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# Producer Services: A Hub for STEM and an Engine for Job Growth

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# Business in Nebraska

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## PRODUCER SERVICES:

### A HUB FOR STEM AND AN ENGINE FOR JOB GROWTH

By Brock Thompson, Eric Thompson

#### Introduction

**P**roducer services providers are firms that sell services primarily to the business community rather than to individuals and households. Accounting firms, consultants, and computer design services are prominent examples of producer services businesses. Producer service industries are worth studying for three reasons:

1. **SUPPORT OF OTHER INDUSTRIES:** Producer services supply the broader business community, making them a critical segment of the economy.
2. **RAPID HIGH WAGE JOB GROWTH:** Many producer services industries are rapidly growing and pay high wages. The producer services sectors, in fact, are the principal source of high wage job growth in our evolving service economy.
3. **STEM ASSOCIATION:** Producer service industries employ high numbers of STEM workers, itself a critical segment of the US and, increasingly, Nebraska economies. By 2022 over 40% of the jobs in top STEM occupations are expected to be in producer service industries<sup>1</sup>.

This article highlights the performance of the producer services sector in Nebraska. In particular, we examine the growth in producer services in the nation and in Nebraska in the last decade, and explore whether or not the state of Nebraska has captured a significant share of employment in producer services.

Most high wage producer services businesses are found in the Professional, Scientific, and Technical Services (PSTS) sector. The PSTS sector includes legal services, accounting, architecture, engineering, design services, computer systems design, management, scientific and technical consulting, and advertising.

Because the PSTS sector is so diverse, it is helpful to understand the distribution of employment among PSTS subindustries, as shown in Figure 1. As a share of nonfarm employment we can see that Nebraska lags the nation in employment concentration for all PSTS subindustries delineated here.

#### Nationwide Growth

Figure 4 shows the strong growth and higher wages paid nationwide in the key producer services sector.

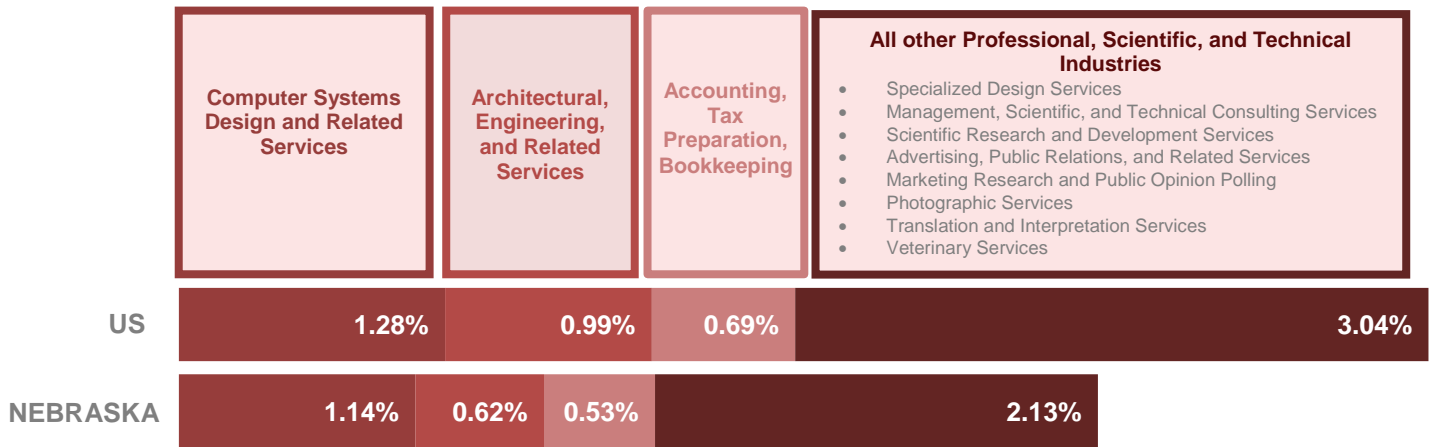
<sup>1</sup> Data from the Employment Projections program, U.S. Department of Labor, U.S. Bureau of Labor Statistics (BLS). The list of top STEM occupations come from the May 2010 BLS Occupational Employment Statistics chart book (figures 7 and 8).

<sup>2</sup> Between 1997 and 2007, for example, the sector saw 36.1% growth and an employment increase exceeding 2 million. Between 2005 and 2014 we have seen a total growth of 18% and employment increases of less than 1.3 million.

Though the PSTS growth of the last decade (in real and percentage terms) was dampened during the Great Recession<sup>2</sup>, expansion of PSTS industries continues in the US. Between 2005 and 2014 the nearly 19% growth rate of the Professional, Scientific and Technical Services sector was exceeded only by

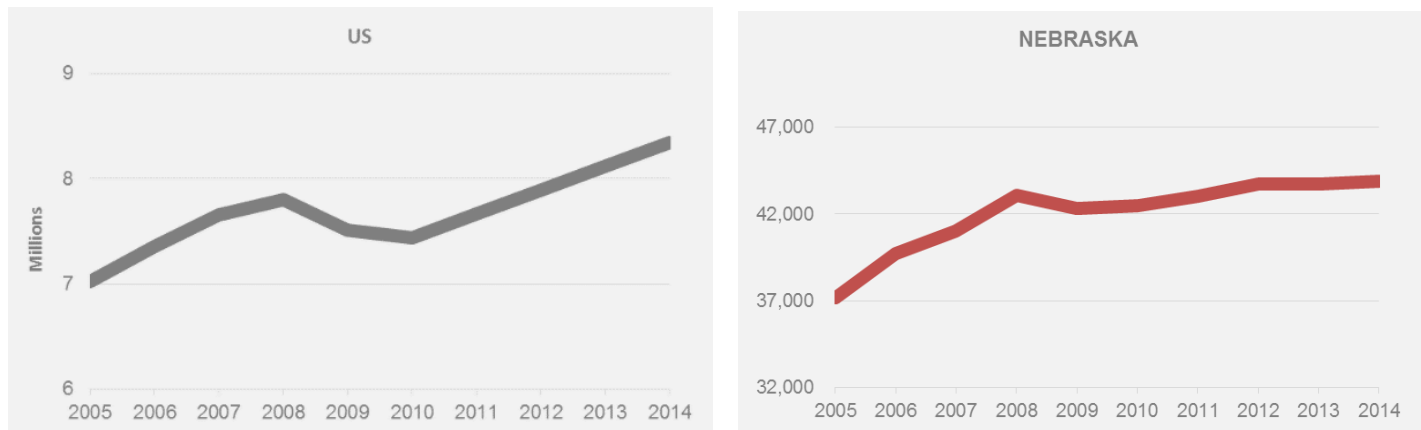
the rapidly expanding Mining and Logging and Education and Health Services sectors. PSTS growth in terms of market share was similarly impressive relative to other sectors, outmatched only by the Education and Health Services and Leisure and Hospitality sectors (Figures 2 and 3).

Figure 1 PSTS Subindustry Shares (as a percentage of total nonfarm income) 2014



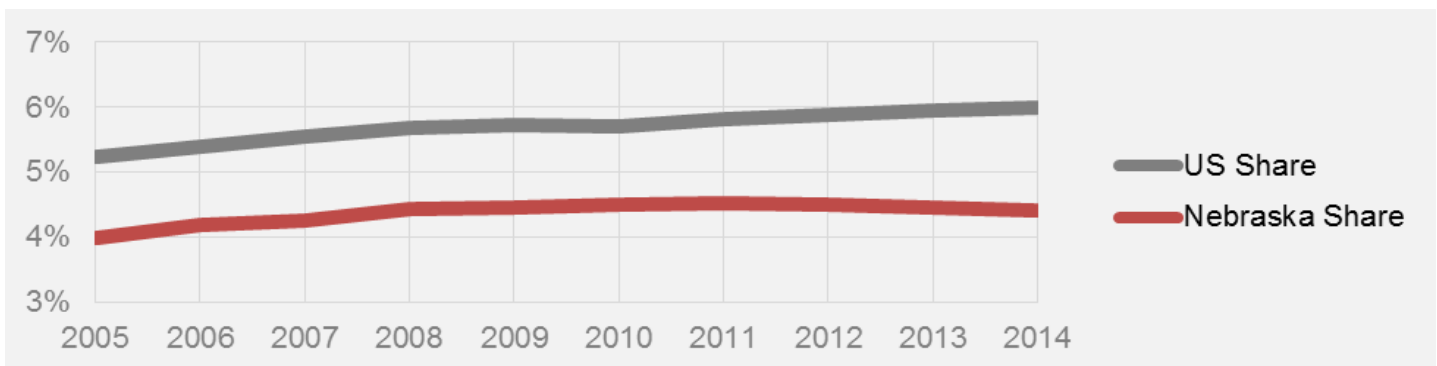
Source: CES, US Bureau of Labor Statistics

Figure 2 PSTS Employment 2005-2014



Source: CES, US Bureau of Labor Statistics

Figure 3 PSTS Share of Nonfarm Employment 2005-2014



Source: CES, US Bureau of Labor Statistics

Figure 4 US Industries 2005-2014

Industry	2005 Employment (thousands)	2014 Employment (thousands)	'05-'14 % Employment Growth	'10-'14 % Employment Growth	Mean Weekly Wage 2014*
Mining and Logging	628	896	43%	27%	\$1,897**
Education and Health Services	17630	21475	22%	8%	\$893
Professional and Technical Services	7024.6	8347.5	19%	12%	\$1,658
Leisure and Hospitality	12816	14710	15%	13%	\$410
Transportation and Warehousing	4360.9	4640.4	6%	11%	\$971
Administrative and Waste Services	8170.2	8579.2	5%	16%	\$691
Total Nonfarm	134005	139042	4%	7%	\$988
Other Services	5395	5573	3%	5%	\$654
Wholesale Trade	5764.4	5826	1%	7%	\$1,366***
Retail Trade	15279.6	15364.3	1%	6%	\$553
Government	21804	21863	0%	-3%	\$1,131
Utilities	554	552.9	0%	0%	\$1,705****
Financial Activities	8197	7979	-3%	4%	\$1,636
Information	3061	2740	-10%	1%	\$1,690
Manufacturing	14227	12188	-14%	6%	\$1,212
Construction	7336	6138	-16%	11%	\$1,055

\*Most wage data is preliminary

\*\*Employment data for local government operations not disclosed

\*\*\*Employment data for state and federal government operations unavailable / undisclosed

\*\*\*\*Employment data for state government operations not disclosed

Employment Source: CES, Bureau of Labor Statistics

Wage Source: QCEW, US Bureau of Labor Statistics

In 2014 the Professional, Scientific, and Technical Services sector paid the third highest mean wage among BLS supersectors at around \$1,700 per week. These wages were paid to workers in a variety of high skill occupations including lawyers, accountants and tax preparers, engineers, computer programmers, technical consultants, veterinarians, and scientific researchers, just to name a few.

A natural question is: where are these higher paying jobs being created? As it turns out, many of the producer services businesses in the Professional, Scientific, and Technical Services sectors are concentrated in larger cities. This can be seen in Figure 5, which shows how major cities in the United States compare in terms of the share of 2014 employment in the PSTS sector. Washington, D.C. is a city that stands out as having the greatest share of employment in the Professional and Technical Services sector at 15.3%. All of these major cities, except for Phoenix, exhibit greater shares of employment in the Professional and Technical Services sector than the national average of 6.0%. Clearly, the PSTS sector concentrates in large metropolitan areas.

Figure 5 Major US Regions PSTS Share of Employment

Major Metropolitan Area	PSTS Concentration (2014)
Phoenix	5.4%
Dallas	6.8%
Los Angeles	7.0%
Houston	7.4%
Philadelphia	7.8%
Atlanta	8.0%
Detroit	9.8%
Washington D.C.	15.3%

Source: CES, US Bureau of Labor Statistics

### Producer Services in Nebraska

Nebraska does not have cities as large as those featured in Figure 5. This raises the question: are producer services as large a part of the economy in Nebraska as nationwide? The answer can be found in Figure 6, which compares the share of employment by industry sectors for the state of Nebraska.

Both in Nebraska and nationwide, the largest share of employment is in the Government sector. Further, the share of jobs in Retail Trade, and Education and Health Services also is similar.

Nebraska even had a higher share of jobs in Financial Activities and Manufacturing. But, there is a lower share of employment in the Professional and Technical Services sector (4.4%) in Nebraska than nationwide (6.0%). The PSTS sector is a smaller share of the Nebraska economy.

However, as seen in Figure 7, there was rapid growth in Professional, Scientific, and Technical Services in Nebraska between 2005 and 2014. Employment grew by 18%. This is just below the national growth PSTS growth rate, 19%. The PSTS sector also paid the second highest weekly wages among BLS supersectors in Nebraska in 2014.

Figure 1  
**US / Nebraska Industry Employment Shares (2014)**

Industry	US	Nebraska
Government	16%	17%
Education and Health Services	15%	15%
Retail Trade	11%	11%
Manufacturing	9%	10%
Leisure and Hospitality	11%	9%
Financial Activities	6%	7%
Transportation and Warehousing	3%	5%
Administrative and Waste Services	6%	5%
Construction	4%	5%
Professional and Technical Services	6%	4%
Wholesale Trade	4%	4%
Other Services	4%	4%
Information	2%	2%
Utilities	0%	0%
Mining and Logging	1%	0%

Source: CES, US Bureau of Labor Statistics

Figure 7 **Nebraska Industries 2005-2014**

Industry	2005 Employment (thousands)	2014 Employment (thousands)	'05-'14 % Growth	'10-'14 % Growth	Mean Weekly Wage 2014*	Percent of National Wage
Professional and Technical Services	37.2	43.9	18%	3%	\$1,258	76%
Education and Health Services	127.4	148.4	16%	5%	\$832	93%
Financial Activities	64.5	72.5	12%	5%	\$1,180	72%
Leisure and Hospitality	79.3	87.1	10%	8%	\$300	73%
Administrative and Waste Services	45.1	48.6	8%	17%	\$681	99%
Other Services	34.4	36.9	7%	0%	\$591	90%
Total Nonfarm	934	993.3	6%	5%	\$849	86%
Government	161	170.5	6%	1%	\$906	80%
Wholesale Trade	40.6	42.7	5%	5%	\$1,177	86%
Transportation and Warehousing	50.6	52	3%	5%	\$857	88%
Retail Trade	107.2	107.9	1%	4%	\$507	92%
Construction	46.5	45.8	-2%	10%	\$941	89%
Manufacturing	101.3	97.3	-4%	6%	\$943	78%
Mining and Logging	1.3	1.2	-8%	33%	Not Available	Not Available
Information	20.2	17.1	-15%	1%	\$1,145	68%
Utilities	1.7	1.2	-29%	-25%	\$1,715	101%

\*Most wage figures are preliminary; all are adjusted for Nebraska's cost of living with 1st Quarter 2015 data from C2ER via Missouri Economic Research and Information Center Employment Source: CES, US Bureau of Labor Statistics (BLS) Wage Source: QCEW, US BLS

### Producer Services in Nebraska Cities

Nebraska has had solid growth in the high-growth, high-wage producer services sectors. This is a sign of strength for the Nebraska economy. The state, however, did have relatively few jobs in the Professional, Scientific, and Technical Services sector. This presumably occurs because Nebraska has a large non-metropolitan population and mid-size rather than large cities.

This expectation is verified in Figure 8 Lincoln Comparison Cities, which compare sector growth in both Lincoln and Omaha to a set of peer cities. The peer cities were chosen based upon similar characteristics of population and geographic location.<sup>3</sup> In addition, Lincoln and Omaha's PSTS industries were compared with those in a slate of aspirational cities, which, while more developed

<sup>3</sup> "Peer" and "aspirational" cities for Omaha and Lincoln were selected largely from studies produced by the Nebraska Bureau of Business Research for the Greater Omaha and Lincoln Chambers of Commerce. Notably, a different selection of peer regions may show the Nebraska metros in a different light.

in certain respects, share some essential characteristics with the Nebraska metros.

Omaha is slightly behind its peer cities average in the Professional, Scientific and Technical Services sector. The Lincoln metro finds itself in a similar position relative to its selected peers.

These results confirm that producer services are doing well in Nebraska cities. And, more generally, that producer services are an area of high wage job growth for the state economy

**Figure 7 Omaha Comparison Cities**

PEER COMPARISONS	PSTS Concentration (2014)
Oklahoma City	4.9%
Des Moines	5.2%
Omaha	5.5%
Salt Lake City	7.2%
Kansas City	7.6%
Colorado Springs	8.5%
Peer average	6.7%
Standard deviations from average (Omaha)	-0.8

ASPIRATIONAL COMPARISONS	PSTS Concentration (2014)
Omaha	5.5%
Nashville	5.9%
Raleigh	8.7%
Austin	9.1%
Aspirational average	7.9%
Standard deviations from average (Omaha)	-1.7

Source: CES, US Bureau of Labor Statistics

**Figure 8 Lincoln Comparison Cities**

PEER COMPARISONS	PSTS Concentration (2014)
Lansing	3.7%
Fargo	4.4%
Lincoln	4.6%
Louisville	4.7%
Lafayette	4.9%
Des Moines	5.2%
Lexington	5.2%
Peer average	4.7%
Standard deviations from average (Lincoln)	-0.2

ASPIRATIONAL COMPARISONS	PSTS Concentration (2014)
Lincoln	4.6%
Madison	5.4%
Salt Lake City	7.2%
Colorado Springs	8.5%
Raleigh	8.7%
Austin	9.1%
Aspirational average	7.8%
Standard deviations from average (Lincoln)	-2.4

Source: CES, US Bureau of Labor Statistics

Figure 9 illustrates the extent to which Nebraska producer services employment is centered in the Omaha and Lincoln metros. In Nebraska's third metropolitan region, Grand Island, PSTS make up only 2.1% of nonfarm employment. This is, in fact, lower than the aggregate of all nonmetropolitan areas in the state. In certain micropolitan regions, including Norfolk and Kearney, PSTS employment share approaches 3%, but still lies well below the state average of 4%.

**Figure 9 Nebraska PSTS Employment by Micropolitan Area (2014)**

Area (metropolitan or micropolitan area)	Average Weekly Wages	PSTS Concentration
Fremont	\$884	1.3%
Beatrice	\$668	1.5%
Lexington	\$776	1.8%
Columbus	\$1,006	2.0%
Grand Island	\$893	2.1%
All Non-Metro	\$811	2.1%
Scottsbluff	\$865	2.5%
Hastings	\$922	2.5%
North Platte	\$795	2.6%
Kearney	\$868	2.8%
Norfolk	\$687	2.9%

Source: QCEW, US Bureau of Labor Statistics via Nebraska Department of Labor's NEWorks

## Summary

The Professional, Scientific and Technical Service (PSTS) sector is comprised of businesses which primarily provide services to other businesses (i.e., producer services). The PSTS sector is a fast growing, high-wage sector in both Nebraska and the nation. PSTS employment grew 18% in Nebraska between 2005 and 2014. PSTS employment makes up 4.4% of Nebraska employment compared to 6.0% nationwide. This lower share is not surprising given that Nebraska has mid-sized rather than large cities and also has a larger share of its population living in non-metro areas than most states. Nonetheless, cities and towns in Nebraska should focus on supporting and tracking growth in this important sector.