

EXECUTIVE SUMMARY



Demonstrating the Value of Barton Community College

APRIL 2014

ANALYSIS OF THE ECONOMIC IMPACT & RETURN ON INVESTMENT OF EDUCATION

Barton Community College (Barton) creates value in many ways. The college plays a key role in helping students increase their employability and achieve their individual potential. Barton 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, as well as promotes their overall health and well-being.

However, the contribution of Barton consists of more than just influencing the lives of students. The college serves a range of industries and supports local businesses in the Barton Service Area (defined as Barton, Ellsworth, Pawnee, Rice, Rush, Russell, and Stafford Counties). Society as a whole in Kansas benefits from an expanded economy and improved quality of life. The benefits created by Barton extend as far as the state and local government, in the form of increased tax revenues and public sector savings.

The purpose of this study is to investigate the regional economic impacts created by Barton on the Barton Service Area's business community and the benefits that the college generates in return for the investments made by its key stakeholder groups—students, society, and taxpayers. The following two analyses are presented:

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

All results reflect student and financial data for Fiscal Year (FY) 2012-13. Impacts on the Barton Service Area's business community are reported under the regional economic impact analysis, and the return on investment to students, society, and taxpayers are reported under the investment analysis. Both analyses are described more fully in the following sections.

REGIONAL ECONOMIC IMPACT ANALYSIS

Barton promotes economic growth in the Barton Service Area in a variety of ways. The college is an employer and a buyer of goods and services which benefit local businesses. In addition, Barton is a primary source of higher education to local residents and a supplier of trained workers to local industry.



The regional economic impact analysis examines the impact of Barton on the Barton Service Area's business community through increased consumer spending and enhanced business productivity. Results are measured in terms of added income and are organized according to the following effects:

1. Impact of college operations;
2. Impact of the increased productivity of former students that were employed in the regional workforce during the analysis year.

IMPACT OF COLLEGE OPERATIONS

Barton is an important employer in the Barton Service Area. In FY 2012-13, the college employed 789 full-time and part-time faculty and staff. Of these, 56% lived in the Barton Service Area. Total payroll at Barton was \$19.4 million, much of which was spent in the service area for groceries, eating out, clothing, and other household expenses.

Barton is itself a large-scale buyer of goods and services. In FY 2012-13 the college spent \$20.5 million to cover its expenses for facilities, professional services, and supplies.

The total income that Barton created during the analysis year as a result of its day-to-day operations was \$11.7 million. 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 local sources.

JOB EQUIVALENTS BASED ON INCOME

Job equivalents are a measure of the average-wage jobs that a given amount of income can potentially support. They are calculated by dividing income by the average income per worker in the Barton Service Area. Based on the added income created by Barton, the job equivalents are as follows:

Effect of college operations = **310** job equivalents

Effect of student productivity = **2,178** job equivalents

Overall, the added income created by Barton and its students supported **2,488** job equivalents.

INCOME CREATED BY BARTON IN FY 2012-13 (ADDED INCOME)

<p>\$11.7 MILLION</p> <p>Effect of college operations</p>
<p>\$82.4 MILLION</p> <p>Effect of student productivity</p>
<p>\$94.1 MILLION</p> <p>Total effect</p>

NOTES

- The revenue and expenditures from Barton's Fort Riley and Fort Leavenworth campuses, and other outreach efforts, are included in the college's collective contribution to the Barton Service Area. The impact the college has on the seven counties is seen as a whole through all of Barton's operations and services. In short, this report focuses solely on Barton's impact on the seven counties within the Barton Service Area.
- Some limitations of the report:
 - Not all employees live in the Barton Service Area; the benefits of the total jobs created are shared with communities outside the Barton Service Area.
 - Not all students reside in the Barton Service Area; the benefits of student spending and productivity are also shared with communities outside the Barton Service Area.
 - The majority of the college's expenses are spent within the Barton Service Area, and the college prioritizes local business when possible. However, this is not always feasible, and occasionally some money has to be spent with organizations from outside of the Barton Service Area.

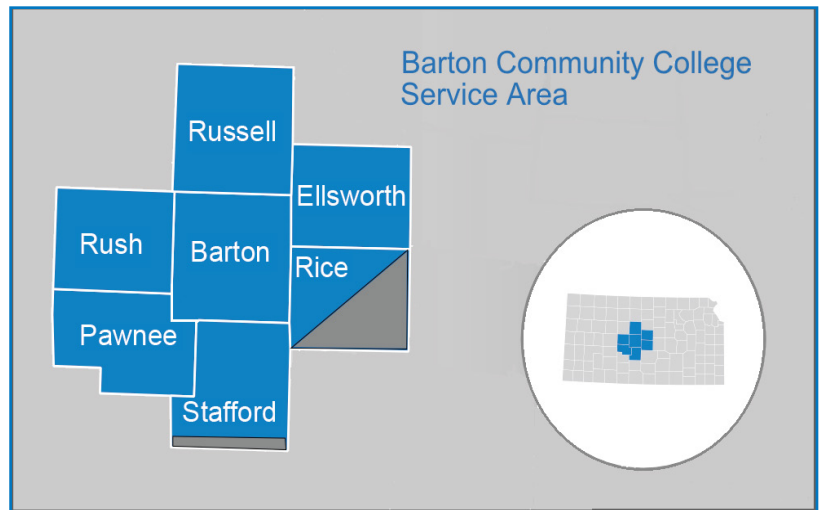
IMPACT OF STUDENT PRODUCTIVITY

Barton's greatest impact results from the education and training it provides for local residents. Since the college was established, students have studied at Barton and entered the workforce with new skills. Today thousands of former students are employed in the Barton Service Area.

During the analysis year, Barton's former students generated \$82.4 million in added income in the Barton Service Area. This figure represents the higher wages 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

The overall effect of Barton on the Barton Service Area business community during the analysis year amounted to \$94.1 million, equal to the sum of the college operations effect and the student productivity effect. This added income was equal to approximately 3.4% of the Barton Service Area's Gross Regional Product.



INVESTMENT ANALYSIS

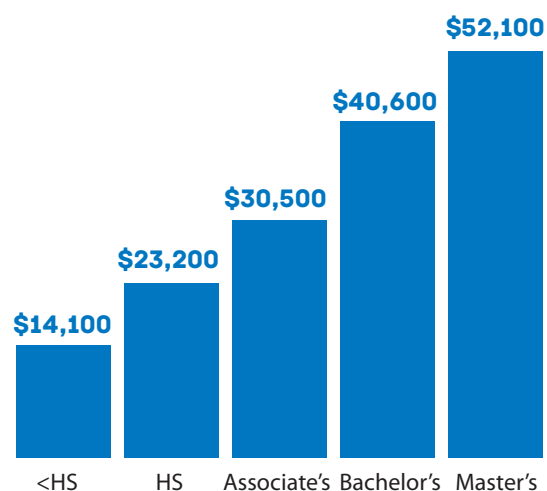
Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and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

STUDENT PERSPECTIVE

In 2012-13, Barton served 16,240 credit students and 332 non-credit students. 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 Barton's students in FY 2012-13 amounted to \$43.7 million, equal to \$10.1 million in out-of-pocket expenses plus \$33.6 million in forgone time and money.

In return for their investment, Barton's students will receive a stream of higher future wages that will continue to grow through their working lives. As shown in Figure 1, mean income 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 Barton will see an increase in earnings of \$7,300 each year compared to someone with a high school diploma or equivalent. Over a working lifetime, this increase in earnings amounts to an undiscounted value of approximately \$313,900 in higher income.

FIGURE 1. ANNUAL INCOME BY EDUCATION LEVEL AT CAREER MIDPOINT IN THE BARTON SERVICE AREA





The present value of the higher future wages that Barton’s students will receive over their working careers is \$153.2 million. Dividing this value by the \$43.7 million in student costs yields a benefit-cost ratio of 3.5. In other words, for every \$1 students invest in Barton in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of \$3.50 in higher future wages. The average annual rate of return for students is 14.3%. This is an impressive return compared, for example, to the less than 1% return per annum that is generally expected from saving money in today’s standard bank savings accounts.

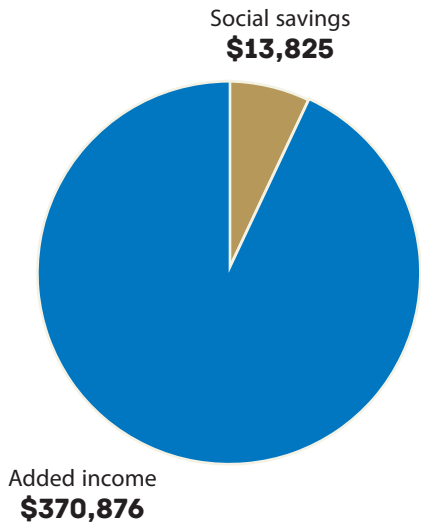
SOCIAL PERSPECTIVE

Society as a whole in Kansas benefits from the presence of Barton in two major ways. The first and largest benefit that society receives is the added income created in the state. As discussed in the previous section, students earn more because of the skills they acquire while attending Barton. Businesses also earn more because the enhanced skills of students make them more productive. Together, higher student wages and increased business output stimulate increases in income across the state, thereby raising prosperity in Kansas and expanding the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of students. Education is statistically correlated with a variety of lifestyle changes that generate social savings across three main categories: 1) health, 2) crime, and 3) unemployment. Health savings include avoided medical costs associated with smoking, alcoholism, obesity, drug abuse, and mental disorders. Crime savings include reduced security expenditure and insurance administration, lower victim costs, and reduced criminal justice system expenditures. Unemployment savings include the reduced demand for income assistance and welfare benefits.

Figure 2 shows the present value of the added income and social savings that will occur in Kansas over the working lifetimes of Barton’s 2012-13 students. Added income amounts to a present value of \$370.9 million due to the increased lifetime incomes of students and associated increases in business output. Social

FIGURE 2. PRESENT VALUE OF ADDED INCOME AND SOCIAL SAVINGS IN KANSAS (THOUSANDS)





savings amount to \$13.8 million, the sum of health, crime, and unemployment savings in Kansas. Altogether, total benefits to society equal \$384.7 million (in present value terms).

State and local taxpayers invested \$17.9 million in Barton during the analysis year. For every dollar of this investment, society as a whole in Kansas will receive a cumulative value of 21.5 in benefits, equal to the \$384.7 million in benefits divided by the \$17.9 million in costs. These benefits will occur for as long as Barton's 2012-13 students remain employed in the state workforce.

TAXPAYER PERSPECTIVE

From the taxpayer perspective, benefits consist primarily of the taxes that state and local government will collect from the added income created in the state. As Barton's 2012-13 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 students' working careers, state and local government will have collected a present value of \$32.7 million in added taxes.

A portion of the savings enjoyed by society also accrues to state and local taxpayers. Students are more employable, so the demand for welfare and unemployment benefits reduces. 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 services reduces. All of these benefits will generate a present value of \$3.8 million in savings to state and local taxpayers.

Total benefits to taxpayers equal \$36.5 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of \$17.9 million—equal to the funding that Barton received from state and local government during the analysis year—yields a benefit-cost ratio of 2.0. This means that for every \$1 of public money invested in Barton, taxpayers receive a cumulative value of \$2.00 over the course of the students' working lives. The average annual rate of return is 5.0%, a solid investment that compares favorably with other long-term investments in both the private and public sectors.

TABLE 2. SUMMARY OF INVESTMENT ANALYSIS RESULTS

STUDENT PERSPECTIVE	
\$153,187	Benefits (thousands)
\$43,683	Costs (thousands)
\$109,505	Net present value (thousands)
3.5	Benefit-cost ratio
14.3%	Rate of return*

SOCIAL PERSPECTIVE	
\$384,701	Benefits (thousands)
\$17,935	Costs (thousands)
\$366,767	Net present value (thousands)
21.5	Benefit-cost ratio
N/A	Rate of return*

TAXPAYER PERSPECTIVE	
\$36,529	Benefits (thousands)
\$17,935	Costs (thousands)
\$18,594	Net present value (thousands)
2.0	Benefit-cost ratio
5.0%	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.

SUMMARY OF INVESTMENT ANALYSIS RESULTS

Table 2 presents the results of the investment analysis for all three of Barton’s major stakeholder groups—students, society, and taxpayers. As shown, students receive great value for their educational investment. At the same time, the investment made by state and local taxpayers in 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 Barton creates value from multiple perspectives. The college benefits Barton Service Area businesses by increasing consumer spending in the service area and supplying a steady flow of qualified, trained workers into the workforce. It enriches the lives of students by raising their lifetime incomes and helping them achieve their individual potential. It benefits society as a whole in Kansas by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students. Finally, it benefits state and local taxpayers through increased tax receipts across the state and a reduced demand for government-supported social services.

ABOUT THE STUDY

Data and assumptions used in the study are based on several sources, including the 2012-13 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.