

W. Frank Barton School of Business

# Center for Economic Development and Business Research

## Wichita Healthcare Collaborative Impact

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WICHITA STATE  
UNIVERSITY

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Contents

**Executive Summary** ..... 2

**Impact of Collaboration** ..... 3

**Impact on Downtown** ..... 4

**Acknowledgment** ..... 5

**Economic Impact model**..... 5

**Terms and Definitions** ..... 5

## Executive Summary

The scope of this study is to understand the potential economic benefits of a health collaborative with the University of Kansas Medical Center, Wichita State University, and WSU Tech on the Wichita regional and downtown economies.

The benefits of having a healthy population pervade every facet of society and affect the day-to-day lives of individuals that live within it. The quality of healthcare provided to members of a society can have a substantial impact on its economy, as well. Studies have shown that there is a positive correlation between spending on healthcare and income, GDP, and labor productivity, and that increases in spending have correlated with increased economic performance.<sup>1</sup> In addition, an adequate supply of healthcare professionals helps ensure that members of a society can achieve the best health outcomes possible and live long, quality lives.

This study shows the economic benefits of a health collaboration with the University of Kansas Medical Center, Wichita State University, and WSU Tech on the Wichita regional and downtown economies. The following are some highlights of the study:



<sup>1</sup> Viju Raghupathi, "Healthcare Expenditure and Economic Performance: Insights From the United States Data," *Front Public Health*. May 2020 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7237575/> (accessed April 30, 2022).

## Impact of Collaboration

To measure the economic impact of the healthcare collaborative on the Wichita economy, this study used a method called economic contribution, which measured the value of all activities instead of identifying the net new portion. At the time of this study, the entities involved have recognized that there will be a number of benefits like efficiencies, improved quality, and increased access to equipment but have not reached a point to fully outline those changes in the level of detail needed for this report.

The economic contribution of the healthcare collaborative, as measured in this report, includes employment, payroll, other operating expenses, and student spending. Construction and all other economic gains from the collaboration were excluded from this impact.

The Center for Economic Development and Business Research requested each division's current payroll and other operating expenses. The economic impacts are based on these estimates. It should be noted that the future costs could be larger or smaller than what was used in this impact study. However, the structure of how that spending affects the regional economy is not expected to differ in any significant way.

Estimated Budget				
	WSU	WSUTech	KU	Total
Other operating	\$ 1,525,172	\$ 485,000	\$ 13,422,817	\$ 15,432,989
Payroll	\$ 10,816,548	\$ 2,045,000	\$ 45,852,524	\$ 58,714,072
<b>Total</b>	<b>\$ 12,341,720</b>	<b>\$ 2,530,000</b>	<b>\$ 59,275,341</b>	<b>\$ 74,147,061</b>

Source: CEDBR

This study used the annual estimated student spending derived from the College Board, which included housing, utilities, food, transportation, and miscellaneous expenses. To prevent double-counting, all expenses for books, supplies, tuition, fees, and housing for those living on campus were removed. Each entity provided the Center with student enrollment over the last four years. The Center used the most recent year to calculate the student spending impact on the economy. It should be noted, however, that the 2021 enrollment was the lowest level during this period. In addition, one might expect that a new downtown initiative would likely increase enrollment; therefore, the estimates generated here should be considered conservative.

Student Enrollment				
	2018	2019	2020	2021
KU Wichita	313	302	293	286
WSU College of Health Professions	2,219	1,981	1,937	1,873
WSU Tech	793	881	820	830
<b>Total</b>	<b>3,325</b>	<b>3,164</b>	<b>3,050</b>	<b>2,989</b>

Source: CEDBR, WSU, KU

Based on the estimated annual spending of \$74.1 and enrollment of 2,989 students, the healthcare collaborative is expected to support 1,594 jobs with a total income of \$104 million. A portion of those jobs was from the three organizations and associated with direct student spending. Because of the local purchases from the universities, regional firms in the area are expected to benefit from the activity. This

study estimated that benefit, excluding the retail spending from students, to support 140 jobs and \$21.7 million in annual sales. The overall economy still benefits from the healthcare collaboration, as household spending further stimulates the economy. This study estimated that additional spending accounts for 421 jobs with a total income of just over \$19.2 million.

<b>Economic Impact</b>				
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment	1,033	140	421	<b>1,594</b>
Income	\$78,311,683	\$6,396,535	\$19,246,139	<b>\$103,954,357</b>
Output	\$94,336,525	\$21,716,460	\$60,900,031	<b>\$176,953,016</b>

Source: CEDBR

The distribution of those jobs, income, and output is concentrated within the retail trade and services sectors; however, transportation, information, and public utilities (TIPIU) are also expected to have a significant impact.

<b>Industry Impact</b>			
	<b>Employment</b>	<b>Income</b>	<b>Output</b>
Total	1,594	\$103,954,357	\$176,953,016
Agriculture	1	\$21,112	\$85,577
Mining	2	\$64,499	\$540,907
Construction	9	\$517,806	\$1,889,204
Manufacturing	3	\$186,491	\$2,113,119
TIPIU	41	\$2,558,932	\$9,789,812
Trade	648	\$20,748,840	\$58,808,027
Service	886	\$79,498,887	\$102,928,927
Government	4	\$357,790	\$797,443

Source: CEDBR

### Impact on Downtown

Based on the market characteristics, downtown capacity, and recent growth, this study further broke out the impact based on the potential value it is likely to have within the central part of the city. The capture rate of employment was the highest of the three categories, as most direct jobs will be associated with the combined organizations. Increasing the downtown market by at least 1,349 people will significantly affect the retail and foodservice sector during the day, creating an increased vibrancy.

Because the continued increased retail property over the last few years will fit the market characteristics of both the students and faculty, it is expected that a significant share of the students and some of the faculty will move to the downtown area. The expected increased demand will capture a larger share of the wage income, further driving economic growth for retail, food services, and other personal services within the downtown market. It should be noted that this study did not capture the additional value of increased demand on the property; however, one would expect that this type of shift would put continued positive upward pressure on the residential and commercial markets.

The economic model does show some additional supply chain benefits from the location of the health collaborative within the downtown market; however, that effect was relatively minor compared to the flow of employment and income.

Economic Impact		
	Downtown	Total
Employment	1,349	1,594
Income	\$43,967,376	\$103,954,357
Output	\$100,426,528	\$176,953,016

Source: CEDBR

### Acknowledgment

The following people were responsible for the successful completion of the impact study, which includes the data collection and economic modeling. For data collection, the following three people assisted with the information related to KU: Christopher McCracken, Jeff Dewitt, and Robert McCormack. Sheree Utash provided the data for WSU Tech, and Gregory Hand provided the information for WSU.

Zach Gearhart coordinated the communication with CEDBR staff and the data providers, and he assisted with the initial project scope and design.

At Wichita State University's Center for Economic Development and Business Research (CEDBR), Jeremy Hill, Director of CEDBR, served as the principal investigator and provided theoretical, technical expertise, data collection, and project management. Alex Hagerott and Jonathan Norris assisted with the research, data collection, and writing.

The Center for Economic Development and Business Research, a unit of the W. Frank Barton School of Business at Wichita State University, is responsible for any errors in this report. Inquiries may be directed to: Center for Economic Development and Business Research, 1845 Fairmount St. Wichita, KS 67370. The Center can be reached by telephone at 1-316-978-3225 or through the website at [www.CEDBR.org](http://www.CEDBR.org).

### Economic Impact model

The impact model used to estimate the economic effects of the logistics industry on the regional and state economies was IMPLAN (Impact analysis for PLANning). IMPLAN is one of the most commonly used models for impacts similar to this project. Alternative models are less common in practice and tend to involve a higher level of customization. The advantage of using this model is that it is broadly available and uses straightforward methodologies. Others could replicate the study or even develop similar studies to provide reliability or comparability.

### Terms and Definitions

- **Direct impact** – A direct effect measures an industry's initial change or value in terms of dollars, jobs, or wages.
- **Indirect impact** – An indirect effect measures the supply chain impact from an initial change or direct impact.

- **Induced impact** – An induced impact measures the household effect from increased demand from an initial change or direct effects.
- **Labor income impact** – Labor income includes all forms of employment income and encompasses employee compensation and proprietor income.
- **Location quotient** – A location quotient measures an industry's relative concentration.
- **Multiplier** – A multiplier captures the inter-industry effects of a change to a primary sector. A value greater than one indicates a positive impact on the economy for every dollar or job created.
- **Output impact** – An output effect measures the total value of a business's production and equals revenues.
- **Tax on corporations** – Corporation taxes include dividends and corporate profits.
- **Tax on households** – Household taxes include income, fines and fees, motor vehicle license, property, and fishing and hunting.
- **Tax on production** – Production taxes include sales, property, motor vehicle licenses, severance, other related taxes.
- **TIPU sector** – The TIPU sector includes transportation, information, and public utilities.
- **Total impact** – A total effect adds the direct, indirect, and induced effects to estimate the full impact on a regional economy.