UPSTATE NEW YORK REGIONAL REVIEW

VOLUME NO. 1, ISSUE NO. 1 • 2006

Baby-Boom Retirements and Emerging Labor Market Pressures

Richard Deitz

As the baby-boom generation begins to retire, employers in upstate New York will be confronted with the dual pressures of replacing these workers and filling new jobs created in growing segments of the economy. An analysis of projected hiring rates in the region suggests that although there will be demand for workers in all occupations, employers may face a particular challenge filling positions in growing services occupations with relatively high retirement rates, such as health care, community and social services, and education.

Roughly 22 million workers are expected to retire from the nation's workforce between 2000 and 2010; this figure could rise to more than 35 million between 2010 and 2020, as the baby-boom generation begins to retire.[1] As one might expect, a significant number of new workers could be required to replace retirees.

The need for new workers is likely to be more acute in upstate New York. The region has a population that is older and has aged more rapidly than the national average, largely because of the out-migration of young adults—a vital source of replacements for retired workers.[2] Complicating the employment picture is the ongoing restructuring of the regional economy, which will create jobs in some occupations but reduce them in others. In expanding service sectors such as education and health care, employment is increasing—bolstering the demand for new workers—while in the manufacturing sector, employment continues to shrink—reducing the need even to replace retirees. Labor market pressures may emerge in some segments of the economy as employers try to fill positions in key occupations of particularly strong growth, especially those populated by large shares of older workers facing retirement.

In this issue of *Upstate New York Regional Review*, we examine the demand for new workers in the region created by the combination of retirements and economic restructuring. We begin by projecting retirement rates for the 2002-12 period and identifying differences in the need for replacement workers among broadly defined occupations. We follow with an analysis of changes in total levels of employment resulting from growth in some sectors and decline in others. By combining retirement rates with projected total employment needs, we are able to project the potential future hiring rate for broad occupational categories.

Our study reveals that the highest hiring rates are likely to be found in growing service occupations that have high retirement rates, such as health care, community and social services, education, and personal care. We find that production and engineering occupations will have a positive—yet relatively low—demand for new workers despite a net decline in the total number of jobs in these occupations in the region. We conclude by discussing the challenges presented to the nation and upstate New York by emerging labor market pressures and suggesting ways in which employers and workers can respond to these challenges to foster a smoother labor market adjustment and a healthier economy.

The Need for Replacements Created by Retirements

Although upstate New York has seen little net growth in the number of jobs in recent years, the region will likely experience a significant demand for workers to replace retirees. Given current trends, we estimate that between 2000 and 2010, roughly half a million upstate workers are likely to retire, a figure that will rise to nearly 800,000 between 2010 and 2020.

We project retirement rates—the percentage of the workforce likely to retire over a period of time—by occupation using the Office of Management and Budget's Standard Occupation Classification System (see box for methodology).[3] We use the 2002-12 period to coincide with the latest employment projections from the U.S. and New York State Departments of Labor—critical information that we rely on later to project the total number of workers likely to be needed by employers.

Table 1

Projected Retirement Rate, 2002-12

Percent

Metropolitan Statistical Area	Retirement Rate
Binghamton	16.4
Rochester	16.4
Utica	16.2
Buffalo	15.9
Albany	15.6
Syracuse	15.0
Upstate New York	**15.7**
United States	**15.1**

Sources: U.S. Bureau of the Census, Census 2000, Five Percent Public Use Microdata Sample; Toosi (2004); author's calculations.

Notes: The projected retirement rate is the cumulative number of workers likely to leave the workforce over the 2002-12 period divided by the number of workers in the 2002 workforce. See box for methodology. Upstate New York refers to a total of fifty counties in New York State. It does not include New York City; Dutchess, Orange, Putnam, Rockland, and Westchester counties; and Nassau and Suffolk counties on Long Island.

According to our projections, roughly 15 percent of the nation's workforce will retire between 2002 and 2012, and a somewhat higher 15.7 percent will retire in upstate New York (Table 1). The area's higher rate reflects an older and more rapidly aging population, mostly attributable to the out-migration of younger workers.[4] Each metropolitan area is expected to have a higher retirement rate than that of the nation, although there is variation. While the rate for Syracuse is close to the nation's, rates in Binghamton, Rochester, and Utica are more than one percentage point higher than the national rate.

Retirement rates differ not only among regions, but also among occupations, because certain jobs tend to be held more by older workers than others. Some may simply require older workers with more experience, while others may be more suitable for younger, entry-level workers. Managers, for example, tend to be older than retail clerks. In addition, the timing of hiring cycles can play a key role in determining the age profile of occupations. For instance, if many workers are hired to a certain occupation within a short period of time, relatively few employees may be needed for a number of years. This pattern may result from a hiring freeze, a relatively common effect in the public sector. As time passes, the percentage of older workers in that occupation will increase. Furthermore, some occupations may be more attractive to older workers, while others may be more appealing to younger staff.

Projections of Retirement Rates

We project the number of workers likely to retire between 2002 and 2012.[a] The region's population is held constant and each person is aged forward from 2002 to 2012. We then use projections of labor force participation rates by age group to determine the number of workers over fifty-five who are likely to retire over the period. To do this, we first separate workers into two age groups: those who will be between fifty-five and sixty-five by 2012 and those who will be over sixty-five by 2012. For each age group, we then calculate the ratio of the labor force participation rate in 2002 relative to that in 2012, and apply this adjustment factor to the age cohort to project the number of workers likely to leave the labor force.[b]

Labor force participation rates are unavailable for occupations generally, so we apply these factors equally to all occupations. This approach ignores the fact that workers tend to retire later in some occupations, such as management, and earlier in others, such as production. It also assumes that workers stay in their current occupations, and that no workers move into or out of the region. Although these simplifying assumptions make such projections imprecise, this method gives a rough, but reasonable, indication of future retirements.

[a]Projections are based on U.S. Bureau of the Census, Census 2000, Five Percent Public Use Microdata Sample.

[b]See Toosi (2004).

Table 2

Projected Retirement Rate for Selected Occupations, 2002-12

Percent

Occupation	Upstate New York	United States
Management	19.8	19.3
Community and social services	19.2	19.0
Education, training, and library	18.9	18.1
Legal	18.3	16.6
Installation, maintenance, and repair	18.0	16.9
Health care support	13.5	14.0
Personal care and service (including tourism)	12.7	14.0
Computer and mathematical	11.0	10.0
Food preparation and serving related	7.8	8.4
Overall	15.7	15.1

Sources: U.S. Bureau of the Census, Census 2000, Five Percent Public Use Microdata Sample; Toosi (2004); author's calculations.

Notes: The projected retirement rate is the cumulative number of workers likely to leave the workforce over the 2002-12 period divided by the number of workers in the 2002 workforce. See box for methodology. Upstate New York refers to a total of fifty counties in New York State. It does not include New York City; Dutchess, Orange, Putnam, Rockland, and Westchester counties; and Nassau and Suffolk counties on Long Island.

A look at retirement rates in the United States and in upstate New York indicates that the occupation with the highest projected rate is management (Table 2). This result is not unexpected given the occupation's need for older, more experienced workers. Community and social services—an occupation with many public-sector workers, such as social workers and counselors—also has a high retirement rate, likely tied in part to public-sector hiring cycles and freezes. In addition, public-sector occupations tend to have more job security and pensions tied to tenure. Both of these conditions may create incentives for workers to stay longer, reducing the normal turnover that tends to bring in younger workers. Retirement rates are also relatively high for education, training, and library; legal; and maintenance and repair occupations. In contrast, rates are relatively low for food preparation and serving, personal care and service, and health care support occupations—all of which typically employ a large share of younger, entry-level workers. Also having a low retirement rate are computer and mathematical occupations, which are heavily populated by young workers.

The need for new workers to replace retirees will be more significant for occupations with higher retirement rates. However, as economic activity shifts from manufacturing to services, rapid growth in some sectors, such as health care, will require still more workers, while the need to replace retirees in the manufacturing sector will be dampened.

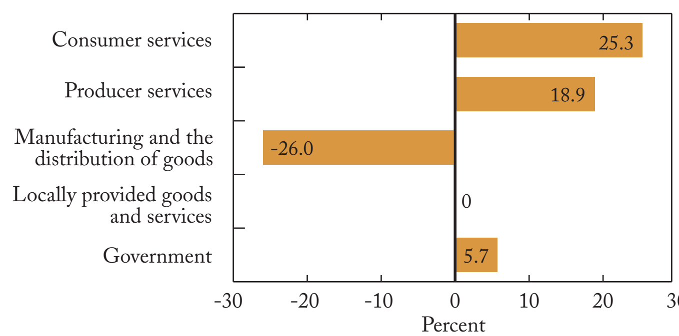
The Need for Workers owing to Restructuring Patterns

Even though the total number of jobs in upstate New York is roughly the same today as it was in 1990, a significant restructuring of the economy has shifted employment from manufacturing to services (see chart). Employment in manufacturing and distribution has fallen dramatically over the past fifteen years, while jobs in services provided to consumers, such as education and health care, have grown 25 percent. Employment in services provided to businesses, such as finance and data processing, rose by 19 percent, but positions in locally provided goods and services, such as retail, were flat. While the lack of expansion in locally provided goods and services reflects a broad-based absence of population growth upstate, several other key factors are driving the decline in manufacturing employment and the gains in services employment.

The decline in manufacturing can be traced in large part to improvements in labor productivity and the expansion of international trade. Productivity growth has allowed manufacturers to reduce the amount of labor needed in the production process. At the same time, the U.S. economy has been more open to international trade, particularly with countries that have access to relatively low labor costs. Increased imports of manufactured goods have forced less competitive domestic manufacturers to cut back production or cease operations. The most labor-intensive processes also tend to be the ones that are outsourced.[5]

These forces also explain why employment in many business services has risen relative to manufacturing. While the United States may be losing jobs to countries with low-cost labor—

Employment Growth by Industry for Upstate New York, 1990-2005



Sources: U.S. Department of Labor; author's calculations.

Notes: Consumer services includes education and health services, and leisure and hospitality; producer services includes information, financial activities, and professional and business services; manufacturing and the distribution of goods includes manufacturing, wholesale trade, and transportation and utilities; locally provided goods and services includes construction and mining, retail trade, and other services. Upstate New York refers to a total of fifty counties in New York State. It does not include New York City; Dutchess, Orange, Putnam, Rockland, and Westchester counties; and Nassau and Suffolk counties on Long Island.

especially in relatively low-skilled manufacturing activity—the nation has grown jobs in higher skilled business services sectors where it has a competitive edge, such as product research, design, and development; marketing and distribution; finance; and data processing.[6]

The increase in consumer services employment can be traced largely to two sources. First, as demographic trends drive up the average age of the population, there is likely to be an increase in the use of age-related services such as health care and social services. At the same time, as a greater percentage of the population retires, a larger demand will emerge for travel, tourism, and other services related to recreation and leisure. Second, economies such as the United States tend to consume more services relative to goods as they grow wealthier. In addition, consumer services provided locally and through personal contact, such as health care and travel and tourism, are less subject to international competition and displacement through technology than are other segments of the economy, increasing their relative employment shares.

These shifts in employment and economic activity among industries create jobs in some occupations, but they reduce them in others. The U.S. and New York State Departments of Labor project growth rates of workers by occupation based on these trends, the most recent of which cover the 2002-12 period.[7] Table 3, which draws on these results, shows that in conjunction with the rise in consumer services, the fastest growing employment levels in upstate New York—and in the nation—are expected in health care, community and social services, and personal care and service occupations. These are all primarily locally provided services with a significant amount of demand created by an aging population. Relatively rapid employment growth is also expected in computer and mathematical occupations as well as in education, training, and library occupations. By comparison, regional declines are seen for office and administrative support occupations, reflecting increases in productivity caused by technology. Production and engineering occupations, also projected to decline in the region, are among the slowest growing for the nation as a whole. Because people in these occupations (in particular, those engaged in industrial and chemical engineering) work in the manufacturing industry, these anticipated declines are associated with the fall in manufacturing employment.

Table 3
Projected Employment Growth Rate for Selected Occupations, 2002-12
Percent

Occupation	Upstate New York	United States
Health care support	21.9	34.5
Community and social services	20.6	26.2
Personal care and service (including tourism)	18.0	20.6
Computer and mathematical	17.5	34.8
Education, training, and library	15.1	24.7
Health care practitioner and technical	15.1	26.0
Architecture	3.5	14.2
Engineering	-0.5	8.1
Office and administrative support	-0.9	6.8
Production	-7.1	3.1
Overall	7.8	14.8

Source: U.S. and New York State Departments of Labor.

Note: Upstate New York refers to a total of fifty counties in New York State. It does not include New York City; Dutchess, Orange, Putnam, Rockland, and Westchester counties; and Nassau and Suffolk counties on Long Island.

In health care occupations, retirements coupled with strong growth are likely to create a significant need for replacement workers.

These shifts in the need for workers, together with retirements, create a demand that varies significantly among occupations. For example, even though the total number of production jobs is projected to decline, retirees will likely create a relatively small net demand for replacement workers. By comparison, in health care occupations, retirements coupled with strong growth are likely to create a significant need for replacement workers. To project the demand for workers across the spectrum of occupations, we now examine how these two forces act in combination.

The Projected Demand for Workers

How might projected retirements and economic restructuring affect the region's labor market? We address this question by projecting the *hiring rate*: the sum of the projected retirement rate and the growth rate of the total number of workers needed for each occupation.[8] For example, for an occupation with 100 workers, if the total number of workers needed is projected to grow by 10 percent and the number of workers projected to retire is 5 percent, the hiring rate would be 15 percent.

The higher the hiring rate, the greater is the need for workers. Hiring rates in upstate New York's occupations are consistently below national rates (Table 4), reflecting the region's significantly slower economic growth. As our earlier results suggest, the hiring rate is highest for occupations in locally provided

Table 4
Projected Hiring Rate, 2002-12
Percent

	Upstate New York					United States				
Occupation	Growth Rate	+	Retirement Rate	=	**Hiring Rate**	Growth Rate	+	Retirement Rate	=	**Hiring Rate**
Community and social services	20.6		19.2		**39.8**	26.2		19.0		**45.2**
Health care support	21.9		13.5		**35.4**	34.5		14.0		**48.5**
Education, training, and library	15.1		18.9		**34.0**	24.7		18.1		**42.8**
Health care practitioner and technical	15.1		16.9		**32.0**	26.0		16.3		**42.3**
Personal care and service (including tourism)	18.0		12.7		**30.7**	20.6		14.0		**34.6**
Building and grounds cleaning and maintenance	11.8		18.0		**29.8**	16.4		16.9		**33.3**
Management	9.0		19.8		**28.8**	12.1		19.3		**31.4**
Computer and mathematical	17.5		11.0		**28.5**	34.8		10.0		**44.8**
Legal	10.2		18.3		**28.5**	16.2		16.6		**32.8**
Construction and extraction	13.8		13.9		**27.7**	15.0		12.6		**27.6**
Business and financial operations	9.3		17.7		**27.0**	21.3		16.5		**37.8**
Installation, maintenance, and repair	9.5		16.2		**25.7**	13.6		14.7		**28.3**
Protective service	10.8		14.5		**25.3**	24.7		14.8		**39.5**
Arts, design, entertainment, sports, and media	9.6		14.6		**24.2**	16.5		14.3		**30.8**
Sales and related (including retail)	8.0		13.9		**21.9**	12.9		14.3		**27.2**
Transportation and material moving	5.1		16.5		**21.6**	13.1		14.9		**28.0**
Life, physical, and social science	7.2		13.7		**20.9**	17.2		14.6		**31.8**
Architecture	3.5		16.5		**20.0**	14.2		16.8		**31.0**
Food preparation and serving related	10.0		7.8		**17.8**	15.8		8.4		**24.2**
Engineering	-0.5		17.3		**16.8**	8.1		16.1		**24.2**
Office and administrative support	-0.9		16.6		**15.7**	6.8		15.3		**22.1**
Production	-7.1		16.5		**9.4**	3.1		15.4		**18.5**

Sources: U.S. Department of Labor; U.S. Bureau of the Census, Census 2000, Five Percent Public Use Microdata Sample; Toosi (2004); author's calculations.

Note: Upstate New York refers to a total of fifty counties in New York State. It does not include New York City; Dutchess, Orange, Putnam, Rockland, and Westchester counties; and Nassau and Suffolk counties on Long Island.

consumer services, for both the United States and upstate New York. The highest hiring rate upstate—40 percent between 2002 and 2012—is projected for community and social services occupations, which include social workers, counselors, and community organization workers. Approximately 20 percent of that workforce is projected to retire and need replacement, while another 20 percent will be needed to meet the growing demand for these workers as activity expands in the region. The two health care occupations—health care support, which includes nursing and home health aides, and health care practitioners, which includes doctors, nurses, and dentists—have rates of close to 35 percent. The education, training, and library occupations also have a relatively high 34 percent rate.

The hiring rate for management occupations, which have the largest retirement rate, is projected to be slightly less than 30 percent, ranking relatively high. Personal care and service occupations, along with building and grounds cleaning and maintenance occupations, are also relatively high: above and just below 30 percent, respectively.

In contrast, we project relatively low hiring rates for engineering, office and administrative support, and production—occupations in which the total number of workers is expected to decline. However, retirement rates exceed 15 percent for each of these occupations, and because the retirements outweigh the decline in employment levels, the demand for workers will still be positive. Hiring rates are expected to be relatively low in occupations with slow growth, including food preparation and serving related; architecture; life, physical, and social science; transportation and material moving; and sales (including retail).

These hiring rates suggest that every occupation will have some need for new workers. In particular, those with relatively strong hiring rates may experience difficulties finding workers. The exact nature of these difficulties, however, cannot be predicted easily because the number of new workers entering an occupation is unknown. For example, while education, training, and library as well as health care occupations have relatively high hiring rates, an influx of new workers into these fields may fill these needs. Alternatively, even though demand is low in production occupations, if new workers are unwilling to enter this field, employers may experience significant hiring difficulties.

It is worth noting that projections of hiring rates provide only a broad picture of the relative differences in the demand for workers expected among occupations and the areas where labor market pressures are likely to emerge. The rates are not, however, estimates of where the labor market is expected to grow because the economy will continue to undergo change as market forces respond to these pressures.

Labor Market Adjustments

In the coming years, hiring needs in the nation and in upstate New York may be much stronger in some occupations than in others. As one might expect, market forces should mitigate ensuing labor market pressures and balance supply and demand. As workers become scarce in an occupation, wages will tend to rise as employers compete for staff. Rising wages will attract workers to these occupations as well as create incentives to work more hours and delay retirement. These effects will likely increase the supply of workers in occupations with strong hiring needs. There are limits to this effect, though, because the higher cost of workers will compel employers to substitute capital and technology for labor and to outsource to other countries, reducing their reliance on a more expensive domestic workforce.

Our hiring rate projections, while tentative, suggest that employers will have unmet needs as these market adjustments take place—needs that may persist if the adjustments take a particularly long time. However, both employers and workers can take measures to smooth the transition.

For example, employers can communicate their needs—including which jobs they wish to fill and what skills are most important—to workers and to organizations that train and prepare them, such as educational and other institutions. This effort can help workers acquire necessary skills and choose career paths that will position them to fill the jobs in demand. Employers will also need to be particularly strategic in their recruitment and retention plans. They can offer favorable working conditions, such as flexible scheduling and partial retirement options, to entice workers to fill desired spots. Responding to the need created by retirements is likely to become critically important as baby-boomers exit the workforce in greater numbers—a trend that will accelerate sharply as the first baby-boomers turn sixty-five in 2012. The loss of workers with critical experience and valuable institutional knowledge may become pervasive. Employers can respond by creating incentives for workers to delay full retirement, training less experienced workers to replace retirees, and developing an array of approaches for succession planning.

Workers, for their part, will have to be flexible enough to respond to the changing labor market by getting training appropriate to employer needs, keeping abreast of evolving employer demands, and being sufficiently versatile to move between jobs as needs change. Significantly, retired workers rejoining the labor market may become an increasingly higher share of workers upon which employers can draw.

More specifically, in upstate New York, if employers do not effectively respond to labor market pressures, the consequences could be considerable. Employers in the region will be competing with other parts of the country for workers, with no certain outcome. In addition, workers in high demand may choose other locations over upstate New York. However, if businesses take the appropriate measures to make employment upstate more attractive to prospective employees, workers may find local employment opportunities relatively favorable.

Employers seeking workers in services used by an aging population and provided through personal contact . . . are likely to face the most significant labor market challenges.

Conclusion

Upstate New York, like the nation, faces a demand for workers to replace retirees and fill new jobs created by ongoing economic restructuring. However, projected hiring rates for occupations in upstate New York are consistently below the nation's rates, reflecting the region's significantly slower economic growth and its slightly higher retirement rates. Despite this gap with the nation, hiring rate calculations for upstate New York still suggest that every occupation will have some need for new workers and that those occupations that do have relatively strong hiring rates may experience difficulties finding workers. In particular, employers seeking workers in services used by an aging population and provided through personal contact—including health care, community and social services, and personal care and service—are likely to face the most significant labor market challenges.

Moreover, the process of finding qualified workers could become increasingly difficult as the need to replace retirees accelerates over the next several years, when baby-boomers begin to exit the workforce. In fact, upstate New York may begin to face labor market pressures in an environment of little overall economic growth as it competes with other parts of the country for key workers in high-demand occupations.

Accordingly, both employers and workers will have to plan carefully to help the market respond to these emerging challenges. Employers can do their part by communicating their needs—including which jobs they want to fill and what skills are most important—to workers and to educational and other institutions that train and prepare staff. Workers can get the appropriate training, keep abreast of changing workplace demands, and be flexible enough to move between jobs as employers' needs evolve. These combined efforts can help promote a healthy labor market adjustment in upstate New York.

The author thanks Feng Qian, who helped design the methodology for projecting retirement rates.

Notes

1. Figures are author's calculations, based on data from the U.S. Bureau of the Census, Census 2000, Five Percent Public Use Microdata Sample.

2. See Deitz (2005).

3. The classification system includes twenty-three broad occupational groups. In our analysis, we exclude military-specific occupations and farming, fishing, and forestry occupations as well as separate architecture and engineering occupations into two groups, yielding a total of twenty-two categories.

Our method assumes that workers do not move between occupations, a necessary but simplifying rationale for making projections.

4. See Deitz (2005).

5. See Deitz and Orr (2006) and Deitz (2004).

6. See Groshen, Hobijn, and McConnell (2005).

7. Projections are based on industry growth trends assuming the economy expands at its long-run growth potential. They are not predictions of expected labor market outcomes, but they represent broad patterns of expected employment levels if demand for workers is met. In particular, these projections do not consider changes in worker supply.

8. The U.S. Department of Labor estimates what it terms "replacement" needs, but this category is not analogous to our projections of the hiring rate because the Labor Department measures gross flows of workers and counts replacement needs even as workers move between occupations. For example, two workers switching jobs counts as two replacement needs by that measure.

References

Deitz, Richard. 2004. "Restructuring in the Manufacturing Workforce: New York State and the Nation." Federal Reserve Bank of New York *Regional Economy of Upstate New York*, winter.

———. 2005. "Population Out-Migration from Upstate New York." Federal Reserve Bank of New York *Regional Economy of Upstate New York*, winter.

Deitz, Richard, and James Orr. 2006. "A Leaner, More Skilled U.S. Manufacturing Workforce." Federal Reserve Bank of New York *Current Issues in Economics and Finance* 12, no. 2 (February/March).

Groshen, Erica, Bart Hobijn, and Margaret McConnell. 2005. "U.S. Jobs Gained and Lost Through Trade: A Net Measure." Federal Reserve Bank of New York *Current Issues in Economics and Finance* 11, no. 8 (August).

Toosi, Mitra. 2004. "Labor Force Projections to 2012: The Graying of the U.S. Workforce." Bureau of Labor Statistics *Monthly Labor Review*, February.

About the Author

Richard Deitz is a senior economist at the Buffalo Branch of the Federal Reserve Bank of New York.

Buffalo Branch • Federal Reserve Bank of New York
40 Fountain Plaza, Suite 650 • Buffalo, NY 14202 • Tel: (716) 849-5019 • Fax: (716) 849-5021 • www.newyorkfed.org/buffalo

Kausar Hamdani, Ph.D., Vice President and Branch Manager, kausar.hamdani@ny.frb.org

Richard Deitz, Ph.D., Senior Economist, richard.deitz@ny.frb.org

Katie Krawczyk, Communications and Public Relations Specialist, katie.krawczyk@ny.frb.org