

# A Profile Of Older Workers In Pennsylvania

Issued May 2005

## Local Employment Dynamics

LED/OW-PA

### Executive Summary

A new information source, the Local Employment Dynamics (LED) program for Pennsylvania, shows:

- The workforce is aging. From 1998 through 2002, an increasing percentage of the workforce was 45 years and older. The proportion of people 65 years and older who continue working has also increased, but slightly.
- Industries in which more than 1 in 5 workers were 55 years and older in 2002 include: local and suburban transit, apparel from fabrics, textile mill products, real estate, and educational services. Of these, textile mill products had relatively few workers.
- An example of an industry with a high turnover rate for workers 55 years and older is the local and suburban transit industry.
- An example of an industry with a low turnover rate for older workers is the transportation equipment industry.
- Industries where workers 65 years and over are most likely to be employed include the service industries of health services, business services, and wholesale trade—durables. Food stores are also an important source of work for the oldest workers.
- On average, in 2002, for workers 65 years and over, 11,324 jobs were gained and 15,551 were lost.

- Of the industries that employed more than 500 workers 65 years and older, the highest paying were security and commodities brokers (\$6,701 a month) and legal services (\$4,204 a month).

### Introduction

A large wave of workers born during the Baby Boom of 1946 to 1964 will be leaving the workforce over the next few decades. A larger share than in past generations may "retire" to collect the pensions they earned over their work life and then continue working part-time or in more flexible working arrangements.<sup>1</sup>

Decision makers are looking at the economic and policy implications for a wide range of programs and institutions, including Social Security and Medicare; financial markets; the housing market; and recreation, transportation, and health care systems.

What the workforce of the future looks like will depend on many factors. This report focuses on one possible scenario that some scholars consider to be reasonable. It assumes that Baby Boomers replicate the retirement behavior of previous generations and that immigrant workers do not fill all of the jobs left vacant by these retirements. If these assumptions prove accurate:

<sup>1</sup> The term "retirees" refers to workers who collect pensions—who may have varied labor market experiences. Some may completely leave the labor force and others may continue to work. Of those who continue to work while they receive pensions, some may work fewer than 35 hours a week, some may work only part of the year, and others may continue in the labor force year-round and full-time.

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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

*The United States will lose the services of millions of highly skilled, experienced workers. Because of the baby dearth that followed the Baby Boom, there will not be many new workers to replace them, even as the senior adult population grows significantly. Labor force growth is expected to fall from 1.1 percent per year in the 1990s to 0.36 percent per year in the period 2010 to 2020.<sup>2</sup>*

Regardless of how the future unfolds, information about the workforce decisions made by the Baby Boomers can be useful to a number of groups. Decision makers in Pennsylvania need to know which industries and regions of the state are likely to be most affected by changes in the size and composition of the labor force in coming decades. Similarly, businesses need such information both to make more informed plans for transitions and to pinpoint potential problem areas and new opportunities. Older workers who want to continue working need to know in what industries and in what areas of Pennsylvania jobs are available, how flexible businesses are about their working arrangements, and the level of earnings they can expect.

The U.S. Census Bureau, together with state partners, is developing several new sources of information to support these needs. The Local Employment Dynamics (LED) program, one of the newest resources, produces workforce indicators that are updated every quarter for each partner state and its metropolitan areas, counties, and Workforce

<sup>2</sup> Penner, Rudolph, Pamela Perun, and Eugene Steuerle. "Legal and Institutional Impediments to Partial Retirement and Part-Time Work by Older Workers," The Urban Institute, 2002.

Investment Areas.<sup>3</sup> Statistics are available without cost on the program's Web site <<http://lehd.dsd.census.gov/>> and additional indicators are available from partner states. The statistics are historical and come from multiple, high-quality information sources that include most of the working population (see "Sources and Accuracy of the Data" at the end of this report for additional information about coverage).

The LED program is a partnership between the Census Bureau and participating states. As of April 2005, 37 states and the District of Columbia are partners with the Census Bureau in creating this information.<sup>4</sup> Those 37 states and the District of Columbia cover about four-fifths of America's workers. Additional states are planning to join the partnership.

This report uses Quarterly Workforce Indicators (QWI) from the LED program for the state of Pennsylvania to focus on two groups of older workers: those who are likely to be receiving pension income (65 and older), and the preretirement group (55–64 years old). People in the preretirement group may collect pensions within the next 10 years, but may or may not continue to participate in the labor force.

With the LED, we can respond to questions such as:

<sup>3</sup> Other related information sources from the Census Bureau include the American Community Survey <<http://www.census.gov/acs/www>> and the economic census <<http://www.census.gov/epcd/www/econ2002.html>>.

<sup>4</sup> As of April 2005, the partner states whose data were being processed were: AL, AR, CA, CO, DE, FL, IA, ID, IL, IN, KS, KY, MD, ME, MN, MO, MT, NC, ND, NJ, NM, OK, OR, PA, SC, TN, TX, VT, VA, WA, WI, and WV. Additional partner states include: DC, GA, MI, NV, OH, and UT. This is an ongoing project and additional states are expected to join.

*What changes are occurring in the age composition of the workforce in a geographic area?*

*Which industries will be most affected by the departure of older workers from the workforce?*

*In what industries do older people tend to continue working and under what circumstances?*

*Which industries create jobs for older workers? Suffer the most job losses?*

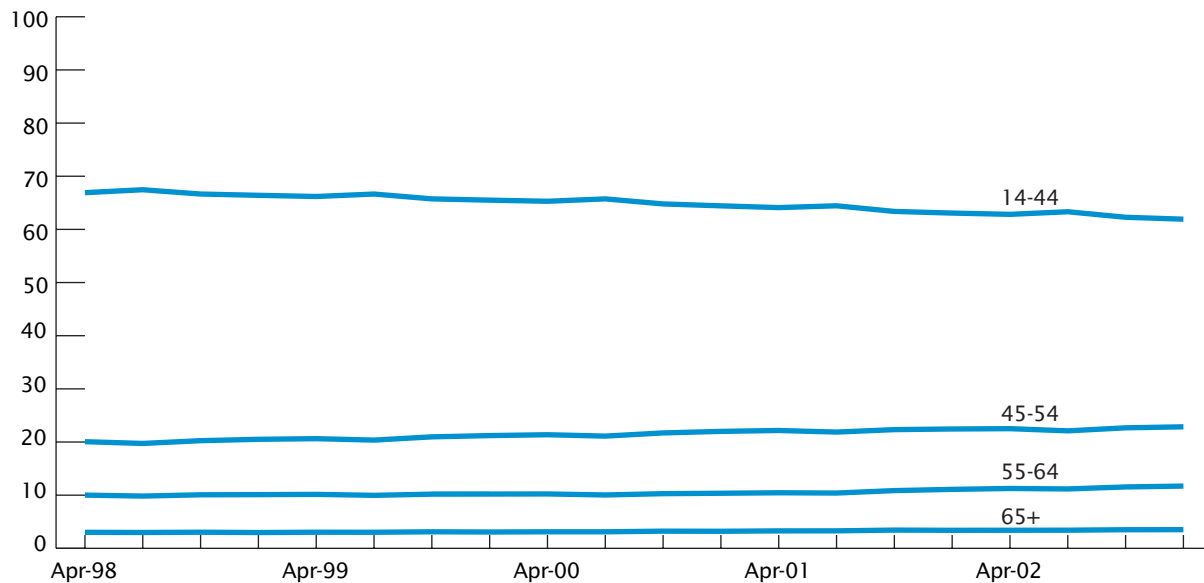
*Which industries have the lowest job turnover rates for older workers?*

*How much do older workers earn in various industry groups and geographic areas?*

As the LED statistics in this report show, older workers in Pennsylvania have been an increasing proportion of the labor force. We learn from the LED information that older workers tend to be employed in the same industries that employ large numbers of younger workers, but the best-paid are those who work in financial firms with relatively few older workers. We do not know yet whether Pennsylvania will undergo rapid and massive changes, or gradual changes due to the retirement of experienced workers of the Baby Boom generation along with the movement of workers into and out of Pennsylvania. We do know that both have the potential to affect the age distribution of the workforce significantly. Planners in Pennsylvania will be able to keep an

Quarterly Workforce Indicators for partner states and detailed information about the LED program are available at <<http://lehd.dsd.census.gov>>.

Figure 1.  
**Pennsylvania Workforce by Age Group: 1998 to 2002**  
 [Percent of beginning-of-quarter employment]



Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program's Web site at <<http://lehd.dsd.census.gov>>.

eye on the impact of such factors and emerging trends by using the LED statistics.

### How is the age composition of the workforce in Pennsylvania changing?

The aging of Baby Boom workers led to an increase in the proportion of the workforce 45 years and older from 1998 to 2002 in Pennsylvania. Many planners anticipate this proportion will grow even more rapidly over the next 2 decades unless a large influx of younger workers comes into

#### Beginning-of-Quarter Employment

Total number of workers who were employed by the same employer in the *reference* and *previous* quarters

#### Skill Level

Quarters of work experience

Pennsylvania. In 1998, about 67 percent of Pennsylvania workers were 14 to 44 years old (Figure 1). By 2002, that figure had dropped to about 63 percent of workers. Twenty percent of Pennsylvania workers were 45 to 54 years old in 1998 and 22 percent were in that age group in 2002.

The falling share of younger workers occurred across the economy of Pennsylvania. The share of workers in Pennsylvania who are 65 and older, the traditional age when most workers leave the labor force permanently, increased slightly, from about 3.0 percent to 3.4 percent, from 1998 to 2002.

### Which industries will be most affected by the aging workforce?

Unless there is an infusion of new workers from outside Pennsylvania, or from other Pennsylvania industries, the industries identified in Figure 2<sup>5</sup> are those likely to be most affected by the aging of the workforce.<sup>6</sup> If older workers seek either more flexibility in hours or leave these industries completely, companies may suffer a consider-

<sup>5</sup> Workers in private households are not shown in the text because the coverage of private households is low relative to other industries.

<sup>6</sup> Because the QWI come from a mixture of sources, they are not directly comparable with statistics from worker-based surveys such as the decennial census, the American Community Survey, and the Current Population Survey. Industries are based on the Standard Industrial Classification (SIC) system. The LED program converted from the SIC system to the North American Industry Classification System (NAICS) in early 2004. Some classification titles appear to be similar, but the detailed industry groups that compose the categories may differ between the SIC and NAICS systems.

able loss of skills and knowledge. Thus, industries with a high proportion of workers near retirement might need, for example, to plan for increased training to respond to the loss of older workers and their institutional knowledge.

Figure 2 shows that the local and suburban transit industry in Pennsylvania had a high proportion of older workers—about 17.1 percent were 55–64 years old and about 12 percent were 65 years and older. Other industries with a relatively high proportion of workers 55 years and older included apparel from fabrics (25.7 percent), textile mill products (22.3 percent) and real estate (22.2 percent).

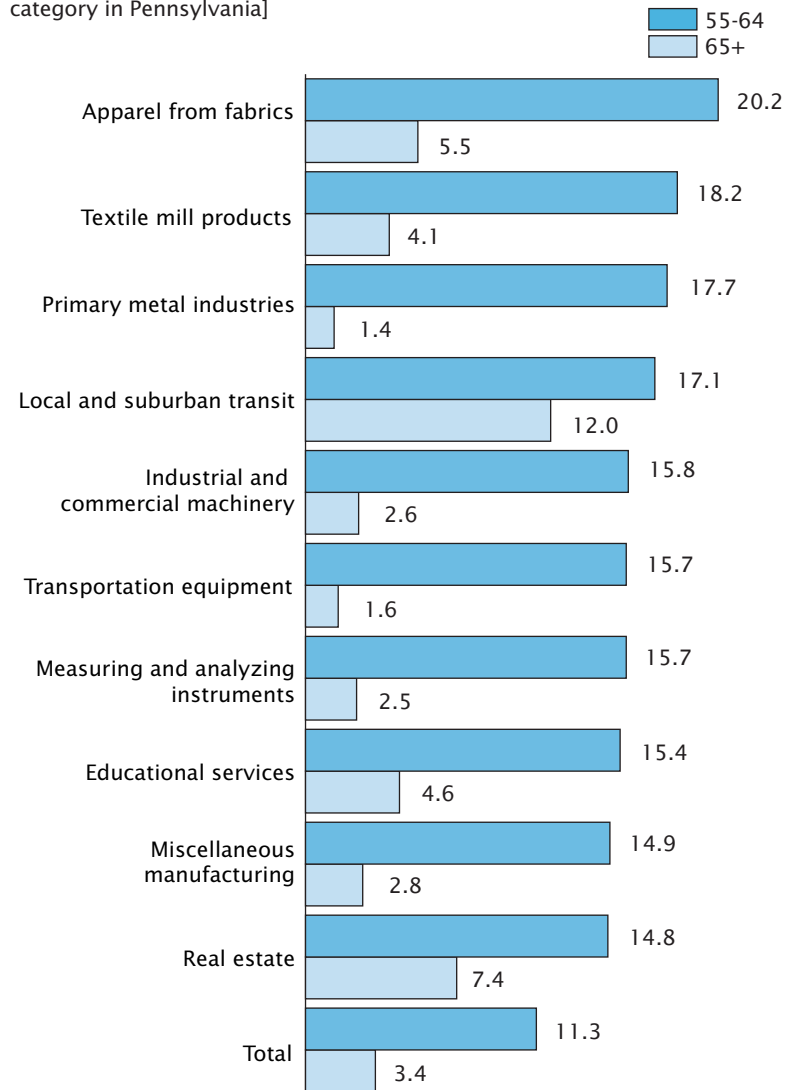
### The demand for older workers and job stability

An indicator of the degree to which businesses need older workers is the turnover rate of older workers within an industry. Industries with a history of relatively high turnover rates may have little need for specific skills and may find it easy to replace employees. As a result, firms in such industries may be likely to pay relatively low wages. A relatively low turnover rate for a specific age group, such as older workers, may indicate that workers in that age group are relatively skilled or not readily replaced. The LED data enable us, for the first time, to identify the nature of demand for older workers in particular industries.

The job turnover rate is also a measure of job stability. Older workers who work in low turnover industries may spend less time looking for work and retraining for new jobs. The average quarterly turnover rate for all workers in Pennsylvania was 11.4 percent in 2002 (although this includes the

Figure 2.  
**Selected Industries With a High Proportion of Older Workers by Age, for Pennsylvania: 2002**

[Includes only industries that employed 500 or more workers in each age category in Pennsylvania]



Note: Details do not cover the total workforce in these age categories.  
Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program's Web site at <<http://lehd.dsd.census.gov>>.

relatively high turnover rates of teenagers and young adults).<sup>7</sup> For workers 65 years and older, it was 9.3 percent; for those 55 years and older, 8.2 percent.

<sup>7</sup> This is a simple average of 4 quarters in a calendar year.

The industries in Figure 2 with the highest average quarterly turnover rates for workers 55–64 years old in 2002 were local and suburban transit (average quarterly turnover rate of 12.6 percent), petroleum refining (10.2 percent), and primary metals (9.5 percent). Industries from Figure 2 with lower

Table 1.  
**Job Stability in Pennsylvania by Industry: 2002**

[Top 10 industries statewide employing workers 65 and older]

Industry	Workers 65 and older (number)	Average quarterly turnover rate for workers 65 and older (percent)	Average quarterly turnover rate for workers 14 and older (percent)	Workers 14 and older (number)
Health services .....	15,657	8.3	9.8	587,204
Business services .....	10,453	14.5	18.8	300,696
Wholesale trade—durables .....	8,189	7.3	8.6	158,689
Food stores .....	7,629	7.7	12.8	172,183
Eating and drinking places .....	7,434	11.5	18.6	329,006
Educational services .....	7,396	7.1	8.2	160,587
Miscellaneous retail .....	7,038	8.3	12.9	142,675
General merchandise stores .....	6,809	7.1	11.7	126,303
Social services .....	6,284	8.1	11.2	169,168
Car dealers and gas stations .....	5,971	8.6	12.1	97,402

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002, Appendix Tables A1 and A2. See Web site at <<http://lehd.dsd.census.gov>>.

*Turnover Rate — A measure of workforce stability, the turnover rate reflects the movement of workers into and out of jobs.*

Turnover rate =

$$\frac{1}{2} * \left( \frac{\text{accessions}_t + \text{separations}_t}{\text{average employment}_{t,t-1}} \right)$$

(A worker who retires is included in the turnover rate.)

average quarterly turnover rates for this age group include transportation equipment, industrial and commercial machinery, and textile mill products (with turnover rates of 5.2, 7.0, and 7.0 percent respectively). Average quarterly turnover rates for 2002 for these and other industries are shown in Appendix Table A2.

Of the top ten industries in Pennsylvania employing workers 65 years and older in 2002 (Table 1 and Figure 3), the business services (14.5 percent) and eating and drinking places (11.5 percent) industries had the highest average quarterly turnover rates; the lowest

was the general merchandise stores (7.1 percent) industry.

### Where do older workers work?

This section asks where older workers are most concentrated because the types of work performed by today's older workers may indicate the work that older people will perform in the future. Planners might also examine the type of work done by younger age groups, such as those 35–44 years old, for the changes they might expect among older workers, given differences in the type of education different age groups received and changes in the needs of industries.

As shown in Figure 3, the industries where workers 65 years and over were most likely to be employed in Pennsylvania in 2002 were health services, business services, wholesale trade—durables and food stores (employing 5 percent to almost 10 percent of the workforce 65 years and older, over 7,500 workers each). Half of workers 65 years and older in Pennsylvania were employed in the ten industries shown in Figure 3, compared with 46.9 percent of all workers. Older and younger work-

ers may be employed in distinctly different types of firms within these industries, however, and may be assigned different tasks.

Between 1998 and 2002, there were few changes in the top ten industries that employed the largest number of workers 65 and older (Table 2).<sup>8</sup> Despite the shuffling in rank, service industries have long been the major employers of the oldest workers in Pennsylvania.

### Employment dynamics and older workers

The employment numbers in the preceding section show only one part of the employment picture. Even when levels of employment in an industry change little, enormous change can occur in the underlying numbers. Economists refer to the underlying changes as "job gain" and "job loss." Even if employment levels in an industry stay the same, some firms add jobs and others eliminate jobs. So, while Figure 3 identifies the industries that employed a high proportion of workers 65 years and older in Pennsylvania in 2002, LED program

<sup>8</sup> Historical statistics are consistent in the LED program, so it is possible to make comparisons of statistics over time.

data reveal more detail. LED indicators also tally the number of jobs gained and lost by older workers in the Pennsylvania economy.<sup>9</sup>

The LED statistics reveal that, on average in Pennsylvania in 2002, for workers 65 years and older, 11,324 jobs were gained a quarter (Appendix Table A4) and 15,551 were lost (Appendix Table A5)—on average, a net decrease of 4,227 such workers employed a quarter. The industries that created the most jobs for workers 65 years and older (Table 3) were business services, with 1,285 jobs gained on average a quarter, followed by amusement and recreation (786 jobs). The industries that lost the most jobs for the oldest workers were business services (1,332 jobs a quarter lost on average), health services (1,287 jobs), and eating and drinking places (817 jobs). These changes represented, in Pennsylvania in 2002, an average net loss of 502 jobs in health services, 53 jobs in eating and drinking places, and 48 jobs in business services.

### What do older workers earn?

On average, full-quarter workers 65 years and older in 2002 earned \$1,880 a month in Pennsylvania, and workers of all ages averaged \$2,953 a month (Table 4 and Appendix Table A6).

As is the case for all workers, the average earnings levels of older workers vary greatly among industries. For example, in health services, which employed 9.5 percent of all workers 65 years and older in Pennsylvania in 2002, the average monthly earnings were \$2,357. Workers 14 and older in that industry had average monthly

<sup>9</sup> Job losses for older workers can happen in two ways—a firm can actually reduce employment, or it can substitute a younger worker for an older worker who may have taken another job, retired, or left involuntarily.

Figure 3.  
**Workers 65 Years and Older in Selected Industries for Pennsylvania: 2002**

[Percent of workers aged 65+ years]



Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002, Appendix Table A3. See Web site at <<http://lehd.dsd.census.gov>>.

earnings of \$3,088. About 6 percent of the oldest workers in Pennsylvania were employed by the business services industry, and they had average monthly earnings of \$1,422. Of the top ten indus-

**Job Gain** — New jobs created either by new businesses opening or by existing firms adding new jobs

**Job Loss** — Jobs lost to the economy when businesses close or reduce employment

**Net Job Flow** — The difference between current and previous beginning-of-quarter employment across all businesses

tries of older workers in Pennsylvania in 2002, the industry with the highest average monthly earnings was educational services, with an average of \$2,936 a month; the lowest was eating and drinking places, with an average \$840 a month.

Among all industry groups, security and commodity brokers had the highest average monthly earnings in 2002 for workers 65 years and older—\$6,701—compared with \$6,665 for all workers in this industry (Table 5). The number of workers 65 years and older in this industry is relatively small—693 workers. Other high paying industries include holding and other investment offices and legal services. Legal

Table 2.

### Top Ten Employers in Pennsylvania Employing Workers 65 and Older by Rank: 1998 and 2002

1998 rank	2002 rank	Industry	Number of workers 65 and older		Percent change, 1998-2002	Number of workers 14 and older, 2002
			1998	2002		
1	1	Health services . . . . .	12,441	15,657	25.9	587,204
2	2	Business services. . . . .	9,759	10,453	7.1	300,696
3	3	Wholesale trade—durables . . . . .	7,240	8,189	13.1	158,689
6	4	Food stores . . . . .	6,238	7,629	22.3	172,183
4	5	Eating and drinking places . . . . .	6,571	7,434	13.1	329,006
7	6	Educational services . . . . .	5,922	7,396	24.9	160,587
5	7	Miscellaneous retail . . . . .	6,305	7,038	11.6	142,675
10	8	General merchandise stores . . . . .	4,735	6,809	43.8	126,303
8	9	Social services . . . . .	5,160	6,284	21.8	169,168
9	10	Car dealers and gas stations . . . . .	4,772	5,971	25.1	97,402

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 1998 and 2002, Appendix Tables A1 and A3. See Web site at <<http://lehd.dsd.census.gov>>.

Table 3.

### Job Gains and Losses Among Industry Groups in Pennsylvania by Industry: 2002

[Average number of jobs per quarter]

Top ten industries that created jobs for workers 65 and over	Jobs created <sup>1</sup>	Jobs lost <sup>1</sup>	Net change <sup>2</sup>	Total employment	
				65 and older	14 and older
Business services . . . . .	1,285	1,332	-48	10,453	300,696
Amusement and recreation . . . . .	786	786	0	3,974	71,963
Health services. . . . .	785	1,287	-502	15,657	587,204
Eating and drinking places. . . . .	764	817	-53	7,434	329,006
Miscellaneous retail . . . . .	470	643	-173	7,038	142,675
Car dealers and gas stations. . . . .	417	485	-68	5,971	97,402
Social services . . . . .	409	513	-104	6,284	169,168
Educational services . . . . .	382	544	-162	7,396	160,587
Engineering, accounting, and research . . . . .	363	515	-152	4,561	149,636
Construction—special trade . . . . .	357	479	-122	3,533	156,656

<sup>1</sup> Averages are rounded to whole numbers. <sup>2</sup> Computed from actual averages, not from the rounded whole numbers as shown in this table.

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002, Appendix Tables A1, A4, and A5. See Web site at <<http://lehd.dsd.census.gov>>.

services—employing more than 1,500 workers 65 years and older—was relatively high paying, with average earnings of \$4,204 a month.

- Which industries are likely to be affected by the aging of the workforce?
- Which industries have the lowest turnover rates of older workers?
- In which industries are older workers most likely to be employed?
- How much do older workers earn?

#### Summary

This report provides answers to several key questions related to the aging of Pennsylvania's workforce:

- What is the age composition of the workforce and what are the changes over time?

#### Full-Quarter Employment

Total number of workers who were employed by the same employer in the *reference*, *previous*, and *subsequent* quarters

#### Average Earnings for Full-Quarter Employees

Total earnings of all workers employed the full quarter divided by the number of such workers

Table 4.  
**Average Monthly Earnings Among Top Ten Industries in Pennsylvania by Age: 2002**

[Full-quarter earnings]

Industry	Average monthly earnings for workers 65 and older (dollars)	Average monthly earnings for workers 14 and older (dollars)	Workers 65 and older (number)	Workers 14 and older (number)
<b>Total</b> .....	<b>1,880</b>	<b>2,953</b>	<b>164,143</b>	<b>4,788,729</b>
Health services .....	2,357	3,088	15,657	587,204
Business services .....	1,422	3,007	10,453	300,696
Wholesale trade—durables .....	2,022	3,804	8,189	158,689
Food stores .....	912	1,477	7,629	172,183
Eating and drinking places .....	840	1,090	7,434	329,006
Educational services .....	2,936	3,295	7,396	160,587
Miscellaneous retail .....	1,195	1,886	7,038	142,675
General merchandise stores .....	1,078	1,583	6,809	126,303
Social services .....	1,275	1,902	6,284	169,168
Car dealers and gas stations .....	1,317	2,621	5,971	97,402

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002, Appendix Table A6. See Web site at <<http://lehd.dsd.census.gov>>.

Table 5.  
**Average Monthly Earnings of Workers in Pennsylvania by Age: 2002**

[Full-quarter earnings. Includes only industries that employed 100 or more workers 65 and older in Pennsylvania]

Industry	Average monthly earnings of workers 65 and older (dollars)	Average monthly earnings of workers 14 and older (dollars)	Workers 65 and older (number)	Workers 14 and older (number)
Security/commodity brokers .....	6,701	6,665	693	22,760
Holding/other investment offices .....	4,644	5,031	357	14,737
Legal services .....	4,204	4,858	1,597	48,034
Communications .....	3,977	4,125	592	55,713
Paper and allied products .....	3,754	3,697	570	34,548
Transportation equipment .....	3,696	3,672	618	37,932
Primary metal industries .....	3,556	3,923	877	61,068
Construction other than building .....	3,544	3,758	601	30,191
Measuring and analyzing instruments .....	3,501	4,062	960	38,594
Nondepository institutions .....	3,442	5,062	239	21,996

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002, Appendix Tables A1 and A6. See Web site at <<http://lehd.dsd.census.gov>>.

In Pennsylvania in 2002, the industries that employed the highest proportions of workers 55–64 years old, and hence were likely to be affected by retirements in the coming decade were: apparel from fabrics, textile mill products, primary metal industries, and local and suburban transit.

The local and suburban transit and real estate industries had high proportions of workers 65 years and older. In terms of pay, older workers tended to fare best in industries with relatively few older workers and, as for all workers, in

industries with many highly trained, professional employees, such as in financial firms.

## SOURCES AND ACCURACY OF THE DATA

### Background

The U.S. Census Bureau and partner states produce Quarterly Workforce Indicators (QWI) for each state, metropolitan area, county, and Workforce Investment Board area. QWI for other geographic areas are available through the state partners.

The QWI are updated each quarter and annual averages are available at <<http://lehd.dsd.census.gov>>.

### Overview

The QWI are key economic indicators selected jointly by the Census Bureau and its partner states. Each QWI provides a critical measure of an area's economy and is a tool to understand changes in the core performance of local economies.

The QWI are updated 7 months after the end of a quarter, which makes them a current and a historical time series to monitor econom-



ic change. They serve as early indicators to states and local areas of emerging trends and help to identify turning points in the dynamics of the workforce and specific industries.

The database covers about 98 percent of the labor force.<sup>10</sup> The QWI are derived from state administrative records and basic demographic information from other existing sources. Some information about the workforce is not now available in this database, including hours and weeks worked, educational attainment, occupation, and whether workers worked for an entire quarter or a part of the quarter. There are other types of errors in administrative data, including coding errors in personal identifiers, coding errors in business identifiers, and errors in wage records (see the technical documentation on <<http://lehd.dsd.census.gov>>).

Because the QWI come from a mixture of sources, they are not directly comparable with statistics from worker-based surveys, such as the decennial census, the American Community Survey, and the Current Population Survey. Industries are based on the Standard Industrial Classification (SIC) system. The LED program will convert from the SIC system to the North American Industry Classification System (NAICS) in early 2004. Some classification titles appear to be similar, but the

<sup>10</sup> The database for each state covers about 98 percent of nonagricultural, private wage, and salaried employment. Most state and local government employees are included, but many federal workers are not (depending on the state). The remaining 2 percent are railroad workers and workers for some nonprofit organizations. Self-employed workers and independent contractors are not in the covered universe. See: U.S. Census Bureau, David W. Stevens and Julia Lane, "Employment That Is Not Covered By State Unemployment," Technical Paper No. TP-2002-16, January 2002, available on <<http://lehd.dsd.census.gov>>.

detailed industry groups that compose the categories may differ between the SIC and NAICS systems.

Enhanced Unemployment Insurance (UI) wage records are the basic data source for the QWI.

Administrative records and the surveys differ in coverage, the timing of data collection, and concept definitions. The QWI are not exactly comparable with establishment surveys either, such as those from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW) program, which capture employment at an establishment on the 12th of the month.

The LED database can respond to a wide variety of questions about the workforce because it allows multiple definitions of "employment." That is because the QWI are job-based statistics and different from the worker-based statistics familiar to many researchers.<sup>11</sup> The LED database includes all jobs held:

1. In a quarter, regardless of length of time the job is held
- 2. At the beginning of a quarter (the measure used in this report)**
3. At the end of a quarter
4. For a full quarter

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 that the trends are similar to those shown by worker-based surveys such as the decennial census, although the levels differ.

Another difference among datasets is measurement of earnings. According to the BLS Handbook of

<sup>11</sup> For the QWI, a "job" is defined as equivalent records for an employer and employee.

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 Old Age Survivor 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, what appears for an industry such as retail trade to be low average earnings in a given year or quarter may be the result of relatively low hourly wages, not working many hours in the time period, or both. In retail trade, much of the work is part-time and this affects the LED measure of average earnings.

### **The confidentiality of the statistics is protected.**

The Census Bureau and the state partners are committed to protecting the confidentiality of the data in the LED files. Technically, the approach to avoid disclosure of individual information is to combine cell suppression methodology with the addition of statistical noise, controlling key measures to county employment levels as reported by the Bureau of Labor Statistics. In plainer English, the statistical techniques the Census Bureau uses mean that the actual statistics are not shown if the numbers in a cell are small. Rather, the statistics that are shown are "fuzzy," that is, close to the actual information but not exact.

Only Census Bureau employees or individuals who have Special Sworn Status are permitted to work with the data. Everyone who has access to Title 13 data must have an official security clearance based on a background check, including fingerprinting. Additionally, they are subject to a fine of up to \$250,000, up to 5

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years in jail, or both, if confidential information is disclosed. The Census Bureau and state data custodians review all projects 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.dsd.census.gov>.

### **Why the Census Bureau produces the LED statistics**

The Census Bureau and the state partners are committed to protecting the integrity of information and producing the highest quality statistics. We accomplish this by ensuring that the LED program is consistent with the Census Bureau's legal authority and mission, that the methodologies used are the best alternatives, and that

the LED program produces demonstrated benefits.

The state partners and the Census Bureau both benefit from the LED program. The state partners fulfill their mandate to provide high quality regional labor market information, and the Census Bureau improves the economic and demographic survey estimates and intercensal population estimates. Specifically, the LED program supports Census Bureau research on improving the quality, use, and analysis of its census, survey, and estimation-based data products.

Estimates of the employed population by demographic, geographic, and industrial detail enhance the Census Bureau's existing agency-wide programs. In particular, estimates of workers in each county and industry, in conjunction with statistical information about

employers, will provide long-needed and critical but previously unavailable information for key programs, such as the demographic survey estimates and the intercensal population estimates program. Census Bureau programs will benefit from new information on turnover, job creation, and job destruction by age and sex, and information on the employment of individuals in each county.

More information about the benefits of the LED program may be found on the LED Web site at <http://lehd.dsd.census.gov>.

### **ACKNOWLEDGMENT**

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## APPENDIX TABLES

Table A1.

### Employment in Pennsylvania by Industry and Age: 2002

[Beginning-of-quarter employment]

Industry	14-44 years	45-54 years	55-64 years	65 years and older	14 years and older
<b>Total, age group</b> .....	<b>3,010,829</b>	<b>1,074,107</b>	<b>539,650</b>	<b>164,143</b>	<b>4,788,729</b>
<b>Agriculture</b>					
Agricultural production—crops .....	8,766	2,543	1,328	935	13,571
Agricultural production—livestock .....	3,281	788	413	276	4,757
Agricultural services .....	24,974	5,111	2,001	753	32,839
Forestry .....	358	117	47	34	555
Fishing, hunting, and trapping .....	59	24	*10	*5	98
<b>Mining</b>					
Metal mining .....	13	4	-	-	21
Coal mining .....	2,727	4,440	1,526	172	8,865
Oil/gas extraction .....	2,269	942	308	102	3,621
Mining/quarrying—nonmetallic .....	3,148	1,489	785	217	5,639
<b>Construction</b>					
Building construction—general contractors .....	38,328	13,193	5,251	1,413	58,184
Construction other than building .....	17,922	7,877	3,791	601	30,191
Construction—special trade .....	107,290	32,453	13,379	3,533	156,656
<b>Manufacturing</b>					
Food/kindred products .....	51,138	22,479	10,867	2,223	86,708
Tobacco products .....	*653	*346	*270	*55	*1,326
Textile mill products .....	6,962	3,875	2,536	571	13,945
Apparel from fabrics .....	11,502	6,686	4,951	1,349	24,488
Lumber and wood products .....	27,344	7,871	3,550	810	39,574
Furniture/fixtures .....	10,730	4,407	2,205	377	17,720
Paper/allied products .....	19,997	9,320	4,661	570	34,548
Printing/publishing .....	42,833	18,024	9,730	2,729	73,316
Chemicals .....	42,676	20,271	9,036	1,530	73,514
Petroleum refining .....	2,724	1,900	926	86	5,635
Rubber and plastics .....	28,391	11,582	5,700	877	46,550
Leather and leather products .....	2,431	982	589	117	4,118
Stone, clay, and glass .....	20,033	11,825	5,513	794	38,165
Primary metal industries .....	27,821	21,583	10,787	877	61,068
Fabricated metal products .....	46,131	22,729	12,223	2,133	83,216
Industrial/commercial machinery .....	45,348	24,999	13,573	2,226	86,146
Electronic/electrical equipment .....	35,302	17,500	9,101	1,252	63,154
Transportation equipment .....	19,591	11,751	5,972	618	37,932
Measuring/analyzing instruments .....	20,445	11,147	6,043	960	38,594
Miscellaneous manufacturing .....	9,399	5,177	2,639	505	17,720
<b>Transportation, Communication, and Utilities</b>					
Railroad transport .....	22	9	4	-	*35
Local/suburban transit .....	20,182	8,373	6,896	4,834	40,285
Motor freight transportation .....	48,075	20,345	10,803	2,628	81,850
Water transportation .....	1,812	934	473	114	3,333
Transportation by air .....	*29,310	*11,142	*4,013	289	44,755
Pipelines, except natural gas .....	199	*184	*52	*5	442
Transportation services .....	8,261	2,896	1,691	527	13,375
Communications .....	35,508	14,198	5,416	592	55,713
Electrical, gas, and sanitary services .....	20,181	15,408	5,523	356	41,467
<b>Wholesale Trade</b>					
Wholesale trade—durables .....	91,068	39,185	20,246	8,189	158,689
Wholesale trade—nondurables .....	60,401	23,442	11,592	3,804	99,239
<b>Retail Trade</b>					
Building materials and hardware .....	28,222	9,232	5,004	2,141	44,599
General merchandise stores .....	79,767	24,157	15,570	6,809	126,303
Food stores .....	120,673	28,122	15,761	7,629	172,183
Car dealers and gas stations .....	62,318	18,775	10,338	5,971	97,402
Apparel and accessory stores .....	40,839	6,209	3,721	1,753	52,522
Home furniture stores .....	28,399	6,975	3,701	1,462	40,536
Eating and drinking places .....	269,386	35,297	16,890	7,434	329,006
Miscellaneous retail .....	93,547	26,795	15,295	7,038	142,675

Table A1.  
**Employment in Pennsylvania by Industry and Age: 2002** — Con.

[Beginning-of-quarter employment]

Industry	14-44 years	45-54 years	55-64 years	65 years and older	14 years and older
<b>Finance, Insurance, and Real Estate</b>					
Depository institutions . . . . .	59,245	24,958	12,595	2,496	99,293
Nondepository institutions . . . . .	15,930	4,065	1,761	239	21,996
Security and commodity brokers . . . . .	15,201	4,575	2,291	693	22,760
Insurance carriers . . . . .	53,692	21,680	8,449	1,221	85,042
Insurance agents/brokers . . . . .	22,208	9,536	4,997	1,330	38,069
Real estate . . . . .	27,674	11,989	7,536	3,757	50,955
Holding/other investment offices . . . . .	10,126	2,932	1,323	357	*14,737
<b>Services</b>					
Hotels/other lodging places . . . . .	34,684	8,996	5,167	2,246	51,092
Personal services . . . . .	36,916	10,351	6,054	2,963	56,284
Business services . . . . .	206,044	56,275	27,924	10,453	300,696
Car repair, services, and parking . . . . .	35,829	9,470	4,588	2,222	52,108
Miscellaneous repair services . . . . .	7,879	2,990	1,581	509	12,958
Motion pictures . . . . .	11,000	1,292	511	273	13,075
Amusement and recreation services . . . . .	51,629	10,569	5,792	3,974	71,963
Health services . . . . .	346,966	155,055	69,527	15,657	587,204
Legal services . . . . .	30,140	10,995	5,302	1,597	48,034
Educational services . . . . .	84,615	43,783	24,793	7,396	160,587
Social services . . . . .	107,348	36,850	18,686	6,284	169,168
Museums, galleries, and gardens . . . . .	2,956	1,086	680	435	5,156
Membership organizations . . . . .	31,012	14,816	8,680	4,229	58,737
Engineering, accounting, and research . . . . .	94,317	33,851	16,909	4,561	149,636
Private households . . . . .	4,949	2,198	1,532	930	9,609
Services, not classified . . . . .	1,704	683	280	55	2,721

- The value equals zero or is suppressed because it does not meet standards for publication.

\* The value has been significantly distorted to protect confidentiality. A description of the confidentiality protection system is available at <<http://www.lehd-test.net/factsheets/index.php>>.

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002. See Web site at <<http://lehd.dsd.census.gov>>.

Table A2.  
**Average Quarterly Turnover Rates in Pennsylvania by Industry and Age: 2002**

[In percent]

Industry	14-44 years	45-54 years	55-64 years	65 years and older	14 years and older
<b>Total</b> .....	<b>13.8</b>	<b>8.3</b>	<b>8.2</b>	<b>9.3</b>	<b>11.4</b>
<b>Agriculture</b>					
Agricultural production—crops .....	16.8	11.1	12.0	15.4	14.7
Agricultural production—livestock.....	14.7	9.1	*9.3	10.1	12.8
Agricultural services .....	18.5	12.3	12.4	16.5	16.7
Forestry .....	21.4	*10.3	*16.7	11.8	16.0
Fishing, hunting, and trapping.....	21.4	-	-	-	12.1
<b>Mining</b>					
Metal mining.....	25.2	-	-	-	43.7
Coal mining.....	9.3	*6.0	*7.2	9.4	*7.2
Oil/gas extraction.....	11.0	7.1	8.4	*7.4	9.6
Mining/quarrying—nonmetallic .....	11.5	*7.8	*8.6	10.7	10.0
<b>Construction</b>					
Building construction—general contractors .....	15.0	10.4	10.3	10.3	13.2
Construction other than building.....	17.0	15.1	14.5	14.1	16.0
Construction—special trade.....	14.8	11.7	11.9	10.9	13.7
<b>Manufacturing</b>					
Food/kindred products .....	10.9	7.3	7.3	8.6	9.3
Tobacco products .....	4.9	*2.9	*3.4	5.9	4.3
Textile mill products.....	9.6	*6.8	7.0	7.3	8.2
Apparel from fabrics .....	11.9	8.8	8.8	9.4	10.1
Lumber and wood products.....	11.8	8.4	8.2	7.7	10.5
Furniture/fixtures .....	11.3	7.4	7.5	9.5	9.6
Paper/allied products .....	10.0	*8.5	*8.9	*10.0	9.3
Printing/publishing .....	9.9	6.9	6.6	7.1	8.4
Chemicals .....	6.4	*4.5	5.1	*4.9	5.6
Petroleum refining .....	10.5	*9.1	*10.2	11.8	9.9
Rubber and plastics .....	9.6	*6.8	*6.8	*8.3	8.4
Leather and leather products .....	10.6	*6.9	*6.5	*8.2	9.0
Stone, clay, and glass .....	9.2	5.4	*6.7	9.3	7.5
Primary metal industries.....	9.0	*8.2	*9.5	*10.2	8.8
Fabricated metal products.....	8.0	5.4	5.4	8.0	6.8
Industrial/commercial machinery .....	8.1	6.5	7.0	8.3	7.4
Electronic/electrical equipment.....	7.7	*6.5	*7.2	8.4	7.3
Transportation equipment .....	7.8	4.4	*5.2	7.3	6.2
Measuring/analyzing instruments.....	8.3	*6.6	*7.3	*7.7	7.5
Miscellaneous manufacturing .....	8.7	4.8	4.8	8.7	6.7
<b>Transportation, Communication, and Utilities</b>					
Railroad transport .....	16.3	*24.0	-	-	11.8
Local/suburban transit .....	14.9	*12.3	*12.6	*12.6	13.6
Motor freight transportation.....	14.3	10.6	9.8	10.1	12.5
Water transportation .....	16.6	*16.1	*15.2	*21.6	16.0
Transportation by air.....	*10.3	*6.7	*7.8	*10.7	*9.1
Pipelines, except natural gas .....	4.9	*2.2	*4.5	-	3.3
Transportation services .....	10.8	8.3	8.8	10.9	9.9
Communications .....	13.7	*14.6	*14.0	*10.4	13.6
Electrical, gas, and sanitary services .....	8.7	*5.9	*7.5	10.0	7.3
<b>Wholesale Trade</b>					
Wholesale trade—durables.....	10.0	6.9	7.1	7.3	8.6
Wholesale trade—nondurables.....	11.9	8.4	7.9	7.9	10.3
<b>Retail Trade</b>					
Building materials and hardware .....	13.1	7.8	7.2	7.8	10.8
General merchandise stores .....	14.9	7.7	6.6	7.1	11.7
Food stores.....	15.7	7.5	7.2	7.7	12.7
Car dealers and gas stations .....	14.6	8.9	8.5	8.5	12.1
Apparel and accessory stores.....	20.9	9.4	8.1	7.9	17.4
Home furniture stores .....	14.9	8.3	7.2	7.3	12.4
Eating and drinking places .....	20.8	11.8	10.3	11.4	18.5
Miscellaneous retail.....	15.7	9.1	8.6	8.3	12.9

Table A2.  
**Average Quarterly Turnover Rates in Pennsylvania by Industry and Age: 2002** — Con.

[In percent]

Industry	14-44 years	45-54 years	55-64 years	65 years and older	14 years and older
<b>Finance, Insurance, and Real Estate</b>					
Depository institutions . . . . .	10.3	*6.7	*7.0	8.3	8.8
Nondepository institutions . . . . .	14.2	11.6	10.8	10.5	13.3
Security and commodity brokers . . . . .	10.8	8.4	7.7	7.8	9.9
Insurance carriers . . . . .	7.4	5.4	5.9	*9.2	6.7
Insurance agents/brokers . . . . .	11.4	8.0	6.9	6.4	9.7
Real estate . . . . .	12.5	8.0	7.0	7.8	10.0
Holding/other investment offices . . . . .	*5.2	5.3	5.3	*5.2	5.1
<b>Services</b>					
Hotels/other lodging places . . . . .	18.0	10.9	10.3	11.6	15.2
Personal services . . . . .	14.7	9.9	8.9	9.1	12.6
Business services . . . . .	21.3	15.7	14.5	14.5	18.8
Car repair, services, and parking . . . . .	13.6	8.4	7.9	8.3	11.6
Miscellaneous repair services . . . . .	12.5	8.8	8.1	8.7	10.8
Motion pictures . . . . .	22.5	12.8	13.7	16.7	20.4
Amusement and recreation services . . . . .	22.5	13.7	15.1	20.8	19.3
Health services . . . . .	11.5	7.7	7.2	8.3	9.8
Legal services . . . . .	8.9	5.4	5.0	5.8	7.4
Educational services . . . . .	11.0	5.6	5.3	7.1	8.1
Social services . . . . .	13.6	8.2	7.4	8.0	11.2
Museums, galleries, and gardens . . . . .	13.3	5.4	6.5	8.5	9.7
Membership organizations . . . . .	15.2	8.1	7.4	8.5	11.2
Engineering, accounting, and research . . . . .	12.7	9.2	9.4	10.9	11
Private households . . . . .	18.8	13.0	11.5	11.1	15.3
Services, not classified . . . . .	12.4	*10.8	*11.3	*11.0	11.7

- The value equals zero or is suppressed because it does not meet standards for publication.

\* The value has been significantly distorted to protect confidentiality. A description of the confidentiality protection system is available at <<http://www.lehd-test.net/factsheets/index.php>>.

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002. See Web site at <<http://lehd.dsd.census.gov>>.

Table A3.  
**Pennsylvania Employment by Industry and Age: 1998 and 2002**

[Beginning-of-quarter employment]

Industry	Under 65		65 and older	
	1998	2002	1998	2002
<b>Total</b> .....	<b>4,558,241</b>	<b>4,624,587</b>	<b>141,311</b>	<b>164,143</b>
<b>Agriculture</b>				
Agricultural production—crops .....	12,392	12,637	744	935
Agricultural production—livestock .....	3,843	4,482	185	276
Agricultural services .....	27,926	32,085	538	753
Forestry .....	552	521	28	34
Fishing, hunting, and trapping .....	111	92	*4	*5
<b>Mining</b>				
Metal mining .....	3	16	-	-
Coal mining .....	11,552	8,693	199	172
Oil/gas extraction .....	3,264	3,519	72	102
Mining/quarrying—nonmetallic .....	5,969	5,422	175	217
<b>Construction</b>				
Building constructio—general contractors .....	55,085	56,772	1,212	1,413
Construction other than building .....	29,035	29,590	527	601
Construction—special trade .....	139,360	153,122	2,737	3,533
<b>Manufacturing</b>				
Food/kindred products .....	88,729	84,484	1,938	2,223
Tobacco products .....	1,089	*1,269	51	*55
Textile mill products .....	21,627	13,373	721	571
Apparel from fabrics .....	37,087	23,139	1,776	1,349
Lumber and wood products .....	36,013	38,765	638	810
Furniture/fixtures .....	17,752	17,343	324	377
Paper/allied products .....	36,629	33,979	485	570
Printing/publishing .....	79,879	70,588	2,756	2,729
Chemicals .....	71,831	71,983	1,307	1,530
Petroleum refining .....	8,962	5,549	96	86
Rubber and plastics .....	46,529	45,673	772	877
Leather and leather products .....	5,425	4,001	124	117
Stone, clay, and glass .....	39,398	37,372	693	794
Primary metal industries .....	70,415	60,191	934	877
Fabricated metal products .....	86,926	81,082	1,959	2,133
Industrial/commercial machinery .....	108,530	83,919	2,384	2,226
Electronic/electrical equipment .....	71,953	61,902	1,164	1,252
Transportation equipment .....	50,922	37,313	568	618
Measuring/analyzing instruments .....	37,467	37,634	850	960
Miscellaneous manufacturing .....	21,163	17,215	534	505
<b>Transportation, Communication, and Utilities</b>				
Railroad transport .....	-	34	-	-
Local/suburban transit .....	30,319	35,451	3,467	4,834
Motor freight transportation .....	71,225	79,223	1,703	2,628
Water transportation .....	3,875	3,219	105	114
Transportation by air .....	*43,224	*44,465	253	289
Pipelines, except natural gas .....	704	435	3	*5
Transportation services .....	13,579	12,848	511	527
Communications .....	58,845	55,122	669	592
Electrical, gas, and sanitary services .....	45,039	41,111	306	356
<b>Wholesale Trade</b>				
Wholesale trade—durables .....	159,362	150,500	7,240	8,189
Wholesale trade—nondurables .....	97,048	95,435	3,661	3,804
<b>Retail Trade</b>				
Building materials and hardware .....	38,563	42,458	1,864	2,141
General merchandise stores .....	109,147	11,949	4,735	6,809
Food stores .....	164,745	16,455	6,238	7,629
Car dealers and gas stations .....	94,258	91,430	4,772	5,971
Apparel and accessory stores .....	49,201	50,769	1,787	1,753
Home furniture stores .....	35,786	39,075	1,351	1,462
Eating and drinking places .....	296,016	32,157	6,571	7,434
Miscellaneous retail .....	126,397	13,563	6,305	7,038

Table A3.  
**Pennsylvania Employment by Industry and Age: 1998 and 2002** — Con.

[Beginning-of-quarter employment]

Industry	Under 65		65 and older	
	1998	2002	1998	2002
<b>Finance, Insurance, and Real Estate</b>				
Depository institutions . . . . .	99,186	96,798	2,246	2,496
Nondepository institutions . . . . .	18,464	21,757	191	239
Security and commodity brokers . . . . .	18,500	22,067	563	693
Insurance carriers . . . . .	87,378	83,821	966	1,221
Insurance agents/brokers . . . . .	32,166	36,740	1,131	1,330
Real estate . . . . .	44,922	47,198	3,447	3,757
Holding/other investment offices . . . . .	11,680	14,380	263	357
<b>Services</b>				
Hotels/other lodging places . . . . .	51,629	48,847	2,078	2,246
Personal services . . . . .	49,273	53,322	2,755	2,963
Business services . . . . .	298,616	290,243	9,759	10,453
Car repair, services, and parking . . . . .	44,689	49,886	1,890	2,222
Miscellaneous repair services . . . . .	12,548	12,449	446	509
Motion pictures . . . . .	13,089	12,803	256	273
Amusement and recreation services . . . . .	62,630	67,989	3,456	3,974
Health services . . . . .	541,777	571,548	12,441	15,657
Legal services . . . . .	43,563	46,437	1,259	1,597
Educational services . . . . .	131,708	153,191	5,922	7,396
Social services . . . . .	139,896	162,884	5,160	6,284
Museums, galleries, and gardens . . . . .	4,017	4,722	344	435
Membership organizations . . . . .	51,973	54,508	3,954	4,229
Engineering, accounting, and research . . . . .	125,414	145,070	3,773	4,561
Private households . . . . .	7,959	8,678	923	930
Services not classified . . . . .	2,404	2,666	54	55

- The value equals zero or is suppressed because it does not meet standards for publication.

\* The value has been significantly distorted to protect confidentiality. A description of the confidentiality protection system is available at <<http://www.lehd-test.net/factsheets/index.php>>.

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002. See Web site at <<http://lehd.dsd.census.gov>>.



Table A4.

**Composition of Job Gain in Pennsylvania by Industry and Age: 2002**

Industry	14-44 years	45-54 years	55-64 years	65 years and older
<b>Total.....</b>	<b>308,499</b>	<b>67,433</b>	<b>32,259</b>	<b>11,324</b>
<b>Agriculture</b>				
Agricultural production—crops .....	1,336	282	177	144
Agricultural production—livestock.....	407	63	33	21
Agricultural services .....	5,048	654	278	129
Forestry .....	89	14	8	6
Fishing, hunting, and trapping.....	16	2	*1	-
<b>Mining</b>				
Metal mining.....	3	-	-	-
Coal mining.....	204	109	39	9
Oil/gas extraction.....	228	51	19	7
Mining/quarrying—nonmetallic .....	286	78	47	14
<b>Construction</b>				
Building constructio—general contractors.....	5,868	1,263	495	130
Construction other than building.....	2,409	890	395	73
Construction—special trade.....	15,161	3,383	1,385	357
<b>Manufacturing</b>				
Food/kindred products .....	4,111	1,091	492	143
Tobacco products .....	*16	*7	*4	*1
Textile mill products.....	561	195	122	25
Apparel from fabrics .....	903	327	216	63
Lumber and wood products.....	2,383	483	211	49
Furniture/fixtures .....	842	223	98	18
Paper/allied products .....	1,272	421	192	24
Printing/publishing .....	3,052	902	416	99
Chemicals.....	2,859	1,158	488	36
Petroleum refining .....	568	473	219	13
Rubber and plastics .....	1,960	526	226	45
Leather and leather products .....	174	46	26	4
Stone, clay, and glass .....	1,217	397	165	40
Primary metal industries.....	1,389	558	261	33
Fabricated metal products.....	2,834	838	388	87
Industrial/commercial machinery .....	2,679	1,060	542	104
Electronic/electrical equipment.....	1,414	511	267	38
Transportation equipment .....	1,589	649	266	27
Measuring/analyzing instruments.....	1,332	522	292	45
Miscellaneous manufacturing .....	839	229	109	34
<b>Transportation, Communication, and Utilities</b>				
Railroad transport .....	-	-	-	-
Local/suburban transit .....	1,896	557	438	274
Motor freight transportation.....	5,523	1,781	834	207
Water transportation .....	261	81	41	13
Transportation by air.....	*1,972	*550	*187	22
Pipelines, except natural gas .....	*55	*34	*17	*1
Transportation services .....	684	171	123	42
Communications .....	2,693	504	183	34
Electrical, gas, and sanitary services .....	1,539	792	253	26
<b>Wholesale Trade</b>				
Wholesale trade—durables.....	7,438	1,973	1,017	339
Wholesale trade—nondurables.....	5,175	1,327	595	216
<b>Retail Trade</b>				
Building materials and hardware .....	2,492	466	276	124
General merchandise stores.....	5,696	977	467	193
Food stores.....	10,481	1,322	706	345
Car dealers and gas stations .....	7,398	1,404	815	417
Apparel and accessory stores.....	5,280	507	263	105
Home furniture stores.....	3,096	479	240	88
Eating and drinking places .....	37,058	3,593	1,577	764
Miscellaneous retail.....	11,328	2,105	1,149	470

Table A4.

**Composition of Job Gain in Pennsylvania by Industry and Age: 2002** — Con.

Industry	14-44 years	45-54 years	55-64 years	65 years and older
<b>Finance, Insurance, and Real Estate</b>				
Depository institutions.....	2,693	555	263	76
Nondepository institutions.....	1,776	372	151	27
Security and commodity brokers.....	1,152	241	109	32
Insurance carriers.....	2,683	757	300	49
Insurance agents/brokers.....	2,292	700	337	68
Real estate.....	3,297	809	455	248
Holding/other investment offices.....	327	112	62	16
<b>Services</b>				
Hotels/other lodging places.....	4,569	771	433	219
Personal services.....	5,430	1,316	773	333
Business services.....	29,143	6,373	3,118	1,285
Car repair, services, and parking.....	4,228	736	348	155
Miscellaneous repair services.....	889	206	99	34
Motion pictures.....	1,504	106	49	24
Amusement and recreation services.....	13,600	1,627	973	786
Health services.....	25,789	7,693	3,155	785
Legal services.....	2,427	535	246	79
Educational services.....	7,432	2,219	1,137	382
Social services.....	10,997	2,269	1,091	409
Museums, galleries, and gardens.....	325	52	40	32
Membership organizations.....	4,155	1,067	572	315
Engineering, accounting, and research.....	8,985	2,420	1,238	363
Private households.....	1,226	345	198	111
Services, not classified.....	235	79	35	7

- The value equals zero or is suppressed because it does not meet standards for publication.

\* The value has been significantly distorted to protect confidentiality. A description of the confidentiality protection system is available at <<http://www.lehd-test.net/factsheets/index.php>>.

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002. See Web site at <<http://lehd.dsd.census.gov>>.

Table A5.  
**Composition of Job Loss in Pennsylvania by Industry and Age: 2002**

Industry	14-44 years	45-54 years	55-64 years	65 years and older
<b>Total.....</b>	<b>272,678</b>	<b>68,338</b>	<b>39,358</b>	<b>15,551</b>
<b>Agriculture</b>				
Agricultural production—crops .....	1,231	273	163	152
Agricultural production—livestock.....	380	62	36	26
Agricultural services .....	4,482	623	260	139
Forestry .....	89	16	7	6
Fishing, hunting, and trapping.....	10	1	*2	*1
<b>Mining</b>				
Metal mining.....	2	-	-	-
Coal mining.....	255	318	145	21
Oil/gas extraction.....	180	51	23	9
Mining/quarrying—nonmetallic .....	279	85	59	26
<b>Construction</b>				
Building construction—general contractors.....	5,541	1,282	569	176
Construction other than building.....	2,444	1,013	531	101
Construction—special trade.....	14,127	3,451	1,608	479
<b>Manufacturing</b>				
Food/kindred products .....	3,573	1,288	775	215
Tobacco products .....	27	*7	*8	*6
Textile mill products.....	533	229	164	54
Apparel from fabrics .....	1,050	553	450	155
Lumber and wood products.....	1,795	379	200	73
Furniture/fixtures .....	874	233	158	45
Paper/allied products .....	1,587	746	437	63
Printing/publishing .....	3,449	1,110	672	221
Chemicals.....	1,850	917	607	84
Petroleum refining .....	448	411	218	17
Rubber and plastics .....	1,784	579	338	88
Leather and leather products .....	172	49	33	9
Stone, clay, and glass .....	1,481	521	399	90
Primary metal industries.....	1,222	638	729	94
Fabricated metal products.....	2,881	1,071	701	220
Industrial/commercial machinery .....	3,127	1,349	942	234
Electronic/electrical equipment.....	2,286	1,001	716	144
Transportation equipment .....	1,040	443	351	59
Measuring/analyzing instruments.....	824	340	263	81
Miscellaneous manufacturing .....	711	248	159	53
<b>Transportation, Communication, and Utilities</b>				
Railroad transport .....	3	*1	-	-
Motor freight transportation.....	4,511	1,566	924	284
Water transportation .....	207	97	56	16
Transportation by air.....	*1,634	*417	*228	30
Pipelines, except natural gas .....	*41	*28	*15	*2
Transportation services .....	641	204	126	51
Communications .....	3,465	1,910	844	77
Electrical, gas, and sanitary services .....	1,482	899	528	40
<b>Wholesale Trade</b>				
Wholesale trade—durables.....	7,217	2,324	1,339	574
Wholesale trade—nondurables.....	5,328	1,612	865	331
<b>Retail Trade</b>				
Building materials and hardware .....	2,324	465	288	167
General merchandise stores.....	5,676	1,105	711	393
Food stores.....	9,955	1,469	902	552
Car dealers and gas stations .....	6,241	1,315	773	485
Apparel and accessory stores.....	5,135	475	286	158
Home furniture stores.....	2,922	477	256	122
Eating and drinking places .....	32,597	3,318	1,506	817
Miscellaneous retail.....	10,243	2,095	1,245	643

Table A5.

**Composition of Job Loss in Pennsylvania by Industry and Age: 2002** — Con.

Industry	14-44 years	45-54 years	55-64 years	65 years and older
<b>Finance, Insurance, and Real Estate</b>				
Depository institutions.....	3,957	1,274	816	236
Nondepository institutions.....	1,074	288	143	29
Security and commodity brokers.....	1,195	331	176	60
Insurance carriers.....	2,024	768	404	137
Insurance agents/brokers.....	1,619	541	295	95
Real estate.....	2,746	749	492	317
Holding/other investment offices.....	381	124	68	23
<b>Services</b>				
Hotels/other lodging places.....	3,851	669	435	260
Personal services.....	4,306	1,036	632	320
Business services.....	23,818	5,340	2,939	1,332
Car repair, services, and parking.....	3,808	719	350	176
Miscellaneous repair services.....	842	234	132	48
Motion pictures.....	1,592	173	75	50
Amusement and recreation services.....	11,274	1,367	839	786
Health services.....	19,385	6,983	3,676	1,287
Legal services.....	2,110	519	281	113
Educational services.....	5,365	1,798	1,155	544
Social services.....	8,456	1,904	1,103	513
Museums, galleries, and gardens.....	277	44	46	37
Membership organizations.....	3,635	974	616	367
Engineering, accounting, and research.....	8,571	2,485	1,419	515
Private households.....	922	280	186	111
Services, not classified.....	158	55	23	7

- The value equals zero or is suppressed because it does not meet standards for publication.

\* The value has been significantly distorted to protect confidentiality. A description of the confidentiality protection system is available at <<http://www.lehd-test.net/factsheets/index.php>>.

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002. See Web site at <<http://lehd.dsd.census.gov>>.

Table A6.  
**Average Monthly Earnings in Pennsylvania by Industry and Age: 2002**

[Full-quarter earnings, in dollars]

Industry	45-54 years	55-64 years	65 years and older	14 years and older
<b>Total.....</b>	<b>3,613</b>	<b>3,303</b>	<b>1,880</b>	<b>2,953</b>
<b>Agriculture</b>				
Agricultural production—crops .....	2,321	1,966	1,430	1,926
Agricultural production—livestock.....	2,303	1,988	1,126	1,816
Agricultural services .....	2,659	2,461	1,768	2,100
Forestry .....	2,423	1,685	*1,547	1,914
Fishing, hunting, and trapping.....	1,993	*2,091	*759	1,872
<b>Mining</b>				
Metal mining.....	3,927	-	-	3,237
Coal mining.....	4,731	4,180	2,497	4,298
Oil/gas extraction.....	4,572	4,086	2,743	3,733
Mining/quarrying—nonmetallic .....	3,290	3,262	2,869	3,070
<b>Construction</b>				
Building construction—general contractors.....	3,935	3,759	2,555	3,284
Construction other than building.....	4,153	4,176	3,544	3,758
Construction—special trade.....	3,883	3,668	2,336	3,299
<b>Manufacturing</b>				
Food/kindred products .....	3,636	3,315	2,183	3,159
Tobacco products .....	*3,555	*3,652	*2,643	*3,334
Textile mill products.....	2,561	2,516	2,163	2,439
Apparel from fabrics .....	2,220	1,957	1,751	2,096
Lumber and wood products.....	2,925	2,942	1,985	2,566
Furniture/fixtures .....	3,145	3,062	2,703	2,789
Paper/allied products .....	4,041	4,064	3,754	3,697
Printing/publishing .....	3,572	3,379	1,969	3,165
Chemicals.....	6,753	5,998	2,463	5,877
Petroleum refining .....	4,609	4,729	4,610	4,230
Rubber and plastics .....	3,334	3,454	3,208	3,019
Leather and leather products .....	2,999	2,931	1,932	2,803
Stone, clay, and glass .....	4,140	4,163	3,073	3,726
Primary metal industries.....	4,258	4,206	3,556	3,923
Fabricated metal products.....	3,537	3,601	3,169	3,200
Industrial/commercial machinery .....	4,258	4,210	3,209	3,797
Electronic/electrical equipment.....	4,003	3,829	3,437	3,804
Transportation equipment .....	3,947	4,193	3,696	3,672
Measuring/analyzing instruments.....	4,365	4,410	3,501	4,062
Miscellaneous manufacturing .....	4,039	3,755	2,565	3,510
<b>Transportation, Communication, and Utilities</b>				
Railroad transport .....	*2,849	*3,225	-	3,289
Local/suburban transit .....	1,473	1,329	927	1,316
Motor freight transportation.....	3,303	3,177	1,921	2,941
Water transportation .....	3,787	3,869	3,132	3,088
Transportation by air.....	*4,458	*4,758	2,160	3,336
Pipelines, except natural gas .....	*7,397	*6,907	*309	6,772
Transportation services .....	3,441	3,053	1,850	3,013
Communications .....	4,622	4,289	3,977	4,125
Electrical, gas, and sanitary services .....	5,704	5,399	2,626	5,254
<b>Wholesale Trade</b>				
Wholesale trade—durables.....	4,424	3,904	2,022	3,804
Wholesale trade—nondurables.....	4,074	3,678	2,303	3,566
<b>Retail Trade</b>				
Building materials and hardware .....	2,500	2,194	1,361	2,145
General merchandise stores .....	1,863	1,647	1,078	1,583
Food stores.....	2,064	1,706	912	1,477
Car dealers and gas stations .....	3,261	2,699	1,317	2,621
Apparel and accessory stores.....	2,119	1,909	1,125	1,514
Home furniture stores.....	2,845	2,514	1,514	2,340
Eating and drinking places .....	1,503	1,321	840	1,090
Miscellaneous retail.....	2,336	2,020	1,195	1,886

Table A6.  
**Average Monthly Earnings in Pennsylvania by Industry and Age: 2002** — Con.

[Full-quarter earnings, in dollars]

Industry	45-54 years	55-64 years	65 years and older	14 years and older
<b>Finance, Insurance, and Real Estate</b>				
Depository institutions . . . . .	3,928	3,613	1,957	3,284
Nondepository institutions . . . . .	5,687	4,902	3,442	5,062
Security and commodity brokers . . . . .	7,944	8,221	6,701	6,665
Insurance carriers . . . . .	5,011	4,476	2,354	4,203
Insurance agents/brokers . . . . .	4,600	4,138	3,291	3,933
Real estate . . . . .	3,263	2,924	1,783	2,793
Holding/other investment offices . . . . .	6,176	5,514	4,644	5,031
<b>Services</b>				
Hotels/other lodging places . . . . .	1,838	1,648	1,181	1,567
Personal services . . . . .	1,846	1,690	999	1,579
Business services . . . . .	3,394	2,840	1,422	3,007
Car repair, services, and parking . . . . .	2,857	2,414	1,229	2,399
Miscellaneous repair services . . . . .	3,170	2,942	1,710	2,798
Motion pictures . . . . .	3,178	2,890	1,084	1,702
Amusement and recreation services . . . . .	2,118	1,831	1,119	1,587
Health services . . . . .	3,658	3,441	2,357	3,088
Legal services . . . . .	5,608	5,306	4,204	4,858
Educational services . . . . .	3,679	3,919	2,936	3,295
Social services . . . . .	2,211	2,127	1,275	1,902
Museums, galleries, and gardens . . . . .	2,857	2,561	1,017	2,162
Membership organizations . . . . .	1,911	1,933	999	1,578
Engineering, accounting, and research . . . . .	5,399	5,151	3,255	4,469
Private households . . . . .	1,428	1,397	1,123	1,256
Services, not classified . . . . .	6,274	6,076	3,081	4,919

- The value equals zero or is suppressed because it does not meet standards for publication.

\* The value has been significantly distorted to protect confidentiality. A description of the confidentiality protection system is available at <<http://www.lehd-test.net/factsheets/index.php>>.

Note: Earnings for workers 65 years and older may reflect lump sum distributions.

Source: U.S. Census Bureau and the Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis, Local Employment Dynamics program, 2002. See Web site at <<http://lehd.dsd.census.gov>>.

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