

Nebraska's Independent Colleges and Universities: Spurring Economic Growth and Brain Gain for the State and Its Counties



Produced for the Council of Independent
Nebraska Colleges Foundation (CINCF)

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Preface

Nebraska's Independent Colleges and Universities: Spurring Economic Growth and Brain Gain for the State and Its Counties

The subsequent analysis was prepared for the Council of Independent Nebraska Colleges Foundation (CINCF) by Goss & Associates, Economic Solutions. Findings remain the sole property of CINCF and may not be used without prior approval of this organization. The authors' biographies are provided in Appendix F. Please address all correspondence to:

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Goals of the study

The objective of this study is to estimate the impact of Nebraska's independent universities and colleges on the state economy and on the local economies in which each operates. The study estimates overall impacts and also calculates impacts across 20 major industries, and 93 counties in the state.

Using input-output multipliers, the study provides sales, earnings and job impacts. In addition, the study examines the impact of Nebraska's independent universities and colleges on yearly state and local tax collections.

The study pays particular attention to the "brain gain" produced by Nebraska's independent colleges and universities by specifically estimating their yearly economic impact via the retention of Nebraska's college bound students and via the attraction of college bound students from other states.

All impact estimates contained in this study, unless otherwise indicated, are in 2018 dollars.

The Goss & Associates research team thanks the Board of Directors, the staff of CINCF, and staff from each of the state's 13 independent colleges and universities for their important input. Any errors, omissions, or misstatements are solely the responsibility of Goss & Associates and the principal investigator.

¹This study was completed independent of Creighton University. As such, Creighton University bears no responsibility for findings or statements by Ernie Goss, Scott Strain, or Goss & Associates, Economic Solutions.

Glossary

Term	Definition
Academic year	Unless specified otherwise, all years are academic years. Thus, 2017 indicates the 2016-17 academic year.
Direct impacts	The set of expenditures applied to the predictive model for impact analysis. For example, direct impacts include independent university employee salaries.
Discounted	Unless stated otherwise, all financial data in this report are expressed in 2018 dollars.
IMPLAN multipliers	Using classic input-output analysis in combination with region specific Social Accounting Matrices and Multiplier Models, IMPLAN provides a highly accurate and adaptable model for its users. Based on an injection of direct dollars into a geographic area, IMPLAN provides estimates of the total impact from the injection.
Input-output analysis	A type of applied economic analysis that tracks the interdependence among various producing and consuming sectors of an economy.
Jobs supported	A job equals the annual average of monthly jobs in that industry. Thus, 1 job lasting 12 months = 2 jobs lasting 6 months, or = 3 jobs lasting 4 months each.
Labor income	Wages and salaries plus self-employment income.
Nebraska neighbors	States geographically contiguous to Nebraska. Includes Colorado, Iowa, Kansas, Missouri, South Dakota, and Wyoming.
Overall sales impacts, or total impacts	Amount of additional sales, including retail sales, wholesale expenditures, construction sales, etc. It is analogous to gross domestic product (GDP) but will include some double counting and will thus exceed GDP.
Private workers	All those working, excluding government workers, state, local, and federal.
Productivity growth	Growth in Gross Domestic Product (GDP) per worker.
Self-employment income	Income of proprietors of non-incorporated companies including attorneys, accountants, and consultants.
Spillover impact	Impacts in businesses and industries are tied indirectly to independent university spending. For example, wholesale firms that sell to retailers serving independent universities experience spillover impacts.
Wages and salaries	The total payroll cost of the employee paid by the employer. This includes wage and salary, all benefits (e.g. health, retirement, etc.) and employer paid payroll taxes (e.g. employer side of social security, and unemployment taxes).

Executive Summary

Nebraska's Independent Colleges and Universities: Spurring Economic Growth and Brain Gain for the State and Its Counties

Major Findings of Study²

Nebraska's 13 independent colleges and universities have made, and continue to make, significant contributions to the Nebraska economy. For 2017, the state's 13 independent colleges and universities:

1. Enrolled Nebraska residents with little taxpayer support. For 2017 alone, this saved the Nebraska taxpayer an estimated \$262.4 million.
2. Recruited and enrolled 13,247 students from outside the state. It is estimated that approximately 51.6 percent of these students graduated and remained in the state. This generated a "brain gain" of approximately \$373.7 million of wages and salaries and \$78.2 million of state and local taxes in 2017 alone.
3. Generated a total impact of \$1.43 billion, wages and salaries of \$573.2 million, and self-employment income of \$44.7 million. Additionally, 13,887.1 jobs were supported and \$53.9 million in state and local taxes were produced by the spending of the 13 institutions and their students.

I. Nebraska's Independent Colleges and Universities: An Overview

- A. For equivalent annual budgets, independent universities and colleges contribute more economically to the state than equivalent tax-supported institutions. This conclusion is based on two factors:
 1. Independent higher education contributes more to "brain gain" because a higher percent of students come from outside the state than equivalent size public higher education institutes.
 2. State and local governments levy taxes on citizens and businesses to support public post-secondary institutions. Other factors unchanged, this drains resources from alternative uses and industries in the state.
- B. Three of Nebraska's 100 largest private employers are independent universities.
 1. In terms of employment size, each of Nebraska's independent colleges and universities ranks among the top five percent of the state's private establishments.
 2. Nine of the state's 13 independent colleges and universities rank among the top one percent of Nebraska's private establishments in terms of employment size.

In 2017, Nebraska spent \$11,880 per FTE on public higher education, which pushed the state ranking to the sixth highest in the nation.

²Unless stated otherwise, all impacts are expressed in 2018 dollars.

Executive Summary

- C. In 2017, Nebraska spent \$11,880 per FTE on public higher education, which pushed the state ranking to the sixth highest in the nation.
1. Among Nebraska's contiguous states, only Wyoming spent more heavily per FTE on public higher education than Nebraska.
 2. In 2017, the Nebraska taxpayer would have saved approximately \$253.5 million if state and local spending on higher education per FTE matched that of the U.S.
- D. By enrolling and educating Nebraska residents, the state's independent colleges save the Nebraska taxpayers significant state and local tax assessments.
1. In 2017, independent colleges enrolled 22,091 students who resided in Nebraska before matriculating at Nebraska independent colleges.
 2. It is estimated that by enrolling and educating Nebraska residents, Nebraska's independent colleges and universities saved the Nebraska taxpayer approximately \$158.1 million in 2017 alone.³
- E. Nebraska ranked 35th in the U.S. in terms of public support per capita for independent higher education.⁴
1. On average, U.S. states supplied independent colleges with \$8.82 per capita while Nebraska provided a much lower \$2.22 per capita.
 2. Assuming Nebraska provided the same spending per capita as the U.S., Nebraska would have been required to spend an additional \$12.7 million on its 13 independent colleges and universities in 2017.

Among Nebraska's contiguous states, only Wyoming spent more heavily per FTE on public higher education than Nebraska.

It is estimated that by enrolling and educating Nebraska residents, Nebraska's independent colleges and universities saved the Nebraska taxpayer approximately \$158.1 million in 2017 alone.



³This estimate is based on average Nebraska taxpayer support of \$11,880 per student.

⁴Full-time equivalent data were not available for independent higher education.

Executive Summary

II. Nebraska's Independent Colleges' and Universities' Contribution to Brain Gain.

- A. Historically, Nebraska has suffered from the loss of educated individuals to other states via migration, termed "brain drain."
 - 1. In 2015, only six states and the District of Columbia lost more residents to migration than Nebraska.
 - a. U.S. Census data show that in 2015 Nebraska had an accumulated net loss of 178,889 individuals.⁵ This is costly for the state, especially since migration is a selective process with more educated and younger workers dominating interstate movers.
 - b. In 2015, there were 664,758 individuals born outside Nebraska, but living in the state. On the other hand, there were 843,647 individuals born in Nebraska living in other states.
 - c. The cost of this accumulated brain drain of college graduates for the state in 2015 was approximately \$5.0 billion in lost wages and salaries, or 11.0 percent of total state wages and salaries for 2015. This results in a loss of an estimated \$1.1 billion in state and local tax collections for 2015 as a result of the net loss of college graduates to other states over the previous decades.
- B. Nebraska's independent colleges and universities have reduced the magnitude of the state's brain drain and contributed to a brain gain.
 - 1. The state's independent colleges and universities recruited 13,247 students from other states in 2017. Of this total, it is estimated that 51.6 percent will remain in the state upon graduation.⁶
 - 2. As a result, it is estimated that Nebraska's 13 independent colleges and universities contributed approximately \$373.7 million to wages and salaries, and \$78.2 million to state and local tax collections via brain gain in 2017.
- C. Previous research has found education to be significantly and positively related to the likelihood of volunteering. Furthermore, the completion of more years of education was associated with greater odds of volunteering.
 - 1. On average, it was found that each independent college or university in the state provided 741 student hours and 6,057 faculty/staff volunteer or unpaid hours for the community.
 - 2. For 2017, Nebraska's independent colleges and universities provided total student volunteer services valued at \$4.5 million and faculty/staff volunteer services valued at \$36.9 million.

The state's independent colleges and universities recruited 13,247 students from other states in 2017. Of this total, it is estimated that 51.6 percent will remain in the state upon graduation.

⁵In 2015, the number of individuals born in Nebraska living outside the state minus the number of individuals born outside the state but living in Nebraska.

⁶Both independent and public higher education institutes have experienced phenomenal growth in the on-line delivery of courses. As a result, a higher and higher share of students reside one state taking classes in another. This is the case for Nebraska's independent colleges and universities. However, the "brain gain" statistics presented here were based on where graduating students reside after completion of their degrees. Thus, "brain gain" estimates presented here are not influenced by on-line student matriculation.

Executive Summary

III. The Economic Impact of Nebraska's 13 Independent Colleges and Universities.

- A. During the five-year period ending in 2017⁷, independent universities and colleges in Nebraska injected over \$4 billion into the state economy, or an annual average of over \$800 million. In 2017, the 13 institutions injected \$841.5 million into the state economy.
 - 1. For the five-year period, operational expenditures totaled \$3.5 billion and capital expenditures added another \$426 million.
 - 2. For the period 2013 through 2017, non-education related student spending added approximately \$115.9 million.
- B. Direct and spillover economic impacts for 2017 from Nebraska's independent colleges and university spending were:
 - 1. Total impact of \$1.43 billion.
 - 2. Wages and salaries impact of \$573.2 million.
 - 3. Self-employment income impact of \$44.7 million.
 - 4. Jobs supported of 13,887.1.
- C. State and local taxes generated for 2017 from independent colleges and universities spending were:
 - 1. Sales taxes of \$17.2 million.
 - 2. Property taxes of \$18.5 million.
 - 3. Personal income taxes of \$10.5 million.
 - 4. Other taxes and fees of \$7.7 million.
 - 5. Total state and local taxes for 2017 of \$53.9 million.

IV. Industry Impacts

- A. The top five private-sector industries impacted (based on sales, or total impact) by independent college institutional spending for 2017 were:
 - 1. Real estate establishments at \$59.5 million.
 - 2. Food service and drinking places at \$34.6 million.
 - 3. Wholesale trade at \$25.6 million.
 - 4. Commercial banks at \$25.4 million.
 - 5. Electric utilities at \$25.0 million.

⁷Unless otherwise specified, all years are stated in academic years. Thus, 2017 represents the 2016-17 academic year.

Executive Summary

- B. Higher education institutions produce graduates that tend to enter high-wage industries. Furthermore, the existence of a college or university attracts firms in industries paying higher wages.
 - 1. Nebraska's independent colleges and universities encourage higher growth among Nebraska's high wage industries.
 - a. Nebraska counties with independent colleges and universities had a 2009 and 2016 median wage advantage of more than \$4,000 per worker over Nebraska counties without a college or university.
 - b. While median wage growth was higher for the period 2009-16 for Nebraska counties without a college or university, the wage advantage for counties with colleges and universities remained above \$4,000 in 2016.
 - c. Except for wholesale trade professional and technical services, counties with independent colleges or universities had a higher median employment growth rate for each high wage industry than counties without a college or university.
 - d. Except for professional & technical services, counties with independent colleges or universities had a higher median employment growth rate for each high wage industry than counties with a public college or university.
 - 2. Nebraska's independent colleges and universities boost concentration of high wage industries.
 - a. Except for wholesale trade, counties with independent colleges or universities had a higher median concentration ratio for each high wage industry than counties without a college or university.
 - b. Except for wholesale trade and information, counties with independent colleges or universities had a higher median concentration ratio for each high wage industry than counties with a public college or university.
- C. Economic impacts for each independent college or university are provided in Appendix A, and for each of Nebraska's 93 counties in Appendix B.
- D. Based on impact studies completed in 2003 and 2018, the compound annual growth in impacts from 2003 and 2017 from Nebraska's independent colleges and universities were 1.5 percent for total impacts, 13.2 percent for state and local taxes, and 0.7 percent for wage and salaries.

Nebraska counties with independent universities and colleges had a 2009 and 2016 median wage advantage of more than \$4,000 per worker over Nebraska counties without a college or university.

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V. Graphical Summary of Economic Impacts

Figure X1: Total and wages/salaries impacts (in millions of 2018 dollars), 2013-17

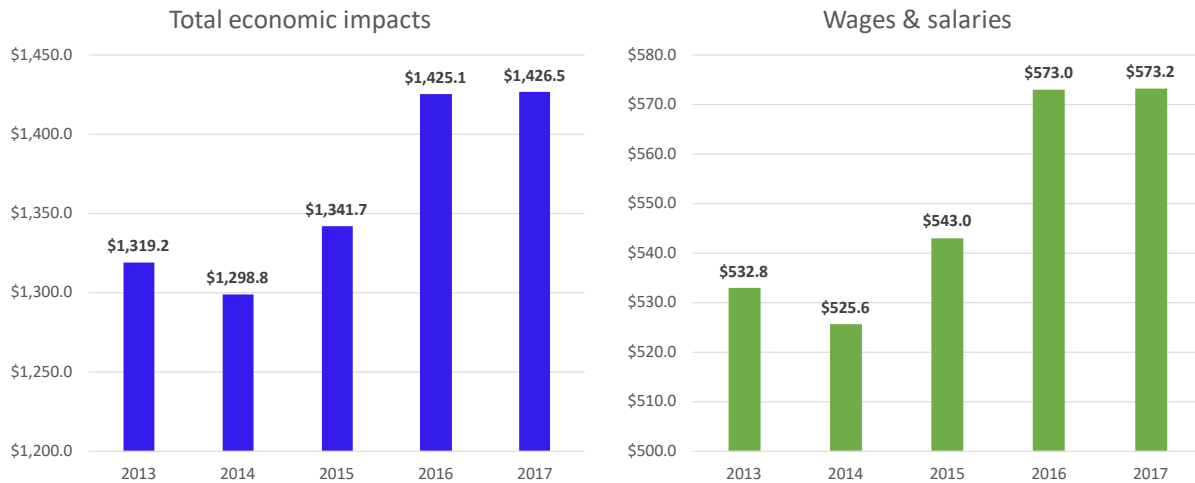
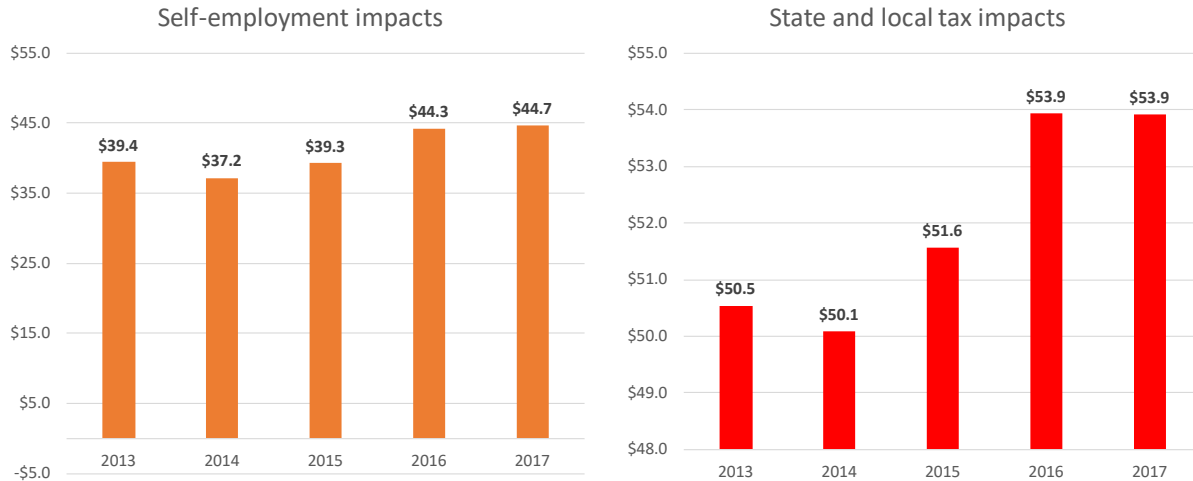


Figure X2: Self-employment impacts and state and local tax impacts (in millions of 2018 dollars), 2013-17



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Figure X3: Jobs supported, 2013-17

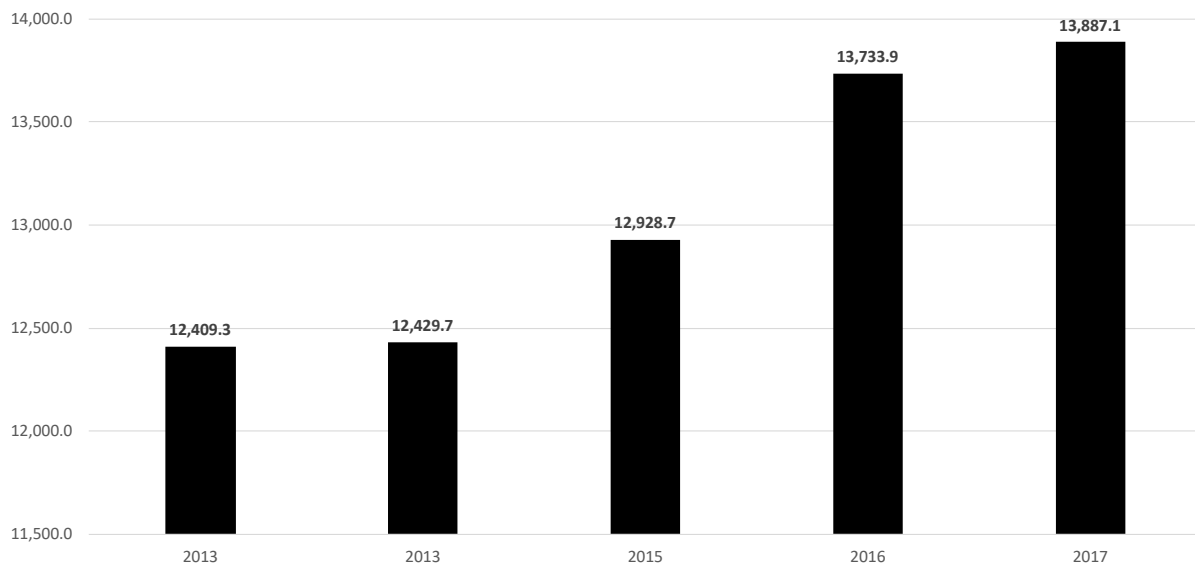
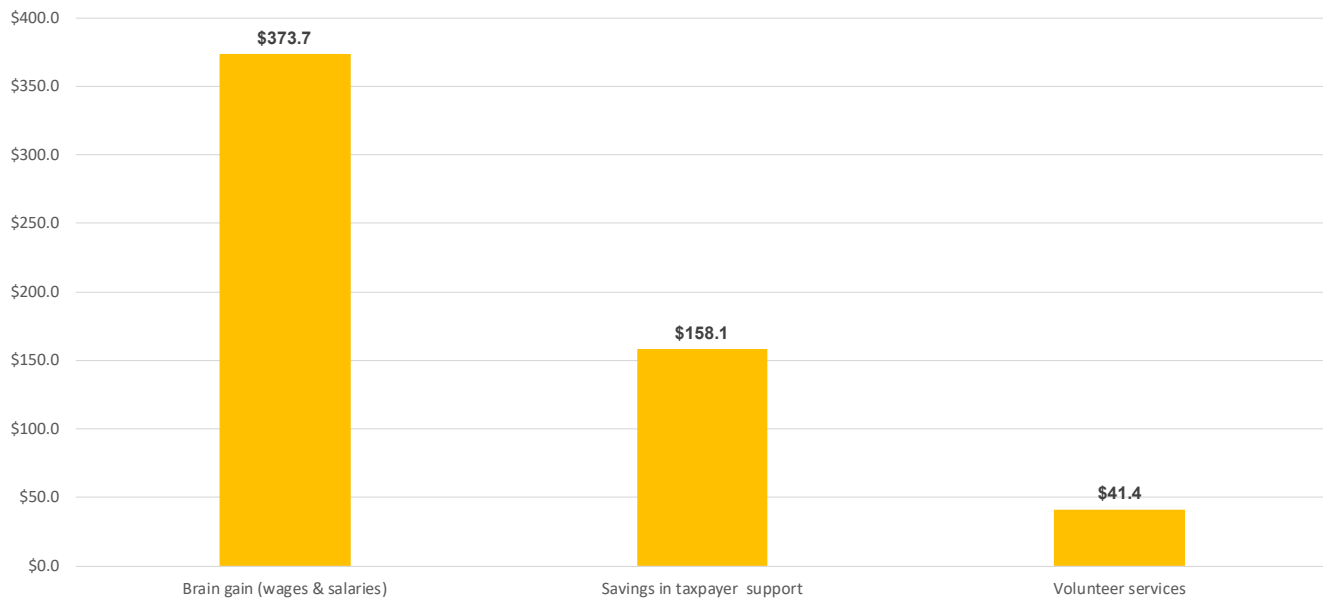


Figure X4: Impact on brain gain, taxpayer savings, and volunteer services, (in millions of 2018 dollars), 2017



Section 1: Nebraska's Independent Colleges and Universities: A Brief Overview

Introduction

For equivalent annual budgets, independent universities and colleges actually contribute more economically to the state than equivalent tax-supported institutions. This conclusion is based on two factors. (1) Independent higher education contributes more to “brain gain” because a higher percent of students come from outside the state than equivalent size public higher education institutions. (2) States and local governments levy taxes on citizens and businesses to support public post-secondary institutions. Other factors unchanged, this drains resources from alternative uses in the state.

Besides contributing to “brain gain,” independent higher educational institutions generate a larger proportion of their budget from outside the state

than comparable public universities. These dollars are very powerful and have a higher multiplier or economic impact than dollars spent by public institutions. Institutions funded primarily by dollars generated from Nebraska residents via tuition and taxes have less economic impact because a high share of these dollars is diverted from industries and individuals in Nebraska.

Nebraska has 13 regionally accredited, not-for-profit, independently controlled colleges and universities. Table 1.1 lists each institution along with its principal location and 2017 student enrollment. These institutions enroll approximately one-fourth of total students attending Nebraska colleges and universities.

Table 1.1: Nebraska's independent colleges and universities, location and enrollment, 2017

	City	County	2017 Enrollment
Bellevue University	Bellevue	Sarpy	10,975
Bryan College of Health Sciences	Lincoln	Lancaster	698
Clarkson College	Omaha	Douglas	1,288
College of Saint Mary	Omaha	Douglas	1,043
Concordia University	Seward	Seward	2,520
Creighton University	Omaha	Douglas	8,654
Doane University	Crete	Saline	2,871
Hastings College	Hastings	Adams	1,149
Midland University	Fremont	Dodge	1,375
Nebraska Methodist College	Omaha	Douglas	1,357
Nebraska Wesleyan University	Lincoln	Lancaster	2,064
Union College	Lincoln	Lancaster	868
York College	York	York	475
Total 2017 enrollments			35,337

Source: Individual colleges (enrollments include part-time and full-time students)

These institutions enroll approximately one-fourth of total students attending Nebraska colleges and universities.

While accounting for 25 percent of higher education students, independent colleges and universities in Nebraska awarded roughly one-third of all baccalaureate degrees in the state in 2016, and produced 50 percent of all health sciences bachelor's and advanced degree programs, including nursing in Nebraska.⁸

Table 1.2 compares the compound annual growth rates between public and independent colleges and universities for the period 2002 to 2016. As listed, Nebraska's independent colleges and universities expanded by more than three times the pace of public institutions of higher learning in the state over the 14-year period. Over the period, the number of post-secondary students attending independent colleges and universities in the state rose from one of five to one of four.

Table 1.2: Compound annual growth in enrollment, public vs. independent colleges 2002-16

	Total Enrollment
Nebraska independent colleges & universities (non-profit)	2.5%
Nebraska public colleges & universities	0.7%
U.S. public colleges & universities	1.0%
U.S. independent colleges & universities (non-profit)	1.6%
U.S. independent colleges & universities (for-profit)	5.0%

Source: National Center for Education Statistics
https://nces.ed.gov/programs/digest/2017menu_tables.asp

As listed, the Nebraska taxpayer would have saved approximately \$253.5 million in 2017 if state and local spending on higher education per FTE matched that of the U.S.



⁸CINCF

Public Tax Support for Post-Secondary Education

Table 1.3 compares public spending, both local and state, per full-time equivalent (FTE) student for Nebraska, its geographic neighbors, and the U.S. average. As listed, Nebraska spent \$11,880 per FTE which pushed the state to the sixth highest spending state in the nation. Among Nebraska's contiguous states, only Wyoming spent more heavily on public higher education than Nebraska. In Column (4) is listed the total savings (or underfunding) for 2017 assuming that the state spent the average U.S. spending per FTE. As listed, the Nebraska taxpayer would have saved approximately \$253.5 million in 2017 if state and local spending on higher education per FTE matched that of the U.S.

Furthermore, by enrolling Nebraska residents, the state's independent colleges save the Nebraska taxpayers significant state and local taxes. In 2017, independent colleges enrolled 22,091 students that resided in Nebraska before matriculating at the independent college. It is estimated that this saved the Nebraska taxpayer approximately \$262.4 million in 2017 alone.⁹

Table 1.4, on the following page, lists 2017 taxpayer support for independent higher education for Nebraska compared to the U.S. and each of its neighbors. As listed, Nebraska ranked 35th in the U.S. in terms of spending per capita for independent higher education.¹⁰ Assuming Nebraska provided the same spending per capita as the U.S., Nebraska would have been required to spend an additional \$12.7 million on its 13 independent colleges and universities in 2017.

In 2017, independent colleges enrolled 22,091 students that resided in Nebraska before matriculating at the independent college. It is estimated that this saved the Nebraska taxpayer approximately \$262.4 million in 2017 alone.

Table 1.3: State & local public support per FTE for public higher education, 2017

(1)	Public support per FTE (2)	U.S. ranking (3)	Over or (underfunding) based on U.S. support per FTE (4)
U.S.	\$8,584	n.a.	n.a.
Nebraska	\$11,880	6	\$253,510,784
Colorado	\$5,118	48	(\$631,558,780)
Iowa	\$6,847	34	(\$11,891,234)
Kansas	\$7,347	30	(\$166,631,312)
Missouri	\$5,800	47	(\$543,530,286)
South Dakota	\$7,563	27	(\$32,021,458)
Wyoming	\$17,702	3	\$212,456,420

Source: 2017 SHEF Report, State Higher Education Executive Officers

⁹This estimate is based on 20,609 students at \$11,880 spending per student. This spending level comes from 2017 SHEF Report (State Higher Education Executive Officers).

¹⁰Full-time equivalent data were not available for independent higher education.

Table 1.4: State and local public support per capita for independent higher education, 2017

	State & local support for independent colleges and universities per capita	U.S. ranking	Over or (underfunding) based on U.S. support per capita
U.S.	\$8.82	n.a.	
Nebraska	\$2.22	35	(\$12,672,550)
Colorado	\$1.65	36	(\$40,162,410)
Iowa	\$16.31	8	\$23,578,539
Kansas	\$3.52	30	(\$15,436,622)
Missouri	\$4.45	26	(\$26,682,554)
South Dakota	\$1.40	41	(\$6,450,596)
Wyoming	\$1.63	37	(\$4,162,675)

Source: 2017 SHEF Report, State Higher Education Executive Officers

Higher Education and Economic Growth

A college education provides the most effective defense against high unemployment rates and low wages. Overall, educational attainment reduces unemployment rates and raises wages. Data in Table 1.5 indicate that during the economic expansion (2017) and the recession (2009) individuals with higher educational attainment experienced lower rates of unemployment.

Table 1.5: Unemployment rates by education level, U.S., 2017 and 2009

	Unemployment rates	
	January 2017	January 2009
Bachelor's degree	2.5%	3.9%
Associate's degree	3.4%	6.5%
High school graduate	4.6%	8.2%
Less than high school diploma	6.5%	12.4%

Source: U.S. Bureau of Labor Statistics

Data in Table 1.6 indicate that during the economic expansion (2017) and the recession (2009) individuals with higher educational attainment earned higher weekly wages, as well.

Table 1.6: Median usual weekly earnings by education level, U.S., 2017 and 2009

	Median earnings	Weekly earnings
	January 2017	January 2009
Bachelor's degree	\$1,173	\$1,138
Associate's degree	\$836	\$726
High school graduate	\$712	\$620
Less than high school diploma	\$520	\$450

Source: U.S. Bureau of Labor Statistics

While Nebraska's independent colleges and universities have been an important provider of education in the state, the 13 institutions have been even more important in terms of their contribution to economic growth. That is, independent higher education is a growth industry for the state.

Three of Nebraska's 100 largest private employers are independent universities. These are Bellevue University, Creighton University, and Nebraska Wesleyan University

Table 1.7 lists Nebraska counties with an independent college. Data show that the employment size for the institution is generally 25-40 times the employment for the average private firm in the county.

Table 1.7: Average employment and salaries by county for all private firms compared to independent colleges			
	All establishments in county		Independent colleges
County	Average employment for county firms	# firms with more than 250 employment	Average institution employment size
Adams	14.0	6	232.0
Dodge	15.5	10	386.0
Douglas	19.9	165	682.5
Lancaster	16.2	61	269.0
Saline	19.8	3	341.0
Sarpy	14.6	23	588.0
Seward	12.2	3	407.0
York	12.3	2	354.0
Total all NE counties	16.3	373	449.6
Source: Goss & Associates calculations based on reports from colleges and 2016 U.S. County Business Patterns			

Table 1.8 lists average compensation by county for 2009 and 2016 according to the existence of colleges and universities in the county group. Data in Table 1.8 support the hypothesis that higher education boosts worker compensation. As indicated, counties with independent colleges and counties with public colleges experience a 2009 median wage advantage of more than \$4,000 per worker over Nebraska counties without a college or university.¹¹ While median wage growth was higher for the period 2009-16 for Nebraska counties without a college or university, the wage advantage for counties with colleges and universities remained above \$4,000 in 2016.

Table 1.8: Average worker compensation by Nebraska county, 2009, 2016 and growth 2009-16			
Counties with:	2009	2016	Median Growth, 2009-16
Independent colleges	\$42,461	\$49,783	18.2%
Public colleges	\$42,346	\$50,393	18.6%
No college	\$38,137	\$45,546	21.3%
Source: Goss & Associates based on U.S. Bureau of Economic Analysis data; Note: median growth rate will not necessarily equal the growth rates of the median.			

¹¹ Counties with a public college or university include: Buffalo, Dawes, Douglas, Frontier, Hall, Lancaster, Lincoln, Madison, Nemaha, Scottsbluff, Thurston, and Wayne. Counties with an independent college or university are: Adams, Dodge, Douglas, Lancaster, Saline, Sarpy, Seward and York.

One of the factors contributing to the higher median wages for counties with colleges and universities is that higher education institutions produce graduates that tend to enter high wage industries. Furthermore, the existence of a college or university attracts firms in industries providing higher wages. Table 1.9 lists concentration ratios, termed location quotients, for high wage Nebraska industries for which there were adequate data.¹² An LQ of 1.0 would indicate that the county group has a median concentration ratio equaling that of the state.

As listed, except for wholesale trade, counties with independent colleges or universities had a higher median concentration ratio for each high wage industry than counties without a college or university. Furthermore, except for wholesale trade and information, counties with independent colleges or universities had a higher median concentration ratio for each high wage industry than counties with a public college or university.

Table 1.9: Industry concentration ratios and salary by Nebraska county, 2009

Industry	Median concentration ratios for Nebraska counties			Average Industry Salary
	Independent college counties	Public college counties	No college counties	
Information	0.647	0.702	0.496	\$68,296
Wholesale trade	1.035	1.038	1.218	\$64,761
Finance & Insurance	0.813	0.792	0.699	\$58,296
Professional & technical services	0.633	0.609	0.437	\$54,111
Health care and social assistance	1.109	0.928	0.661	\$48,453
Total state average wage for all industries, 2016				\$44,328

Source: Goss & Associates based on U.S. Bureau of Economic Analysis data.

Table 1.10 lists median employment growth rates for high wage Nebraska industries for which there were adequate data. As listed, except for wholesale trade, professional and technical services, counties with independent colleges or universities had a higher median employment growth rate for each high wage industry than counties without a college or university. Furthermore, except for professional and technical services, counties with independent colleges or universities had a higher median employment growth rate for each high wage industry than counties with a public college or university.

Table 1.10: Industry employment growth rates, 2009-16 by Nebraska county group

Industry	Independent college counties	Public colleges	No college	Average Industry Salary
Information	0.5%	0.0%	-0.8%	\$68,296
Wholesale trade	4.78%	4.22%	11.43%	\$64,761
Finance & Insurance	1.6%	0.1%	-3.8%	\$58,296
Professional & technical services	6.2%	7.6%	9.7%	\$54,111
Health care and social assistance	15.0%	11.7%	0.0%	\$48,453
Total employment	7.9%	4.9%	3.2%	\$44,328

Source: Goss & Associates based on U.S. Bureau of Economic Analysis data.

The next section of this study profiles the impact of independent colleges and universities on “brain gain” for the State of Nebraska and its counties.

¹²Concentration ratios or location quotients equal the percent of total county employment in a specific industry divided by the percent of total state employment in the same industry

Section 2: Independent Colleges' Contribution to Nebraska Brain Gain

Nebraska's Past Brain Drain

Historically, Nebraska has suffered from the loss of educated individuals to other states via migration. This "brain drain" has reduced overall Nebraska economic growth. Tables 2.1 and 2.2 list states with brain gains and drains, respectively. Data include

international migrants. As listed, 34 brain gain states experienced a net gain of approximately 55.7 million residents. The number one brain gain state was Nevada with 60.5 percent population brain gain. Nebraska is not one of the brain gain states and is listed in Table 2.2.

Table 2.1: Brain gain states, current residents of states (2015)

Rank	State	Gain Born outside state living in state	Drain Born in state but living outside state	Net gain	Net gain: Percent of state population
1	Nevada	2,146,424	396,052	1,750,372	60.5%
2	Florida	12,984,771	2,440,415	10,544,356	52.0%
3	Arizona	4,148,168	1,023,414	3,124,754	45.8%
4	Colorado	3,126,719	1,270,031	1,856,688	34.0%
5	Washington	3,775,272	1,392,572	2,382,700	33.2%
6	Oregon	2,179,949	934,084	1,245,865	30.9%
7	New Hampshire	770,156	393,070	377,086	28.3%
8	Georgia	4,608,265	1,739,795	2,868,470	28.1%
9	Maryland	3,168,590	1,489,102	1,679,488	28.0%
10	Texas	11,083,675	3,547,672	7,536,003	27.4%
11	California	17,690,251	7,062,025	10,628,226	27.2%
12	Virginia	4,229,939	2,035,397	2,194,542	26.2%
13	North Carolina	4,304,264	1,795,052	2,509,212	25.0%
14	Delaware	514,631	306,979	207,652	22.0%
15	South Carolina	2,071,076	1,067,457	1,003,619	20.5%
16	Idaho	860,143	523,418	336,725	20.3%
17	Alaska	429,984	303,149	126,835	17.2%
18	Tennessee	2,632,473	1,520,663	1,111,810	16.8%
19	New Jersey	4,250,513	2,992,507	1,258,006	14.1%
20	Utah	1,130,291	709,925	420,366	14.0%
21	New Mexico	973,950	687,437	286,513	13.7%
22	Vermont	313,705	233,174	80,531	12.9%
23	Hawaii	672,315	504,857	167,458	11.7%
24	Connecticut	1,605,411	1,230,927	374,484	10.4%
25	Oklahoma	1,539,651	1,204,658	334,993	8.6%
26	Wyoming	347,847	306,831	41,016	7.0%
27	Montana	472,394	409,563	62,831	6.1%
28	Minnesota	1,773,334	1,459,316	314,018	5.7%
29	Arkansas	1,140,586	1,006,327	134,259	4.5%
30	Massachusetts	2,606,749	2,321,998	284,751	4.2%
31	Missouri	2,059,919	1,873,820	186,099	3.1%
32	Wisconsin	1,649,563	1,500,625	148,938	2.6%
33	Indiana	2,088,980	1,997,431	91,549	1.4%
34	Alabama	1,455,135	1,412,717	42,418	0.9%
Total for gaining states		104,805,093	49,092,460	55,712,633	24.4%

As presented in Table 2.2, in 2015 there were 664,758 individuals born outside Nebraska, but living in the state. On the other hand, there were 843,647 individuals born in Nebraska living in other states, resulting in a net brain drain of 178,889 in population.

Table 2.2: Brain drain states, 2015

Rank	State	Gain Born outside state living in state	Drain Born in state but living outside state	Net gain	Net gain: Percent of state population
35	Kentucky	1,347,146	1,357,611	-10,465	-0.2%
36	Rhode Island	458,203	464,830	-6,627	-0.6%
37	Kansas	1,205,610	1,240,506	-34,896	-1.2%
38	Maine	477,725	493,867	-16,142	-1.2%
39	New York	7,308,401	7,807,590	-499,189	-2.5%
40	Illinois	4,218,641	4,702,259	-483,618	-3.8%
41	Pennsylvania	3,465,515	4,116,750	-651,235	-5.1%
42	Ohio	2,882,072	3,698,632	-816,560	-7.0%
43	Michigan	2,323,978	3,034,199	-710,221	-7.2%
44	Nebraska	664,758	843,647	-178,889	-9.4%
45	Mississippi	852,034	1,159,691	-307,657	-10.3%
46	Louisiana	1,013,117	1,502,639	-489,522	-10.5%
47	Iowa	903,539	1,399,315	-495,776	-15.9%
48	South Dakota	301,304	478,535	-177,231	-20.6%
49	West Virginia	559,606	1,027,106	-467,500	-25.4%
50	North Dakota	274,866	497,026	-222,160	-29.4%
51	District of Columbia	431,392	1,148,499	-717,107	-106.7%
Total for gaining states		28,687,907	34,972,702	-6,284,795	-6.7%

Source: Goss & Associates based on U.S. Census data

Table 2.3 estimates the cost of this brain drain of college graduate for Nebraska for 2015. As estimated, the state lost approximately \$5.0 billion in wages and salaries, or 11.0 percent of total 2015 Nebraska wages and salaries. This results in a loss of an estimated \$1.1 billion in state and local tax collections for 2015 as a result of the net loss of college graduates to other states.

Table 2.3: Estimated Nebraska brain drain college graduates only, 2015

		Employment	Population	Ratio E/P
Nebraska's employment to population ratio		983,889	1,896,190	0.519
Nebraska's loss in population (from Table 2.2)			-178,889	
Employment loss (-178,889 * 0.519)		-92,821		
	Percent of movers	Average Salary	Estimated Loss (% movers * #movers * average salary)	
Graduate degrees	29.5%	\$101,620	-\$2,782,578,656	
Bachelor's degree	29.5%	\$81,780	-\$2,239,315,907	
Nebraska's net loss in wages & salaries to brain drain (2015)			-\$5,021,894,563	
Total Nebraska wages & salaries-2015			\$45,791,673,000	
Percent Nebraska wages & salaries lost via brain drain, 2015			11.0%	
Estimated loss in state & local tax collections to brain drain of college graduates, 2015			\$1,050,286,653	

Source: Goss & Associates, 2018 based on U.S. BEA and U.S. Census data

Nebraska's Independent College and University Contribution to Brain Gain

Nebraska's independent colleges and universities first contribute to the state via recruiting non-Nebraskans to the state who, upon graduation, remain residents of the state. Second, Nebraska's independent colleges and universities add to brain gain by recruiting Nebraska residents who would otherwise attend universities and colleges outside the state.¹

Independent colleges and universities tend to recruit a higher percentage of their students from outside the state than public universities and colleges, thus contributing to "brain gain."

This is certainly an important factor adding to Nebraska's economic growth. In 1995, the Federal Reserve Bank of Kansas City estimated that Nebraska loses \$246 million per year due to brain drain, or an annual 1.1 percent of personal income.² This loss is largely due to departure of well-educated professionals, executives, and managers.

Table 2.4 lists the percent of students drawn from outside Nebraska by each institution for 2017. As presented, roughly 37.5 percent of students attending independent colleges and universities in Nebraska originated from outside the state. The rates varied from a low of 4.6 percent for Bryan College of Health Sciences to a high of 91.7 percent for Union College. For the 2016-17 academic year, it is estimated that 13,247 Nebraska residents migrated to Nebraska to attend one of the state's independent higher educational institutions.

Value of Brain Gain: Recruiting Non-Nebraskans.

With a 2017 statewide enrollment of 35,337 students, Nebraska's 13 independent colleges and universities offer comprehensive educational programs to individuals from Nebraska and across the globe. Students residing outside of Nebraska and moving to the state to attend one of the independent colleges add to the economy in the form of "brain gain." This brain gain is the result of the gain from the graduating college students remaining in Nebraska adding to the state's overall income gain.

Table 2.4: State of residence prior to enrollment in Nebraska independent institution, 2016-17

	Residence prior to enrollment		Total	Percent from Outside
	Nebraska	Outside Nebraska		
Bellevue	4,905	6,070	10,975	55.3%
Bryan College of Health Sciences	666	32	698	4.6%
Clarkson College	905	383	1,288	29.7%
College of Saint Mary	687	356	1,043	34.1%
Concordia University	1,132	1,388	2,520	55.1%
Creighton University	6,749	1,905	8,654	22.0%
Doane University	2,200	671	2,871	23.4%
Hastings College	784	365	1,149	31.8%
Midland University	890	485	1,375	35.3%
Nebraska Methodist College	1,147	210	1,357	15.5%
Nebraska Wesleyan	1,800	264	2,064	12.8%
Union College	72	796	868	91.7%
York College	155	320	475	67.3%
Total	22,091	13,247	35,337	37.5%

Source: Individual colleges, 2018 (due to rounding, column totals may not sum to the column total)

¹This element of brain gain is not estimated in this study.

²Ferguson, Deron. "The Tenth District's Brain Drain: Who Left and What Did It Cost?" Regional Economic Digest, Federal Reserve Bank of Kansas City, Q1, pp. 8-13.

Table 2.5 provides estimated impact of independent colleges for 2017 on brain gain.³ As presented, the state's independent colleges and universities recruited 13,247 students from other states in 2017. Of this total, it is calculated that 51.7 percent will remain in the state upon graduation. As a result, it is estimated that Nebraska's 13 independent colleges and universities contributed approximately \$373.7 million to wages and salaries and \$78.2 million to state and local tax collections via brain gain in 2017.⁴

Table 2.5: Estimated brain gain from Nebraska independent colleges from non-Nebraska students, 2017 (2018 dollars)

Total in-coming students from outside, 2017	13,247
Estimated percent that stay in Nebraska	51.6%
Estimated salary upon graduation	\$55,821
Estimated unemployment rate	2.5%
Total estimated addition to Nebraska wages and salaries	\$373,707,735
Total addition to Nebraska state & local tax collections	\$78,157,803

Source: Goss & Associates calculations based on institutional data

Brain Gain Via Volunteerism. Previous research has found education to be significantly and positively related to the likelihood of volunteering. Furthermore, the completion of more years of education was associated with greater odds of volunteering.⁵ In terms of benefit to the community, higher levels of educational attainment are associated with increased volunteerism which, in turn, stimulates the Nebraska economy.

As a result, it is estimated that Nebraska's 13 independent colleges and universities contributed approximately \$373.7 million to wages and salaries and \$78.2 million to state and local tax collections via brain gain in 2017.

³Average salary and unemployment rate for college graduates come from U.S. Bureau of Labor Statistics. It is also assumed that graduates that subsequently leave Nebraska are matched by previous graduates that moved out of the state upon graduation but moved back into the state in future years.

⁴Both independent and public higher education institutes have experienced phenomenal growth in the on-line delivery of courses. As a result, a higher and higher share of students reside one state taking classes in another. This is the case for Nebraska's independent colleges and universities. However, the "brain gain" statistics presented here were based on where graduating students reside after completion of their degrees. Thus, "brain gain" estimates presented here are not influenced by on-line student matriculation.

⁵Ajrouch, Kristing, et al. "Volunteerism: Social Network Dynamics and Education," *The Journal of Gerontology Series B: Psychological Sciences and Social Sciences*, 2016 March, 71(2), pp. 309-19.

Table 2.6 provides the estimated value of volunteer hours for student and faculty/staff for 2017. Hours of volunteer work were estimated for institutions that did not separately report those hours. Each volunteer hour is valued at the Nebraska minimum wage of \$9.00 per hour.

As listed, for 2017, Nebraska's independent colleges and universities provided student volunteer services valued at \$4.5 million and faculty/staff volunteer services valued at \$36.9 million. On average, each institution provided 741 student hours and 6,057 faculty/staff volunteer or unpaid hours for the community.

Table 2.6: Estimated value of volunteer services, 2017		
	Estimated value of student volunteer hours	Estimated value of faculty/ staff volunteer hours
Bellevue University	\$1,401,036	\$3,707,132
Bryan College of Health Sciences	\$89,076	\$390,884
Clarkson College	\$164,424	\$964,600
College of Saint Mary	\$133,120	\$1,229,384
Concordia University	\$321,672	\$2,565,992
Creighton University	\$1,104,740	\$14,097,252
Doane University	\$366,496	\$2,149,888
Hastings College	\$146,692	\$1,462,656
Midland University	\$175,552	\$2,433,600
Nebraska Methodist College	\$173,212	\$920,504
Nebraska Wesleyan University	\$263,484	\$3,064,048
Union College	\$110,812	\$1,632,904
York College	\$60,632	\$2,231,840
Total Nebraska independent colleges	\$4,510,948	\$36,850,684
Source : Goss & Associates based on survey of institutions.		

On average, each institution provided 741 student hours and 6,057 faculty/staff hours of volunteer or unpaid hours for the community.

Section 3: Economic Impacts of Nebraska's Independent Colleges and Universities

Introduction

While fulfilling their missions of educating, research and community service, independent colleges and universities fuel regional economic growth across Nebraska. Nebraska's independent colleges and universities generate economic activity that directly supports the employment of thousands of workers and billions of dollars in income. The economic activity associated with institutional operations, direct institutional capital expenditures and student spending add millions of dollars to state and local tax coffers.⁶

In this section, the impact of Nebraska's independent colleges is estimated for the period of 2013 to 2017. Using Input-Output multipliers, this study provides sales, earnings and job impacts in addition to estimating the impact of the initial spending on state and local tax collections. Input-Output multipliers show how spending initiated in one industry, colleges and universities in this case, is filtered throughout the state economy.

Input-Output multiplier models are the most frequently-used type of analysis tool for economic impact assessment. Input-output analysis assumes that each sector purchases products and services from other sectors and then sells its output to other sectors and/or final consumers.

The multiplier system that will be used is IMPLAN.⁷ This is a widely-used and accepted methodology and is described in more detail in Appendices D and E.

This initial spending, termed direct spending, leads to further spending by Nebraska residents, businesses and other institutions, termed, spillover impacts, with a resultant impact that is a multiple of "first round" spending. Thus, the impact of Nebraska's independent colleges continues after the initial money is spent for goods and services as it supports many enterprises and individuals that are indirectly linked to these institutions.

Economic impacts by county, state and industry are provided in this section.

Using Input-Output multipliers, this study provides sales, earnings and job impacts in addition to estimating the impact of the initial spending on state and local tax collections.

⁶In order to avoid double-counting, student spending at the independent institution (e.g. tuition and housing) are excluded from impacts. That is, only non-education spending by students is included in the impacts.

⁷IMPLAN (for Impact Analyses and Planning) is a computer software package that consists of procedures for estimating local input-output models. The U.S. Forest Service, in cooperation with the Federal Emergency Management Agency and the U.S. Department of the Interior's Bureau of Land Management originally developed IMPLAN to assist in land and resource management planning. Since 1993, the Minnesota IMPLAN Group Inc. in Stillwater, Minnesota with exclusive rights has continued development and maintenance of the IMPLAN system. This group licenses and distributes the software to users. IMPLAN is one of the most widely used and accepted software packages for impact assessment. Goss & Associates is a licensed user of IMPLAN.

Direct Impact

During the five-year period ending in 2017, independent universities and colleges in Nebraska injected over \$4 billion into the state economy, an annual average of over \$800 million. Operational expenditures totaled \$3.5 billion and capital expenditures added an additional \$426 million. Non-education related student spending added approximately \$115.9 million during the study period. Table 3.1 provides direct annual expenditure levels by category for the study period.

Table 3.1: Direct impacts, independent universities and colleges, 2013-17 (2018 dollars)

Direct impacts	2013	2014	2015	2016	2017
Operation expenditures	\$673,105,040	\$683,959,741	\$699,018,079	\$705,488,106	\$705,163,024
Capital expenditures	\$75,102,670	\$57,535,045	\$67,576,185	\$112,038,108	\$114,014,985
Student expenditures*	\$23,746,165	\$23,202,951	\$23,274,105	\$23,330,035	\$22,320,116
Total expenditures	\$771,953,876	\$764,697,736	\$789,868,369	\$840,856,249	\$841,498,124

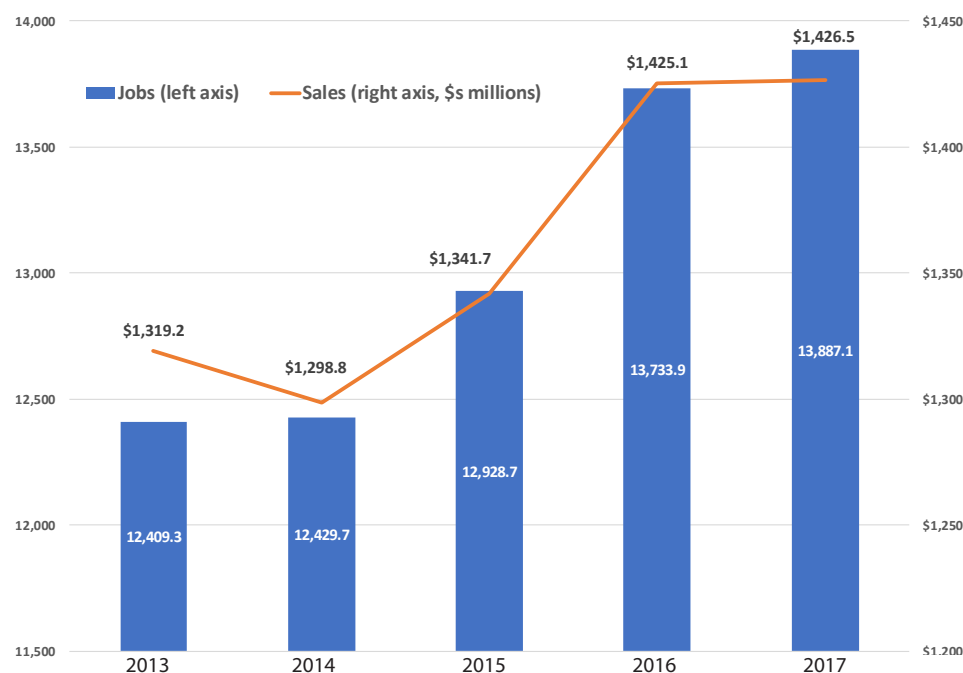
Source: Goss and Associates based on IMPLAN multiplier system

*Student spending at off-campus businesses; An increase in on-campus spending accounts for any yearly decline.

Direct Plus Spillover Impacts

Figure 3.1 presents the annual impacts for the state over the five-year study period. This direct spending is next input into the multiplier system to estimate spillover impacts.

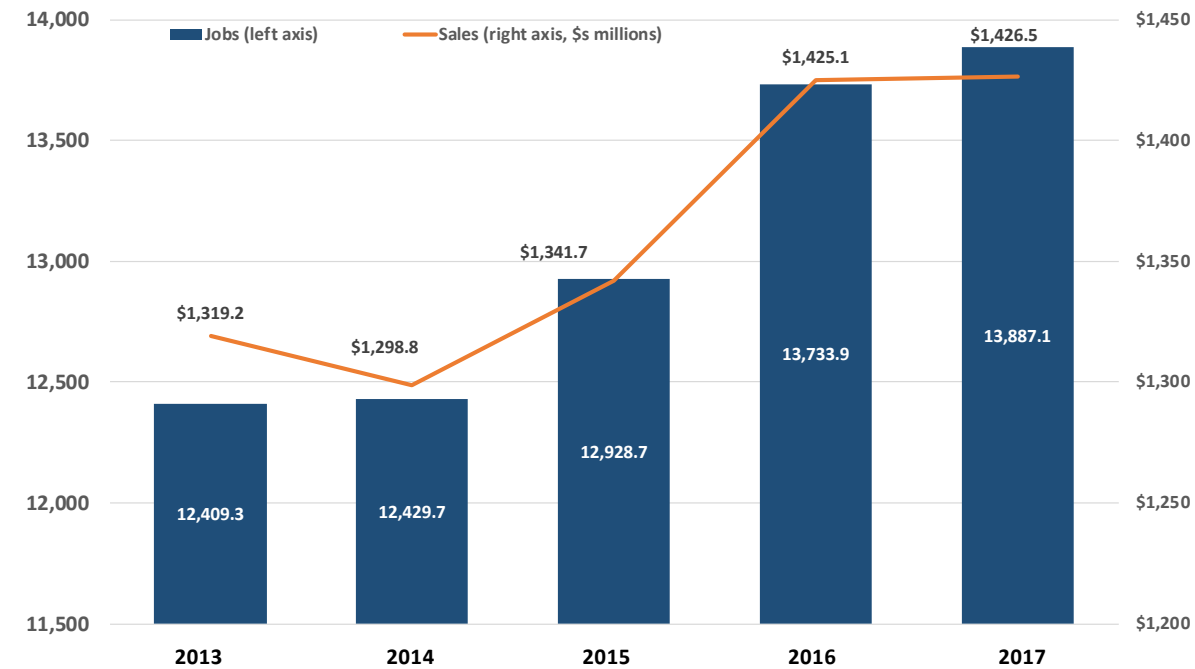
Figure 3.1: Economic impact, jobs and sales (total) | impact– 2013 to 2017 (2018 dollars)



Source: Goss and Associates based on IMPLAN multiplier system

Figure 3.2 presents the annual impact on wages and salaries, and self-employment income from 2013 to 2017. Nebraska's independent universities and colleges fueled economic growth that resulted in nearly \$3 billion in labor income during the five-year study period. In 2017, institutional activity increased state labor income by nearly \$618 million, with self-employment income growing by \$44.7 million and employee salaries and wages growing by \$573.2 million. Spending impacts by institution are listed in Appendix A.

Figure 3.2: Economic impact, Wages, salaries and self-employment income – 2013 to 2017 (2018 dollars, millions)



Source: Goss and Associates based on IMPLAN multiplier system

Table 3.2 lists the eight counties experiencing the largest economic impacts for 2017. Impacts for all of Nebraska's 93 counties are in Appendix B.

Table 3.2: impacts by county from independent universities and independent colleges, 2017 (2018 dollars)

Geography	Jobs	Wages & salaries	Self-employment income	Sales
State	13,887.1	\$573,200,831	\$44,716,221	\$1,426,533,810
Adams County	1,391.9	\$57,453,734	\$4,482,048	\$142,986,000
Dodge County	1,213.1	\$50,069,650	\$3,906,005	\$124,609,116
Douglas County	3,736.6	\$154,231,564	\$12,031,826	\$383,838,489
Lancaster County	2,668.3	\$110,136,345	\$8,591,895	\$274,098,033
Saline County	409.9	\$16,919,354	\$1,319,903	\$42,107,460
Sarpy County	1,782.4	\$73,571,476	\$5,739,417	\$183,098,474
Seward County	488.6	\$20,167,631	\$1,573,306	\$50,191,498
York County	522.8	\$21,577,405	\$1,683,284	\$53,700,022

Source: Goss and Associates based on IMPLAN multiplier system

Table 3.3 shows the total five-year economic impact for the state and main campus counties for the Nebraska's independent universities and colleges. For the 5 years ending in 2017, Douglas County saw the largest impact at \$1.8 billion, followed by Lancaster County at \$1.3 billion, and Sarpy County at \$874.3 million. Independent institutions in Douglas County supported more than 3,518.8 workers in Douglas County on an annual average basis. Spending impacts by institution are listed in Appendix A.

Table 3.3: impacts by county, independent universities and colleges, 2013-17 (2018 dollars)

Geography	Jobs (annual average)	Wages & salaries	Self-employment income	Sales
State	13,077.7	\$2,747,697,526	\$204,909,963	\$6,811,405,577
Adams County	1,310.8	\$275,410,423	\$20,538,774	\$682,728,747
Dodge County	1,142.3	\$240,014,051	\$17,899,085	\$594,982,902
Douglas County	3,518.8	\$739,324,970	\$55,135,273	\$1,832,749,849
Lancaster County	2,512.8	\$527,949,973	\$39,371,950	\$1,308,761,739
Saline County	386.0	\$81,104,676	\$6,048,394	\$201,054,461
Sarpy County	1,678.5	\$352,672,486	\$26,300,605	\$874,257,562
Seward County	460.1	\$96,675,629	\$7,209,600	\$239,654,080
York County	492.3	\$103,433,523	\$7,713,571	\$256,406,562

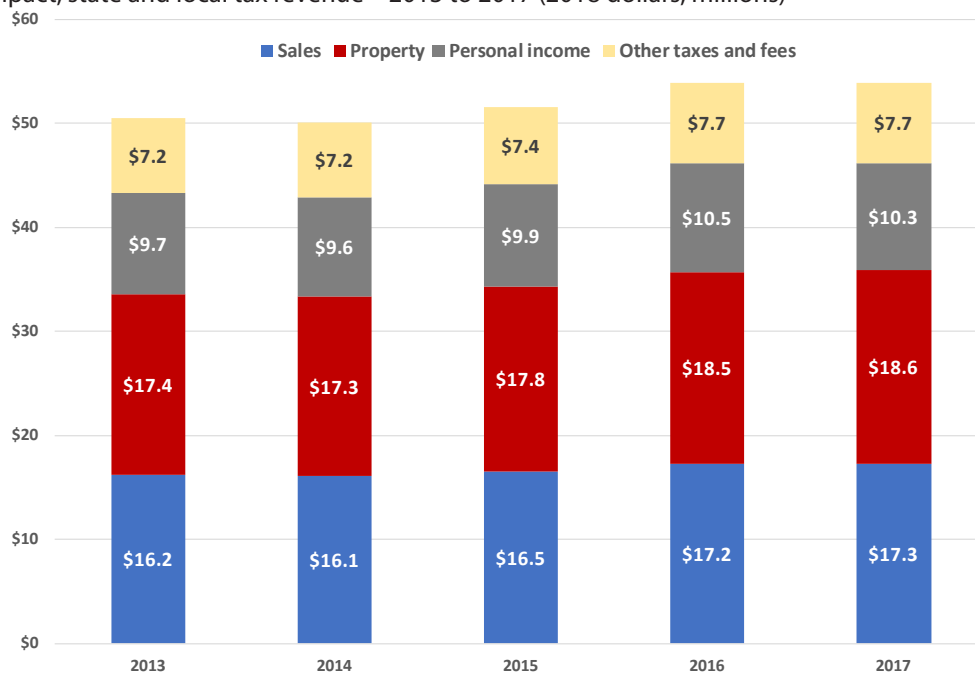
Source: Goss and Associates based on IMPLAN multiplier system

Impact on State and Local Tax Collections

The economic activity generated by Nebraska independent universities and colleges increases state and local tax revenue collections. During the five-year study period, tax revenue associated with independent institution economic activity has experienced a modest upward trend, with state and local taxes totaling \$50.5 million in 2013 and \$53.9 million in 2017.

On average, during the five-year study period, activity at Nebraska's independent universities and colleges added \$52.0 million to state and local tax revenue. Figure 3.3 provides detail of the fiscal impact to state and local taxes by category: sales tax; property tax (both real and personal); personal income tax and other taxes and fees (e.g., motor vehicle license). Even though institutions do not pay most state and local taxes, their employees and vendors do.

Figure 3.3: Fiscal impact, state and local tax revenue – 2013 to 2017 (2018 dollars, millions)



Source: Goss and Associates based on IMPLAN multiplier system

Tables 3.4 and 3.5 present state county level fiscal impacts for 2017 and the five-year study period. Activity at independent universities and colleges increased total taxes and fees by over \$260 million for the five-year study period. Between 2013 and 2017, sales taxes saw a boost of \$83.3 million at the state level. Douglas County experienced the largest county-level increase at \$22.4 million between 2013 and 2017. Property taxes rose by \$89.4 million, with Douglas County experiencing an increase of nearly \$13.5 million. Personal income taxes increased by \$50.1 million, and other taxes and fees increased by \$37.2 million.

Table 3.4: State and local tax revenues, 2017 (2018 dollars)

Geography	Sales tax	Property tax	Personal income tax	Other taxes and fees	Total taxes and fees
State	\$17,224,190	\$18,485,791	\$10,495,660	\$7,716,124	\$53,921,766
Adams County	\$472,037	\$508,017	\$335,608	\$212,951	\$1,528,613
Dodge County	\$513,909	\$550,551	\$277,451	\$217,948	\$1,559,860
Douglas County	\$11,120,961	\$11,940,502	\$6,953,803	\$5,040,707	\$35,055,973
Lancaster County	\$1,924,017	\$2,057,702	\$919,672	\$816,260	\$5,717,651
Saline County	\$481,021	\$517,581	\$338,073	\$213,638	\$1,550,313
Sarpy County	\$1,946,240	\$2,086,665	\$1,112,362	\$864,759	\$6,010,026
Seward County	\$613,466	\$660,531	\$447,649	\$281,115	\$2,002,762
York County	\$152,538	\$164,242	\$111,042	\$68,746	\$496,568

Source: Goss and Associates based on IMPLAN multiplier system

Table 3.5: State and local tax revenues, 2013-17 totals (2018 dollars)

Geography	Sales tax	Property tax	Personal income tax	Other taxes and fees	Total taxes and fees
State	\$83,304,404	\$89,388,393	\$50,144,740	\$37,217,857	\$260,055,394
Adams County	\$8,349,864	\$8,959,682	\$5,026,166	\$3,730,464	\$26,066,176
Dodge County	\$7,276,721	\$7,808,163	\$4,380,192	\$3,251,016	\$22,716,092
Douglas County	\$22,414,777	\$24,051,800	\$13,492,482	\$10,014,236	\$69,973,294
Lancaster County	\$16,006,332	\$17,175,326	\$9,634,945	\$7,151,139	\$49,967,741
Saline County	\$2,458,923	\$2,638,506	\$1,480,139	\$1,098,572	\$7,676,139
Sarpy County	\$10,692,287	\$11,473,179	\$6,436,178	\$4,776,987	\$33,378,631
Seward County	\$2,931,002	\$3,145,062	\$1,764,304	\$1,309,482	\$9,149,850
York County	\$3,135,887	\$3,364,911	\$1,887,634	\$1,401,018	\$9,789,449

Source: Goss and Associates based on IMPLAN multiplier system

Industry Impacts

Table 3.6 provides industry-level detail for the top 20 industries impacted by independent university and student expenditures in 2017. The list does not include direct university operational and capital expenditure categories. Industry sectors are ranked by sales activity. The following are the top five private-sector industries impacted (based on sales): real estate establishments (\$59.5 million); food service and drinking places (\$34.6 million); wholesale trade (\$25.6 million), commercial banks (\$25.4 million), and electric utilities at \$25.0 million.

Table 3.6: State and local tax revenues, 2017 totals (2018 dollars)

Industry	Jobs	Wages and salaries	Self-employment income	Average income	Sales (total impact)
Real estate	657.0	\$6,940,956	\$2,108,275	\$13,774	\$59,482,585
Food services	747.8	\$11,124,360	\$628,905	\$15,716	\$34,640,201
Wholesale trade	153.8	\$9,545,729	\$3,313,512	\$83,626	\$25,556,294
Commercial banks	83.3	\$3,931,710	\$0	\$47,193	\$25,379,938
Electric utilities	78.0	\$8,143,229	\$0	\$104,431	\$24,970,620
Natural gas distribution	13.3	\$1,692,627	\$2,656,305	\$325,816	\$22,787,193
Private hospitals	190.9	\$10,413,185	\$35,153	\$54,720	\$21,846,362
Medical healthcare services	175.3	\$12,320,362	\$1,841,361	\$80,797	\$21,698,648
Investment activities	116.2	\$3,816,706	-\$240,124	\$30,786	\$16,925,141
Non-bank credit establishments	122.7	\$7,796,211	\$737,779	\$69,559	\$16,514,403
Insurance carriers	63.3	\$4,084,267	\$85,881	\$65,860	\$15,625,585
Architectural & engineering services	94.0	\$6,108,984	\$1,143,473	\$77,166	\$11,401,611
Telecommunications	29.4	\$2,028,293	\$14,438	\$69,432	\$11,241,169
Retail Stores -	184.0	\$4,294,389	\$3,353	\$23,362	\$8,646,560
Animal processing	19.0	\$904,323	\$5,468	\$47,785	\$8,513,536
Scientific research and development	60.0	\$3,735,810	\$824,351	\$76,026	\$8,493,852
Services to buildings and dwellings	152.4	\$3,108,118	\$179,205	\$21,572	\$8,055,589
Lessors of intangible assets	2.3	\$133,875	\$3,145	\$60,077	\$7,100,529
Nursing and residential care	124.7	\$4,226,266	\$23,090	\$34,074	\$6,928,162
All other industries	10,695.7	\$460,272,359	\$31,352,651	\$45,965	\$1,038,404,612
Total all industries	13,887.1	\$573,200,831	\$44,716,221	\$44,496	\$1,426,533,810

Source: Goss and Associates based on IMPLAN multiplier system



Growth in Impacts

Goss & Associates completed an impact study for Nebraska's independent colleges and universities in 2005 based on 2003 data. Table 3.5 compares the 2003 impacts to the 2017 impacts. As indicated, the compound annual growth in impacts from 2003 and 2017 from Nebraska's independent colleges and universities were 1.5 percent for total impacts, 13.2 percent for state and local taxes, and 0.7 percent for wage and salaries

For 2017, the state's 13 independent colleges and universities:

1. Enrolled Nebraska residents with little taxpayer support. For 2017 alone, this saved the Nebraska taxpayer an estimated \$262.4 million.
2. Recruited and enrolled 13,247 students from outside the state. It is estimated that approximately 51.6 percent of these students graduated and remained in the state. This generated a "brain gain" of approximately \$373.7 million of wages and salaries and \$78.2 million of state and local taxes in 2017 alone.
3. Generated a total impact of \$1.43 billion, wages and salaries of \$573.2 million, and self-employment income of \$44.7 million. Additionally, 13,887.1 jobs were supported and \$53.9 million in state and local taxes were produced by the spending of the 13 institutions and their students.

Table 3.7: Comparison of 2003 and 2017 impacts from Nebraska's independent colleges and universities

	2003	2017	Compound Annual Percent Change
Number of institutions	14	13	n.a.
Number of students	22,072	37,433	3.8%
Total impact	\$1,162,043,078	\$1,426,533,810	1.5%
State & local tax impact	\$46,100,989	\$260,055,394	13.2%
Wages & salaries	\$522,233,330	\$573,200,831	0.7%
Percent of students from outside state	31%	37.5%	n.a.
Total injection	\$656,922,981	\$841,498,124	1.8%
Number of students from outside NE	6,842	13,307	6.1%

Source: Goss & Associates impact studies, 2003 and 2018

As indicated, the compound annual growth in impacts from 2003 and 2017 from Nebraska's independent colleges and universities were 1.5 percent for total impacts, 13.2 percent for state and local taxes, and 0.7 percent for wage and salaries.

Summary

Sections one, two, and three have detailed the impact of Nebraska's 13 independent colleges and universities.

For 2017, the state's 13 independent colleges and universities enrolled Nebraska residents with little taxpayer support. For 2017 alone, this saved the Nebraska taxpayer an estimated \$262.4 million.

Nebraska's Independent colleges and universities recruited and enrolled 13,247 students from outside the state in 2017. It is estimated that

approximately 51.6 percent of these students graduated and remained in the state. This generated a "brain gain" of approximately \$373.7 million of wages and salaries and \$78.2 million of state and local taxes in 2017 alone.

Also, for 2017, the state's independent colleges and universities generated a total impact of \$1.43 billion, wages and salaries of \$573.2 million, and self-employment income of \$44.7 million. Additionally, 13,887.1 jobs were supported and \$53.9 million in state and local taxes were produced by the spending of the 13 institutions and their students.

Nebraska's Independent colleges and universities recruited and enrolled 13,307 students from outside the state in 2017.

Appendices

Appendix A: Impact by
College or University, 2017
All Impacts are Statewide



Bellevue University

As one of Nebraska's largest, fully accredited, nonprofit colleges, Bellevue University offers undergraduate and graduate degree programs. From the time of its founding in 1966, Bellevue University has more than 50,000 graduates worldwide. The University is a recognized national leader in preparing students for lifelong success with career-relevant knowledge and skills, while making college affordable. Routinely ranked among the nation's top military-friendly and open access institutions, the University serves students at its beautiful 46-acre main campus in Bellevue, Nebraska, and everywhere online.

Bellevue University attracts a broad base of students, creating a diversity that deepens the student experience while making it more enjoyable. Undergraduate and graduate populations are made up of roughly half men and women, with ages ranging from 18 to 65+ with many falling into the 25-34-year-old age range. Students online represent all 50 United States and the District of Columbia. International students from countries across the globe attend the university either on campus or online. Many military service members enroll in Bellevue University programs. All these facts are a testament to the growing diversity at Bellevue University.

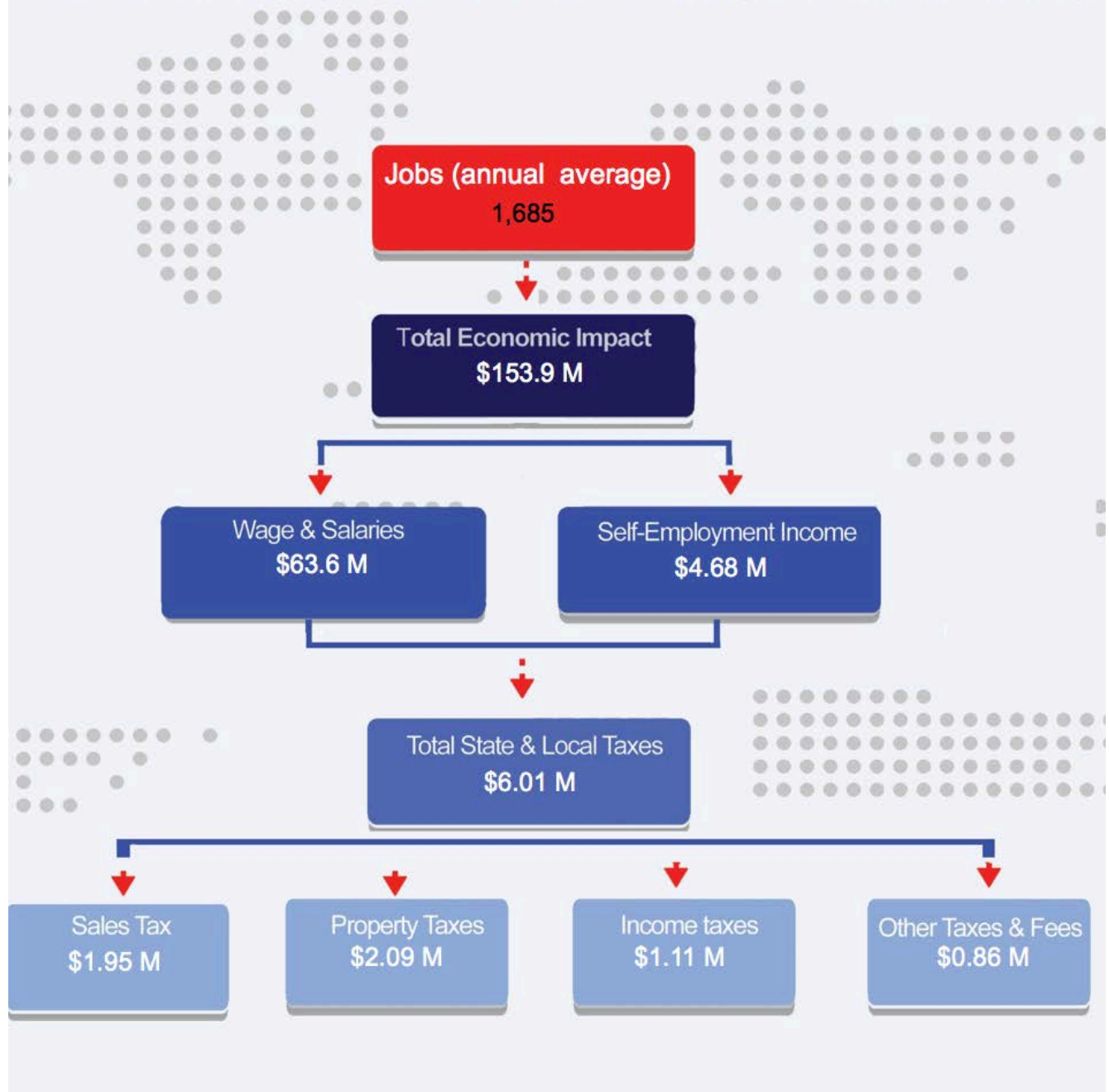


- Location: Sarpy County
- Total enrollment: 8,896
- Total Faculty: 390
- Student to Faculty Ratio: 31:1
- Students from NE: 44.7%
- Alumni Living in NE: 40.6%

Bellevue University effectively engages students in earning awards and degrees that prepare them to thrive in a connected, competitive world. Bellevue University provides students with a powerful foundation for personal value creation, instilling the confidence they need to take control of their lives and to be responsible citizens of the global community.

In addition, Bellevue University teaches the value of a free market, capitalist economic system and the importance of preserving the American heritage of a democratic and free way of life. These topics are stressed all while embracing five key values: integrity in all we do; belief in the transformational value of education; student-centric; market focused; and, innovative.

Bellevue University's Impact on the Economy, 2017 (2018 Dollars)





Bryan College of Health Sciences, located in Lincoln, Nebraska, is a small private college that offers undergraduate degrees in nursing and health professions, a graduate degree for nurse anesthesia, and certificate options for both undergraduate and graduate students. Bryan College fully occupies one building of the Bryan Medical Center East campus, with space totaling 66,175 square-feet.

Bryan Health's history goes back to 1922 when William Jennings Bryan donated his home, Fairview, and surrounding land to the Nebraska Conference of the United Methodist Church for the purpose of establishing a new hospital in Lincoln. It officially opened its doors as Bryan Memorial Hospital in 1926 and added the Bryan School of Nursing later that year. However, it was not until 2001 that the Nebraska Coordinating Commission for Postsecondary Education approved the request by Bryan School of Nursing to become a degree-granting institution.

Today, Bryan College of Health Sciences includes a School of Health Professions, School of Nurse Anesthesia, School of Nursing, the Research and Professional Practice Center, Center for Excellence in Simulation Education and the divisions of General Education and Educational Technology.

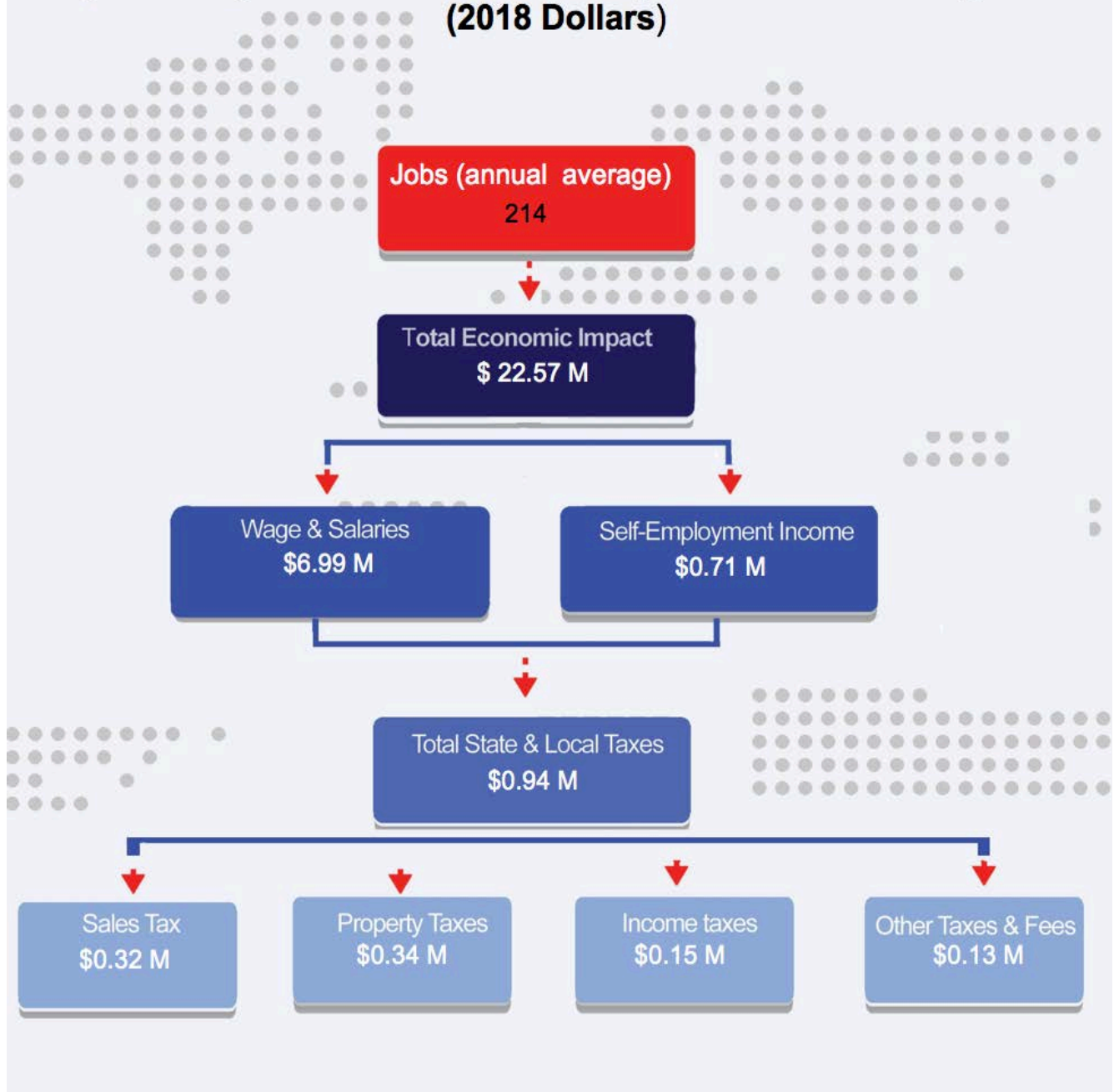


- Location: Lancaster County
- Total Enrollment: 698
- Total Faculty: 72
- Student to Faculty Ratio: 9:1
- Students from NE: 95.4%
- Alumni Living in NE: 87.68%

Bryan College of Health Sciences prides itself on its highly qualified faculty, low student-to-instructor ratio, and an unparalleled number of clinical hours combined with sophisticated technology such as high-fidelity patient simulators and human body specimens.

Bryan College also makes sure to have a positive impact on the surrounding community. Many of the educational offerings planned for faculty and students are opened up to the public with alumni, faculty from other colleges, health care practitioners and others with interest in the topics invited to participate. Examples of this include: The Provost Colloquium series; the annual Nurse Anesthesia workshop attended by CRNAs from across the state; the educational workshop held at Bryan College in collaboration with Clarkson College and Nebraska Methodist College; collecting personal care items for Fresh; participating in blood drives, serving meals at the Matt Talbot soup kitchen for the homeless; playing bingo with residents at Lancaster Manor; sponsoring the residents of a nursing home at Christmas; helping with Remembering our Children— a memorial evening and a time of remembrance for parents who have lost a child; staffing a water station at the Lincoln Marathon; and, hosting a sand volleyball tournament with proceeds going toward a philanthropic organization.

Bryan College of Health Sciences' Impact on the Economy, 2017 (2018 Dollars)





Located near downtown Omaha, Clarkson College is a private, accredited, non-profit that offers certificate and degree opportunities in a multitude of fields. These fields include Nursing, Health Care Business, Community Health, Health Education Leadership, Health Information Management, Physical Therapist Assistant, Radiologic Technology, Medical Imaging, Imaging Informatics and Professional Development.

The Mission of Clarkson College is to prepare students to professionally provide high quality, ethical, and compassionate health care services. With this in mind, program directors and faculty identified five important Student Success Skills, which include Communication, Critical Thinking, Technology, Professional Behavior and Diversity.

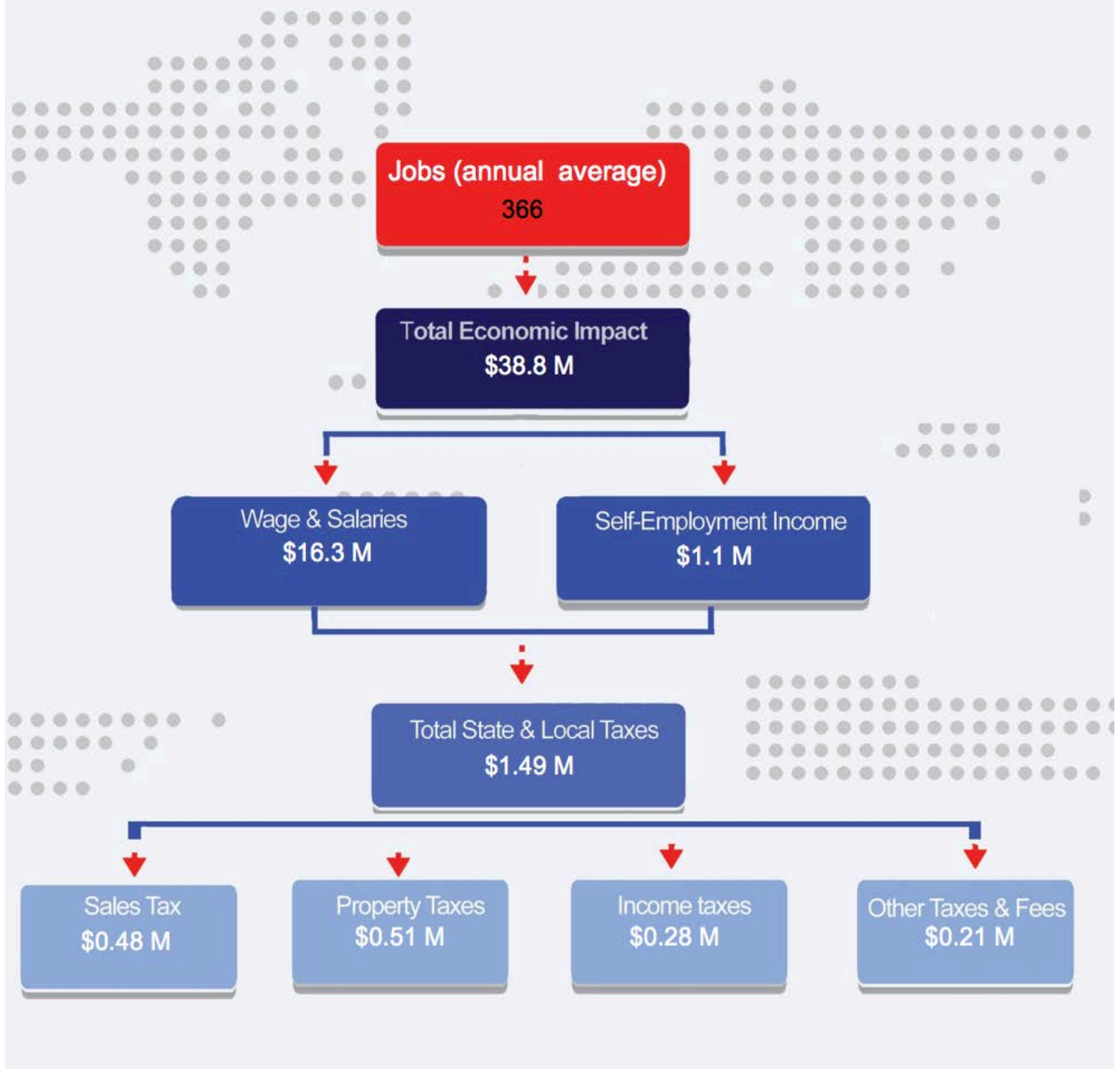


- Location: Douglas County
- Total enrollment (Fall 2017): 1,217
- Total Faculty: 74
- Student to Faculty Ratio: 17:1

These skills are the Institutional Student Learning Outcomes for the College and are measured within all departments on campus to provide evidence that students possess the foundational knowledge and skills necessary to

become successful health care professionals. Student assessment is essential to ensure that its programs meet professional standards and all regional and program specific accreditation requirements.

Clarkson College's Impact on the Economy, 2017 (2018 Dollars)





Established in 1923, College of Saint Mary (CSM) is a thriving Catholic university located in the heart of Omaha, NE. Founded for women by the Sisters of Mercy, CSM is committed to providing access to affordable education for women that calls forth potential and fosters leadership through academic excellence, scholarship and lifelong learning. The University offers more than 35 undergraduate, master's, and doctoral level programs across an array of fields from healthcare and education to business and legal studies.

As part of CSM's work to maximize the value of a student's education, the college has developed closely integrated bachelor's and master's degree programs that enable students to obtain professional degrees in the time commonly expected for a bachelor's program. Today, CSM students can earn a bachelor of science in nursing in three years and go from high school to holding a master's degree in physician assistant studies or occupational therapy in just five years. Similarly, a qualified undergraduate enrolling in paralegal studies can complete her bachelor's degree at CSM in three years, while earning full qualifications for admission to law school.



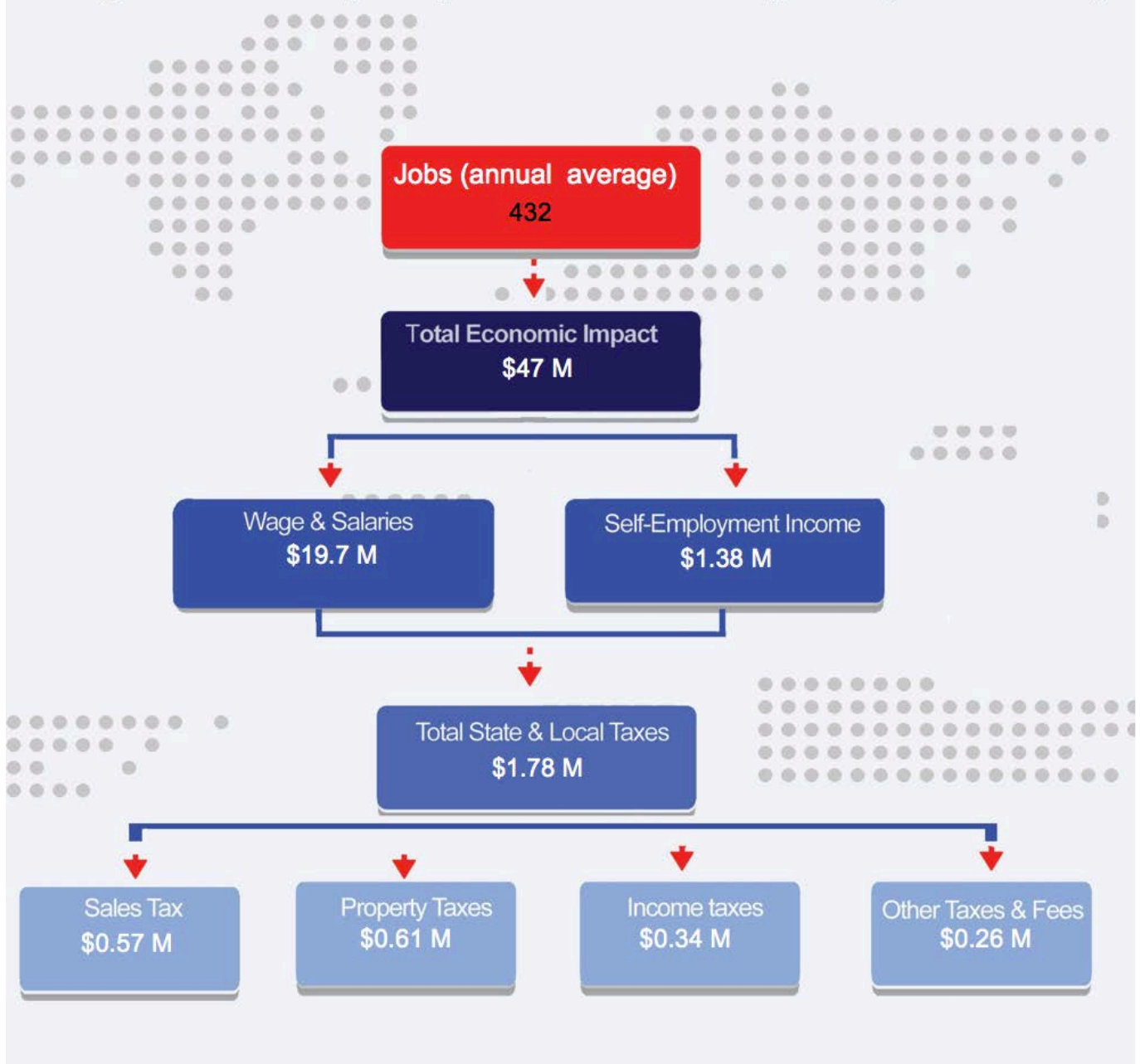
In the fall of 2017, College of Saint Mary (Omaha, Neb.) made a bold change to its pricing strategy, "resetting" or reducing undergraduate tuition by 33 percent. By decreasing tuition and eliminating fees for students, CSM can now more fully live out its mission of providing access to an affordable, high-quality education to women.

CSM offers its student body a complete collegiate experience that includes competitive athletics and a wide range of fine arts opportunities. A member of the Great Plains Athletic Conference (GPAC), the CSM Flames field teams in 10 competitive sports: basketball, soccer, softball, volleyball, golf, bowling, competitive dance, swimming, tennis and cross country. Fine arts play a large role in rounding out an academic experience, and CSM creates opportunities for students to experience the enriching power of music, drama, and visual arts.

- Location: Douglas County
- Total Enrollment: 1,140
- Total Faculty: 67
- Student to Faculty Ratio: 11:1

Located in the heart of Omaha, home of four Fortune 500 companies, CSM's 40-acre campus is adjacent to Aksarben Village's vibrant and bustling retail and entertainment space, as well as Baxter Arena. As a Catholic institution rooted in service, CSM students provide more than 10,000 hours of service annually to the people and organizations of greater Omaha.

College of Saint Mary's Impact on the Economy, 2017 (2018 Dollars)





In 1894, the Lutheran Church-Missouri Synod founded Concordia University, Nebraska with the purpose of training teachers for the Synod. Today, Concordia University, Nebraska has blossomed into large-scale, private, coeducational institution of higher learning that holds true to its Lutheran identity. The main campus is located in the small town of Seward, Nebraska about 25 miles west of Lincoln. Unlike the undergraduate experience, the graduate school and degree completion program are based in Lincoln.

Concordia University, Nebraska strives to equip men and women for lives of learning, service and leadership. This is achieved by focusing on four themes—community, inquiry, purpose, and wisdom—that make up a quality Lutheran education. Concordia University, Nebraska offers over 200 academic programs to its students.

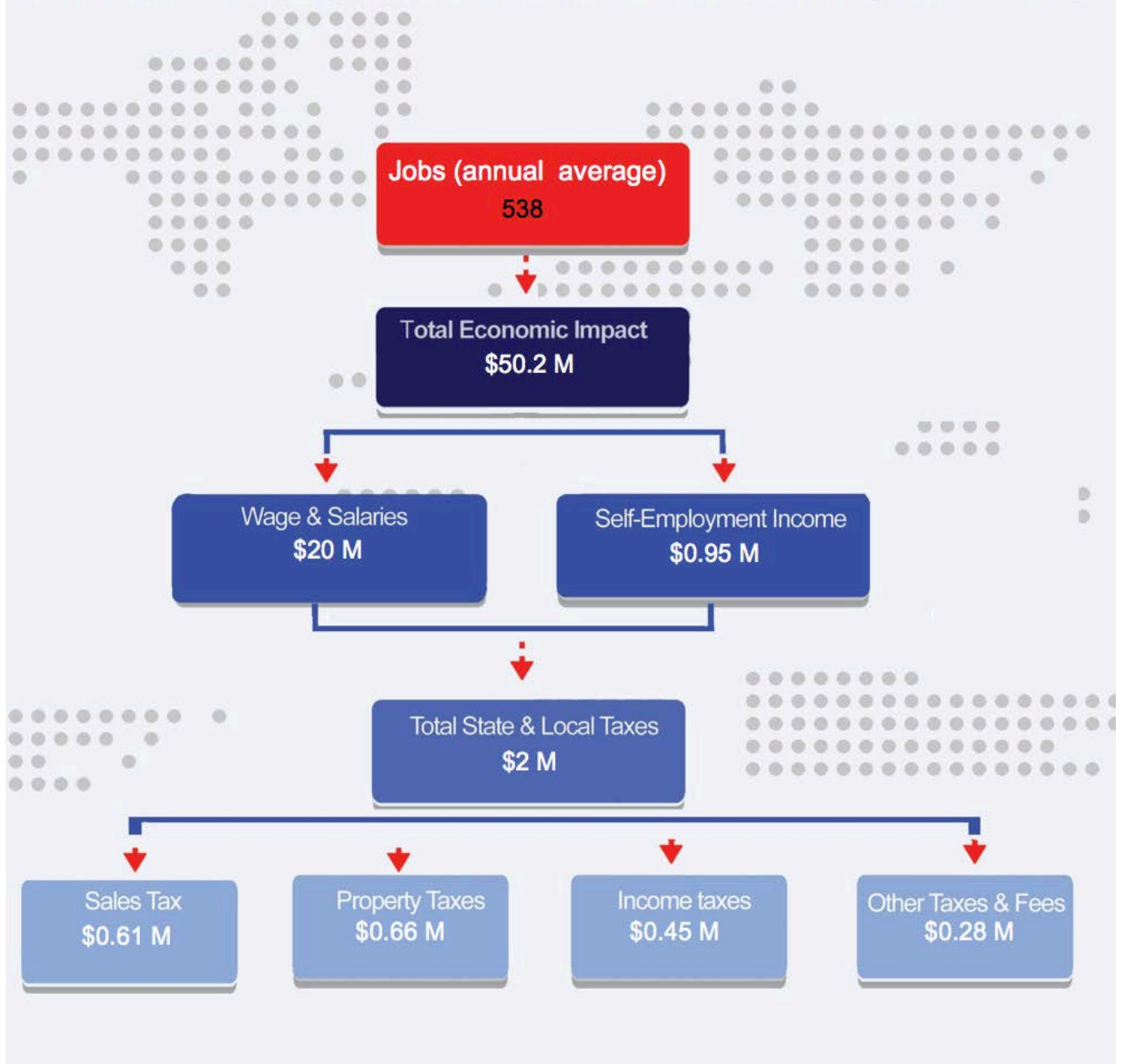


In 2018, Concordia University, Nebraska was the only Christian school in Nebraska—and one of 61 schools in the nation—to be named as a Christian College of Distinction. Concordia is one of the top ten best valued universities in the Midwest region by *U.S. News and World Report*, as well as being the 19th safest university in the nation according to Cappex.

- Location: Seward County
- Total enrollment (2016): 2,757
- Total Faculty: 253
- Student to Faculty Ratio: 13:1
- Students from NE: 45%
- Graduates from NE (2017): 43.5%

Concordia University, Nebraska has a special partnership with 10 Lutheran high schools in the Midwest region. These partnerships help give students a fantastic education with a small price tag. Students that attend these schools are guaranteed \$17,000 in financial aid.

Concordia University's Impact on the Economy, 2017 (2018 Dollars)



Creighton UNIVERSITY

Founded in 1878, Creighton University is one of 28 Jesuit universities and colleges in the U.S. Located in Omaha, Nebraska, Creighton University provides world-class education to over 8,000 undergraduate, graduate, and professional students each year. Creighton University is consistently ranked by *U.S. News and World Report* as the top regional university in the Midwest. Creighton University's prestige is also recognized globally, as *U.S. News and World Report* named Creighton University as one of the 2017 Best Global Universities.

Guided by the Ignatian tradition, Creighton University stresses the importance of service and leadership in the journey to creating a better world. Creighton University's nine schools and colleges deliver powerful education that connects arts and sciences, law and business with health science programs in dentistry, medicine, nursing, pharmacy, occupational and physical therapy, public health and emergency medical services.



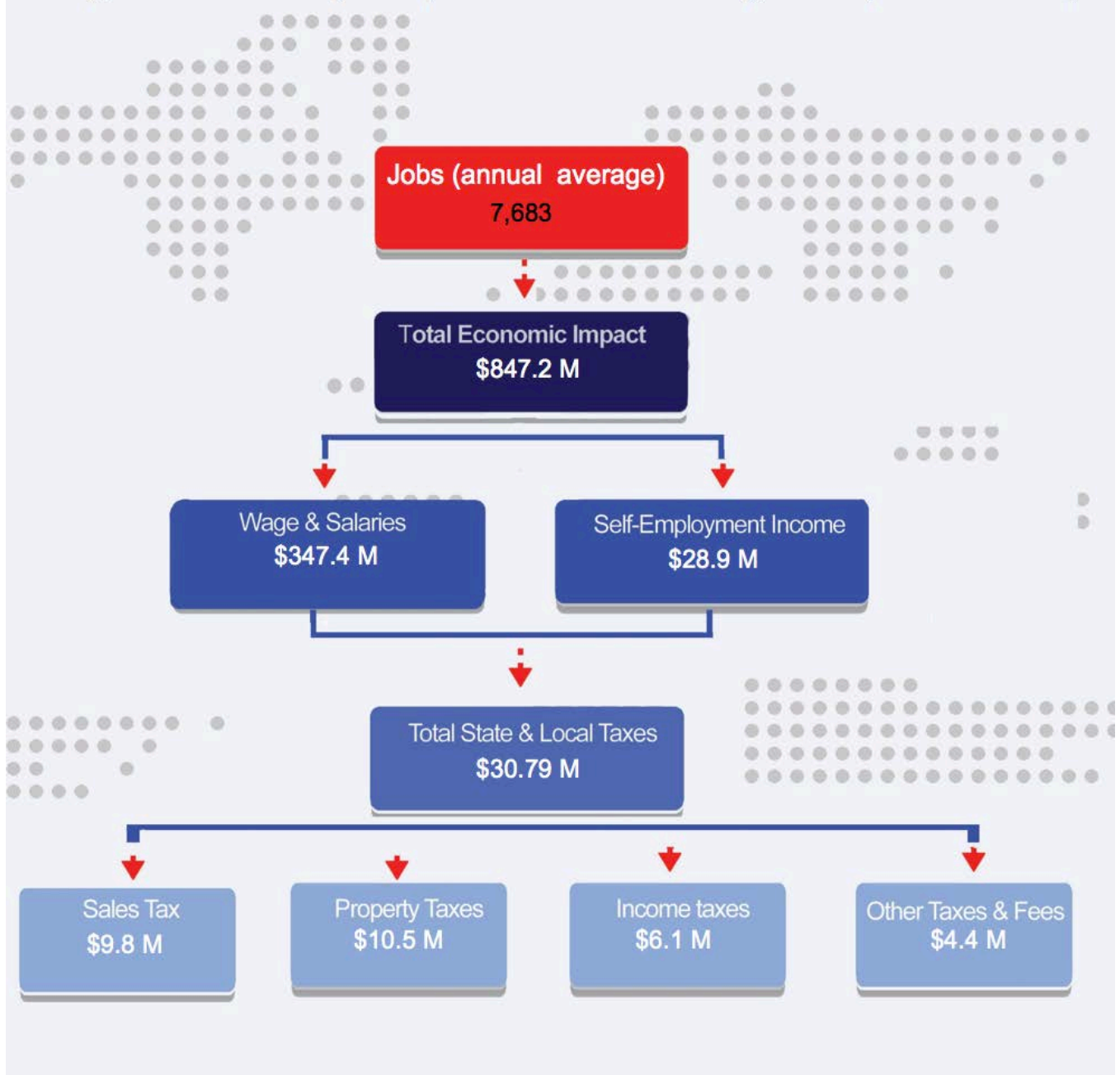
On top of the variety of subjects taught at Creighton University, Creighton grants its students with the opportunity to live a fruitful life. Creighton University graduates for 2017 had a success rate of 99 percent. Creighton's alumni network expands across the world and continues to grow and provide more opportunity for its students.

- Location: Douglas County
- Total enrollment: 8,654
- Total Faculty: 668
- Student to Faculty Ratio: 11:1
- Students from NE (Fall 2017): 24.7%
- Graduates from NE (Fall 2017): 19.8%

Creighton University is one of the top 13 employers in the city of Omaha making it a vital part of the local economy. Creighton also has about a \$787.5 million annual impact on the state of Nebraska as a whole.

As part of the Ignation spirit, Creighton University's staff, students, and faculty are committed to serving others on campus and beyond. In fact, during the 2014-2015 school year, students logged over 1.25 million service hours. These hours are another testament to how important Creighton University is to Omaha.

Creighton University's Impact on the Economy, 2017 (2018 Dollars)





Located on a beautiful 300-acre campus in Crete, Nebraska, Doane University, formerly Doane College, is Nebraska's oldest private university. Since 1872 Doane University has offered generations of opportunity with its world-class liberal arts and sciences education built on pillars of leadership, inquiry, values and engagement. Today, Doane University offers 39 majors, several pre-professional programs, and 32 minors.

Doane University is focused on everything it can do to benefit its students so they can thrive in further education and the workplace. Doane University prides itself in being one of the first universities to implement a four-year graduation guarantee. It also makes sure that all of its students receive some form of financial aid.



The average class size consists of 11 students, allowing for personal attention, more interaction, and the ability to know professors on a first-name basis. With the help of its College to Career Center, students can better identify their skills and interests while connecting them to the real world through internships, pre-professional programs, skill development, career planning, and other resources. Over 700 internships have been completed by its students in the last five years

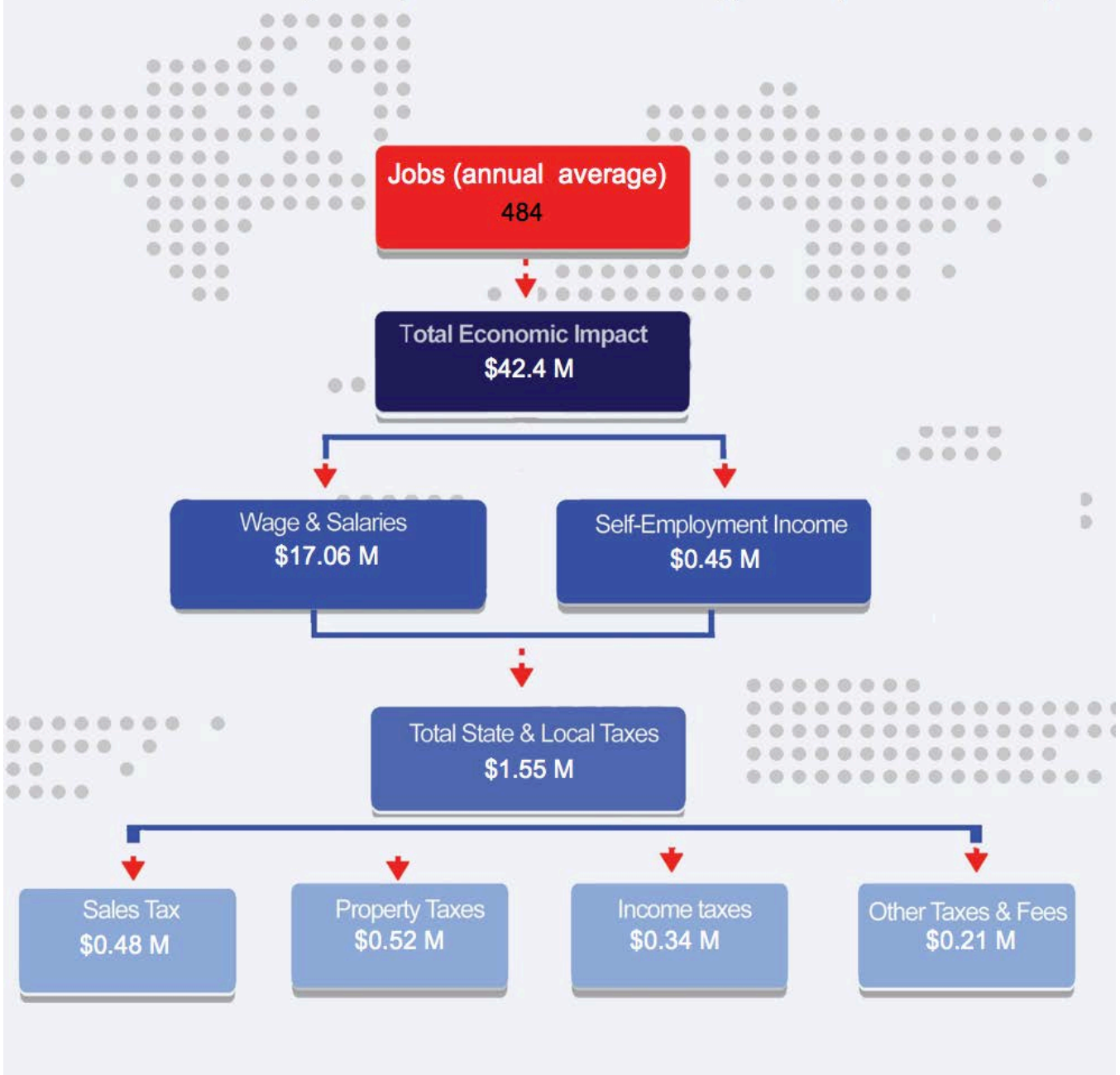
- Location: Saline County
- Total enrollment: 2,871
- Total Faculty: 89
- Student to Faculty Ratio: 11:1
- Students from NE: 76.6%
- Graduates Living in NE from 2016-2017: 1321

Doane University continually receives national recognition every year from some of the most prestigious publications across the country. For its 2017 college rankings, *The Wall Street Journal* rated

Doane University as the 2nd best university in Nebraska. Doane

University was only one of four institutions to receive recognition from the WSJ/Times Higher Education. In addition, *U.S. News and World Report* named Doane University a "Top National Liberal Arts College," ranking among the top 150 schools nationally, but the recognition doesn't stop there. *The Princeton Review* labeled Doane University a "Best Midwestern School," and Forbes made sure to include it among their "America's Best Colleges" list.

Doane University's Impact on the Economy, 2017 (2018 Dollars)





HastingsCollege

Founded in 1882, Hastings College sits upon a beautiful 120-acre campus in Hastings, Nebraska. Hastings College is affiliated with the Presbyterian Church (U.S.A.) and has five core values: Community, Ambition, Integrity, Respect, and Spirituality. Hastings offers students many opportunities to prepare for a successful future. In fact, Hastings College has 60 plus majors in 32 areas of study and more than a dozen pre-professional programs and offers the following degrees: Bachelor of Arts, Bachelor of Music and Master of Arts in Teaching.

Hastings College prides itself on its ability to prepare its students for a long-term success. Of its 2016 graduates, 95 percent were continuing their education or were employed within the six months following graduation. Hastings College has a network of over 10,000 alumni around the world that give students an upper-hand in the work force.

Hastings College continues to be nationally recognized for its excellence. In fact, the *U.S. News and World Report* ranks Hastings College in the top 20 for best colleges and best value in the Midwest region.

About two-thirds of all classes at Hastings College have less than 20 people, which make the learning experience far more specialized and personal for its students. In fact, each full-time faculty member met with an average of 20 prospective students over a one-year

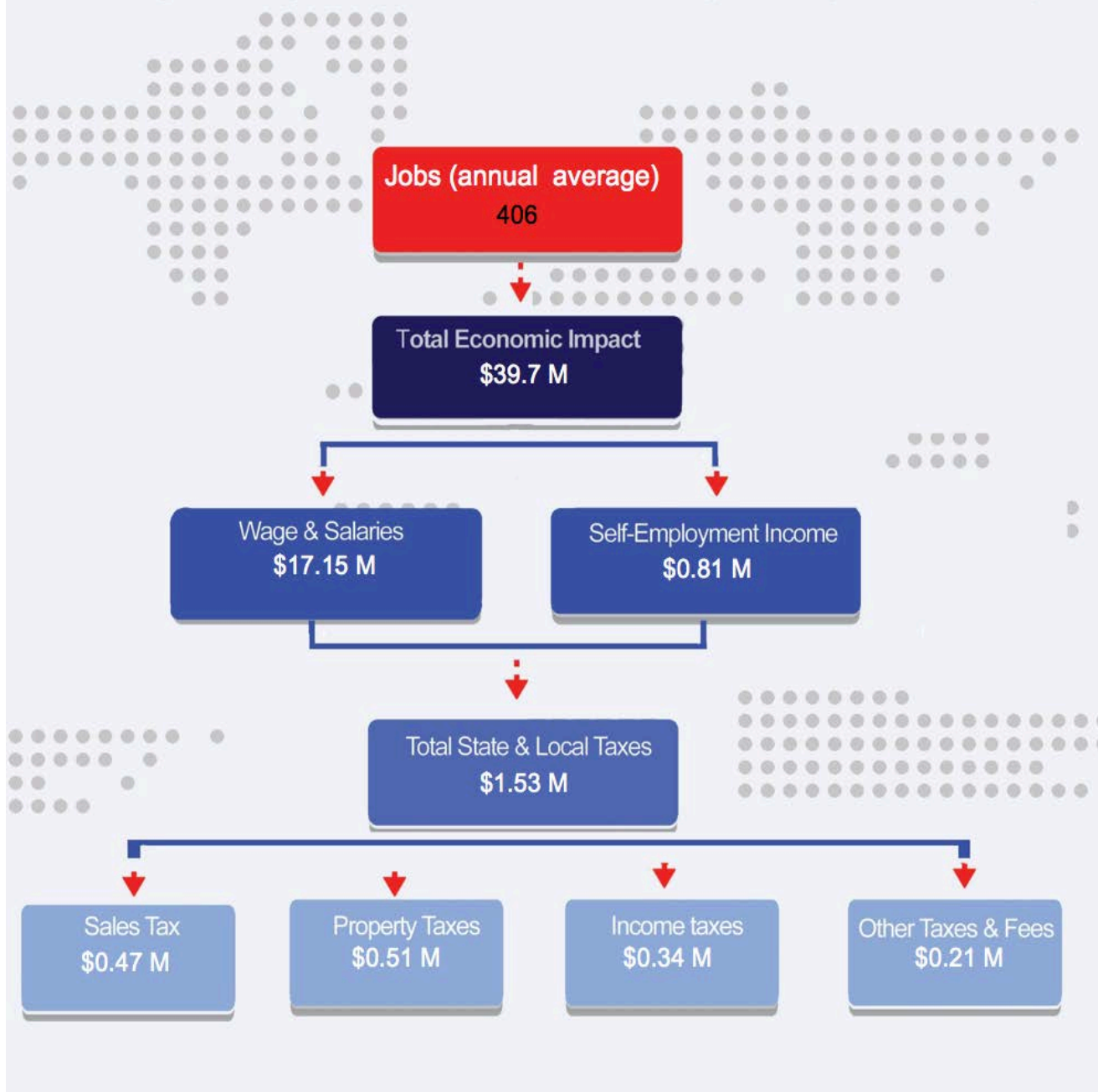
period. Hastings College also offers its students the chance to study abroad in more than eight different countries.

Hastings College draws inspiration from its Presbyterian heritage, its liberal arts history, and the spirit of the Great Plains to graduate caring and creative students that thrive as citizens of their local and global communities.



- Location: Adams County
- Total enrollment: 1,207
- Total Faculty: 77
- Student to Faculty Ratio: 13:1
- Students from NE (2017): 58.3%
- Graduates Living in NE (2017): 189

Hastings College's Impact on the Economy, 2017 (2018 Dollars)





Located in the heart of Fremont, Nebraska, Midland University is a private liberal arts college. With about 1,400 students from across the map attend Midland University. From its founding in 1883, Midland University has always been student-centric. For example, students attending Midland University are guaranteed to graduate in four years, which is a first of its kind in the state of Nebraska. With an average class size of 18, students have full access to professors who know them by name.

Furthermore, Midland University is Nebraska's fastest growing college. Students can choose from over 30 majors and academic programs. Also, more than 30 clubs, student organizations, sororities, and fraternities are available at Midland University, and nearly 60 percent of students reside on campus. All of these offerings give its students the opportunity to grow and deepen the Midland experience.



- Location: Dodge County
- Total enrollment: 1,375
- Total Faculty: 163
- Student to Faculty Ratio: 10:
- from NE: 64.7%
- Alumni Living in NE: 5,142

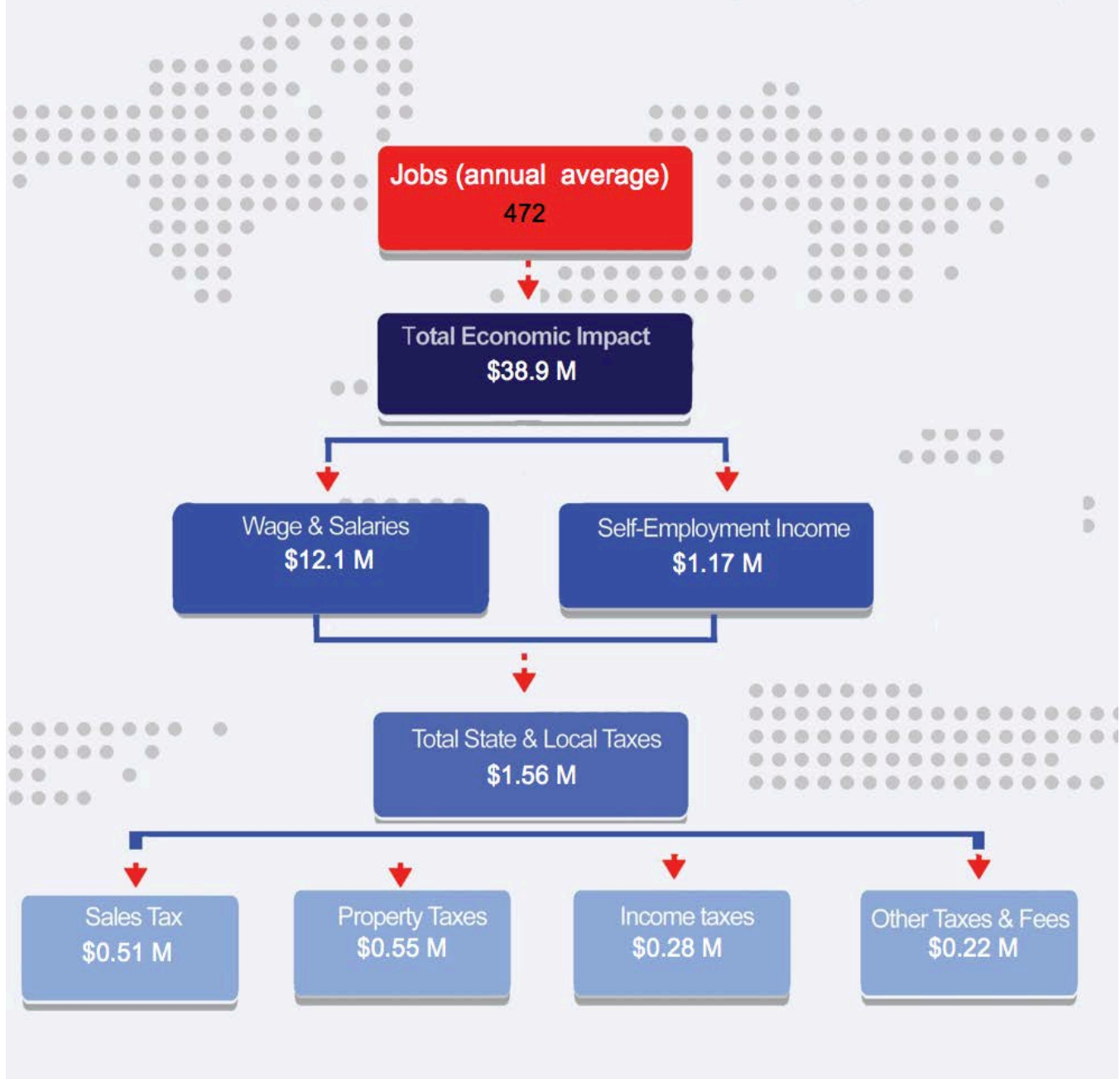
Although a 135-year institution, Midland's vision is to be "Relentlessly Relevant" and its students experience dynamic, relevant learning opportunities that ensure their career readiness. Midland University is an agile, nimble institution that can develop programs for its key stakeholders quickly and without undue bureaucracy and "red tape". Midland does not offer faculty tenure but instead has rolling three-year contracts. Its president and the majority of the leadership team come from business backgrounds

Midland University is also home to the largest athletic program in the state, offering 31 varsity sports. With the many benefits it provides, Midland University is able to create a close-knit community for faculty, staff, students, friends and alumni. Notable alumni include:

- Allen Beermann '62- former Secretary of State for the State of Nebraska
- Robert Benne '59 - Lutheran theologian
- Doug Christensen '65 - Commissioner of Education for the State of Nebraska

- Jon Lynn Christensen '85- former member of the United States House of Representatives
- Wesley J. Fuerst '51-Lutheran Old Testament scholar
- Philip Hefner '54-Lutheran theologian
- Clifton Hillegass '37-founder of CliffsNotes
- Ralph Hult (Luther)-first American Lutheran missionary to Tanzania
- Michael Jacobson '72-CEO of HunTel Systems, Inc.
- Larry Mosner '64-retired CEO of Deluxe (Checks) Corporation
- Diana Smalley '74-regional president of West Communications at Mercy Hospital (Missouri)
- John Sturgeon '62-retired President and CEO of Mutual of Omaha
- Reuben Swanson '30-(Luther)-former Secretary of the Lutheran Church in America, bishop, and pastor
- Del Weber '54-Chancellor Emeritus, University of Nebraska at Omaha
- Paul Norris-Creator of Aquaman (comic book)
- Ingrid Hult Trobisch Youngdale '45 (Luther)-Author, international speaker, missionary
- Gary Perkins '70-Retired president and CEO of Children's Hospital Omaha
- Bret Erickson '82-Four-time Olympian and a former coach of the US National Shooting Sports Team
- Lt. Col. Julie Nethercot '93-Executive Officer, Ground Combat Element Integrated Task Force (Pentagon)
- Lorraine Keilstrup '67-internationally known author and play/script writer
- Crystal Childers '97-state coordinator and president of Nebraska Ms. Wheelchair Chapter
- Gwen Middaugh Howard '67-politician serving two terms in the Nebraska legislature, from 2005-13
- Erik Bye '50-Norwegian journalist, artist, author, film actor, folk singer and popular radio and television personality

Midland University's Impact on the Economy, 2017 (2018 Dollars)





Nebraska Methodist College (NMC), located in Omaha, Nebraska and an affiliate of Methodist Health System, is a premier private, not-for-profit nursing and health professions institution that has offered a caring, close-knit community to its students since it was established in 1891. NMC also maintains a historic and supportive relationship with the United Methodist Church. With an enrollment of over 1,100 students, NMC is the right size to really care about each student as an individual and large enough to provide outstanding undergraduate, graduate and certificate programs in nursing and allied health.



NMC students experience a holistic culture of caring while mastering the art and science of health care. They gain the skills and experience needed to become outstanding contributors to society through service-learning experiences, community-based education, and leadership development integrated throughout the curriculum. More than classes, clinical and credit hours, NMC prepares its graduates as educated citizens for what's next—in their career and life by teaching mind set and heart set along with the health care skillsets.

- Location: Douglas County
- Total enrollment: 1,357
- Total Faculty/Staff: 146
- Student to Faculty Ratio: 12:1
- Students from NE: 85%
- Graduates from NE (2017): 84.4%

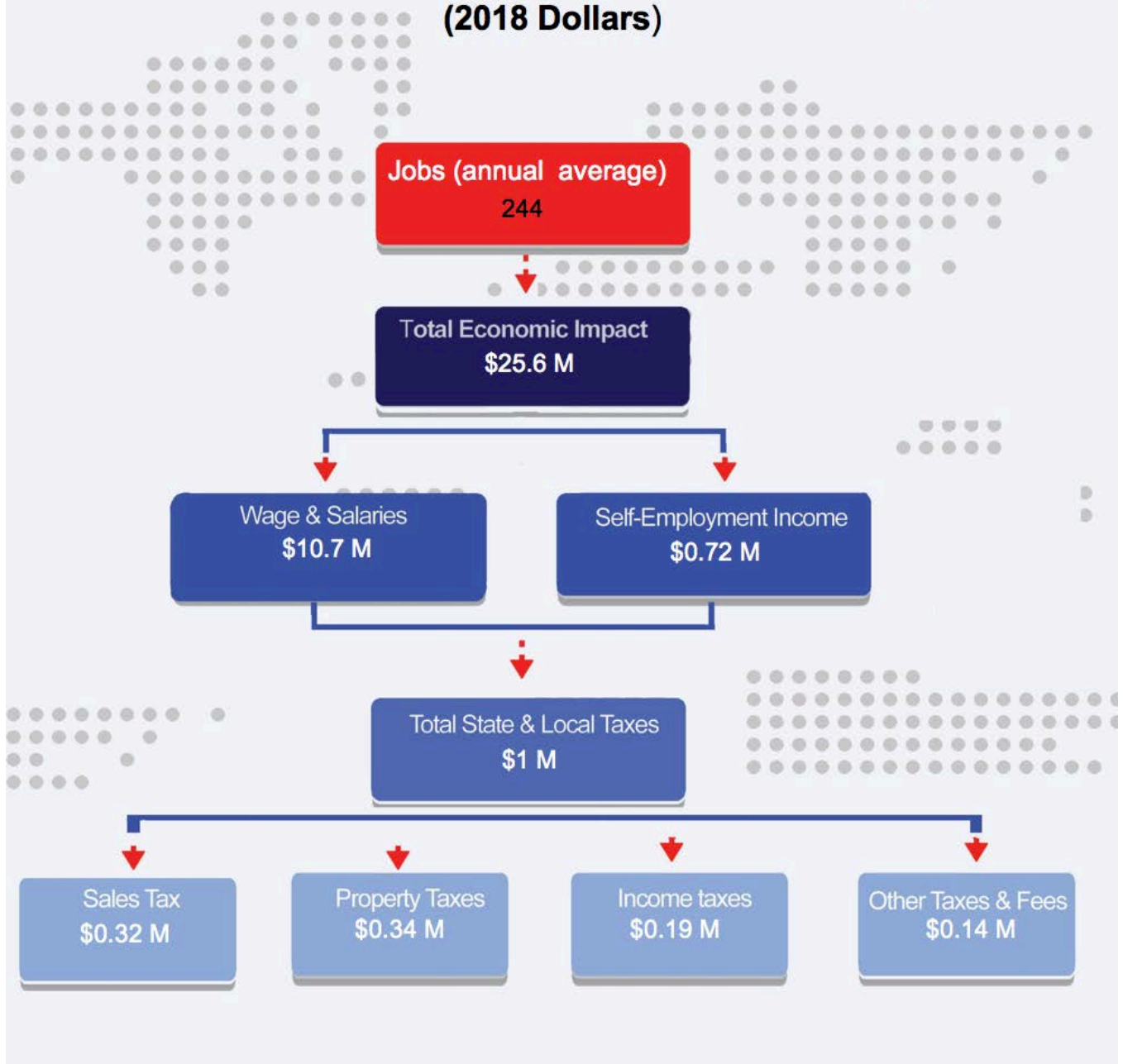
NMC's nursing program offers a traditional BSN, accelerated BSN, LPN to BSN, and RN to BSN, online MSN Educator, Executive and Informatics tracks, and online Doctorate of Nursing Practice (DNP) degrees. Health professions programs include in Physical Therapist Assistant, Radiography Tech/Imaging, Sonography, Surgical Technology, and Respiratory Care. In addition, NMC offers a Master's of Occupational Therapy, online MBA in Healthcare and online Ed.D in Healthcare.

NMC is active in Omaha and other Nebraska communities through its Center for Health Partnerships, Mobile Diabetes Center, Lead Testing Initiatives, community CPR training, and TRIO Classic Upward Bound program. NMC also impacts the community through its continuing education and professional development division (Medical Assistant, Phlebotomy, CNA, etc.), high school healthcare camp, service learning projects, and immersion trips.

Notable alumni include:

- Anne Boatright, MSN, RN, SANE, FNE. Nebraska State Forensic Nursing Coordinator within the Criminal Bureau of the Attorney General's Office. Coordinator of the Methodist Heidi Wilke Forensic Nurse Examiner program. NMC Master of Science in Nursing-Nurse Executive Program, 2015
- Greg Opseth, MHA, BSN, RN. Chief Nursing Officer, Guthrie County Hospital, Guthrie Center, Iowa. NMC Accelerated Bachelor of Science in Nursing (ACE) Program, 2012
- Blake K. Smith, MSN, RN, President –elect American Association for Men in Nursing, Robert Wood Johnson Foundation New Careers in Nursing Scholar, Nebraska Action Coalition Leadership Committee. NMC Accelerated Bachelor of Science in Nursing (ACE) Program, 2012
- Paula Stapleton, BSN, RN. NMC Bachelor of Science in Nursing Program, 1995, President of Interim HealthCare of Omaha

Nebraska Methodist College's Impact on the Economy, 2017 (2018 Dollars)





In the upbeat, urban setting of Lincoln, Nebraska sits Nebraska Wesleyan University (NWU). Founded in 1887 by Nebraska Methodists, NWU is home to more than 2,000 students from the United States and beyond. NWU actively maintains its relation to the United Methodist Church and its Great Plains Annual Conference.

NWU earns high regard nationally and in Nebraska for its many successes. They include exceptional medical school placement rates, an exceptional level of international activity, an acclaimed “Archway Curriculum” that builds life-long skills for all undergraduates, and one of the best undergraduate theatre programs in the nation. NWU ranks #8 in the U.S. among all universities and colleges for Academic All-American awards to its student-athletes.



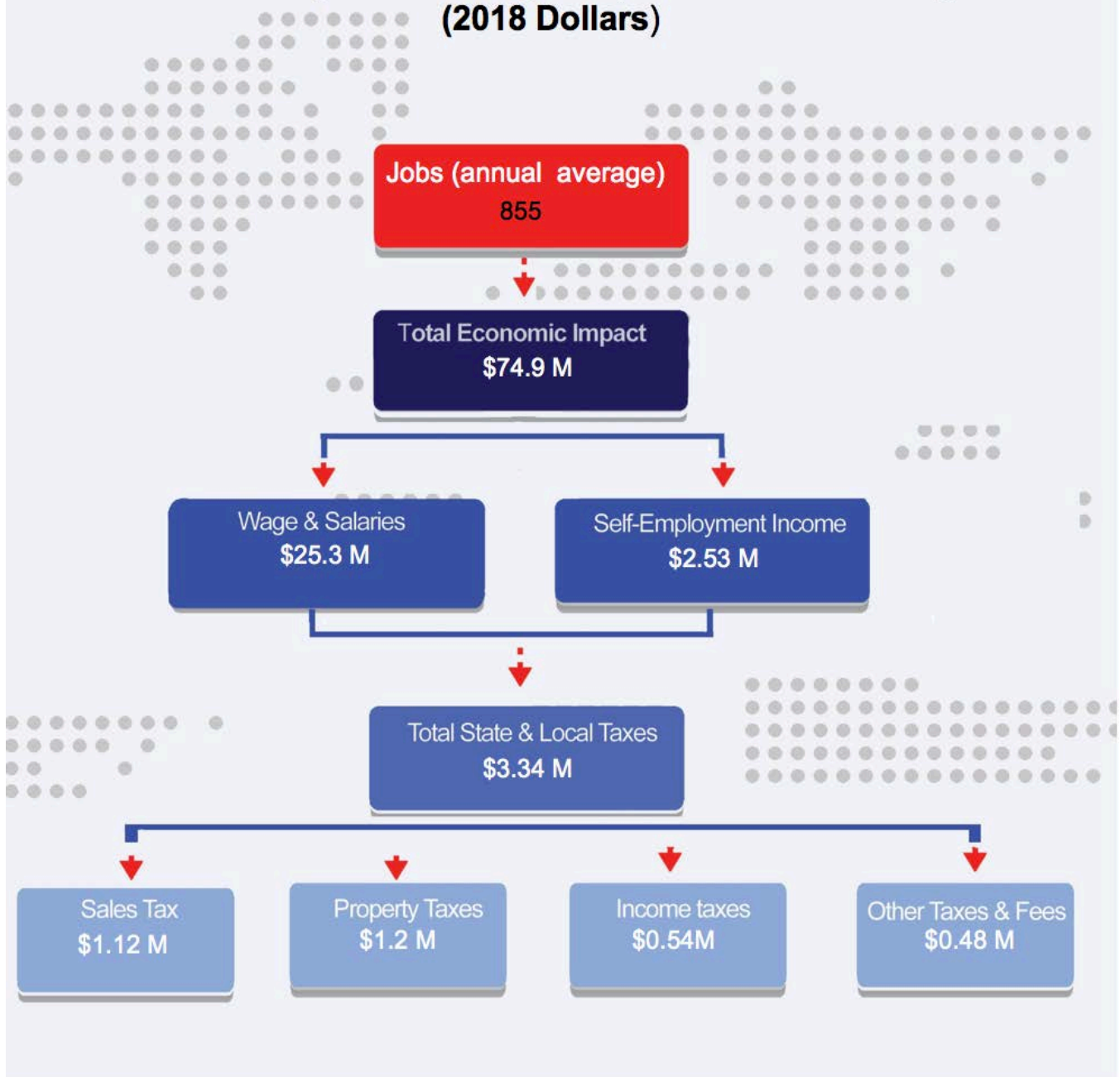
- Location: Lancaster County
- Total enrollment: 2,064
- Total Faculty: 214
- Student to Faculty Ratio: 12:1
- Students from NE: 87.2%
- Alumni Living in NE: 81.7%

NWU graduates are in high demand. In fact, 90% of 2017 grads had jobs or grad school placement before graduation. In 2018, *U.S. News and World Report* ranks NWU in the top 20 for Best Regional University (Midwest region) and in the top 30 for Best Value Schools.

A variety of programs and activities are offered to the Lincoln community by NWU. They include all new students participating in Lend a Hand to Lincoln service projects, partnerships with Huntington Elementary and Dawes Middle schools, and community groups and high schools using campus facilities. NWU offers sports, science, and music camps, invites the public to attend lectures and art exhibits without charge, and hosts the Nebraska Academy of Sciences as well as National History Day for the state.

*Data collected from the [National Center for Economic Statistics](#). These numbers are based on the 2016-2017 school year.

Nebraska Wesleyan University's Impact on the Economy, 2017 (2018 Dollars)



UNION

C O L L E G E

Founded in 1891, Union College is a traditional Seventh-day Adventist institution that sits upon a beautiful, tree-covered 50-acre campus in Lincoln, Nebraska. For the last 12 years *U.S. News and World Report* has ranked Union College as a top-tier college. With an enrollment of less than 900 students, Union College provides its students with great attention and guidance, which contributes to high standard achievement.

Union College is home to many academic programs, but there are 4 very prestigious programs that make Union College special. These signature programs are Nursing, Physician's Assistant Studies, International Rescue and Relief, and Business Administration.



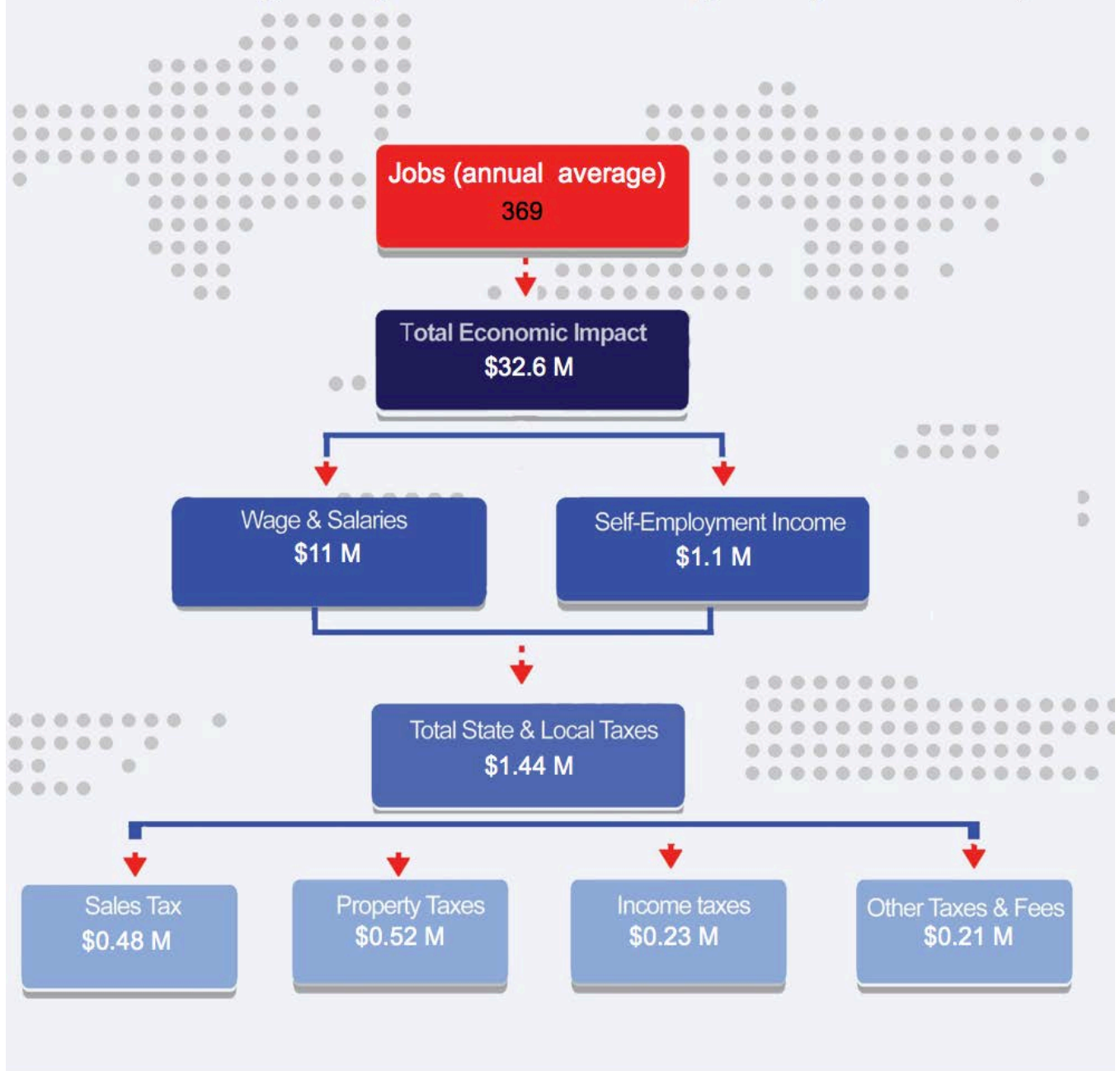
- Location: Lancaster County
- Total Enrollment: 868
- Total Faculty: 108*
- Student to Faculty Ratio: 11:1
- Incoming Students from NE (2017): 8.2%
- Graduating Students from NE: 37.6%

Aside from academics, Union College puts volunteerism and service learning as a top priority. In fact, Union College is among in the top 3 percent of colleges and universities in the United States for service learning and volunteerism.

Union College has many resources available to the community, including library services and use of the Larson Lifestyle Center.

There are also a multitude of community outreach programs done by students that help the Lincoln community blossom. A few of these programs include "Project Impact" (campus-wide community service day), a foot clinic conducted by Physician's Assistant (PA) and Nursing program students, the Matt Talbot Kitchen where PA students serve lunch once a month, the People's City Mission where students serve meals regularly, and volunteer work done by the Social Work program at the Friendship Home (a violence prevention center).

Union College's Impact on the Economy, 2017 (2018 Dollars)





York College was founded on August 26, 1890, thanks to the collaboration between the United Brethren Church and York citizens to establish a church-related college. York College sits on a cozy 40-acre plot in York, Nebraska. This institution may be small in terms of enrollment, but the value and quality of the education at York College is anything but small.

York College is and continues to be one of the best colleges for veterans in the state, and *Best Value Colleges and Universities* ranks York College at #6 for best value. It is also the most diverse campus in the state with over 40 percent of students coming from minority populations. Being the most diverse campus in Nebraska means that York College is a net importer of revenue with over 70 percent of students coming from out of state.



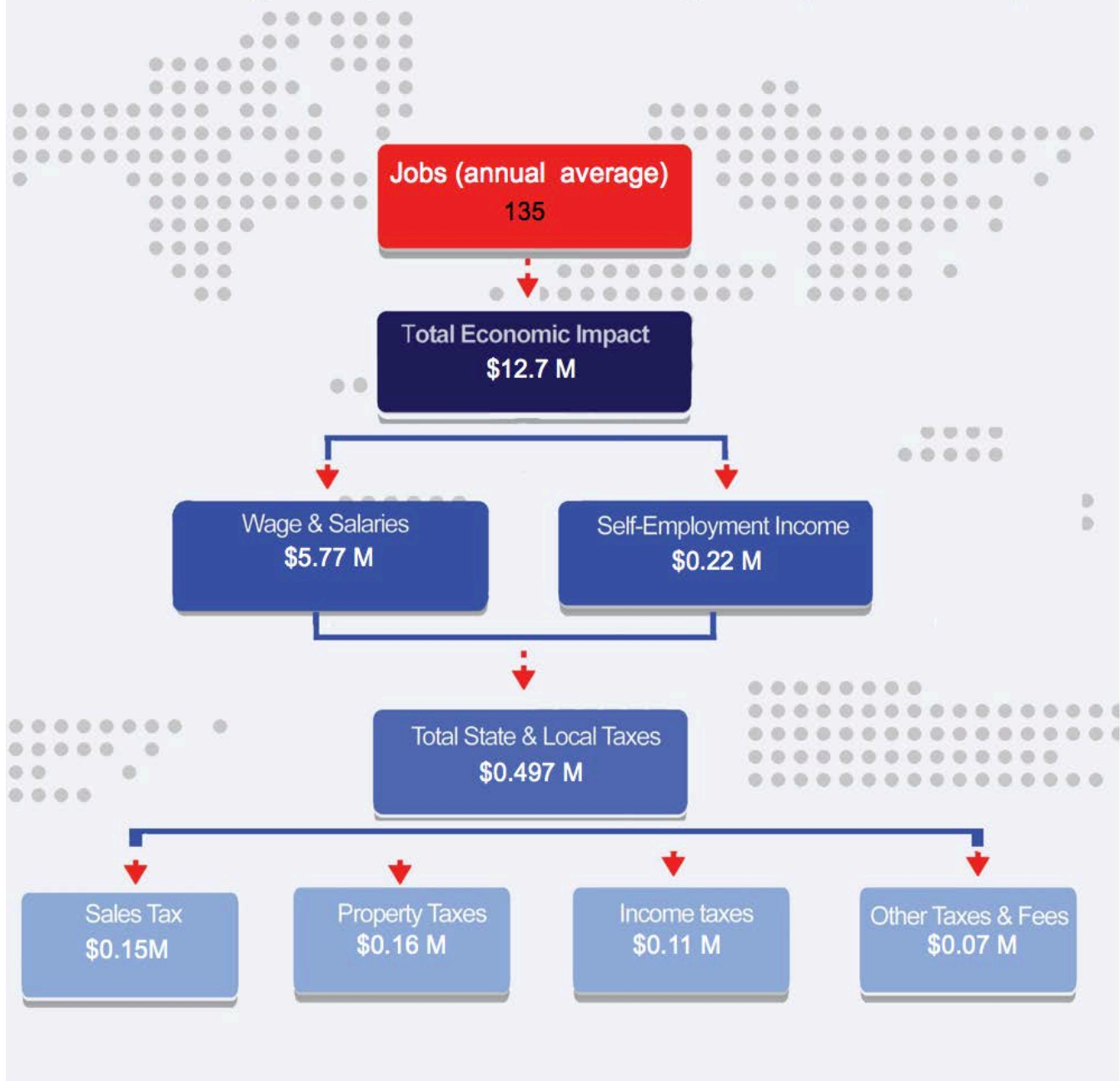
- Location: York County
- Total enrollment: 475
- Total Faculty: 44
- Student to Faculty Ratio: 12:1
- Students from NE: 32.7%
- Alumni Living in NE: 32%

Almost 10 percent of York County residents are graduates or employee families who moved here due to their experience at the College. The intentionality of character development is a main focus for York College, which defines the entire campus, especially the athletic teams. Speaking of the athletic teams, there is a high level of athletic success at York College with up to four programs per year advancing to national playoff venues.

York College has excellent Criminal Justice and STEM programs, which is evident by the high number of graduates that have been extremely successful with job placement.

Community engagement is also a major part of the Panther experience. Due to its small size and daily interaction with all students, York College can form strong bonds with the surrounding community. One service site that York College takes pride in assisting is the Nebraska Correctional Center for Women.

York College's Impact on the Economy, 2017 (2018 Dollars)



Appendix B: Impacts for Nebraska's 93 Counties

Table B1: Impacts of private universities on each Nebraska county, 2017

County	Jobs (annual average)	Wages and salaries	Sales	Total taxes & fees	County	Jobs (annual average)	Wages and salaries	Sales	Total taxes & fees
Adams	1,391.90	\$57,453,734	\$142,986,000	\$5,404,749	Johnson	11.3	\$466,613	\$1,161,267	\$43,895
Antelope	7.0	\$289,304	\$719,996	\$27,215	Kearney	31.8	\$1,314,459	\$3,271,315	\$123,653
Arthur	0.1	\$4,304	\$10,711	\$405	Keith	4.1	\$169,813	\$422,616	\$15,975
Banner	0.0	\$1,312	\$3,266	\$123	Keya Paha	0.3	\$10,358	\$25,778	\$974
Blaine	0.2	\$6,543	\$16,283	\$615	Kimball	0.7	\$27,002	\$67,201	\$2,540
Boone	9.9	\$406,761	\$1,012,311	\$38,265	Knox	5.5	\$225,825	\$562,014	\$21,244
Box Butte	1.5	\$60,736	\$151,155	\$5,714	Lancaster	2,668.30	\$110,136,345	\$274,098,033	\$10,360,673
Boyd	1.0	\$43,302	\$107,768	\$4,074	Lincoln	16.5	\$682,116	\$1,697,593	\$64,168
Brown	1.4	\$59,212	\$147,362	\$5,570	Logan	0.3	\$13,332	\$33,180	\$1,254
Buffalo	119.6	\$4,938,394	\$12,290,257	\$464,561	Loup	0.2	\$9,911	\$24,665	\$932
Burt	18.7	\$771,396	\$1,919,784	\$72,566	McPherson	0.1	\$3,481	\$8,662	\$327
Butler	28.0	\$1,157,557	\$2,880,830	\$108,893	Madison	64.0	\$2,642,606	\$6,576,695	\$248,593
Cass	82.1	\$3,390,309	\$8,437,514	\$318,931	Merrick	21.2	\$875,565	\$2,179,032	\$82,366
Cedar	8.6	\$354,223	\$881,560	\$33,322	Morrill	0.7	\$27,573	\$68,621	\$2,594
Chase	1.9	\$76,580	\$190,585	\$7,204	Nance	6.2	\$254,931	\$634,450	\$23,982
Cherry	2.0	\$81,175	\$202,020	\$7,636	Nemaha	11.6	\$478,304	\$1,190,363	\$44,995
Cheyenne	1.7	\$69,544	\$173,076	\$6,542	Nuckolls	13.0	\$538,536	\$1,340,262	\$50,661
Clay	35.7	\$1,475,496	\$3,672,090	\$138,802	Otoe	57.2	\$2,361,109	\$5,876,129	\$222,113
Colfax	42.8	\$1,765,490	\$4,393,803	\$166,082	Pawnee	3.8	\$155,721	\$387,544	\$14,649
Cuming	43.1	\$1,779,558	\$4,428,814	\$167,405	Perkins	1.2	\$51,483	\$128,127	\$4,843
Custer	10.0	\$414,820	\$1,032,368	\$39,023	Phelps	20.3	\$836,553	\$2,081,941	\$78,696
Dakota	14.6	\$601,247	\$1,496,333	\$56,560	Pierce	8.3	\$341,223	\$849,207	\$32,099
Dawes	1.0	\$42,986	\$106,981	\$4,044	Platte	74.2	\$3,063,553	\$7,624,312	\$288,193
Dawson	23.2	\$958,677	\$2,385,874	\$90,184	Polk	14.3	\$588,561	\$1,464,760	\$55,367
Deuel	0.4	\$18,207	\$45,311	\$1,713	Red Willow	8.5	\$351,203	\$874,045	\$33,038
Dixon	3.6	\$148,831	\$370,399	\$14,001	Richardson	9.9	\$408,822	\$1,017,442	\$38,458
Dodge	1,213.1	\$50,069,650	\$124,609,116	\$4,710,119	Rock	0.7	\$29,485	\$73,379	\$2,774
Douglas	3,736.6	\$154,231,564	\$383,838,489	\$14,508,769	Saline	409.9	\$16,919,354	\$42,107,460	\$1,591,626
Dundy	0.6	\$25,807	\$64,227	\$2,428	Sarpy	1,782.4	\$73,571,476	\$183,098,474	\$6,920,967
Fillmore	29.7	\$1,224,432	\$3,047,263	\$115,184	Saunders	126.7	\$5,229,386	\$13,014,454	\$491,935
Franklin	4.9	\$203,162	\$505,612	\$19,112	Scotts Bluff	5.4	\$224,065	\$557,633	\$21,078
Frontier	1.6	\$64,236	\$159,864	\$6,043	Seward	488.6	\$20,167,631	\$50,191,498	\$1,897,196
Furnas	4.5	\$184,401	\$458,922	\$17,347	Sheridan	1.0	\$39,312	\$97,836	\$3,698
Gage	63.7	\$2,631,296	\$6,548,547	\$247,530	Sherman	5.7	\$234,639	\$583,949	\$22,073
Garden	0.3	\$11,791	\$29,344	\$1,109	Sioux	0.1	\$2,497	\$6,214	\$235
Garfield	2.5	\$103,002	\$256,344	\$9,690	Stanton	6.9	\$285,055	\$709,422	\$26,816
Gosper	2.1	\$87,946	\$218,873	\$8,273	Thayer	14.9	\$614,575	\$1,529,501	\$57,814
Grant	0.2	\$9,761	\$24,292	\$918	Thomas	0.3	\$13,349	\$33,221	\$1,256
Greeley	3.5	\$144,665	\$360,031	\$13,609	Thurston	6.4	\$264,538	\$658,361	\$24,885
Hall	344.3	\$14,209,864	\$35,364,310	\$1,336,741	Valley	8.1	\$336,070	\$836,383	\$31,615
Hamilton	44.1	\$1,820,256	\$4,530,100	\$171,234	Washington	76.9	\$3,173,394	\$7,897,676	\$298,525
Harlan	4.5	\$184,108	\$458,191	\$17,319	Wayne	9.6	\$396,282	\$986,234	\$37,279
Hayes	0.2	\$8,382	\$20,859	\$788	Webster	14.1	\$579,970	\$1,443,380	\$54,559
Hitchcock	1.0	\$42,368	\$105,443	\$3,986	Wheeler	0.9	\$36,807	\$91,603	\$3,463
Holt	9.4	\$386,964	\$963,043	\$36,402	York	522.8	\$21,577,405	\$53,700,022	\$2,029,815
Hooker	0.3	\$13,757	\$34,237	\$1,294					
Howard	14.1	\$580,938	\$1,445,789	\$54,650	State	13,887.1	\$573,200,831	\$1,426,533,810	\$53,921,766
Jefferson	20.9	\$862,495	\$2,146,505	\$81,136					

Goss & Associates calculations based on U.S. BEA data

Impacts by county presented in this table differ from those presented in Chapter 3 due to the allocation of statewide impacts to the individual 93 counties.

Appendix C: Why Estimate Impacts?

Since the early 1980s, one of the most frequent applications of economic tools to industrial assessment has been economic impact analysis. The focus of such studies has been to convince policy makers and the general public of the importance of an industry to the economic viability of the industry. However, the assessment of the impact of business investment is fraught with problems.

The impact analysis can also be used to tailor tax-restructuring initiatives to the needs of firms and the overall economy, and to insure that the changes are consistent with the overall economic development plan of the community or state.

These problems center on measurement issues and include the proper treatment of the industry's impact on spending by local residents, the extent to which the industry diverts spending from other local firms, and the isolation of the industry's impact on other non-education and health-related firms in the area.

Despite these difficulties, the Council of State Governments contends that communities should undertake economic impact analysis to assess the costs and benefits of either retaining an existing event/business or attracting a new event or business (Council of State Governments, 1989). Impact analysis can also be used to tailor tax-restructuring initiatives to the needs of firms and the overall economy, and to ensure that the changes are consistent with the overall economic development plan of the community or state. Furthermore, many states, including Nebraska, have enacted legislation requiring completion of a cost-benefit assessment by local governments granting tax incentives or concessions.

However, due to the rapid growth of tax incentive/subsidy packages, and the belief that their states should remain competitive, policymakers in many states and localities have awarded tax incentive packages or made changes to the tax system not well grounded in economic theory or empirical evidence. According to the Council of State Governments, the presence of interstate impacts, as with the universities, necessitates the development of new models of assessment to more properly evaluate the impact of the industry.⁸

At the same time that citizens are asking public officials to be more proactive in economic development, they are holding public officials to a higher level of fiduciary responsibility regarding tax dollars. But given this increased accountability, why have states been slow to adopt evaluation methodologies? According to Bartik (1991), the following represent the primary reasons that states do not use systematic or structured evaluation programs:

- Good evaluations are expensive.
- Findings from analyses are available to states and localities not paying for the assessment.
- Negative evaluations are sometimes used against an industry, whereas positive evaluations are often discounted by critics.
- Obtaining reliable data to produce accurate estimates of both costs and benefits is difficult and fraught with ambiguity.
- The timeframe over which the benefits are derived and costs are incurred is difficult to gauge. Evaluations are simply snapshots of the effect of policy at a particular time with future changes not considered.
- The breadth or diversity of initiatives prevents a systematic or structured evaluation approach. For example, projects usually have different objectives, diverse time-scales and take effect in different ways.

⁸It is quite likely, for example, that a significant proportion of visitors to Omaha's independent universities and colleges will obtain lodging in nearby Council Bluffs, Iowa.

According to the *Council of State Governments* (1989), states and localities should at least begin systematically collecting data on incentives and monitoring their effects with a comprehensive evaluation in mind. To expand economic development programs on a significant scale, it should be demonstrated to skeptics that these programs have a large effect on state or local area economic performance.

While objective evidence of effectiveness will not overcome all political opposition, it can change the terms of the policy debate. Not only can the evaluation affect the actions of public officials, it can push industry leaders to be more vigilant in fully meeting their promises and commitments. The objective of this study is to estimate the public benefits of independent universities and colleges on Nebraska.⁹

According to the *Council of State Governments* (1989), states and localities should at least begin systematically collecting data on incentives and monitoring their effects with a comprehensive evaluation in mind.

⁹Section 1 of LB 1373 passed by the 1996 Nebraska legislature states that “It is the intent of the Legislature to accurately and objectively measure the costs and benefits of tax incentives granted by state and local governments to businesses, individuals, and communities using the tax incentives.”

Appendix D: Types of Economic Impacts

Economic impacts can be divided into direct, indirect and induced impacts. The most obvious direct impact of the higher education spending on the economy comes in the form of university and college salaries and in the form of purchases of supplies from vendors in the region. Indirect impacts come from expenditures by these vendors to their suppliers. Employees of the supplying firms spend their wages and salaries in Nebraska. This re-spending, or second round multiplying, is referred to as an induced impact. From an economic perspective, tuition revenues, federal research funds and visitor revenues represent new dollars in the state's economy and are thus very powerful in generating jobs and income for the area.

Direct Economic Impacts. College and university revenues flowing into the state have direct economic effects on their local economies by making expenditures for goods and services and by paying employee salaries. The most obvious direct expenditures are payment of wages to workers employed by independent colleges and universities. In addition, expenditures by business visitors to the institutions in the area produce direct impacts on the region affecting primarily the Wholesale and Retail Trade Industry. Examples of direct economic impacts are color-coded green in Figure B1.

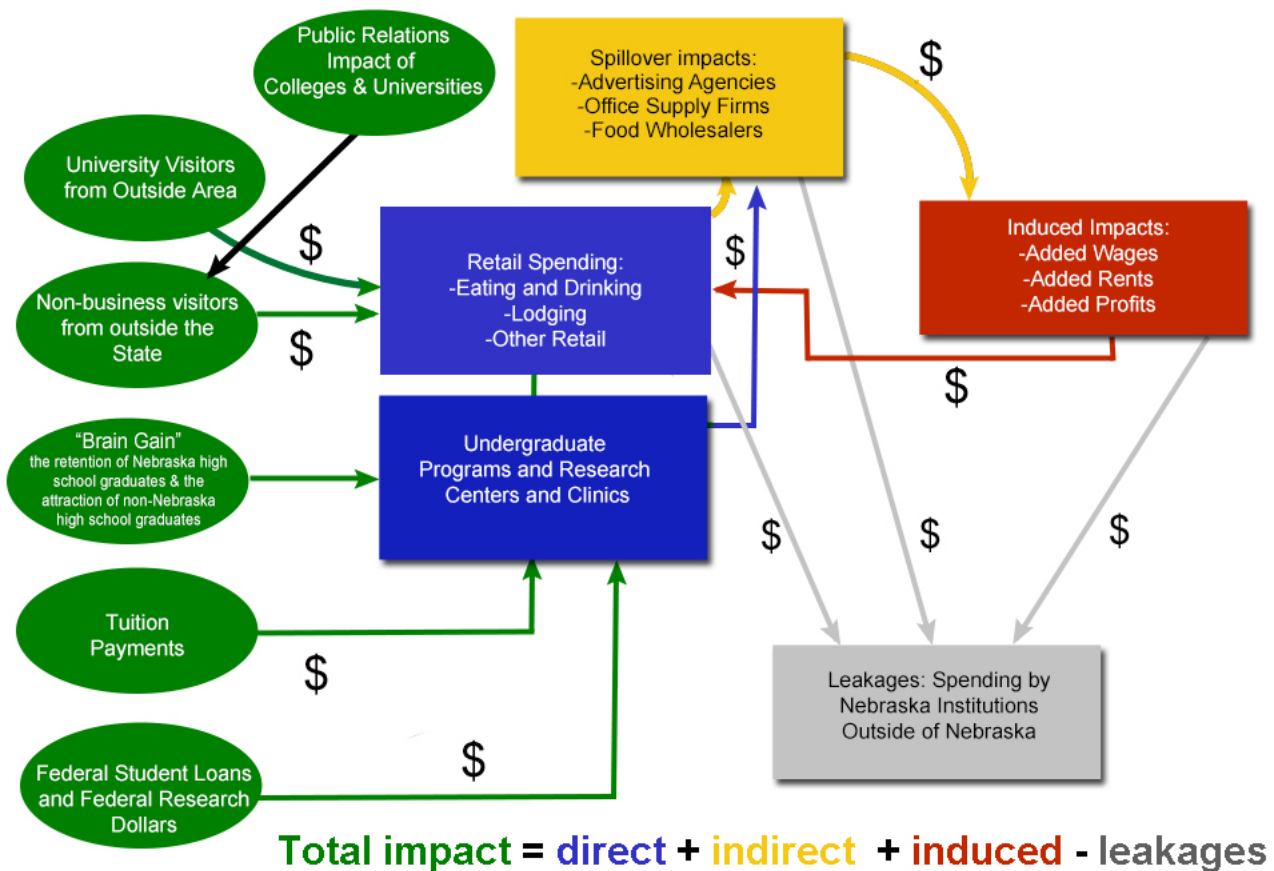
Indirect Economic Impacts. Independent colleges and universities also produce indirect economic effects on the area economy. For example, office supply companies buy merchandise from area wholesalers. Furthermore, institution expenditures encourage the startup and expansion of other businesses related to the college or university. Independent colleges and universities generate indirect effects by increasing: (a) the number of firms drawn to a community, (b) the volume of deposits in local financial institutions and, (c) economic development. Examples of indirect economic impacts are color-coded blue in Figure B1.

Induced Economic Impacts. Induced impacts in the region occur as the initial spending feeds back to industries in the region when workers in the area purchase additional output from local firms in a second round of spending. That is, higher education spending increases overall income and population, which produces another round of increased spending adding to sales, earnings and jobs for the area. Examples of induced economic impacts are color coded red in Figure B1.

Independent college and university spending increases overall income and population, which produces another round of increased spending adding to sales, earnings and jobs for the area.

Figure D1 depicts examples of the flow of funds into and out of Nebraska as a result of Nebraska's independent universities and colleges. As indicated, the total impact is the sum of direct (green arrows), indirect (blue arrows) and induced (red arrows) impacts minus leakages (gray arrows). Leakages represent expansion contractor spending outside of the area. Input-output multiplier systems are used to estimate each of the impacts in Figure B1 by industry.

Figure D1: Schematic of Impacts



Source: Goss & Associates 2018.

Appendix E:

IMPLAN Multipliers

The Forestry Service of the U.S. Department of Agriculture developed the IMPLAN multipliers in the 1980s (U.S. Forest Service, 1985). For very populous areas, IMPLAN divides the economy into 528 industrial sectors. Industries that do not exist in the region are automatically eliminated during user construction of the model (e.g. coal mining in Lancaster County). IMPLAN uses an industry-based methodology to derive its input-output coefficients and multipliers. Primary sources for data are County Business Patterns data and Bureau of Economic Analysis data.

Researchers have used IMPLAN to estimate the impact of changes in military spending on the Washington State economy (Hughes, et. al, 1991). IMPLAN and RIMS (Regional Input-Output Modeling System) are two of the most widely used multiplier models. IMPLAN has been compared to other multiplier systems and found to produce reliable estimates (Richman and Schwer, 1993). Likewise, Carihfield and Campbell (1991), in estimating the impacts of opening an automobile assembly plant, concluded that IMPLAN's outcomes are, on balance, somewhat more accurate than RIMS.

IMPLAN multipliers possess the following advantages over other I-O Multiplier Systems:

1. Price changes are accounted for in the creation of the multipliers.
2. Employment increases or decreases are assumed to produce immediate in or out-migration.
3. Multipliers are produced at reasonable costs by third party vendors.
4. IMPLAN produces five different sets of multipliers. This study focuses primarily on four of these multipliers. Descriptions of the four multipliers are presented in Table E1.

Table E1: Multipliers provided by IMPLAN and used in this study

Type of Multiplier	Description
Output Multipliers	Represents the value of production required from all sectors to deliver one dollar's worth of output in a particular sector. For colleges and universities, this multiplier is generally in the range of 1.5 to 2.0.
Wage & Salary Multipliers	Shows the direct, indirect, and induced employee wages and salaries generated per dollar of higher education spending (injection). For colleges and universities, this multiplier ranges between .65 and .85.
Employment Multipliers	Direct, indirect and induced employment effects from the production of one million dollars of new spending (injection). For colleges and universities, this multiplier is between 30.0 and 50.0.
Proprietary Multipliers	Shows the direct, indirect, and induced self-employment income per dollar of college and university spending (injection). For colleges and universities, this multiplier ranges between .05 and .10.
Tax Multipliers	Direct, indirect and induced tax effects from each dollar of independent university spending. This multiplier ranges between .05 to .10.

Source: Goss & Associates

Appendix F: Researchers' Biographies

Ernie Goss is the Jack MacAllister Chair in Regional Economics at Creighton University and is the initial director for Creighton's Institute for Economic Inquiry. He is also principal of the Goss Institute in Denver, Colo. Goss received his Ph.D. in economics from The University of Tennessee in 1983 and is a former faculty research fellow at NASA's Marshall Space Flight Center. He was a visiting scholar with the Congressional Budget Office for 2003-2004, and has testified before the U.S. Congress, the Kansas Legislature, and the Nebraska Legislature. In the fall of 2005, the Nebraska Attorney General appointed Goss to head a task force examining gasoline pricing in the state.

He has published more than 100 research studies focusing primarily on economic forecasting and on the statistical analysis of business and economic data. His book Changing Attitudes Toward Economic Reform During the Yeltsin Era was published by Praeger Press in 2003, and his book Governing Fortune: Casino Gambling in America was published by the University of Michigan Press in March 2007.

He is editor of Economic Trends, an economics newsletter published monthly with more than 11,000 subscribers, produces a monthly business conditions index for the nine-state Mid-American region, and conducts a survey of bank CEOs in 10 U.S. states. Survey and index results are cited each month in approximately 100 newspapers; citations have included the New York Times, Wall Street Journal, Investors Business Daily, The Christian Science Monitor, Chicago Sun Times, and other national and regional newspapers and magazines. Each month 75-100 radio stations carry his Regional Economic Report.

Scott Strain is a senior research economist at Goss & Associates. He has worked as an economist and statistician for more than 20 years providing forecasts and analysis across a wide-range of industries. Strain served as an industry economist, working in new product development regarding both quantitative and qualitative research. Strain was Senior Director of Research for an economic development agency, providing economic impact and tax incentive analysis to both private businesses and government entities. He served on the business advisory committee that worked with Nebraska state senators and the director of the state's Economic Development Department to develop the Nebraska Advantage Act – a comprehensive package of business incentives that has helped to add more than \$6 billion in new capital investment and over 13,000 new jobs in the state of Nebraska since the Act's inception in 2006.