

Industry Snapshot: Professional and Business Services in a Flat World

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The Professional and Business Services sector is a cluster of industries that comprise an important component of the U.S. economy. This sector, which accounts for more than 17 percent of all private sector jobs, includes both industries with high wages and high skills such as engineering, legal, accounting, and computer systems design, as well as industries that provide more basic support services to businesses such as call centers, telemarketing bureaus, temporary help services, facilities support services and administrative services. All are necessary for a region's companies to be internationally competitive. Recently, jobs in these industries have come under increasing global pressures as companies have pursued strategies to reduce costs. Figure 1 shows the total employment and payroll for the three NAICS industries that comprise the Professional and Business Services Sector.

Figure 1: Professional and Business Services Industries for the U.S. and Connecticut, 2004

Rgn	NAICS Code	NAICS Name	Employment 2004		Payrolls 2004		Payroll Per Employment 2004
			Total	Share of Relative Total	Total	Share of Relative Total	
US		Total Professional & Business Services	115,074,924		\$4,253,995,732		\$36,967
			19,102,820	17%	\$884,714,409	21%	\$46,313
US	54	Professional, scientific & technical services	7,569,981	40%	\$426,713,010	48%	\$56,369
US	55	Management of companies & enterprises	2,824,787	15%	\$222,459,177	25%	\$78,753
US	56	Admin, support, waste mgt, remediation services	8,708,052	46%	\$235,542,222	27%	\$27,049
CT		Total Professional and Business Services	1,537,461		\$72,848,717		\$47,382
			246,729	16%	\$14,075,768	19%	\$57,050
CT	54	Professional, scientific & technical services	98,504	40%	\$6,454,012	46%	\$65,520
CT	55	Management of companies & enterprises	42,976	17%	\$4,548,302	32%	\$105,834
CT	56	Admin, support, waste mgt, remediation services	105,249	43%	\$3,073,454	22%	\$29,202

Source: County Business Patterns

Because, by nature, many of these jobs are knowledge jobs or provide basic support services for workers in knowledge jobs, employment in these industries is vulnerable to

outsourcing pressures. The outsourcing of employment classified in NAICS industry 56, including traditional business support services jobs like call centers, telemarketing bureaus, and office administrative services is well documented and has been experienced by nearly all of us. Increasingly, work done by knowledge workers within the larger Professional and Business Services industry group, in industries such as Architectural, Engineering, Accounting and Computer Design, is critically being evaluated and outsourced if companies are able to reduce costs. Thomas L. Friedman's book *The World is Flat* has popularized the issues around outsourcing work and encourages the following analysis to include this factor in reviewing some simple economic factors and trends for the U.S., for the growth among the states, and Connecticut's experience since 1990 for this industry group.

In 1990 the Professional and Business Services sector employed 10.5 million, or 12 percent, of all private employment in the U.S. as reported from the Bureau of Labor Statistics. By 2000, employment in that industry had increased by slightly more than 6 million to account for nearly 15 percent of all private jobs. The annual average growth rate during this time was 4.6 percent. From 2000 through 2003 employment declined by 700,000. Since 2003 the national rate of annual employment growth has been at an average rate of 3.3, (adding another 1.1 million) not as fast as the decade of the 1990s but still enough to add slightly over one million workers in two years to these industries and slightly increase the share of these industries in the overall economy.

Thus, despite the pressures of outsourcing to contain costs, growth in employment in these industries has been robust. Not only has there been significant growth in employment during this time, the average employee in these industries earns 25 cents

more on the dollar than the average wage in the U.S. Not only are the salaries higher, they are also growing at a faster rate. From 1998 to 2004, salaries for the Professional and Business Services Industry increased 24 percent, compared to a growth of 19 percent for all other industries. The number of jobs grew at a rate of 16 percent over the same time period versus 5 percent in all other industries.

In addition to this high growth rate, the higher wages that these jobs bring to a local economy contribute substantially to the region's overall growth and vitality. It is clear that these are desirable jobs for a region to acquire. From a flat earth perspective, these jobs are vulnerable to move to a relatively low-cost region. Thus, if internationally, the earth is fairly flat for these jobs to move around, the U.S. is even flatter. Due to language requirements, legal structures and other issues, companies can more easily hire workers within the U.S. and move employment around within the nation's borders than outsource internationally. An analysis of employment growth in these industries among the states, as shown in Figure 2 must take into account the changes.

Two regions of the country that experienced high growth are the mountain states of Montana, Idaho, and Nevada, as well as the border states of North and South Dakota and the southern states of Texas, Arkansas, Tennessee, Georgia and North Carolina. Six of the seven states with over 5 percent growth are west of the Mississippi River. One factor that clearly contributes to the growth of employment these industries in these states is that the overall average wages paid in these states are relatively low, reflecting a relatively low cost of living.

Figure 2: Employment Growth in the Professional and Business Services Industry, 1990-2005

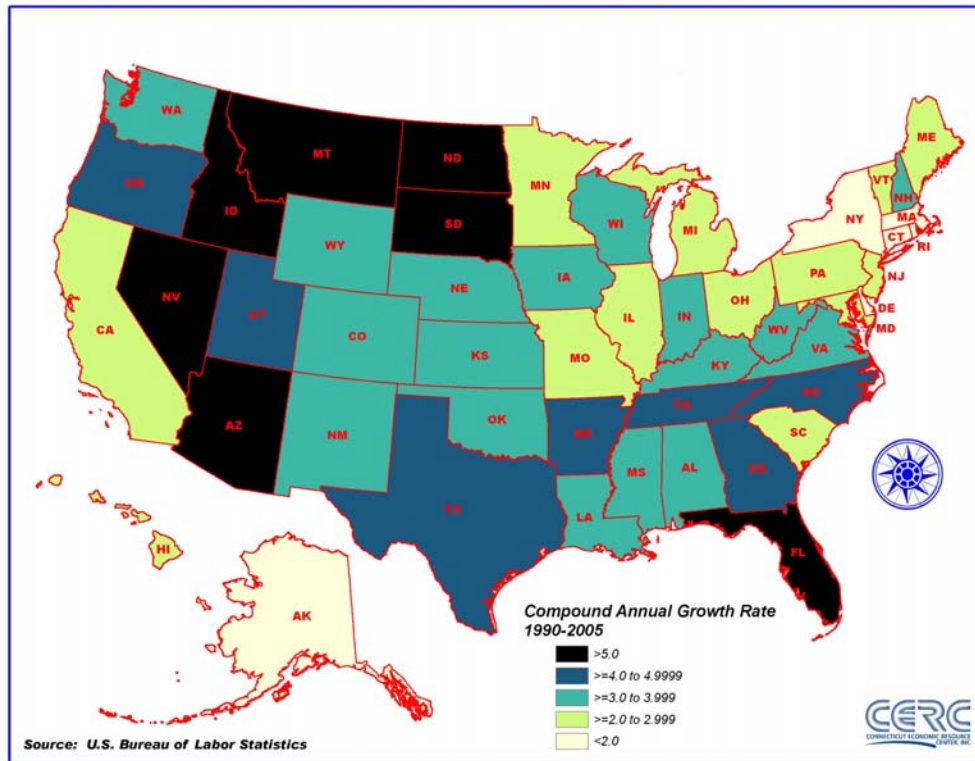


Figure 2 also shows that there is a regional trend for slower growing states in these industries. There are only five states within the continental 48 that have a compound growth rate 2 percent or less. Four of those states are in the northeast, which consists of nine states:

- Connecticut
- Massachusetts
- Rhode Island
- Vermont
- New Hampshire
- Maine
- New York
- Pennsylvania
- New Jersey

Delaware is the only exception, but its proximity to the Northeast indicates a geographic factor since the industry is growing in other sections of the United States. Half of the 10 states shown in Figure 3, with the lowest growth rate in employment, are located in the Northeast. These states all had annualized growth rates of approximately 2 percent or less. Also, no Northeastern state ranks even in the top 25 for annualized growth rate over the time period. In contrast there is only one state in the bottom 10 that is in the southern or western regions of the country, California. However, California may be a bit of an exception due to its large share of employment existing in that industry and the fact that in 1990 it accounted for nearly 13 percent of all U.S. employment in these industries. In fact, California added more than 600,000 jobs to the industry group in the 15 year period, which accounted for 10 percent of the total national growth in employment of the industries over that timeframe.

Figure 3: States with the Highest and Lowest Growth in Professional and Business Services, 1990-2005

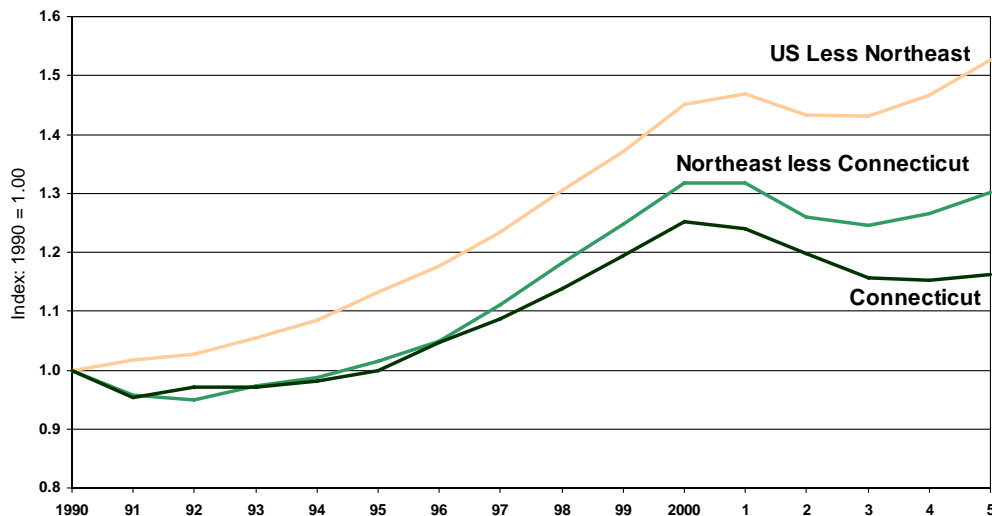
Top 10 States				Bottom 10 States			
State	Annual Growth Rate in Employment		Share of Total State Employment 1990	State	Annual Growth Rate in Employment		Share of Total State Employment 1990
	Rate	Rank			Rate	Rank	
Arizona	6.55	1	12%	Illinois	2.44	41	13%
Florida	6.43	2	11%	California	2.38	42	14%
Nevada	6.18	3	11%	Minnesota	2.32	43	12%
Idaho	5.82	4	11%	New Jersey	2.04	44	14%
Montana	5.52	5	7%	Massachusetts	2.00	45	13%
North Dakota	5.34	6	6%	Alaska	1.77	46	11%
South Dakota	5.24	7	5%	Rhode Island	1.75	47	11%
Utah	4.61	8	13%	New York	1.56	48	13%
Arkansas	4.57	9	8%	Delaware	1.43	49	17%
North Carolina	4.36	10	9%	Connecticut	1.05	50	12%

Figure 3 shows that all of the top ten states are either in the western or southern regions. The top 4 states (Arizona, Florida, Nevada and Idaho) all had industry shares of total state employment around the national average of 12 percent in 1990. These states were able to foster excellent growth over the past 15 years that greatly surpassed what

was seen at the national level. All four of these states more than doubled their workforces in these industries, in spite of having already substantial number of Professional and Business Services employees. Not surprisingly these four states were also the best in increasing their share of these industries total employment. The growth in these states is outpacing the rest of the country, leading to a denser industry concentration.

Examining growth throughout the entire 15 years and comparing the Northeast and Connecticut against the rest of the county gives a clearer idea of what is occurring. From 1990 to 2005 the employment in the U.S., not including the Northeast, grew 61 percent. The Northeast, excluding Connecticut, saw employment grow by 34 percent, about half the rate of the rest of the nation, while Connecticut's employment grew only 16 percent over this time. Figure 4 shows the indexed trend of the growth rates in these regions over the past 15 years. The graph shows significant growth from the early 1990s until the beginning of the new millennium.

Figure 4: Index of Employment Growth in Professional and Business Services, 1990-2005



Source: U.S. Bureau of Labor Statistics

After the year 2000 however, there is a clear dip in employment growth for all of the regions. The dot-com bubble burst as well as increased outsourcing of jobs may be contributing to this trend—both would have had a considerable effect on this industry. The post 2003 recovery in employment growth rates for these industries suggest that although outsourcing continues to be a factor, an equilibrium that balances the various costs and benefits of moving jobs to low-cost areas internationally may have been reached. However, for Connecticut the recovery from this downturn shows another disconcerting observation. By 2004 the rest of the U.S. had seen a complete recovery of the employment lost in this industry during the early 2000s and the Northeast was able to record a significant increase in employment since 2003, however, Connecticut has not yet shown any sign of a return to the growth rate observed by the state for this industry in the 1990s.

While this review has pointed out that Connecticut's employment growth in this industry is related to its geographic location in the northeastern region of the U.S., there are additional factors that have affected Connecticut's growth. Characteristics such as:

- Size of the industry in the state in 1990 (-);
- Average wages paid in the state in 1990 (-);
- Growth in wages during the previous decade (-);
- Cost of doing business in the state (-);
- State's Education Attainment (-);
- Age of the state's population (-);

appear to have had an affect on a state's growth in employment in the Professional and Business Services industry.

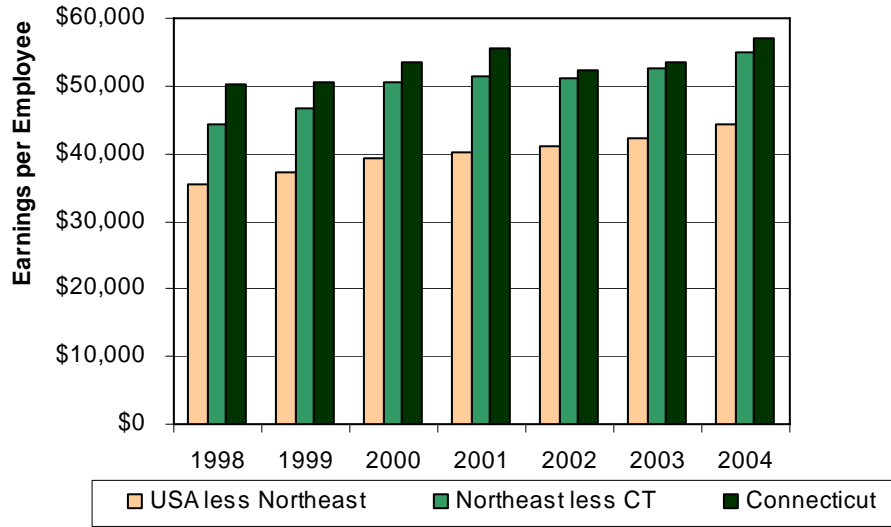
Not all of these factors have the expected affect on the growth in these industries. A good foundation for cultivating growth in this industry would be a young and well-educated workforce. Yet a statistical analysis of these factors suggested that, in a simple analysis, higher shares of the state's population with graduate degrees at the beginning of the period and also the share of its total population who are between 20 and 35 tended to result in lower growth rates in a state's employment in Professional and Business Services. In 1990 Connecticut had the highest share of its total population with graduate degrees, and was 15th in the 20 to 35 age group, which would lead to the expectation of low growth. These factors may be so closely related to the higher costs in these states that the simple analysis results in spurious conclusions as has been suggested in more advanced analyses.

The results of the effect of the other factors, the size of the industry in the state in 1990, the growth in the wages in the state from 1980 to 1990, the wages paid in the state in 1990 and the cost of doing business in 1990 tended to be high in states that experienced low growth rates from 1990 to 2005. Connecticut's measures were relatively high for each of these variables. This observation suggests that the state's growth rate for this industry over this time period was been negatively affected by the general trends that are observed among all the states. The state ranked sixth in the 1990 Moody's Economy.Com Cost of Doing Business index, first in median household income, second in wages per employee, and 13th in the size of this industry in 1990.

Wages proved to have the strongest relationship with growth among the previously mentioned factors. A statistical test suggests that an increase in the overall average wage paid in a state in 1990 would have resulted in an estimated decrease of 2 percentage points in the state's observed growth rate in this industry over the next 15 years. This supports the observed employment growth trends seen in Connecticut's and the entire Northeast. As stated above, Connecticut had the second highest wages per employee in 1990, and six of the eight remaining Northeastern states were in the top 25. These high wages continued through the time period. The average wage per employee in the Northeast was 20 percent larger than the average wage for workers in the rest of the country in 2004. In addition workers in Connecticut earn 11 percent more than the rest of the workers in the Northeast, which could explain why Connecticut did worse than the rest of the region.

Expanding this rationale leads to the fact that wages within the industry grouping are higher for the northeast region. Figure 5 displays the regional wages per employee for the industry. Professional and Business Services workers in the United States outside of the Northeast earned \$44,200 in 2004. Not including Connecticut workers, Northeastern employees earned \$55,100 on the average. Connecticut workers out-earned both groups with an average wage of \$57,000. These high wages show that Connecticut is competitive in these industries, but they do not encourage new employment growth.

Figure 5: Earnings per Employee in Professional and Business Services, 2004



Source: U.S. Census, County Business Patterns

The current lack of growth is troubling because the Nutmeg State has a long history in this industry. Connecticut workers in these industries have given the world such innovations as the helicopter, the nuclear powered submarine and the color television. Although Connecticut has a stellar history in this industry, its recent track record does not live up to its previous successes. Examining growth trends and indicators, it becomes apparent that Connecticut is not keeping pace with the rest of the nation.

Examining the state's job growth over the past 15 years paints an alarming picture. Connecticut's annual average growth rate for jobs in these industries, from 1990 to 2005, ranks last among the 50 states at a rate of 1.1 percent. Connecticut cannot take any solace that it was a close race since Delaware ranked 49th with an annual average growth rate of 1.4 percent. One could wish that this shortcoming could be explained by a stumble, a couple of bad years, and that the growth rates would improve as the state recovered its footing. However, when looking at the growth in five-year and 10-year

increments, Connecticut only improved to a ranking of 48th for both time periods. From 1995 to 2005 the state had an annual average growth rate of 1.21 percent, beating out Alaska and Mississippi. The data from the past five years, 2000-2005, shows that Connecticut had an annual average growth rate of -1.56 percent, again enough for 48th place.

These industries are a vital part of an economy; to some extent they reflect the vitality of the business community within the region. As this simple analysis has shown job growth in this industry sector, as in most industries is sensitive to wage pressures and many are exposed either directly or indirectly to outsourcing and other international pressures. The Northeast and Connecticut's growth trends for these jobs are concerning and the factors that can encourage job growth in these industries appear to all work against growth in this region. Although Connecticut's sky is not falling, the state and the region need to recognize the economic challenges and understand the factors that can influence future trends.