



Pittsburgh's Future

Making Southwestern Pennsylvania
One of the World's Greatest Regions

March 2006

The Pittsburgh Region's Economy: Stronger Than It May Seem

EXECUTIVE SUMMARY

- Although the overall rate of job growth in the Pittsburgh Region was much slower than in the U.S. over the past six years, the gap was caused by two factors: (1) job losses at USAirways, and (2) the impacts of slow population growth on three population-dependent sectors of the economy – construction, government, and retail. Despite these challenges, the Pittsburgh Region created more jobs than either Boston or Silicon Valley between 1999 and 2005.
- Higher education and health care have been the quality-job drivers in the Pittsburgh Region, creating nearly 13,000 jobs over the past 6 years. Had it not been for the strong job growth in higher education and health care, there would have been a net reduction in employment in the high-wage sectors of the economy and in the overall Pittsburgh Region economy.
- Some of the fastest growth in the Pittsburgh Region has been in high-paying, technology-oriented jobs. Jobs in science, engineering, and health occupations increased by over 12% in the Pittsburgh Region between 1999 and 2004, nearly 70% faster than the 7% growth in the U.S. as a whole, and faster than in Boston, Charlotte, Minneapolis, and Silicon Valley. These jobs pay 50% more than the average wage in the region. Surprisingly, however, Pittsburgh still has a smaller proportion of its workforce in these occupations than most other comparable regions.
- Although Pittsburgh lost 1 in 5 of its manufacturing jobs over the past 6 years, this was comparable to the U.S. as a whole, and was lower than many other regions, including Austin, Boston, and Silicon Valley. Many of the jobs lost were in management positions – the Pittsburgh Region retained more of its production worker jobs than most comparable regions in the country.
- One-third of the jobs created in the U.S. over the past 6 years were in government, including public schools. In contrast, public sector jobs in the Pittsburgh Region declined during this period.

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I. Introduction

At first glance, statistics on the Pittsburgh Region's economy would seem to paint a bleak picture:

- Between 1999 and 2005, jobs in the Pittsburgh Region (the Metropolitan Statistical Area) grew by less than 1%, whereas jobs nationwide grew by 3.5%.
- Between 2004 and 2005, jobs in the Pittsburgh Region grew by only 0.3%, whereas jobs nationwide grew by 1.5%, i.e., five times faster.
- Job growth in the Pittsburgh Region in 2005 was slower than most comparable regions – only Cleveland and Detroit did worse.

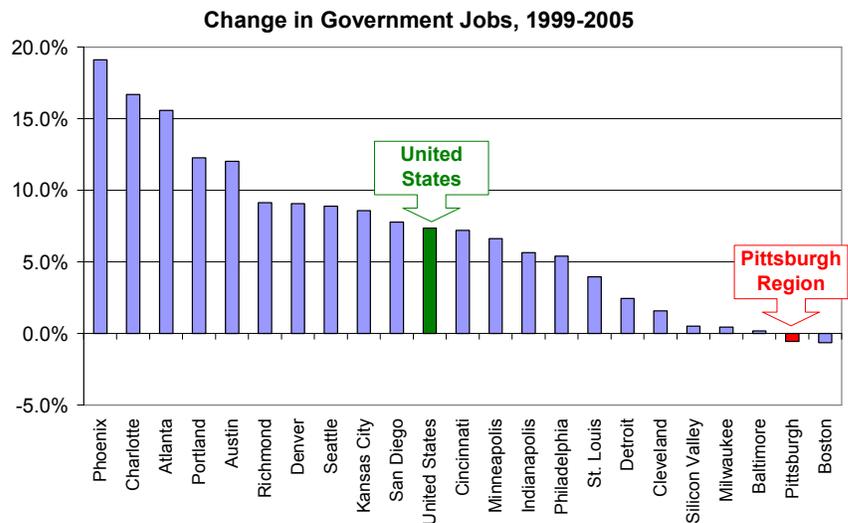
But a closer look shows that there are two simple reasons why the Pittsburgh Region's overall job growth looks so bad compared to the U.S. and other regions: slow population growth and the downsizing of USAirways.

In the rest of the economy, the Pittsburgh Region's job growth is on par with the nation and most regions, and there are sectors where there is significant growth in high-wage jobs.

II. Why Pittsburgh's Overall Job Growth Looks Bad

Government Jobs Are Growing Nationally, But Not in the Pittsburgh Region

Surprisingly, over one-third of the job growth nationally between 1999 and 2005 was not in the private sector, but in government. The U.S. economy grew by over 4.4 million jobs during this period, and 1.5 million of those jobs were in the public sector. Before you imagine more bureaucrats sitting behind desks, remember that public schools are government agencies. In fact, half of the new public sector jobs created nationally were in public schools.

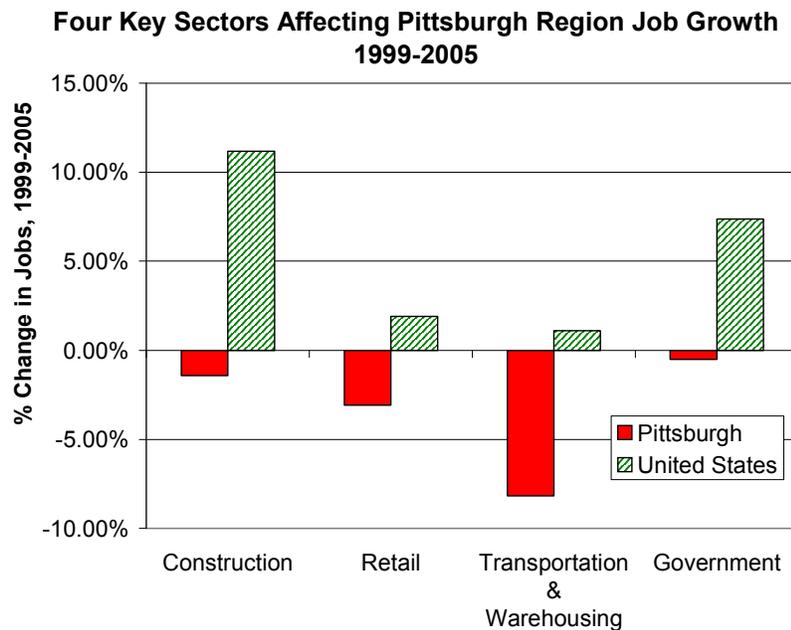


In contrast, the Pittsburgh Region actually reduced the number of public sector employees during this period. This explains over 1/3 of the difference in job growth between Pittsburgh and the U.S. from 1999 to 2005.

Population-Dependent Sectors Are Growing Nationally, But Not in the Pittsburgh Region

Two other sectors of the economy explain a lot of the gap between U.S. and Pittsburgh job growth: Construction and Retail.

Over 730,000 jobs nationally were created in the construction industry between 1999 and 2005, 16% of the total national job growth. In the Pittsburgh Region, construction jobs declined slightly over this period, after a major increase in construction jobs in the 2000-2002 period. Most of the growth in construction nationally and in other regions was in the residential construction industry, which in turn was driven by population growth in those regions.



In the retail sector, nearly 300,000 jobs were created nationally between 1999 and 2005. Two-thirds of that growth – 200,000 jobs – occurred in 2005 alone. Retail jobs represented 10% of the total growth nationally in 2005, whereas retail jobs in the Pittsburgh Region declined slightly in 2005. (Note: although published reports show a decrease of several thousand jobs in the retail sector in the Pittsburgh region between 1999 and 2005, much of this was due to the reclassification of jobs to the “headquarters” sector.)

All three of these sectors – construction, retail, and government – are fundamentally *population-dependent* sectors. When a region's population is growing, more buildings are built, more people shop, more children are in public schools, and more public services are needed. The Pittsburgh Region's population has not been growing, so the population-dependent sectors have also not been creating jobs. Since these are large sectors of the economy (these three sectors represented 1/3 of jobs in the U.S. in 1999), slow job growth or job losses in these sectors can significantly influence the total job trends for a region.

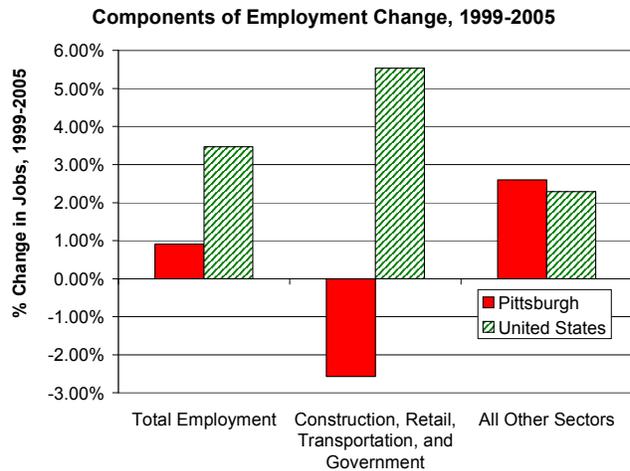
USAirways Job Losses Hit Locally More than Nationally

A fourth sector completes the explanation – air transportation. Although job growth in the Transportation and Warehousing sector nationally was fairly small – just over 1%, jobs in the Pittsburgh Region in this sector dropped by over 8%. This was due primarily to the job reductions by USAirways. USAirways employed over 12,000 people in the Pittsburgh Region

in 1999, and today employs fewer than 3,200 – a loss of over 8,000 jobs. Pittsburgh's status as a hub airport meant that it had a higher concentration of air service-related jobs than other regions – and thereby suffered disproportionate job losses when that hub status disappeared. It is likely that some job losses in other sectors also occurred as a result of USAirways cutbacks, e.g., when suppliers to USAirways lost business.

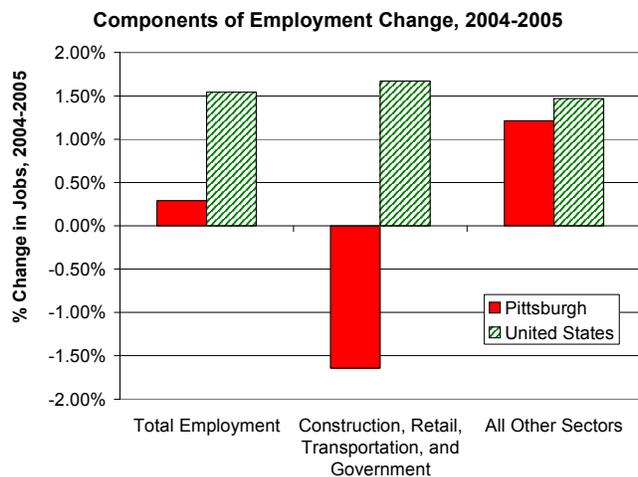
Slow Growth in Construction, Government, Retail, and Transportation Were the Cause of Slow Job Growth in the Pittsburgh Region

These four sectors – government, construction, retail, and transportation – completely explain the gap between the Pittsburgh Region's job growth rate and the nation's over the past 6 years. In each of these sectors, jobs in the Pittsburgh Region declined between 1999 and 2005, while they increased nationally. Jobs in the remaining sectors of the economy actually increased somewhat faster in the Pittsburgh Region (2.6%) than in the U.S. (2.2%). (The other sectors are manufacturing, wholesale trade, utilities, information, financial activities, professional and business services, education and health services, and leisure and hospitality.)



Put another way, if Pittsburgh Region jobs in these four sectors had increased at the national rate during this period of time, total jobs in the Pittsburgh Region would have increased by 3.43%, almost identical to the 3.47% national growth rate.

These same four sectors also explain why the Pittsburgh Region's job growth rate in 2005 was so slow compared to the U.S. growth rate. Total job growth in 2005 in Pittsburgh was a lackluster 0.3%, compared to 1.5% nationally. But if you look at the sectors other than government, construction, retail, and transportation, job growth was 1.21% -- 80% of the U.S. growth rate in the same sectors.

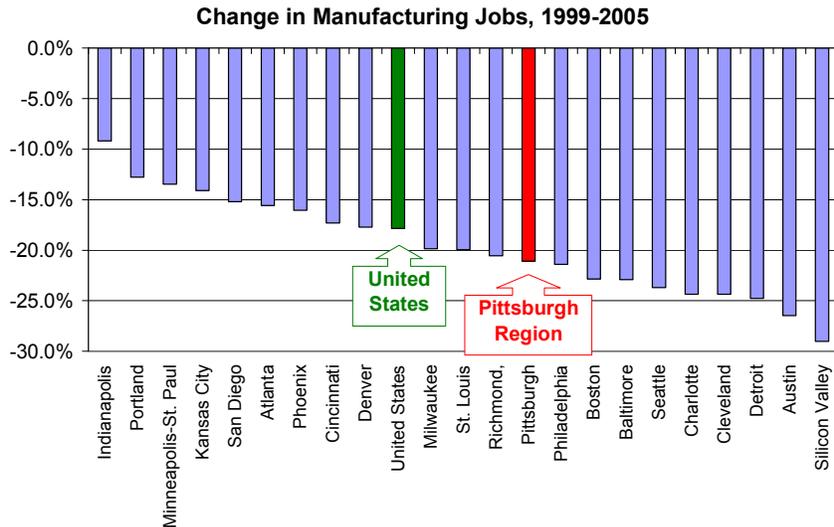


The Pittsburgh Region Lost Manufacturing Jobs – and So Did Every Other Region

Pittsburgh lost about one-fifth of its manufacturing jobs between 1999 and 2004 – a reduction of over 27,000 jobs.

But the U.S. as a whole lost almost the same proportion of its manufacturing jobs.

In fact, every major region in the country lost manufacturing jobs, and many lost a larger share of their manufacturing jobs than did the Pittsburgh Region. Silicon Valley lost 29% of its manufacturing jobs. Austin lost 27% of its manufacturing jobs. Boston lost 23% of its manufacturing jobs.



Unfortunately, it’s hard to determine exactly where the Pittsburgh region did better or worse than other regions during this period of time, because many jobs that were previously classified as “manufacturing” were reclassified into other categories such as “headquarters” or “research and development.” As a result, the reported declines in manufacturing jobs probably slightly overstate the actual loss of jobs in manufacturing, and this may have been truer in the Pittsburgh region than elsewhere because of the many corporate headquarters and R&D centers here. As noted below, occupational data indicate that Pittsburgh had one of the smallest reductions in production worker jobs of any region in the country.

Saying that a region lost fewer jobs than other regions doesn’t sound positive. But if you go back a little further, before the recession of 2001-2003, you find that Pittsburgh was growing manufacturing jobs well ahead of the national average and ahead of most regions outside of the south and west. Regions like Boston, Charlotte, and St. Louis actually lost manufacturing jobs in the 1990s, while the Pittsburgh region was growing them. So the fact that Pittsburgh grew manufacturing jobs ahead of many regions in the 1990s, and that it lost fewer jobs than many regions through the recession, strongly suggests that the Pittsburgh Region remains a desirable region for manufacturing.

III. Which Industries Are Creating Jobs in the Pittsburgh Region?

As noted above, if you take out construction, government, retail, and transportation (which represent about 1/3 of jobs locally and nationally), the remaining sectors, which represent the majority of the local job market, have collectively been growing at about the same rate as the nation as a whole.

Since the manufacturing sector lost jobs, which sectors have created the new jobs in the Pittsburgh Region?

Higher Education and Health Care Have Created Most New High-Wage Jobs

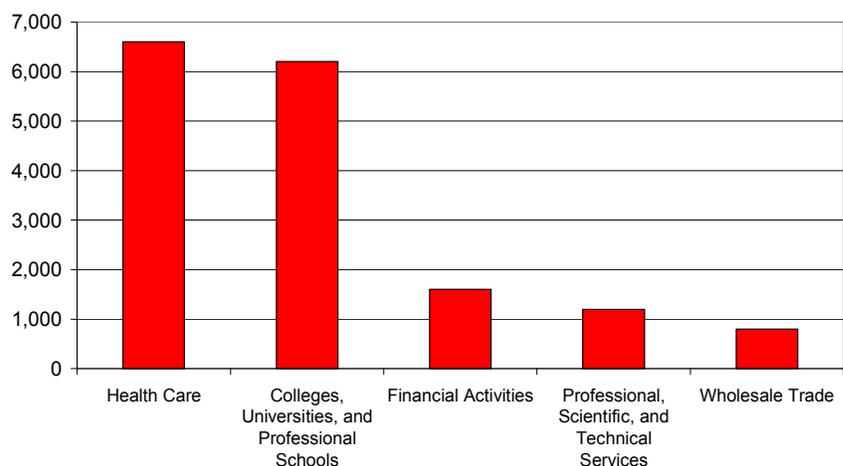
The largest job growth among high-wage sectors was created by higher education (universities and colleges) and health care. Nearly 13,000 net new jobs were created in these sectors – over 6,000 jobs at colleges and universities, and over 7,000 jobs in ambulatory health care. (There was a slight decline in overall hospital jobs.)

Although the total number of jobs created in health care was large, the growth rate was much lower than the nation as a whole (6.4% in the Pittsburgh Region vs. 15.2% nationally). This is likely due again to the stagnant population growth in Pittsburgh, since rapidly growing areas of the country are also expanding their health care jobs.

However, jobs in higher education here grew faster than the nation as a whole – nearly 20% growth in the Pittsburgh Region vs. 16% nationally – and faster than in regions like Boston, Portland, San Diego, and Seattle. Although some of the total job creation at universities was student jobs, the majority of new jobs were in regular employment (i.e., jobs covered by unemployment insurance).

Had it not been for the strong job growth in higher education and health care, there would have been a net reduction in employment in the high-wage sectors of the economy and in the Pittsburgh Region economy as a whole. Jobs in higher education and health care are not just for Ph.D.s and M.D.s, but for nurses, lab technicians, etc., so growth in these sectors provides opportunities to a wide segment of the region's workforce.

Net New Jobs in Pittsburgh Region in High Wage Sectors, 1999-2005



Other High-Wage Sectors Creating Jobs, Too

Three other high-wage sectors created jobs during this period – Finance, Professional and Technical Activities, and Wholesale Trade. As many as 3,500 net new jobs were created in these sectors. Areas that grew significantly within these sectors were accounting services, health insurance, and legal firms.

(Note: Because some jobs were reclassified from Manufacturing and other sectors to Professional and Technical Activities, some of the reported job growth in that sector may be an artifact of reclassification, rather than true job growth. This is particularly true with R&D, which is a subsector of Professional and Technical Activities. On the other hand, some Finance jobs may have been reclassified as “Management of Companies and Enterprises,” meaning that actual job growth might have been higher there than reported. The Management of Companies and Enterprises sector showed extraordinarily high job growth during this period – an increase of nearly 6,000 jobs, or 36% – but much of this was due to reclassification of headquarters operations from other sectors, such as manufacturing and retail.)

Significant Job Creation in the Entertainment and Tourism Industry

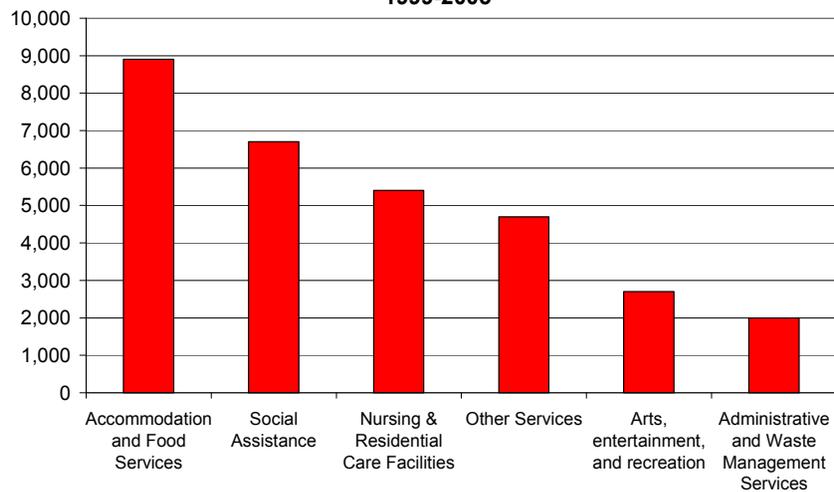
There has also been significant job growth in lower-wage sectors of the Pittsburgh Region’s economy.

Between 1999 and 2005, over 11,000 net new jobs were created in the Leisure and Hospitality Sector – nearly 3,000 jobs in Arts, Entertainment, and Recreation, and nearly 9,000 jobs in the Accommodation and Food Service industry.

The majority of the new jobs in Arts, Entertainment, and Recreation were created by the professional sports teams, by amusement parks, and by performing arts companies. Over 10,000 net new jobs were created in the food service industry (both full-service restaurants and fast-food restaurants), but these were offset slightly by job losses in hotels and motels.

Although growth in these sectors is influenced significantly by population growth, they also depend heavily on tourism. In light of the stagnant population growth in the Pittsburgh Region, it seems likely that much of the job growth which occurred was due to tourism. The increased number of visitors from outside the Pittsburgh Region to Pittsburgh’s Cultural

Net New Jobs in Lower-Wage Sectors in Pittsburgh Region, 1999-2005



District, to PNC Park, and other new attractions during this period are likely explanations for the fact that job growth in these sectors was higher than what occurred in other population-dependent sectors.

Job Creation in Long-Term Care and Human Services Programs

The final sectors where significant job growth occurred since 1999 were long-term care (nursing homes and residential care facilities) and social services (including a wide range of programs, from child day care to vocational rehabilitation). A total of 12,000 net new jobs were created in these sectors, a higher rate of growth than the nation as a whole and most regions. This likely reflects the high proportion of senior citizens in the Pittsburgh Region and also the extensive network of human services programs available in Pennsylvania. These sectors tend to provide relatively low-wage jobs, but they provide entry-level opportunities for many workers.

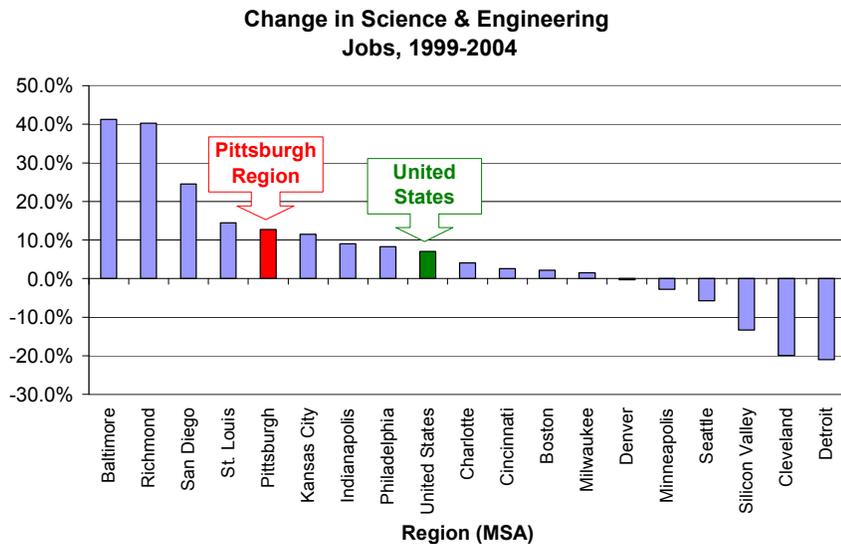
IV. What Kinds of Jobs Are Being Created in the Pittsburgh Region?

Although a particular sector may have higher wages on average than others, it doesn’t necessarily mean that the new jobs are high-paying jobs. What kinds of jobs are actually being created in the region? And what kinds of jobs are being lost?

Science, Engineering, and Healthcare Occupations Growing Faster in Pittsburgh Than Other Regions

Between 1999 and 2004 (the most recent year available for occupational data), the number of jobs in science and engineering occupations (computer, mathematical, architectural, engineering, life sciences, physical sciences, and social sciences) increased by almost 13% in the Pittsburgh Region,

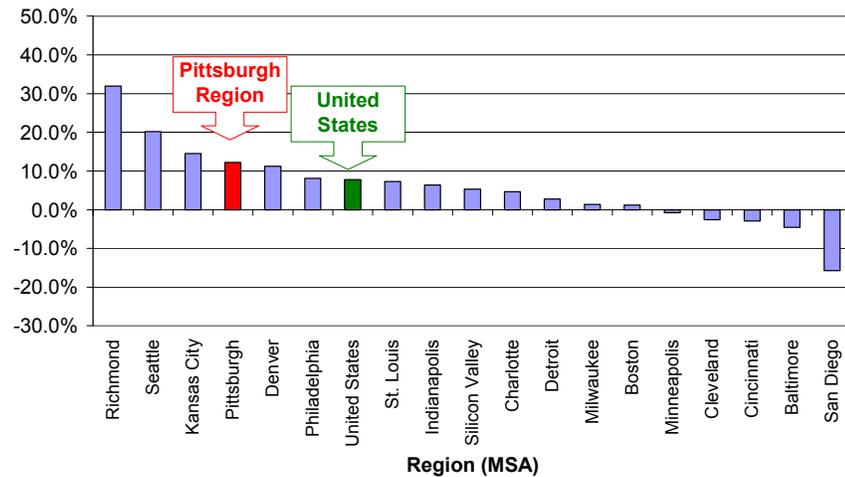
compared to only 7% in the U.S. as a whole. (These are jobs like computer programmers, computer software engineers, mechanical engineers, and medical scientists.) Job growth in these occupations in the Pittsburgh Region outpaced the growth in Boston, Charlotte, Minneapolis, Seattle, and Silicon Valley, among others. Over 6,000 new, high-quality jobs were created, paying on average 50% more than the overall average wage for the region.



Thanks to the region's health systems and growing life sciences industry, the Pittsburgh Region also outperformed most other large regions in creating practitioner and technical jobs in healthcare. (This includes medical lab technicians as well as doctors, RNs, and LPNs, but not health care support occupations such as nurse aides, medical transcriptionists, etc.). These types of jobs grew by over 12% in Pittsburgh between 1999 and 2004, compared to only 7% nationally. Jobs in these occupations grew faster in Pittsburgh than in Boston, Charlotte, Minneapolis, San Diego, and Silicon Valley. That's another 7,300 high-quality jobs, also paying a 50% premium over the average wage in the region.

Combined, that's over 13,000 net new jobs in science, engineering, and health professions in the Pittsburgh Region between 1999 and 2004, more than almost any other region in the country. Most of these jobs were likely created at the universities and health care systems – as noted earlier, these were the sectors that created the most new, high-quality jobs during the same period of time.

Change in Healthcare Practitioners & Technical Jobs, 1999-2004



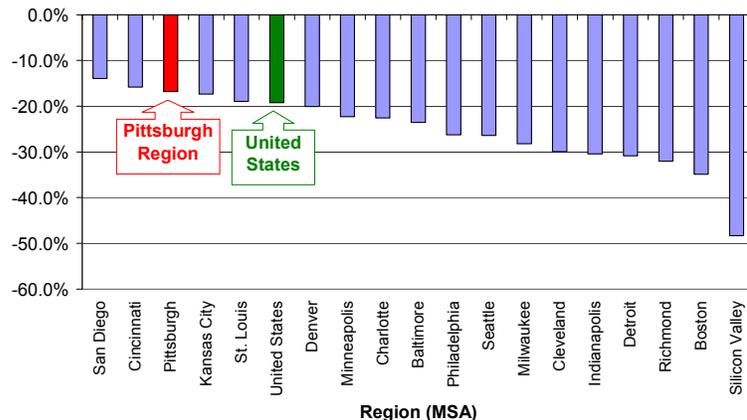
Surprisingly, despite this growth, Pittsburgh still has a smaller proportion of its workforce in these occupations than most other comparable regions.

The Pittsburgh Region Has Retained More Production Jobs Than Most Regions

What about the people who don't have the education to be a researcher, computer programmer, engineer, or medical technician?

The bad news is that jobs for production workers in the Pittsburgh Region decreased by 17% between 1999 and 2004 – a loss of about 14,000 jobs.

Change in Production Jobs, 1999-2004

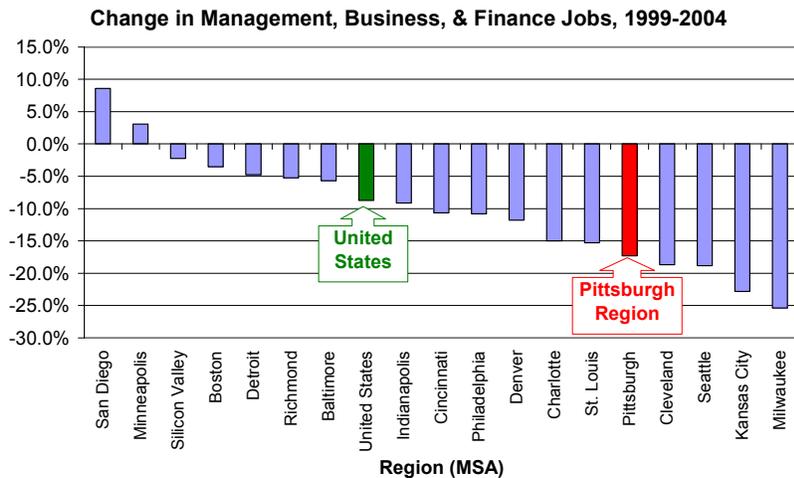


But the good news is that the loss of production jobs in Pittsburgh has been lower than almost anywhere in the country. Nationally, production jobs dropped by even more – over 19% during the same period. Regions like Philadelphia, Seattle, Milwaukee, Cleveland, Indianapolis, Detroit, Richmond, Boston, and Silicon Valley lost 25% or more of their production jobs during the same period of time.

In other words, Pittsburgh has retained more production jobs than most regions, while creating more science, engineering, and health care jobs than most.

Pittsburgh Has Lost Management and Finance Jobs

Although it's a good thing that many businesses are becoming leaner in order to become more competitive, Pittsburgh appears to have suffered disproportionately from the downsizing of high-paying management jobs. Between 1999 and 2004, management, business, and financial jobs dropped by over 17%, a loss of over 18,000 jobs.



Partly as a result of this cutback, the Pittsburgh Region now ranks behind all comparable regions in the proportion of its workforce in management, business, and finance occupations.

This is not only a concern for the present, but for the future. The Pittsburgh Region needs management talent to run the startup companies that will commercialize the technologies coming out of the universities and create jobs for the future. The region doesn't yet have enough "depth of bench" in terms of serial entrepreneurs and people with experience in marketing, finance, etc. for entrepreneurial firms. Addressing this should be a priority for regional economic development agencies.

V. Future Prospects

The Major Problems Are (Hopefully) Behind Us

The nation only recently recovered from a serious recession. Over the past six years, the United States lost jobs for two straight years (2002 and 2003) after a year of virtually no growth (2001). Most regions in the country suffered job losses or slow growth during this period, including Pittsburgh.

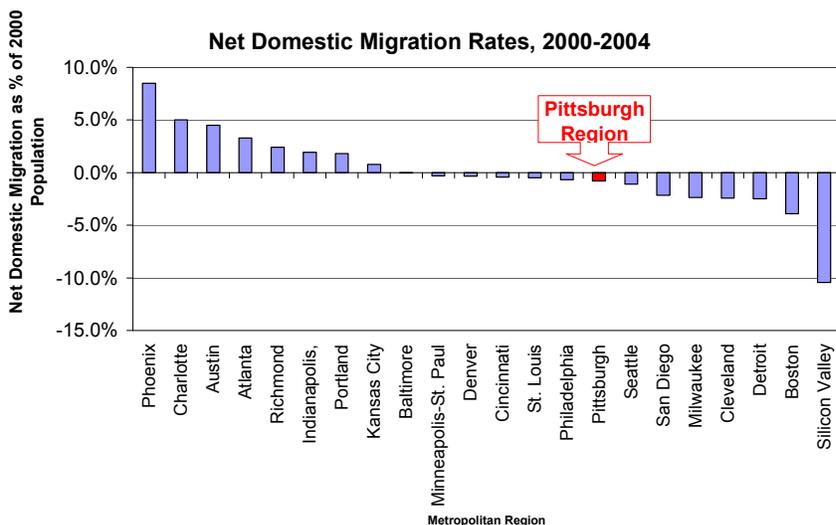
The Pittsburgh Region was not only hit by the overall national recession, but by a dramatic restructuring of the airline industry in general, and of USAirways in particular. Hopefully, Pittsburgh has suffered through the worst of the USAirways job losses, and new airlines coming into Pittsburgh should help stabilize jobs in the transportation sector, and possibly create some growth.

Slow Population Growth Will Continue to Make Overall Job Growth Look Slow

However, Pittsburgh will likely continue to have stagnant population growth for some time, so it will continue to lag other areas in job creation in the population-dependent sectors of the economy. Since these are large sectors, the Pittsburgh Region will likely continue to lag in total job growth as well.

Slow population growth does not mean that the region is an undesirable place for young people – contrary to popular myth, the Pittsburgh Region's population remains stagnant because of a low birth rate and low international immigration, not because of continuing outmigration of young people. The low birth rate today is due to the outmigration of young people 20 years ago following the collapse of the steel industry – when they left the region, they took their future children and grandchildren with them. Although the Pittsburgh Region still has net domestic outmigration, so do most other regions, and indeed, many regions, including Boston, Seattle, and Silicon Valley, have a higher rate of outmigration than does Pittsburgh.

Many of the population-dependent sectors of the economy create relatively low-wage jobs. For example, the average wage in the retail sector is less than 60% of the overall regional average in the Pittsburgh Region. So even if the region's retail sector had grown at the U.S. rate and created 7,000 more jobs than exist today, they would not have been the kinds of jobs needed to attract and retain



the region's young people.

As a result, in the years ahead, it will be important to continue looking beneath the overall employment figures to determine how rapidly job growth is occurring in the so-called "traded sectors" – sectors that are not dependent on the local population for business, but which bring new revenues into the region, such as manufacturing, higher education, and research & development. These are the sectors that attract and retain talented young people and build regional wealth.

Significant Regional Strength for Continued Employment Growth

What do the past six years tell us about the ability of the Pittsburgh Region to create and retain the kinds of high-wage jobs that can attract and retain young people and bring outside income into the region?

- The Pittsburgh Region's universities and health care systems have been growing consistently and can continue to grow with appropriate funding support from the state and federal governments. These institutions create many high-quality jobs directly, and they also create new ideas that lead to new businesses and new jobs.
- The universities and medical centers are not the only location for the kinds of scientific occupations that develop new ideas and new products. The continued presence of long-standing corporate R&D Centers for companies like Alcoa, Bayer, PPG, and U.S. Steel, and the recent successes in attracting research centers for Google, Intel, RAND, Seagate, and others, prove that southwestern Pennsylvania is an ideal spot for growing R&D jobs of all kinds. An aggressive marketing effort targeted at R&D jobs could accelerate this trend.
- There is still a significant base of manufacturing businesses in the Pittsburgh Region, and the higher than average retention of production jobs through the recession suggests that the region remains attractive for high-value-added manufacturing work. By addressing business climate issues affecting established businesses, and by expanding support for entrepreneurs starting new businesses, the region can build on this base and create additional high-wage production jobs in the future.

Growth in these kinds of jobs will, over time, lead to population growth in the region, which in turn will lead to higher rates of job creation in the population-dependent sectors of the economy, and move Pittsburgh closer to the national job growth rate.

The Pittsburgh Region's economy is clearly stronger than it would seem from looking at aggregate employment changes. It provides a good foundation for future growth, if there is appropriate support from the public and private sectors. More details on the strategies and actions that could increase job growth in the region are available at www.PittsburghFuture.com.

VI. Sources and Acknowledgements

All of the employment data cited in this analysis are from the U.S. Bureau of Labor Statistics (www.bls.gov). The information on employment trends by industry are derived from the Current Employment Statistics program, supplemented by more detailed data from the Quarterly Census of Employment and Wages. The information on employment trends by occupation are derived from the Occupational Employment Statistics program. All data for the "Pittsburgh Region" reflect the seven-county Metropolitan Statistical Area (MSA) – Allegheny, Armstrong, Beaver, Butler, Fayette, Washington, and Westmoreland Counties – for maximum comparability with other MSAs.

The staff of the Center for Workforce Information and Analysis at the Pennsylvania Department of Labor & Industry provided invaluable information and assistance about the impact of employment coding changes that have occurred over the past 5 years as a result of the transition from SIC (Standard Industrial Classification) codes to NAICS (North American Industrial Classification System) codes. These coding changes, designed to improve the accuracy with which job counts by industry are reported, mean that the same jobs may be reported in two different sectors in different years. This can create increases or decreases in employment counts by sector that do not reflect actual job creation or losses. (For example, a manufacturing firm in southwestern Pennsylvania with separate facilities for its headquarters, R&D center, and production operations would have had all of those jobs classified as "Manufacturing" in the 1990s under the SIC system, but under the NAICS system, the jobs would properly be broken into three separate sectors – "Management of Companies and Enterprises," "Professional, Scientific, and Technical Services," and "Manufacturing." Looking at data prior to and after the reclassification, it would appear that manufacturing jobs had decreased and jobs in the other two sectors had decreased, even if there had been no actual change in total employment.) Many reclassifications were still occurring in 2005.

The data on population migration are from the U.S. Census Bureau (www.census.gov).