The Geographic Distribution and Characteristics of Older Workers in Pennsylvania: 2004

Local Employment Dynamics

Issued October 2008

LED-OW04-PA

By
Cynthia Taeuber
and
Matthew R. Graham

Sponsored by the
National Institute on Aging
National Institutes of Health
U.S. Department of Health
and Human Services

What's in This Report?

HIGHLIGHTS

THE LOCAL EMPLOYMENT DYNAMICS PROGRAM

SOURCES AND ACCURACY OF THE ESTIMATES

CHARACTERISTICS AND EMPLOYMENT DYNAMICS OF OLDER WORKERS

Table 1— Percentage of Workers by Age in Metropolitan Statistical Areas and Nonmetropolitan Area Workplaces in Pennsylvania: 2004

Figure 1— Pennsylvania Workforce by Age Group: 1997 to 2004

Figure 2— Percentage of Workers 45 to 54 Years Old by County of Workplace in Pennsylvania: 2004

Figure 3— Percentage of Workers 55 to 64 Years Old by County of Workplace in Pennsylvania: 2004

Figure 4— Percentage of Workers 65 and Older by County of Workplace in Pennsylvania: 2004

Figure 5— Percentage Change in Number of Workers 55 and Older by County of Workplace in Pennsylvania: 2001 to 2004

ADDITIONAL RESOURCES

HIGHLIGHTS

The statistics about older workers in Pennsylvania in 2004 show this group's proportion of the state's labor force has increased. Changes in the size and composition of age groups may affect government program and policy choices and the options available to businesses. National projections indicate that the population 65 and older will increase from about 1 in 8 people to 1 in 5 people by 2030, so that older workers will likely compose an increasingly larger proportion of each state's workforce.[1] Whether, and in what industries, the large wave of workers born during the Baby Boom of 1946 to 1964 are currently working may influence their labor force behavior beyond traditional retirement ages. That is important information for firms planning for the eventual loss of experienced workers and the payout of pensions. In 2004, the Baby Boom cohort was aged 40 to 58.

This report uses data from the Local Employment Dynamics (LED) program to show the geographic distribution and the economic dynamics among private sector workers 55 and older (also including some statistics on those aged 45 to 54). It includes comparisons among the counties (and county equivalents) and between metropolitan and nonmetropolitan areas of Pennsylvania.[2]

[1] U.S. Census Bureau, 2004. "U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin," <http://www.census.gov/ipc/www/usinterimproj/natprojtab02a.xls>.

[2] The metropolitan and nonmetropolitan county classifications are based on Census 2000.

For definitions of specific metropolitan statistical areas, see <http://www.census.gov/population/www/estimates/metroarea.html>.

pennsylvania
DEPARTMENT OF LABOR & INDUSTRY

U S C E N S U S B U R E A U

Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

Industries are classified according to the North American Industry Classification System (NAICS). Because the Quarterly Workforce Indicators (QWI) are updated every 3 months, the numbers in this report may differ from the most recent ones on the current LED Web site, <http://lehd.did.census.gov>.

This report defines "older workers" as those 55 and older. Information is displayed for all workers by age groups to facilitate comparisons among workers and provide information about the potential characteristics of future older workers. The characteristics and geographic distribution throughout Pennsylvania of three groups of older workers are shown: those who may be receiving pension income but who are working (65 and older) and two pre-retirement groups of workers (those aged 45 to 54 and aged 55 to 64), who may start collecting pensions and social security over the next two decades.

With the LED information, state planners can monitor changes in the workforce and emerging trends. Detailed statistics about workers by age in counties and metropolitan and nonmetropolitan areas of Pennsylvania are available on the U.S. Census Bureau's Web site, <http://www.census.gov>.

Following are highlights from the detailed statistics.

Age Composition of the Workforce

- None of the 67 counties in Pennsylvania had 20.0 percent or more of the total workforce that was 55 and older.
- Statewide, 16.0 percent of workers were 55 and older. The five counties with the highest percentage of workers 55 and older were:[3]

County	Percentage of workforce
Sullivan	19.7
Mifflin	19.1
Wayne	18.3
Beaver	18.0
Susquehanna	18.0

- Statewide, 3.6 percent of workers were 65 and older. The five counties with the highest percentage of workers 65 and older were:[4]

County	Percentage of workforce
Susquehanna	5.3
Wayne	5.2
Pike	5.1
Perry	4.9
Lawrence	4.8

- Of the 67 counties in Pennsylvania, all 67 experienced an increase from 2001 to 2004 in the percentage of the county workforce that was 55 and older. The largest increase was in Sullivan County.
- Of the total workforce employed in metropolitan statistical areas, about 15.9 percent was 55 and older; in nonmetropolitan area workplaces, the proportion was 16.4 percent.

[3] Counties with low employment (fewer than 100 employees) in the 55-and-older age group are not included in this list.

[4] Counties with low employment (fewer than 100 employees) in the 65-and-older age group are not included in this list.

Industry Sectors With the Highest Proportions of Older Workers in 2004[5]

- Statewide, among industry sectors that employed 100 or more workers 55 and older, Educational Services (NAICS 61) had the highest proportion of workers in this age group. This sector had the highest percentage of workers 55 and older in 15 counties as well.
- Statewide, the only industry sector with more than 1 in 5 workers 55 and older that employed at least 100 or more workers from that age group was:

Industry	Percentage of workforce
Educational Services	21.9

- In metropolitan statistical areas of the state, the industry sector that employed the largest percentage of workers 55 and older was Educational Services (NAICS 61), with 22.0 percent; the industry sector with the highest proportion of workers 65 and older was Agriculture, Forestry, Fishing, and Hunting (NAICS 11), with 6.7 percent.
- In nonmetropolitan area workplaces in Pennsylvania, the industry sector that employed the largest percentage of workers 55 and older was Utilities (NAICS 22), with 22.5 percent. Other Services (except Public Administration) (NAICS 81) was the industry sector with the highest proportion of workers 65 and older, with 6.5 percent.

[5] Sectors are groups of industries. For more information, see <http://www.census.gov/epcd/www/naicsect.htm>.

Industry Sectors Most Likely to Employ Older Workers in 2004

- Of the workers in the state 55 and older, 16.7 percent were employed in Manufacturing (NAICS 31–33), the highest proportion for that age group of any industry sector in the state. This industry was ranked number one in 39 of 67 counties.
- Of the workers 55 and older in the state's metropolitan statistical areas, 16.3 percent were employed in Health Care and Social Assistance (NAICS 62), the highest proportion for that age group statewide among industrial sectors.
- Of the workers 55 and older in the state's nonmetropolitan area workplaces, 23.3 percent were employed in Manufacturing (NAICS 31–33), the highest proportion for that age group statewide among industrial sectors.

Quarterly Job Gains and Losses in 2004

- On average, for workers 55 to 64 years old, 33,739 jobs were created quarterly and 35,322 jobs were lost quarterly. For workers 65 and older, the numbers were 11,804 and 14,688, respectively.
- The county with the largest share of job gains for workers 55 to 64 years old was Philadelphia County, with 12.8 percent. The largest share of job losses for such workers was also in Philadelphia County, with 13.1 percent.
- The county with the largest share of job gains for workers 65 and older was Philadelphia County, with 10.7 percent. The largest share of job losses for such workers was in Allegheny County, with 12.4 percent.
- The industry sector with the largest gain in jobs for workers 55 to 64 years old was Health Care and Social Assistance (NAICS 62), with an average of 5,298 jobs gained per quarter at the state level. The most jobs lost by that age group were in Manufacturing (NAICS 31–33), with an average of 5,194 jobs lost per quarter at the state level.
- The industry sector with the largest gain in jobs for workers 65 and older was Retail Trade (NAICS 44–45), with 2,069 jobs gained per quarter at the state level. The most jobs lost by that age group were also in Retail Trade (NAICS 44–45), with 2,363 jobs lost per quarter at the state level.

Average Earnings of Older Workers in 2004

- Statewide, on average, workers 55 and older earned $3,234 a month.
- Of industry sectors employing at least 100 workers 55 and older, the highest paying was Utilities (NAICS 22). Workers in that sector earned, on average, $6,070 per month. The lowest paying was Accommodation and Food Services (NAICS 72). Workers in this sector earned, on average, $1,349 per month. The following table shows statewide average monthly earnings in 2004 for full-quarter, private-sector wage and salary workers 55 and older by NAICS sector.

Industry	Earnings [dollars]
Utilities	6,070
Professional, scientific, and technical services	5,123
Management of companies and enterprises	4,992
Finance and insurance	4,640
Mining	4,237
Educational services	3,916
Manufacturing	3,901
Wholesale trade	3,814
Construction	3,723
Information	3,510
Health care and social assistance	3,192
Real estate and rental and leasing	2,856
Transportation and warehousing	2,699
Administrative and support and waste management and remediation services	2,275
Agriculture, forestry, fishing, and hunting	1,951
Other services (except public administration)	1,944
Retail trade	1,934
Arts, entertainment, and recreation	1,721
Accommodation and food services	1,349

Older Workers in Metropolitan Statistical Areas and in Nonmetropolitan Area Workplaces in 2004

- In metropolitan statistical areas, the five industry sectors with the largest percentage of workers 55 and older were:

Industry	Percentage of workers
Educational services	22.0
Real estate and rental and leasing	19.5
Mining	19.0
Other services (except public administration)	18.9
Transportation and warehousing	18.9

- In nonmetropolitan area workplaces, the five industry sectors with the largest percentage of workers 55 and older were:

Industry	Percentage of workers
Utilities	22.5
Transportation and warehousing	21.3
Educational services	21.1
Other services (except public administration)	19.3
Real estate and rental and leasing	19.2

- In metropolitan statistical areas, of industry sectors employing at least 100 workers 55 and older, the highest paying for workers 55 and older was Utilities (NAICS 22), which paid, on average, $6,169 a month. The lowest paying was Accommodation and Food Services (NAICS 72), which paid, on average, $1,377 a month.
- In nonmetropolitan area workplaces, of industry sectors employing at least 100 workers 55 and older, the highest paying for workers 55 and older was Utilities (NAICS 22), which paid, on average, $5,856 a month. The lowest paying was Accommodation and Food Services (NAICS 72), which paid, on average, $1,185 a month.

THE LOCAL EMPLOYMENT DYNAMICS PROGRAM

The LED program is a partnership between the Census Bureau and the participating states. LED produces QWI for each partner state, as well as each partner state's metropolitan areas, combined nonmetropolitan areas, counties, and Workforce Investment Board areas. Quarterly and annual averages are available at <http://lehd.did.census.gov>.[6]

> QWI for partner states and detailed information about the LED program are available without cost at <http://lehd.did.census.gov>.

Overview

The QWI are measures of economic characteristics and change selected jointly by the Census Bureau and its partner states. Each component of the QWI provides a critical measure of an area's economy and can be used as a tool to better understand changes in the core performance of local economies.

Listed in this report are figures and data tables that show selected QWI statistics on older workers. Comprehensive summary data that cover geographic areas and include age and gender composition by industry, total employment, net job flows, job gains and job losses, separations, new hires, skill level (quarters of employment), and average monthly earnings are available at <http://lehd.did.census.gov>.

Nine months after a quarter ends, the Census Bureau and its partners update the workforce indicators for that quarter. This provides current and historical information about the characteristics of America's workers and a tool to monitor economic change.[7] The statistics are comparable across time, making it possible to identify emerging workforce trends and turning points and to compare geographic areas and demographic groups working in specific industries. Industries are classified according to the NAICS.

The QWI come from a mixture of data sources, the base of which is a census of jobs. The LED database includes all jobs a worker holds and allows multiple definitions of "employment" in order to respond to a wide variety of questions about the workforce (see "Sources and Accuracy of the Estimates" in the following section). The definition of "employment" in this report, unless stated otherwise, is "beginning of quarter" employment—that is, the total number of workers who were employed by the same employer in the *reference* quarter and the *previous* quarter.

[6] For more complete information on QWI, see Abowd, John M., Bryce E. Stephens, Lars Vilhuber, Fredrik Andersson, Kevin L. McKinney, Marc Roemer, and Simon Woodcock, 2005. *The LEHD Infrastructure Files and the Creation of the Quarterly Workforce Indicators*. LEHD Technical Paper, TP-2006-01. U.S. Census Bureau, Washington, DC. Available at <http://lehd.did.census.gov/led/library/techpapers/tp-2006-01.pdf>.

[7] Because the QWI are updated quarterly, the numbers in this report may differ from the most recent ones, which are shown on the current LED Web site. For the latest list of partner states, see <http://lehd.did.census.gov/led/led/statepartners.html>. Additional states are in the process of joining.

As job-based statistics, the QWI are not directly comparable with statistics from worker-based surveys such as the decennial and economic censuses, the American Community Survey, or the Current Population Survey.[8] Neither are the QWI exactly comparable with data from establishment surveys, such as those from the U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW) program, which capture employment data at establishments on the 12th of the month.

Throughout this report, "earnings" refer only to the earnings of workers who were employed for a full quarter—that is, those who were employed by the same employer in the reference, previous, and subsequent quarters. This earnings measure reflects the earnings of "attached" employees, generally workers who worked for the same employer for the whole quarter. The measures of earnings from the QWI are not directly comparable with measures of earnings from the Bureau of Labor Statistics.

SOURCES AND ACCURACY OF THE ESTIMATES

Because the QWI are job-based statistics, not the worker-based statistics familiar to many researchers, the LED database allows multiple definitions of "employment" and can respond to a wide variety of questions about the workforce.[9]

[8] Information about the decennial census is available at <http://www.census.gov/main/www/cen2000.html>. American Community Survey information is available at <http://www.census.gov/acs/www>. Information about economic censuses is available at <http://www.census.gov/econ/census02/>.

[9] For the QWI, a "job" is defined as an employer-employee pair among administrative datasets.

Sources

Enhanced unemployment insurance (UI) wage records and the QCEW are the basic data sources for the QWI. These are administrative data provided to the Census Bureau by partner states. The QWI's coverage, timing of data collection, and concept definitions differ from those in worker-based surveys, such as the decennial and economic censuses, the American Community Survey, and the Current Population Survey. Also, QWI data are not exactly comparable with Bureau of Labor Statistics information, due to timing differences.

Administrative data from these sources almost certainly contain nonsampling errors. The extent of the nonsampling errors is unknown. Sources of nonsampling errors include errors made in data collection, such as recording and coding errors, errors made in processing the data, errors made in estimating values for missing data, and errors from failing to represent all units within a target population (undercoverage).

The LED program undertakes a process of continuous monitoring to attempt to control the nonsampling errors in the integrated data that underlie the LED database. In particular, identifiers on both the UI wage records and the QCEW records are subjected to longitudinal editing every quarter. A set of quality assurance tests is applied to the integrated data. These tests detect problems known to cause nonsampling errors—primarily, tests for missing records of various types (based on estimates of the number of expected records from alternative sources), tests for incomplete wage or earnings information, and tests for changes in the structure of identifiers or entities. Problems detected by these quality assurance tests are investigated and corrected before data integration and production of the QWI are allowed to continue.[10]

Industries are based upon the NAICS.

Coverage

This report covers civilian noninstitutionalized workers in the private sector only. While this report does not include federal government workers, the complete QWI database does include most state and local government employees. The QWI database covers about 98 percent of nonagricultural, private wage, salaried employment. The remaining 2 percent of the nonagricultural, private wage, salaried workers are railroad workers and workers for some nonprofit organizations. Self-employed workers and independent contractors are not in the covered universe.[11]

Definitions

The LED database includes all jobs held:

- In a quarter, regardless of the length of time the job is held.
- At the beginning of a quarter—the measure used in this report (workers employed by the same employer in the reference quarter and the previous quarter).
- At the end of a quarter.
- For a full quarter (total number of workers who were employed by the same employer in the reference, previous, and subsequent quarters). This measure is

[10] Technical documentation is available at <http://lehd.did.census.gov>.

[11] See David W. Stevens. *Employment That Is Not Covered by State Unemployment.* LEHD Technical Paper, TP-2002-16. U.S. Census Bureau, Washington, DC. Available at <http://lehd.did.census.gov/led/library/techpapers/tp-2002-16.pdf>.

used in this report for average earnings because it reflects the earnings of employees in more stable jobs.

The measure that is closest to the QCEW definition of employment is the second one, jobs held at the beginning of a quarter. This second measure has the additional advantage of capturing trends similar to those shown by worker-based surveys, such as the decennial census.

Annual figures are simple averages with each quarter weighted equally. There is no differential weighting of averages for seasonal industries, for example.

Earnings are measured differently among the various datasets. According to the *BLS Handbook of Methods* (1997), UI wage records measure "gross wages and salaries, bonuses, stock options, tips, and other gratuities, and the value of meals and lodging, where supplied." They do not include amounts paid for Old-Age, Survivors, and Disability Insurance (OASDI), health insurance, workers' compensation, unemployment insurance, private pensions, and welfare funds. The LED database does not include the number of hours or weeks an employee worked. Thus, low average earnings in a given year or quarter in an industry sector may reflect relatively low hourly wages, or many part-time jobs, or both, as often occurs in the retail trade sector.

Some large companies have multiple work sites but may report all their workers at the company's main address. This creates a problem for the correct geographic distribution of the workers. LED uses an imputation process to allocate workers to geographic areas in order to maintain appropriate distributions within the QWI dataset.

Confidentiality of information about individuals and firms is protected.

The Census Bureau and the state partners are committed to protecting the confidentiality of the data used to create the LED estimates. One technical approach used to conceal individual information involves combining cell suppression methodology and statistical noise, thereby controlling key measures to county employment levels as reported by the Bureau of Labor Statistics. In other words, the Census Bureau uses statistical techniques in which the actual statistics are not shown if the numbers in a cell are small. In addition, the statistics that are shown are "fuzzy," meaning close to the actual information but not exact.

Only Census Bureau employees and individuals who have Special Sworn Status are permitted to work with the input data. Everyone who has access to data protected by Title 13 of the U.S. Code must have an official security clearance based on a background check, including fingerprinting.[12]

Additionally, these individuals are subject to a fine of up to $250,000, up to 5 years in prison, or both, if confidential information is disclosed. The Census Bureau and the state data custodians review all products before release to avoid disclosure of confidential information.

More detailed information about the confidentiality protection system is available under the "Confidentiality" menu at <http://lehd.did.census.gov>.

[12] The Census Bureau's Data Protection and Privacy Policy, including information on Title 13, is available at <http://www.census.gov/privacy>.

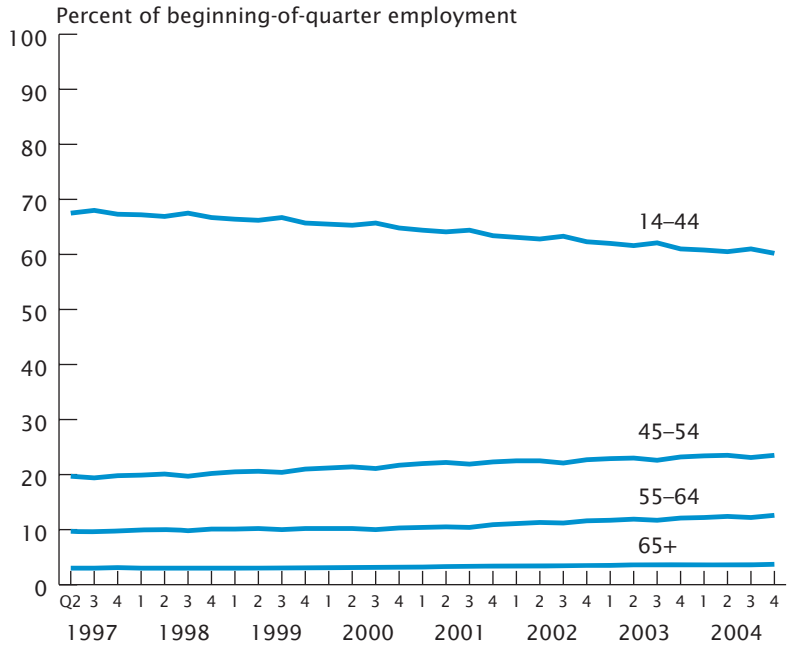
Table 1.
Percentage of Workers by Age in Metropolitan Statistical Areas and Nonmetropolitan Area Workplaces in Pennsylvania: 2004

Area of workplace	45 to 54 years	55 to 64 years	65 to 99 years	55 to 99 years
Pennsylvania	23.4	12.3	3.6	16.0
Allentown-Bethlehem-Easton, PA-NJ (PA part)	23.9	12.8	3.4	16.2
Altoona, PA	23.3	12.2	3.1	15.3
Erie, PA	24.2	11.8	3.2	15.0
Harrisburg-Carlisle, PA	22.8	12.0	3.3	15.3
Johnstown, PA	25.4	12.7	3.4	16.1
Lancaster, PA	22.4	12.5	4.6	17.1
Lebanon, PA	21.9	12.7	4.8	17.5
New York-Northern New Jersey-Long Island, NY-NJ-PA (PA part)	20.4	11.2	5.1	16.3
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD (PA part)	22.7	12.0	3.7	15.6
Pittsburgh, PA	24.8	12.5	3.5	15.9
Reading, PA	23.2	12.7	3.9	16.6
Scranton—Wilkes-Barre, PA	22.9	12.9	3.8	16.7
State College, PA	19.6	9.9	2.8	12.7
Williamsport, PA	24.6	13.3	3.4	16.6
York-Hanover, PA	23.2	13.1	3.9	16.9
Youngstown-Warren-Boardman, OH-PA (PA part)	24.4	13.3	3.9	17.1
All metropolitan areas	23.4	12.3	3.6	15.9
All nonmetropolitan area workplaces	23.5	12.7	3.7	16.4

Note: Discrepancies may occur due to rounding.

Source: U.S. Census Bureau and the state of Pennsylvania, Local Employment Dynamics program, 2006. See <http://lehd.did.census.gov>.

Figure 1.
Pennsylvania Workforce by Age Group: 1997 to 2004



Note: Universe is all jobs identified by the LED program.

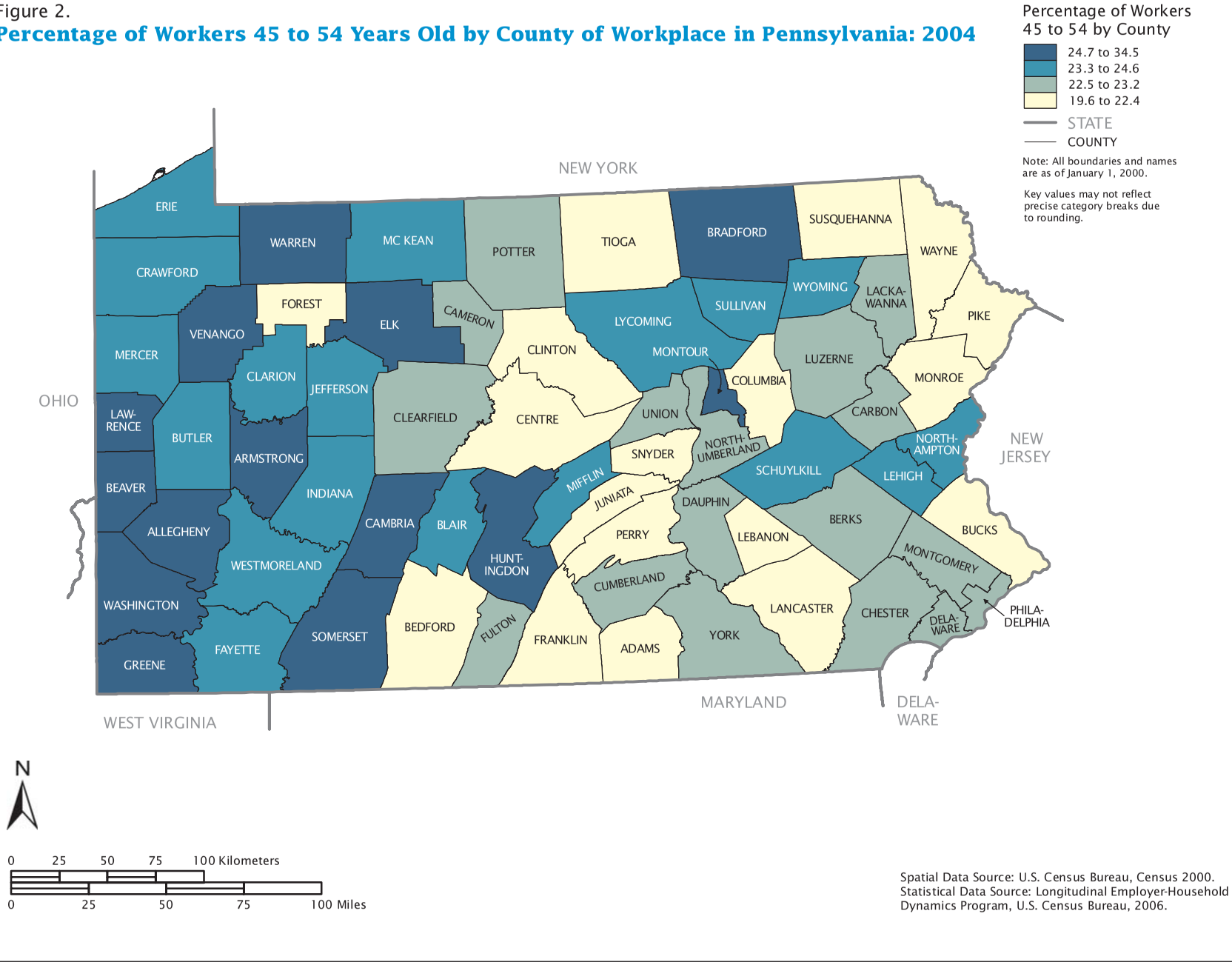
Source: Source: U.S. Census Bureau and the state of Pennsylvania, Local Employment Dynamics program, 2006. See <http://lehd.did.census.gov>.

Beginning-of-quarter employment

Total number of workers employed by the same employer in the *reference* quarter and the *previous* quarter.

Figure 2.

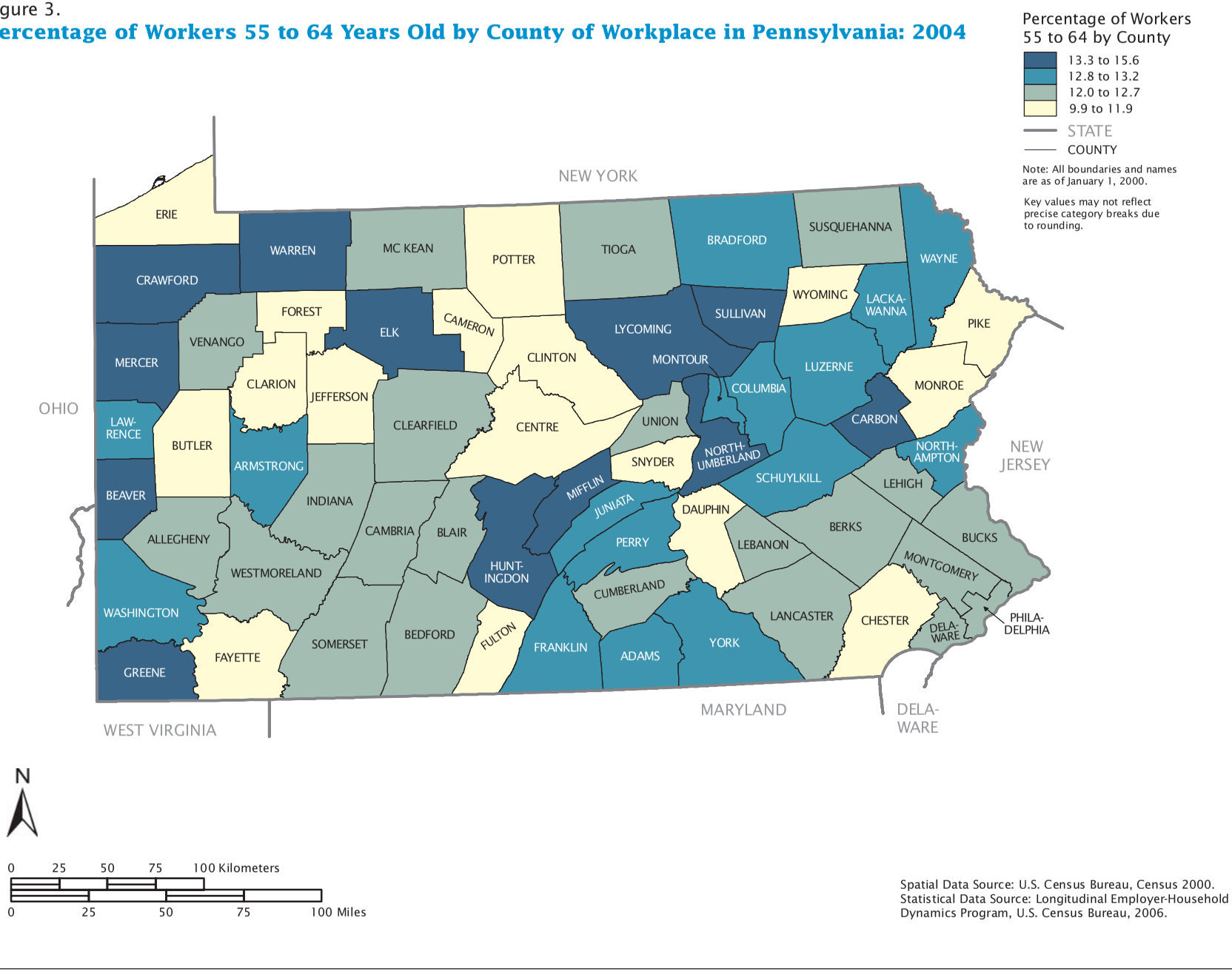
Percentage of Workers 45 to 54 Years Old by County of Workplace in Pennsylvania: 2004



Spatial Data Source: U.S. Census Bureau, Census 2000.
Statistical Data Source: Longitudinal Employer-Household Dynamics Program, U.S. Census Bureau, 2006.

Figure 3.

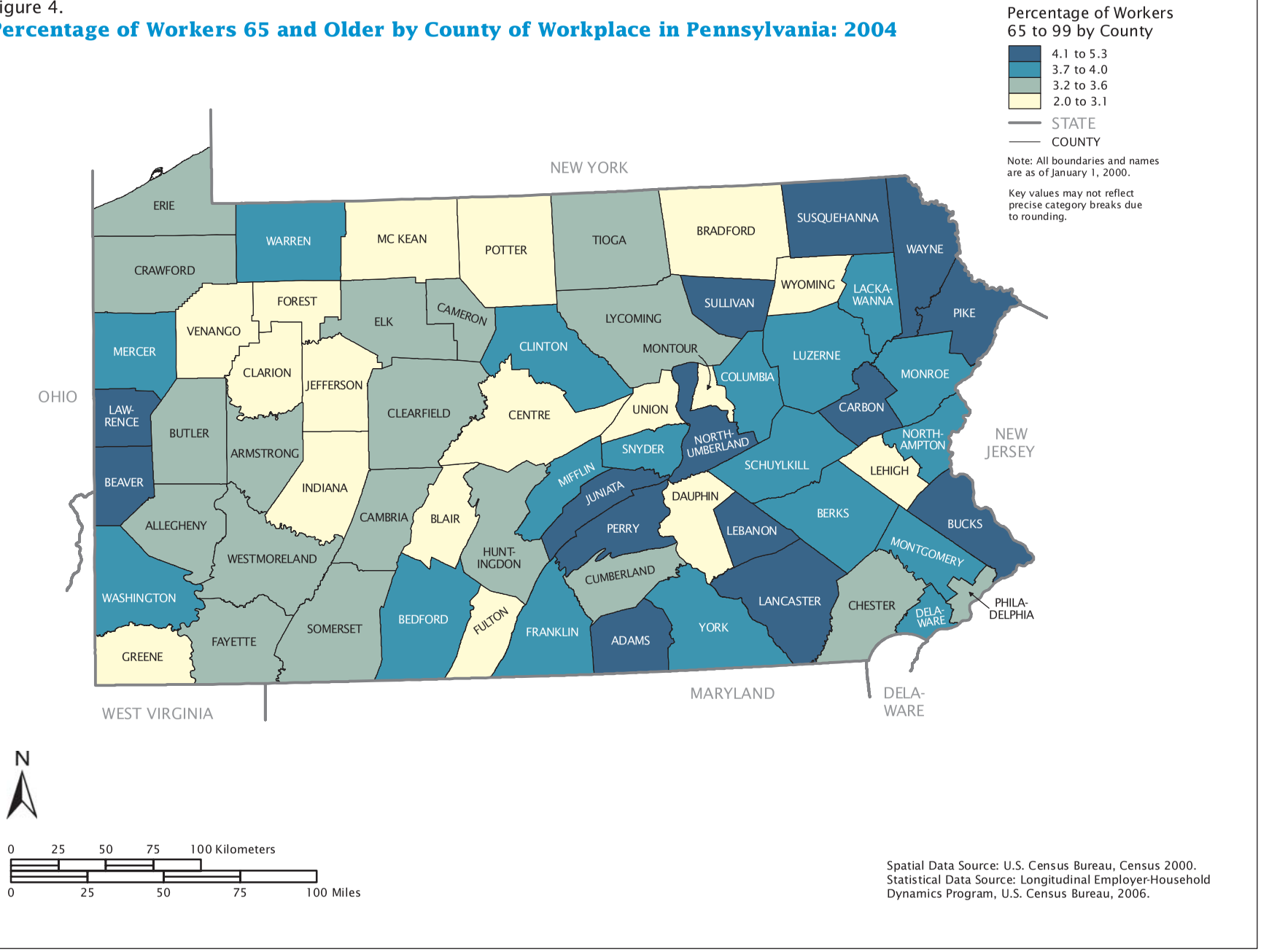
Percentage of Workers 55 to 64 Years Old by County of Workplace in Pennsylvania: 2004



Spatial Data Source: U.S. Census Bureau, Census 2000.
Statistical Data Source: Longitudinal Employer-Household Dynamics Program, U.S. Census Bureau, 2006.

Figure 4.

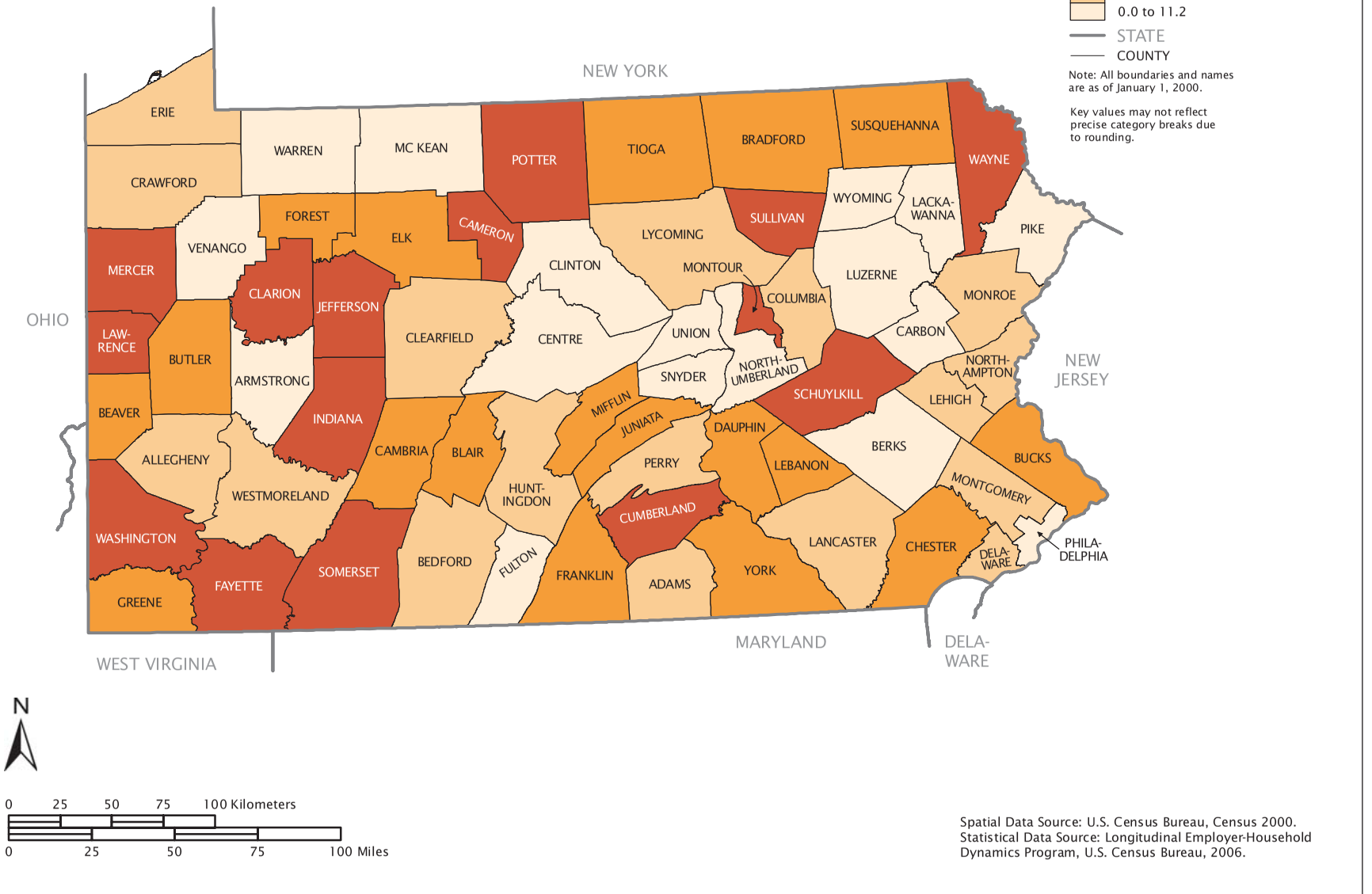
Percentage of Workers 65 and Older by County of Workplace in Pennsylvania: 2004



Spatial Data Source: U.S. Census Bureau, Census 2000.
Statistical Data Source: Longitudinal Employer-Household Dynamics Program, U.S. Census Bureau, 2006.

Figure 5.

Percentage Change in Number of Workers 55 and Older by County of Workplace in Pennsylvania: 2001 to 2004



Spatial Data Source: U.S. Census Bureau, Census 2000.
Statistical Data Source: Longitudinal Employer-Household Dynamics Program, U.S. Census Bureau, 2006.

ADDITIONAL RESOURCES

Other data tables with information about older workers are available for download from the LED Web site in a comma-separated value (.csv) format. Brief descriptions of the available tables are given below. See <http://lehd.did.census.gov> for additional details.

Characteristics and Employment Dynamics of Older Workers

Age composition

A series of tables shows absolute and relative shares of older workers disaggregated into four standard age ranges. The county aggregation level and the metropolitan statistical area and nonmetropolitan area workplace aggregation levels are presented for 2004.

Industry sectors with a high proportion of older workers

Two tables contain data on the top five industry sectors for older workers in 2004 at the county aggregation level and at the metropolitan statistical area and nonmetropolitan area workplace aggregation levels.

Most likely industry sectors of employment for older workers

A table contains the top five industry sectors most likely to employ workers 55 and older. The aggregation level is the county of workplace for 2004.

Job gains and losses

A series of tables displays gains, losses, and net changes in jobs for older workers disaggregated into four standard age ranges. The aggregation level is the workplace county for 2004.

Average monthly earnings of older workers

A series of tables displays average monthly earnings for workers 55 and older across industry sectors and aggregated at the county, metropolitan statistical area, and nonmetropolitan area workplace levels. An additional table presents earnings across the four standard age ranges.

Appendix tables

These tables contain all remaining datasets—aggregated by county, metropolitan statistical area, and nonmetropolitan area workplace levels and organized by industry and age. Notable data include: employment totals for 2001 to 2004, quarterly job loss/gain composition for 2004, and average monthly earnings and employment by Workforce Investment Areas.

ACKNOWLEDGMENTS

Research for and production of this report was supported under an interagency agreement with the Behavioral and Social Research Program, National Institute on Aging, Agreement No. Y1-AG-9415-07, and under Grant No. R01-AG018854.

Thanks to Heath Hayward for production of the state maps. Also, thanks to Liliana Sousa, Corinne Prost, and Matthew Armstrong for assistance in the statistical analysis.

MORE INFORMATION

This report is one of a series of reports on older workers in states in the LED partnership. Additional tables of data and other detailed information can be found at the LED Web site, <http://lehd.did.census.gov>. Other data tools and applications, such as QWI Online and OnTheMap, based upon LED partnership data, can also be found on the LED Web site.

SUGGESTED CITATION

Taeuber, Cynthia and Matthew R. Graham, 2008. *The Geographic Distribution and Characteristics of Older Workers in Pennsylvania: 2004*. LED Older Workers Profile, LED-OW04-PA. U.S. Census Bureau, Washington, DC.