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Professional and Business Services in Regional Economies

By Ellen D. Harpel, Ph.D.

GROWTH AND GAPS

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professional and business

SERVICES IN REGIONAL ECONOMIES

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Regional economies are increasingly service-oriented and the Professional and Business Services (PBS) sector is one of the most important service sectors in terms of generating employment and output. As communities strive to establish a place in the new global economy and replace lost manufacturing jobs, the PBS sector may provide a promising opportunity for both job creation and economic vitality. This article explains why the PBS sector is important, describes the key elements of the PBS sector, reviews its role in regional economic development, and explains where PBS employment tends to locate. It concludes with a guide for understanding the role that the PBS sector plays in individual communities.

Rosslyn, VA, is one of several locations in Greater Washington with a high concentration of professional and business services firms.

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WHY PROFESSIONAL AND BUSINESS SERVICES?

Professional and business services is one of the fastest growing service sectors and represents the knowledge- and information-intensive industries and jobs critical to generating growth in today's economy. Consider these facts:

- From 1970 to 2005, total services employment jumped from 69 percent to 83 percent of total employment. The PBS and Education and Health Sectors were the fastest growing service sectors over this period. (See Figure 1.)
- In 1970, there were 17.8 million manufacturing jobs compared to 5.3 million jobs in the PBS sector, according to the Bureau of Labor Statistics. By 2005, there were 14.2 million manufacturing jobs and over 16.8 million PBS jobs. (See Figure 2.)
- The PBS employment growth rate has generally outpaced services and total employment growth, especially since 1990. Between 1990 and 2005, the PBS sector grew 56 percent and accounted for 25 percent of total US job growth.
- PBS employment is not just a home-grown, small business phenomenon. Businesses in this

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sector are growing and moving at higher rates than firms in many other sectors that have traditionally been the focus of the business recruitment process. Site selection analysts have reported that between 1999 and 2005, professional, technical and scientific services operations accounted for 1,550 new facility announcements among companies with at least $5 million in sales and a minimum of 25 employees – more than any other individual sub-sector.[1] The business services category accounted for hundreds more new and expanded facility announcements.

PBS employment is growing because of the need for specialized knowledge created by an increasingly complex global operating environment. As business transactions become more complex, more services are required to help companies stay competitive. For example, when companies serve customers around the world, services such as communications, logistics, and market research become increasingly important to the firm (O'hUallachain and Reid 1991). Financial services and the legal and regulatory environment have also become more complex and specialized, often requiring experts from outside the firm (Hansen 1994, Marshall and Wood 1995, Tordoir 1995, Illeris 1996, Gong 1997). Similarly, firms often need specialized knowledge to apply new technologies in their business processes (Kutscher 1988, Beyers and Lindahl 1996, Illeris 1996). Finally, marketing, advertising and product design and development are increasingly the factors that determine firm profitability or failure. Professional and business services provide these knowledge-based, productivity-enhancing support functions that can help firms in all sectors prosper in today's economy.

PROFESSIONAL AND BUSINESS SERVICES SECTOR ACTIVITIES

The professional and business services sector includes three sub-sectors:

- Professional, Scientific, and Technical Services (42 percent);
- Management of Companies and Enterprises (10 percent); and
- Administrative and Support Services and Waste Management Services (48 percent).

Professional, Scientific, and Technical Services are activities that require a high degree of expertise and training. This sub-sector includes:

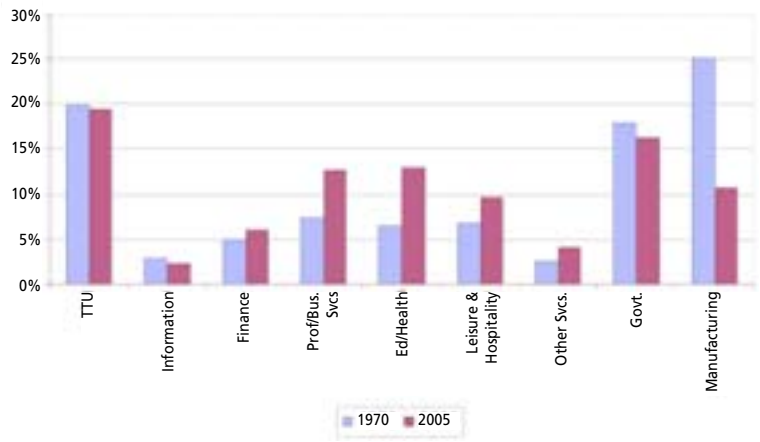
- Legal services,
- Accounting services,
- Architectural, engineering and related services,
- Specialized design services,
- Computer systems design,
- Management, scientific and technical consulting services,
- Scientific research and development services,
- Advertising and related services, and
- Other professional, scientific and technical services.

Within the professional services sub-sector, legal, architectural and engineering, and computer systems design services had the most employees in 2005. Consulting and computer systems design have experienced the most rapid growth since 1990, growing at more than twice the rate of the PBS category as a whole.

Administrative services are routine support activities provided to other organizations. This sub-sector includes:

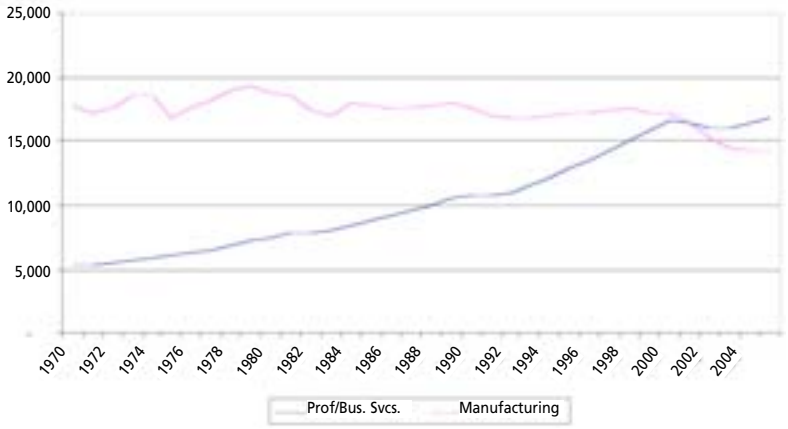
- Office administrative services (such as billing, personnel, or logistics),
- Facilities support services (such as janitorial or security services),
- Employment services (employment placement or temporary help services),
- Business support services (such as call centers and mailing services),
- Travel services,

Figure 1. Sector Employment as a Percentage of Total Employment, NAICS Basis



Source: Bureau of Labor Statistics

Figure 2. PBS and Manufacturing Employment (000)



Source: Bureau of Labor Statistics

- Investigation and security services,
- Services to buildings and dwellings (such as pest control and cleaning services), and
- Other support services.

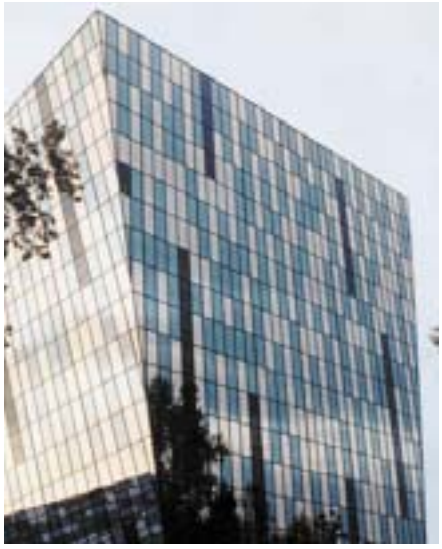
This category also includes waste management and remediation services. Within the administrative services sub-sector, employment services is by far the most important, accounting for 44 percent of total business services in 2005 – up from only 32 percent in 1990. It is worth noting that workers in the employment services industry are not necessarily performing services work at all. The American Staffing Association reported in its 2006 Annual Economic Analysis of the Staffing Industry that 35 percent of contract and temporary employees worked in industrial occupations. Services to buildings is next, accounting for 21 percent of business services employment in 2005.

PBS AND ECONOMIC DEVELOPMENT

While the employment figures are impressive, the essential question for economic development professionals is whether PBS activities are beneficial to regional economies. Both economic theory and empirical studies suggest that the answer is yes. Beyond creating jobs, professional and business services can generate regional exports and increase innovation and productivity, thereby supporting economic growth. Further, as described below, PBS jobs are good jobs for people and their communities.

Exports and Innovation

Economic base theory divides activities into basic (exported) and non-basic (used locally) categories. Exports are more valuable to the local economy because they bring in new income from outside the area and generate a multiplier effect, rather than simply recycling income internally. The theory and those who have applied it have often assumed that most services are non-basic. However, many services are exported. Exported services include wholesaling, transport, tourism, government activities, university education, and most types of producer services, which are services that are inputs into another product or service and include professional and business services (Greenfield 1966, Daniels 1985, Gillis 1987, Marshall and Wood 1995, Beyers 2000). Further, transportation and telecommunications advances mean more services can be exported today than previously, especially those that are transmitted using telecommunications (such as back offices) or those with value that far exceed the costs of travel (such as engineering or consulting services) (Illeris 1996).



Center for Innovative Technology (CIT) based in Reston, VA. CIT is a nonprofit corporation designed to enhance the research and development capability of the state's major research universities in partnership with local industries.

"Indirectly basic" activities can also contribute to regional exports. "A variety of service providers may act as indirect exporters in a large, diversified service center. They are likely to range from banks, business consultants, corporate lawyers, and advertising firms to providers of security guards, janitors, and printing. In a major center like Boston or New York, the export base is largely made up of firms that provide services to corporate headquarters. These indirect exporters may account for a major share of export-sector employment" (Stanback 2002, 50-51).

Another viewpoint proceeds from the premise that innovation (not exports) drives economic growth. Services firms play important roles in this process both by innovating themselves and by catalyzing and diffusing innovation in others (Marshall 1988, Miles and Boden 2000, Aslesen and Isaksen 2004). Unfortunately, service innovation can be difficult to measure. Standard measures of R&D spending and capital investment are not good proxies for innovation in services firms (Marshall & Wood 1995, Marklund 2000). Still, there have been several empirical studies to try to assess whether PBS firms do contribute to innovation in their client companies.

Some studies have found that firms can serve a catalytic role in advising, providing expert knowledge, and organizing projects (Larsen 2000, Aslesen and Isaksen 2004, Jakobsen and Aslesen 2004). Other research has found a positive relationship between the growth of business services and manufacturing productivity and wages at the state level using econometric models (Gatrell 2002). A positive correlation between producer services and GDP growth in OECD countries has also been identified (Wilber 2002). Innovation can also be generated through integrated industry clusters that link various functions, institutions and organizations, including service activities (Porter 1998, Hauknes 2000).

Job Quality

There is a perception, or at least a lingering concern, among community leaders that services jobs are low-quality, low-paying jobs, despite evidence that there are many high-wage, high-productivity jobs employing skilled workers in producer services industries. Recent research examined data on occupations, education, and earnings by industry sector to assess the quality of PBS jobs (Harpel 2006).

Table 1 reflects the level of "good" jobs by occupation associated with three industry sectors: manufacturing, PBS, and other services, which includes wholesale trade, retail trade, personal services, social services, entertain-

Table 1. Occupational Quality by Select Industry Sector, 1990 and 2000 (percentage)

	Manufacturing		PBS		Other Services	
	1990	2000	1990	2000	1990	2000
High	23%	27%	50%	59%	16%	19%
Middle	33%	32%	31%	26%	47%	44%
Low	44%	41%	19%	15%	37%	37%
TOTAL	100%	100%	100%	100%	100%	100%

Source: Current Population Survey, 2003

ment and recreation services. Modifying frameworks used by previous research in this area (Aoyama and Castells 2002, Appelbaum and Albin 1990, Illeris 2002), this analysis organizes occupations into three ordered categories:

- High Level Occupations: Executive/Managerial, Professional, Technicians, and Health/Education/Public Administration
- Middle Level Occupations: Sales, Administrative/Clerical; Precision Manufacturer/Craft
- Low Level Occupations: Other Services, Operator/Fabricator/Assembler, Other

The PBS sector has more than double the level of high level occupations compared to either the manufacturing or other services sector. Middle level occupations are more evenly distributed, with other services having the highest level of these jobs, followed by the manufacturing and PBS sectors. The manufacturing sector has the highest percentage of low level jobs, followed by other services. The PBS sector has very low percentages of the low level occupations.

In terms of education, 41 percent of individuals in the PBS sector hold at least a bachelor's degree compared to 21 percent and 17 percent in manufacturing and other services sectors respectively. By contrast, PBS has the lowest levels of workers with a high school degree or less (32 percent) compared to the other two categories (54 percent in both manufacturing and other services).

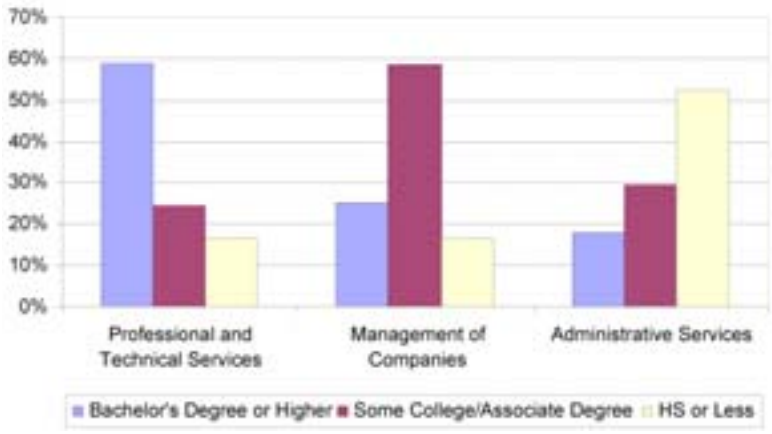
Breaking down the PBS sector into its components, the professional and technical services category has the highest percentage of college-educated workers at 59 percent. The management services category has a heavy percentage of workers with some college or an associate degree. The administrative category has relatively high levels of workers with a high school diploma or less at 52 percent. (See Figure 3.)

Finally, earnings in the PBS sector are 20 percent above the national average and are on par with manufacturing earnings. (See Figure 4). Earnings ratios are presented instead of dollar values for wages. Earnings ratios above one mean the industry wages are above the private sector average, while ratios less than one mean wages are below the average. The PBS earnings ratio in 1990 was 1.17 and reached 1.20 by 2003. Manufacturing starts the period with an earning ratio of 1.21 and ends with 1.22. By contrast, the overall services sector continues to lag, with earnings below the national average.

As with educational attainment, there is disparity in earnings within the PBS sector. Management of Companies and Professional and Technical Services both have earnings ratios well above the national average and above the PBS and Manufacturing sector ratios. Professional and Technical Services started the period at 1.50 and ended it at 1.60. Management services expanded from 1.7 in 1990 to 1.93 in 2003. By contrast, business services stayed below the national average and far below the PBS sector average for this period, with an earnings ratio of 0.69 in both 1990 and 2003. This ratio is also well below the overall services sector average.

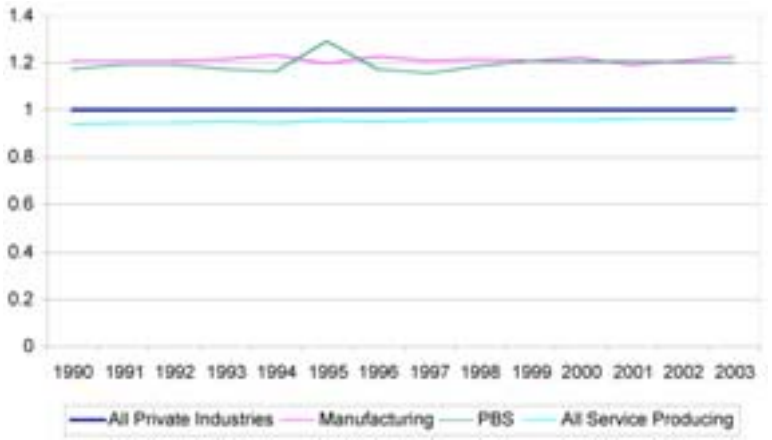
In sum, PBS jobs involve higher order occupations and require greater educational attainment than the average

Figure 3
Educational Attainment by PBS Sub-sector (percentage)



Source:Current Population Survey, 2003

Figure 4
Earnings Ratios, 1990-2003, by Select NAICS Sector



Source: Quarterly Census of Employment and Wages

job, and they pay approximately 20 percent above the national average. Compared to the manufacturing and overall services sector, PBS jobs are demonstrably stronger as measured by occupation type and education. Professional and business services jobs, as a whole, also command the same type of wage premium as the manufacturing sector and pay far above the average services job.

However, there is a wide gap between the professional services and business services components of the overall PBS sector. Nearly 60 percent of professional services workers have at least a college degree compared to less than 20 percent of business services workers. Earnings in the business services category are actually lower than the national average, in contrast to professional services earnings, which are approximately 50 percent above the national average.

PBS LOCATION PATTERNS

PBS firms tend to cluster in large cities around the world. Several operating factors drive these location decisions. First, firms gain access to large numbers of the highly qualified workers they need for successful operations (O'hUallachain and Reid 1991, Beyers and Lindahl 1996, Gong 1997, Gatrell 2002, Aslesen and Isaksen 2004). Second, corporate headquarters, which have been predominantly located in major metropolitan areas, both generate great demand for external services (Stanback and Noyelle 1984, Coffey 1995, Sassen 2000, Hansen 2001) and spin off the talent to form new PBS companies (Bryson 2004). Third, information and knowledge are the tools of the trade for PBS firms. Locating in cities facilitates formal and informal access to information among institutions, networks, customers and suppliers, both through proximity and by being part of a greater volume of activity. The "transaction cost" associated with obtaining knowledge, information, and specialized inputs is therefore lower in cities.

As more cities are able to offer these attributes, PBS employment has started to disperse from the very largest cities (O'hUallachain and Reid 1991, Gong 2001). More recent research shows that employment has indeed dispersed from the largest two metro areas (New York and Los Angeles), but PBS employment concentration and job growth remain greatest in metropolitan areas with a population over one million. These large metropolitan areas have 53 percent of the population and 55 percent of total employment, but 66 percent of all PBS jobs. These metropolitan areas also have PBS location quotients (LQ) greater than 1, while those with less than 1 million people have LQs below 1 (Table 2). Further, large metropolitan areas accounted for 68 percent of total PBS employment expansion between 1990 and 2004 (Harpel 2006).

Table 3 lists the MSAs with a population greater than one million and their PBS employment characteristics. Individual metropolitan areas often have PBS patterns that differ from their size category. For example:

- PBS employment for the entire set of MSAs listed in Table 3 represented 15 percent of total employment, matching the US as a whole, but with a range of 10-26 percent. The group's location quotient was 1.19, but with a range of 0.84 – 2.05.
- 15 of the 49 MSAs had location quotients less than 1, with the lowest levels in Providence, RI; Riverside, CA; Hartford, CT; Louisville, KY; and Rochester, NY.
- Tampa, FL, led the group with a location quotient of 2.05, followed by Washington, DC; San Jose, CA; and Detroit, MI.
- PBS employment growth ranged from only 1,500 in Hartford, CT, to 245,500 in Washington, DC, between 1990 and 2004; median growth was 53,000.
- 23 of these MSAs had a PBS employment growth rate below the US rate of 51 percent, with the lowest growth rates in Hartford, CT, and Pittsburgh, PA. The highest growth rates were in Tampa, FL; Las Vegas, NV; Phoenix, AZ; Austin, TX; and Orlando, FL.
- For individual MSAs across the country, the PBS sector is their major job generator. PBS represented more than 50 percent of total job growth in a diverse group of cities, including New York, NY; Los Angeles, CA; Boston, MA; Detroit, MI; Baltimore, MD; Tampa, FL; Cleveland, OH; San Jose, CA and Rochester, NY.

Table 2: PBS Employment by Population Category, 2004

MSA Population Category	Number of MSAs	% Population (2000)	% Total Employment	% PBS Employment	PBS Location Quotient 1990	PBS Location Quotient 2004
10 million+	2	11%	10%	12%	1.31	1.19
2.5M - 10M	17	26%	27%	34%	1.28	1.24
1M - 2.5M	30	16%	18%	20%	1.08	1.12
250K-1M	115	19%	19%	18%	0.92	0.94
100K-250K	149	8%	8%	5%	0.66	0.68
<100K	25	0.7%	0.8%	0.5%	0.64	0.61
Other		19.3%	17.2%	10.5%	0.56	0.58
US TOTAL	**338**	**100%**	**100%**	**100%**	**1.00**	**1.00**

Source: Calculation from Bureau of Labor Statistics and US Census; preliminary 2004 data

Table 3. PBS in Metro Areas with Population > 1 Million

	2000 Population	PBS as % of Total Emp. (2004)	PBS LQ 2004	PBS Emp. Growth (000) 90-04	PBS Emp. Growth Rate 90-04	PBS Share of Total Job Growth 90-04
New York, NY	18,323,002	15%	1.18	216.9	22%	56%
Los Angeles, CA	12,365,627	15%	1.21	113.6	16%	79%
Chicago, IL	9,098,316	15%	1.23	165.9	32%	42%
Philadelphia, PA	5,687,147	15%	1.17	92.8	30%	38%
Dallas, TX	5,161,544	14%	1.09	166.8	83%	24%
Miami, FL	5,007,564	17%	1.33	200.8	111%	37%
Washington, DC	4,796,183	22%	1.73	245.5	67%	41%
Houston, TX	4,715,407	14%	1.09	104	50%	20%
Boston, MA	4,540,941	16%	1.25	95.4	34%	55%
Detroit, MI	4,452,557	17%	1.4	70	24%	55%
Atlanta, GA	4,247,981	16%	1.31	166.9	82%	25%
San Fran., CA	4,123,740	16%	1.32	46.1	17%	35%
Riverside, CA	3,254,821	11%	0.87	62.3	99%	14%
Phoenix, AZ	3,251,876	16%	1.3	160.6	146%	24%
Seattle, WA	3,043,878	13%	1.03	65	47%	23%
Minneapolis, MN	2,968,806	14%	1.13	63.6	35%	18%
San Diego, CA	2,813,833	16%	1.31	81	65%	28%
St. Louis, MO	2,698,687	14%	1.09	32	22%	24%
Baltimore, MD	2,552,994	14%	1.13	57	47%	52%
Pittsburgh, PA	2,431,087	12%	0.98	12.3	10%	13%
Tampa, FL	2,395,997	26%	2.05	216.7	198%	55%
Denver, CO	2,179,240	16%	1.26	53.9	42%	17%
Cleveland, OH	2,148,143	12%	0.99	23.3	21%	52%
Cincinnati, OH	2,009,632	14%	1.13	49.2	52%	31%
Portland, OR	1,927,881	13%	1.03	43.6	56%	20%
Kansas City, MO	1,836,038	13%	1.06	37	41%	27%
Sacramento, CA	1,796,857	11%	0.91	44.2	83%	19%
San Jose, CA	1,735,819	19%	1.55	50.1	43%	135%
San Antonio, TX	1,711,703	12%	0.94	43.6	95%	20%
Orlando, FL	1,644,561	17%	1.35	95.1	140%	26%
Columbus, OH	1,612,694	15%	1.17	47.7	56%	26%
VA Beach, VA	1,576,370	13%	1.07	40.1	66%	29%
Indianapolis, IN	1,525,104	13%	1.08	56.1	90%	27%
Milwaukee, WI	1,500,741	13%	1.03	29.7	39%	40%
Las Vegas, NV	1,375,765	12%	0.94	60.3	172%	14%
Charlotte, NC	1,330,448	15%	1.16	53.2	90%	24%
New Orleans, LA	1,316,510	12%	0.95	20.7	39%	26%
Nashville, TN	1,311,789	13%	1.02	48.9	116%	26%
Providence, RI	1,291,932	10%	0.84	19.4	47%	34%
Austin, TX	1,249,763	13%	1.07	52.2	143%	19%
Memphis, TN	1,205,204	12%	0.94	30.2	72%	25%
Buffalo, NY	1,170,111	12%	0.94	16.3	34%	N/A*
Louisville, KY	1,161,975	11%	0.88	20	44%	23%
Jacksonville, FL	1,122,750	15%	1.21	48.9	125%	32%
Richmond, VA	1,096,957	14%	1.15	20.8	32%	20%
OK City, OK	1,095,421	12%	0.98	28.8	76%	26%
Hartford, CT	1,059,878	11%	0.85	1.5	3%	N/A*
Birmingham, AL	1,052,238	12%	0.97	21.4	53%	27%
Rochester, NY	1,037,831	11%	0.89	15.6	38%	91%

Source: Calculation from Bureau of Labor Statistics and US Census Bureau; preliminary 2004 data;
* Experienced a loss of jobs for this period.

In sum, PBS employment remains concentrated in metropolitan areas with a population greater than one million, though it is growing rapidly nationwide. Size alone does not explain which metropolitan areas will have strong PBS sectors either in terms of job concentration or growth. PBS employment patterns, of course, ultimately depend on the characteristics of each location. Given its importance, these tables suggest that economic developers should examine the dynamics of the PBS sector in their communities, whether to understand the reasons for a lagging performance, to sustain an important source of growth, or to support an up-and-coming sector.

CONCLUSIONS AND A GUIDE FOR ECONOMIC DEVELOPERS

This article has described the role of professional and business services in regional economies in terms of job creation, contributions to economic growth, job quality, and location patterns. The professional and business services sector is an essential element of most large metropolitan area economies. Given its dominant role in job creation in many regions, understanding the dynamics of the PBS sector is an imperative for economic development and community leaders.

The accompanying checklist provides a starting point for assessing the PBS sector in individual regions or communities. The split between the professional services and business services sub-sectors is an especially important element of this assessment. On many data points, each represents an extreme on opposite sides of the PBS average, making the PBS sector data useful primarily as a starting point. Knowing the level and characteristics of PBS employment is good; understanding the characteristics of the professional services and business services components is better.

Professional and Business Services Checklist

- ❑ What is the level of professional and business services employment in your community or region?
- ❑ How does the level of professional and business services employment compare to your competitor or peer regions?
- ❑ How fast is professional and business services employment growing?
- ❑ What is the split between professional services and business services employment in your community or region?
- ❑ What are the occupations, income, and education levels associated with professional and business services employment in your community?
- ❑ What are the dominant industries within your professional and business services sector?
- ❑ What are the characteristics of firms in these industries? What is the mix of small and large businesses? What role do entrepreneurs and sole proprietors play?
- ❑ How are these industries connected to the rest of your regional economy?
- ❑ Where are firms in the professional and business services sector located within your community or region? How are they clustered? What are the implications for planning and real estate development?
- ❑ How many recent business attraction and retention projects fall into the professional and business services category? How well do the economic development services offered match the needs of these firms?

Source: www.businessdevelopmentadvisors.com

Professional and business services jobs provide high value to regional economies.

While it may be tempting to conclude that business services sector jobs are not as desirable as professional services sector employment based on industry, education, and earnings information, these jobs may be as beneficial in terms of overall economic development. The business services sector may provide job, income and ownership opportunities that may not appear on paper to be as good as professional service occupations, but in fact provide better opportunities for individuals than they may otherwise have – especially with the decline in manufacturing employment. For example, it has been noted that in the 1990s, ". . . there was also an increase in startups of many service businesses using relatively unskilled labor for services such as building cleaning, security, detective, and secretarial services. These may be started by career-oriented individuals who have recognized opportunities or developed new ideas to allow them to compete favorably in these markets, based on their own experiences or on spillovers from others (Acs 2005, 11). It is therefore important to understand the dynamics of these activities in each region.

Beyond measuring the basic size and scope of the PBS sector, it is important to understand how the sector and its components fit into the overall regional economy. For example, it is useful to know where business services tend to cluster compared to where professional services are concentrated. As one of the fastest growing sectors of many regional economies, the location requirements of PBS firms have important implications for the patterns of growth within metropolitan areas, as well as workforce development issues and demand for office and other types of working space. Further, understanding the structure of each sub-sector including the role of entrepreneurs, size and employment patterns, as well as the inter-relationships between professional services and business services would provide valuable insight into their role in regional economic development.

This article attempts to make the case that policy makers in metropolitan areas should be aware of the nature and extent of the professional and business services sector in their regions. With deeper understanding of the sector, regional leaders may choose to develop economic development policies that incorporate consideration of PBS sector trends and needs.

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FOOTNOTE

[i] "Will New and Expanded Intensify in 2006?" Pete Julius, *Conway Data Scoreboard & Whittaker Associates, Inc.* http://www.whittakerassociates.com/newsletter/new/index.htm.