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Economic Impact of Kalamazoo College

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Executive Summary

The following points summarize the findings of this economic impact analysis of Kalamazoo College.

- In total, all of the activities associated with the presence of Kalamazoo College contribute \$32 million to the Kalamazoo metropolitan area economy and support 685 jobs.
- The college employs 396 workers earning an annual payroll of approximately \$19.6 million; Kalamazoo College students spend \$3.6 million annually in the local community, and out-of-area campus visitors spend approximately \$2 million. Combined, another 289 jobs and personal income of \$6 million are indirectly generated by the presence of the college and the expenditures of students and visitors.

Overview

This paper estimates the economic impact of Kalamazoo College (K-College), a four-year liberal arts college, on the Kalamazoo-Portage metropolitan area.¹ As a residential institute of higher education, K-College has an economic impact on the region through the following three major activities:

1. Operations. As part of its operations, the college directly employs a total of 396 workers in positions including faculty, administration, maintenance, library and research positions, and other support staff. These employees induce other employment in the region through their own personal expenditures. The college also contracts with many local businesses to provide goods and services needed for the operation of the campus.
2. Student expenditures. Throughout the academic year, K-College students spend money at area stores and service-providers; additionally, a portion of the student population lives off-campus and also pays rent for area apartments and other living expenses.
3. Visitor expenditures. The presence of K-College attracts thousands of visitors to the Kalamazoo metro area each year. Major attractions include the annual commencement ceremony, prospective student visits, homecoming, and the annual USTA boys' national tennis tournament.

The next section details the results for each of these activities, as well as the total economic impact of the presence of the college. The final section of this report provides detailed information on the methodology used to estimate the economic impact.

¹ The Kalamazoo-Portage metropolitan area is defined by the U.S. Census Bureau as the counties of Kalamazoo and Van Buren, Michigan.

Results

Table 1 illustrates the primary measures of economic impact estimated for K-College, based on data obtained for the 2010–2011 academic year. In total, the presence of K-College generates 685 jobs in the region and contributes \$32 million to the region’s gross product.

As discussed in the previous section, K-College impacts the economy through three major activities: operations, student expenditures, and visitor expenditures. The college’s ongoing operations generate the largest impact which directly and indirectly support 645 jobs and contribute \$29.5 million to the regional economy. The college directly employs 396 workers with annual wages of approximately \$19.6 million. The relationship between direct and indirect employment is summarized by the employment multiplier of 1.6, which indicates that for every job at K-College, on average another 0.6 jobs are generated elsewhere in the region.

Table 1: Total Economic Impact on the Metropolitan Area

Category of impact	Operations	Student expenditures	Visitors	Total impact
Total employment	645	23	17	685
Direct	396			396
Indirect	249	23	17	289
Employment multiplier	1.6			
Gross regional product (\$ millions)	29.5	1.8	0.6	32.0
Personal income	24.8	0.6	0.3	25.7
Direct wage and salary	19.6			19.6
Indirect	5.2	0.6	0.3	6.1

The second largest impact results from the expenditures of K-College students in the local community. Using data provided by the college, it is estimated that the 1,135 resident students spend approximately \$3.6 million at local businesses. As a result of these expenditures, 23 year-round jobs are supported in the region and \$1.8 million is contributed to the regional economy. A detailed explanation of the calculation of student (and visitor) expenditure estimates is provided in the next section of the report.

Finally, K-College also impacts the regional economy by attracting visitors who would not otherwise travel to the region. During the academic year, it is estimated that visitors to the campus spent around \$2 million purchasing goods and services in the region. Estimated visitor expenditures are based on visits associated with four major campus events: commencement, homecoming, the USTA boys’ national tennis tournament, and summer campus tours by prospective students. Because most K-College visitor expenditures are mostly driven by special events, the duration of the impact is quite concentrated; for example, commencement spending takes place over a single weekend each spring and USTA spans no more than 10 days. Still,

these visitor expenditures generate the equivalent of 17 year-round jobs and boost the size of the regional economy by approximately \$600,000.²

Estimation Procedures

The economic impact of K-College was calculated using a regional econometric model developed by Regional Economic Modeling, Inc. (REMI), which has been tailored to the Kalamazoo-Portage metropolitan area.³ The REMI model is a general equilibrium input-output model (in addition to other econometric functions), which allows for the dynamic simulation of economic impacts based on detailed inter-industry relationships and income effects within a given region. Put simply, the REMI model allows the simulation of two different economic realities: one where K-College exists and one where it does not exist. The difference between these two scenarios constitutes the overall economic impact.

Of course, modeling the economic impact of K-College requires making a number of estimates and assumptions, since some aspects of the college's true economic impact cannot be directly observed. The following summarizes how data for each major college activity were obtained. In all cases where data records from K-College were used, the values represent the 2010–2011 academic year.

- Direct college employment. K-College provided records on total employment and wages by major occupation category for this report.
- Major procurement expenditures. K-College provided data on the amount paid and source of major expenditures. Although most supplies are purchased on the national market (e.g., textbooks, computers), the college does have a major local contract for its food services. Data on major research grant awards were also provided by the college. Major local expenditures that exceeded the basic assumptions included in the model were included as additional intermediate demand in the estimation procedure.
- Student expenditures. Student enrollment numbers for 2010–2011 were provided by K-College and expenditure estimates were taken from a small survey conducted by the college.
- Visitors. Estimates of the number of visitors associated with commencement and prospective student visits were provided by the college. Data on USTA attendance were provided by college's USTA coordinator. Estimates of average visitor expenditure by trip length in Michigan were taken from a report to MEDC on state tourism activity.⁴

In total, data provided by K-College indicates an enrollment of 1,369 students and direct employment of 396 workers earning an annual payroll of approximately \$19.6 million. Because

² As an illustration of the difference between jobs generated at one-time events and year-round jobs, 36 workers employed during a 10-day period would be roughly equivalent to one year-round job.

³ For more information on the REMI model, see <http://remi.com/>.

⁴ Costa, Bernardo. 2009 Visitor Profile Prepared for the Michigan Economic Development Corporation. (2010: D.K. Shifflet & Associates.) Retrieved on August 29, 2011 from http://travelmichigannews.org/cm/attach/7FCE50AA-1D21-411D-A4CE-B2C55EE09612/2009_Michiganvisitorprofile.pdf.

K-College is a unique, competitive liberal arts college, it is assumed that none of the current student body would otherwise be present in the region if not for the presence of the college. Even if the students’ families live in the Kalamazoo metropolitan area, it is assumed that they would choose to attend other small liberal arts schools elsewhere if K-College did not exist. Indirect impacts generated by the college’s operation are assumed to be standard for the private colleges industry; however, adjustments to the model were made to compensate for the college’s actual payroll wages and the use of a local contractor for food services—an annual expenditure of approximately \$2.2 million.

Of the total student body of 1,369 students, 234 were taking part in the study abroad program or similar activities designed to give students a diverse educational experience. The remaining 1,135 students who were present on the Kalamazoo campus during the academic year constitute the group that has an impact on the local economy through their expenditures. Because K-College students attend a unique private college, their expenditures are considered to be “export” dollars in the sense that the money would not be spent in the region if not for the presence of the college.

The monthly spending estimates listed in Table 2 were collected by K-College through a small, convenience sample survey. In total, it is estimated that K-College students spend approximately \$3.6 million in the Kalamazoo metropolitan area during the academic year. The calculation of expenditures for on- and off-campus student residents is calculated in Table 2. All calculations assume that K-College students are only present in the Kalamazoo area for nine months. However, it is likely that at least some off-campus resident students remain in the area throughout the year; therefore, these estimates should be considered conservative.

Table 2 Estimation of Student Expenditures in Kalamazoo

Category	Number	Monthly spending est.	Nine-month total
On-campus students	815	\$200	\$1,467,000
Off-campus students			
Rent	320	\$450	\$1,296,000
Groceries	320	\$100	\$288,000
Entertainment	320	\$60	\$172,800
Restaurants	320	\$65	\$187,200
Movies and other	320	\$67	\$192,960
Students living away / study abroad	234	\$0	\$0
Total local student expenditures during the academic year			\$3,603,960

SOURCE: K-College enrollment data and student survey.

In total, it is estimated that nearly \$2 million in local tourism expenditures are made annually by visitors from outside the area who come to visit K-College for commencement, homecoming, prospective student visits, and the USTA tournament. Other visits to K-College, such as associated with smaller campus activities or family and friends visiting students are not tracked

and have not been included; therefore, these estimates should be considered a conservative representation of visitor spending.

Table 3 details the calculation of tourism expenditures in the Kalamazoo-area that are generated by the major annual events at K-College. The impact calculations assume that 1,000 visitors will spend \$410 each in the region while in the area to participate in the school's graduation activities. Visitors associated with prospective students were estimated by the college to total 1,500 each year; of these, we assume that half stay overnight in local accommodations and half visit the area only during the day for a combined expenditure assumption of \$363,750. Homecoming visitors are estimated to number 700 persons with an average total local expenditure of \$114,800. Homecoming visitors are assumed to be individual out-of-town visitors spending an average of \$164 during their stay.

Table 3: Tourism Estimates

Type of visit	Visitors	Average trip expenditure	Total
Commencement ceremony (avg. one-night group stay)	1,000	\$410	\$410,000
Prospective student visits (assumes less than one-night on average)	1,500		
Half staying overnight locally (assumes avg. size party)	750	\$410	\$307,500
Half visiting only during the day	750	\$75	\$56,250
Homecoming visitors (single visitors, staying one night)	700	\$164	\$114,800
USTA Visitors			
Player-associated groups staying 4–7 days	425	\$1,210	\$514,250
Coaches, USTA officials, umpires, and other officials	315	\$1,210	\$381,150
Day-trip visitors to view tournament (Est. 15% of 20k attendance)	3,000	\$75	\$225,000
Total, All K-College tourism			\$2,008,950

Source: K-College; 2009 Tourism Profile Presented to the MEDC (see footnote 2); Upjohn Institute estimates.

Finally, spending by visitors associated with the USTA tournament at K-College was estimated at \$1.1 million, as shown in Table 3. Groups of visitors associated with players or USTA-related staff, such as coaches and officials spend the most locally during the tournament week. Each player or official is assumed to travel with a group averaging 2.5 persons in size, which will spend \$1,210 during a typical 4- to 7-day stay. Expenditures are assumed to be distributed across a typical mix of expenditures for nonresident visitors as determined by the model.

A typical USTA tournament at K-College also attracts cumulative attendance of 20,000 spectators, of which 15 percent (3,000) are assumed to travel from outside the area. These visitors are assumed to be primarily day-trip visitors with an average daily expenditure of \$75 each. The remaining spectators are assumed to be residents of the Kalamazoo metropolitan area; their spending is not considered to be part of the economic impact of K-College, since residents would simply spend their money on other entertainment options in the region if the USTA tournament did not take place locally.

In total, the impact estimate assumes that K-College attracted an annual total of approximately \$5.6 million in local expenditures by visitors. The expenditures of students and visitors are combined with the impact generated by the operation of the college to create the total economic impact associated with the presence of K-College in the Kalamazoo metropolitan area.