2024

INSTITUTIONAL RESEARCH & EFFECTIVENESS

BUTLER COMMUNITY COLLEGE

A College and its county: Modeling the economic impact of Butler Community College on Butler County, Kansas

DR. ESAM SOHAIL MOHAMMAD
ASSOCIATE VICE PRESIDENT
INSTITUTIONAL RESEARCH & EFFECTIVENESS

Abstract

Community colleges provide much needed services to their communities by being the affordable destination of choice for higher education, workforce development, and cultural programming. They are also important anchors of economic vitality for their communities[1]. The purpose of this economic impact analysis report is to provide a quantitative economic measurement of the overall contribution of Butler Community College to Butler County, Kansas, specifically as it relates to the return on investment (ROI) for the taxpayers of the county.

This report serves as an overview of the annual economic impact that Butler Community College has on Butler County, Kansas. Though it is intended as a complement to the larger economic impact study completed by outside vendors that focus on the south-central Kansas region and the state as a whole, this analysis uses a different model (the "Ryan Model") that is specifically developed for measuring the short-term impact of a community college on its home county. Thus, it is not advised that readers consider this merely as a geographic subunit of the larger studies since the measurements, metrics, and calculations are defined differently here. Butler's last county-level economic impact study in 2019 was done using this same model; to keep continuity for comparison purposes, we are not changing it this year. Our study finds that in 2023, the college continues to have a significant and positive impact on the Butler county economy through its operational functions, employment opportunities, and student and visitor spending.

Acknowledgments

Several Butler teammates assisted in completing this economic impact analysis report including Kerry Potter, Director of Accounting, Tiffany Rhodes, Assistant Director of Human Resources, and Rodney Dimick, Digital Production Manager at College Relations and Marketing.

Executive Summary

In the Fiscal Year 2023 Butler Community College:

- Had an initial economic impact of $49.4 million in Butler County, Kansas
- Had a cumulative economic impact of $70.7 million in Butler County, Kansas
- Provided a return on investment (ROI) of $3.31 for every $1.00 from Butler County, Kansas taxpayers when measured by the initial economic impact
- Provided a return on investment (ROI) of $4.73 for every $1.00 from Butler County, Kansas taxpayers when measured by the cumulative economic impact
- Supported 382 jobs for Butler County residents, including 44 indirect jobs
- Provided employment to 236 student workers
- Contributed 2% of the county's gross regional product (GRP)

Introduction

The college's initial economic impact on the county consists of four broad segments of economic output:

1. College operations in terms of buying of goods and services in the county
2. Spending from wages and salaries earned by college employees living in the county
3. Student spending in the county
4. Visitor spending in the county

The afore-mentioned initial economic impact also drives additional economic activity, known as indirect impact or 'ripple effect', as some of those dollars circulate multiple times within the county (the economic multiplier effect). The sum of the initial and indirect impacts provides the cumulative economic impact.

At the same time, the taxpayers of Butler County financially support the college through two segments of investment:

1. Local appropriations directly via the county mill levy
2. Portion of state appropriations grant indirectly attributed to the county

The County and the College

Butler is the 8th most populous county in Kansas and located in the southcentral part of the state.

In Table 1 below a snapshot of the county's economy is provided.

Table 1
An economic snapshot of Butler County, Kansas for FY 2023

Population	68,240
Gross Regional Product (GRP)	$ 3.23 billion
Land area	1,428 square miles
Number of Industries	230
Households	25,936
Percentage of adults with an associate or bachelor's degree	19
Industries employing largest number of county residents	Education, fast-food restaurants, real estate, ranching/farming, family services

Source: IMPLAN[2] and Lightcast[3]

Butler Community College is a comprehensive community college that was chartered in 1927 by the citizens of Butler County and has been in continuous operation since then. It is accredited by the Higher Learning Commission with the most recent decennial accreditation affirmed in 2023.

In Table 2 below, a snapshot of the College's operations is provided.

Table 2

A snapshot of Butler Community College Operations for AY 2023

Annual headcount for credit courses	9,455
Annual credit hours	132,097
Programs of Study	Almost 100
Total number of Employees	More than 700
Degrees and certificates awarded	1,327
Industry Recognized Credentials awarded	More than 800
Popular majors	Business, nursing, psychology, information technology, culinary arts
Specialized services available	Veterans, disability, first-generation

Source: Butler Datahub[4] and internal records

The Model and Methodology

The traditional economic impact model[5] developed by Caffrey and Isaacs for the American Council of Education was subsequently modified[6] by Ryan and Malgieri to better suit the needs and resource constrains of community colleges. With minor modifications this is the model that has been used in this study, with some contextual data sourced from IMPLAN[2], Lightcast[3], and some necessary extrapolations and assumptions made.

The economic output of the college is shown in Table 3 below, categorized by the four segments of the model and providing the primary data sources, principal activities, and monetary value of each of the segments.

Table 3

Final Demand Output of the Ryan Model at Butler Community College

Output segment	Principal Data Source	Activities	Value
College operations	IPEDS Finance; internal records	Purchase of goods and services	$6,831,053
Employee spending	IPEDS Finance; Consumer Expenditure Survey (BLS)	Consumer spending not including mortgage or utilities	$6,250,094
Student spending	Financial Aid Cost of Attendance disclosures	Expenditures not including tuition and fees	$35,624,114
Visitor spending	Internal impact studies from athletics and performing arts attendance	Tickets, food, incidentals, and lodging	$744,697
Total			$49,449,958

The investment input in the model, consisting of two segments, is detailed in Table 4 shown below.

Table 4

Investment Input of the Ryan Model at Butler Community College

Investment segment	Principal Data Source	Revenue Stream	Value
Local appropriations	IPEDS Finance	County mill levy	$14,535,296
State appropriations attributable to county[7]	IPEDS Finance	State grant	$414,997
Total			$14,950,293

The calculation of the return on investment (ROI) is as follows:

$$ROI_{(initial)} = \frac{Total\ Output}{Total\ Input} = \frac{\$49,449,958}{\$14,950,293} = \$3.31$$

$$ROI_{(cumulative)} = \left(\frac{Total\ Output}{Total\ Input}\right) \times Economic\ Multiplier = \left(\frac{\$49,449,958}{\$14,950,293}\right) \times 1.43 = \$4.73$$

Assumptions, Estimates, Limitations

Several reasonable assumptions are relevant to this study. Firstly, our Human Resource records indicate approximately 45% of our employee base is resident in Butler County. Secondly, we estimate that approximately 27.7% of our students reside in the county; this includes residents paying in-district tuition rates and students from states other than Kansas who mainly reside in the dormitories or rental units; this computation specifically excludes students who are considered 'guests' or are residents of the El Dorado Correctional Facility or have classes

exclusively at the Winfield facility. Thirdly, we conservatively assume about 3% of the state appropriations to Butler Community College to be sourced from the taxpayers of Butler County via various state taxes. We further estimate that approximately 16% of the college's purchase of goods and services is sourced from Butler County residents and businesses.

The original literature of the Ryan Model suggested an economic multiplier of a factor between 1.9 to 3.0 for use in similar studies. However, based on county output modeling in IMPLAN[2] we use the more conservative factor of 1.43 as the economic multiplier to calculate the cumulative ROI in this study. Such a cautious approach shows sensitivity towards the notion that some of the effects of this impact could 'leak' into neighboring metropolitan areas of a larger economic footprint. Further, for the purpose of calculating indirect jobs we use a factor of 1.13 as a jobs multiplier; this factor is sourced from the most recent Lightcast[3] county input-output dataset for Butler County, Kansas.

Finally, we are aware of a small but respectable school of thought in economics that is skeptical of the very concept of economic impact studies; these concerns often revolve around the treatment of perceived opportunity costs. While space and time do not permit us to get into a philosophical discussion of opportunity costs, it is important for the authors of such studies to ameliorate some of the concerns by being transparent as to the assumptions, calculations, and data sources[8]. We have endeavored to provide such transparency throughout this report.

Long-term impact

While the previous sections focused on quantifiable short-term economic impact of the college on its home county, the longer-term economic effects are equally important to get a full picture of the college's role in shaping the prosperity of the county. Three of those long-term effects are described briefly below:

IMPLAN[2] data estimates that the county receives tax revenues of $82,278 from the aggregate *impact* of college operations and spending by employees, students, and visitors. Such taxes often help keep the county's citizen safe. This amount supports, for example, the starting salaries of a sheriff's patrol officer plus a logistics coordinator for the county's emergency medical service[9].

Families in the county realize savings of hundreds of thousands when their children complete the first two years of a baccalaureate degree locally. Our analysis of comparative tuition rates suggest that a Butler county family can save an average of more than $23,000 in tuition and fees by sending two children to Butler Community College instead of a state university for the first 60 hours of a baccalaureate degree. This is especially important considering the articulation agreements which allow for a smooth transfer of most general education courses between the state's community colleges and public universities[10]. That saving of $23,000 is equivalent to two years' worth of grocery bills for a family of four in Kansas[11].

Not all individuals seek a baccalaureate degree. In fact, many individuals choose to go into the workforce faster than a baccalaureate degree would accommodate; Butler's array of workforce-ready associate degrees and certificates provides those of our neighbors who choose this path to add job-ready skills and mid-career reskilling to their professional repertoire. A Butler county citizen with a workforce ready certificate or associate degree will earn up to $1.9 million dollars more over her or his lifetime compared to someone with a high school diploma alone. Dispersed over a 40-year working life, this represents a 'premium' of $47,500 a year, representing the potential for significant advancement into the middle class and its attendant benefits for the quality of life[12].

Conclusion

Public higher education institutions are public goods. Taxpayer investment in maintaining these institutions should come with quantifiable returns in educational, social, and economic measures. This study has taken a conservative approach to measuring quantifiable economic returns of the investment made by Butler County taxpayers in their college. The results of the study suggest that as the principal sponsors of Butler Community College, the citizens of Butler County can rest assured that their college is a good investment for their taxes, toil, and treasure.

REFERENCES

1. Christopherson, K.A. (2019). *Community Colleges as Economic Engines.* Rowman & Littlefield.
2. IMPLAN is a cloud-based economic impact modeling software which sources county level economic data from various US Government databases that are further augmented by proprietary methods
3. Lightcast (formerly known as EMSI) is a cloud-based database that provides county level demographic and jobs data in a near-real time environment
4. The Butler Datahub is the consolidated repository of regularly updated academic, financial, and regional economic information available on Butler's website at butlercc.edu/datahub
5. Caffrey, J. and Isaacs, H. (1971). *Estimating the Impact of a College or University on the Local Economy*. American Council on Education
6. Ryan, G.J. and Malgieri, P. (1992). *Economic Impact Studies in Community Colleges: The Short Cut Method, Second Edition*, National Council for Resource Development
7. Of the total state grant of $19.6 million to the college, $414,997 or 2.11% is attributed to Butler County sourced taxes based on *Kansas Department of Revenue Annual Report 2023* that details the county sourcing of all state taxes
8. Ordway, D. (2018, April 17). Economic impact studies: Should journalists rely on them? *The Journalists' Resource.*
9. Butler County, Kansas. (2023). *Butler County Pay Plan*.
10. Kansas Board of Regents. (2024). *Tuition and Required Fees Annual Comparison*
11. Commens, E. and Stebbins, S. (2020). Cost of Living in Kansas. *24/7 Wallstreet.com*
12. Carnevale, A., Cheah, B., and Wenzinger, E. (2021). *The College Payoff: More Education Doesn't Always Mean More Earnings*. Georgetown University Center on Education and the Workforce.