

**The Labor Market Problems of Massachusetts'  
Workers in the Recovery from the Great  
Recession: The Great Socioeconomic  
Divergence**

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*“There is no problem so big that it cannot be run away from.”*  
Richard Bach, Illusions: The Adventures of a Reluctant Messiah

*“For the measure that you measure with, shall be measured back unto you.”*  
Luke, Chapter 6 verse 38.

## **Introduction**

The labor markets of both the state and the nation performed quite poorly over the past 12 years (2000-2012). Some economists and other social science analysts have referred to the decade of 2000-2010 as the “Lost Decade”. After achieving full employment in 2000, the nation experienced a recession in early 2001 that lasted for 8 months and then was followed by a largely jobless recovery for close to two years. Four years of job growth were then followed by the Great Recession of 2007-2009 and a slow growing jobs recovery that sharply increased the national unemployment rate and other labor underutilization problems through 2010.<sup>1</sup> The aggregate numbers of payroll jobs for the nation over the entire 2000-2010 decade fell by approximately 1.9 million versus gains of 22.4 million in the 1990s decade and close to 19 million jobs in the 1980’s. This was the worst job creating performance in the nation during the entire post-World War Two era. The nation began the decade with an unemployment rate of only 4.0% in 2000, the lowest unemployment rate since 1969, but ended the decade with an unemployment rate of 9.6%, tied with 1982 and 1983 as the highest unemployment rates in the nation’s post-World War Two history.<sup>2</sup>

The employment recovery from the Great Recession of 2007-2009 had left many U.S. workers behind, with lower income workers continuing to face far more severe unemployment, underemployment, and other labor underutilization problems than their more affluent counterparts.<sup>3</sup> The less educated and lower income workers were being left far behind in the labor market as of 2011. A very large share of the income gains generated by the recovery were not going to workers in the form of higher wages or annual earnings, but to corporate profits and

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<sup>1</sup> See: The National Bureau of Economic Research, U.S. Business Cycle Expansions and Contractions, [www.nber.org/cycles](http://www.nber.org/cycles).

<sup>2</sup> For an overview of the national unemployment rates from 1947 to 2000, see: U.S. Council of Economic Advisers, Economic Report of the President: February 2002. U.S. Government Printing Office, Washington, D.C. 2002.

<sup>3</sup> See: “Five Years Later: How the Great Recession Changed America,” The Week, September 27, 2013.

to capital gains recipients dominated by those at the top one percent of the income distribution.<sup>4</sup> Employment gains and labor market problems were very unevenly shared across household income groups with the gaps between the affluent and the low income population rising over time.

Massachusetts' labor markets performed equally as badly and in some cases even more poorly than the nation's. By the final quarter of 2012, the state had still not yet matched the number of payroll jobs it had generated in the first quarter of 2001, the previous historic high jobs count. In 2000, the state's unemployment rate was only 2.7%, the third lowest state unemployment rate in the entire country. By 2010, the unemployment rate had risen to 8.5%, more than three times as high as that of 2000 and ranking only 20<sup>th</sup> lowest, tied with three other states.

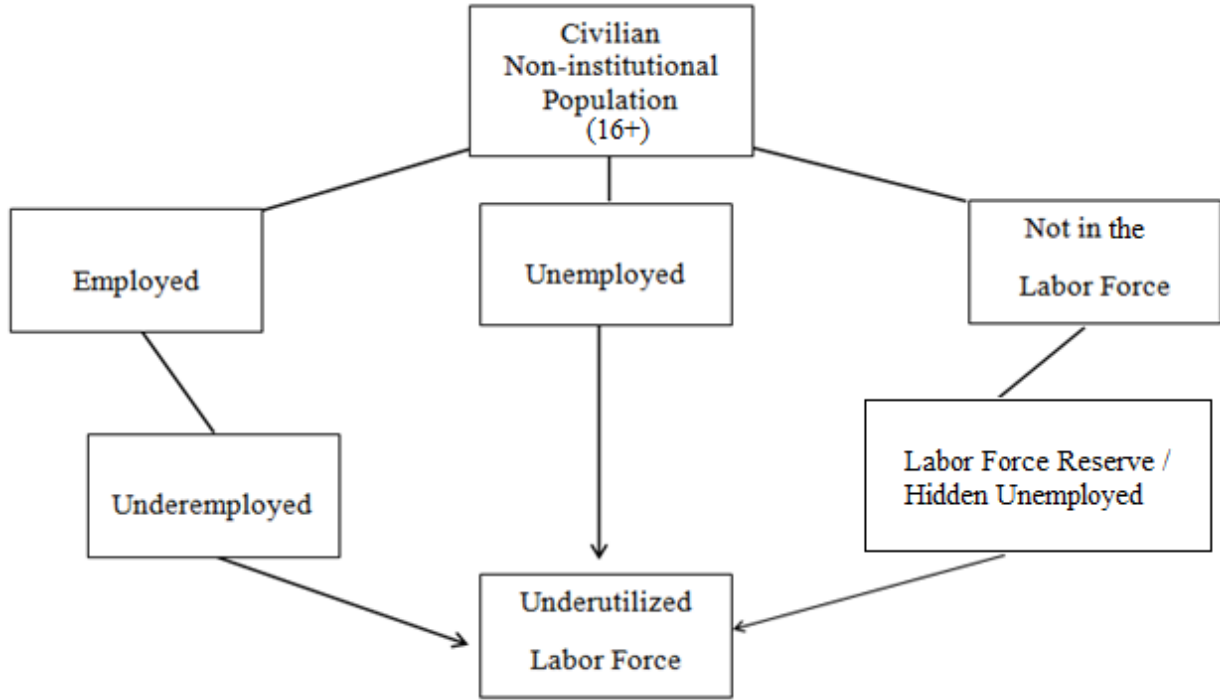
A serious understanding of the labor market problems of Massachusetts and U.S. residents requires going well beyond the official unemployment statistics to include problems of underemployment, malemployment, and other measures of labor underutilization. It also requires going well beyond the average number and incidence of such problems to include a careful examination of the distribution of such labor market problems among educational attainment and household income groups in the state.<sup>5</sup> This paper is devoted to such a more rigorous analysis of the size and incidence of alternative labor market problems among Massachusetts workers in 2012-13, with comparisons dating back to 2000. We will show that combined labor underutilization problems among state workers have increased by a substantial degree over the past 12-13 years and that the distribution of such labor market problems has become far more unequal across key socioeconomic groups of workers, as represented by their educational attainment and household income group. These widening socioeconomic disparities in labor market problems have contributed in an important way to the growth of earnings and income inequality in our state over the past decade. We are no longer a true "Commonwealth" and the consequences are quite severe.

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<sup>4</sup> See: Hope Yen, "Rich-Poor Employment Gap Now Widest on Record," Huffington Post, September 16, 2013, [www.huffingtonpost.com](http://www.huffingtonpost.com).

<sup>5</sup> For a more careful explanation of these labor underutilization measures, see: Andrew Sum and Ishwar Khatiwada, "Endnotes: Going Beyond the Unemployment Statistics: The Case for Multiple Measures of Labor Underutilization", Mass Benchmarks, 2012, Volume 14, Issue 2, pp. 19-24.

Chart 1:  
Measuring the Civilian Labor Force, the Employed and Unemployed, and the Underutilized Labor Force in Massachusetts



Civilian Labor Force	=	Employed	+	Unemployed		
Unemployment Rate	=	Unemployed	/	Civilian Labor Force		
Underemployment Rate	=	Underemployed	/	Employed		
Hidden Unemployment Rate	=	Hidden Unemployed	/	Adjusted Labor Force		
Underutilized Labor Force	=	Unemployed	+	Underemployed	+	Hidden Unemployed
Adjusted Labor Force	=	Civilian Labor Force	+	Hidden Unemployed		
Labor Force Underutilization Rate	=	Underutilized Labor Force	/	Adjusted Labor Force		

## Labor Force, Unemployment, and Other Labor Underutilization Concepts, Measures, and Data Sources

All of the empirical findings appearing in this paper are based on data collected as part of the monthly national Current Population Survey (CPS).<sup>6</sup> The CPS survey conducts interviews with a representative sample of households in every state with approximately 820 households per month in Massachusetts and 60,000 across the nation. Labor force, employment, and labor underutilization data are collected from each household resident aged 16 and older. Over the January 2012 – August 2013 time period (a 20 month period), labor force data were obtained for just under 34,000 respondents in Massachusetts.<sup>7</sup> At various points throughout this paper, we compare the results for Massachusetts workers over the 2012-2013 time period with those for other years back to 2000.

These findings from the CPS interviews are used by the U.S. Bureau of Labor Statistics to classify each respondent into one of three mutually exclusive categories: the employed, the unemployed, and those not in the labor force (see Chart 1). To be classified as employed, an individual must have either worked for one or more hours for pay or profit in the reference week, had a job from which they were temporarily absent due to a temporary illness, the weather, personal vacation, or an industrial dispute at the work place, or worked for a family owned business for 15 or more hours without pay.<sup>8</sup> The unemployed are those persons who did no work for pay or profit in the reference week, but had actively looked for a job in the past four weeks, and could have taken a job if one were offered to her or him. Those persons who were not classified as either employed or unemployed are placed into the not in labor force category. As will be noted below, however, there is a fairly sizeable group of people in this not-in-labor-force population who express an interest in immediate employment at the time of the survey.

The estimates of the numbers of the employed and unemployed are combined to form an estimate of the civilian labor force. By dividing the number of unemployed persons by the civilian labor force, an estimate of the unemployment rate can be obtained. The unemployment

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<sup>6</sup> The CPS is a monthly household survey conducted by the U.S. Census Bureau for the U.S. Bureau of Labor Statistics. For a review of the key purposes and features of the monthly Current Population Survey and key labor force activity measure and labor market problems, see: U.S Bureau of Labor Statistics, The Employment Situation: August 2013, Washington, D.C., September 2013.

<sup>7</sup> These are not 34,000 different individuals. The CPS survey operates on a rotation group cycle. Once a household is selected for participation in the survey, it is interviewed for 4 months, dropped for 8 months, then re-interviewed for 4 months, and then dropped from the survey.

<sup>8</sup> The reference week of the survey is the calendar week containing the 12<sup>th</sup> day of the month. The CPS survey is administered during the week containing the 19<sup>th</sup> day of the month.

rate is the most widely cited measure of labor underutilization in the media, but it covers only a fraction of the labor market problems encountered by both state and national workers. A second labor market problem is that of underemployment (see Chart 1). An underemployed person is one who worked part time (under 35 hours in the reference week) but desired full time work and was available to take a full time job.<sup>9</sup> Nationally the numbers of underemployed increased strongly during the Great Recession and remained high in the early years of the recovery from the recession. On average, the underemployed typically work only 21-22 hours per week, barely half the number of hours worked by the full time employed and they receive less per hour in wages than comparable full time workers. The underemployed, thus, earn less than half the mean weekly earnings of their comparable full time employed peers. Recent national research evidence has shown that working part time has no statistically significant effect on the long term earnings of workers, both men and women.<sup>10</sup> Being underemployed, thus, leads to losses in earnings in both the short and the long run.

A third measure of labor underutilization is the so-called labor force reserve or the hidden unemployed.<sup>11</sup> These are individuals who have not actively looked for a job in the past four weeks but express a desire for immediate employment at the time of the CPS survey. A subset of this group of the hidden unemployed is referred to by the U.S. Bureau of Labor Statistics as the marginally attached. They must have looked for a job at some time in the past 52 weeks. Their numbers are typically only 40% as high as the total number of the hidden unemployed. A subset of the marginally attached is categorized by the U.S. Bureau of Labor Statistics as the “discouraged worker.” This group must have cited to the CPS interviewer that the main reason for not actively looking for a job is that they had earlier looked but could not find a job, think no jobs are available, or were too young, too old, or too poorly educated to be hired. The discouraged workers typically constitute only a small fraction (15%) of the total number of hidden unemployed.

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<sup>9</sup> For an overview and assessment of the rising incidence of underemployment problems during the Great Recession, see: Andrew Sum and Ishwar Khatiwada, “The Nation’s Underemployed in the Great Recession of 2007-2009,” Monthly Labor Review, November 2010, pp. 3-13.

<sup>10</sup> For evidence on the limited effectiveness of part time jobs in raising the future wages of U.S. workers, see: (i) Marta Tienda, V. Joseph Hotz, et al., “Employment and Wage Prospects of Black, White, and Hispanic Women,” in Human Resource Economics and Public Policy, W.E. Upjohn Institute for Employment Research, Kalamazoo, 2010, pp. 129-160; (ii) Francine Blau and Lawrence M. Kahn, “The Feasibility and Importance of Adding Measures of Actual Experience to Cross-Section Data Collection,” Journal of Labor Economics, Volume 31, Number 2, April 2013, pp. S17-S58.

<sup>11</sup> The labor force reserve or hidden unemployed is more than twice as large as the marginally attached labor force.

In this paper, we develop a count of the total pool of underutilized workers in Massachusetts.<sup>12</sup> The underutilized represent the sum of the official unemployed, the underemployed, and the hidden unemployed. We also estimate a labor underutilization rate. This underutilization rate is calculated by dividing the number of underutilized workers by the adjusted civilian labor force. The adjusted civilian labor force represents the sum of the civilian labor force and the numbers of hidden unemployed.

The main objectives of this research report are to provide estimates of four labor underutilization measures (the unemployment rate, the underemployment rate, the hidden unemployment rate, and the labor underutilization rate) for Massachusetts workers and for those in educational attainment groups, household income groups, and combinations of educational attainment/household income groups. We have categorized workers into six household income groups ranging from a low of those with annual incomes under \$20,000 to a high of those living in households with incomes above \$150,000. Workers also have been assigned to one of six educational attainment groups, ranging from those with no high school diploma/GED credential to those holding a Master's or Ph.D. degree or a professional degree. Disparities in the incidence of each of the four labor market problems across these educational attainment/household income groups will be presented and highlighted. The size of these disparities in labor market outcomes across socioeconomic groups are enormous today and appear to be historically unprecedented, far higher than those prevailing in the 1990s and especially at the peak of the state labor market boom in 2000.

## **Unemployment Problems Among Massachusetts Workers**

Time trends in the overall unemployment rates of the state over the 2000-2013 period are displayed in Chart 2. In 2000, at the height of the national labor market boom of the 1992-2000 period, the unemployment rate of the state stood at only 2.7%, its lowest rate ever recorded under the CPS data collection system for states that started in the late 1960s, and was 1.3 percentage points below the national average of 4.0% (see Chart 2). Massachusetts' unemployment rate in 2000 was the third lowest among the 50 states. Payroll job losses in the state during the 2000-2003 time period exceeded the rate of decline in the country, helping push the unemployment rate up to 5.8% by 2003, only slightly below that of the nation. Over the ensuing four years, the

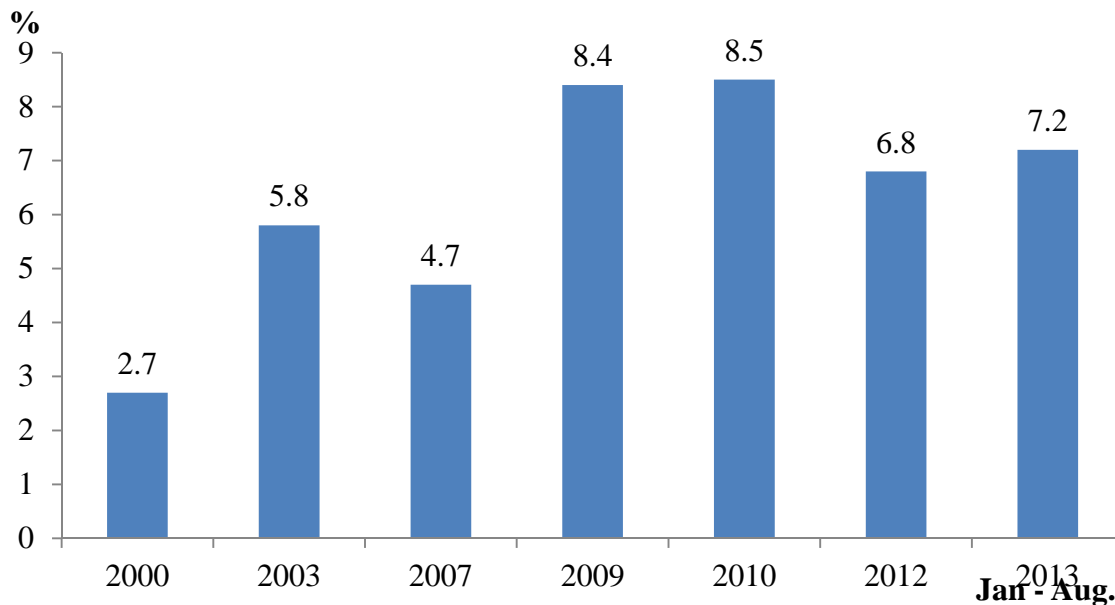
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<sup>12</sup> For a review of the BLS alternative measures of labor underutilization, see: U.S. Bureau of Labor Statistics, The Unemployment Rate and Beyond: Alternative Measures of Labor Underutilization, Washington, D.C., June 2008.



state unemployment rate fell, dropping to 4.7% in 2007, approximately identical to that of the U.S.

Chart 2:  
Unemployment Rates of Massachusetts Workers (16+) in Selected Years, 2000 to 2013<sup>1</sup> (in %)



Note <sup>(1)</sup>: The 2013 estimate is based on the first eight months of the CPS household survey from 2013. Monthly estimates were seasonally adjusted using the monthly seasonal adjustment factors from the LAUS survey for the state.

During the Great Recession of 2007-2009, the unemployment rate of the state jumped quite dramatically, reaching 8.4% in 2009 and staying near there in 2010. In the U.S., the unemployment rate more than doubled from 4.6% in 2007 to 9.6% in 2010. Following 2010 through 2012, the state unemployment rate improved as the state began to recover nearly all of the payroll jobs it lost during the recession. The state unemployment rate fell to 6.8% in 2012, more than a full percentage point below the national rate of 8.1%. The state ranked 15<sup>th</sup> lowest on this measure among the 50 states. During the first eight months of 2013, however, the state's unemployment rate (seasonally adjusted) had climbed back to 7.2%<sup>13</sup>, and it ranked only 23<sup>rd</sup> lowest, tied with three other states.

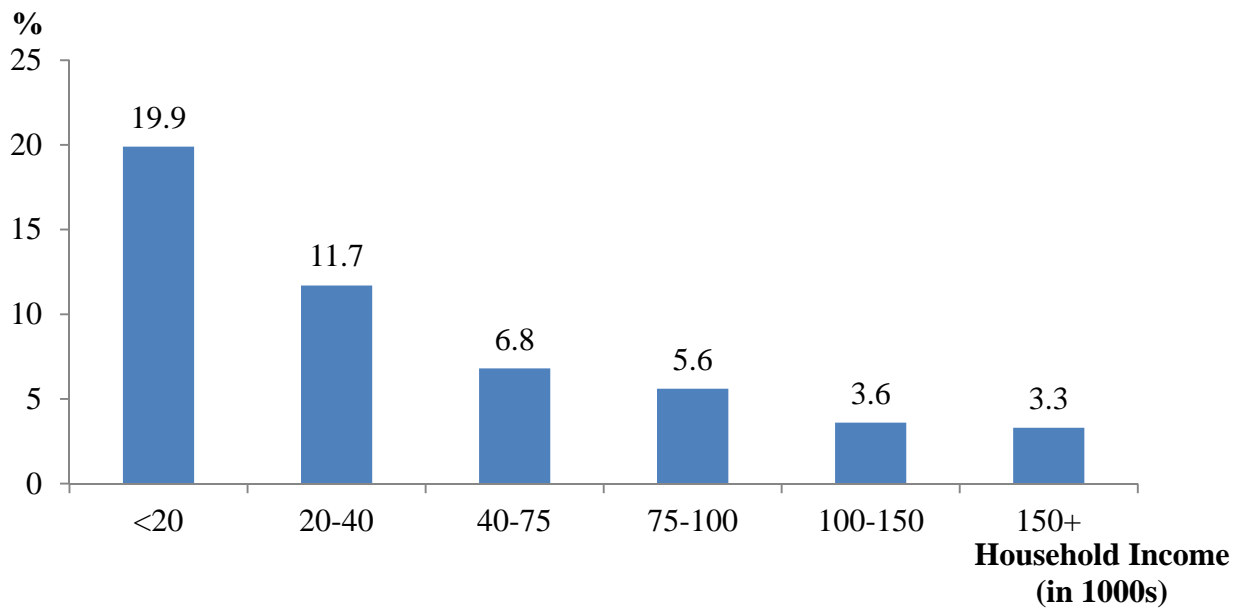
The average unemployment rate of Massachusetts workers over the past 20 months has hovered close to 7.0%. Around that average, how much variation do we observe in unemployment rates across workers in different household income and educational attainment

<sup>13</sup> During the May-August period, the state's seasonally adjusted unemployment rate was 7.7%.

groups? Are unemployment rates evenly shared or is there a highly unequal structure of these rates? Findings in Tables 3, 4, and 5 clearly reveal the existence of enormous socioeconomic disparities in unemployment rates among Bay State workers in 2012-2013.

Unemployment rates over the 2012-2013 time period varied extremely widely across both household income and educational attainment groups. Unemployment rates were highest by far among the lower income groups of workers and fell steadily and steeply with household income. Massachusetts workers in the lowest income group (under \$20,000) faced an unemployment rate of slightly more than 20% with the rate falling to just under 12% for those in the second lowest income group (\$20-40,000), to only 7% for those with upper middle incomes and to a low of only 3% for the most affluent group of workers in the state (household incomes above \$150,000). The lowest income workers were nearly seven times more likely to be unemployed than the most affluent group of workers in 2012-2013.

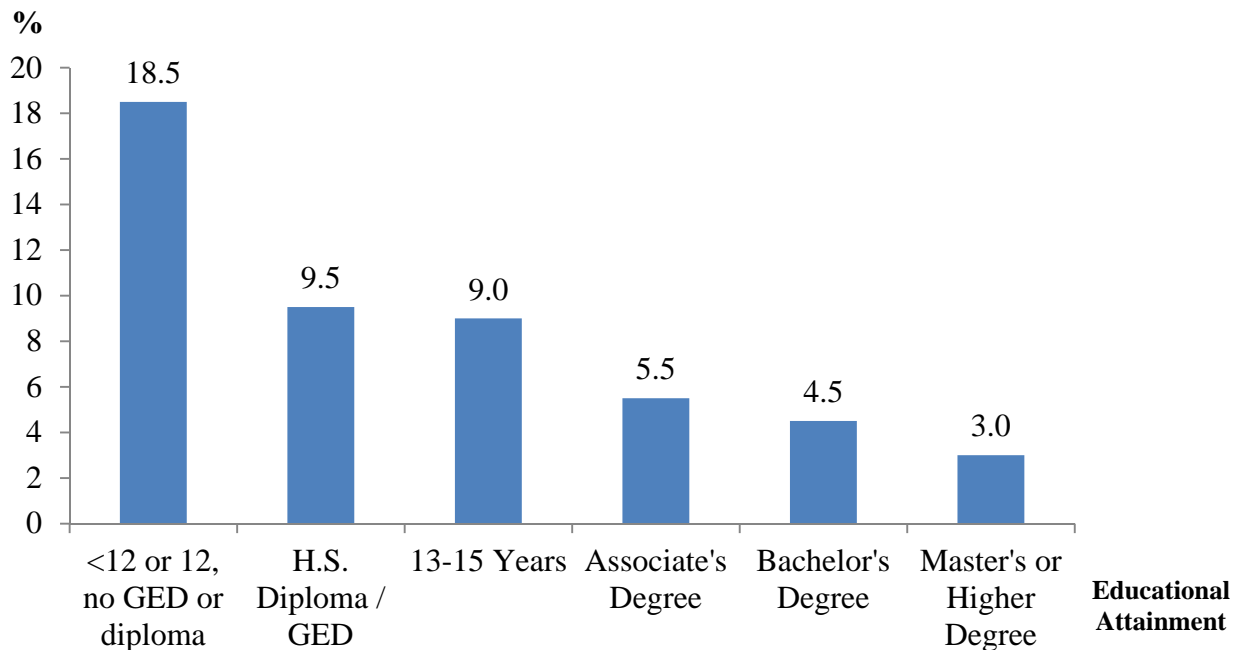
Chart 3:  
Unemployment Rates of Massachusetts Workers (16+) by Household Income Group in 2012-2013 (in %)



Very large disparities in unemployment rates also prevailed across state workers by educational attainment group. Those workers with no high school diploma or GED experienced an unemployment rate of 18%, falling to 9-10 percent for those with a high school diploma or some postsecondary schooling but no college degree, and to a low below 3% for those holding a

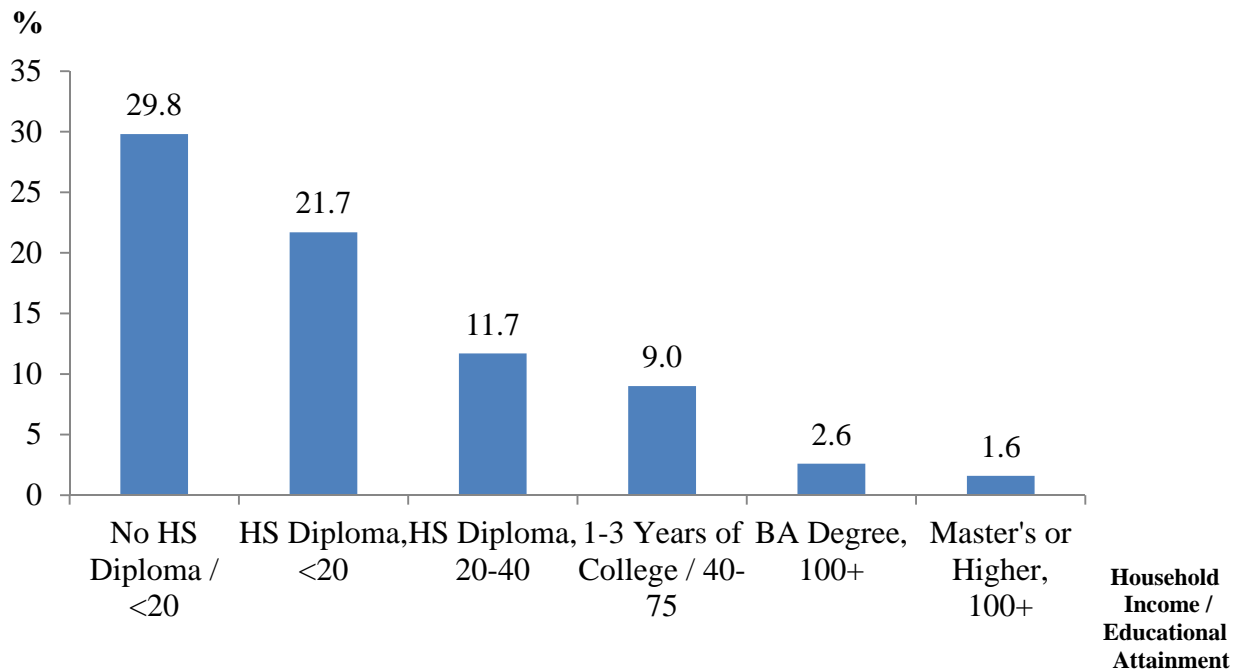
Master’s, PhD, or professional degree. The least well educated workers in our state were 6 times as likely to be unemployed as the best educated group of workers.

Chart 4:  
Unemployment Rates of Massachusetts Workers (16+ by Educational Attainment in 2012-2013  
(in %)



Massachusetts workers were combined into 36 separate educational attainment/household income groups and unemployment rates were calculated for each of these 36 groups. They ranged from high school dropouts with low incomes (under \$20,000) to those with a Master’s degree and the most affluent workers (\$150,000+). The unemployment rates for these groups of workers ranged from highs of 22-30 percent for low income workers with only 12 or fewer years of schooling, to 9-12% for lower middle to middle income adults with 12 to 15 years of schooling to lows of 1.6 to 2.6% for those adults in households with incomes over \$100,000 holding a bachelor’s or higher degree. The state’s less well educated, low income workers faced unemployment rates equivalent to those of the U.S. in the Great Depression of the 1930s, those with modest schooling and low middle to middle incomes faced unemployment rates equivalent to the Great Recession while the state’s best educated and most affluent workers operated in a super full-employment environment. The average unemployment rate has little operational meaning in such a labor market environment.

Chart 5:  
Unemployment Rates of Massachusetts' Workers in Selected Educational Attainment /  
Household Income Groups in 2012-2013 (in %)



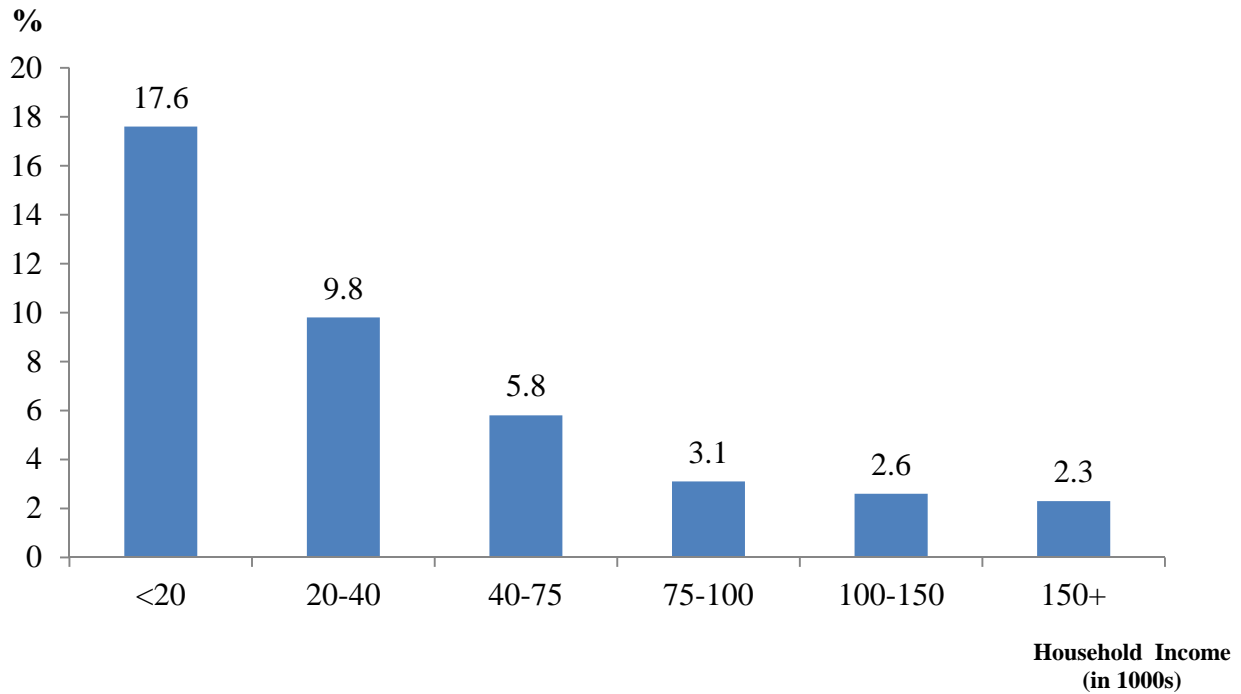
### **Underemployment Problems among Massachusetts Workers**

Problems of underemployment among Massachusetts workers have risen substantially in recent years and have nearly tripled in size in 2000. During 2000, there were only 56,000 underemployed workers in the state representing only 1.7% of the employed. Their numbers increased over the next two years, rising to 88,000 as a consequence of the recession of 2001 and the jobless recovery of 2002 and 2003. During the job growth period from 2004 to 2007, the number of underemployed declined to 66,000 by the latter year, representing only 2.1% of the employed. Over the next four years, the pool of underemployed exploded, rising to 200,000 in 2011 and accounting for 6.1% of the employed. Over the January 2012 – August 2013 period, the average monthly number of underemployed workers was 175,000 yielding an underemployment rate of 5.4%.

The incidence of underemployment problems among the state’s workers in 2012-2013 varied quite widely across both household income and educational attainment groups (Charts 6 and 7). Workers from the lowest income families in the state encountered an underemployment rate of 18.0%. This rate fell steadily and strongly with household income, dropping slightly

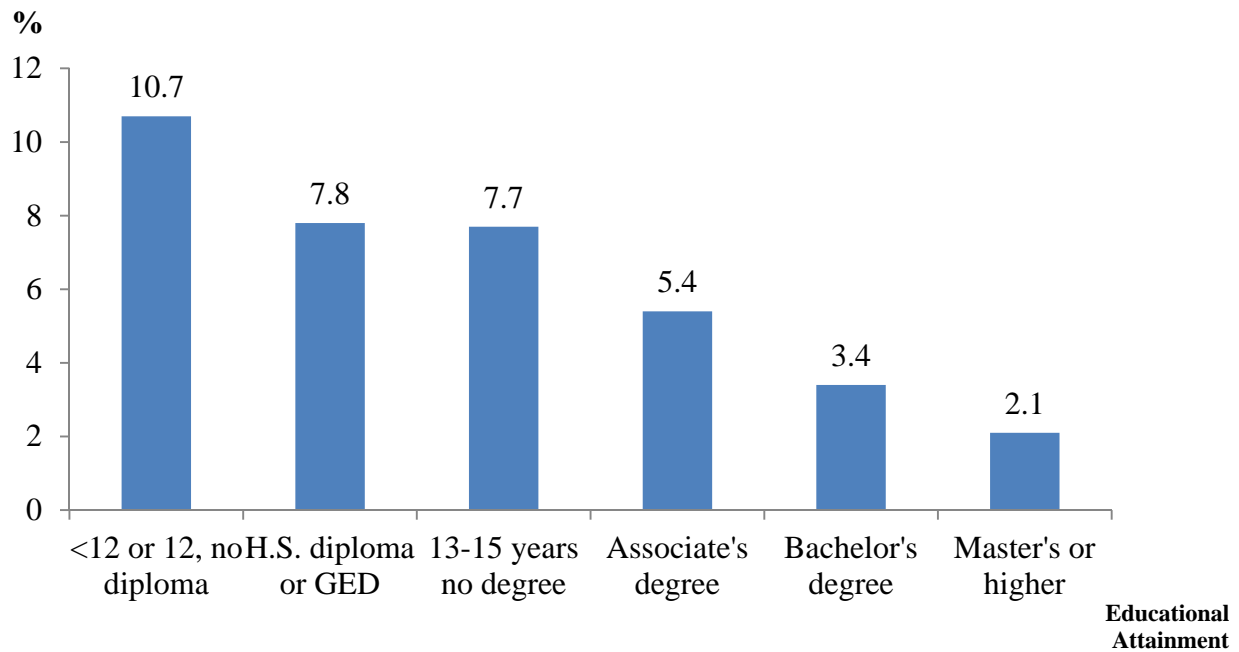
below 8% for those in the \$20-40,000 income category, to 3% for those with upper middle incomes in the \$75-100,000 category, and to a low of just 2.3% for those in the most affluent families (\$150,000+). Underemployment rates of workers in the lowest income category were eight times as high as those in the most affluent groups of families.

**Chart 6:**  
**Underemployment Rates of Employed Workers (16+) in Household Income Groups, 2012-2013**  
**(in %)**



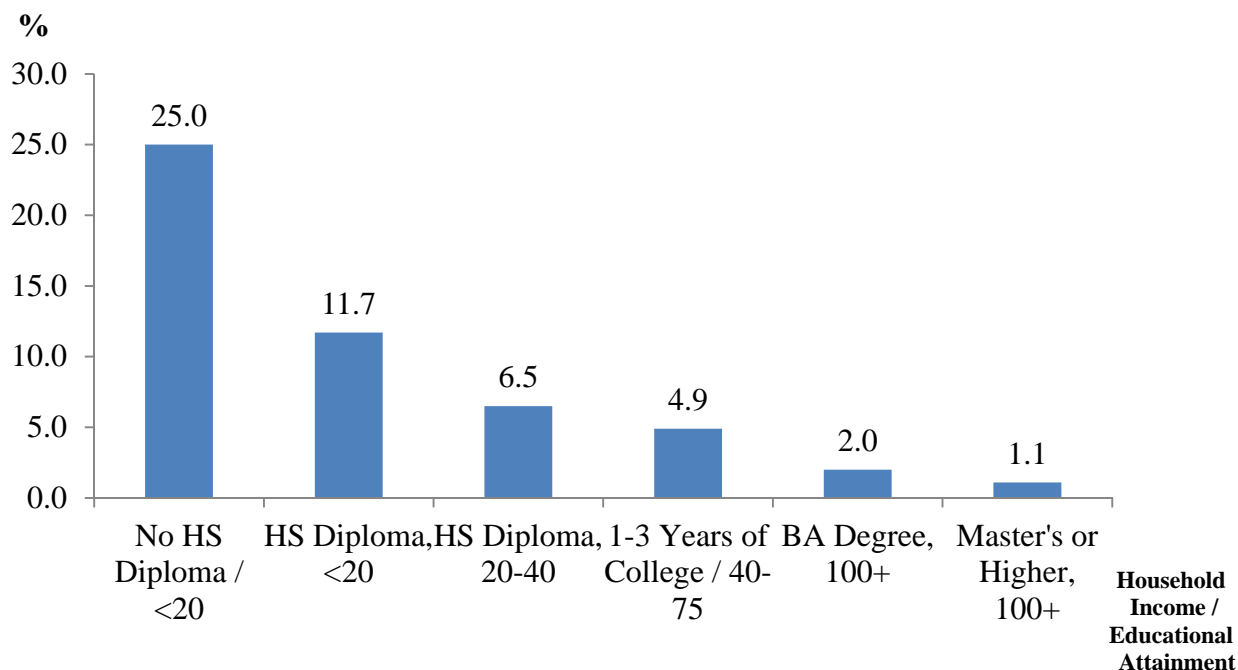
Underemployment rates also were strongly associated with the educational attainment of workers. Those workers lacking a high school diploma/GED credential faced an underemployment rate of nearly 11%, followed closely by an 8% underemployment rate among employed high school graduates. The underemployment rate fell to 5.4% for those workers with an Associate’s degree and to a low of only 2% for those with a Master’s or higher degree. The least well educated group of workers was between five and six times more likely than the best educated group to experience an underemployment problem in 2012-2013.

Chart 7:  
Underemployment Rates of Employed Massachusetts Workers by Educational Attainment, 2012-  
2013 (in %)



The underemployment rates of Massachusetts workers in combined educational attainment / household income groups differed to an amazingly high degree. Low income workers who lacked a high school diploma/GED credential were characterized by an underemployment rate of 25%. Clearly, underemployment was a major factor underlying their low income status. The rate of underemployment fell to 12% for low middle income workers with a high school diploma, to 5% for employed Associate degree holders from slightly upper middle income families to a low of 1% for workers with a Master’s or higher degree from families with a household income above \$100,000. The least well educated, low income group of workers was 25 times as likely as the most affluent, best educated workers of the state to be underemployed in 2012-2013.

Chart 8:  
Underemployment Rates of Employed Massachusetts Workers in Selected Educational Attainment and Household Income Groups, 2012-2013 (in %)



### **The Problems of Hidden Unemployment among Massachusetts Workers**

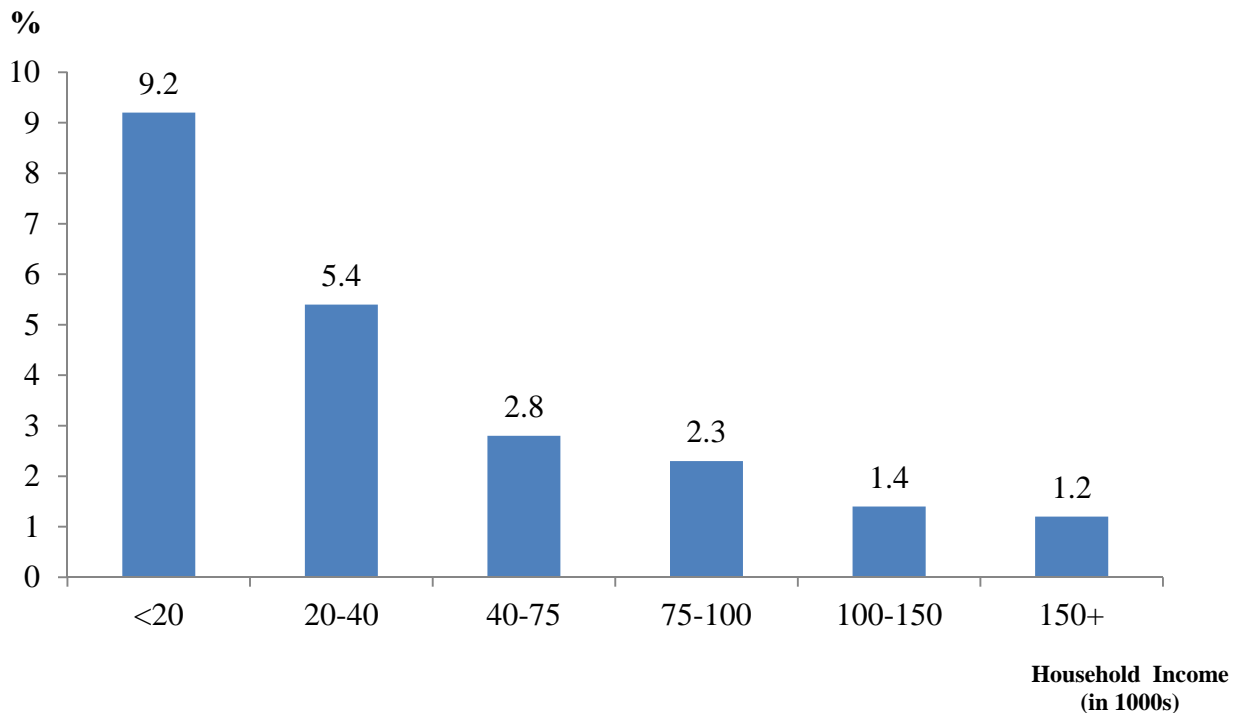
Nationally, the number of persons in the ranks of the hidden unemployed has been quite cyclically sensitive, rising sharply both during the Great Recession and the early stages of the economic recovery. Similar patterns have prevailed in Massachusetts. During 2000, only 57,000 working-age individuals in our state or 1.7% of the adjusted civilian labor force were members of the hidden unemployed. Their numbers increased to 74,000 or 2.1% of the civilian labor force in 2003 and increased further to 88,000 by 2007. In 2011, their ranks had risen to 118,000 or 3.3% by the state’s resident labor force. Over the January 2012 – August 2013 period, on average there were 113,000 individual persons in the pool of the hidden unemployed, equivalent to 3.1% of the state’s adjusted civilian labor force.<sup>14</sup>

The incidence of hidden unemployment problems in our state during the 2012-2013 time period varied quite substantially across both household income and educational attainment groups (see Charts 9 and 10). Slightly more than 9% of the adjusted labor force participants from low income families were members of the hidden unemployed. This ratio fell to 5.4% for

<sup>14</sup> According to the findings of the 2013 CPS surveys through August, nearly 4.2% of the adjusted civilian labor force in the state were members of the labor force reserve, the 17<sup>th</sup> highest such ratio among the 50 states.

low middle income labor force participants to 2.3% for those with incomes modestly above the median household income and to a low of 1.2% for those labor force participants living in the highest income households. The lowest income labor force participants were seven times as likely to be members of the labor force reserve as were members of the state’s most affluent households (see Chart 9).

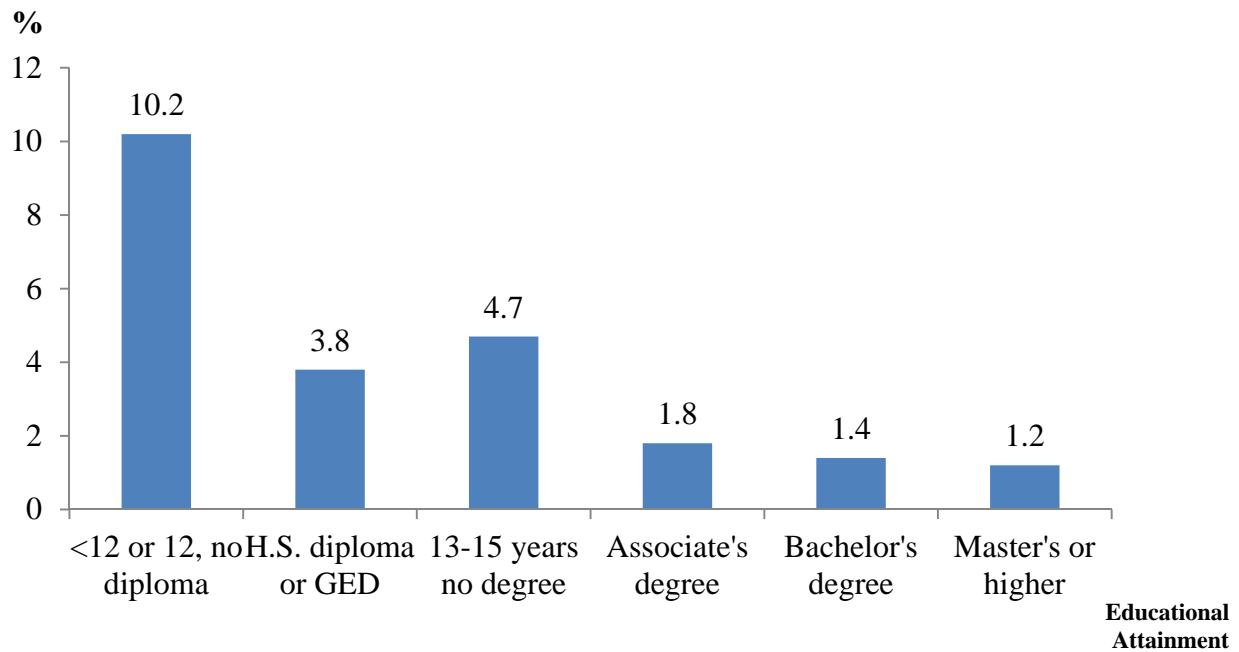
**Chart 9:**  
**Hidden Unemployment Rates of Massachusetts Workers in the Adjusted Labor Force by Household Income, 2012-2013 (in %)**



These hidden unemployment problems also were strongly associated with the educational backgrounds of members of the state’s adjusted labor force. The less educated members of the resident labor force were far more likely to be found in the ranks of the hidden unemployed. More than 10% of those working-age adults without a high school diploma were members of the labor force reserve versus only 4% of high school graduates, nearly 2% of Associate degree holders, and only 1% of those labor force participants with a Master’s or higher degree. Those adults without a high school diploma were 9 times as likely to be a member of the hidden unemployed as their fellow residents with a Master’s or higher degree.



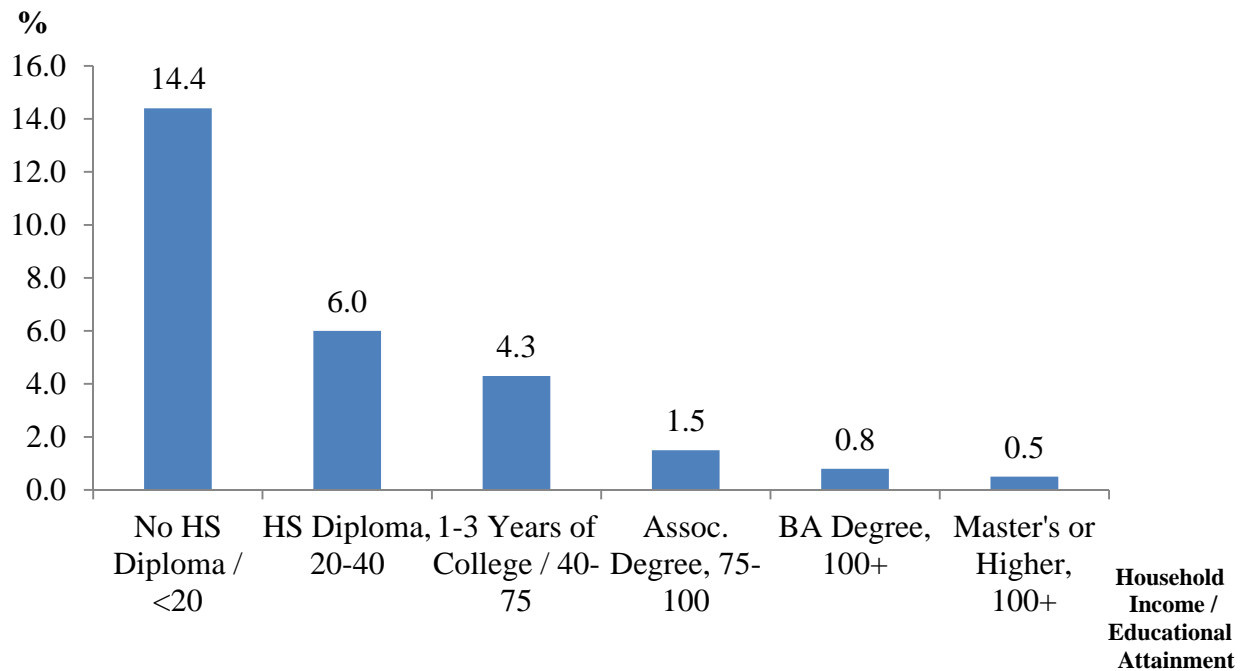
Chart 10:  
Hidden Unemployment Rates of Massachusetts Workers in the Adjusted Labor Force by  
Educational Attainment, 2012-2013 (in %)



The distribution of hidden unemployment rates among workers in combinations of educational attainment/household income groups was extraordinarily wide. Over 14% of high school dropouts from low income households were members of the hidden unemployed versus only 6% of high school graduates from low middle income families and under 1% of those with Bachelor's or higher degrees from households with incomes above \$100,000. The share of low income, high school dropout labor force participants that were members of the hidden unemployed was 29 times as high as that of those labor force members with advanced degrees who came from upper income families.

Chart 11:

Hidden Unemployment Rates of Massachusetts Workers in the Adjusted Labor Force in Selected Educational Attainment and Household Income Groups, 2012-2013 (in %)



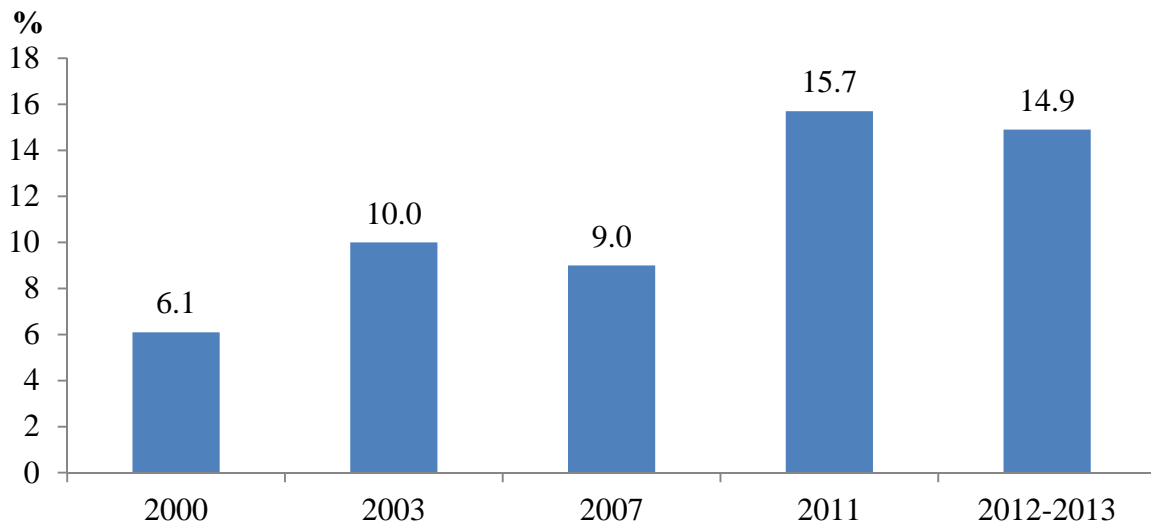
### **Labor Underutilization Problems Among Massachusetts Workers and Their Growing Disparities Across Educational and Income Groups: The End of the Average<sup>15</sup> as a Basis for Understanding and Policy Making**

Our final set of measures on the labor market problems confronting Massachusetts' workers consists of their combined labor underutilization rate. As discussed earlier in this paper, the underutilized labor pool consists of the unemployed, the underemployed, and the hidden unemployed. The pool of underutilized workers has varied widely in both our state and the nation over the past 12 years with large increases taking place during and after the Great Recession of 2007-09. The increased incidence of underutilization problems also has been accompanied by widening gaps in these rates across income and education groups. These findings make starkly clear the need to “end the average” as a measure for both describing and understanding labor market problems whether unemployment, underemployment, or labor underutilization and developing appropriate policy responses.

<sup>15</sup> Average is Over is the title of a recent book by Tyler Cowen on moving the American economy forward. It was also the title of a chapter in the book That Used to Be Us by Thomas L. Friedman and Michael Mandelbaum. See: Tyler Cowen, Average is Over: Powering America Beyond the Age of the Great Stagnation, Dutton Press, New York City, 2013.

During calendar year 2000, there were only 205,000 underutilized workers in Massachusetts, yielding an annual average underutilization rate of 6.5%. This was the third lowest underutilization rate among the 50 states during that year. The state’s underutilization rate and its relative ranking has deteriorated substantially since then. (see Chart 12). In the recessionary environment of 2000-2003, the overall labor underutilization rate of the state increased sharply to 10.0% by 2003. It then fell modestly over the next four years, dropping to 9.0% in 2007. During the Great Recession, the underutilization rate exploded, hitting 15.6% in 2009 and remaining in that general range in 2010 and 2011 when it reached 15.7%. On average, during the January 2012-August 2013 time period, there were 535,000 underutilized workers in our state, yielding an underutilization rate of 14.8%.<sup>16</sup> Our rank among the 50 states was now only 20<sup>th</sup> lowest.

Chart 12:  
The Labor Underutilization Rates of Massachusetts Workers (16+) in 2000, 2003, 2007, 2011, and 2012-2013 (in %)

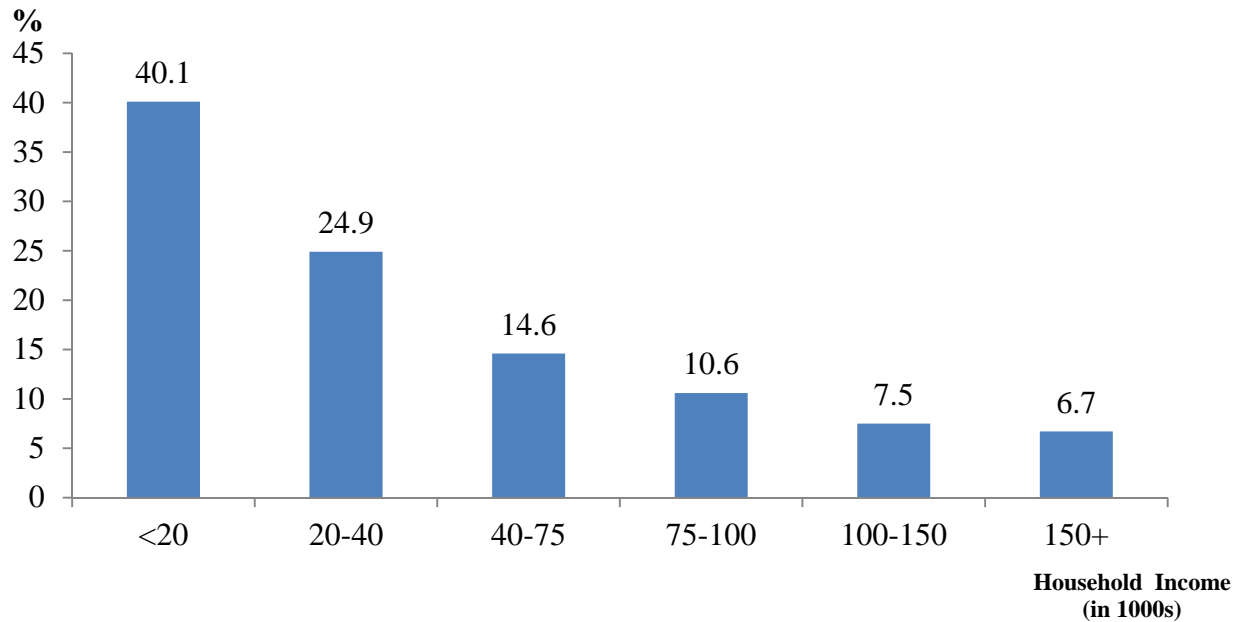


The labor underutilization rates of the state’s workers in 2012-2013 differed considerably across household income groups. (see Chart 13). The lowest income group of workers faced an underutilization rate of nearly 40%. This rate fell to 25% for the second lowest income group (\$20,000-40,000), and then dropped steadily downward as the household’s income rose, dropping to 11% for those with incomes in the middle to upper middle income segment and to a low of 6.7% for those in the highest household income group. The lowest income group of

<sup>16</sup>During the May-August period of 2013, there was a sharp tick upward in the number of underutilized workers in Massachusetts. The number rose close to 580,000.

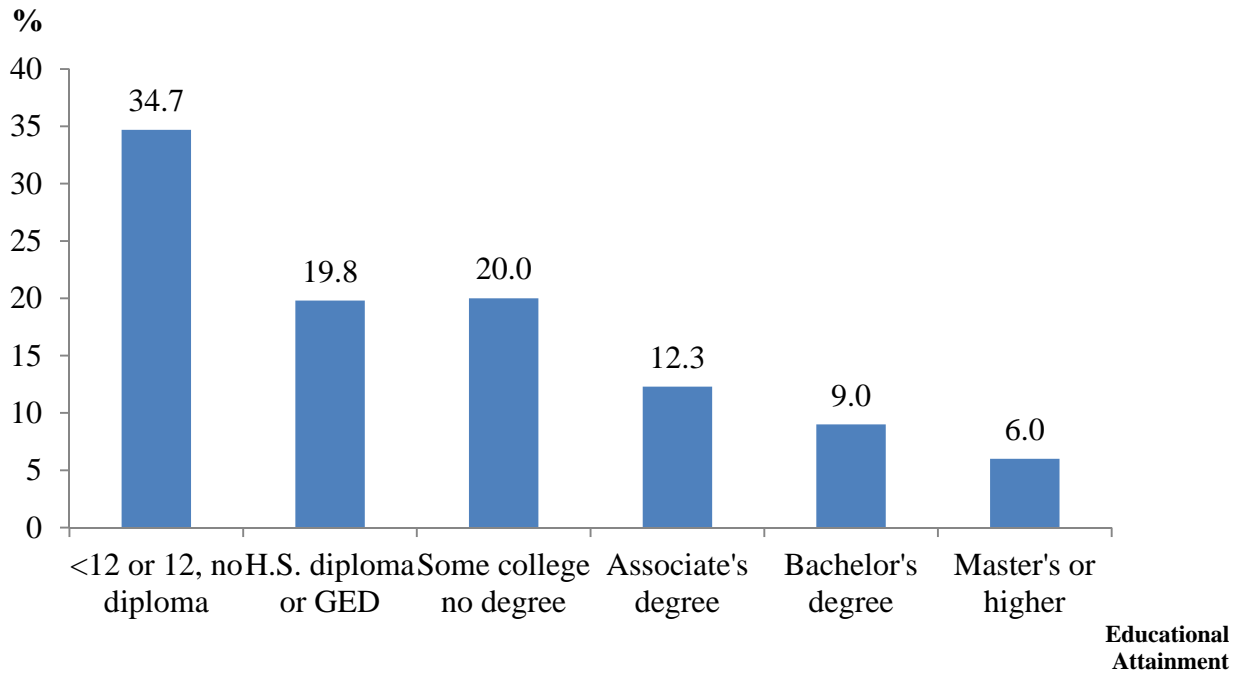
workers (nearly 300,000 such workers in this group) experienced an underutilization rate that was six times as high as that of the most affluent group of workers.

Chart 13:  
Labor Underutilization Rates of Massachusetts Workers (16+) by Household Income in 2012-  
2013 (in %)



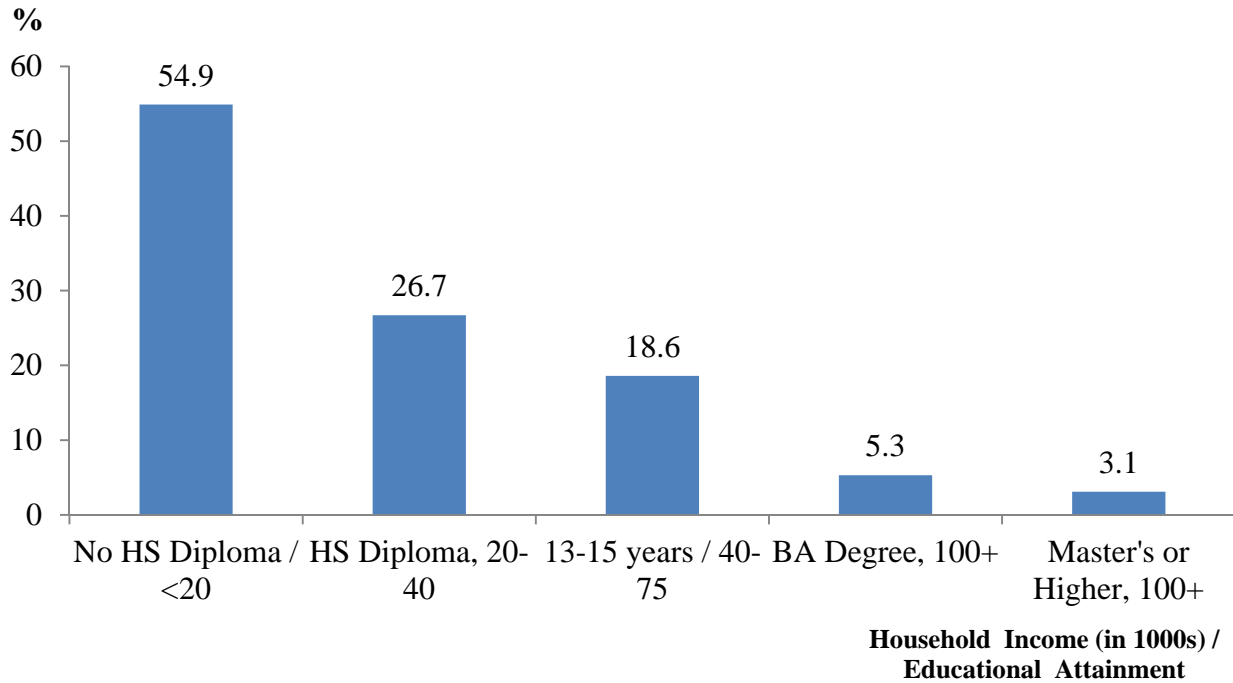
Labor underutilization rates in Massachusetts also ranged widely across the six educational groups in 2012-2013. The higher the level of one's educational attainment, the lower was the rate of underutilization that they experienced. Nearly 35% of those workers lacking a high school diploma were underutilized versus 1 of every 5 high school graduates and those with one or more years of post-secondary schooling but no college degree. At the upper end of the educational distribution, underutilization rates were 9% for bachelor degree holders and 6% for those with a Master's or more advanced degree. The least well educated group of workers encountered a labor underutilization rate that was six times higher than that of the best educated group. (see Chart 14).

Chart 14:  
Labor Underutilization Rates of Massachusetts Workers (16+) by Educational Attainment in 2012-2013 (in %)



Finally, we estimated the incidence of labor underutilization problems among groups of workers classified by their educational attainment/household income. Findings for selected groups of these workers from the top to the bottom of the labor underutilization rate distribution are displayed in Chart 15. High school dropouts from low income families faced the highest underutilization rate at 55%. High school graduates from this low income group also fared quite poorly with an underutilization rate of just under 41%. Nearly 27% of high school graduates from the second lowest income group were underutilized in 2012-2013. The incidence of such problems fell steeply for the best educated, more affluent groups of workers. Those workers with a Bachelor’s degree and a household income over \$100,000 had an underutilization rate of only 5% that fell to 3% if the worker held a Master’s or higher degree.

**Chart 15:**  
**Labor Underutilization Rates of Massachusetts Workers (16+) in Selected Educational Attainment and Household Income Groups 2012-2013 (in %)**



The least well educated, low income workers in Massachusetts were characterized by an underutilization rate that was 18 times higher than that of their best educated peers from the state's most affluent families. The absolute size of the gap (in percentage points) between the labor underutilization rates of these two groups rose from 23 percentage points in 2000 to 52 percentage points in 2012-2013. Labor market problems are today characterized by a massive degree of socioeconomic inequality. Welcome to the Uncommonwealth of Massachusetts!