A PROFILE OF PENNSYLVANIA'S UNEMPLOYED

pennsylvania
DEPARTMENT OF LABOR & INDUSTRY
CENTER FOR WORKFORCE INFORMATION & ANALYSIS

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Preface

Explanatory Notes on the Studies of Pennsylvania's Unemployed in the Aftermath of the Great Recession

During the beginning of the recovery from the Great Recession, two studies were undertaken by The Pennsylvania Department of Labor and Industry's Center for Workforce Information and Analysis (CWIA) to determine how Pennsylvania's labor market had reacted to the national downturn and how much it had improved since. Of particular interest was a better understanding of the nature and causes of the remaining unemployment, so that decision makers could devise remedies for the kinds of unemployment that persisted even after the recession ended. Due to resource limitations these studies had to be conducted sequentially, rather than simultaneously. Three phases of the study were envisioned. The first phase, which focused on the broader unemployment population, was encapsulated in a report titled, "A Profile of Pennsylvania's Unemployed", which was completed in the fall of 2013 (using the then available data). The second phase was targeted to individuals who were filing claims in the Unemployment Compensation (UC) system. The third phase dealt with individuals who were UC exhaustees. The final two phases were conducted simultaneously by conducting a survey of the relevant populations (during the Summer of 2014) and resulted in a companion report titled, "A Survey of Pennsylvania Unemployment Compensation Recipients", which was released in April of 2015.

"A Profile of Pennsylvania's Unemployed"

This study analyzed the impact of the Great recession on Pennsylvania's labor market by comparing data from before, during, and after the recession (i.e. the recovery). It used three data sources: Local Area Unemployment Statistics (LAUS), Current Population Survey (CPS), and Unemployment Compensation (UC), each of which provided a different perspective on the unemployment problem. The study looked at the demographics of the unemployed, their industries, the duration of unemployment, and the nature of the cause of their unemployment. Since the remedies to unemployment as well as its costs depend on whether it is frictional, structural, or cyclical, a taxonomy was developed to classify individuals into the three types. The last section of the report deals with UC claimants who would generally be a subset of the non-frictionally unemployed. Their characteristics were compared to the overall unemployed population. Questions that remained regarding this group were addressed in the follow-up study, "A Survey of Pennsylvania Unemployment Compensation Recipients."

“A Survey of Pennsylvania Unemployment Compensation Recipients”

This companion report to “A Profile of Pennsylvania’s Unemployed,” is a follow-up to the last section of that report. Utilizing a survey of two distinct populations of UC recipients, it generates more detailed information on these groups than was available from the data in the UC system. The first group was comprised of active claimants at the time the sample was drawn, while members of the second group had exhausted their benefits or their benefits had been terminated when the government stopped funding the Emergency Unemployment Compensation Program in December of 2013. These two groups served as proxies for the short-term unemployed and the long-term unemployed respectively. Results for these two groups were compared to each other, and to the unemployed population as depicted by the Current Population Survey (CPS) data for 2013. This study extends the previous study by analyzing rural and urban differences, steps taken to get jobs (education, pay cuts, etc.), search methods and effectiveness of those methods, in addition to the usual analysis regarding demographics, industries and the like. Since the survey was completed in late 2014, it also provides a snapshot a little later in time for how much progress has been made in the healing of Pennsylvania’s labor market and any problems that remain.

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Executive Summary

In 2012, Pennsylvania had an average level of unemployment in excess of 510,000, with a large portion being unemployed long-term. By year's end, more than 200,000 were collecting unemployment compensation benefits. This represents a large portion of the 'supply' of labor that needs to be absorbed by employer demand to lower the state's unemployment rate. To accomplish this goal, the Department needs to better understand the nature and causes of that unemployment, which is the purpose of this report. High-level findings from the research and analysis of unemployed individuals in Pennsylvania include:

On the Causes and Types of Unemployment

- Frictional unemployment arises due to the dynamic nature of the labor market. At any time, many workers will be between jobs (voluntarily or involuntarily) as some employers cut employment while others expand. Additional workers also enter and re-enter the labor market looking for work. In 2012, 25 percent of the unemployed were considered to be frictionally unemployed.
- Structural unemployment arises due to a mismatch of skills in a given area or an inability of workers to relocate to other areas where jobs are available. In 2012, 39 percent of the unemployed were considered to be structurally unemployed.
- Arising only during economic downturns, cyclical unemployment is caused by an overall imbalance between the available number of jobs and a greater number of workers available to fill them; the most dramatic change from pre- to post-recession was the increase in the volume of individuals who were cyclically unemployed. In 2007, when the economy was at "full employment" cyclical unemployment was absent; however, in 2012, 36 percent of the unemployed were considered to be cyclically unemployed.

On the Nature and Geographic Distribution of the Unemployed in Pennsylvania

- At the start of the recession the unemployment rate in Pennsylvania stood at 4.6 percent and peaked at 8.7 percent in March 2010. It fell to 7.6 percent in March 2012, but ended that year at 7.9 percent.
- From 2011 to 2012, 32 counties experienced unemployment rate decreases, 9 counties saw no change, and 26 counties had over-the-year unemployment rate increases.
- While not true for all counties, the south central portion of the state, as well as the western region, are faring better than other regions across the state in terms of unemployment rate.
- The improvement in the unemployment rate in the post-recession period has occurred in spite of the fact that Pennsylvania's labor force has been increasing. In December

2012, Pennsylvania's seasonally adjusted civilian labor force reached an all-time high, in excess of 6.5 million.

On the Detailed Characteristics of the Unemployed

- From 2007 to 2010 the unemployment rates for nearly every age cohort (with the exception of those aged 16-19) doubled. From 2010 to 2012 no age cohort (with the exception of those aged 16-19) experienced unemployment rates returning to pre-recession levels. From 2007 to 2012 the unemployment rate for individuals 65 and over continued to increase.
- The unemployment rate for Black, non-Hispanic individuals increased the most from 2007 to 2010 (+9.1 percentage points), and decreased only 1.3 percentage points from 2010 to 2012.
- Unemployment rates increased among individuals with all levels of educational attainment from 2007 to 2010; the unemployment rates for individuals without college degrees began to decrease by 2012, while the unemployment rate continued to increase for individuals with either an associate degree or bachelor's degree.
- Certain industries had a higher concentration of unemployed workers than their share of overall employment in the state: construction; professional and business services; information; leisure and hospitality; and wholesale and retail trade. This was especially true for the construction industry, as there were more than twice as many unemployed individuals from this industry than the industry's share of overall employment.
- Certain occupational groups had a higher concentration of unemployed workers than their share of overall employment in the state: construction and extraction; transportation and material moving; production; service; and sales. This was especially true for the construction and extraction occupations, as there were more than twice as many unemployed individuals from this occupational group than the occupational group's share of overall employment.
- As the economy recovered from the Great Recession, the number of individuals who were unemployed short-term fell to almost its pre-recession level, but the level of long-term unemployed remained high during the recovery and its proportion of total unemployment remained elevated. Workers becoming unemployed for voluntary reasons are often seen as a good indicator for the economy, signifying that they have confidence in finding a job. In 2007, more than half of the unemployed were classified as voluntary, but this number dipped to 37 percent in 2010. While this percentage has climbed back to 40 percent, it remains lower than prior to the recession, signifying less confidence in the labor market.
- The duration of unemployment tended to increase with age in 2012. Those unemployed long-term comprised only 14 percent of the total unemployed among the 16 to 19 year

old age cohort, but accounted for 53 percent of those 65 and older who were unemployed.

On the Composition of Individuals Utilizing the Unemployment Compensation (UC) System

- More than 70 percent of UC recipients in 2012 worked more than three full years between 2006 and 2010; more than half worked more than four full years during that period. This provides evidence that the majority of UC recipients were significantly attached to the labor force prior to their current bout of unemployment.

Introduction

The Great Recession may be officially over, but its lasting effects continue to pose challenges. The number of individuals who remain unemployed even during the recovery is one of the most critical issues facing the nation's economy today. It is imperative to understand who the unemployed are, in order to inform policy development that addresses the unemployment situation in Pennsylvania. This report provides an analysis of the characteristics of the unemployed in Pennsylvania.

To see how the unemployment population has changed over the course of the Great Recession, multiple time periods are examined throughout this report. Specifically, data from 2007 (prior), 2010 (during), and 2012 (recovery)[1] are analyzed to determine which aspects of the unemployed population have changed, and which have remained constant.

Three data sources covering different aspects and subsamples of the unemployed are examined to gain a more complete understanding of the unemployed in Pennsylvania: Local Area Unemployment Statistics (LAUS), Current Population Survey (CPS), and Unemployment Compensation (UC). Many individuals are captured in these varied data sets, however each provides a unique perspective into the unemployed population in Pennsylvania, as different individuals are captured in each. Explanations of the data sets are included at the beginning of each section of this report.

This report focuses on individuals who are defined as "unemployed" by the United States Bureau of Labor Statistics (BLS); individuals not currently working, and also looking for work. In a broader sense, the problem of unemployment would also include under-employed and discouraged workers. The under-employed are people who are working in jobs for which they are over-qualified or are working fewer hours than they would like to be. Discouraged workers are not working but are also not actively seeking employment. They were available to work, and have looked for employment sometime in the past year, but have not looked in the past four weeks.

[1] According to the National Bureau of Economic Research, the recession began in December of 2007 and ended in June of 2009. However, labor markets tend to lag behind output markets so the unemployment effects of the recession became evident in 2008 and reached their maximum during the first quarter of 2010. When using annual data, it therefore makes sense to characterize 2007 as prior and 2010 as during the recession.

Causes of Unemployment:
Not All Unemployment Is the Same

Unemployment is usually classified as being one of three categories: frictional, structural, or cyclical.

Frictional unemployment arises due to the dynamic nature of the labor market. At any time, many individuals will be between jobs voluntarily or involuntarily as some employers reduce employment while others expand. At the same time, new job seekers will enter the labor market and others will re-enter the labor market after spending time outside the labor force. The unifying theme of frictional unemployment is that it takes time for job seekers and employers to find each other and process information about the jobs in question. As such, frictional unemployment is normal and as long as it is not excessive can even be beneficial to the economy, as it gives rise to better matches between employers and those seeking employment. The existence of frictional unemployment does not indicate an intrinsic problem in the labor market, and is usually characterized by short spells of unemployment. The magnitude of this type of unemployment can be lessened by providing information to job seekers and employers that expedites their searches. In Pennsylvania, resources such as the PA CareerLink® offices and the JobGateway℠ system are used to facilitate jobseeker-company matching, and thereby lessen the length of time the frictionally unemployed are out of work.

Structural unemployment, like frictional unemployment, will always exist in a dynamic economy, even one that is at "full employment[2]". However, unlike frictional unemployment, which is generally short-term, structural unemployment tends to be long-term. The two major causes of structural unemployment are geographic and occupational immobility. In the case of geographic immobility, a job seeker has the requisite skills for a job vacancy, but that job exists in a different locality. Consequently, the job seeker may be unaware of the vacancy or be unable or unwilling to relocate for that job. Occupational immobility is typically caused by a skills mismatch. Job seekers may have skills that the market no longer values as highly as before and/or there may be many jobs available for which these seekers do not have the requisite skills.

In a dynamic economy, technological change and globalization are two major factors that cause structural unemployment. Technological change in an industry can make certain skills obsolete, while creating a new demand for other skills that are currently in short supply. The displaced workers do not have the requisite skills to fill the new jobs created by the new technology and there is insufficient demand (in their current occupation and location) to find jobs utilizing their

[2] A detailed discussion of "full employment" is provided in the footnotes below and the remainder of this section.

current skill set. In order for them to find suitable jobs, they will either have to acquire new (for them) skills, relocate, or both. Another factor giving rise to structural unemployment is globalization. As trade barriers are lessened, goods and services that were produced locally can be acquired at a lower price elsewhere. Profit maximizing firms will attempt to lower costs by shifting production to lower cost locales. Since workers displaced by such globalization cannot compete (usually due to their higher wages), their skill set while not technically obsolete has become economically obsolete. Again, this can be alleviated by acquiring more skills. Generally retraining takes a significant amount of time, which is why workers who are structurally unemployed tend to have long durations of unemployment.

Cyclical unemployment is caused by an overall imbalance between the available number of jobs and a greater number of workers to fill them. It is tied to the normal ebb and flow of the business cycle, and comes about due to insufficient aggregate spending from all sources to buy up the "full employment" level of output. Lower demand for products results in a cutting back on production and services. When production and services are reduced, companies cut back on their workforces. The existence of cyclical unemployment makes the labor market less efficient as more individuals are searching for fewer jobs. This tends to increase both frictional unemployment through longer job-search durations, and structural unemployment as the skill sets of the unemployed diminish through disuse and technological advancements eliminate jobs over time.

The length and depth of a recession will determine the magnitude and duration of cyclical unemployment. However, since labor markets tend to lag output markets, cyclical unemployment will persist even after a recession ends. Since the cause of cyclical unemployment is insufficient spending in the economy, it can be alleviated either by itself when the economy heals or by policies that lead to more aggregate expenditures. For example, creating incentives for increased hiring could increase spending throughout the economy. **Table 1** estimates the total number of unemployed Pennsylvanians by types of unemployment for the years 2007, 2010, and 2012, using classifications from the Current Population Survey (CPS)[3].

[3] The two main dimensions used to classify unemployment were duration and cause of unemployment. Unemployment which lasts 26 weeks or less, which is the duration of regular unemployment compensation benefits, is classified as short-term, while a longer duration is classified as long-term. The CPS provides six causes of unemployment which as explained below are classified as voluntary and involuntary. The following assumptions were used to generate Table 1:

I. The national unemployment and Pennsylvania rates in 2007 were below the "natural rate" (where the natural rate is that for full employment). Therefore, full employment existed and cyclical unemployment had to be absent. Consequently, all unemployment in 2007 had to be classified as either frictional (based on assumption 2) or structural (the remainder), notwithstanding other considerations listed below.

II. Short-term (under 27 weeks) voluntary unemployment (new entrants, re-entrants and job leavers) was considered frictional, while long-term (more than 26 weeks) voluntary unemployment was classified as structural (on the assumption that the reason for the long duration was a skills or geographic mismatch).

These classifications are not detailed enough to always allow a precise breakdown between categories, but remain a useful tool. For example, it is difficult to determine the exact breakdown between structural and cyclical unemployment during a prolonged recession, but those counted as such are clearly not frictional.

Table 1: Number of Unemployed by Unemployment Type (2007, 2010, and 2012)

	2007		2010		2012		Pct. Change
Type of Unemployment	**Unemployed**	**Pct. of Unemployed**	**Unemployed**	**Pct. of Unemployed**	**Unemployed**	**Pct. of Unemployed**	**2007 to 2012**
Frictional	115,700	42%	133,000	25%	128,300	25%	11%
Structural	160,300	58%	208,600	39%	199,800	39%	25%
Cyclical	0	0%	196,400	37%	184,900	36%	undefined
Total	**276,000**		**538,000**		**513,000**		**86%**

Sources: Bureau of Labor Statistics; Local Area Unemployment Statistics; U.S. Census Bureau; Current Population Survey
Percentages may not sum to 100% due to rounding.

The overall level of the unemployed in all categories increased in volume from 2007 (pre-recession) to 2010, but declined from 2010 to 2012. The percentage breakdown of the unemployed was virtually identical in 2010 and 2012. In percentage growth terms, cyclical unemployment increased the most, since it started from zero in 2007, a year of full employment, while frictional unemployment was the most stable. Frictional unemployment increased by 15 percent due to the recession and was 11 percent higher during the recovery at the end of 2012 than its pre-recession level. Structural unemployment increased by 30 percent due to the recession and was 25 percent higher in 2012 than its pre-recession level. Cyclical unemployment increased by 196,400 due to the recession, and 94 percent of them remained unemployed in 2012. Although it is typical for all three types to increase during a recession, as cyclical unemployment decreases, the other two types recede as well. The persistence of high cyclical unemployment (which keeps the other two relatively elevated), is a symptom of a slow recovery.

III. Involuntary unemployment (job loss due to layoffs, other non-layoff job loss, and the end of a temporary job) was classified as cyclical if short-term, and structural if long-term. Layoffs are generally caused by insufficient demand for a product and are temporary. A layoff will either have a recall date or is expected by the unemployed person to last six months or less. A layoff that persists long-term is assumed to be caused by some mismatch. While to those affected, non-layoffs are of indeterminate length and could be permanent, similar reasoning may hold.

Full employment does not imply 100 percent employment. The existence of frictional and structural unemployment, as well as seasonal factors, prevents 100 percent of the labor force from working at any given time. It is also important to note that the unemployment rate considered to be full employment tends to vary over time. The unemployment rate corresponding to full employment is sometimes referred to as the "natural rate".

There are several definitions of full employment. Some economists define it as the state of the economy in which price and wage inflation are stable, while others consider it to occur when the number of vacancies equals the number of job seekers. A third variant entails that the level of unemployment would not decrease if aggregate demand increased. Currently, these definitions would place full employment as an unemployment rate with a value of approximately five to six percent. In 2007, the Pennsylvania economy was above full employment as the unemployment rate was below the natural rate. The breakdown of the overall rate into its component parts shows that for 2007, 2010, and 2012 the sum of the frictional and structural components approximately equaled the natural rate.

Table 2: Breakdown of Unemployment Rate by Type of Unemployment (2007, 2010, and 2012).

	Decomposition of Unemployment Rate by Type of Unemployment		
Type of Unemployment	**2007**	**2010**	**2012**
Frictional	1.8%	2.1%	2.0%
Structural	2.6%	3.3%	3.1%
Cyclical	0.0%	3.0%	2.8%
Total Unemployment Rate	**4.4%**	**8.4%**	**7.9%**
Average Duration (in weeks)	**16.1**	**30.3**	**33.2**

Sources: Bureau of Labor Statistics, Local Area Unemployment Statistics; U.S. Census Bureau, Current Population Survey

The percentage of the unemployed who were frictionally unemployed fell from 42 percent in 2007 to 25 percent in the other years considered. However, approximately two percent of the labor force was frictionally unemployed in all three years depicted in **Table 2**. Structural unemployment was more variable than frictional and accounted for another 2.6 to 3.3 percent of the labor force. The most dramatic change was seen in those individuals who were cyclically unemployed. In 2007, at full employment, there was no cyclical unemployment, but this increased to three percent in 2010, and remained high in 2012, again indicating a slow recovery.

Due to the small sample size, a complete decomposition of unemployment types (frictional, structural, and cyclical) by either industry or occupation is not possible. However the industries and occupations where unemployment is highest are provided in **Table 3**, which lists all industries and occupational groups that accounted for at least 10 percent of the structural or cyclical unemployment in 2012. For structural unemployment the percentages are compared to those in 2007, prior to the recession[4].

Table 3: Industries and Occupations that Accounted for at least 10 Percent of the Structural or Cyclical Unemployment in 2012

Industries	Pct. Of Total Structural Unemployment 2007	Pct. Of Total Structural Unemployment 2012
Wholesale and Retail Trade	13%	17%
Educational and Health Services	12%	15%
Manufacturing	18%	14%
Professional and Business Services	3%	13%
Occupational Groups	**Pct. Of Total Structural Unemployment 2007**	**Pct. Of Total Structural Unemployment 2012**
Service Occupations	8%	18%
Office and Administrative Support Occupations	7%	16%
Professional and Related Occupations	7%	13%
Sales and Related Occupations	18%	11%
Production Occupations	5%	10%

Source: U.S. Census Bureau; Current Population Survey

Industries	Pct. Of Total Cyclical Unemployment 2012
Construction	19%
Educational and Health Services	17%
Professional and Business Services	14%
Manufacturing	13%
Wholesale and Retail Trade	12%
Leisure and Hospitality	11%
Occupational Groups	**Pct. Of Total Cyclical Unemployment 2012**
Service Occupations	21%
Construction and Extraction Occupations	17%
Professional and Related Occupations	13%
Transportation and Material Moving Occupations	11%

Source: U.S. Census Bureau; Current Population Survey

[4] In contrast to structural unemployment which existed in both 2007 and 2012, cyclical unemployment was absent in 2007, since full employment existed in that year. Therefore, for cyclical unemployment, only data for 2012 is presented.

The Nature of Pennsylvania's Unemployed

In this section the report will examine the unemployed through the use of Local Area Unemployment Statistics (LAUS) data. The LAUS program, a Federal-State cooperative effort with the U.S. Bureau of Labor Statistics (BLS), produces the official monthly estimates of labor force, employment, unemployment, and the unemployment rate for states and sub-state areas. These estimates are key indicators of local economic conditions and serve as the most common and visible measurement of unemployment for states.

The LAUS program classifies people into the following subgroups of the population aged 16 and over who are neither in an institution nor on active duty in the Armed Forces:

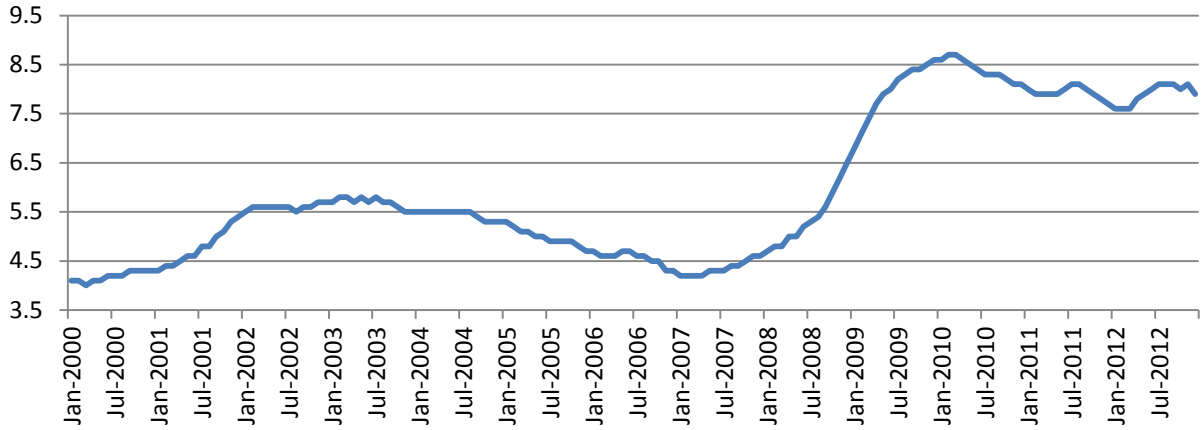
> *Employed:* All persons who, during the reference week (the week including the 12th day of the month), (a) did any work as paid employees, worked in their own business or profession or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of their family, or (b) were not working but had jobs from which they were temporarily absent. Each employed person is counted only once, even if he or she holds more than one job.
>
> *Unemployed:* All persons who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment some time during the four-week-period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.
>
> *Not in the Labor Force:* People who are neither employed nor unemployed.
>
> *Labor Force:* The sum of the employed and unemployed.
>
> *Unemployment Rate*: The percentage of the labor force that is unemployed.

The unemployed examined here include not only those who filed claims for unemployment compensation (UC) insurance benefits under state or federal programs, but also those whose benefits had been exhausted, as well as those who were ineligible, or did not apply for such benefits.

Joblessness in Pennsylvania

The unemployment rate from 2000 to 2012 is shown in **Figure 1**. After January 2000, the lowest rate prior to the Great Recession was 4.0 percent in March of 2000. At the start of the recession, the unemployment rate stood at 4.6 percent and peaked at 8.7 percent in February and March of 2010.

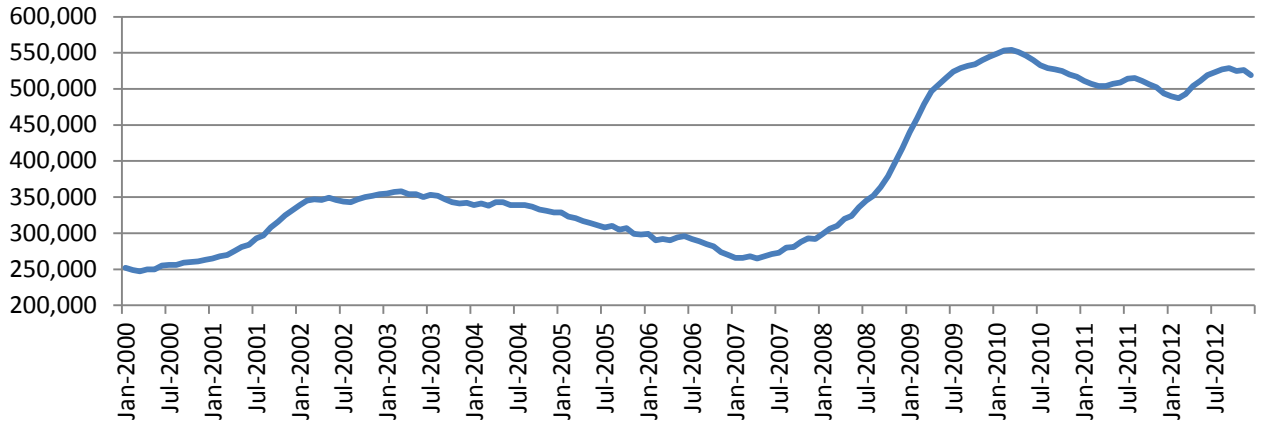
Figure 1: Monthly Percentage Unemployment Rate in Pennsylvania (2000 – 2012)



Source: Bureau of Labor Statistics; Local Area Unemployment Statistics

Unemployment increased in Pennsylvania through March 2010, when it reached a peak of 554,000 (**Figure 2**). Prior to the Great Recession, from January 2000 through August 2008, the monthly count of unemployed people in Pennsylvania never exceeded 358,000.

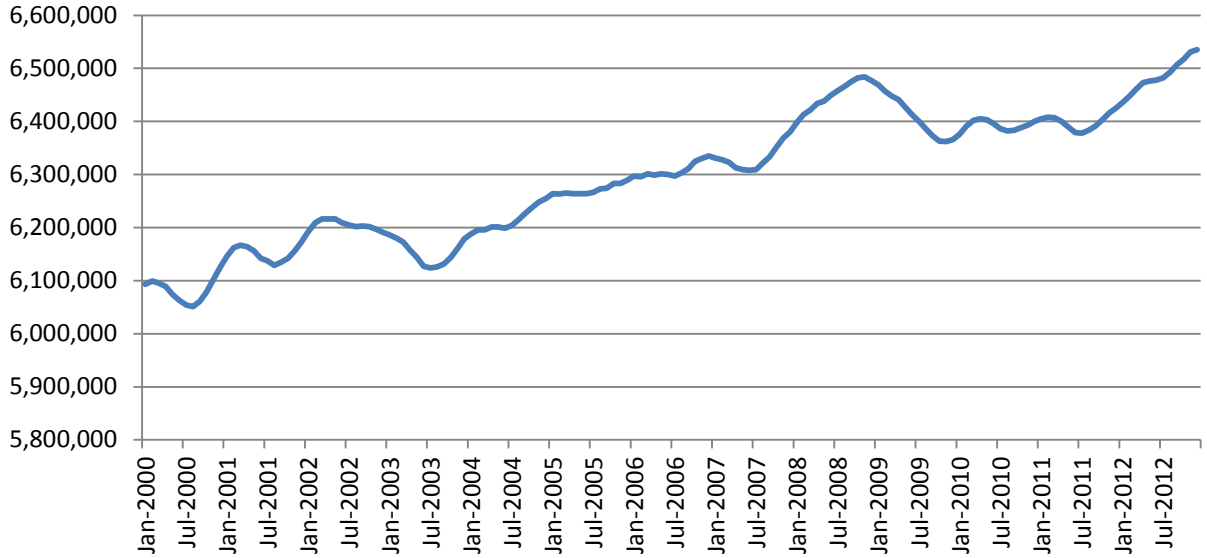
Figure 2: Seasonally-Adjusted Monthly Total Unemployed in Pennsylvania (2000 – 2012)



Source: Bureau of Labor Statistics; Local Area Unemployment Statistics

In addition to looking at the volume of unemployed individuals in Pennsylvania, **Figure 3** shows the path of the civilian labor force from January 2000 to December 2012. In December 2012, Pennsylvania's seasonally adjusted civilian labor force reached an all-time high.

Figure 3: Seasonally-Adjusted Monthly Civilian Labor Force in Pennsylvania (2000 – 2012)

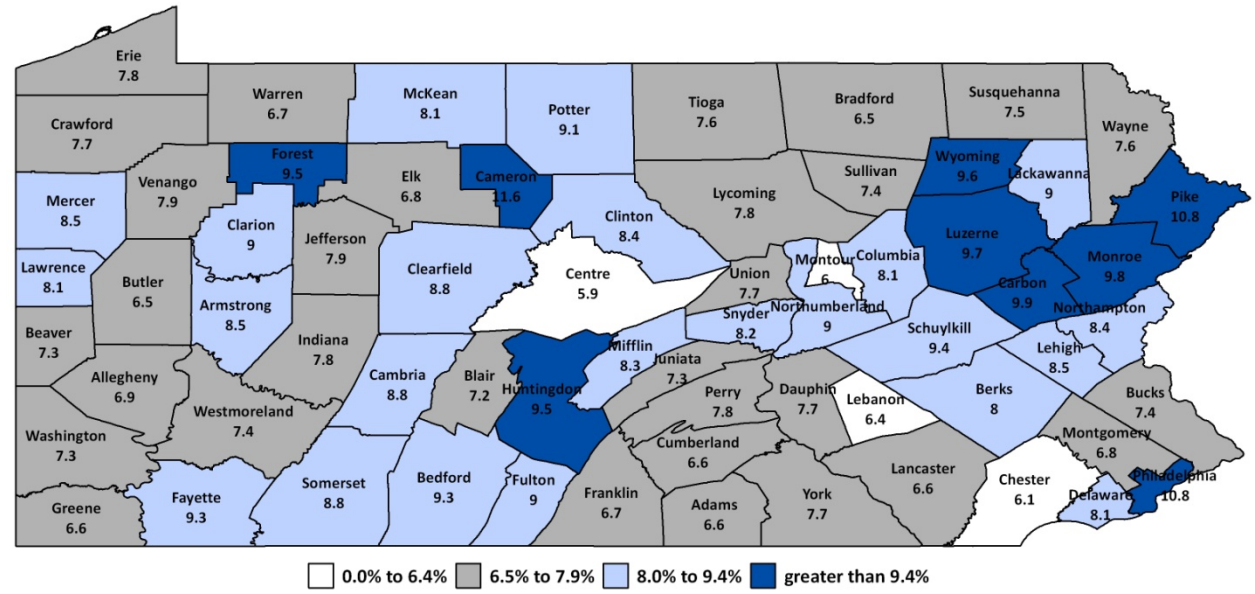


Source: Bureau of Labor Statistics; Local Area Unemployment Statistics

Where do Pennsylvania's Unemployed People Live?

Figure 4 shows that different counties in Pennsylvania are experiencing unemployment to varying degrees.

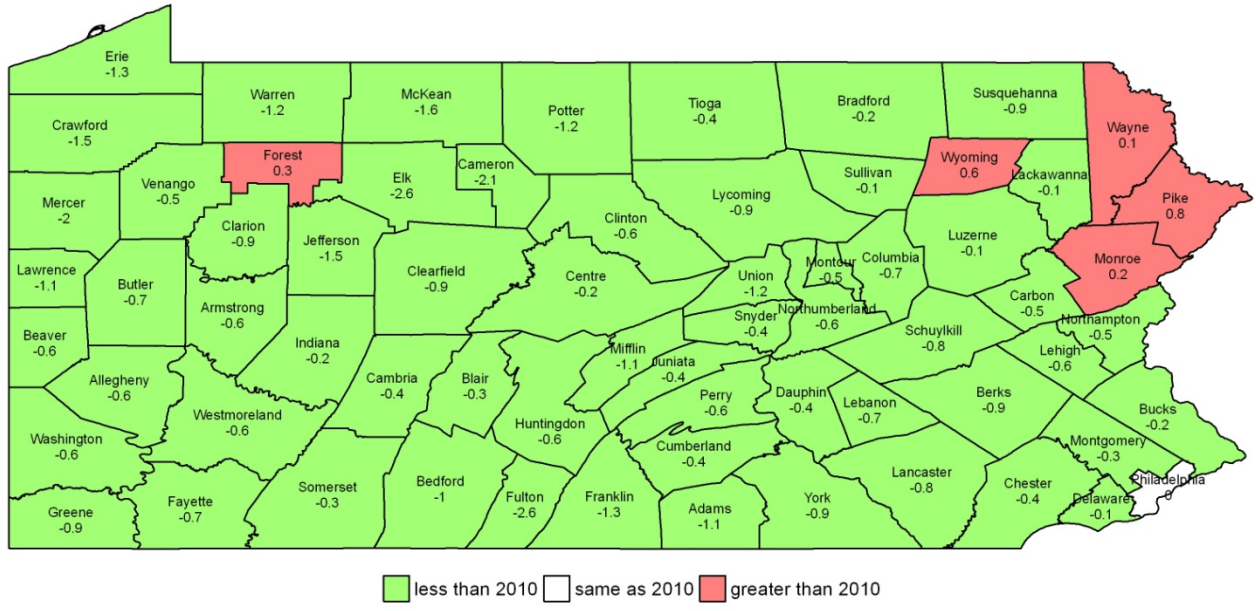
Figure 4: Annual Average Unemployment Rate by County (2012)



Source: Bureau of Labor Statistics; Local Area Unemployment Statistics

Figure 5 shows the change in annual average unemployment rates from 2010 to 2012.

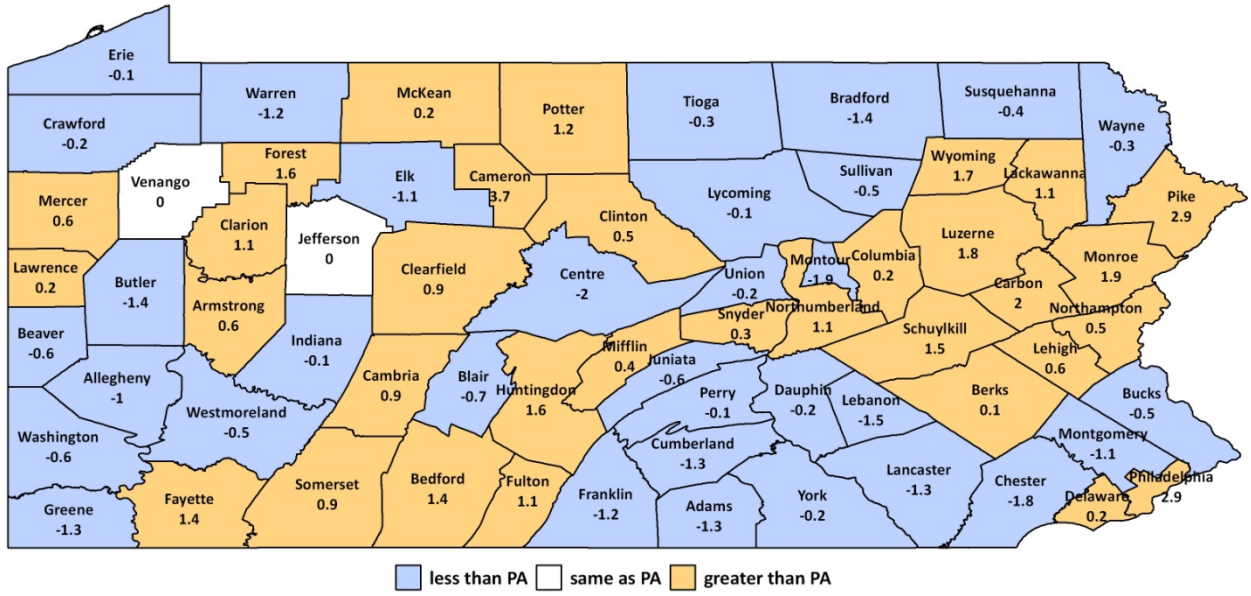
Figure 5: Change in Annual Average Unemployment Rate by County (2010-2012)



Source: Bureau of Labor Statistics; Local Area Unemployment Statistics

Figure 6 depicts the difference between a county's unemployment rate and the statewide average rate.

Figure 6: Annual Average Unemployment Rate by County, Compared to Statewide Annual Average Rate (2012)



Source: Bureau of Labor Statistics; Local Area Unemployment Statistics

Detailed Characteristics of the Unemployed

This portion of the report will focus on the demographic characteristics of the unemployed in Pennsylvania, including information on age, race, and educational attainment. Previous work history, both by industry and occupation, will also be explored, as well as the impact of disabilities and veteran status on the incidence of unemployment. Finally, the characteristics of individuals who have been unemployed long-term will be compared to those who have been unemployed for a relatively shorter period of time.

The Current Population Survey (CPS) is the source of numerous high-profile economic statistics, including the national unemployment rate, and provides data on a wide range of issues relating to employment and earnings. Sponsored jointly by the U.S. Census Bureau and the BLS, it is the primary source of labor force statistics for the population of the United States. The CPS also collects extensive demographic data that complement and enhance the understanding of labor market conditions in the nation overall, among many different population groups.

The survey has its origin in a program established to provide direct measurement of unemployment each month on a sample basis. The problem of measuring unemployment became especially acute during the economic depression of the 1930s. The labor force concepts and definitions used in the CPS have undergone only slight modification since the survey's inception in 1940. Although labor market information is central to the CPS, the survey provides a wealth of other social and economic data that are widely used in both the public and private sectors. In addition, because of its long history and the quality of its data, the CPS has been a model for other household surveys, both in the U.S. and in other countries.

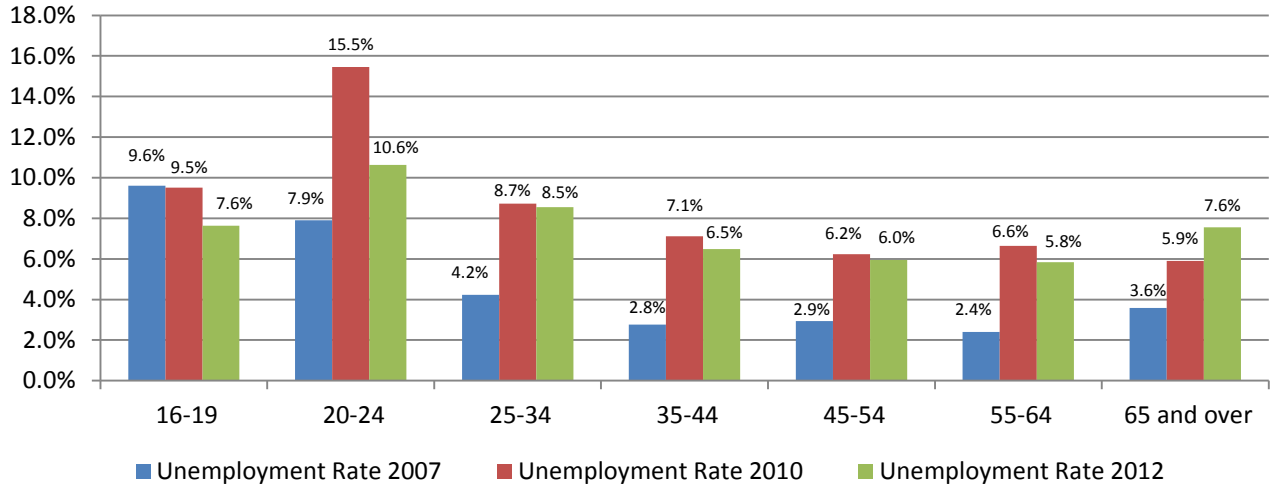
The CPS is administered by the Census Bureau using a probability selected national sample of about 60,000 occupied households (approximately 2,000 in Pennsylvania). Respondents are interviewed to obtain information about the employment status of each member of the household 15 years of age or older. This report, however, focuses only on those 16 years of age and older. The definition of the unemployed in CPS is exactly the same as that in LAUS. However, the CPS also collects data that allow for people who are out of the labor force to be classified as discouraged workers (i.e. people who stopped looking for a job because they lost hope of finding one).

Detailed data extracted from the CPS, for the years 2007, 2010, and 2012, are presented in table format in Appendices A, B, and C, respectively. It should be noted that cell sizes decrease dramatically the further one drills down. Care should be taken in interpreting results generated from small samples as they may be due to sampling error.

Demographics of Unemployed Pennsylvanians

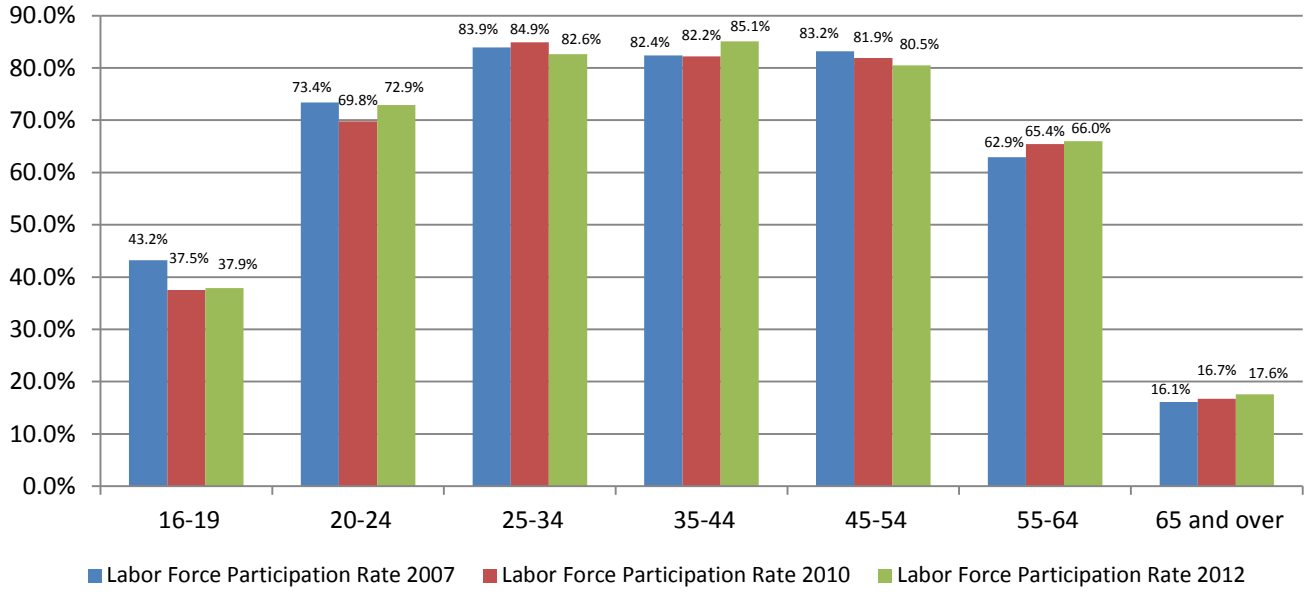
The impact of the demographic characteristics of age, race, and ethnicity of Pennsylvania's unemployed population in 2007, 2010, and 2012 are explored in this section. **Figure 7** shows the unemployment rate by age cohort for each of these three years, in order to examine the impact of the Great Recession on different age groups in Pennsylvania. **Figure 8** shows the labor force participation rate for these same cohorts for the same years.

Figure 7: Unemployment Rate by Age Group in Pennsylvania over Time



Source: U.S. Census Bureau, Current Population Survey

Figure 8: Labor Force Participation Rate by Age Group in Pennsylvania over Time



Source: U.S. Census Bureau; Current Population Survey

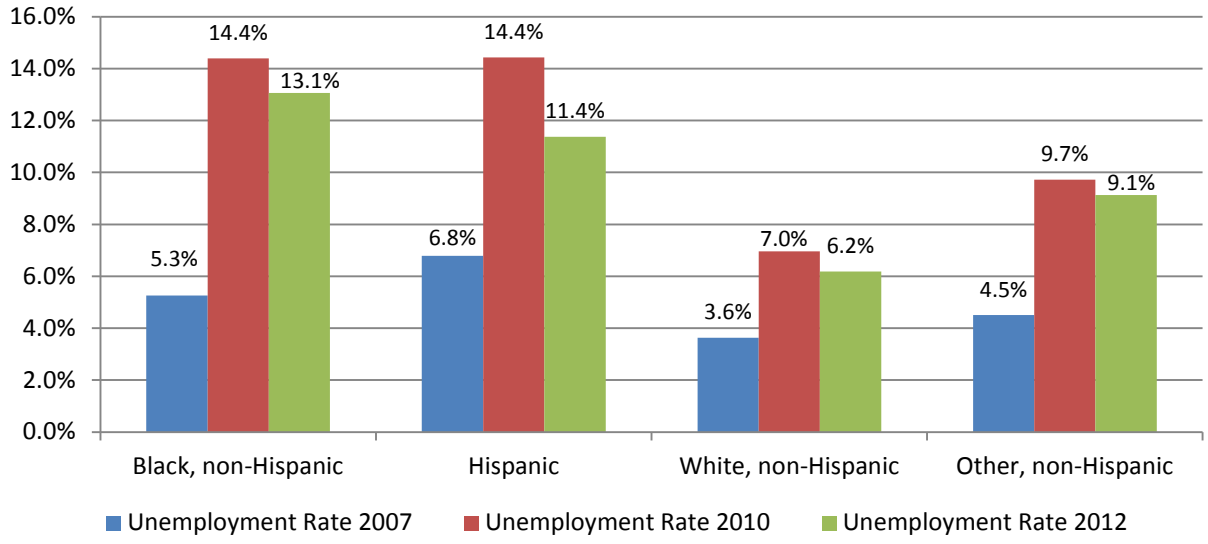
With the exception of those aged 16-19, the unemployment rate of each age cohort nearly doubled from 2007 to 2010. The lack of an increase in the unemployment rate of 16-19 year olds may be partially due to a reduction of more than 5.5 percentage points in the labor force participation rate of this age group.

The unemployment rate of each age group with the exception of those 65 and over decreased from 2010 to 2012. However, the rate decreases of all age groups from 20 to 64 were smaller than their respective increases from 2007 to 2010. For those 65 and over, not only did the unemployment rate increase, but this increase was accompanied by corresponding increases in both the labor force participation rate and the employment to population ratio. Despite the increasing unemployment rate among those 65 and older, the number of individuals working in this age group increased by more than 14 percent between 2007 and 2012.

The modest decreases in the unemployment rates for individuals in the 25 to 34 and 45 to 54 age groups (0.2 percentage points in both cases), were potentially attributable to falling labor force participation rates (2.3 and 1.4 percentages points, respectively). These two age groups are the only age cohorts examined that saw labor force participation rates decline from 2007 to 2010 and decline further from 2010 to 2012.

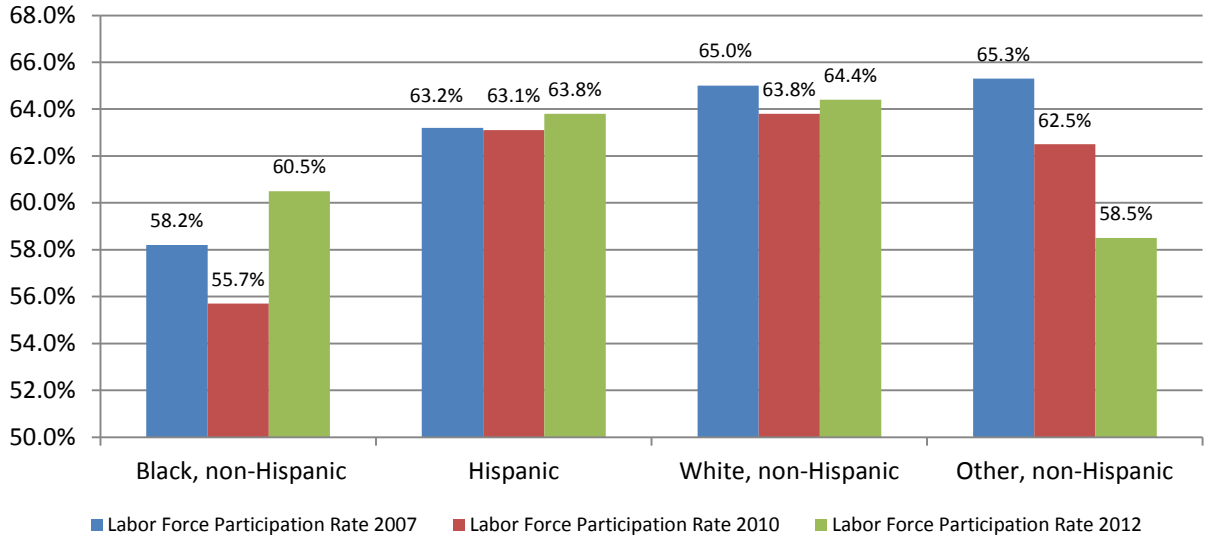
Figure 9 shows the unemployment rate by race and ethnicity in 2007, 2010, and 2012. From 2007 to 2010, unemployment rates in Pennsylvania increased for all race and ethnic groups examined in **Figure 9,** and decreased for all groups from 2010 to 2012, albeit remaining above their 2007 levels. **Figure 10** shows the labor force participation rate for these groups for the same years.

Figure 9: Unemployment Rate by Race and Ethnicity in Pennsylvania over Time



Source: U.S. Census Bureau, Current Population Survey

Figure 10: Labor Force Participation Rate by Race and Ethnicity in Pennsylvania over Time



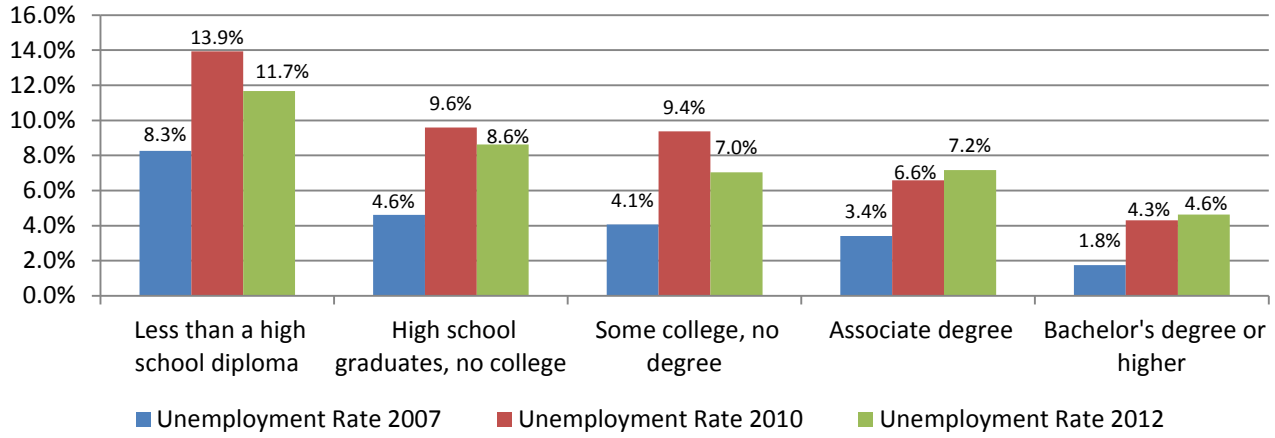
Source: U.S. Census Bureau; Current Population Survey

In 2010, at the height of the recession, both Black (non-Hispanic) and Hispanic individuals had unemployment rates of 14.4 percent, although Blacks (non-Hispanic) experienced a larger increase in rate from 2007 to 2010 and a smaller rate decrease from 2010 to 2012. The labor force participation rate of Hispanics in Pennsylvania was relatively constant over these three years, while that of Blacks (non-Hispanic) was higher in 2012 than in 2007 (the only racial or ethnic group for which this was true).

Educational Attainment of Unemployed Pennsylvanians

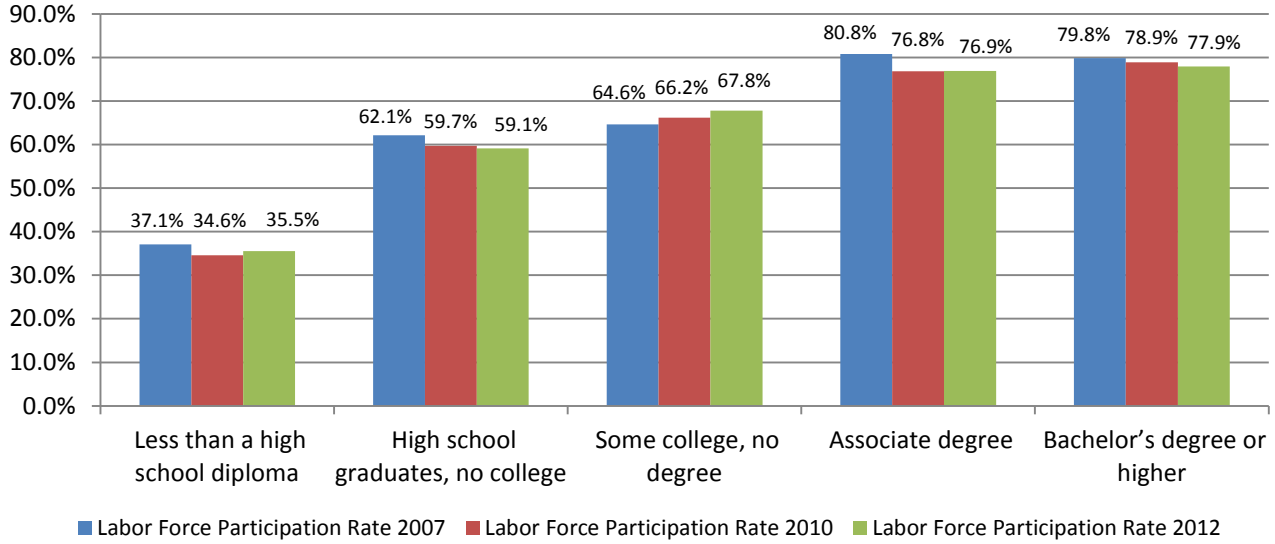
Figure 11 shows the unemployment rates for Pennsylvanians by educational attainment for 2007, 2010, and 2012. **Figure 12** shows the labor force participation rates for these groups for the same years. From 2007 to 2010 the unemployment rate increased for each level of educational attainment. However, while unemployment rates decreased from 2010 to 2012 for individuals with lower levels of educational attainment, they increased for individuals with associate degrees and bachelor's degrees or higher. The increase in the unemployment rate among those individuals with a bachelor's degree or higher occurred despite a decline in the labor force participation rate of this group.

Figure 11: Unemployment Rates by Educational Attainment over Time



Source: U.S. Census Bureau, Current Population Survey

Figure 12: Labor Force Participation Rates by Educational Attainment over Time



Source: U.S. Census Bureau, Current Population Survey

While the unemployment rate rose slightly among individuals with higher educational attainments, these groups generally have lower unemployment rates than those with less educational attainment. In particular, it should be noted that individuals with a bachelor's degree in 2012 were approximately one third less likely to be unemployed than those with some college education.

Unemployment by Industry Sector

Unemployment has affected certain industry sectors more than others. **Table 4** shows the industry sector distribution of unemployed workers in 2007, based on the industry in which they were working prior to their separation, alongside the industry sector share of overall employment. The last column shows the ratio of each industry sector's share of unemployment to its share of employment. The ratio is one when an industry sector accounts for the same share of unemployment as employment. If the ratio is greater than one, the industry sector's share of unemployment is higher than expected based on its share of employment. **Table 5** replicates the same data, but for 2012.

Table 4: Industry Distribution of Unemployment and Employment in Pennsylvania (2007) need data

Industry	Industry Share of Unemployment	Industry Share of Long-Term Unemployment	Industry Share of Employment	Ratio of Industry Share of Unemployment to Industry Share of Employment
Construction	12%	9%	6%	1.95
Leisure and Hospitality	13%	10%	8%	1.56
Professional and Business Services	12%	10%	9%	1.29
Wholesale and Retail Trade	16%	18%	14%	1.14
Mining	0%	0%	0%	1.10
Transportation and Utilities	6%	4%	6%	1.00
Other Services	4%	4%	5%	0.80
Manufacturing	10%	12%	13%	0.77
Information	1%	2%	2%	0.62
Agriculture, Forestry, Fishing, and Hunting	1%	0%	1%	0.59
Financial Activities	3%	7%	6%	0.55
Educational and Health Services	11%	10%	25%	0.43
Public Administration	1%	2%	4%	0.30

Source: U.S. Census Bureau, Current Population Survey
Percentages may not sum to 100% due to rounding.

Table 5: Industry Distribution of Unemployment and Employment in Pennsylvania (2012)

Industry	Industry Share of Unemployment	Industry Share of Long-Term Unemployment	Industry Share of Employment	Ratio of Industry Share of Unemployment to Industry Share of Employment
Construction	13%	9%	6%	2.21
Professional and Business Services	13%	14%	10%	1.28
Information	2%	2%	2%	1.24
Leisure and Hospitality	11%	8%	9%	1.23
Wholesale and Retail Trade	17%	18%	14%	1.22
Manufacturing	13%	15%	13%	1.03
Other Services	4%	6%	4%	1.03
Transportation and Utilities	4%	5%	6%	0.73
Educational and Health Services	18%	16%	25%	0.72
Financial Activities	3%	4%	6%	0.55
Mining	0%	0%	1%	0.51
Agriculture, Forestry, Fishing, and Hunting	0%	0%	1%	0.28
Public Administration	1%	1%	4%	0.20

Source: U.S. Census Bureau, Current Population Survey

Percentages may not sum to 100% due to rounding.

Unemployment by Occupational Group

The unemployment situation can also be examined by occupational group. **Table 6** examines broad occupational groups with 2007 data in a manner similar to that done for industries in the previous section, while **Table 7** does the same for 2012**.** Some interesting similarities emerged. The variation in occupational unemployment parallels that of industries; some occupational groups have been hit harder than others. The share of total unemployment accounted by the construction and extraction occupations was more than 2.25 times their share of total employment in both 2007 and 2012, which was substantially higher than any other occupational group. However, this is most likely due to the seasonality in that industry and occupation, which is why it is more pronounced in 2007 than in 2012. It should be recalled that even when percentages and ratios in the two years are similar, the levels of unemployment and long term unemployment were significantly lower in 2007 than in 2012.

Table 6: Distribution of Unemployment and Employment in Pennsylvania by Occupational Group (2007)

Occupation	Occupation Share of Unemployment	Occupation Share of Long-Term Unemployment	Occupation Share of Employment	Ratio of Occupation Share of Unemployment to Occupation Share of Employment
Construction and Extraction	13%	11%	5%	2.54
Transportation and Material Moving	12%	11%	7%	1.81
Service	25%	20%	16%	1.51
Production	8%	9%	7%	1.23
Sales and Related	12%	10%	10%	1.18
Installation, Maintenance, and Repair	4%	7%	4%	1.00
Farming, Fishing, and Forestry	0%	0%	1%	0.86
Office and Administrative Support	11%	11%	14%	0.80
Management, Business, and Financial	5%	8%	14%	0.40
Professional and Related	8%	13%	22%	0.36

Source: U.S. Census Bureau, Current Population Survey
Percentages may not sum to 100% due to rounding.

Table 7: Distribution of Unemployment and Employment in Pennsylvania by Occupational Group (2012)

Occupation	Occupation Share of Unemployment	Occupation Share of Long-Term Unemployment	Occupation Share of Employment	Ratio of Occupation Share of Unemployment to Occupation Share of Employment
Construction and Extraction	11%	7%	5%	2.28
Transportation and Material Moving	9%	10%	7%	1.31
Production	9%	11%	7%	1.26
Service	22%	19%	18%	1.22
Sales and Related	11%	11%	10%	1.12
Office and Administrative Support	13%	17%	12%	1.05
Farming, Fishing, and Forestry	1%	0%	1%	1.01
Professional and Related	15%	14%	21%	0.72
Installation, Maintenance, and Repair	2%	3%	4%	0.59
Management, Business, and Financial	7%	9%	16%	0.46

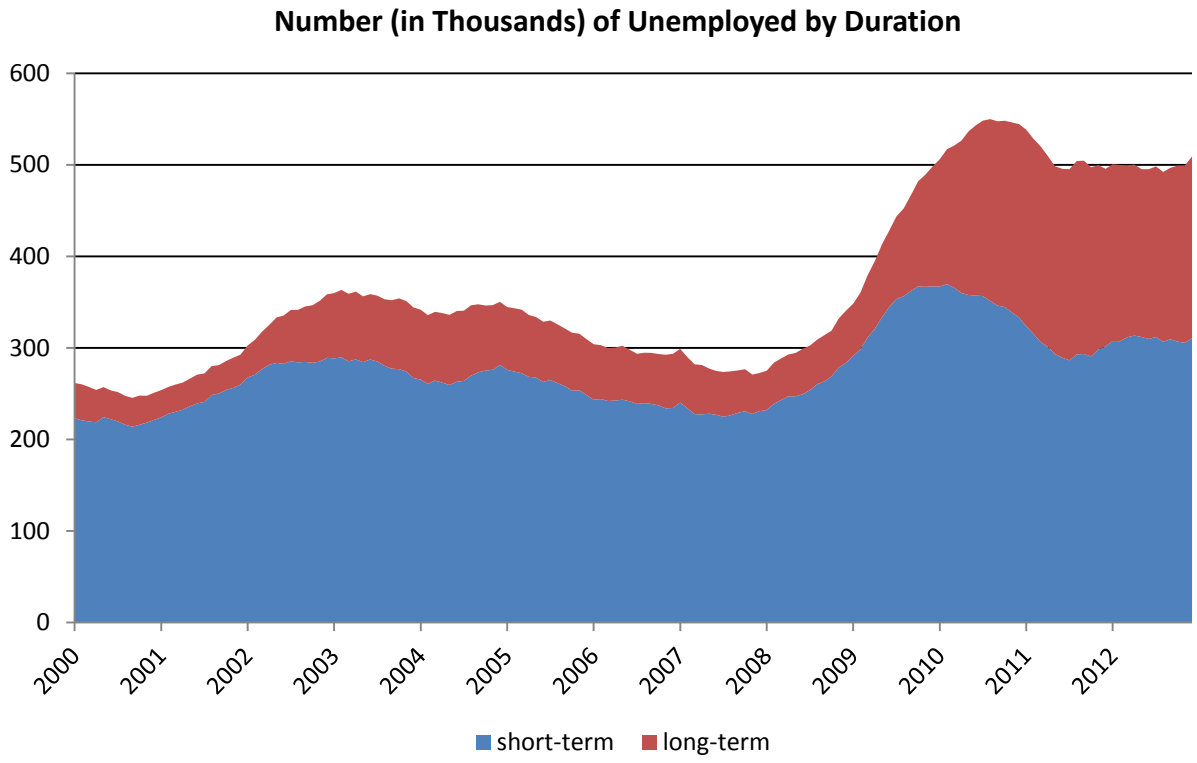
Source: U.S. Census Bureau, Current Population Survey
Percentages may not sum to 100% due to rounding.

The Long-term Unemployed: A Recent Historical Perspective

The problem that unemployment poses depends not only on the incidence of unemployment, but also on the duration that individuals remain unemployed. An increase in either the incidence or duration of unemployment would cause the unemployment rate to increase, but the ramifications of the two are different. A given unemployment rate can be generated by a low incidence and a high duration (fewer people who are unemployed for longer spells), a high incidence with low duration (many people become unemployed but for relatively short spells) or some intermediate set of combinations. While frictional unemployment tends to be short-term, structural unemployment is associated with longer durations.

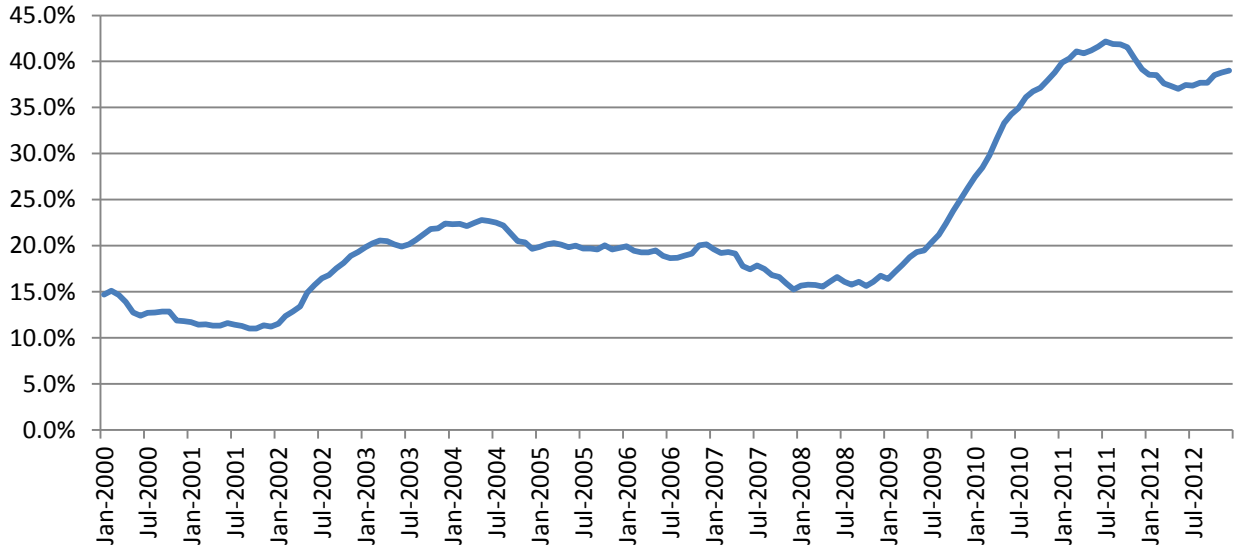
The breakdown of the number of unemployed by duration is depicted in **Figure 13,** with long-term (27 weeks or longer) depicted in red and short-term in blue. It is clear that the recession caused the number of long-term unemployed to increase, as well as its proportion of total unemployment. As the economy recovered, the number of individuals who were unemployed short-term almost returned to its pre-recession level, while the level and proportion of the long-term unemployed remained high. For the period 2000 to 2012, the percentage of the unemployed who were classified as long-term is portrayed in **Figure 14.**

Figure 13: Breakdown of the Unemployed into Long-term and Short-term (2000 – 2012)



Source: U.S. Census Bureau, Current Population Survey

Figure 14: Percentage of Unemployed Classified as Long-Term (2000 – 2012)



Source: U.S. Census Bureau, Current Population Survey

Voluntary vs. Involuntary Unemployment

In addition to tracking the level of unemployment over time, it is also useful to analyze the composition of the unemployed by the cause of their unemployment. The Current Population Survey (CPS) classifies six causes of unemployment; layoffs, other job loss (non-layoff), temporary job ended, new entrant, re-entrant, and job leaver. To be classified as a layoff, a worker would be a job loser with a recall date or one who expects to be recalled within 6 months. “Other job losers” have no such expectation and therefore can view their separation as “permanent.” The third category is for workers whose jobs were considered temporary when they were hired and became unemployed when the term of the job ended. For the purposes of this analysis these three categories of unemployment are classified as involuntary, since they were caused by job loss and were not the result of decisions made by the worker. On the other hand, the last three categories, which are classified as voluntary, result directly from decisions of labor force participants to enter the labor force for the first time, to re-enter the labor force after having been absent for a while, or to leave a current job in order to search for a different one. When there is a downturn in the economy, involuntary unemployment tends to increase as employed workers lose their jobs. Conversely, when the economy improves, involuntary job losses decline, while voluntary unemployment increases as people who were out of the labor force are induced to now look for work and some workers decide to leave their current employment to seek better jobs. In the early stages of a recovery as job prospects improve, “discouraged workers” who had left the labor force, decide to re-enter the labor force by resuming their job search, and some employed workers leave their jobs to seek better ones, giving rise to an increase in voluntary unemployment. The impact of the better economy is not fully manifested by a large decrease in the unemployment level or rate since the decrease in job losses (involuntary unemployment) is partially offset by this increase in voluntary unemployment.

How the Causes of Unemployment Differ by Duration

During the Great Recession, the number of long-term unemployed Pennsylvanians increased dramatically. Although the level declined somewhat during the recovery, it still remained elevated in 2012, as 39 percent of the unemployed were classified as long-term. Of this cohort, 62 percent were classified as involuntary unemployed (layoffs, other non-layoff job losers, and temporary job ended) (**Figure 16**), slightly higher than the percentage for those with shorter durations of unemployment (59 percent) (**Figure 15**).

Figures 15 and 16: Comparison by Duration of Causes of Unemployment (2012)

Figure 15: Short-term Unemployed

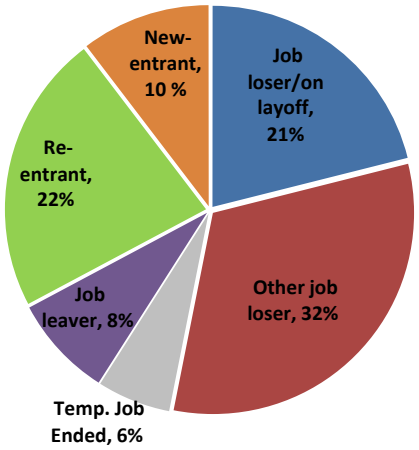
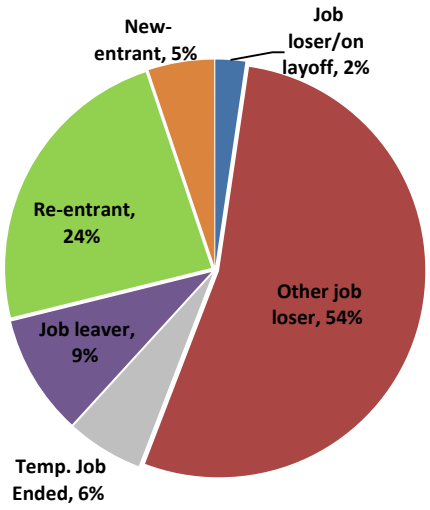


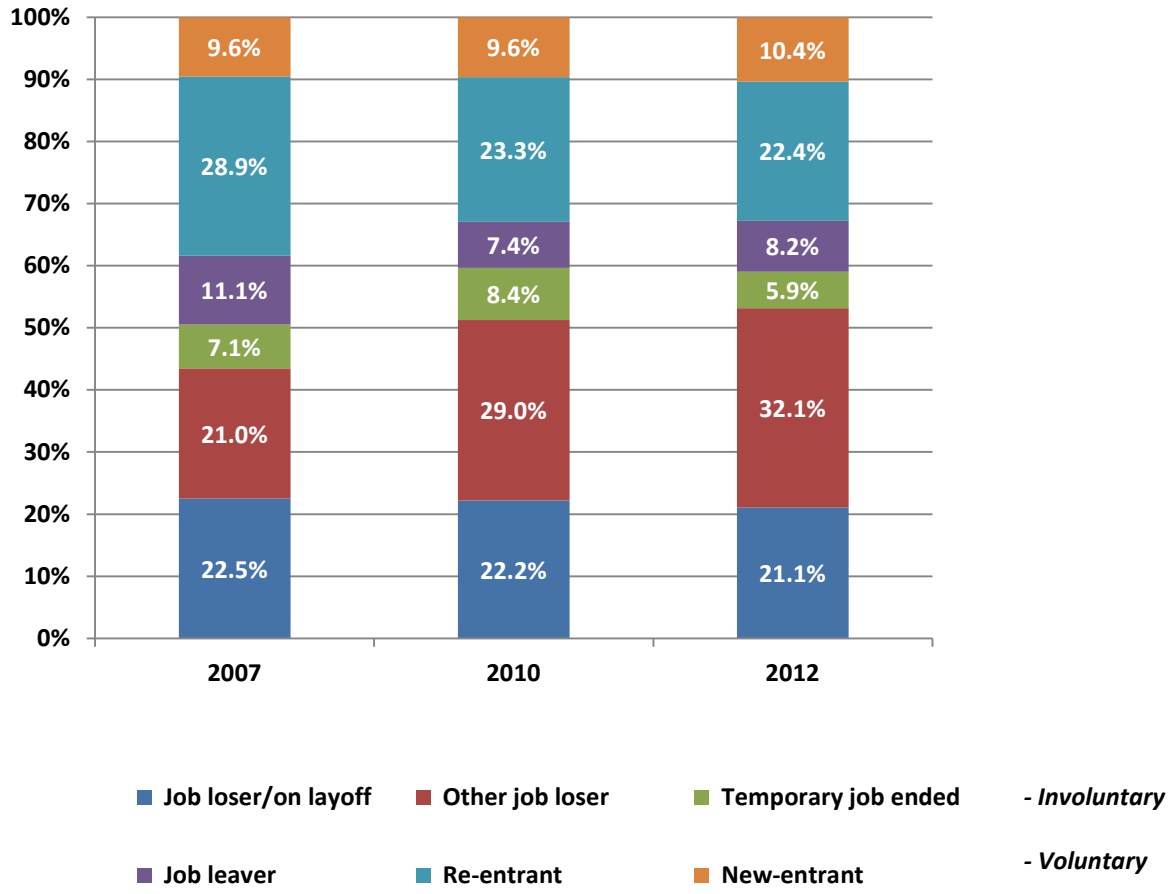
Figure 16: Long-term Unemployed



Source: U.S. Census Bureau, Current Population Survey

The percentage of the long-term unemployed who were laid off was significantly lower relative to the short-term unemployed. The percentage of layoffs was inversely related to the duration of unemployment. Since a person classified as on layoff expects to be recalled within 6 months, it would be expected that a higher percentage of the short-term unemployed were classified as layoffs. Among the voluntarily unemployed, new entrants were more likely to be found among the short-term unemployed than among those unemployed long-term. The long-term unemployed were less likely to be considered new entrants than those unemployed for shorter periods.

Figure 17: Comparison of Causes of Short-term Unemployment Over Time

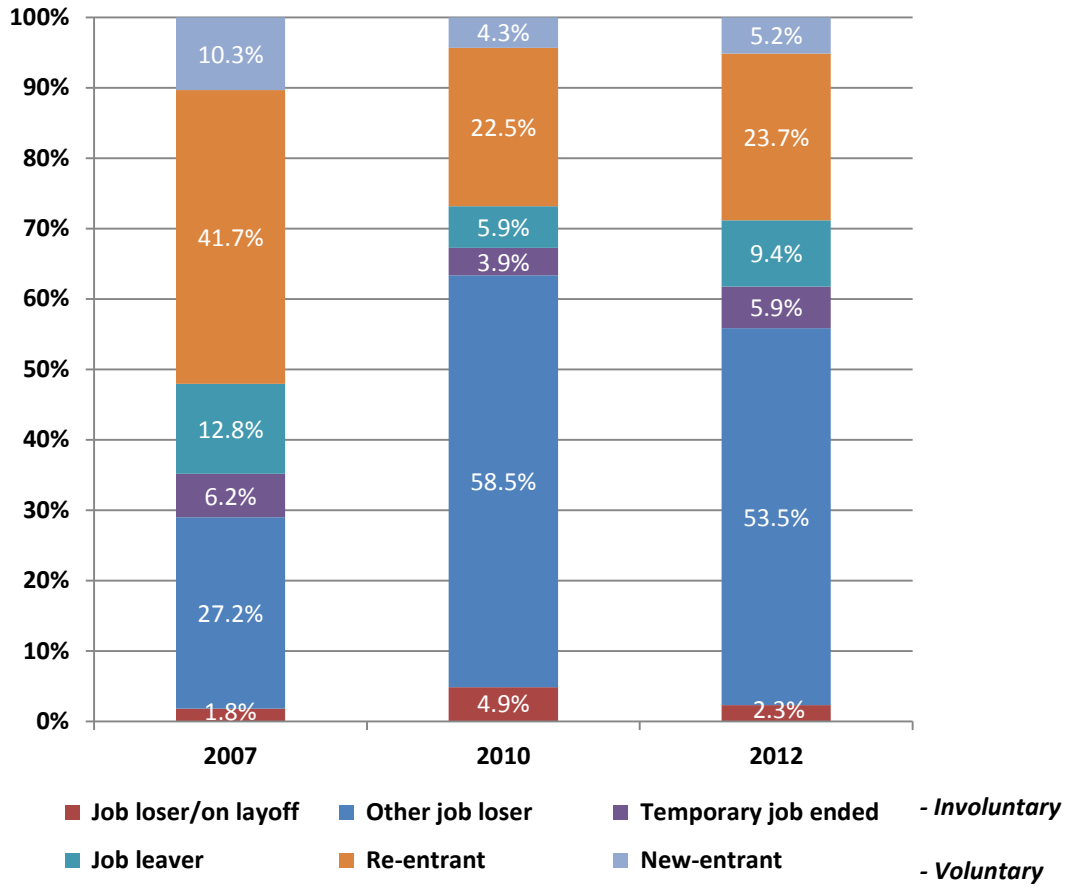


Source: U.S. Census Bureau, Current Population Survey

The causes of unemployment among the short-term unemployed **(Figure 17)** seemed to change little over time. The causes of unemployment among the long-term unemployed, on the other hand, seemed to have changed more over time. **Figure 18** shows that the long-term unemployed had much higher percentages of new entrants and re-entrants in 2007 than in 2010 or 2012. In contrast, a much higher percentage of the long-term unemployed were "other job losers" in 2010 and 2012 than in 2007. As opposed to those on layoff, who are involuntarily unemployed, but expect to be recalled within 6 months, other job losers have no such expectation. In a full employment economy, permanent job losers would be rarer than those during or shortly after the recession.

While the percentage of those leaving their jobs voluntarily decreased substantially from 2007 to 2010, it increased again in 2012. Individuals leaving their jobs voluntarily is considered to be a good indicator of confidence in the overall labor market.

Figure 18: Comparison of Causes of Long-term Unemployment Over Time



Source: U.S. Census Bureau, Current Population Survey

The Effect of Age and Duration on the Causes of Unemployment

In 2012, the duration of unemployment tended to increase with age as did the percentage of the long-term unemployed for each age group. The long-term unemployed who accounted for 39 percent of the unemployed overall, constituted only 14 percent of those between 16 and 19 years old, but 53 percent of those 65 years and older (**Table 9**). For comparison purposes, the analogous data for 2007, is portrayed in **Table 8.**

Table 8: Distribution of Voluntary/Involuntary Unemployment by Age and Duration (2007)

Age	Duration	Total		Involuntary Unemployment		Voluntary Unemployment	
Total All Ages	Total	100.0%	272,579	100.0%	131,330	100.0%	141,249
	Short-term	84.7%	230,980	88.9%	116,699	80.9%	114,281
	Long-term	15.3%	41,599	11.1%	14,631	19.1%	26,968
Between 16 and 19	Total	17.2%	46,845	5.2%	6,865	28.3%	39,980
	Short-term	16.7%	45,638	5.2%	6,865	27.5%	38,773
	Long-term	0.4%	1,207	0.0%	0	0.9%	1,207
Between 20 and 24	Total	20.0%	54,584	11.6%	15,295	27.8%	39,289
	Short-term	16.8%	45,745	10.2%	13,383	22.9%	32,362
	Long-term	3.2%	8,838	1.5%	1,912	4.9%	6,926
Between 25 and 34	Total	19.6%	53,499	22.2%	29,218	17.2%	24,281
	Short-term	17.0%	46,228	20.6%	27,119	13.5%	19,109
	Long-term	2.7%	7,271	1.6%	2,099	3.7%	5,172
Between 35 and 44	Total	14.2%	38,615	19.6%	25,708	9.1%	12,907
	Short-term	11.1%	30,189	15.3%	20,058	7.2%	10,131
	Long-term	3.1%	8,427	4.3%	5,651	2.0%	2,776
Between 45 and 54	Total	16.8%	45,790	23.6%	30,991	10.5%	14,799
	Short-term	13.0%	35,377	20.9%	27,407	5.6%	7,970
	Long-term	3.8%	10,413	2.7%	3,584	4.8%	6,829
Between 55 and 64	Total	8.4%	23,006	13.4%	17,534	3.9%	5,472
	Short-term	6.9%	18,852	12.5%	16,412	1.7%	2,440
	Long-term	1.5%	4,154	0.9%	1,122	2.1%	3,032
65 and older	Total	3.8%	10,240	4.4%	5,719	3.2%	4,521
	Short-term	3.3%	8,952	4.2%	5,456	2.5%	3,496
	Long-term	0.5%	1,287	0.2%	262	0.7%	1,025

Source: U.S. Census Bureau, Current Population Survey
Percentages may not sum to 100% due to rounding.

Table 9: Distribution of Voluntary/Involuntary Unemployment by Age and Duration (2012)

Age	Duration	Total		Involuntary Unemployment		Voluntary Unemployment	
Total All Ages	Total	100.0%	509,109	100.0%	306,042	100.0%	203,067
	Short-term	61.0%	310,784	60.0%	183,507	62.7%	127,277
	Long-term	39.0%	198,326	40.0%	122,536	37.3%	75,790
Between 16 and 19	Total	8.7%	44,237	1.5%	4,481	19.6%	39,756
	Short-term	7.4%	37,871	1.5%	4,481	16.4%	33,390
	Long-term	1.3%	6,366	0.0%	0	3.1%	6,366
Between 20 and 24	Total	16.4%	83,727	11.1%	33,895	24.5%	49,832
	Short-term	12.0%	60,969	8.7%	26,556	16.9%	34,413
	Long-term	4.5%	22,758	2.4%	7,339	7.6%	15,419
Between 25 and 34	Total	21.7%	110,552	21.8%	66,694	21.6%	43,858
	Short-term	13.3%	67,499	13.5%	41,250	12.9%	26,249
	Long-term	8.5%	43,054	8.3%	25,444	8.7%	17,610
Between 35 and 44	Total	16.9%	86,232	21.4%	65,589	10.2%	20,643
	Short-term	9.6%	48,712	12.7%	38,754	4.9%	9,958
	Long-term	7.4%	37,520	8.8%	26,835	5.3%	10,685
Between 45 and 54	Total	18.6%	94,474	22.7%	69,350	12.4%	25,124
	Short-term	9.8%	49,706	11.9%	36,266	6.6%	13,440
	Long-term	8.8%	44,768	10.8%	33,084	5.8%	11,684
Between 55 and 64	Total	12.5%	63,722	16.7%	51,110	6.2%	12,612
	Short-term	6.6%	33,796	9.5%	29,084	2.3%	4,712
	Long-term	5.9%	29,925	7.2%	22,026	3.9%	7,899
65 and older	Total	5.1%	26,165	4.9%	14,923	5.5%	11,242
	Short-term	2.4%	12,229	2.3%	7,115	2.5%	5,114
	Long-term	2.7%	13,936	2.6%	7,808	3.0%	6,128

Source: U.S. Census Bureau, Current Population Survey
Percentages may not sum to 100% due to rounding.

Within most age groups, and for all age groups combined, the percentages of involuntary and voluntary unemployment did not vary much by whether the individual was unemployed long-term or short-term. However, the percentage breakdown between voluntary and involuntary unemployment varied considerably among age groups. Voluntary unemployment in 2012, tended to decline percentagewise as age increased except for those between 45 and 54 years of age and for those older than 65 years. The only age groups in which a majority (of the total as well as both the short-term and long-term cohorts within each age group) was voluntarily unemployed were the two groups below 25 years old. A more detailed breakdown of how the causes of unemployment in 2012 varied by age are provided in **Table 10.**

In contrast to 2012, a majority of the long-term unemployed during 2007, both overall and within all age groups, were voluntarily unemployed, except for those between 35 and 54 years of age. Furthermore, the breakdown between voluntary and involuntary unemployment differed by duration. Within each age group of at least 25 years old, a majority of those who were unemployed short-term was due to involuntary unemployment. However, recall that 2007 was a year characterized by full employment, with roughly half the volume of unemployed and a much lower percentage of long-term unemployed than existed in 2012. As such, the sample size of the long-term unemployed was quite small, and consequently, one should not read too much into these differences. The analysis of how voluntary and involuntary unemployment varied by age and duration in 2007 is provided in **Table 8.**

Table 10: Reasons for Unemployment by Age (2012)

	Forms of Involuntary Unemployment			Forms of Voluntary Unemployment		
Age Group	**Job loser/on layoff**	**Other job loser**	**Temporary Job Ended**	**Job leaver**	**Re-entrant**	**New entrant**
Total All Ages	14%	40%	6%	9%	23%	8%
Between 16 and 19	5%	5%	1%	4%	28%	57%
Between 20 and 24	13%	24%	3%	10%	37%	13%
Between 25 and 34	12%	41%	7%	11%	26%	3%
Between 35 and 44	18%	50%	9%	10%	11%	2%
Between 45 and 54	10%	57%	7%	8%	18%	1%
Between 55 and 64	20%	52%	8%	4%	16%	0%
65 and older	24%	33%	0%	12%	31%	0%

Source: U.S. Census Bureau, Current Population Survey
Percentages may not sum to 100% due to rounding.

In 2012, the percentage of each age cohort accounted for by new entrants decreased with age, going from 57 percent of the unemployed in the 16 to 19 year cohort to zero percent in the 65 and older group. For no age group of at least 25 years old did new entrants constitute even three percent of their unemployed. This would be expected as individuals tend to initially enter the labor force at younger ages.

Re-entrants were a plurality of the unemployed for those between the ages of 20 and 24, while other (than layoff) job losers were at least a plurality of the unemployed for all age groups of at least 25 years of age and a majority for those between the ages of 45 and 64. **Table 9** suggests that those under 25 years old tended to be voluntarily unemployed, while those 25 years old and older tended to be involuntarily unemployed.

Of particular concern, based on **Table 9**, for individuals between 35 and 64 more than half of all involuntarily unemployed were counted as other job losers, indicating that there was little to no expectation of these individuals ever returning to these jobs. Given that, these individuals seem most in need of re-employment services and/or training for a new occupation.

Unemployment Compensation (UC)

The Federal-State Unemployment Compensation (UC) Program provides benefits to eligible workers who become unemployed through no fault of their own and meet other eligibility requirements of state law. In Pennsylvania, employment covered by UC includes approximately 96 percent of all non-farm wage and salary workers.

The UC recipient population includes persons who have filed claims and received UC payments. Exhaustees are a subset of this population and include individuals who have exhausted all available Regular UC, Emergency Unemployment Compensation (EUC), and Extended Benefits (EB). Regular UC includes up to 26 weeks of state provided benefits. EUC is an emergency federal benefits program that is payable to individuals who have exhausted Regular UC with respect to a benefit year that ended on or after May 1, 2007. EB is available to workers who have exhausted Regular UC and EUC during periods of high unemployment. EB became available in Pennsylvania in February 2009 and most recently ended in May 2012.

Because not all unemployed individuals are eligible for UC benefits and not all who are eligible file a claim, the number of UC recipients is smaller than the total number of unemployed persons (as represented in LAUS or CPS). The UC recipient population does not include persons who are entering the labor force for the first time, such as graduating students. It also does not include persons who are considered unemployed by other measurements, but are excluded by law from the UC program, or are otherwise not qualified to receive benefits. Examples of this would include full commission salespersons, elected and appointed government officials, and teachers who are paid on 12-month contracts but do not work during the summer months. In 2012, the UC recipiency rate (average weekly claims as a percentage of total unemployed in LAUS) was 42 percent for Regular UC and 62 percent for all programs (Regular UC+EUC+EB).

Demographic information on UC recipients, including gender, race, age, education, industry of separating employer, number of dependents, and disability status, is collected as part of the UC claims process. Claims activity recorded in the UC system also allows for an analysis of claims history, as shown in **Figure 19**. The work history of UC recipients, as shown in **Figure 20**, is based on wage record data, which is collected through quarterly UC tax reports submitted by employers.

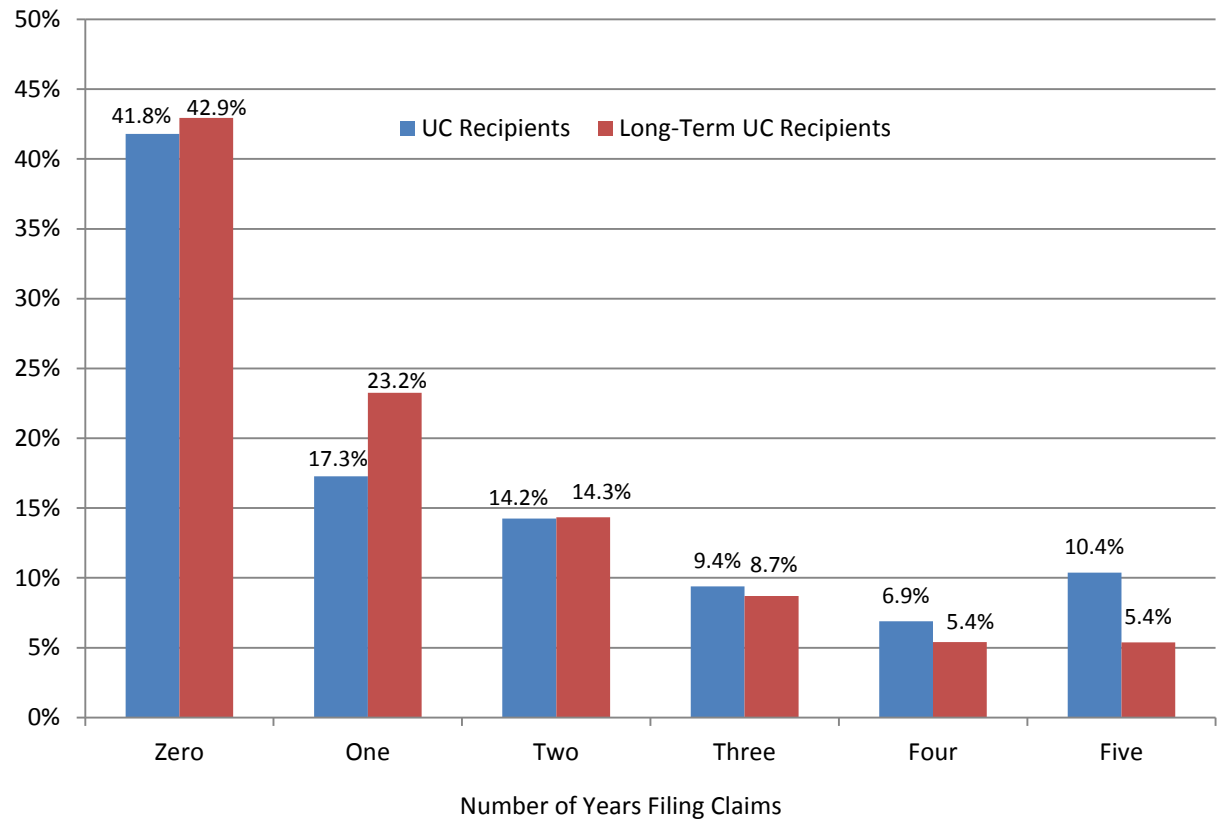
Detailed data on UC recipients, presented in table format, for the years 2007, 2010, and 2012 can be found in Appendices D, E, and F, respectively.

The Work and Claim History of UC Recipients in Pennsylvania

Pennsylvania's unemployment insurance system is designed to provide people with income support when they lose a job through no fault of their own. **Figure 19** shows the claims history, from 2006 to 2010, of all people who received unemployment benefits (UC recipients) in 2012. Also shown is the subset of long-term UC recipients, defined here as UC recipients who exhausted Regular UC, which provides up to 26 weeks of benefits. The exclusion of 2011 data in **Figure 19** was due to the fact that many individuals unemployed in 2011 began receiving unemployment compensation in 2010.

More than 40 percent of all 2012 UC recipients had filed no UC claims in the referenced five year period. A detailed analysis of their demographic characteristics is provided in **Table 11**. The claims history of the long-term UC recipients was similar to that of the overall recipient population. However, long-term UC recipients were more likely than all UC recipients to have filed claims in only one year and less likely to have filed claims in all five years of this period. This provides evidence that the long-term unemployed have filed claims in few years, when compared to all UC recipients.

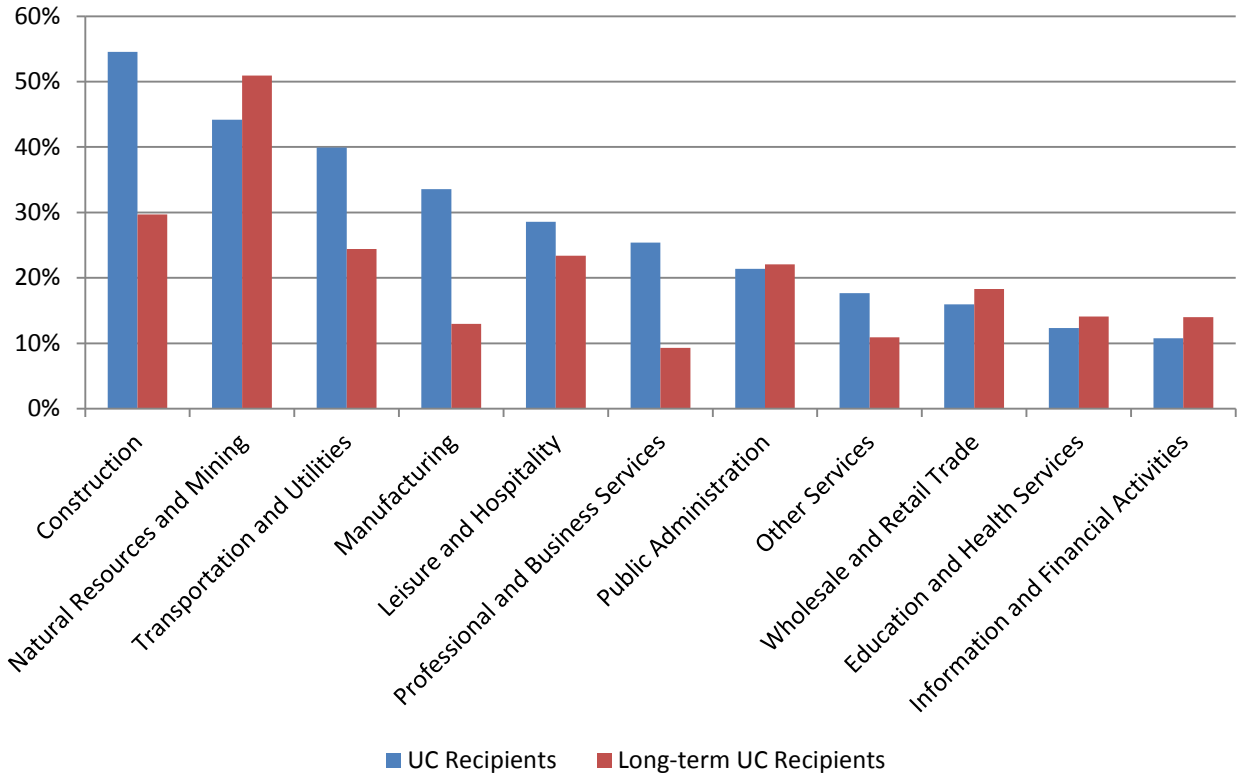
Figure 19: Percentage of Workers Receiving Unemployment Compensation in 2012 by Number of Prior Years of UC Claims (2006 – 2010)



Source: Pennsylvania Unemployment Compensation System

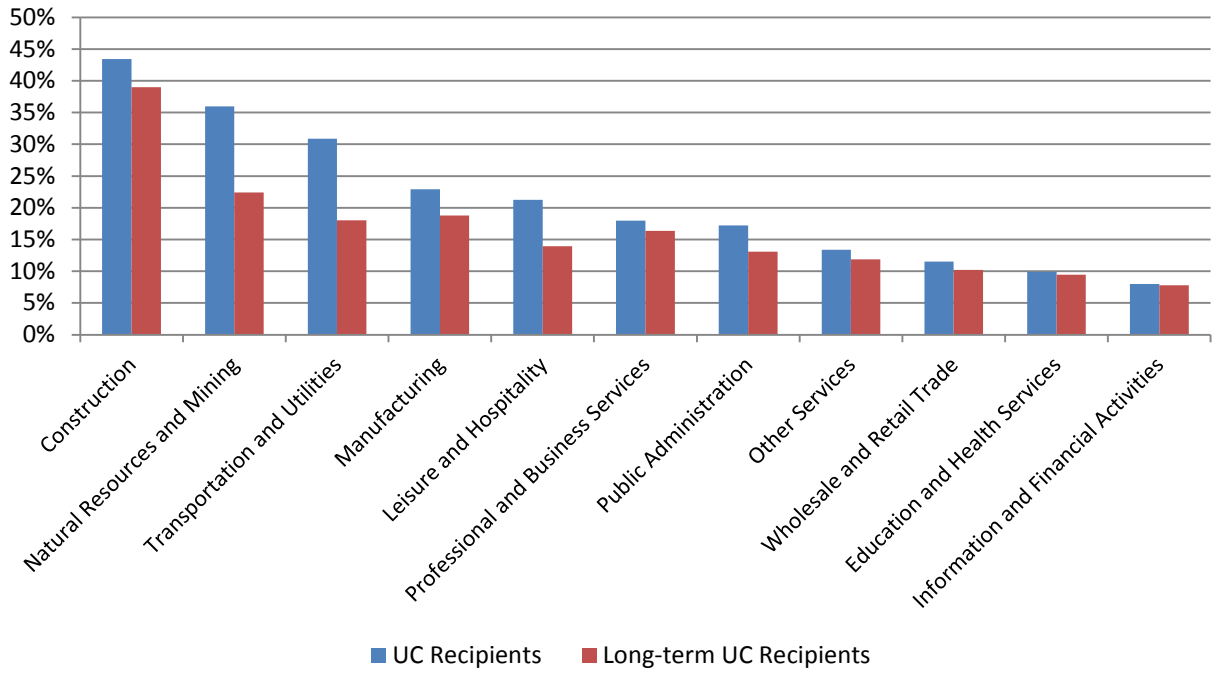
Figure 20 shows the claims history by industry sector for persons who received UC benefits in 2012. The Construction sector had the highest percentage of recipients with three or more claims in the years 2006 through 2010, followed by Natural Resources and Mining. **Figures 21** and **22** show the same measurement by industry sector for the years 2010 and 2007 respectively. As in 2012, the Construction and Natural Resources and Mining sectors were the leaders for both years; however, the percentages were lower for both sectors. For Construction, 43 percent of recipients had three or more claims in the previous five years for both 2010 and 2007, compared to 55 percent for 2012.

Figure 20: Percentage of UC Recipients in 2012 Who Had Three or More Claims in 2006-2010



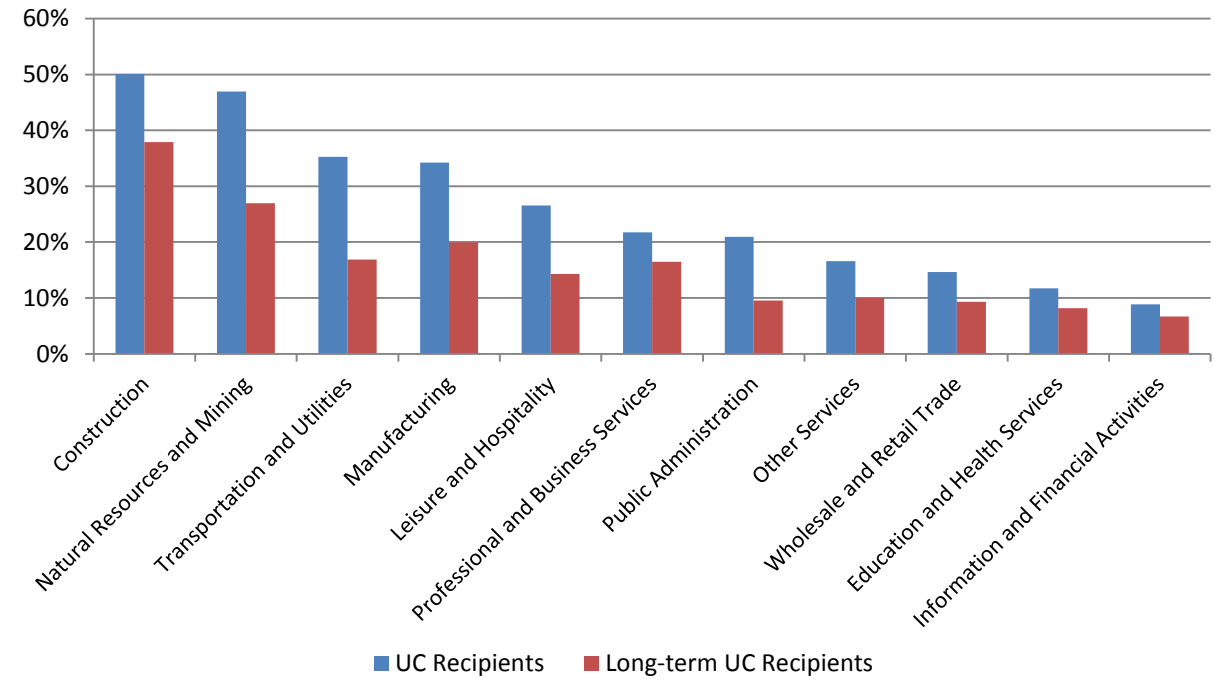
Source: Pennsylvania Unemployment Compensation System

Figure 21: Percentage of UC Recipients in 2010 Who Had Three or More Claims in 2004-2008



Source: Pennsylvania Unemployment Compensation System

Figure 22: Percentage of UC Recipients in 2007 Who Had Three or More Claims in 2001-2005

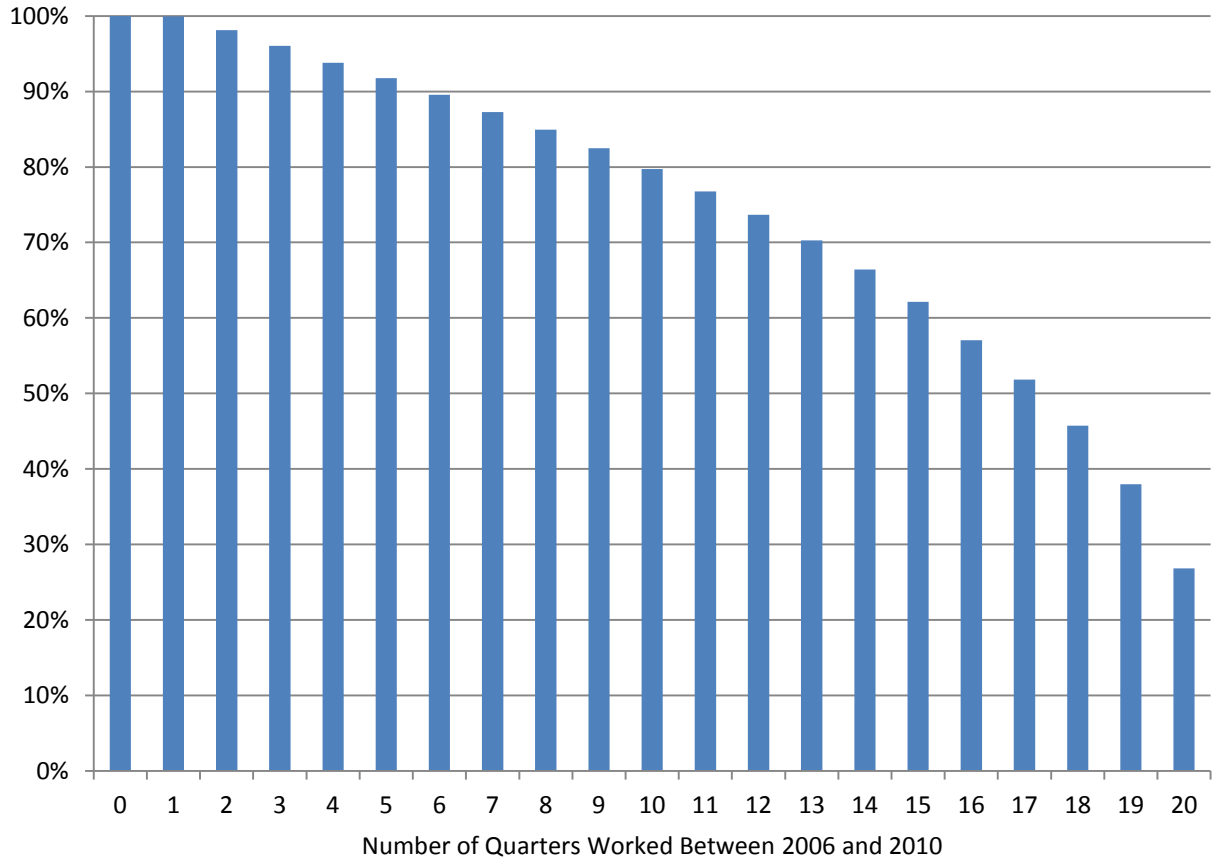


Source: Pennsylvania Unemployment Compensation System

Another way to look at the work history of people receiving UC benefits in 2012 is to look at the number of quarters in which they were employed between 2006 and 2010 (maximum of 20 quarters). The percentage of recipients who worked at least a certain number of quarters during that period is shown in **Figure 23.**

More than 70 percent of UC recipients in 2012 worked at least 13 quarters (about three years) from 2006 to 2010. Further, more than half of the recipients worked at least 17 quarters (about 4 years) during that five-year period. This suggests that, despite some of the stigma associated with the unemployed, the vast majority of these individuals were gainfully employed for the bulk of the time leading up to the Great Recession, but now are having difficulty re-entering employment.

Figure 23: Percentage of Unemployment Compensation Recipients in 2012 and Quarters Worked (at a Minimum) Between 2006 and 2010



Source: Pennsylvania Unemployment Compensation System

Table 11: 2012 Recipients who had no Prior UC Claims in 2006-2010

	2012 Recipients who had no prior UC claims in 2006-2010	All 2012 recipients
Gender		
Male	54%	58%
Female	46%	42%
Race		
Black, non-Hispanic	15%	14%
Hispanic	6%	6%
Other, non-Hispanic	2%	2%
White, non-Hispanic	76%	78%
Age		
16-19	less than 1%	less than 1%
20-24	12%	6%
25-34	26%	23%
35-44	19%	21%
45-54	21%	24%
55-64	16%	19%
65 and older	6%	8%
Education		
Less than High School Diploma	10%	11%
High School Diploma	53%	57%
Some College	18%	18%
Bachelor's Degree or more	20%	15%
Industry		
Natural Resources and Mining	1%	1%
Construction	8%	15%
Manufacturing	13%	15%
Wholesale and Retail Trade	17%	14%
Transportation and Utilities	5%	6%
Information and Financial Activities	7%	5%
Professional and Business Services	16%	16%
Education and Health Services	20%	15%
Leisure and Hospitality	8%	8%
Other Services	3%	3%
Public Administration	2%	1%
Family Status		
0 dependents	68%	67%
1 dependent	16%	17%
2 or more dependents	16%	16%
Base Year Wages		
Less than $10,000	15%	14%
$10,000 to $19,999	23%	26%
$20,000 to $29,999	19%	21%
$30,000 to $39,999	15%	15%
$40,000 to $49,999	10%	10%
$50,000 to $59,999	7%	6%
$60,000 to $74,999	7%	5%
$75,000 and over	5%	3%
Disability Status		
Disabled	4%	2%
Not Disabled	96%	98%

Source: Pennsylvania Unemployment Compensation System

Percentages may not sum to 100% due to rounding.

Conclusion

The roots of Pennsylvania's unemployment problems today stem from the lingering impact of The Great Recession. Typically, a decline in the economy brings in its wake an increase in cyclical unemployment, but also aggravates the already existing frictional and structural unemployment. In a period of economic recovery, the process reverses itself. Pennsylvania's experience, during and after the Great Recession, followed this pattern. However, the slow pace of the national recovery has led to only a slight to moderate decrease in the number of unemployed and the unemployment rate in Pennsylvania. Frictional unemployment has basically returned to its normal level, while a significant amount of cyclical unemployment remains. Structural unemployment has improved, though it remains somewhat elevated.

This report has analyzed data from three sources regarding the unemployed (supply), to better understand the nature and dimensions of the current unemployment problem in Pennsylvania. The three supply sources include different groups and variables and therefore highlight different aspects of the challenges faced. The LAUS and CPS data are generated from a large sample and are representative of all unemployed persons in the state. On a state and county level the LAUS data provide the most reliable estimates, historically and currently, of all aggregate labor force variables including the unemployment rate. The CPS data complement the LAUS data by allowing for demographic analysis (age, education, gender, etc.) of the unemployed. Unlike LAUS, the CPS also provides data on the past occupation and industry of the unemployed as well as the causes and duration of unemployment. The UC data focus on a subset of the unemployed population who are UC claimants and exhaustees. This group would generally exclude all those who are voluntarily unemployed, and include only a portion of those who are involuntarily unemployed. As such, this data refer only to a subset of the structurally and cyclically unemployed since some of them may not be eligible for UC or did not apply. Notwithstanding that, this is an important group to understand, as changes in this group can impact unemployment insurance rates and are important from a policy perspective.

The broad picture revealed by the LAUS data was that the recession caused a large increase in the number of the unemployed and in the unemployment rate. By 2012, the recovery led to a decrease in the annual average level of unemployment and its rate, although both remained elevated at higher than pre-recession levels. In addition, in both good and bad times, the annual unemployment rates by county showed tremendous variation, with the highest rate about twice that of the lowest rate. The implication being, that even during the pre-recession period there were counties with rates of 6.5 percent and higher, while in the post-recession period the lowest county rate was below 6 percent. Of course, the range in each year moved up and down as the state's average rate did. The economic improvement in 2012 still left nine counties with unemployment rates of 9.5 percent or above.

The CPS data contain a more detailed look at the causes and duration of unemployment, which allowed for a classification of total unemployment into its component parts; frictional, structural, and cyclical. The data revealed that the recession led all three components to increase, while the recovery led to a smaller decrease in each. As expected, frictional was the most stable component and accounted for about two percentage points of the overall rate. Structural unemployment averaged around three percentage points of the total rate, but varied more with the underlying economic conditions. In addition, the number of people classified as structurally unemployed fell slightly during the recovery but remained fairly elevated. The recession led to a large increase in cyclical unemployment, which has to a large extent persisted into the recovery period. One manifestation of the elevated levels of structural and cyclical unemployment is that the percentage of the long-term unemployed has remained elevated.

Demographically, the CPS data revealed that the majority of the unemployed in 2012 belonged to the following groups: male, White, aged 25 to 54, and with at least a high school diploma. College-educated individuals were under-represented among the unemployed relative to their percent in the working-age population, but their advantage was less after the recession than it had been prior to its onset. Furthermore, a disproportionate share of the unemployed in 2012 came from the construction industry and related occupations.

In 2012, at least 60 percent of Pennsylvania's unemployed received UC benefits. The UC data showed that 2012 UC recipients had been strongly connected to the labor force in the period from 2006 to 2010, with more than 70 percent of them having worked at least three years over that period. Relative to all UC recipients, long-term UC recipients were more likely to have filed a claim in only one year and less likely to have filed claims in all five years. The UC recipient population was similar to that of the unemployed in some respects, but had higher percentages of individuals who were White, older, and less educated. A majority of UC recipients were aged 45 or older as opposed to only 40 percent for the unemployed overall.

In conclusion, this report has presented a historical analysis of recent unemployment in Pennsylvania and discussed the magnitude and nature of the unemployment problem as of 2012. Further, it presents a demographic analysis of the composition of the unemployed and that of the sub-group of UC recipients. By presenting a broad picture of the unemployed this research can assist in developing policy. However, additional research is still needed through surveys to fill in the details.

Next Steps

This report serves as the first phase in CWIA's research into the unemployed in Pennsylvania. While this report provides a thorough analysis of available data sources, certain information gaps still remain. Two additional phases will gather this information through additional surveys:

Phase II

This survey will be targeted to individuals filing claims in the UC system. This survey of continuing claims will gather information on the portion of unemployed Pennsylvanians who collect UC benefits. Targeted research metrics include additional demographic characteristics (household composition, marital status), potential barriers to employment (medical/health issues), educational attainment, work experience (previous industry/occupation), and job search methods. Additionally, this survey will be conducted in such a manner as to allow analysis of rural/urban variation throughout the commonwealth.

Phase III

This survey will collect and analyze information along the same metrics as in Phase II, but it will target the UC exhaustees, (i.e. those who had filed claims and collected UC benefits, but have exhausted all available Regular UC, EUC, and EB). Such individuals generally have been unemployed for a substantial period and are a subset of the long-term unemployed. This survey will be conducted in a manner that allows for an urban/rural analysis.

Final Report

Results from Phase II and Phase III of the study of the unemployed will be presented, with a comprehensive analysis and summary. The report will be written for a non-technical audience.

Appendix A: Characteristics of the Unemployed in Pennsylvania (2007)

	Unemployed	Long-Term Unemployed	Employed	Population	Labor Force
Gender					
Male	58%	56%	53%	48%	53%
Female	43%	44%	47%	52%	47%
Race					
Black, non-Hispanic	11%	19%	8%	9%	8%
Hispanic	6%	7%	3%	3%	3%
White, non-Hispanic	80%	73%	86%	85%	86%
Other, non-Hispanic	3%	1%	2%	2%	2%
Age					
16-19	11%	2%	4%	7%	5%
20-24	20%	14%	9%	9%	10%
25-34	21%	19%	19%	15%	19%
35-44	16%	23%	22%	17%	22%
45-54	19%	28%	25%	19%	25%
55-64	9%	11%	15%	15%	15%
65 and over	4%	3%	5%	18%	5%
Education					
Less than a high school diploma	18%	17%	8%	15%	9%
High school graduates, no college	46%	44%	38%	40%	38%
Some college, no degree	14%	13%	14%	14%	14%
Associate degree	8%	10%	10%	8%	10%
Bachelor's degree or higher	13%	16%	30%	24%	30%
Marital Status					
Married - Spouse Present	31%	23%	56%	52%	55%
Marital Status Other	17%	29%	15%	20%	15%
Never Married	52%	49%	29%	29%	30%
Industry					
Natural Resources and Mining	1%	less than 1%	1%	1%	1%
Construction	14%	11%	6%	7%	7%
Manufacturing	11%	13%	13%	13%	13%
Wholesale and Retail Trade	18%	20%	14%	14%	14%
Transportation and Utilities	6%	5%	6%	6%	6%
Information and Financial Activities	5%	11%	9%	8%	9%
Professional and Business Services	13%	12%	9%	9%	9%
Educational and Health Services	12%	11%	25%	24%	24%
Leisure and Hospitality	14%	11%	8%	9%	8%
Other Services	4%	4%	5%	5%	5%
Public Administration	1%	3%	4%	4%	4%

Source: U.S. Census Bureau; Current Population Survey

Percentages may not sum to 100% due to rounding.

Appendix B: Characteristics of the Unemployed in Pennsylvania (2010)

	Unemployed	Long-Term Unemployed	Employed	Population	Labor Force
Gender					
Male	58%	60%	52%	48%	53%
Female	42%	40%	48%	52%	47%
Race					
Black, non-Hispanic	15%	13%	8%	9%	8%
Hispanic	8%	10%	4%	4%	4%
White, non-Hispanic	74%	73%	85%	83%	84%
Other, non-Hispanic	4%	4%	3%	3%	3%
Age					
16-19	5%	3%	4%	7%	4%
20-24	18%	11%	9%	8%	9%
25-34	23%	23%	21%	16%	21%
35-44	18%	21%	20%	15%	20%
45-54	19%	21%	25%	19%	24%
55-64	14%	17%	17%	16%	16%
65 and over	4%	4%	5%	19%	5%
Education					
Less than a high school diploma	14%	16%	8%	15%	8%
High school graduates, no college	44%	44%	36%	38%	36%
Some college, no degree	17%	14%	15%	14%	15%
Associate degree	8%	8%	10%	8%	10%
Bachelor's degree or higher	17%	17%	32%	25%	31%
Marital Status					
Married - Spouse Present	40%	42%	57%	52%	56%
Marital Status Other	14%	14%	14%	18%	14%
Never Married	46%	44%	29%	30%	30%
Industry					
Natural Resources and Mining	2%	1%	2%	2%	2%
Construction	14%	13%	6%	7%	7%
Manufacturing	15%	17%	11%	12%	12%
Wholesale and Retail Trade	14%	16%	15%	14%	14%
Transportation and Utilities	4%	3%	5%	5%	5%
Information and Financial Activities	7%	7%	9%	8%	8%
Professional and Business Services	11%	14%	9%	10%	10%
Educational and Health Services	13%	12%	24%	23%	23%
Leisure and Hospitality	14%	11%	9%	9%	9%
Other Services	3%	2%	5%	5%	5%
Public Administration	3%	3%	5%	5%	5%

Source: U.S. Census Bureau; Current Population Survey

Percentages may not sum to 100% due to rounding.

Appendix C: Characteristics of the Unemployed in Pennsylvania (2012)

	Unemployed	Long-Term Unemployed	Employed	Population	Labor Force
Gender					
Male	54%	51%	53%	48%	53%
Female	46%	49%	47%	52%	47%
Race					
Black, non-Hispanic	17%	21%	9%	10%	9%
Hispanic	8%	9%	5%	5%	5%
White, non-Hispanic	71%	66%	83%	82%	82%
Other, non-Hispanic	4%	4%	3%	4%	3%
Age					
16-19	4%	2%	4%	6%	4%
20-24	16%	10%	10%	9%	11%
25-34	23%	22%	19%	15%	20%
35-44	18%	19%	20%	15%	20%
45-54	20%	23%	25%	19%	24%
55-64	14%	16%	17%	16%	17%
65 and over	6%	7%	5%	19%	5%
Education					
Less than a high school diploma	12%	12%	7%	13%	7%
High school graduates, no college	42%	40%	35%	38%	35%
Some college, no degree	15%	16%	16%	15%	16%
Associate degree	11%	12%	11%	9%	11%
Bachelor's degree or higher	20%	19%	32%	26%	31%
Marital Status					
Married - Spouse Present	38%	35%	54%	50%	53%
Marital Status Other	17%	23%	15%	19%	15%
Never Married	45%	42%	31%	31%	32%
Industry					
Natural Resources and Mining	1%	less than 1%	4%	2%	2%
Construction	13%	9%	11%	6%	6%
Manufacturing	13%	15%	25%	13%	13%
Wholesale and Retail Trade	17%	18%	28%	14%	14%
Transportation and Utilities	4%	5%	11%	5%	5%
Information and Financial Activities	6%	6%	16%	8%	8%
Professional and Business Services	13%	14%	21%	11%	11%
Educational and Health Services	18%	16%	49%	24%	24%
Leisure and Hospitality	11%	8%	18%	9%	9%
Other Services	4%	6%	9%	4%	4%
Public Administration	1%	1%	8%	4%	4%
Disability Status					
Disabled	6%	7%	4%	12%	4%
Not Disabled	94%	93%	96%	88%	96%
Veteran Status					
Veteran	6%	7%	7%	9%	7%
Not Veteran	94%	93%	93%	91%	93%

Source: U.S. Census Bureau; Current Population Survey

Percentages may not sum to 100% due to rounding.

Appendix D: Characteristics of All UC Recipients and Recipients Who Were Unemployed for More Than 26 Weeks (2007)

	All recipients	Recipients who were unemployed for more than 26 weeks[5]
Gender		
Male	61%	54%
Female	39%	46%
Race		
Black, non-Hispanic	19%	28%
Hispanic	4%	4%
Other, non-Hispanic	1%	1%
White, non-Hispanic	76%	66%
Age		
16-19	less than 1%	less than 1%
20-24	less than 1%	less than 1%
25-34	19%	17%
35-44	22%	22%
45-54	26%	25%
55-64	22%	21%
65 and older	12%	14%
Education		
Less than High School Diploma	12%	12%
High School Diploma	60%	55%
Some College	16%	18%
Bachelor's Degree or more	12%	14%
Industry		
Natural Resources and Mining	1%	1%
Construction	18%	11%
Manufacturing	19%	15%
Wholesale and Retail Trade	13%	16%
Transportation and Utilities	7%	4%
Information and Financial Activities	5%	8%
Professional and Business Services	14%	17%
Education and Health Services	11%	15%
Leisure and Hospitality	8%	7%
Other Services	2%	3%
Public Administration	1%	2%
Family Status		
0 dependents	66%	68%
1 dependent	17%	16%
2 or more dependents	17%	16%
Base Year Wages		
Less than $10,000	14%	16%
$10,000 to $19,999	27%	28%
$20,000 to $29,999	23%	23%
$30,000 to $39,999	16%	14%
$40,000 to $49,999	9%	8%
$50,000 to $59,999	5%	4%
$60,000 to $74,999	3%	3%
$75,000 and over	2%	2%
Disability Status		
Disabled	3%	4%
Not Disabled	97%	96%

Source: Pennsylvania Unemployment Compensation System

Percentages may not sum to 100% due to rounding.

.

[5] *Recipients who exhausted all regular UC benefits. No extended (EB) or emergency (EUC) benefits were available in 2007.*

Appendix E: Characteristics of All UC Recipients, Recipients Exhausting Regular UC (Up to 26 Weeks), and Recipients Exhausting Regular UC and EUC (Up to 99 Weeks) (2010)

	All recipients	Recipients who were unemployed for more than 26 weeks	Recipients who exhausted their benefits[6]
Gender			
Male	60%	58%	54%
Female	40%	42%	46%
Race			
Black, non-Hispanic	13%	16%	21%
Hispanic	5%	6%	6%
Other, non-Hispanic	2%	2%	2%
White, non-Hispanic	80%	76%	72%
Age			
16-19	less than 1%	less than 1%	less than 1%
20-24	3%	2%	less than 1%
25-34	22%	22%	16%
35-44	21%	21%	20%
45-54	24%	23%	24%
55-64	20%	20%	23%
65 and older	10%	12%	17%
Education			
Less than High School Diploma	11%	12%	14%
High School Diploma	57%	55%	56%
Some College	17%	18%	17%
Bachelor's Degree or more	14%	15%	13%
Industry			
Natural Resources and Mining	1%	1%	1%
Construction	15%	12%	10%
Manufacturing	18%	18%	19%
Wholesale and Retail Trade	15%	17%	18%
Transportation and Utilities	6%	4%	4%
Information and Financial Activities	6%	8%	9%
Professional and Business Services	15%	17%	17%
Education and Health Services	12%	13%	12%
Leisure and Hospitality	8%	7%	6%
Other Services	3%	3%	3%
Public Administration	1%	1%	1%
Family Status			
0 dependents	65%	67%	66%
1 dependent	17%	17%	18%
2 or more dependents	17%	17%	16%
Base Year Wages			
Less than $10,000	15%	14%	16%
$10,000 to $19,999	26%	26%	27%
$20,000 to $29,999	22%	22%	23%
$30,000 to $39,999	15%	15%	15%
$40,000 to $49,999	9%	9%	9%
$50,000 to $59,999	6%	6%	5%
$60,000 to $74,999	5%	5%	4%
$75,000 and over	3%	3%	2%
Disability Status			
Disabled	2%	1%	1%
Not Disabled	98%	99%	99%

Source: Pennsylvania Unemployment Compensation System

Percentages may not sum to 100% due to rounding.

[6] *Up to 99 weeks were available for all of 2010.*

Appendix F: Characteristics of All UC Recipients, Recipients Exhausting Regular UC (Up to 26 Weeks), and Recipients Exhausting Regular UC and EUC (Up to 93 Weeks) (2012)

	All UC recipients	Recipients Exhausting Regular UC (Up to 26 Weeks)	Recipients Exhausting Regular UC and EUC (Up to 93 Weeks)[7]
Gender			
Male	58%	53%	51%
Female	42%	47%	49%
Race			
Black, non-Hispanic	14%	18%	21%
Hispanic	6%	7%	7%
Other, non-Hispanic	2%	2%	2%
White, non-Hispanic	78%	73%	70%
Age			
16-19	less than 1%	less than 1%	less than 1%
20-24	6%	5%	3%
25-34	23%	24%	22%
35-44	21%	20%	21%
45-54	24%	22%	23%
55-64	19%	19%	21%
65 and older	8%	9%	11%
Education			
Less than High School Diploma	11%	11%	12%
High School Diploma	57%	54%	55%
Some College	18%	19%	19%
Bachelor's Degree or more	15%	16%	15%
Industry			
Natural Resources and Mining	1%	1%	1%
Construction	15%	11%	9%
Manufacturing	15%	14%	14%
Wholesale and Retail Trade	14%	16%	17%
Transportation and Utilities	6%	4%	4%
Information and Financial Activities	5%	8%	8%
Professional and Business Services	16%	17%	17%
Education and Health Services	15%	18%	19%
Leisure and Hospitality	8%	7%	6%
Other Services	3%	3%	3%
Public Administration	1%	2%	2%
Family Status			
0 dependents	67%	69%	67%
1 dependent	17%	16%	17%
2 or more dependents	16%	15%	16%
Base Year Wages			
Less than $10,000	14%	15%	16%
$10,000 to $19,999	26%	26%	27%
$20,000 to $29,999	21%	22%	22%
$30,000 to $39,999	15%	15%	15%
$40,000 to $49,999	10%	9%	9%
$50,000 to $59,999	6%	5%	5%
$60,000 to $74,999	5%	4%	4%
$75,000 and over	3%	3%	3%
Disability Status			
Disabled	2%	2%	1%
Not Disabled	98%	98%	99%

Source: Pennsylvania Unemployment Compensation System

Percentages may not sum to 100% due to rounding.

[7] *A maximum of 93 weeks of benefits were available from January 1 through February 18. This decreased to 86 weeks from February 19 through May 12, 73 weeks from May 13 through September 1, and 63 weeks from September 2 through December 31.*

Appendix G: Unemployment Rate and Labor Force Participation Rate by Age Cohort in Pennsylvania (2007, 2010, and 2012)

	Unemployment Rate		
	2007	2010	2012
16-19	9.6%	9.5%	7.6%
20-24	7.9%	15.5%	10.6%
25-34	4.2%	8.7%	8.5%
35-44	2.8%	7.1%	6.5%
45-54	2.9%	6.2%	6.0%
55-64	2.4%	6.6%	6.0%
65 and over	3.6%	5.9%	7.6%

	Labor Force Participation Rate		
	2007	2010	2012
16-19	43.2%	37.5%	37.9%
20-24	73.4%	69.8%	72.9%
25-34	83.9%	84.9%	82.6%
35-44	82.4%	82.2%	85.1%
45-54	83.2%	81.9%	80.5%
55-64	62.9%	65.4%	66.0%
65 and over	16.1%	16.7%	17.6%

Source: U.S. Census Bureau; Current Population Survey

Percentages may not sum to 100% due to rounding.

Appendix H: Unemployment Rate and Labor Force Participation Rate by Race and Ethnicity in Pennsylvania (2007, 2010, and 2012)

	Unemployment Rate		
	2007	2010	2012
Black, non-Hispanic	5.3%	14.4%	13.1%
Hispanic	6.8%	14.4%	11.4%
White, non-Hispanic	3.6%	7.0%	6.2%
Other, non-Hispanic	4.5%	9.7%	9.1%

	Labor Force Participation Rate		
	2007	2010	2012
Black, non-Hispanic	58.2%	55.7%	60.5%
Hispanic	63.2%	63.1%	63.8%
White, non-Hispanic	65.0%	63.8%	64.4%
Other, non-Hispanic	65.3%	62.5%	58.5%

Source: U.S. Census Bureau; Current Population Survey

Percentages may not sum to 100% due to rounding.

Appendix I: Unemployment Rate Labor Force Participation Rate by Educational Attainment in Pennsylvania (2007, 2010, and 2012)

	Unemployment Rate		
	2007	2010	2012
Less than a high school diploma	8.3%	13.9%	11.7%
High school graduates, no college	4.6%	9.6%	8.6%
Some college, no degree	4.1%	9.4%	7.0%
Associate degree	3.4%	6.6%	7.2%
Bachelor's degree or higher	1.8%	4.3%	4.6%

	Labor Force Participation Rate		
	2007	2010	2012
Less than a high school diploma	37.1%	34.6%	35.5%
High school graduates, no college	62.1%	59.7%	59.1%
Some college, no degree	64.6%	66.2%	67.8%
Associate degree	80.8%	76.8%	76.9%
Bachelor's degree or higher	79.8%	78.9%	77.9%

Source: U.S. Census Bureau; Current Population Survey

Percentages may not sum to 100% due to rounding.

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