnings that OCC's students will receive over their working careers is \$586 million. Dividing this value by the \$156.2 million in student costs yields a benefit-cost ratio of 3.8. In other words, for every \$1 students invest in OCC in the form of out-of-pocket expenses and forgone time and money, they receive a present-value of \$3.80 in higher future earnings. The average annual rate of return for students is 14.1%. This is an impressive return, especially when compared to the 10-year average 7.2% return to the US stock market (Figure 3).

TAXPAYER PERSPECTIVE

OCC generates more in tax revenue than it takes. These benefits to taxpayers consist primarily of taxes that the state government will collect from the added revenue created in the state. As OCC students earn more, they will make higher tax payments. Employers will also make higher tax payments as they increase their output and purchase more supplies and services. By the end of the FY 2013-14 students' working careers, the state government will have collected a present value of \$178 million in added taxes.

Benefits to taxpayers consist of the savings generated by the improved lifestyles of students and the proportionally reduced government expenditures. Education is statistically correlated with a variety of lifestyle changes that generate taxpayer savings across three main categories: 1) health, 2) crime, and 3) unemployment. Improved health habits lower the students' demand for national health care services. Students are also less likely to commit crimes, so the demand for law enforcement and criminal justice services is reduced (study references are available in the main report). Students are also more employable, so the demand for welfare and unemployment benefits, such as earnings assistance and welfare benefits, is reduced. For a list of study references to these statistical benefits, please contact the college for a copy of the main report. All of these benefits will generate a present value of \$14 million in savings to state taxpayers.

Total benefits to taxpayers equal \$192 million, equal to the sum





of the added taxes and public sector savings. Comparing this to the taxpayer costs of \$38.2 million—equal to the funding that OCC received from the state government during the analysis year—yields a benefit-cost ratio of 5.0. This means that for every \$1 of public money invested in OCC, taxpayers receive a present-day value of \$5.00 over the course of the students’ working lives. The average annual rate of return is 13.5%, a solid investment that compares favorably with other long-term investments in both the private and public sectors (Figure 3).

SOCIAL PERSPECTIVE

Society as a whole within Ohio benefits from the presence of OCC in two major ways. The first and largest benefit that society receives is an increased state economic base. As discussed in the previous section, the higher student earnings and increased business output occurs across the state. This raises prosperity in Ohio and expands the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of students. Similar to the taxpayer section above, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers, and are distinct from the costs avoided by taxpayers outlined above. Health savings include avoided medical costs associated with smoking, alcoholism, obesity, drug abuse, and mental disorders. Crime savings include reduced security expenditures and insurance administration, lower victim costs, and reduced criminal justice system expenditures. Unemployment savings include the reduced employer contributions towards unemployment claims. For a list of study references to these statistical benefits, please contact the college for a copy of the main report.

Figure 4 shows the present value of the higher earnings and social savings that will occur in Ohio over the working lifetime of the FY 2013-14 student population at OCC. Higher earnings amounts to a present value of \$2.5 billion due to the increased lifetime earnings of students and associated increases in business output. Social savings amount to \$52.8 million, the sum of health, crime, and unemployment savings in Ohio. Altogether, total benefits to society equal \$2.6 billion (in present value terms).

Society invested \$231.7 million in OCC educations during the

FIGURE 4. PRESENT VALUE OF HIGHER EARNINGS AND SOCIAL SAVINGS IN OHIO

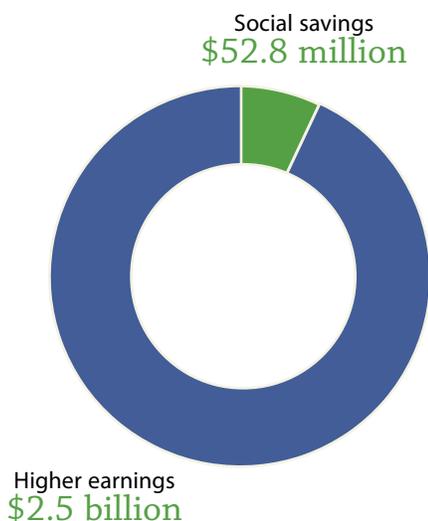


TABLE 3. SUMMARY OF INVESTMENT ANALYSIS RESULTS

STUDENT PERSPECTIVE	
\$585,993	Present value benefits (thousands)
\$156,222	Costs (thousands)
\$429,772	Net present value (thousands)
3.8	Benefit-cost ratio
14.1%	Rate of return

TAXPAYER PERSPECTIVE	
\$192,001	Present value benefits (thousands)
\$38,199	Costs (thousands)
\$153,802	Net present value (thousands)
5.0	Benefit-cost ratio
13.5%	Rate of return

SOCIAL PERSPECTIVE	
\$2,556,930	Present value benefits (thousands)
\$231,735	Costs (thousands)
\$2,325,195	Net present value (thousands)
11.0	Benefit-cost ratio
N/A	Rate of return*

* The rate of return is not reported for the social perspective because the beneficiaries of the investment are not necessarily the same as the original investors.

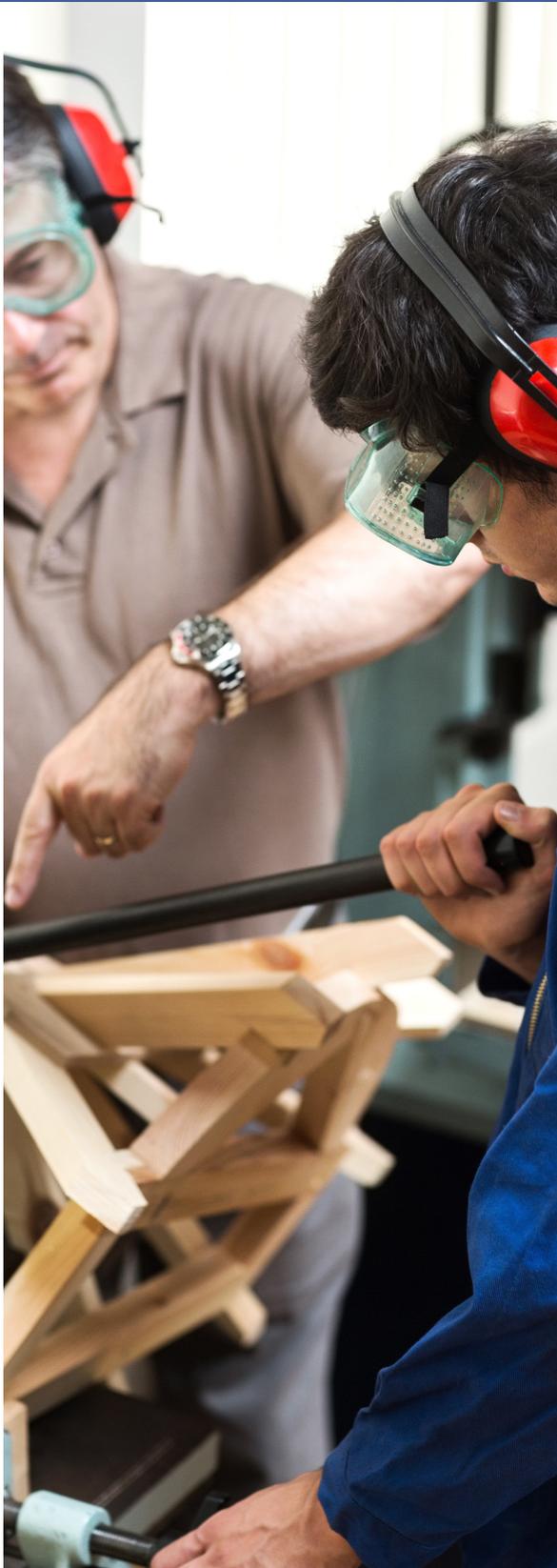
analysis year. This includes all expenditures by OCC, all student expenditures, and all student opportunity costs. For every dollar of this investment, society as a whole in Ohio will receive a cumulative value of \$11.00 in benefits, equal to the \$2.6 billion in benefits divided by the \$231.7 million in costs. These benefits will occur for as long as OCC’s FY 2013-14 students remain employed in the state workforce.

SUMMARY OF INVESTMENT ANALYSIS RESULTS

Table 3 presents the results of the investment analysis for all three of OCC’s major stakeholder groups—students, taxpayers, and society. As shown, students receive great value for their educational investment. At the same time, the investment made by state taxpayers to the college creates a wide range of benefits to society and returns more to government budgets than it costs.



CONCLUSION



The results of this study demonstrate that OCC creates value from multiple perspectives. The college benefits local businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained workers into the workforce. It enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. It benefits state taxpayers through increased tax receipts across the state and a reduced demand for government-supported social services. Finally, it benefits society as a whole in Ohio by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students.

ABOUT THE STUDY

Data and assumptions used in the study are based on several sources, including the FY 2013-14 academic and financial reports from the college, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of EMSI's Social Accounting Matrix (SAM) model, and a variety of studies and surveys relating education to social behavior. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of investment effectiveness and economic impact. For a full description of the data and approach used in the study, please contact the college for a copy of the technical report.

ABOUT EMSI

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