

GROWING NEBRASKA

THE ECONOMIC IMPACT OF THE UNIVERSITY OF NEBRASKA

2018

UNIVERSITY OF
Nebraska[®] **Tripp
Umbach**

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Table of Contents

Annual Economic and Social Contribution Infographic	3
Introduction.....	4
Key Findings.....	4
Methodology	12
FAQ's Regarding Economic Impact Assessment	14

ANNUAL ECONOMIC AND SOCIAL CONTRIBUTION OF THE UNIVERSITY OF NEBRASKA

2018

The University of Nebraska serves the people of Nebraska and investment from the State has allowed the University to contribute to the vitality and success of the state.

The University of Nebraska has used the state's investment wisely to educate and train the future workforce, provide access to a thriving arts and cultural community, deliver high quality and cutting edge clinical care, conduct and commercialize innovative research, and connect with people throughout Nebraska as a part of its land grant mission. Tripp Umbach was retained to complete an independent analysis of The University of Nebraska's impact on the State to demonstrate the multiple ways that the university contributes to its economic vitality and cultural fabric.

ECONOMIC IMPACT



\$4.5 billion
in total economic impact generated by NU. **This is 3% of overall state gross national product.**

RESEARCH IMPACT



\$400 million
generated through research supporting **2,600 jobs.**

EMPLOYMENT IMPACT



38,000 jobs are supported by NU in total. **One out of every 26 jobs** in the Entire State is directly or indirectly supported by The University of Nebraska.

UNMC/NEBRASKA MEDICINE



UNMC/Nebraska Medicine and affiliates generated **\$4.8 billion** in economic impact, supported **42,000 jobs**, and **\$165 million** in government revenue.

GOVERNMENT REVENUE IMPACT



\$154 million in tax revenue to state and local governments, including sales, property, and business tax payments.

COMMUNITY IMPACT



\$100 million generated by NU faculty, staff, and students annually in charitable donations and volunteer services.

Introduction

The University of Nebraska retained Tripp Umbach to complete an independent economic impact assessment of all University operations as well as Nebraska Medicine. Tripp Umbach is the established National Leader in assessing the economic impact of universities and academic medicine centers having completed more than 500 studies over the past 30 years, including for the University of Nebraska in 2015. Tripp Umbach's findings are based on data supplied by the University for fiscal year 2017/18.

This economic impact analysis measures the effect of direct and indirect/induced business volume and government revenue impacts for all of NU's operations throughout Nebraska. The methodology employed in the calculation of these impacts is IMPLAN. Primary data was collected from the University of Nebraska. Data included: capital expenditures, operational expenditures, jobs, payroll and benefits, and taxes. The approach taken on this study was decidedly conservative.

Total economic impact measures the dollars that are generated within Nebraska due to the presence of the University of Nebraska. This includes not only spending on goods and services with a variety of vendors within the state and the spending of its faculty, staff, students and visitors, but also the business volume generated by businesses within Nebraska that benefit from NU's spending. It is important to remember that not all dollars spent by a university remain in its home state. Dollars that "leak" out of the state in the form of purchases from out-of-state vendors are not included in the university's economic impact on the state. The multipliers used in this study are derived from the IMPLAN software.

Key economic impact findings presented within the summary include the total current (FY 17-18) impact of NU's operations on employment in Nebraska, as well as the revenue impact on state and local governments.

Key Findings

The University of Nebraska (NU) is the state's only public university, with four campuses and educational, research, and extension facilities that serve students, business owners, farmers and ranchers, educators, and taxpayers in every Nebraska county. The University of Nebraska impacts every Nebraskan through education, research, healthcare, innovation, charitable contributions, athletics, extension services, economic development, and workforce development.

In 2018, the University of Nebraska provided the following economic and societal benefits to Nebraska:

- **\$4.5 billion** total economic impact on Nebraska stemming from the operations of the four campuses, the Nebraska College of Technical Agriculture, or NCTA, and system administration. This represents an increase of more than \$600 million in annual economic impact since 2015.
 - Additional **\$3.1 billion** impact from Nebraska Medicine in 2018.
 - Additional **\$2.4 billion** impact in 2018 from more than 7,300 recent graduates who are working throughout Nebraska.
 - Resulting in a total economic impact of **\$10 billion** from all University operations, Nebraska Medicine, and the impact of one graduating class that remains to work in Nebraska.
- **38,664 total jobs** in Nebraska are supported by the operations of the four campuses, NCTA, and system administration. One in every 26 jobs in the state are a result of University activities.
 - Additional **26,742 jobs** supported by Nebraska Medicine in 2018.
 - Additional **20,520 jobs** supported from more than 7,300 recent graduates who are working throughout Nebraska.
 - Resulting in a total employment impact of more than **85,000 jobs** from all University operations, Nebraska Medicine, and the impact of one graduating class that remains to work in Nebraska.
- **\$154 million** in total state and local taxes generated in Nebraska in 2018 stemming from the operations of the four campuses, NCTA, and system administration.
 - Additional **\$106 million** government revenue impact from Nebraska Medicine.
 - Additional **\$87 million** government revenue impact in 2018 from more than 7,300 recent graduates who are working throughout Nebraska.
 - Resulting in a total economic impact of more than **\$347 million** in government revenue from all University operations, Nebraska Medicine, and the impact of one graduating class that remains to work in Nebraska.
- The University of Nebraska graduates approximately 11,000 people each year.
 - 1 in every 7 Nebraskans over age 20 is a University alumnus.

- More than 70% of all graduates remain in Nebraska after graduation.
- Graduates who remain in Nebraska have a **\$2.4 billion** economic impact on the state's economy.
- University research creates a culture of innovation and discovery as well as retains talent
 - University of Nebraska research programs alone generate **\$400 million** in annual economic impact and support 2,600 jobs statewide.
 - The University's technology transfer offices, NUtech Ventures, and UNeMed are responsible for more than 50 start-up companies.
- University employees and students provide nearly **\$100 million** in charitable donations and volunteer services each year.

Table 1. Campus and Entity Breakouts

University Entity	Total Economic Impact (Millions)	Total Supported Jobs	Total State / Local Taxes (Millions)
UNL	\$2,224	18,497	\$76
UNMC	\$1,225	10,917	\$42
UNO	\$716	6,255	\$25
UNK	\$265	2,453	\$9
NCTA	\$12	140	\$5
System Administration	\$51	402	\$1.5
Total University of Nebraska	\$4,493	38,664	\$154
Nebraska Medicine	\$3,107	26,742	\$107
Grand Total	\$7.6 Billion	65,406	\$261 Million

Image 1. Economic Impact by Region

THE UNIVERSITY OF NEBRASKA HAS ECONOMIC IMPACT IN ALL REGIONS OF THE STATE

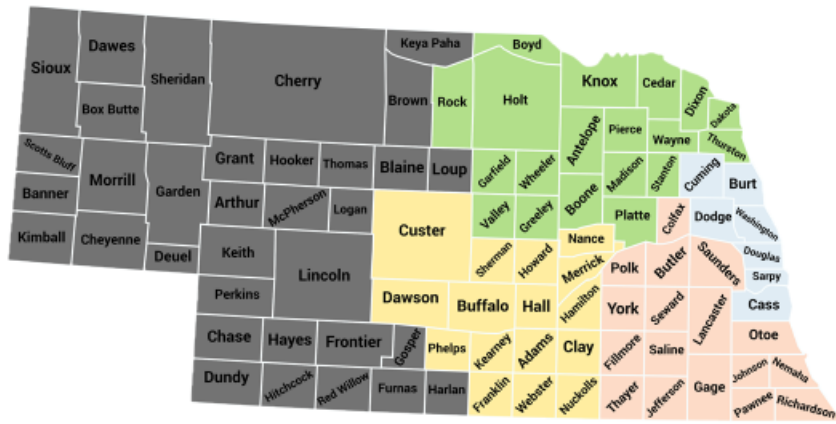
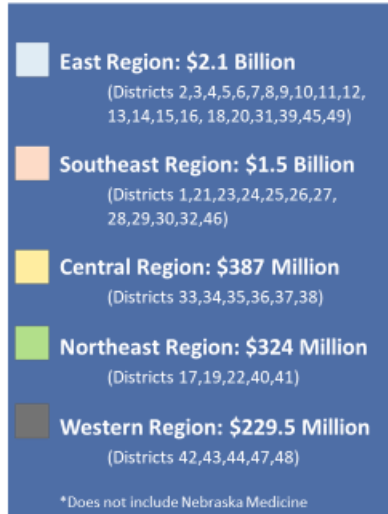


Image 2. Economic Impact of Graduates throughout the State

EACH GRADUATING CLASS HAS A \$2.4 BILLION IMPACT ON THE NEBRASKA ECONOMY

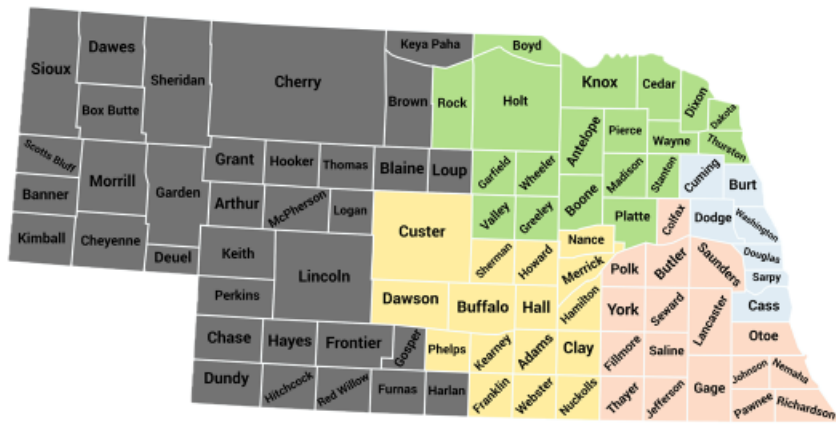
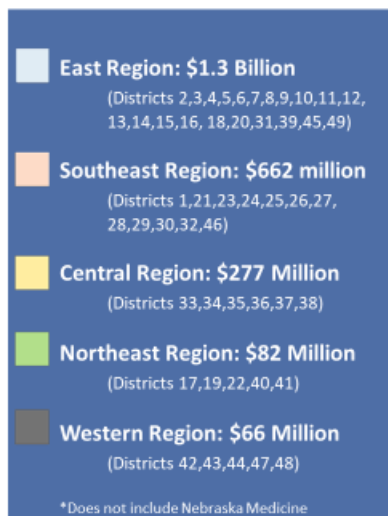


Table 2. Operational Impact by Legislative District

Legislative District	Economic Impact	Employment Impact	Tax Impact (state and local)
1	\$63,000,000	542	\$2,299,500
2	\$58,500,000	503	\$2,135,250
3	\$45,000,000	387	\$1,642,500
4	\$72,000,000	620	\$2,628,000
5	\$94,500,000	813	\$3,449,250
6	\$153,000,000	1,317	\$5,584,500
7	\$94,500,000	813	\$3,449,250
8	\$180,000,000	1,549	\$6,570,000
9	\$220,500,000	1,897	\$8,048,250
10	\$85,500,000	736	\$3,120,750
11	\$202,500,000	1,742	\$7,391,250
12	\$135,000,000	1,162	\$4,927,500
13	\$99,000,000	852	\$3,613,500
14	\$85,500,000	736	\$3,120,750
15	\$81,000,000	697	\$2,956,500
16	\$40,500,000	348	\$1,478,250
17	\$40,500,000	348	\$1,478,250
18	\$72,000,000	620	\$2,628,000
19	\$72,000,000	620	\$2,628,000
20	\$117,000,000	1,007	\$4,270,500
21	\$99,000,000	852	\$3,613,500
22	\$144,000,000	1,239	\$5,256,000
23	\$54,000,000	465	\$1,971,000
24	\$76,500,000	658	\$2,792,250
25	\$103,500,000	891	\$3,777,750
26	\$202,500,000	1,742	\$7,391,250
27	\$225,000,000	1,936	\$8,212,500
28	\$243,000,000	2,091	\$8,869,500
29	\$211,500,000	1,820	\$7,719,750
30	\$63,000,000	542	\$2,299,500
31	\$94,500,000	813	\$3,449,250
32	\$49,500,000	426	\$1,806,750
33	\$31,500,000	271	\$1,149,750
34	\$36,000,000	310	\$1,314,000
35	\$40,500,000	348	\$1,478,250
36	\$90,000,000	774	\$3,285,000
37	\$144,000,000	1,239	\$5,256,000
38	\$45,000,000	387	\$1,642,500
39	\$72,000,000	620	\$2,628,000

Legislative District	Economic Impact	Employment Impact	Tax Impact (state and local)
40	\$36,000,000	310	\$1,314,000
41	\$31,500,000	271	\$1,149,750
42	\$45,000,000	387	\$1,642,500
43	\$36,000,000	310	\$1,314,000
44	\$40,500,000	348	\$1,478,250
45	\$49,500,000	426	\$1,806,750
46	\$94,500,000	813	\$3,449,250
47	\$45,000,000	387	\$1,642,500
48	\$63,000,000	542	\$2,299,500
49	\$58,500,000	503	\$2,135,250

Table 3. Economic Impact of UN Graduates by Legislative Districts

Legislative District	Graduates working in Areas	Economic Impact	Employment Impact	Local Tax Impact
1	58	\$17,400,000	150	\$635,100
2	42	\$12,600,000	108	\$459,900
3	155	\$46,500,000	400	\$1,697,250
4	254	\$88,900,000	765	\$3,244,850
5	250	\$75,000,000	645	\$2,737,500
6	250	\$75,000,000	645	\$2,737,500
7	250	\$75,000,000	645	\$2,737,500
8	250	\$75,000,000	645	\$2,737,500
9	250	\$75,000,000	645	\$2,737,500
10	250	\$75,000,000	645	\$2,737,500
11	250	\$75,000,000	645	\$2,737,500
12	250	\$75,000,000	645	\$2,737,500
13	250	\$75,000,000	645	\$2,737,500
14	155	\$46,500,000	400	\$1,697,250
15	69	\$20,700,000	178	\$755,550
16	71	\$21,300,000	183	\$777,450
17	27	\$8,100,000	70	\$295,650
18	250	\$75,000,000	645	\$2,737,500
19	62	\$18,600,000	160	\$678,900
20	250	\$75,000,000	645	\$2,737,500
21	300	\$90,000,000	774	\$3,285,000
22	74	\$22,200,000	191	\$810,300
23	75	\$22,500,000	194	\$821,250
24	82	\$24,600,000	212	\$897,900
25	265	\$79,500,000	684	\$2,901,750
26	265	\$79,500,000	684	\$2,901,750
27	265	\$79,500,000	684	\$2,901,750
28	265	\$79,500,000	684	\$2,901,750
29	265	\$79,500,000	684	\$2,901,750
30	41	\$12,300,000	106	\$448,950
31	250	\$75,000,000	645	\$2,737,500
32	59	\$17,700,000	152	\$646,050
33	69	\$20,700,000	178	\$755,550
34	41	\$12,300,000	106	\$448,950
35	194	\$58,200,000	501	\$2,124,300
36	98	\$29,400,000	253	\$1,073,100
37	427	\$128,100,000	1,102	\$4,675,650
38	94	\$28,200,000	243	\$1,029,300

Legislative District	Graduates working in Areas	Economic Impact	Employment Impact	Local Tax Impact
39	250	\$75,000,000	645	\$2,737,500
40	28	\$8,400,000	72	\$306,600
41	83	\$24,900,000	214	\$908,850
42	49	\$14,700,000	126	\$536,550
43	29	\$8,700,000	75	\$317,550
44	52	\$15,600,000	134	\$569,400
45	155	\$46,500,000	400	\$1,697,250
46	265	\$79,500,000	684	\$2,901,750
47	57	\$17,100,000	147	\$624,150
48	31	\$9,300,000	80	\$339,450
49	155	\$46,500,000	400	\$1,697,250

Methodology

The economic impact of NU was estimated using IMPLAN (IMpact Analysis for PLANing), an econometric modeling system developed by applied economists at the University of Minnesota and the U.S. Forest Service. The IMPLAN modeling system has been in use since 1979 and is currently used by over 500 private consulting firms, university research centers and government agencies. The IMPLAN modeling system combines the [U.S. Bureau of Economic Analysis' Input-Output Benchmarks](#) with other data to construct quantitative models of trade flow relationships between businesses and between businesses and final consumers. From this data, one can examine the effects of a change in one or several economic activities to predict its effect on a specific state, regional or local economy (impact analysis). The IMPLAN input-output accounts capture all monetary market transactions for consumption in a given time period. The IMPLAN input-output accounts are based on industry survey data collected periodically by the U.S BEA and follow a balanced account format recommended by the United Nations.

IMPLAN's Regional Economic Accounts and the Social Accounting Matrices were used to construct state-level multipliers, which describe the response of the state economy to a change in demand or production as a result of the activities and expenditures of NU. Each industry that produces goods or services generates demand for other goods and services; and this demand is multiplied through a particular economy until it dissipates through "leakage" to economies outside the specified area. IMPLAN models discern and calculate leakage from local, regional and state economic areas based on workforce configuration, the inputs required by specific types of businesses, and the availability of both inputs in the economic area. Consequently, economic impacts that accrue to other regions or states as a consequence of a change in demand are not counted as impacts within the economic area.

The model accounts for substitution and displacement effects by deflating industry-specific multipliers to levels well below those recommended by the U.S. Bureau of Economic Analysis. In addition, multipliers are applied only to personal disposable income to obtain a more realistic estimate of the multiplier effects from increased demand. Importantly, IMPLAN's Regional Economic Accounts exclude imports to an economic area, so the calculation of economic impacts identifies only those impacts specific to the economic impact area, in this case the State of Nebraska. IMPLAN calculates this distinction by applying Regional Purchase Coefficients (RPC) to predict regional purchases based on an economic area's particular

characteristics. The RPC represents the proportion of goods and services that will be purchased regionally under normal circumstances, based on the area's economic characteristics described in terms of actual trade flows within the area.

FAQ's Regarding Economic Impact Assessment

What is economic impact?

Economic impact begins when an organization spends money. Economic impact studies measure the direct economic impact of an organization's spending, plus additional indirect spending in the economy as a result of direct spending. Economic impact has nothing to do with dollars collected by institutions, their profitability or even their sustainability, since all operating organizations have a positive economic impact when they spend money and attract spending from outside sources.

Direct economic impact measures the dollars that are generated within Nebraska due to the presence of NU. This includes not only spending on goods and services with a variety of vendors within the state, and the spending of its employees and visitors, but also the business volume generated by businesses within Nebraska that benefit from spending by NU. It is important to remember that not all dollars spent by NU stay in Nebraska. Dollars that "leak" out of the state in the form of purchases from out-of-state vendors are not included in the economic impact that NU has on the state of Nebraska.

The total economic impact includes the "multiplier" of spending from companies that do business with NU. Support businesses may include lodging establishments, restaurants, construction firms, vendors, temporary agencies, etc. Spending multipliers attempt to estimate the ripple effect in the state economy where the spending occurs. For example: Spending by NU with local vendors provides these vendors with additional dollars that they re-spend in the local economy, causing a "multiplier effect."

What is the multiplier effect?

Multipliers are a numeric way of describing the secondary impacts stemming from the operations of an organization. For example, an employment multiplier of 1.8 would suggest that for every 10 employees hired in the given industry, eight additional jobs would be created in other industries, such that 18 total jobs would be added to the given economic region. The multipliers used in this study range from 1.8 to 2.0.

The Multiplier Model is derived mathematically using the input-output model and Social Accounting formats. The Social Accounting System provides the framework for the predictive Multiplier Model used in economic impact studies. Purchases for final use drive the model. Industries that produce goods and services for consumer consumption must purchase products, raw materials and services from other companies to create their product. These vendors must also procure goods and services. This cycle continues until all the money is leaked from the region's economy. There are three types of effects measured with a multiplier: the direct, the indirect and the induced effects. The direct effect is the known or predicted change in the local economy that is to be studied. The indirect effect is the business-to-business transactions required to satisfy the direct effect. Finally, the induced effect is derived from local spending on goods and services by people working to satisfy the direct and indirect effects.

- **Direct effects** take place only in the industry immediately being studied.
- **Indirect effects** concern inter-industry transactions: because NU is in business, it has a demand for locally produced materials needed to operate.
- **Induced effects** measure the effects of the changes in household income: employees of NU and suppliers purchase from local retailers and restaurants.
- **Total Economic Impacts** the total changes to the original economy as the result of the operations of NU. i.e., Direct effects + Indirect effects + Induced effects = Total Economic Impacts

What methodology was used in this study?

IMPLAN (IMpact analysis for PLANning) data and software. ^[L]_[SEP] Using classic input-output analysis in combination with regional specific Social Accounting Matrices and Multiplier Models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains county, state, zip code and federal economic statistics which are specialized by region, not estimated from national averages and can be used to measure the effect on a regional or local economy of a given change or event in the economy's activity.

What is employment impact?

Employment impact measures the direct employment (employees, staff, faculty, administration) plus additional employment created in the economy as a result of the operations of NU.

Indirect and Induced employment impact refers to other employees throughout the region that exist because of the University's economic impact. In other words, jobs related to the population – city services (police, fire, EMS, etc.), employees at local hotels and restaurants, clerks at local retail establishments, residents employed by vendors used by NU.

What is the difference between direct and indirect taxes?

Direct tax dollars include sales taxes and net corporate income taxes paid directly by the institution to the state, while indirect taxes include taxes paid to the state by vendors that do business with NU and individuals.

Is this a one-time impact or does the impact repeat each year?

The results presented in the University of Nebraska economic impact study are generated on an annual basis. The economic impact in future years can either be higher or lower based on number of employees, students, capital expansion, increases in external research and state appropriations. Most notably, as a direct consequence of a drastic reduction in its state appropriation in Fiscal Year 2013-2014, the University has implemented initiatives, a voluntary early retirement program, which eliminated more than 350 positions. However, those actions have been balanced by NU's continuing assessment and introduction of measures to enhance the productivity of employees, within what might be described as growing its "lines of business." A key example can be found in NU's research accounting group which has not grown since 1995, even though the University's research expenditures now are more than three times what they were back then.

What are Tripp Umbach’s qualifications to perform an Economic Impact Study for the University of Nebraska and the Regional Campuses?

Tripp Umbach is the national leader in providing economic impact analysis to leading healthcare organizations, universities and academic medical centers. We have completed more than 500 economic impact studies over the past 30 years for clients such as Penn State University, The Ohio State University, the University of Washington, The University of Iowa, The University of Alabama at Birmingham, the Cleveland Clinic, the University of Florida Hospital, the University of North Carolina Hospitals, the University of Nebraska Health System, the University of Nebraska Medical Center and The Ohio State University Medical Center.