Employment and Schooling Activities of Youth in Lawrence

Prepared for
Merrimack Valley Workforce Investment Board
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Introduction

The ages between 16 and 24 represent a time when most young persons are intensively engaged in human capital building activities. Human capital is the stock of knowledge, skills, and abilities that enhance the labor market productive potential of workers. Most of the human capital building activities in early years of life are focused on formal schooling which begins early in elementary school and continues through middle school, high school and college. However, at age 16 individuals become eligible to work in the labor market which allows the accumulation of a different kind of human capital—labor market work experience. Economists consider labor market work experience to be a form of human capital and similar to the human capital developed from formal schooling, work experience is found to enhance the productive potential of workers.

For youth, early work experience is an important activity that introduces them to the world of work and exposes them to learn the different soft skills and behavioral traits—e.g., punctuality, reliability, communication, working in teams, etc.—that are consistently required for successful employment in entry level and low skill jobs as well as high skill jobs.[1] Youth without early work experience are less likely to develop these skills and therefore are less employable than those who have been exposed to the world of work and have therefore developed the behavioral traits and soft skills that are a requirement for employment in any job. Youth employment is therefore path dependent, that is, those who have worked in the past are more likely to be employed in the future. For example, students who work during the school year are more likely to be employed during the summer months; high school graduates who have worked while in high school are more likely to be employed after graduating high school; college students who combine school with work are more likely to be employed after earning their college degree.

In this paper we present analysis of the labor market and schooling activities of residents of Lawrence City between the ages of 16 and 24. Based on their lack of engagement in schooling or work, we have identified young residents of Lawrence who are disconnected from school and work—the two primary activities in which most youth are engaged. Presented alongside Lawrence City, is an assessment of the labor market and schooling activities and disconnection of youth residing in other Gateway Cities in Massachusetts and of young residents of the entire state. The paper begins with an examination of the labor market activities. We have presented three most commonly used measures of labor market activities that present a comprehensive view of participation in the labor market and the degree of success in finding employment among those who participate in the labor market. The three measures include the

[1] Neeta P. Fogg, Paul E. Harrington, and Anja Petrovich, "Building Blocks of Labor Market Success: Evidence from O*NET Job Analysis Surveys," Prepared for Commonwealth Corporation, Boston, Massachusetts, April 2013.

labor force participation rate, the unemployment rate, and the employment to population ratio. The paper then proceeds to examine the schooling activities of young residents of Lawrence and other Gateway Cities. The schooling activities of young residents are presented with the school enrollment rate which measures the proportion of young residents who were enrolled in school at a given point in time. The next section of this paper examines the extent to which young residents of these communities are disengaged from work or school. Young residents of these communities who were not working and not enrolled in school are identified as disconnected youth and the proportion of young residents of these communities who were out of school and out of work or the disconnection rate is used to measure the incidence of youth disconnection.

Data and Methodology

Findings presented in this paper are based on the authors' analysis of American Community Survey (ACS) public use micro data files. The American Community Survey is an annual survey of about 3 million households conducted by the U.S. Census Bureau. The ACS data are based on a large sample that is sufficient to produce annual statistically reliable estimates at the national and state level and for large sub-state areas. However, the sample sizes for smaller subgroups of the population and in smaller geographic areas (16- to 24-year olds in the city of Lawrence) in single year of ACS data files are not large enough to produce statistically reliable estimates. We have therefore used combined 5 years of ACS data files (2007 to 2011) to produce all estimates presented in this paper.

In order to protect the confidentiality of respondents, the Census Bureau restricts the smallest geographic entity for which estimates can be produced from the ACS micro data files, to areas with a minimum population of 100,000. Each state is divided into geographic areas called PUMAs (Public Use Micro-data Areas) that are contiguous areas consisting of a population of 100,000 or more. PUMA boundaries are drawn so that every town/city is contained within a PUMA, and does not straddle two PUMAs. If a city's population is much larger than the minimum 100,000 threshold for a PUMA, then the city is divided into more than one PUMA with each PUMA containing a part of that city and no other city or town. For example, the city of Boston is divided into five PUMAs each containing a part of Boston representing approximately 100,000 of the city's population.

We have examined the city/town contents of each of the 52 PUMA's in Massachusetts to identify PUMA's containing each of the 11 Gateway Cities. Using the 2010 decennial census data we secured the 2010 population of each gateway city and the PUMA within which the Gateway City was located. Findings (presented in Appendix A) reveal that the population of three Gateway Cities (Lowell,

Springfield, and Worcester) represented 100 percent of the population of the PUMAs in which they were located. The population of Brockton city represented 82% of the PUMA in which it was located, and Fall River city's population represented about 73 percent of the population of the PUMA in which it was located. The population of the remaining six Gateway Cities (including Lawrence) represented much smaller shares of the PUMA population—from 53 percent for New Bedford to 28 percent for Fitchburg. Therefore we have not included all 11 Gateway Cities in this paper. Our analysis in this paper includes 5 Gateway Cities that have all or majority of the PUMA's population and Lawrence. We were restricted to just five Gateway Cities because of the limited geographic detail available in ACS micro data files which restricts our ability to closely match some of the Gateway Cities with the smallest geographic areas identifiable in the ACS PUMS data files (PUMAs).

The Census Bureau produces a number of readymade tabulations for cities and towns from combined 5 years of ACS data. Unfortunately the Census Bureau's readymade tabulations from ACS data do not contain tabulations on disconnection rates and on the employment and schooling activities of the different subgroups of 16- to 24-year old residents of these communities. Consequently we could not use the readymade ACS tabulations from the Census Bureau for the city of Lawrence and had to use ACS micro data files to produce these estimates. Furthermore, since Lawrence City cannot be identified separately in ACS micro data files, we had to use the entire PUMA containing the city of Lawrence.

Unfortunately, the population of Lawrence City represents a little under half of the total population of the PUMA in which it is located. The ACS PUMA containing Lawrence included two other towns, Andover and Methuen; that account for the remaining half of the PUMAs population. We have used the 2010 decennial census race-ethnicity data and ACS readymade tabulations on selected economic characteristics of the population to compare the characteristics of the population of the three communities that are located in the PUMA containing Lawrence. Findings are presented in Table 1.

The race-ethnicity and other demographic and economic characteristics of Lawrence are very different from that of Andover and Methuen. At the time of the 2010 decennial census enumeration, 156,800 people lived in the three towns that make up the PUMA containing Lawrence. Nearly 49 percent lived in Lawrence, 30 percent in Methuen and the remaining 21 percent in Andover. Hispanic residents comprised nearly three out of four residents of Lawrence, 18 percent of Methuen, and under 4 percent in Andover. Conversely non-Hispanic Whites accounted for only one in five residents in Lawrence but three-quarters in Methuen and over 84 percent in Andover. The young population of Lawrence has an even larger concentration of Hispanic and non-White population. Only 12 percent of the 15- to 24-year old residents of Lawrence were non-Hispanic White and over 82 percent were Hispanic. Data from the

Census Bureau's readymade tabulations from the 2007-2011 ACS data are presented in the lower half of the table and show wide variations in the employment rates, annual earnings of employed residents, family incomes and family poverty rates across the communities.

Table 1: A Comparison of the Total Population and Race-Ethnicity Characteristics of the Population of Lawrence City with that of the Two Other Towns Located within the same PUMA, 2010

	Total Population				15-24* Population
	PUMA	Andover	Methuen	Lawrence	Lawrence
Total Population, 2010 decennial census	156,833	33201	47255	76377	13,325
Distribution of PUMA Population	100.0%	21.2%	30.1%	48.7%	--
Total Population, 2010 decennial census	100.0%	100.0%	100.0%	100.0%	100.0%
White, non-Hispanic	50.2	83.4	74.9	20.5	12.3
Black non-Hispanic	1.9	1.0	2.0	2.3	1.9
Hispanic	42.1	3.6	18.1	73.8	82.4
Asian, non-Hispanic	4.4	10.3	3.7	2.3	2.1
Other, non-Hispanic	1.3	1.7	1.4	1.2	1.3
2007-2011 ACS 5-Year Estimates					
Working age population employed	---	62.8%	64.2%	54.6%	
Mean earnings of employed	---	$148,096	$82,317	$48,774	
Mean Family Income	---	$168,316	$91,978	$46,524	
Family Poverty Rate	---	2.5%	5.1%	26.9%	

Source: 2010 Decennial Census and 2007-2011 5-Year ACS data from the American FactFinder (http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml); tabulations by authors.
* The 2010 decennial census race-ethnicity tabulations on the American FactFinder are provided for 15-24 year olds and not for 16-24 year olds. We expect that the race-ethnic composition of 15-24 and 16-24 year olds is not likely very different.

Research has consistently found variations in the educational attainment and labor market activities by race-ethnicity. The sharp differences in the race-ethnic composition and the income, earnings, poverty and employment status of the population in the three towns (presented in Table 1) means that the labor market and schooling activities of youth residing in Lawrence are very likely to be sharply different from that of their counterparts in Andover and Methuen. How then do we measure the labor market and educational activities of youth residing in Lawrence from the ACS micro data that do not allow separate estimates for Lawrence? We have mitigated some of the effects of these differences between the populations of Lawrence and the other two towns in the PUMA by adjusting estimates of labor market and schooling activities of all young PUMA residents with the use of weights based on race-ethnicity. The race-ethnicity composition of the population of Lawrence is very different from that of Andover or Methuen. Therefore producing youth labor force and school enrollment estimates that are weighted by the race-ethnicity composition of the youth population of Lawrence is likely to produce

estimates that are closer to that of young residents of Lawrence than of youth residing in Andover or Methuen. Black, Asian, and Other race groups account for a small proportion of the population of the PUMA (7%) and an even smaller percent of the population of Lawrence (6%) and young residents in Lawrence (5%). Therefore we have used 2 race-based weights: White and non-White. Estimates for Lawrence presented in this paper are weighted estimates based on weights that represent the proportion of Lawrence population in the relevant age group (16-19, 20-24, or 25-64) that was White and the (remaining) proportion that was non-White.

For example, the labor force participation rate (LFPR) of the 16-24 year old population for the city of Lawrence would be estimated as:

(LFPR of White 16-24 year olds in the PUMA * share of Whites among 16-24 year olds in Lawrence) plus
(LFPR of non-White 16-24 year olds in the PUMA * share of non-Whites among 16-24 year olds in Lawrence).

An additional adjustment has been made to the ACS based estimates presented in this paper. ACS data have been found to yield different estimates of rates of disconnection among youth compared to those produced from the Current Population Survey (CPS) and other longitudinal data. Belfield and Levin found an average disconnection rate 17.3 percent from 3 sets of longitudinal analysis and the CPS compared to just 9.2 percent from the ACS.[2] Similar to the findings by Belfield and Levin, our estimates of the average disconnection rates of 16- to 24-year old youth in Massachusetts from 2007-2011 ACS and CPS data files found much higher estimates from the CPS than the ACS. Unfortunately the CPS data files are based on a much smaller sample and do not provide the geographic detail to identify small cities and towns such as Lawrence. However, using statewide estimates from 2007-2011 ACS and CPS data for different age groups, we have adjusted the ACS-based estimates of disconnection of youth to make them comparable to CPS estimates. Using the same method, we have also adjusted all ACS-based estimates of labor market and schooling activities presented in this paper.

Concepts and Definitions

This paper presents analysis of three measures of the labor market activities of youth: labor force participation rate, unemployment rate, and employment to population ratio. These measures are based on the classification of the working age population into three groups based on their activity at a point in time. In this paper, estimates of youth labor market and enrollment activities are based on their status at the

[2] Belfield, Clive R., Henry M. Levin, and Rachel Rosen, "The Economic Value of Opportunity Youth," In association with Civic Enterprises for the Corporation for National and Community Service, January 2012.

time of the ACS survey.[3] Based on the response to questions regarding their activity at the time of the ACS survey, 16- to 24-year old respondents to the ACS survey are classified into one of the following groups:

- Employed: persons who report that they work for one hour or more for pay or profit or are employed for 15 hours or more in an unpaid position in a family business.
- Unemployed: persons who report that they are jobless during the survey reference week, have actively looked for a job in the prior four weeks and are immediately available to start a job.
- Labor Force: is the sum of employed and unemployed persons.
- Out of the labor force: A residual category that includes all persons within a population group who are not classified as employed or unemployed.

Based on this classification we have used the following three measures to represent the labor market status of youth:

- The labor force participation rate: measures the proportion of the population that is in the labor force (labor force ÷ population)
- The unemployment rate: measures the proportion of persons in the labor force who are unemployed (unemployed ÷labor force)
- The employment/population ratio: is the proportion of a population that is employed (employed ÷ population).

Engagement of youth in schooling activities is measured in this paper with the school enrollment rate. Respondents to the ACS survey were classified as enrolled in school if they were attending a public or private school or college at any time during the 3 months prior to the time of interview. The school enrollment on the ACS includes nursery or preschool, kindergarten, elementary school, home school, and schooling that lead to a high school diploma, or a college degree. Respondents are classified as enrolled only if the schooling advances them to an elementary school certificate, a high school diploma, a college degree, or a professional degree (e.g., law or medicine). The school enrollment rate measures the proportion of the population in the group that was enrolled in school at the time of the ACS survey (number enrolled ÷ total population).

[3] For definitions of subjects in the ACS data files, see: "American Community Survey: 2011 Subject Definitions." (http://www.census.gov/acs/www/Downloads/data_documentation/SubjectDefinitions/2011_ACSSubjectDefinitions.pdf)

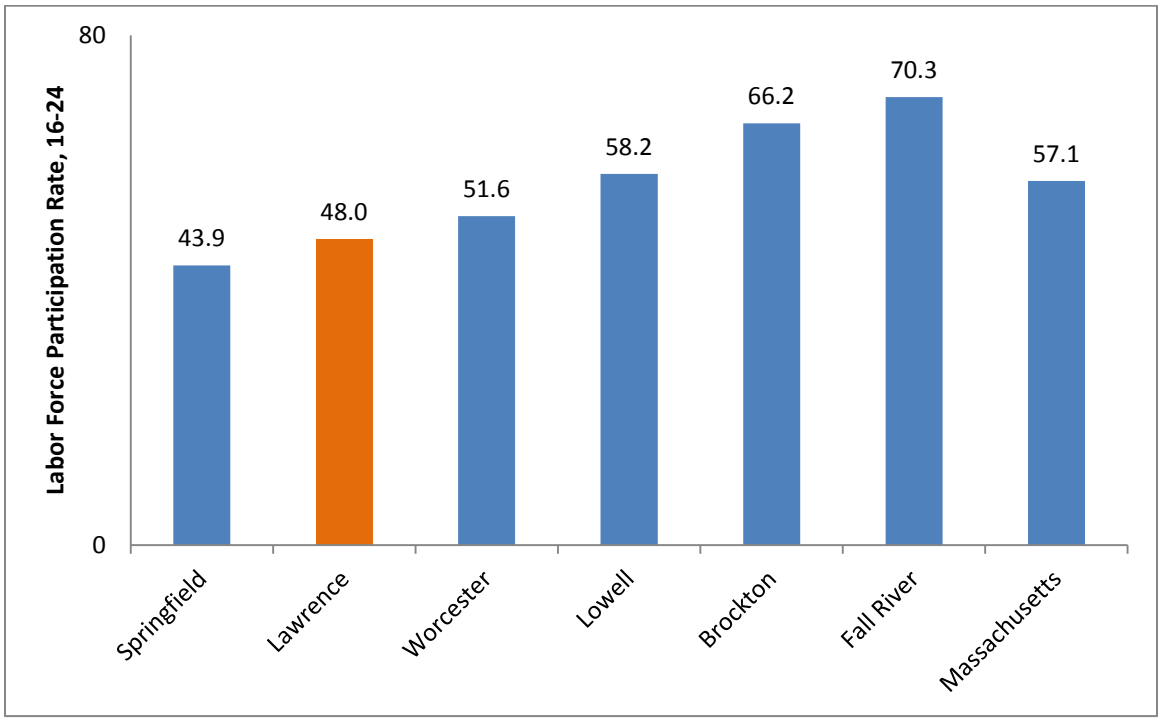
Disconnection in this paper measures the extent to which youth are disconnected the two primary activities in which most youth are engaged: work and school. A disconnected youth is one who was not employed and not enrolled in school at the time of the ACS survey. The disconnection rate represents the proportion of the youth population that is disconnected (number disconnected ÷ population).

Participation in the Labor Force

Participation in the labor market represents the first step on the pathway to employment. The labor force participation rate is an important measure that reflects the degree of engagement in the labor market. Failure to participate in the labor market means that these youth do not avail themselves of the opportunity to gain work experience. Youth who participate in the labor force even if they are unemployed are in the queue for employment and therefore have a shot at getting a job. But youth who are not in the labor force have removed themselves from the employment queue thereby greatly reducing their chances of becoming employed.

The average labor force participation rate of 16- to 24-year old youth was 48 percent in Lawrence over the 2007-2011 period. A comparison with five Gateway Cities presented in Chart 1 indicates that there was only one other city, Springfield, that had a lower rate of youth labor market participation. Only 44 percent of youth in Springfield were active labor market participants. The labor force participation rate was a little under 52 percent in Worcester and 58 percent in Lowell. Youth in Brockton and Fall River were much more likely to participate in the labor market. Two out of every three young residents in Brockton and 70 percent of their counterparts in Fall River were active labor market participants. Statewide the five year average youth labor force participation rate was 57 percent. The variation in youth labor force participation rates across these cities could be due to differences in a variety of factors including traits of young residents of these cities. Labor market participation and the individual decision to engage in the labor market to supply labor are based on a variety of individual as well as environmental factors. Differences in these factors likely underlie the different rates at which young residents of these cities had participated in the labor force. Within the Lawrence PUMA, labor force participation varied by youth characteristics. Males were more likely to participate in the labor force than females. Over 49 percent of males were actively participating in the labor force versus 47 percent of female residents of the region. Some of these differences could be attributed to labor force withdrawal among young mothers with family responsibilities. Although labor force participation of mothers of young children has increased over time, women of childbearing age still have a lower rate of labor market participation than younger or older women. The teenage labor force participation rate in Lawrence was only 31 percent. The same estimate among teens across the state was 41 percent. Nationwide, the 2007-2011 average teen labor

Chart 1: The Labor Force Participation Rate of 16- to 24-Year Old Residents of Lawrence and Other Selected Areas of the State, 2007-2011

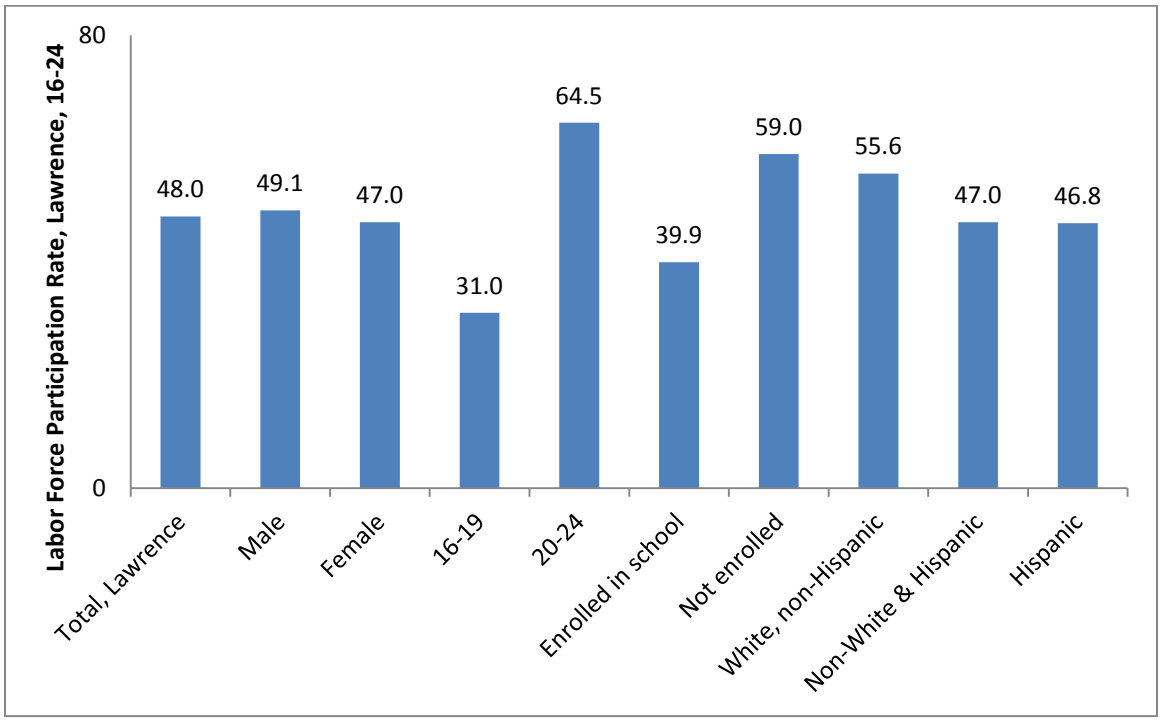


Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

force participation rate was 37.6 percent. Teens in the Lawrence area have very low levels of attachment to the labor market which means that many of the city's teens do not have early labor market work experience which is likely to reduce the likelihood of future employed. Labor market attachment of young adults between 20 and 24 is higher than that of teens, 65 percent. School enrolled youth in Lawrence were 20 percentage points less likely to participate in the labor market compared to those who were not enrolled in school. School-going youth in the area had a low level of labor market attachment.

White youth, most of whom were residents of Andover and Methuen had a much higher rate of labor force participation than their non-White and Hispanic counterparts. The labor force participation rate of non-Hispanic youth in the area was 56 percent or nearly 9 percentage points higher than Hispanic and non-White youth, 47 percent. Most of the non-White and Hispanic group of youth consisted of Hispanics (there were very few young Black and Asian/Other race residents in this area) among whom the labor force participation rate was a little under 47 percent.

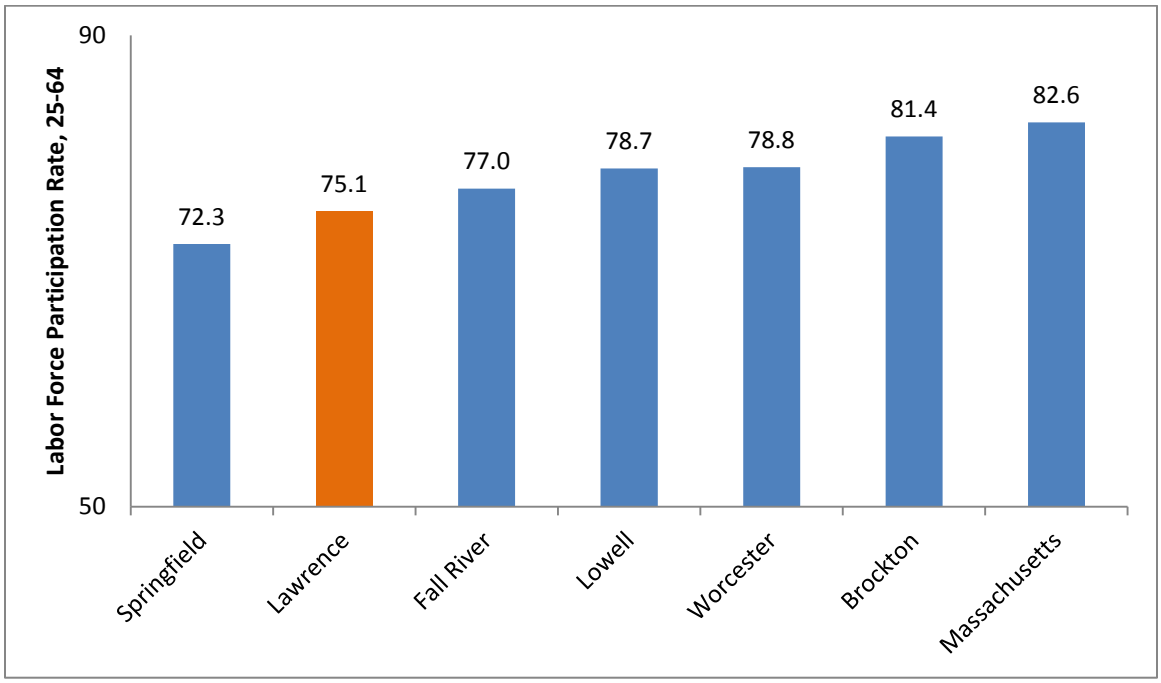
Chart 2: The Labor Force Participation Rate of 16- to 24-Year Old Residents of Lawrence by Selected Characteristics, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. Estimates for all subgroups except the three race groups are weighted by the race-ethnic composition of youth residing in Lawrence City.

Chart 3 contains the labor force participation of the 25- to 64-year old population in these areas. We have excluded the elderly population (65 years & older) as the labor market activities and decisions of this group do not represent the labor market behavior and decisions of a typical adult. Unlike adults under the age of 65, the labor market decisions of the elderly more likely to be guided by their retirement decisions which in turn are primarily based upon their retirement income sources and their health and physical ability to work. The labor force participation rate among non-elderly adults was much higher than that of youth in each one of the six Gateway Cities as well as the entire state. However a comparison of the adult labor force participation across these areas finds the lowest rate among adult residents of Springfield and Lawrence (72% and 75%) and the highest rates among adult residents of Brockton and Worcester. The statewide labor force participation rate of adults was higher than any of the six Gateway City areas, 83 percent.

Chart 3: The Labor Force Participation Rate of 25- to 64-Year Old Residents of Lawrence and Other Selected Areas of the State, 2007-2011

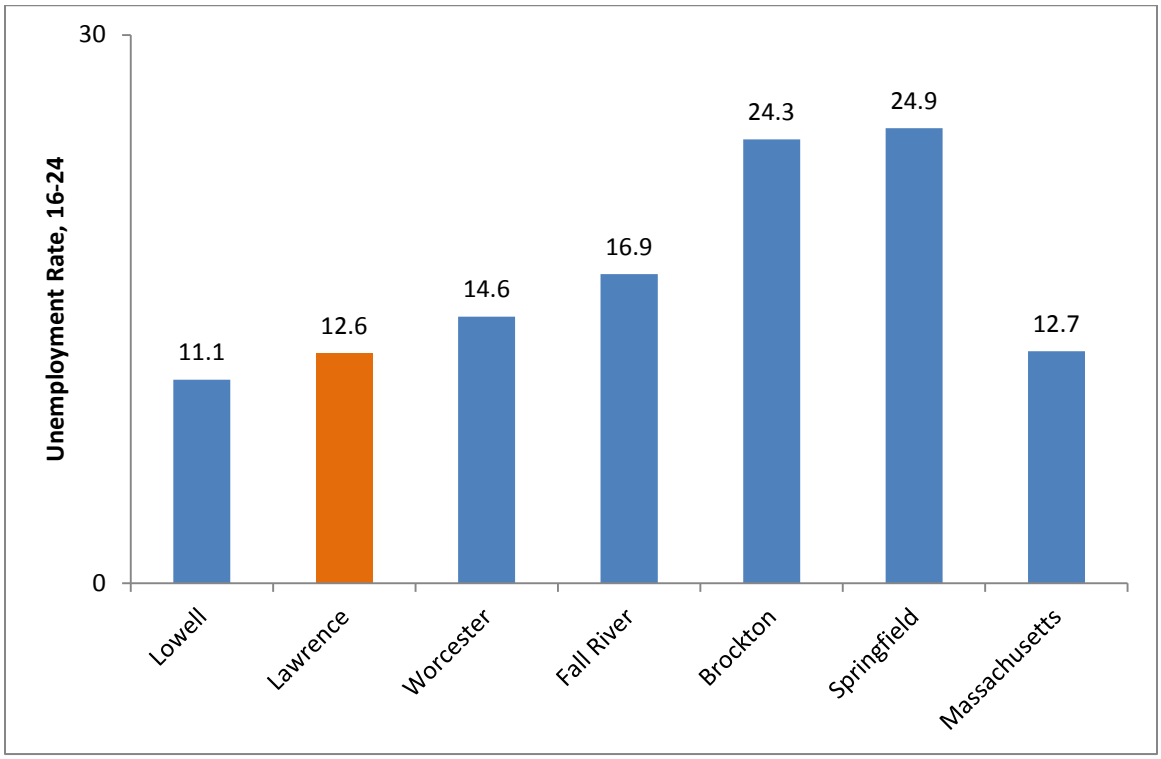


Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

Unemployment

Not all labor force participants are successful in finding a job. Individuals who are actively seeking employment but are not employed are considered unemployed. They are actively participating in the labor force but have not succeeded in finding employment. Young people are relatively new to the labor market and typically are at the bottom of the labor market queue. Even in entry level jobs where teens and young adults used to find a better position in the employment queue, increased competition for from older workers and poorly educated adult workers has pushed younger jobseekers further down in the in the queue. Stiff competition for these entry level jobs increases the importance of early labor market entry among young workers so that they can acquire the behavioral and soft skills and labor market experience that can improve their chances of finding employment.

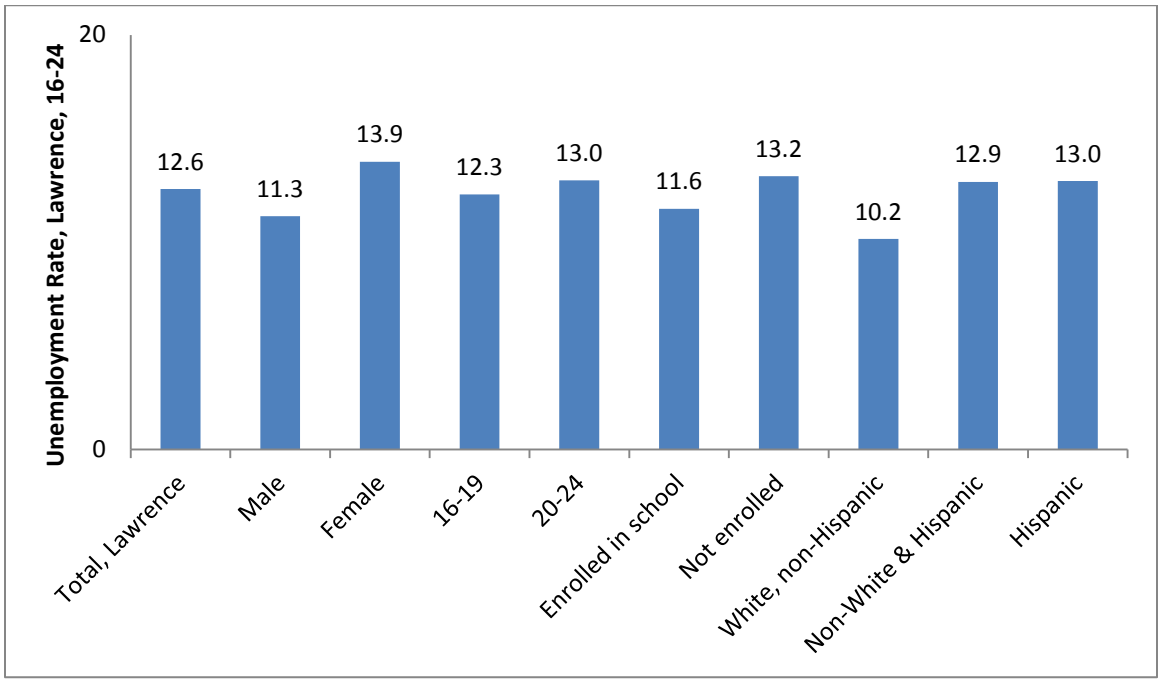
Chart 4: The Unemployment Rate of 16- to 24-Year Old Residents of Lawrence and Other Selected Areas of the State, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

On average between 2007 and 2011, one out of eight young labor market participants in Lawrence was unemployed. The youth unemployment rate in Lawrence was about the same as that of young residents across the state, 12.7 percent. However, since the labor force participation rate of youth was higher across the state than in Lawrence (57% versus 48%), the percent of employed young residents will be higher in the state than in Lawrence despite the same unemployment rate in the two areas. Lawrence had the second lowest unemployment rate (after Lowell) among the six Gateway Cities presented in Chart 4. Young residents of Lowell had the lowest unemployment rate, 11 percent whereas youth residing in Springfield and Brockton had the highest unemployment rate. Nearly one-quarter of 16- to 24-year old labor force participants in these two areas were unemployed. Youth unemployment rates in Fall River and Worcester were 17 and 15 percent, respectively.

Chart 5: The Unemployment Rate of 16- to 24-Year Old Residents of Lawrence by Selected Characteristics, 2007-2011

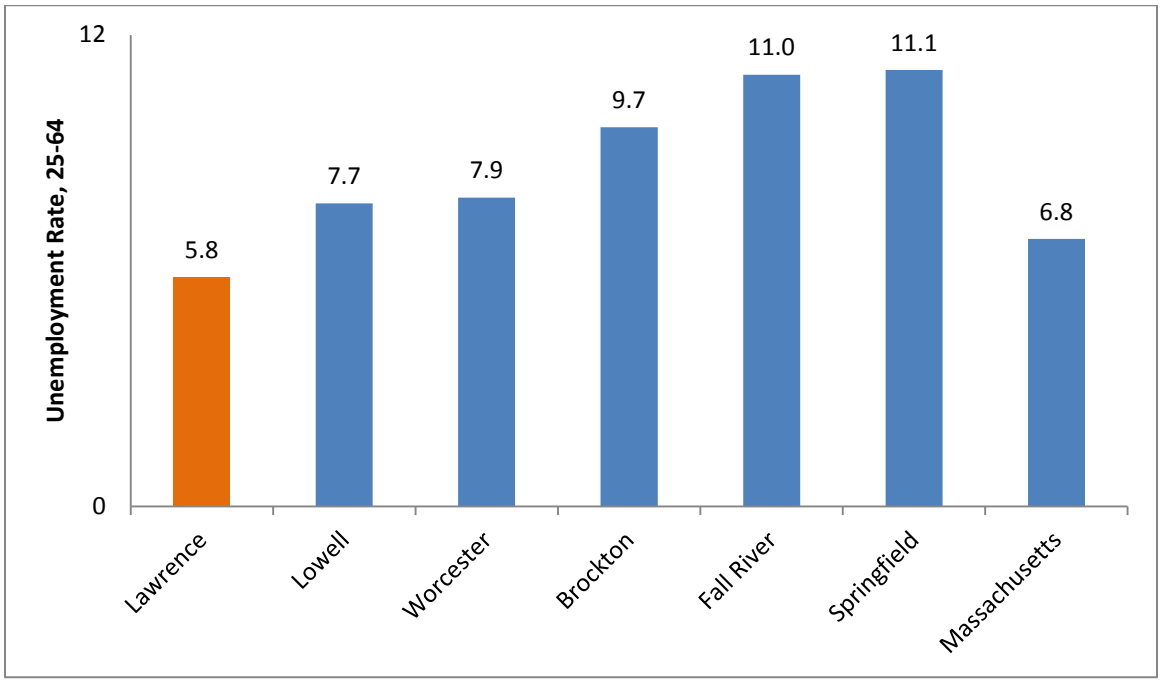


Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. Estimates for all subgroups except the three race groups are weighted by the race-ethnic composition of youth residing in Lawrence City.

An examination of the unemployment rates of subgroups of youth residing in Lawrence finds that young male labor force participants in Lawrence were more successful at finding employment than their female counterparts. This is evident in the higher unemployment among young women compared to young men (14% versus 11%). The unemployment rate of teens and youth who were enrolled in school was lower than their older and non-enrolled counterparts. However, teens and enrolled youth were also less likely to participate in the labor force than their older and non-enrolled counterparts. A comparison of the youth unemployment rates in the Lawrence region by race-ethnicity reveals lower rates among non-Hispanic White youth (10%) than among non-White and Hispanic youth (13%).

The adult unemployment rate in these communities was much lower than that of young residents. The unemployment rates of adult non-elderly residents of these Gateway City areas ranged from a low of 5.8 percent in Lawrence and 7.7 percent and 7.9 percent in Lowell and Worcester, to a high of 11 percent in Fall River and Springfield. The adult unemployment rate was a little under 10 percent in Brockton and 6.8 percent statewide.

Chart 6: The Unemployment Rate of 25- to 64-Year Old Residents of Lawrence and Five Other Gateway Cities in Massachusetts, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

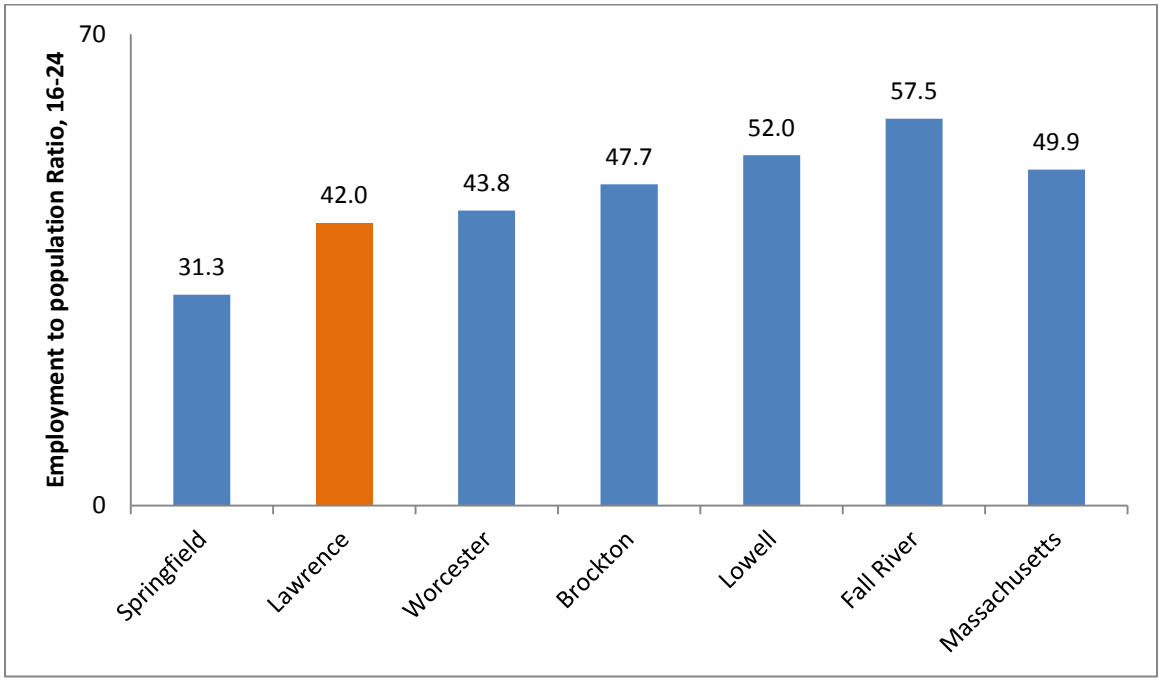
Employment to Population Ratio

The employment to population ratio is a summary labor market measure that includes labor force participation as well as unemployment outcomes of individuals. The labor force participation measures the extent to which the working age residents of a community participate in the labor market but it does not provide information about their employment status. The unemployment rate measures the extent to which labor force participants failed to find a job, or conversely, the extent to which labor force participants were successful in finding employment. The unemployment rate can increase or decrease from a change in the labor force as well as a change in employment. For example, if a number of unemployed individuals give up looking for a job and quit participating in labor market these individuals are no longer considered unemployed or part of the labor force. As a result of these labor market exits, the labor force and number of unemployed individuals will decline and therefore the unemployment rate will decline. This unemployment rate decline is the result of a negative change in the labor market—unemployed workers who gave up looking for a job.

Alternatively, the unemployment rate could decline when unemployed people are able to find employment. This kind of a decline in the unemployment rate is a result of a positive change in the labor market—more people were able to find jobs. Therefore although it is an important and commonly cited labor market barometer, the unemployment rate must be analyzed in the context of labor market participation for a better assessment of the labor market. The employment rate captures the effect labor force participation and unemployment and is therefore a more comprehensive measure of the labor market outcomes of residents of a community than the labor force participation rate or the unemployment rate alone.

The 5-year average (2007-2011) employment to population ratios of teens and young adults residing in the six Gateway Cities ranged from just 31 percent in Springfield to 58 percent in Fall River. Youth between the ages of 16 and 24 who lived in Fall River were almost twice as likely as their counterparts who lived in Springfield, to be employed at a given point in time. Statewide, half of the 16- to 24-year old youth were employed. Forty-two percent of young residents of Lawrence and 44 percent in Worcester were employed over the same period. Youth employment rates were higher in Brockton (48%) and Lowell (52%).

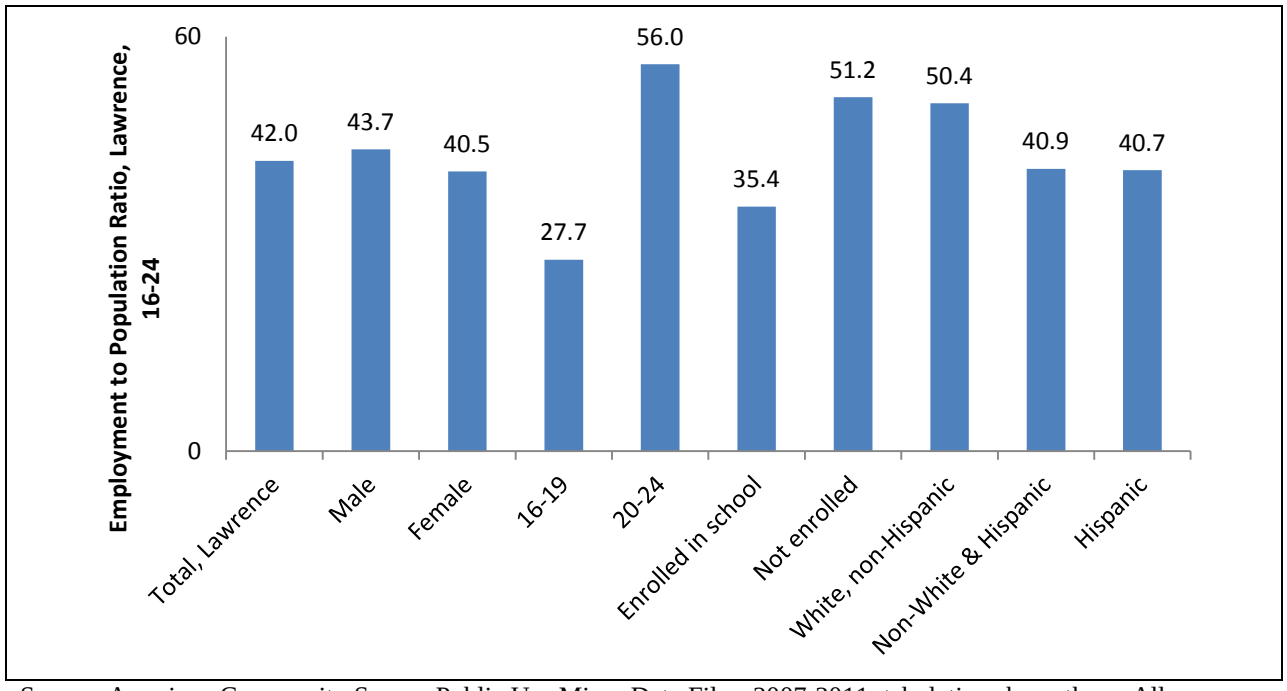
Chart 7: The Employment to Population Ratio of 16- to 24-Year Old Residents of Lawrence and Five Gateway City Areas, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

The youth employment to population ratios in Lawrence varied widely by their demographic characteristics and schooling activities (Chart 8). Young men, who had higher rates of labor market participation than women, also were more likely to be employed than young women. Nearly 44 percent of young men were employed compared to 40.5 percent of young women. Teenagers in the city had a very low rate of employment. On average, over the 2007-2011 period, only 28 out of every 100 teens were employed. Lawrence teens had the second lowest employment to population ratio compared to the other five Gateway City areas; the only area with a lower teen employment rate was Springfield where only one in five teens were employed (Table 2). Teens in Worcester had a slightly higher employment to population ratio, 29 percent. Employment among young adults between the ages of 20 and 24 years in Lawrence (56%) was much higher than their teen counterparts, albeit lower than that of young adults on all Gateway Cities except Springfield where only 43 percent of young adults were employed.

Chart 8: The Employment to Population Ratio of 16- to 24-Year Old Residents of Lawrence, by Selected Characteristics, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. Estimates for all subgroups except the three race groups are weighted by the race-ethnic composition of youth residing in Lawrence City.

Mixing school with work was not common among 16- to 24-year old school-enrolled youth in Lawrence. The employment to population ratio among youth who were enrolled in school was only 35 percent in Lawrence. Mixing school with work was uncommon in Springfield and Worcester as well.

Table 2: The Employment to Population Ratio of 16- to 24-Year Old Residents of Lawrence and Five Gateway City Areas, by Selected Characteristics, 2007-2011

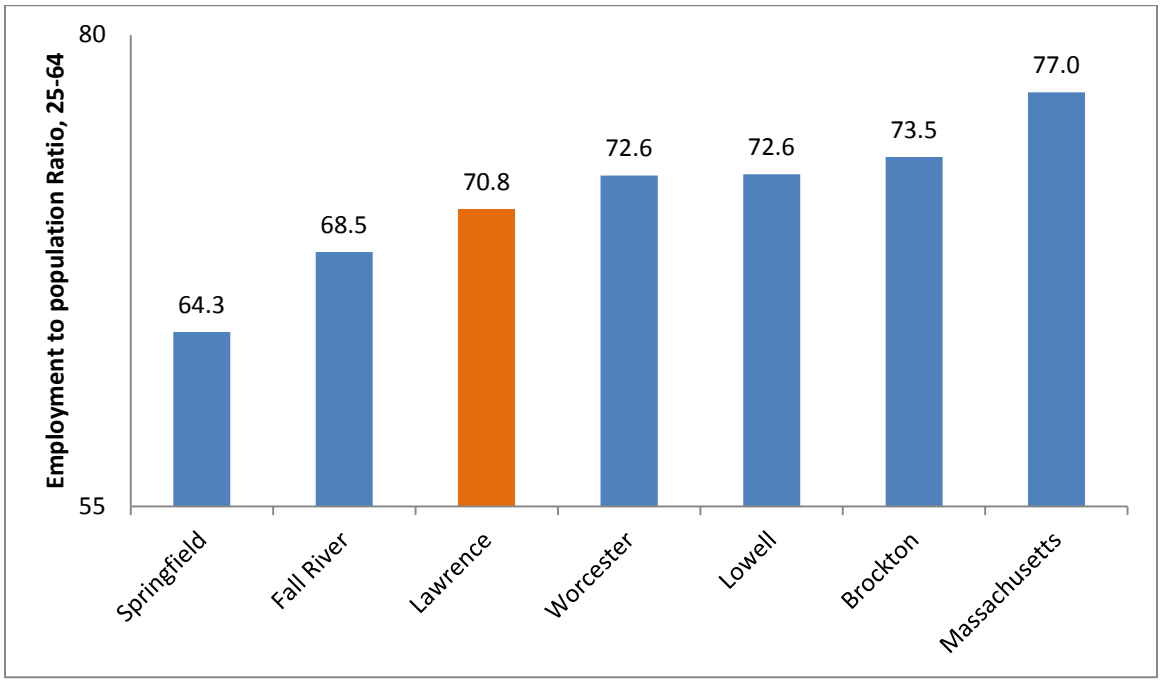
Area	Male	Female	16-19	20-24	Enrolled	Not Enrolled
Lawrence	43.7	40.5	27.7	56.0	35.4	51.2
Brockton	46.0	49.6	35.3	59.5	43.9	53.0
Fall River	54.0	61.0	42.8	68.2	48.5	66.5
Lowell	53.0	51.0	36.0	64.3	42.8	63.3
Springfield	31.6	31.1	19.7	42.8	20.5	49.1
Worcester	47.3	40.7	29.0	56.7	37.1	61.7
Massachusetts	48.4	51.3	34.3	63.3	40.8	69.6

Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates adjusted for CPS-ACS differences. Estimates for Lawrence for all subgroups are weighted by the race-ethnic composition of youth residing in Lawrence City.

Only one in five school-enrolled young residents in Springfield and 37 percent in Worcester were employed at the time of the ACS survey. Among youth who were not enrolled in school only one half were employed in Lawrence. This means that half of out-of-school youth in the city were not engaged in school or work. Employment rates among out-of-school youth in the remaining Gateway Cities ranged from just 49 percent in Springfield to two-thirds in Fall River. Statewide, nearly 70 percent of out-of-school youth were employed on average over the 2007-2011 period. The employment to population ratio of non-Hispanic White youth in the Lawrence area was considerably higher than that of non-White youth. As noted in a previous section, most of the non-Hispanic White youth lived in the other two towns that are part of the Lawrence PUMA in the ACS data files and most of the Hispanic youth were Lawrence residents. Therefore the employment to population ratio of Hispanic and non-White youth is more representative of youth in Lawrence.

Similar to the other two labor market outcomes, the employment to population ratios of adult (25-64 years old) residents of Lawrence and the other five Gateway Cities was higher than that of their young (16-24 year old) counterparts. Nearly 71 percent of adult residents of Lawrence were employed. Adult residents of Springfield and Fall River had lower employment to population ratios (64% and 69%) whereas adults in Worcester, Lowell, and Brockton had higher employment to population rations compared to their counterparts in Lawrence. Statewide the employment rate among non-elderly adult residents was 77 percent.

Chart 9: The Employment to Population Ratio of 25- to 64-Year Old Residents of Lawrence and Other Gateway City Areas of the State, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

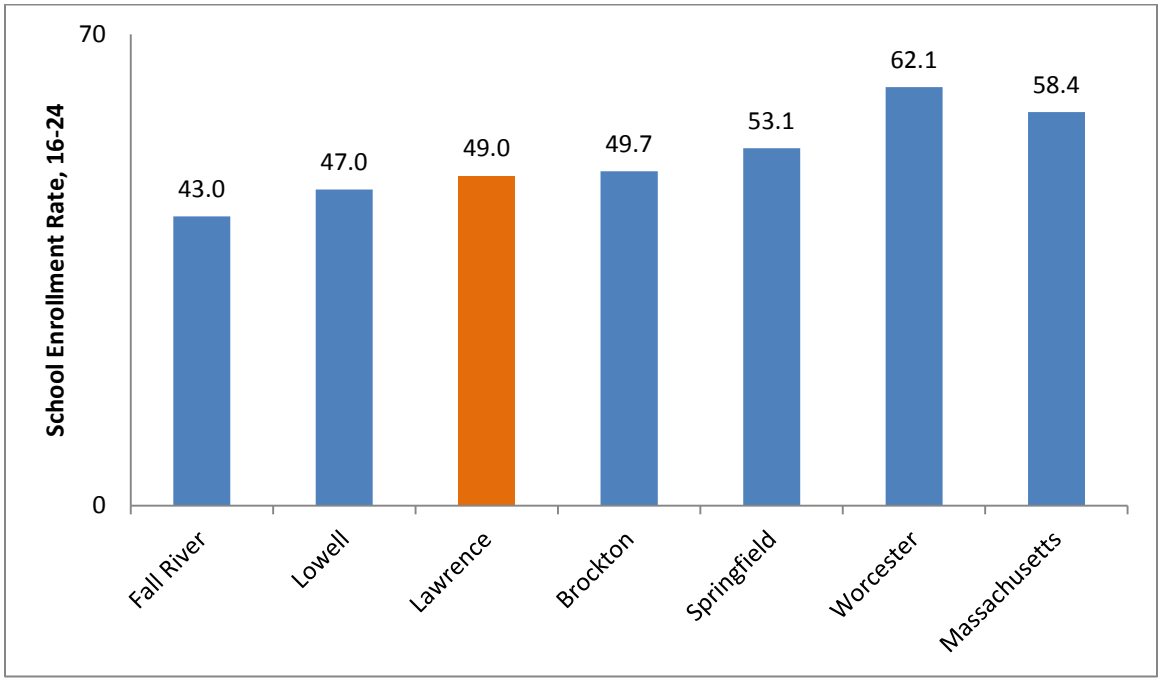
School Enrollment

Youth residing in the Lawrence area did not have a strong attachment to the labor market. Just 48 percent of 16- to 24-year old Lawrence residents were participating in the labor force and on average between 2007 and 2011 and only 42 percent were employed. Schooling is the other major activity in which most young people are engaged. In this section of the paper we examine the school enrollment behavior of young residents of Lawrence and other five Gateway Cities. Findings presented in Chart 10 reveal that less than one half of Lawrence youth were enrolled in school at the time of the 2007-2011 ACS surveys. School enrollment rates ranged from 43 percent among youth in Fall River to 62 percent in Worcester.

School enrollment among youth residing in areas with a large presence of colleges and universities, is likely to be higher as students who attend schools also live in communities near the schools. This is particularly so among 4-year colleges that are likely to bring in students who are temporary residents of communities in and around their college. The presence of 4-year colleges in the Worcester area (WPI, Holy Cross, Clark etc.) might underlie some of the above average school

enrollment rate among youth residing in that city. Springfield, Brockton, and Lowell areas also house higher education institutions, which is likely to place an upward bias on the school enrollment rate in these communities to the extent that they attract students from outside the area to live in the community while they attend school. However, the school enrollment rate of Lawrence is not likely to be distorted from the presence of a college or university. Statewide the school enrollment rate among 16- to 24-year old residents was 58 percent.

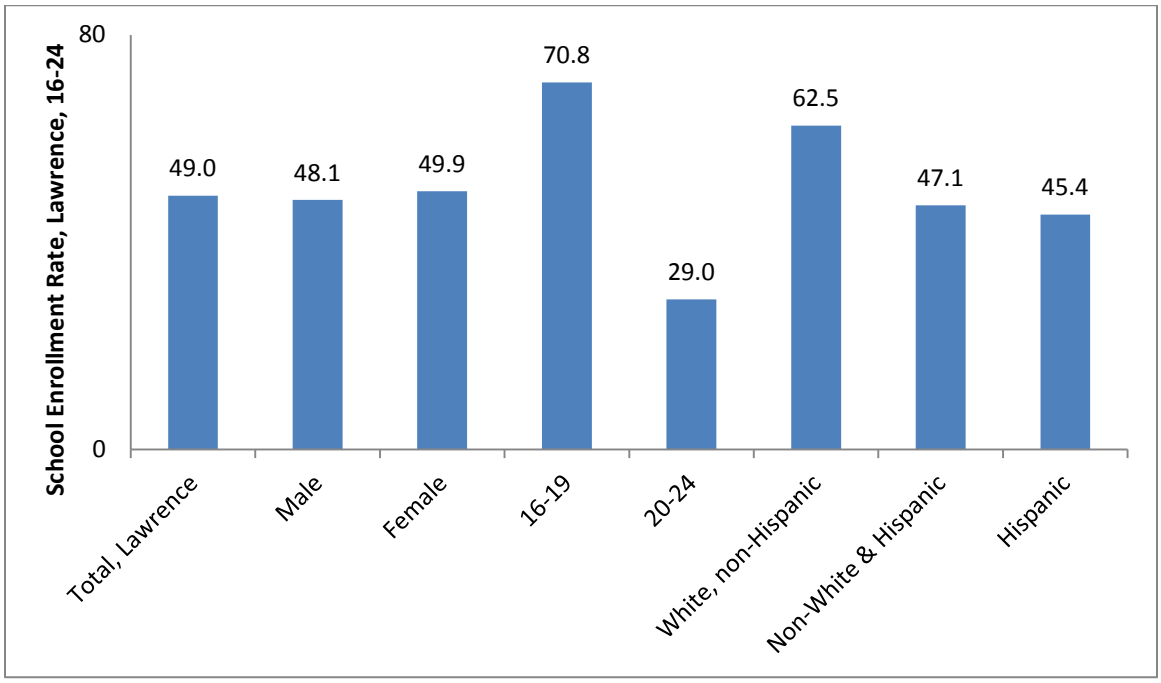
Chart 10: The Proportion of 16- to 24-Year Old Residents of Lawrence and Other Selected Areas of the State who were Enrolled in School at the time of the ACS Survey, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

Young women residing in Lawrence were somewhat more likely to attend school than males. The school enrollment rate of women was 50 percent or 2 percentage points higher than that of male young residents in the Lawrence area. Teenagers were most likely to be enrolled in school than 20- to 24 year old residents in Lawrence. The school enrollment rate of 16- to 19-year old teenagers was 71 percent whereas only 29 percent of those between the ages of 20 and 24 were enrolled in school at the time of the 2007-2011 ACS surveys. Most of the postsecondary school enrollment, particularly those attending 4-year schools occurs among older youth, 20 years or older. The low school enrollment rate among 20- to 24-year old youth in Lawrence implies that there is very little postsecondary enrollment activity among the city's youth.

Chart 11: The Proportion of 16- to 24-Year Old Residents of Lawrence who were Enrolled in School at the time of the ACS Survey, by Selected Characteristics, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. Estimates for all subgroups except the three race groups are weighted by the race-ethnic composition of youth residing in Lawrence City.

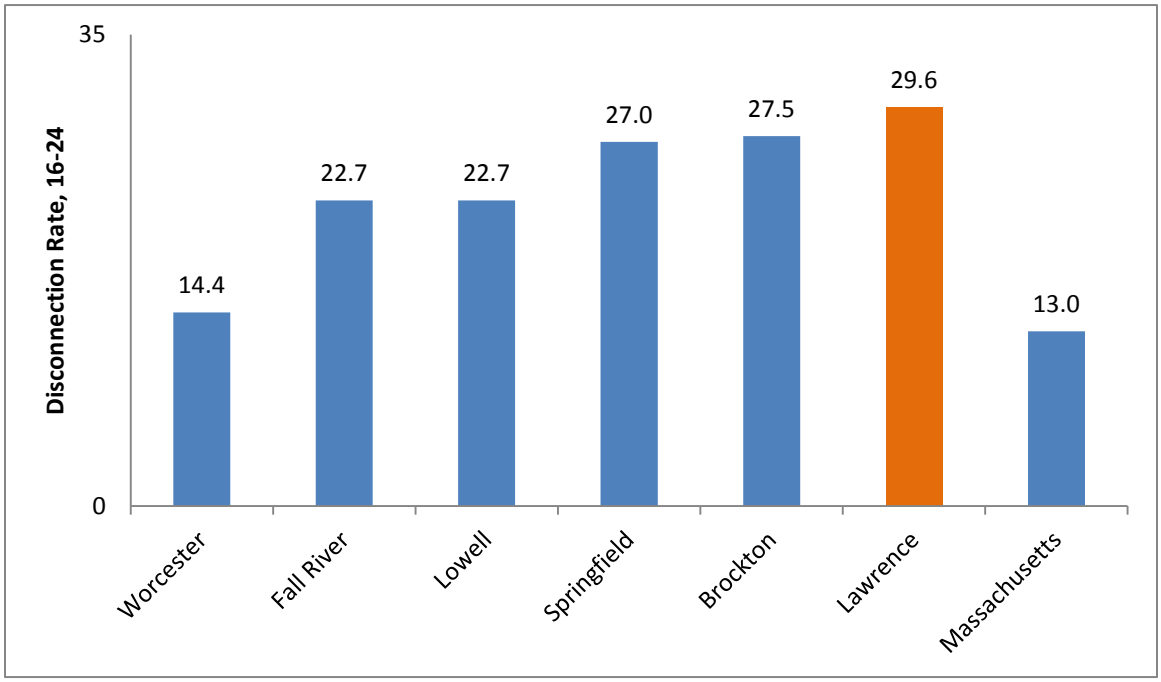
There was a wide gap between the school enrollment rates of non-Hispanic White youth and their non-White and Hispanic counterparts. Nearly 63 percent of the former (most of whom live in Andover or Methuen) were enrolled in school at the time of the 2007-2011 ACS surveys, compared to just 47 percent of the non-White and Hispanic youth combined and 45 percent of just Hispanic youth.

Disconnection from Work and School

Our examination of the labor market and schooling activities among young residents of Lawrence in this paper has revealed low rates of labor market attachment, employment, and school enrollment among them. Youth who are not engaged in work or school are disconnected from the two main activities in which most individuals are engaged in their late teens and early 20s. We have made estimates of the disconnection rate that provides a measure of the extent to which young residents of a city are not engaged in work or school. Disconnected youth are those who are not employed and not enrolled in school. The disconnection rate measures the proportion of youth or a subgroup of youth who are disconnected at a point in time (number disconnected ÷ total population).

Disconnection rates among youth exceeded 22 percent in five out of the six Gateway City areas presented in Chart 12. In Lawrence nearly 30 percent of 16- to 24-year old residents were disconnected from work and school. This means three in ten young residents were not employed and not enrolled in school at the time of the ACS survey. Youth residing in Brockton and Springfield also had high rates of disconnection—27 percent. On average at the time of the 2007-2011 ACS surveys, nearly 23 percent of young residents of Lowell and Fall River were disconnected from work and school. Only 14 percent of young residents of Worcester were disconnected from work and school. In the previous section we had noted a higher rate of school enrollment among youth in Worcester. However, the employment rate of youth in Worcester was just slightly better than that of youth residing in Lawrence (44% versus 42%). The lower youth disconnection rate in Worcester is likely from the high rate of school enrollment among young residents of the city. Statewide 13 percent of 16- to 24-year old residents were out of school and out of work.

Chart 12: The Proportion of 16- to 24-Year Old Residents of Lawrence and Other Selected Areas of the State who were not Employed and not Enrolled in School at the time of the ACS Survey, 2007-2011

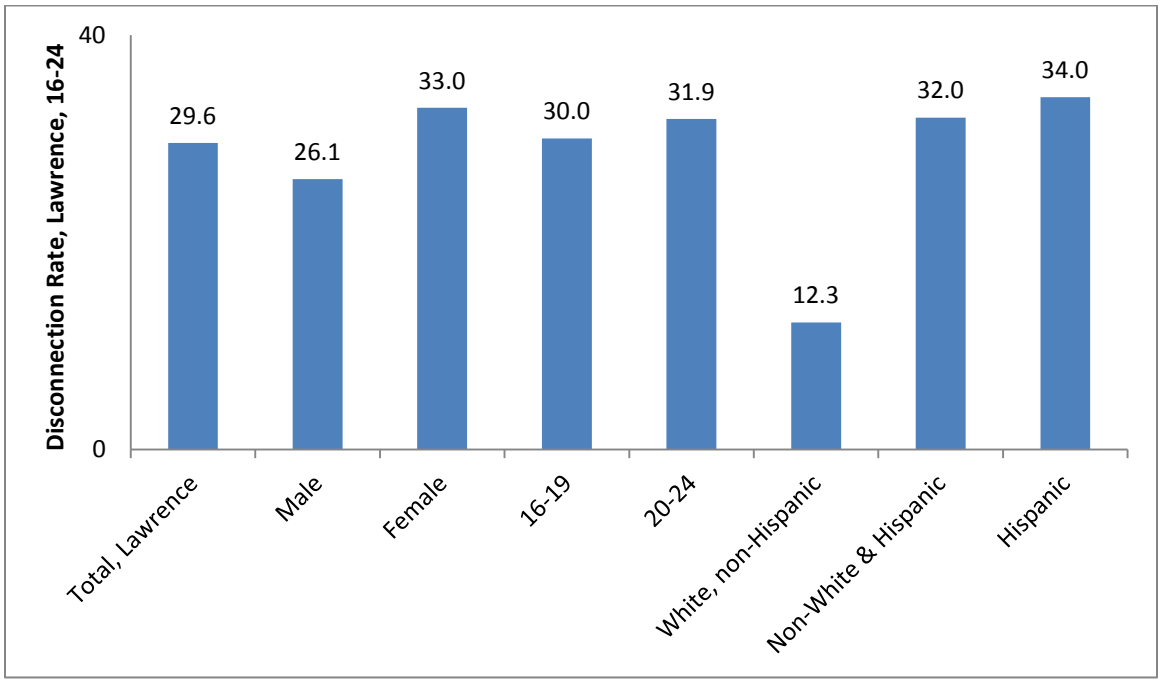


Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

A closer look at disconnection rates among different subgroups of youth residing in Lawrence reveals particularly high disconnection rates among female and Hispanic youth. One-third of young

female residents and 34 percent of Hispanic residents of Lawrence were out of school and out of work. Over one quarter of young male resident of the area were disconnected from school and work; a very high rate of disconnection among young males. Disconnection from work and school places these men at a much higher risk of joblessness and idleness in the future. Furthermore, disengaging from school and work also increases the risk of socially deviant behaviors among these young men. Three out of ten teenagers and nearly 32 percent of young adults between 20 and 24 years old in Lawrence were out of school and out of work. A comparison of disconnection rates of young residents by race reveals a sharp difference; 12 percent of non-Hispanic White residents of the area were disconnected from work and school compared to 34 percent of their Hispanic counterparts. Non-White and Hispanic youth were at a considerably higher risk of disconnection (nearly three times as high) than their non-Hispanic White counterparts.

Chart 13: The Proportion of 16- to 24-Year Old Residents of Lawrence who were not Employed and Not Enrolled in School at the time of the ACS Survey, by Selected Characteristics, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. Estimates for all subgroups except the three race groups are weighted by the race-ethnic composition of youth residing in Lawrence City.

A comparison of the disconnection rates by age and gender across all six Gateway City areas and the entire state is presented in Chart 14. The top two charts (Charts 14a and 14b) compare disconnection rates of male and female youth between the ages of 16 and 24 in Lawrence and the five Gateway City

areas included in this paper as well as for the entire state of Massachusetts. The bottom two charts (Charts 14c and 14d) present a comparison of the disconnection rates of 16- to 19-year olds and 20- to 24-year olds in the same areas.

The male disconnection rate presented in Chart 14a was much lower in Worcester and Lowell compared to the other four Gateway City areas. The male youth disconnection rate in Worcester was the same as the state (13.6%) and a little higher in Lowell (15.7%). Over one-quarter of the male residents between the ages of 16 and 64 in the remaining four areas were disconnected; ranging from 26 percent in Lawrence to 28 percent of disconnected young males in Brockton.

Statewide, young females were less likely to be disconnected than young males (12.2% of females versus 13% percent of males). According to findings presented in Chart 14b, young women residents of Lawrence had the highest rate of disconnection from school and work (33%), more than twice as high as that of young women residing in Worcester (15%). With a 30 percent disconnection rate, Lowell ranked as second highest among the six Gateway Cities in Chart 14b in the disconnection rate among young females. The male disconnection rate in Lowell was much lower. Males in Lowell were only a little over half as likely as their female counterparts to be disconnected from school and work (15.7% versus 30%).

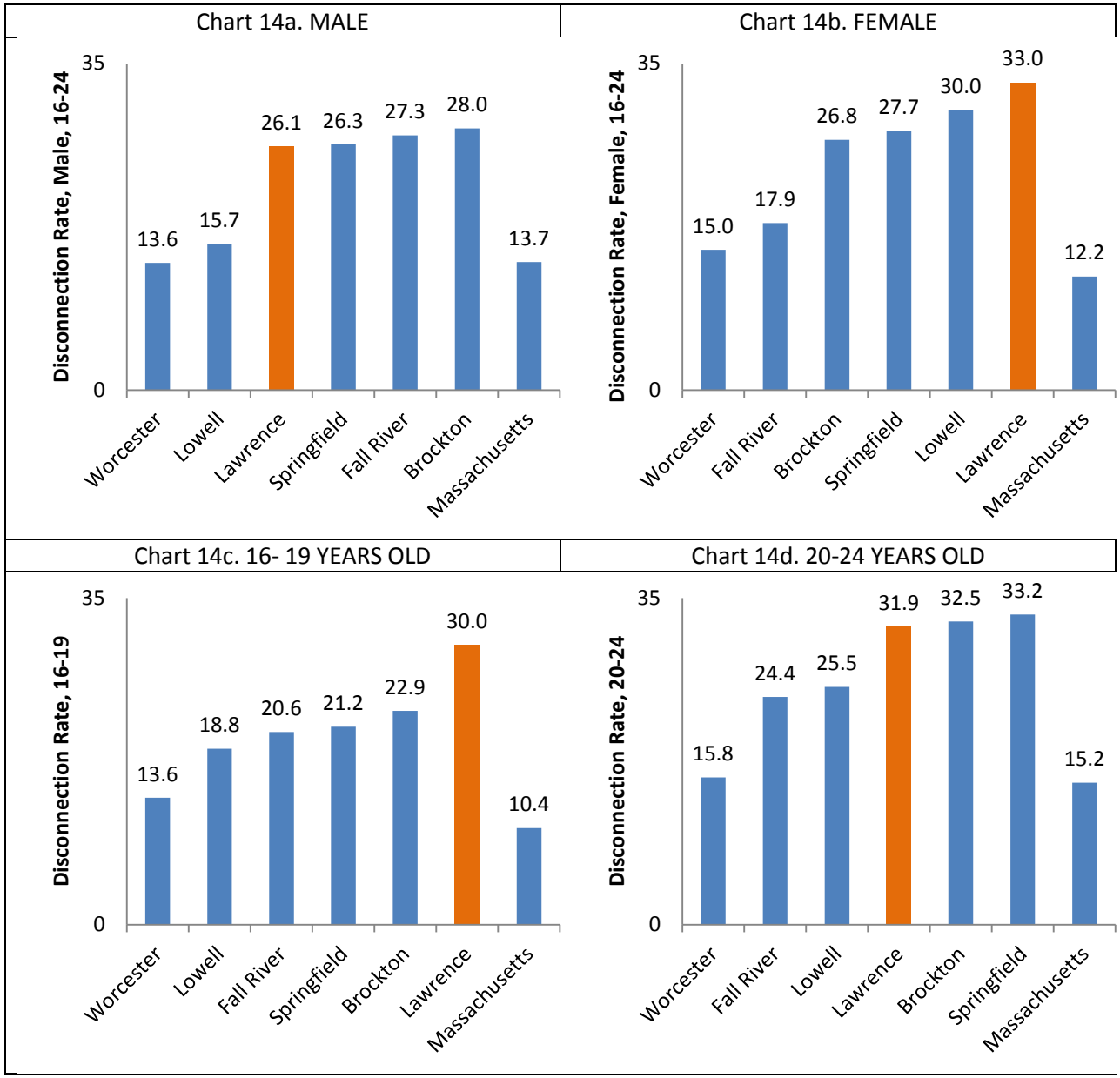
Springfield and Brockton also had high proportions of young women that were out of school and out of work (27% to 28%). Fall River women had the second lowest disconnection rate compared to all Gateway Cities in Chart 14b. With a disconnection rate of 18 percent, young women in Fall River were 10 percentage points less likely to be disconnected than the city's young men among whom over 27 percent were not engaged in school or work.

Teen disconnection rates also varied widely across Gateway City areas (Chart 14c). Teens in Lawrence were most likely to be disconnected (30%). Teen residents of Brockton, Springfield, and Fall River had disconnection rates between 21% and 23%; much lower than that of their counterparts in Lawrence. A little under one-fifth of teen residents in Lowell were out of school and work as were 14 percent of their counterparts who lived in Worcester. Statewide, one in ten teens was disconnected from school and work.

The incidence of disconnection among young adults between the ages of 20 and 24 is presented in Chart 14d. Statewide 15 percent of young adult residents were out of school and work at the time of the 2007-2011 ACS surveys. Close to one-third of 20- to 24-year olds residing in Springfield, Brockton, and Lawrence and one-quarter of their counterparts in Lowell and Fall River were idle at the time of the ACS

surveys—not enrolled in school and not employed. As was the case in every demographic group, compared to other Gateway Cities in Chart 14d young adult residents of Worcester had the lowest incidence of disconnection, 16%.

Chart 14: The Proportion of 16- to 24-Year Olds in Lawrence and Five Gateway City Areas who were not employed and Not Enrolled in School at the time of the ACS Survey, by Gender and Age, 2007-2011



Source: American Community Survey Public Use Micro Data Files, 2007-2011; tabulations by authors. All estimates are adjusted for CPS-ACS differences. The estimate for Lawrence is weighted by the race-ethnic composition of youth residing in Lawrence City.

Summary and Discussion

Job access for teens and young adults has deteriorated badly for teens and young adults since the end of the 1990s. Not only has the overall rat e of labor force participation declined sharply but the fraction of young people who are employed has also fallen sharply. A major part of the reason for the decline in employment among teens and young adults is associated with poor overall economic and labor market conditions that have prevailed in the nation and in the Commonwealth since the end of the economic expansion of the 1990s. Since that time, Massachusetts has experienced two quite severe economic recessions with large numbers of jobs lost, in each case the subsequent economic recovery has proven incapable of recovering those jobs lost in the downturn.[4] Historically, teens and young adults find themselves at the margin of the labor market. When job openings are plentiful employers hire young people at an above average pace, and when economic retrenchment occurs young people making the transition from school to the job market struggle to find work and are often more likely to be laid-off from a position when firms must cut-back production. Part of the reason young people are more vulnerable to changes in economic conditions is that they are frequently viewed as less productive workers, relative to adults. Indeed, we have seen considerable evidence of firms substituting older workers for young people in even the most low skilled of occupations.[5]

The employment situation for teens and young adults in Lawrence remains quite poor. Our estimates of the nature of labor market engagement and more importantly job market success paint a disturbing picture for the future job market outlook of these young residents of a city that is itself struggling to succeed in an economic and job market environment in Massachusetts that is markedly improved from conditions several years ago but is still operating well below full employment conditions. Our systematic review of findings from the CPS/ACS public use data files revealed that:

- On average, fewer than one half of teen and young residents of Lawrence were actively engaged in the job market. A high degree of disengagement from the job market means that more than one

[4] Neeta P. Fogg and Paul E. Harrington, Healthcare Sector Offsets to Declining Employment and Earnings in Massachusetts during the 2000s Decade, Center for Labor Markets and Policy, Drexel University, Philadelphia, January 2012

[5] Neeta P. Fogg and Paul E. Harrington, *The Increased Presence of Older Workers in the Massachusetts Labor Market: implications for Workforce Development Policies,* Workplace Accommodation, and Universal Design. Commonwealth Corporation, July, 2011
http://www.commcorp.org/resources/documents/Increased%20Presence%20of%20Older%20Workers%20(print%20version)%207.2011.pdf
Neeta P. Fogg and Paul E. Harrington, "Rising Demand for Older Workers Despite the Economic Recession: Accommodation and Universal Design for a New American Workforce," *Public Policy and Aging Report*
http://www.seniorserviceamerica.org/site/downloads/reports-publications-analyses/OlderWorkersProblemsandProspectsinanAgingWorkforcePublicPolicyAgingReport.pdf

half of these young people are not engaged in even the most basic kind of job market activity—searching for a job. Among the teen population of Lawrence only 31 percent were actively engaged in the labor market.

- A very discouraging picture emerged of those young Lawrence residents who were not enrolled in school. Our analysis found that only 59 percent of this group of out-of-school youth was either working or actively looking for work. This of course means that about 4 out of 10 out-of-school youth were not engaged in the job market.
- We found that the unemployment rate among the 16-24 year old population in Lawrence averaged 12.6 percent. This is a relatively low unemployment rate compared to teens in other Gateway Cities in the Commonwealth. This means that those teens and young adults who did participate in the labor market had more success than their counterparts elsewhere, but the low rate of labor force attachment in the city means that high share of young people simply does not try to find work.
- The fraction of young employed residents of Lawrence was quite low. Our analysis found that among the 16 to 19 year old population in the city just 28 percent were employed at a point in time. Only 56 percent of those aged 20 to 24 had a job.
- Among those aged 16 to24 who were enrolled in school, relatively few were engaged in a work activity. Only about one half of all out-of-school teens and young adults in Lawrence had a job.
- Our analysis found that only about one half of the 16 to 24 year old residents of Lawrence were enrolled in school.
- Our analysis of the data revealed that a very large fraction of teens and young adults are disconnected from both work and school, two fundamental activities that develop young people into positive social and economic contributors to their communities. We found that three in ten teen and young adult residents of Lawrence are disconnected from both work and school. The incidence of disconnection in the city was greater among females, and race/ethnic minority residents.

The findings above paint a very depressing picture of young people in the city. Low levels of labor force participation among teens and young adults in Lawrence results in a low overall fraction of young people working. School enrollment of those aged 16 to 24 is also quite low. The combination of low employment rates and low school enrollment rates lead to very high levels of disconnection from both school and work in Lawrence. A key set of questions then are: What are some of the explanations for these high disconnection rates? What they mean for Lawrence? And what might community leaders do to reduce these rates of disconnection?

One important source of disconnection in Lawrence is associated with low levels of school enrollment. The Lawrence school district has been plagued by a very low high school graduation rate. The 2011 adjusted five year cohort graduation rate for Lawrence high schools was just 60.6 percent. The estimated share of students from that cohort of entering 9th graders was 22 percent with an additional 6 percent earning a GED.[6] Thus five years after entering high school 40 percent of students have still not earned a regular diploma. Andrew Sum has analyzed some of the most important social and economic consequences of failing to complete high school are quite severe. Sum found that:

- High school dropouts aged 16-24 are much less likely to be engaged in the labor force or be employed than those who complete high school.
- Teen and young adult female high school dropouts were considerably more likely to have borne one or more children, with the majority remaining unmarried.
- The chance of being incarcerated for 16 to 24 year old high school dropouts was 6 times greater than their counterparts who finish high school.
- The odds of residing in a household with income below the poverty/near poverty thresholds were sharply higher for young high school dropouts.
- Over their expected working lives, high school dropouts will cost U.S. taxpayers a net loss of about $5,200 per year---every year-- up to the age of 65.[7]

The college enrollment rare of high school graduates from Lawrence was quite high; within 16 months of high school graduation about 78 percent of the Lawrence graduating class of 2009-10 had enrolled at a post-secondary educational institution, a college enrollment rate that was somewhat greater than the 74 percent statewide college enrollment mean. About 60 percent of all those Lawrence graduates who do enroll in college shortly after exiting high school matriculate in the state's community college system with an additional 15 percent enrolling in the state's four-year public college system. A substantial proportion of those students who enroll in college are unlikely to complete a degree or certificate program. This is especially the case at the public two year college level where the three year cohort graduation rate averages about 16 percent and the three year cohort transfer rate averages about 22 percent.

[6] Massachusetts Department of Elementary and Secondary Education, " 5-Year Adjusted Cohort Graduation Rate 2011 Lawrence,"
http://profiles.doe.mass.edu/nsc/gradsattendingcollege_dist.aspx?orgcode=01490000&orgtypecode=5&TYPE=DISTRICT&fycode=2010

[7] Andrew Sum, et.al. "The consequence of Dropping Out of High School: Joblessness and Jailing's for High School Dropouts and the High Cost for Taxpayers," Center for Labor Market Studies, Northeastern University, October, 2009

Given that 60 percent of college bound Lawrence high school graduates enroll in Massachusetts community colleges, this suggests that a large fraction of these youngsters drop-out of college and never earn a degree or certificate. Our research on the outcomes for young adults with some college, but no degree suggests few gains in employment and earnings for college dropouts relative to those with a high school diploma who have no additional years of schooling. The evidence suggests large sheepskin effects associated with a college degree, that is, the degree award is highly valued in the labor market, but that additional years of schooling with no degree or certificate are not assigned a high value by employers.

The second major source of disconnection for teens and young adults in Lawrence is, of course, associated with low levels of labor force participation rates leading to low employment rates for young working age residents of the city. In a recent study of employer views of teens in the job market we prepared in cooperation with the Commonwealth Corporation we found that employers often rate teens poorly with respect to their work behaviors or what are sometimes called non-cognitive skills.[8] This study was based on both a survey of employers as well as focus groups composed of local business leaders from across the state including a group of employers organized by the Merrimack Valley Chamber of Commerce who participated in a lively discussion of teen employment issues.

The study found that employers take hiring at entry level occupations very seriously and devote considerable resources to identify the best candidates for employment. Employers do this to mitigate the risk of shirking, that is, avoiding or neglecting duties and responsibilities while on the job. Work values and work behavior can exert a powerful impact on the contributions to production of a given new hire, yet these values and behavioral traits can be readily hidden by prospective job candidates. So employers have developed a number of methods that help them get a better understanding of the behavioral traits of their job applicants. Employers use two distinct sources of information to reduce the risks of making an adverse selection in the hiring process: job seeker signaling and employer screening. Jobseekers engage in a variety of signaling activities to indicate in a much abbreviated, but readily observable way, a trait or set of traits or characteristics that serve as proxy indicators about their underlying productive abilities. Employers learn to interpret these signals based on their past hiring experiences and the subsequent job performance of the hires that are made.[9] Perhaps the most heavily relied upon signal in the hiring process is the level of educational attainment which is thought to be positively connected to the productive abilities of job seekers. Employers use

[8] Paul E. Harrington and Nancy L. Snyder, "Signaling Success: Boosting Teem Employment Prospects, Prepared for Commonwealth Corporation, Boston, Massachusetts, April 2013.
[9] Michael Spence," Job Market Signaling," Quarterly Journal of Economics, August, 1973

educational credentials as an indicator - albeit an imperfect one - to determine which applicants are more likely to be productive.

The signals that job seekers send about their productive potential are all, to some extent, malleable. Certainly teen job seekers can alter their dress and behavior in a way that improves their image as a job candidate. Thus teen job seekers are able to alter some of the signals they provide to employers to create a more positive image of themselves as potentially productive employees at a given business. However, one important characteristic that employers we spoke with use as a signal of the potential quality of a hire is the age of the job seeker. Our research revealed that the overwhelming share of employers perceived teens—especially high school aged teenagers as potentially inferior workers—and so were less likely to hire them based on the signal of their age.[10] In effect, we found a type of statistical discrimination in entry-level labor markets, where employers viewed teens as less productive and thus frequently eliminated teens under the age of 18 for consideration for employment in their firms. Some of the reasons teens are viewed as less desirable workers are due to legal restrictions and high school extracurricular activities that limit key aspects of teen work.

Screening refers to the process that employers undertake to gather reliable and trustworthy information about applicants for positions in their organizations. The purpose of the screening process is to elicit information from a variety of sources for use by those making the hiring decisions that can help them predict the likelihood of positive future job performance among a set of candidates for a position and then identify that candidate that is most likely to be successful. Employers increasingly rely on on-line and computer generated applications processes to screen workers. This method of screening includes personality profile tests that provide insight through sophisticated psychometric measures about applicants' values and likely behaviors. Our interactions with employers suggest that they place a high degree of confidence in the results of these formal tests and believe that on average they generate an improved set of hires relative to the unstructured interview alternative. Not surprisingly, we did not find many employers relied simply on unstructured interviews to hiring entry-level workers; rather they developed a variety of methods to screen in superior candidate. Chief among these methods was finding a trusted source of supply for workers. Often employers relied on current employees to find new hires. Current employees were viewed by many employers as a superior way to screen workers for a job. They believed that workers with good work values and behaviors were more likely to be associated with individuals with similar values and behaviors.

[10] Researchers distinguish nonmalleable signals by labeling them 'indices' Op Cit., Spence, "job Market Signaling"

Employers placed great emphasis on trusting the sources of information that they used in making their hiring decisions. One area where employees thought they were able to access high quality teen works was in the state's career and technical high schools. CTE students had strong reputations as good workers who had good dependability and exerted a good degree of self-control. Many employers we spoke with had relationships with local CTE high schools. A hallmark of these relationships was that the school had built a long-term relationship with the employer and so was a trusted source of information about a job candidate. CTE schools were viewed as taking care in making sure that only solid work ready students were referred to employers and that if a problem with a student developed the CTE program could step in to help resolve a given situation. Few employers reported similar kinds of relationships with their local comprehensive high schools, although some employers had attempted to build such relationships with these schools.

In the job market context where the number of job applicants, even at the entry level, substantially exceeds the number of available positions, we found employers generally place teens and young adults towards the bottom of the hiring queue, primarily because they see their behavioral traits as inferior to those of other applicant groups including older workers and recent college graduates (who themselves are unable to crack the college labor market and so enter the high school labor market-trading unemployment for underemployment.) The problem is that there are large long-term economic advantages to working for young people.

- Ruhm found that, 6 to 9 years after graduation, those who worked 20 hours per week during their senior year had annual earnings that were 22 percent greater than those who did not work. They were employed in higher level occupations than those who did not work in high school and were more likely to have health insurance and participate in an employer pension plan.[11]
- The impact of working while in school is also quite positive at the post-secondary level—especially among community college students. Audrey Light finds that among men, when in school work experience is included from calculations of the returns to college, the estimated gains are upwards of 25 percent greater than when in-college work experience is excluded in the statistical model This implies that one quarter or more of the net earnings premium associated with earning a college degree is in fact the product of working while in school—and not a product of the college degree per se.[12]

[11] Christopher J. Ruhm, "The Extent and Consequences of High School Employment," *Journal of Labor Research*, Vol. 16, No 3. Summer 1995, pp. 293-303.
[12] Audrey Light, In-School Work Experience and the Returns to Schooling, *Journal of Labor Economics*, January 2001.

- Molitor and Leigh find that the gains to in school work experience at the post-secondary level are particularly pronounced for two year male college students, many of whom are adults returning to school after an extended time period after high school.[13]
- Early work experience is thought to increase a young person's focus on potential adult roles including the role of work decisions in influencing future earnings and the quality of life associated with decisions about work, school and other activities.[14] In short, exposure to work at a young age is thought to contribute to the focus and direction young people need to make decisions about their future life pathways.
- Zimmer-Gembleck and Mortimer found that students who work for an extended number of weeks while in school, but more limited hours of work (less than 20 hours per week) are substantially more likely to earn a bachelor's degree than students who do not work or who work more intensively over the course of a week. [15]

These findings suggest that secondary high schools, local community colleges and workforce development organizations are the best positioned institutions to assist teens and young adults who are disconnected from the labor market. High schools are already engaged in the long and laborious process of reducing dropout rates in their institutions. A key element of these strategies should be based on developing basic behaviors related to attendance and behavior in high school. The chance of dropping out of high school rises sharply with the number of absences recorded by a student in a given period of time. Similarly the numbers of disciplinary actions taken against a student including in-school and out-of-school suspensions are important factors influencing the chance of a student dropping out.

Not only are high school dropout rates influenced by high school attendance and behavior, but so are college dropout rates. We noted earlier that retention and graduation rates at the community college level in Massachusetts are low. But our research on the factors that influence college withdrawal found that high school attendance and suspension were also powerful predictors of dropping out of college. So it is no surprise to find that employers' reluctance to hire young people without a college degree is associated with the same negative behaviors of poor attendance and self-control (as measured by disciplinary suspension) that cause secondary and post-secondary drop-out problems. Indeed, many

[13] Christopher J. Molitor and Duane E. Leigh, "In-School Work Experience and Returns to Two-Year and Four-Year Colleges," *Economics of Education Review,* Vol. 24, No. 9, August 2005, pp. 459-468.
[14] Op.Cit, Mortimer, p.24
[15] Melanie J. Zimmer-Gembleck and Jeylan T, Mortimer, Review of Educational Research, Winter 2006 pp. 537-566 and Mortimer Working and Growing Up in America.

employers point to poor discipline at school and home as the source of shirking behavior among young people.

Many of the institutions and organizations that serve teens are themselves disconnected from the labor market and are therefore unable to adequately prepare and coach teens about how to find and succeed in work. For instance, employers perceive that the first time a teen faces any consequences for poor attendance is in the workplace. It is not a behavior that is taught and reinforced in school or by parents. Reinforcing behaviors like attendance and punctuality can be imbedded into school and community settings. More generally, these organizations must see themselves as responsible for helping build the skills necessary to find and keep a job. What exactly can these organizations do?

- Help teens overcome the challenges of employer screening by demonstrating how screening mechanisms work—teaching young people how to think about on-line applications and to understand the underlying reasons for each question that is posed on the application.
- Provide students with help in acquiring the savvy required to get a job in today's labor market. Provide coaching and training in work readiness and career exploration and especially in life skills like punctuality, taking direction and initiative so that young people can find and keep a job. Programs in basic job hunting and job retention should be offered to all working age high school students, with a strong emphasis on understanding how employers make their hiring decisions.
- Take responsibility for brokering relationships between young people and local businesses. Employers are sometimes more willing to take some risk in hiring a young person with little or no work experience if they know that the local high school or community college is engaged in screening these youngsters and will support both the job applicant and the employer to make a successful new hire.
- Provide an easily navigated, unified point of entry for employers who are potentially interested in hiring young people for entry level positions. This means offering employers screening services they value along with a chance to support youth programming in other ways in addition to hiring.
- Comprehensive high schools should place a stronger emphasis on attendance and discipline. District leadership should develop methods to closely monitor and manage attendance, punctuality and discipline and self-control issues on a daily basis. Improvements in these areas will sharply bolster credibility with area employers. Indeed, one of the mainstays of success for the state's CTE programs has been a strong emphasis on managing student behavior—which many believe helped substantially improve CTE MCAS scores over the years.
- Workforce development efforts should include supporting an in-school professional who connects students with employers. Their task is to build long term credible relationships with local

employers and work with young people who do not have their own networks into the labor market to find work.

- Use subsidized work programs as springboards into employer paid positions. Young people in subsidized jobs should come away from those positions with job seeking and job readiness skills. This means that there should be competition among students for subsidized jobs and students must pass the signal and screen tests that are found in the unsubsidized sector of the labor market.
- Employers who participate in subsidized work programs must structure the experience in such a way as to reinforce positive work behaviors including attendance self-discipline, initiative and honesty.
- An important idea about creating teen staffing agencies emerged from the Merrimack Valley youth employer focus group. Employers often have short-term projects that require a few days or weeks or work. Youth serving organizations should develop a teen staffing agency model to place young people with area employers on a short-term basis. Such teen temp help firms would be located at retail malls or other central locations where a number of employers may be looking for temporary help. Teens who perform well in their temp duties will have the added possibility that an employer will hire them on a more permanent basis or recommend them to another firm for a permanent job.

Appendix A: Total Population and Race-Ethnicity of the Population of Each Gateway City and the Public Use Micro data Area (PUMA) in which it is Located, 2010

	PUMA	Gateway City
BROCKTON		
Total Population	114,151	93,810
Percent of PUMA Population in Gateway City		82.2%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	51.2%	42.9%
Black non-Hispanic	25.1%	29.8%
Hispanic	8.6%	10.0%
Asian, non-Hispanic	2.2%	2.3%
Other, non-Hispanic	12.8%	15.0%
FITCHBURG		
Total Population	146,136	40,318
Percent of PUMA Population in Gateway City		27.6%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	80.7%	68.2%
Black non-Hispanic	3.0%	4.0%
Hispanic	11.8%	21.6%
Asian, non-Hispanic	2.3%	3.6%
Other, non-Hispanic	2.2%	2.5%
HAVERILL		
Total Population	122,411	60,879
Percent of PUMA Population in Gateway City		49.7%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	85.4%	79.5%
Black non-Hispanic	1.7%	2.5%
Hispanic	8.8%	14.5%
Asian, non-Hispanic	2.5%	1.6%
Other, non-Hispanic	1.6%	1.9%
FALL RIVER		
Total Population	122,554	88,857
Percent of PUMA Population in Gateway City		72.5%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	87.1%	83.4%
Black non-Hispanic	2.6%	3.4%
Hispanic	5.6%	7.4%
Asian, non-Hispanic	2.0%	2.5%
Other, non-Hispanic	2.7%	3.3%

	PUMA	Gateway City
HOLYOKE		
Total Population	111,231	39,880
Percent of PUMA Population in Gateway City		35.9%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	69.5%	46.8%
Black non-Hispanic	2.4%	2.4%
Hispanic	25.3%	48.4%
Asian, non-Hispanic	1.4%	1.0%
Other, non-Hispanic	1.5%	1.4%
NEW BEDFORD		
Total Population	180,334	95,072
Percent of PUMA Population in Gateway City		52.7%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	79.9%	67.9%
Black non-Hispanic	3.4%	5.2%
Hispanic	9.6%	16.7%
Asian, non-Hispanic	1.0%	0.9%
Other, non-Hispanic	6.1%	9.2%
LOWELL		
Total Population	106,519	106,519
Percent of PUMA Population in Gateway City		100.0%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	52.8%	52.8%
Black non-Hispanic	6.0%	6.0%
Hispanic	17.3%	17.3%
Asian, non-Hispanic	20.0%	20.0%
Other, non-Hispanic	3.9%	3.9%
LAWRENCE		
Total Population	156,833	76,377
Percent of PUMA Population in Gateway City		48.7%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	50.2%	20.5%
Black non-Hispanic	1.9%	2.3%
Hispanic	42.1%	73.8%
Asian, non-Hispanic	4.4%	2.3%
Other, non-Hispanic	1.3%	1.2%

	PUMA	Gateway City
SPRINGFIELD		
Total Population	153,060	153,060
Percent of PUMA Population in Gateway City		100.0%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	36.7%	36.7%
Black non-Hispanic	19.6%	19.6%
Hispanic	38.8%	38.8%
Asian, non-Hispanic	2.4%	2.4%
Other, non-Hispanic	2.5%	2.5%
WORCESTER		
Total Population	181,045	181,045
Percent of PUMA Population in Gateway City		100.0%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	59.6%	59.6%
Black non-Hispanic	10.2%	10.2%
Hispanic	20.9%	20.9%
Asian, non-Hispanic	6.0%	6.0%
Other, non-Hispanic	3.3%	3.3%
PITTSFIELD		
Total Population	115,245	44,737
Percent of PUMA Population in Gateway City		38.8%
Distribution of Population by Race-Ethnicity		
White, non-Hispanic	89.9%	85.9%
Black non-Hispanic	2.8%	4.9%
Hispanic	3.7%	5.0%
Asian, non-Hispanic	1.3%	1.2%
Other, non-Hispanic	2.3%	2.9%

Source: 2010 Decennial Census from the American FactFinder (http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml); tabulations by authors.