9-2012

Is Portland Really the Place Where Young People Go To Retire? Analyzing Labor Market Outcomes for Portland's Young and College-Educated

Jason R. Jurjevich
Portland State University, jjason@email.arizona.edu

Greg Schrock
Portland State University, gschrock@pdx.edu

Is Portland Really the Place Where Young People Go To Retire?
Analyzing Labor Market Outcomes for Portland's Young and College-Educated

Greg Schrock, PhD
Assistant Professor, Nohad A. Toulan School of Urban Studies & Planning
Portland State University
gschrock@pdx.edu

Jason Jurjevich, PhD
Assistant Director, Population Research Center
Assistant Professor, Nohad A. Toulan School of Urban Studies & Planning
Portland State University
Jason.Jurjevich@pdx.edu

September 2012

Acknowledgements

The authors wish to thank Joe Cortright (Impresa Consulting), John Quinterno (South by North Strategies), Nick Beleiciks and Amy VanderVleit (Oregon Employment Department) for helpful feedback and comments on earlier drafts, and Charles Rynerson (PSU Population Research Center) and Dillon Mahmoudi for technical support and research assistance.

Is Portland Really the Place Where Young People Go To Retire?
Analyzing Labor Market Outcomes for Portland's Young and College-Educated

Greg Schrock and Jason Jurjevich
Nohad A. Toulan School of Urban Studies & Planning
Portland State University
September 2012

Executive Summary

Few segments of the population are more critical to Portland's future economic vitality than the young and college-educated (YCE). In the last several decades the Portland metropolitan region has become a magnet for YCEs nationally, boasting one of the country's highest net migration rates for college-educated individuals under the age of 40, a trend that has continued in good economic times and bad. The infusion of human capital from other regions has undoubtedly been a benefit to Portland, especially given Oregon's historically low levels of investment in higher education.

However, in recent years there has been growing concern about the poor labor market prospects for Portland's YCEs, in particular the problem of underemployment. The television show *Portlandia* has amusingly captured this concern, dubbing Portland "a city where young people go to retire." To the extent that Portland's YCEs face a chronically difficult job market, there is cause for concern that college graduates will stop moving to Portland, or that those who have moved here won't stay.

What are the facts? In this paper we draw upon Census Bureau data from the 2000 Census and more recent American Community Surveys from 2005-07 and 2008-10, comparing the labor market outcomes for Portland's YCE population against those of the other 50 largest metropolitan regions in the United States. Based on our analysis, we find that:

- Portland is gaining ground on other metros in the YCE share of the workforce, but remains in the second-tier among metros in adult educational attainment rates. Portland's progress on this front can be attributed to attraction and retention of YCE migrants, as well as increased college degree production locally.
- Contrary to the "*Portlandia* hypothesis," Portland's YCEs are active in the labor market at rates that are comparable to other major metros.
- However, the unemployment rate for Portland's YCEs has been among the highest of all major metros in each of the three periods studied. In the most recent period, 5.4 percent of YCEs were unemployed, more than a percentage point higher than the average for all large metros.
- Portland's YCEs experience some of the highest rates of part-time employment and self-employment nationally. In the most recent period, nearly one in five YCEs was working part-time, and nearly one in ten was self-employed.

- Portland's YCEs are somewhat more likely to work in "non-college" occupations, especially in service occupations like health care and food service.
- The typical Portland YCE earns less than what she or he would in other major metros, due in part to the prevalence of part-time employment. In the most recent period, the typical YCE earned 84 percent of the average for all large metros.

In short, we find relatively little evidence that young people come to Portland to retire – but they probably are not coming here to get rich either. What is striking about our findings is their consistency. While most of the indicators worsened somewhat during the recent recession, Portland's YCEs have faced a consistently tough job market for at least the past decade, suggesting that this is not simply a short-run phenomenon. But almost equally striking is that the fact these poor labor market outcomes do not seem to be causing a wave of outmigration to other metros– at least not yet.

So is this really a problem? On one hand, one could interpret the findings as compelling evidence of the region's high quality of life and amenity value, for which Portland's YCEs are willing to forego more lucrative opportunities elsewhere. And indeed, the region's high rate of self-employment suggests that Portland's YCEs are highly entrepreneurial – whether by choice or by necessity. But if this trend continues, Portland may become a place that is only accessible to an increasingly self-selected group of individuals who are "willing to pay" for the region's distinctive quality of life – which could cause Portland to become less diverse of a place over time. At the same time, we are concerned that a consistently poor job market for young college graduates will have negative effects on the job prospects for workers without a college degree, and lessen their incentives to pursue a college education at a time when the costs of doing so continue to go up.

The bottom line is that Portland needs to find ways to capitalize better upon its "brain gain." To the extent that Portland has a talent pool that is willing to accept lower wages than other regions like the Bay Area or Seattle, Portland's employers benefit from this, making it an especially attractive place for businesses in search of college-educated workers – something that economic development officials could do more to communicate to prospective employers. But the region's high rate of self-employment suggests that at least some share of Portland's YCEs are attracted to less traditional career paths, and so efforts to promote entrepreneurship – whether in high-tech sectors like software, cultural and "artisan" products like apparel, beer, or arts, or local-serving retail like food carts – would contribute to the region's economic vitality. Creating good work for Portland's entire workforce is absolutely critical, but we hope that this report will call attention to the particular challenges and opportunities facing this important segment of the workforce.

I. Introduction: Brain *Gain* or Brain *Pain*?

In a knowledge-based economy, a place's ability to develop, attract, and retain talented individuals is one of its most important sources of dynamism and resilience. New migrants – whether a PhD scientist, recent college graduate or an immigrant without a formal education – are a generative force in the economic and social health of a local economy, by bringing new ideas that cross-fertilize with a place's existing culture and capabilities. Firms, and even industries, may come and go, but if the people who contribute their talents decide to go as well, then a region's prospects are likely to wane.

Portland has benefited in recent years by the ongoing influx of young, college-educated individuals. Indeed, along with Seattle, it is one of only two of the 50 largest U.S. metros that have consistently been among the top 15 destinations for this population over the past 30 years, in good economic times and bad (see Jurjevich and Schrock 2012, companion report on migration trends). Although migration to Portland is hardly a new phenomenon, it can be argued that the region's efforts in the past three decades to manage its growth in a more sustainable way, and promote a vibrant "urban fabric," have contributed toward its appeal for prospective migrants[1]. The economic importance of in-migration to the Portland region is reinforced by the State of Oregon's historically low levels of public investment in higher education (ranked 41st as of 2007-08), production of college degrees (33rd as of 2007-08) and secondary education completion rates (34th as of 2006-07).[2]

However, in recent years there has been a nagging concern about the labor market prospects for young, college-educated workers in the Portland region. Throughout the country, impacts of the Great Recession have fallen hard on recent college graduates[3], but the concern reflects something more chronic. Media accounts, most notably the television show *Portlandia*, have suggested that young migrants to Portland place relatively low value on work and traditional careers, famously dubbing Portland "a city where young people go to retire."[4] Others have depicted a job market in Portland where it is exceptionally hard for young, college graduates to find steady, well-paid jobs, in part due to an ongoing inflow of workers that drives up the competition for jobs – and drives wages down – and fuels widespread underemployment.[5]

---

[1] See for example, Joe Cortright and Carol Coletta. 2004. "The Young and the Restless: How Portland Competes for Talent." Portland: Impresa Consulting.

[2] Figures are drawn from the National Center for Education Statistics and the National Center for Higher Education Management Systems.

[3] Shierholtz, Heidi, Natalie Sabadish and Hilary Wething, 2012 (May 3), "The Class of 2012: Labor Market for Young Graduates Remains Grim," Economic Policy Institute Briefing Paper, http://www.epi.org/publication/bp340-labor-market-young-graduates/

[4] "Portlandia: Portland Dream of the '90s", http://www.ifc.com/portlandia/videos/portlandia-portland-dream-of-the-90s. For local response to *Portlandia* depiction see Kristy Turnquist, "Have a laugh, it's on us," *The Oregonian*, 2011 (January 20).

[5] Dougherty, Conor, "Youth Magnet Cities Hit Mid-Life Crisis," *Wall Street Journal*, 2009 (May 16), A1. http://online.wsj.com/article/SB124242099361525009.html.

Why does this matter? If labor market outcomes for young, college-educated workers in Portland are persistently worse than for other regions, then we may find that individuals will stop moving here – or that they won't stay. Economic theory suggests that low real wage levels (i.e., adjusted for cost-of-living differences between places) can be sustained where individuals place high value on the amenities – natural, cultural, or otherwise – of living there, a factor that University of Oregon economist Ed Whitelaw and others have called the "second paycheck."[6] But at a certain point individuals may decide that Portland's amenities and quality of life are simply not worth the loss of earnings over time. In particular, low wages may drive out individuals who may place relatively less value on the region's amenities but whose talent may be equally important to the local economy.

At the same time, there is reason to worry that the job market troubles of young, college graduates spill over to workers without a college degree. To the extent that college graduates in Portland are compelled to seek out "non-college" jobs, they add to the competition for those jobs, and potentially limit the career advancement and upward mobility of workers lacking a college degree. Although normally this might provide more incentive for such individuals to pursue higher education, ongoing increases in cost of higher education may offset those incentives greatly. These factors may serve to undermine the State of Oregon's "40-40-20" goal of reaching at least 40 percent of the adult population with a bachelor's degree or more (from approximately 29% in 2009) by 2025.

What are the facts? In this report, we attempt to bring evidence to bear on this issue, and in particular, to answer the following questions:

- How large is the young (under 40-year-old), college-educated (YCE) population in the Portland region relative to other large U.S. metros? How has it changed in recent years?
- What are the labor market outcomes – such as unemployment and labor force participation – for Portland's YCE population? How does Portland compare to other metros? How have these outcomes changed over time.
- To what extent is *underemployment* evident among Portland's YCE population? How does Portland compare to other metros?

[6] Niemi, Ernie, Ed Whitelaw and Andrew Johnston, "The Sky Did Not Fall: The Pacific Northwest's Response to Logging Reductions," April 1999. Portland: ECONorthwest. In their analysis they were referring specifically to the economic (amenity) value of the region's forest lands, but the concept can be extended to place-specific amenities of all types. Indeed, this "hedonic" approach to valuing amenities and quality of life is well-established in the economics literature. See for example, Sherwin Rosen. 1979. "Wage-Based Indexes of Urban Quality of Life," in *Current Issues in Urban Economics*, PM Mieszkowski and MR Straszheim, eds. Baltimore: Johns Hopkins Press.

II. Data and Methods

To answer these questions, we utilize the U.S. Census Bureau's Public Use Microdata Sample (PUMS) for the decennial Population Census and the American Community Survey (ACS), accessed through the Minnesota Population Center's Integrated Public Use Microdata Series[7]. We analyze data for three recent periods – 2000, 2005-07, and 2008-10[8] – which allows us to assess Portland's labor market in quite different economic circumstances – the end of a prolonged expansionary period, the middle of a jobless economic recovery, and the throes of a deep global recession, respectively.

The PUMS datasets offer researchers distinct advantages, but also some limitations. The advantages are quite significant; in particular, it permit us to tabulate Census and ACS data in customized ways, as opposed to the pre-defined formats and categories offered by the Census Bureau through portals like American Factfinder. They also allow users to cross-tabulate various population characteristics collected through the surveys; for example, you can analyze the educational attainment of individuals by user-defined age cohorts, or the occupational composition of workers in different racial/ethnic groups.

However, the fact that the PUMS data are drawn from a survey means that there are limits to how finely one can "slice and dice" the data. Like any survey, PUMS data are subject to sampling error, meaning the imprecision based on the probability that the respondents are representative of the overall population[9]. Although the Census and ACS PUMS files are drawn from large samples, representing five percent of the population in 2000 and three percent for 2005-07 and 2008-10, we are careful to report data only where the sampling errors are at reasonable levels, and in the appendix we present the confidence intervals associated with our various point estimates[10]. This allows us to assess better whether differences between places and over time are real or simply "noise" in the data.

---

[7] Ruggles, Steven, Trent Alexander, Katie Grenadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. 2010. *Integrated Public Use Microdata Series: Version 5.0 [Machine-readable Database]*. Minneapolis: Minnesota Population Center [producer and distributor]. http://usa.ipums.org/usa/.

[8] For 2005-07 and 2008-10 we use the three-year pooled ACS files published by the Census Bureau. The three-year files offer the advantage of larger sample sizes and greater reliability of the estimates, but at a loss of point-in-time precision, since observations are drawn across the entire three-year period.

[9] They are also subject to non-sampling error (i.e., imprecision based on biases and misunderstanding on the part of the survey respondent, survey researcher and the instruments themselves); however, there is relatively little that can be done by PUMS users to address error of this sort.

[10] For discussion of the methods for calculating sampling errors and confidence intervals, see the Census Bureau publication "2008-10 PUMS Accuracy of the Data," available from the IPUMS website at: http://usa.ipums.org/usa/resources/codebooks/AccuracyACS_0810.pdf. We have used the Generalized Standard Error with Design Factor method to calculate standard errors (p. 14-21). In general, we avoid presenting detailed estimates where the relative standard error (standard error divided by the point estimate) exceeds 40 percent.

In this analysis we compare the Portland metropolitan region against 49 other metro regions that, together, comprise the 50 largest metropolitan areas as of 2009 (Table 1). Because the PUMS datasets are built upon geographical units (Public Use Microdata Areas) that vary somewhat from year to year, we have taken steps to make the metropolitan regions both consistent over time and with the current definitions published by the Office of Management and Budget and used by the U.S. Census Bureau and other federal statistical agencies[11].

III. Findings

- **The YCE population is a growing segment of the Portland workforce, and Portland has gained ground on other metros in the past decade.**

  As of 2008-10, the young, college-educated (YCE) population represented nearly one in six (15.6 percent) members of the metro Portland workforce (Table 2)[12]. This figure represents an increase from 2000, when the YCE population comprised 13.5 percent of region's workforce. Over the decade, Portland's rank in this category has steadily increased, from 24th out of 50 metros in 2000 to 15th in the 2008-10 period. Portland was one of only a few regions where the YCE workforce share increased throughout the decade; in most metros, the YCE share dipped slightly in the mid-2000s, likely as a result of increased immigration of less-educated workers from regions like Latin America, a trend that has reversed since the 2008-09 recession.

  Portland's improved standing likely reflects above-average rates of in-migration of YCE individuals to the region, as well as the continued growth of local higher education institutions, especially Portland State University, which increased its production of bachelor's and graduate degrees by nearly 60 percent between 2000 and 2010[13]. Still, Portland is well behind metros like Washington DC, San Jose and Boston, where the YCE population represents over 20 percent of the workforce.

- **College attainment rates among Portland's young adult population are increasing, but the region continues to lag behind other metros.**

  Another way of looking at the scope of the YCE population is by looking at college attainment rates among the 25 to 39 year old population. As of 2008-10, 37 percent of Portland-area individuals in this age cohort had completed a bachelor's degree or more, placing the region 19th out of 50 metros on this measure (Table 2). Although the rate has increased significantly since 2000, when the figure stood at 31 percent, other regions have made similar progress over the past decade and so Portland's relative standing has held fairly steady. Although Portland is

[11] For current and historical metropolitan area definitions, see the U.S. Census Bureau, "Metropolitan and Micropolitan Statistical Areas Main," http://www.census.gov/population/metro/.

[12] Detailed tables with data for all 50 metros, with confidence intervals, can be found in Appendix A.

[13] Oregon University System, "Facts and Figures 2011," http://www.ous.edu/sites/default/files/dept/ir/reports/fb2010/2011_Facts_and_Figures_0.pdf.

now slightly above the rate for the 50 largest metros as a whole (37%), it is well behind metros like Boston (53%) and Washington, DC (50%), and mid-sized metros like Minneapolis-Saint Paul (45%), Denver-Boulder (42%) and Seattle (40%).

Interestingly, Portland's ranking in college attainment among the overall adult (25 and older) population has consistently been slightly higher – 15th in 2000 and 14th in 2008-10 – increasing from 29.4 percent of adults with a bachelor's degree or higher in 2000 to 34.6 percent in 2008-10. One explanation for this can be found in age-articulated migration data, which show that unlike most major metros, Portland has exhibited positive net migration flows among households in their forties and fifties, when most metros tend to see out-migration toward smaller metro and non-metropolitan locations[14].

How much of Portland's improvement in educational attainment can be attributed to increased local degree production, and how much to migration? This is difficult to say. However, recent research has estimated that doubling a metropolitan area's degree production rate yields approximately a three percent increase in local adult higher educational attainment levels[15]. Thus, if PSU's 60 percent increase in degree production were applied to the entire Portland region, it would imply that a little over one-third of the region's attainment increase in the past decade could be attributed to increased local degree production, with the rest attributable to other factors, including migration.

- **Contrary to the "*Portlandia* hypothesis", labor force participation rates among YCEs, and younger workers generally, are similar to other large metros.**

  There is no evidence that Portland's 25 to 39-year-old[16] college-educated workforce, and younger workers in general, are "retired" at higher rates than other metros, as measured in terms of overall labor force participation – i.e., having a job or actively searching for one. As of 2008-10, nearly nine of out of ten (89.5%) Portland YCEs was working or looking for work, which was just above the 50-metro average (89.2%) and 27th highest out of the 50 metros (Table 3). Overall, labor force participation for all 25-39 year olds in Portland, regardless of education level, was 85.0 percent, ranking 20th, while the participation rate among all prime-working age individuals (25-54 years old) was 84.5 percent, which was 17th highest.

  Interestingly, Portland did register a minor decline in YCE labor force participation in the 2005-07 data, when the region had the eighth lowest rate at 86.1 percent. It is unclear, though,

[14] See Jurjevich and Schrock 2012 companion report on migration trends, and David Plane and Jason Jurjevich. 2009. "Ties That No Longer Bind? The Patterns and Repercussions of Age-Articulated Migration," *The Professional Geographer*, 61(1): 4-20.

[15] Abel, Jaison R., and Richard Deitz. 2012. "Do Colleges and Universities Increase Their Region's Human Capital?" *Journal of Economic Geography* 12: 667-691.

[16] From here on we confine the "YCE" population to individuals aged 25 to 39, to reflect more accurately the labor market experiences of workers beyond the college age.

whether this was simply an outlier compared to the other two years, when participation rates were slightly above average. Changes to the U.S. Census Bureau's methodology for measuring labor force participation, which make comparisons of labor force participation rates between 2008-10 and previous years problematic, may be a factor here. Beginning with the 2008 ACS, the U.S. Census Bureau adopted a method that better matches the "official" labor force data collected through the monthly Current Population Survey (CPS)[17]. According to their analysis, the approach used prior to 2008 tended to understate the employment activities – and consequently, labor force participation – of workers, especially those in casual or non-standard work arrangements[18]. Given that Portland's YCE workers show much higher rates of part-time and self-employment, it is plausible that this factor biased the participation rates downward in 2000 and 2005-07.

Still, it is important to point out that the differences in labor force participation rates across metro areas tend to be relatively slight. In 2008-10, the 90% confidence interval for 36 out of the 50 metros overlapped with the confidence interval for the 50 metro average (89.1-89.4%, see Table A4), meaning that there were relatively few metros where YCE labor force participation rates deviated significantly above or below the average[19].

- **Unemployment rates among YCEs in Portland have consistently been among the highest of all large metro regions, but remain well below the rates for workers without a college degree.**

  The data confirm that Portland has a challenging job market for college graduates. In each of the three time periods examined, unemployment rates in metro Portland were among the five highest of the 50 metros analyzed; as of 2008-10, Portland ranked 46th with a YCE unemployment rate of 5.4 percent (Table 4). In each period, Portland's YCE unemployment rate was roughly 20 to 30 percent higher than the average for the 50 largest metros; in 2008-10, this amounted to more than a percentage point above the 50-metro average of 4.2 percent. The only other metros where YCE unemployment rates were among the ten highest for each period were San Francisco-Oakland, Los Angeles, New York City and Riverside-San Bernardino.

[17] The monthly CPS is used to the Bureau of Labor Statistics and state labor market information agencies (e.g., Oregon Employment Department) to calculate national and state/local unemployment rates. While a timelier source than the ACS, the CPS has a much smaller sample size and thus permits much less detailed analysis, both geographically and in terms of specific sub-populations.

[18] Holder, Kelly A. and Dave Raglin. 2007. "Evaluation Report Covering Employment Status," 2006 American Community Survey Content Test Report P.6.a. Washington, DC: US Census Bureau. http://www.census.gov/acs/www/Downloads/methodology/content_test/P6a_Employment_Status.pdf

[19] The 90% confidence interval indicates the range of values that is likely to be the "real" value, given the sampling error. By contrast, in 2008-10 only 19 of 50 metros had YCE unemployment rates where the confidence interval overlapped with the 50-metro confidence interval (4.1-4.3%), suggesting that much more variation exists across metros on unemployment than on labor force participation (see Table A3 in the Appendix).

One explanation for the persistently higher YCE unemployment rate in Portland is the relatively high proportion of new migrants in the workforce, who are more likely to be unemployed while seeking work during a transitional period, a term that labor economists call "frictional" unemployment. Indeed, in 2008-10, new migrants represented nearly 10 percent of Portland's YCE workforce, a rate that was much higher than the 50 metro average (7.0%); and the unemployment rate for those migrants appears to have been higher than the 50-metro average[20], suggesting that more YCE migrants tend to come to Portland without a job in hand – and take longer to find employment once they are here. Still, the unemployment rate for non-migrant YCEs in Portland (i.e., those reporting having lived in the region a year prior) was sixth highest among the 50 metros, at 4.7 percent, which suggests that new migrants are not the only factor behind Portland's elevated YCE unemployment rate.

It is worth noting, however, that unemployment rates for YCEs and college graduates in general remain much lower than rates for workers without a college degree. As of 2008-10, the unemployment rate for workers in Portland without a college degree was 12.3 percent, which was 13th highest among the 50 metros. Portland region's unemployment rate for all workers has consistently stood at, or slightly above, the 50-metro average for each of the three time periods studied.

- **Part-time employment rates among Portland YCEs are consistently among the highest in the country.**

  While Portland's YCE population is active in the labor market at similar rates as other metros, higher percentages of them are working less than full-time hours. In 2008-10, nearly 18 percent of employed YCEs reported working less than 35 hours per week, which is the definition used by the Bureau of Labor Statistics for part-time employment (Table 5). This rate was the highest of the 50 metros in the dataset, and almost seven points higher than the 50-metro average of 11.2 percent. The poor economic climate has caused this rate to increase significantly in Portland and elsewhere, but nonetheless, Portland has been among the top two metros in each of the three periods studied.

  Younger, college-educated workers are not the only groups experiencing elevated rates of part-time employment in Portland; they mirror the trend for the broader Portland workforce. As of 2008-10, nearly one-quarter (24%) of all employed workers reported working part-time hours, which was 10th highest among the 50 metros and well above the 50-metro average of 20.5 percent. In each of the time periods, Portland ranked among the highest metros in part-time employment with rates approximately ten to twenty percent above the average for large metros.

[20] Unfortunately the confidence interval on the point estimate was unacceptably large and therefore we do not report it here.

Unfortunately, we cannot assess here whether or not workers are actively choosing part-time work. Unlike the official unemployment surveys conducted by the U.S. Census Bureau and the Bureau of Labor Statistics, the ACS does not ask individuals whether their part-time employment status is voluntary or not. However, a recent report from the Oregon Employment Department indicated that the state ranked among the top ten in involuntary part-time employment as of 2009[21].

- **Self-employment rates among Portland's YCEs are also among the highest in the country.**

  Young, college-educated workers in Portland are consistently more likely to report themselves as being self-employed than their peers in other metros. In 2008-10 roughly nine percent of YCEs were self-employed, compared to an average of 6.2 percent for the 50 largest metros (Table 6). This rate was the third highest among large metros, behind only Los Angeles (9.2%) and Miami (9.9%). Portland's self-employment rate for YCEs has been among the highest in each of the three time periods studied. By a somewhat broader measure – the share of workers reporting earnings from a business or other form of self-employment, even if they were primarily employed at a "normal" wage and salary job – Portland had the highest share of self-employment in the country at 10.1 percent in 2008-10, compared to a 50-metro average of 7.1 percent. As with part-time employment, rates of self-employment among the broader Portland workforce have consistently been among the highest in the country.[22]

  Several factors may be responsible for Portland's higher self-employment rates. One is the region's high concentration of YCEs in arts and cultural occupations, which generally tend toward higher rates of self-employment. Another is the unemployment rate, which is moderately but significantly correlated with self-employment rates across the metros for most of the years. This could mean that given a weak local job market, jobseekers are forced to take on short-term contracting "gigs," without benefits or longer-term advancement opportunities, as an alternative to a traditional job.

  Are higher rates of self-employment a sign of labor market vitality or weakness? One perspective is that the trend toward self-employment reflects a greater entrepreneurial spirit and vitality here in Portland, as individuals are inclined to strike out on their own and find new avenues to express their talents and interests. Economists like Ed Glaeser have found that metros with higher self-employment rates and smaller establishments experience faster rates

[21] Nick Beleiciks, Jessica Nelson and Graham Slater, "Why Oregon Trails the Nation: An Analysis of Per Capita Personal Income," Oregon Employment Department Workforce and Economic Research Division, November 2010, http://www.qualityinfo.org/pubs/pcpi/pcpi.pdf

[22] It is worth noting that the Census Bureau's method for defining self-employment only applies to the individual's primary job, and does not capture individuals who may engage in freelance work as a supplement to their primary employment. The Census Bureau's Nonemployer Statistics data program, which draws data from IRS Schedule C filings, would allow us to develop a broader measure of self-employment.

of growth[23]. On the other hand, self-employment is often accompanied by a more vulnerable, tenuous financial existence for workers, for example in terms of access to affordable health insurance or the ability to obtain a home mortgage.

- **Rates of "occupational underemployment" – college-educated workers in occupations requiring less than a bachelor's degree – are somewhat higher in Portland than average.**

  One of the most frequent anecdotes about Portland's labor market is that disproportionate shares of college graduates are employed in occupations – from coffee shop baristas to retail clerks – that are not commensurate with their educational credentials. Our analysis suggests that Portland's YCEs are indeed employed in "non-college" occupations at somewhat higher rates than the average for large metros, but on this metric Portland is less exceptional than what is commonly portrayed.

  To complete this analysis, we looked at the detailed occupations that individuals reported as their primary job, and categorized those occupations based on the BLS' classification for "typical education needed for entry" into the each occupation[24]. Our analysis found that in 2008-10, approximately 35 percent of Portland YCEs were employed in occupations requiring less than a bachelor's degree (Table 7). This was the 8th highest rate of the 50 metros studied, and nearly four points above the 50-metro average of 31.3 percent. The highest rates of occupational underemployment among YCEs were found in tourism-oriented cities like Las Vegas (45%) and Miami (39%), and the lowest rates were in San Jose (21%) and Washington, DC (26%).

  "Occupationally underemployed" YCEs in Portland are distributed fairly evenly across broad occupational categories. Nearly one-fourth were employed in office and administrative occupations such as administrative assistants or customer service representatives (24%), with similar shares in sales occupations, such as retail clerks or supervisors (23%); professional and para-professional occupations, such as real estate property managers, computer support technicians and health technicians (22%); and service occupations, such as home care aides and food service workers (21%) (Table 8). A somewhat smaller share was in "blue collar" fields (11%) like construction, manufacturing and transportation. This breakdown roughly mirrors the distribution of occupationally underemployed YCEs elsewhere, with the exception of service jobs, where Portland YCEs are somewhat more highly concentrated.

---

[23] Glaeser, Edward L. 2007 (October). "Entrepreneurship and the City." NBER Working Paper 13551. Cambridge, MA: National Bureau of Economic Research.

[24] Bureau of Labor Statistics, Occupational Projections program, "Education and training assignments," http://bls.gov/emp/ep_table_112.htm. After our initial analysis, we reclassified five detailed occupations – General and Operations Managers, Miscellaneous Managers, Preschool and Kindergarten Teachers, Registered Nurses, and Wholesale and Manufacturing Sales Representatives – that BLS considers "non-college" occupations but have relatively high wages and significant proportions of college-educated workers nationally. We felt that these occupations, which employ more than ten percent of YCEs in some metros, were not appropriate to combine with other non-college occupations.

Occupational underemployment among YCEs in Portland has held steady at about 35 percent across all three periods; in each period, it was in the top ten metros on this measure. For large metros as a whole, the rate actually dipped slightly from 31.8 percent in 2005-07 to 31.3 percent in 2008-10. This likely reflects the overall decline in real estate and construction-related jobs during the recession; these were among the most commonly held "non-college" jobs by YCEs.

The finding that more than three out of 10 college graduates of all ages working in large U.S. metros is in a "non-college" job is striking unto itself, but not necessarily a cause for alarm. Research has shown that college-educated workers earn significantly more than their non-college-educated peers in such jobs[25], suggesting that their educational background makes them relatively more productive workers, allows them preferential access to better-paid jobs and employers within the occupation, and may cause long-run shifts in the skills and educational requirements for those jobs. However, we do not explore this issue here.

- **YCEs earn less in Portland than in other major metros, partly due to the increased prevalence of part-time employment.**

Given the evidence of a weak labor market for young college graduates in Portland, it should not be surprising that YCEs earn less here relative to other major metros. As of 2008-10, YCEs had a median earned income level of $42,659, which is approximately 84 percent of the 50-metro average and in the bottom tier among the 50 metros (Table 9). The earnings gap has grown slightly since 2000 and 2005-07, when Portland YCEs earned 89 and 88 cents on the dollar relative to the 50-metro average, respectively. In real, inflation-adjusted terms, median earnings for YCEs have declined since 2000, by 3.6 percent for the 50 largest metros and 6.9 percent in Portland.

The earnings picture is similar, but only slightly better for college graduates as a whole. Median earnings for college graduates of all ages in Portland stood at 90 percent of the large metro average in 2008-10, ranking 38th out of the 50 metros. As with YCEs, the relative earnings level of college graduates in Portland has deteriorated somewhat since 2000, when college-educated workers earned 92 percent of the large metro average. And also like YCEs, real earnings have declined since 2000, by 2.9 percent for the 50 largest metros and 4.5 percent in Portland.

Of course, when citing figures on relative earnings, it is important to consider differences in cost of living between metros. Not surprisingly, the metros with the highest median earnings for YCEs – San Jose, Washington DC, San Francisco-Oakland and New York City (Table A14) – are also ones where housing costs are highest. But even when housing cost differences are taken

[25] Tyler, John, Richard J. Murnane, and Frank Levy. 1995 (December). "Are more college graduates really taking 'high school' jobs?" *Monthly Labor Review*, pp. 18-27. However, their analysis also showed that such "occupationally underemployed" college graduates earned significantly less than their fellow college graduates working in "college" jobs.

into consideration, Portland YCEs earn less than in other metros. Consider the difference between Portland and Seattle. In the Seattle region, the typical YCE earned approximately $8,200 (or 19%) more per year than in Portland as of 2008-10. However, according to the US Department of Housing and Development, median rents for one-bedroom apartments in Seattle were $141 more per month in 2010 ($897 versus $756), or $1,692 annually[26]. Assuming that housing costs represent the primary driver of cost-of-living differences between metros[27], the typical Portland YCE earns $6,500 less, in real terms, than he or she would in Seattle.

Is that person worse off than in Seattle? Not necessarily. In economic terms, if the person values Portland's quality of life more – at least $6,500 more, to be precise – than living in Seattle, then that person would be considered better off. While a highly simplified example, it illustrates the tradeoffs that individuals make between economic opportunity and place-specific amenities in deciding whether and where to migrate[28]. The fact that outmigration among Portland YCEs has remained relatively low (see Jurjevich and Schrock 2012) strongly suggests that many do indeed have such a "revealed preference" for the region's quality of life.

A major factor contributing to the earnings gap for Portland's YCEs is the higher prevalence of part-time employment. Indeed, if only YCEs reporting having worked full-time, full-year (50 or more weeks) are counted, median earnings levels increase to $53,532 as of 2008-10, which is 92 percent of the 50-metro average of $57,935, and 22nd highest among the metros (Table 10). However, fewer than two out of three (66%) Portland YCEs reported working full-time, full-year, compared to a 50-metro average of 75 percent. In other words, the lower earnings are a function of both lower wage and salary levels experienced by full-time workers, but also the fact that a smaller proportion of the workforce earns a full-time income[29].

---

[26] US Dept of Housing and Urban Development, 50th Percentile Rent Estimates for 2010, http://www.huduser.org/portal/datasets/50per.html. Data for Seattle are based on the weighted average of the Seattle-Bellevue and Tacoma sub-areas, which are combined for the purpose of our labor market analysis. Because of the prevalence of renting among younger households, differences in rent levels are likely a better measure of cost differences than home prices. If housing represents approximately 30 percent of household expenditures (a decent rule-of-thumb estimate), this would suggest that overall cost of living in Seattle is approximately 5 to 6% higher than in Portland.

[27] Other types of costs may vary between metros, such as transportation costs – both in terms of direct outlays (e.g., gas) and in "time costs" of congestion. Joe Cortright has estimated that the Portland region's lower levels of congestion and vehicle miles traveled allow residents to save about $1.1 billion in out-of-pocket expenses per year relative to national averages, which works out to about $500-$600 per person annually. See Cortright, "The Green Dividend," 2007 (June), http://www.impresaconsulting.com/node/42.

[28] There are, of course, much more complicated ways of computing this. For example, economists would consider moving costs as offsetting part of the earnings difference, and consider (discounted) future earnings, not just the current time period.

[29] Of course, wage and salary income is just one component of compensation, along with non-wage benefits such as health insurance. Although data on health insurance coverage is now available in the ACS, we do not examine whether Portland YCEs are more or less likely to have employer-sponsored health insurance.

Interestingly, Portland's YCEs fare differentially depending on their occupation. Science and technology workers – including computer and information technology, architecture and engineering, and life, physical and social scientists – working full-time, full-year reported earnings that were actually 1.3 percent higher than the 50-metro average as of 2008-10 (Table 10). By contrast, workers in all other occupational groups – from managers to financial workers to educators – stood at 91 percent of the 50-metro average. The higher relative earnings levels for science and technology workers likely reflects the influence of companies like Intel that recruit nationally and globally for highly specialized positions.

Taken together, the evidence suggests that most young, college-educated workers in Portland forego a modest but significant amount of earnings relative to other major metros. This is a result of lower wage and salary levels, a lower likelihood of working full-time hours and likely also the greater tendency to work in "non-college" jobs. The earnings gap is evident across all three time periods, but grew slightly during the recession. However, in some occupations – notably high-tech occupations – Portland YCEs kept pace in earnings with their peers in other large metros. For others, however, the gap in real earnings can be interpreted as a measure of Portland's amenity value or "second paycheck" to those individuals[30].

Of course, the finding that Portlanders earn less is not necessarily a new one – the question of why income levels lag in Oregon and the Portland metro has been analyzed and debated at length within the economic development community in recent years[31]. However, by focusing on the earnings outcomes of young, college-educated workers, we are bringing attention to a population that is both instrumental to the region's economic future, and most likely to be responsive to differences in economic opportunity across places.

IV. Conclusion

Is Portland really the place where young people come to retire? Our analysis suggests that young people do not come here to retire, but they probably do not come here to get rich either. On a host of measures, young, college-educated workers fare worse in Portland's labor market than their peers in other major metropolitan regions. Although YCEs are active in the labor market at roughly similar rates, they are more likely to be unemployed or marginally employed, and when they do find work, they are more likely to be in occupations that do not match their educational credentials, and earn substantially less than in other places. While most of these trends worsened during the recession, their consistency over the three periods studied is quite striking. Perhaps even more

[30] It should be noted that the data presented here are descriptive in nature, and do not fully control for all the potential factors – from demographic characteristics like age, gender, race and educational attainment (e.g., having a graduate degree), to occupation and hours worked, to employer and industry characteristics, to place-specific characteristics like local cost of living – that would potentially explain individual-level differences in earnings across metro regions. Such a hedonic, "all things equal" study would establish more definitively whether Portland YCEs, controlling for all other factors, do indeed earn less than their counterparts elsewhere.

[31] See ECONorthwest, 2010, "A Check-Up on the Portland Region's Economic Health" (Report to Portland Business Alliance and others); Beleiciks, Nelson and Slater, 2010, "Why Oregon Trails the Nation"; and Joe Cortright and others, "How to Care for Your Economy," *The Oregonian*, 16 January 2011.

striking, however, is the fact that these poor labor market outcomes have not been accompanied by increased out-migration rates to more prosperous locales – at least not yet. Instead, Portland's YCEs appear to be staying put, even if it means a more difficult time in the job market.

So is this really a problem? On one hand, one could interpret the findings as compelling evidence of the region's high quality of life and amenity value, for which Portland's YCEs are willing to forego more lucrative opportunities elsewhere. And indeed, the region's high rate of self-employment suggests that Portland's YCEs are highly entrepreneurial – whether by choice or by necessity. But if this trend continues, Portland may become a place that is only accessible to an increasingly self-selected group of individuals who, in economic terms, are "willing to pay" for the region's distinctive quality of life. While this has arguably reinforced Portland's distinctive character and culture – a positive trend in many respects – there is reason to worry that this could actually cause Portland to become less diverse of a place over time. Portland needs to be a place that attracts and nurtures talented individuals of all types and inclinations – including those motivated by the prospect of wealth and financial success.

Although we do not directly analyze this issue in this report, we are concerned that a consistently poor job market for young college graduates has negative effects on workers without a college degree, in the form of competition from underemployed, college-educated workers for good "non-college" jobs with benefits and upward mobility. But we suspect that the poor labor market outcomes also lessen the incentives for them to pursue a college degree, especially at a time when the costs of higher education continue to go up.

Despite the difficult job market for college-educated workers, one should not conclude Portland has an *oversupply* of college-educated workers, and therefore should not continue its efforts to invest in education at all levels, from early childhood to higher education. Indeed, the Portland region continues to lag behind many of its peers in high school completion rates and college attainment levels among the adult population, and so efforts like the Cradle to Career initiative are important for raising achievement levels. Strengthening educational attainment among native Portlanders, and Oregonians more broadly, would limit the region's dependence on "imported" human capital, and bolster its economic capacity.

The bottom line is that the Portland region needs to find ways to capitalize better upon its "brain gain." So what can be done to improve outcomes for young, college-educated workers in Portland? To the extent that Portland has a talent pool that is willing to accept lower wages than other regions like the Bay Area or Seattle, Portland's employers benefit from this, making it an especially attractive place for businesses in search of college-educated workers. This is something that economic development officials could do more to communicate to prospective employers. Indeed, the fact that Portland has been among the top 10 among the 26 largest U.S. metros in non-farm job growth in both 2011 and 2012[32] suggests that the region may be experiencing a rebound, one to which its skilled workforce may be contributing.

[32] "Job Growth USA" rankings, W.P. Carey School of Business, Arizona State University: http://wpcarey.asu.edu/bluechip/jobgrowth/. Data for July 2011-2012, and July 2011-2012.

But the region's high rate of self-employment suggests that at least some of Portland's younger workers are attracted to less traditional career paths. Efforts to promote entrepreneurship – whether in high-tech sectors like software, cultural and "artisan" products like apparel, beer, or arts, or local-serving retail like food carts – would offer a pathway for those with "DIY" inclinations to create new work, and add to the region's economic vitality. Traditionally, this has involved expanding access to working capital, affordable workspace and technical assistance through "incubators"; however, other strategies could include helping freelance workers access affordable health insurance and housing to reduce the personal financial risk that budding entrepreneurs face. Whether those individuals aspire to build the next Nike, Widmer Brothers or New Seasons Market, or instead remain small-scale, "lifestyle" entrepreneurs, Portland's economic development community should value their ambition equally.

In order for the Portland region to sustain its quality of life in the years to come, it needs to ensure that all of its residents have opportunities to find good work and build meaningful careers. But few groups are as instrumental to the region's near-term economic success as its young, college-educated workforce. Hopefully this report will stimulate discussion about the steps that can be taken to support their place in the Portland labor market and ensure that the region reaps the benefits of the talent that it continues to attract.

Tables

Table 1

50 Largest Metropolitan Regions by Population, 2009

Metropolitan Area	Population
New York-Northern New Jersey-Long Island, NY-NJ-PA	19,069,796
Los Angeles-Long Beach-Santa Ana, CA	12,874,797
Chicago-Joliet-Naperville, IL-IN-WI	9,580,567
Dallas-Fort Worth-Arlington, TX	6,447,615
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	5,968,252
Houston-Sugar Land-Baytown, TX	5,867,489
Miami-Fort Lauderdale-Pompano Beach, FL	5,547,051
Washington-Arlington-Alexandria, DC-VA-MD-WV	5,476,241
Atlanta-Sandy Springs-Marietta, GA	5,475,213
Boston-Cambridge-Quincy, MA-NH	4,588,680
Detroit-Warren-Livonia, MI	4,403,437
Phoenix-Mesa-Glendale, AZ	4,364,094
San Francisco-Oakland-Fremont, CA	4,317,853
Riverside-San Bernardino-Ontario, CA	4,143,113
Seattle-Tacoma-Bellevue, WA	3,407,848
Minneapolis-St. Paul-Bloomington, MN-WI	3,269,814
San Diego-Carlsbad-San Marcos, CA	3,053,793
Denver-Aurora-Broomfield-Boulder, CO*	2,855,677
St. Louis, MO-IL	2,828,990
Tampa-St. Petersburg-Clearwater, FL	2,747,272
Baltimore-Towson, MD	2,690,886
Pittsburgh, PA	2,354,957
Portland-Vancouver-Hillsboro, OR-WA	2,241,841
Cincinnati-Middletown, OH-KY-IN	2,171,896
Sacramento-Arden-Arcade-Roseville, CA	2,127,355
Cleveland-Elyria-Mentor, OH	2,091,286
Orlando-Kissimmee-Sanford, FL	2,082,421
San Antonio-New Braunfels, TX	2,072,128
Kansas City, MO-KS	2,067,585
Las Vegas-Paradise, NV	1,902,834
San Jose-Sunnyvale-Santa Clara, CA	1,839,700
Columbus, OH	1,801,848
Charlotte-Gastonia-Rock Hill, NC-SC	1,745,524
Indianapolis-Carmel, IN	1,743,658
Austin-Round Rock-San Marcos, TX	1,705,075
Virginia Beach-Norfolk-Newport News, VA-NC	1,674,498
Raleigh-Cary-Durham-Chapel Hill, NC*	1,627,055
Providence-New Bedford-Fall River, RI-MA	1,600,642
Nashville-Davidson-Murfreesboro-Franklin, TN	1,582,264
Milwaukee-Waukesha-West Allis, WI	1,559,667
Jacksonville, FL	1,328,144
Memphis, TN-MS-AR	1,304,926
Louisville-Jefferson County, KY-IN	1,258,577
Richmond, VA	1,238,187
Oklahoma City, OK	1,227,278
Hartford-West Hartford-East Hartford, CT	1,195,998
New Orleans-Metairie-Kenner, LA	1,189,981
Birmingham-Hoover, AL	1,131,070
Salt Lake City, UT	1,130,293
Buffalo-Niagara Falls, NY	1,123,804

Source: Bureau of Economic Analysis, based on Census Bureau annual population estimates.
Note: All metro areas based on Metropolitan Statistical Area definition, except Raleigh-Durham and Denver-Boulder. In both cases the metros were combined for the purpose of consistency over time.

Table 2

Young, College-Educated Workforce and Population Share, Selected Metros, 2000-2008/10

	YCE Workforce Share						College Attainment, 25-39 Population					
	2000	**Rank**	**2005-07**	**Rank**	**2008-10**	**Rank**	**2000**	**Rank**	**2005-07**	**Rank**	**2008-10**	**Rank**
Atlanta	16.7%	10	15.3%	11	15.7%	13	34.4%	11	35.7%	19	37.5%	18
Austin	18.4%	6	17.4%	6	18.2%	6	37.8%	8	38.9%	11	39.5%	13
Charlotte	14.1%	20	14.1%	18	14.4%	20	30.1%	25	33.8%	23	35.3%	25
Denver	17.3%	7	16.0%	9	17.5%	9	38.8%	7	39.2%	10	42.2%	8
Mpls-St Paul	17.0%	8	16.2%	8	17.6%	8	39.1%	6	42.0%	6	44.9%	6
Phoenix	11.8%	35	11.5%	36	11.7%	37	25.1%	40	25.6%	46	27.1%	46
Portland	**13.5%**	**24**	**13.8%**	**19**	**15.6%**	**15**	**31.2%**	**22**	**34.1%**	**22**	**37.4%**	**19**
Raleigh-Durham	20.8%	2	19.8%	1	19.7%	5	43.6%	4	45.8%	5	46.7%	5
Salt Lake City	10.8%	42	11.2%	38	12.8%	32	25.4%	38	27.2%	41	29.6%	39
San Diego	13.8%	23	14.4%	16	15.2%	17	29.3%	29	33.7%	24	35.6%	24
SF-Oakland	20.2%	4	18.8%	5	19.7%	4	43.3%	5	47.2%	3	48.6%	4
Seattle	15.9%	11	15.3%	12	16.4%	12	35.6%	10	38.7%	12	40.0%	12
50 Largest Metros	**14.5%**		**14.1%**		**14.8%**		**31.7%**		**34.6%**		**36.6%**	

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS.

Table 3

Labor Force Participation, Young College-Educated Workers and All Adults 25-54, Selected Metros, 2000-2008/10

	2000				**2005/07**				**2008/10***			
	YCE	Rank	25-54	Rank	YCE	Rank	25-54	Rank	YCE	Rank	25-54	Rank
Atlanta	87.5%	24	81.5%	23	87.9%	19	83.2%	14	89.5%	26	85.1%	10
Austin	88.1%	17	82.0%	19	86.7%	33	83.5%	12	89.7%	18	85.0%	11
Charlotte	88.9%	4	82.9%	10	88.6%	9	83.8%	9	90.6%	9	85.2%	8
Denver	88.8%	6	83.8%	5	88.2%	12	84.4%	4	90.2%	14	86.0%	4
Mpls-St Paul	90.1%	1	87.3%	1	89.5%	3	86.7%	1	91.9%	1	88.4%	1
Phoenix	86.8%	37	78.6%	41	86.5%	38	80.2%	43	88.8%	37	80.9%	49
Portland	**87.3%**	**27**	**83.2%**	**9**	**86.1%**	**43**	**82.6%**	**22**	**89.5%**	**27**	**84.5%**	**17**
Raleigh-Durham	87.5%	25	83.7%	7	86.8%	32	83.3%	13	88.5%	42	84.9%	12
Salt Lake City	86.2%	43	82.1%	16	84.6%	48	82.6%	21	85.2%	50	83.2%	33
San Diego	86.9%	34	79.1%	38	86.0%	44	80.8%	38	88.2%	44	81.9%	42
SF-Oakland	86.8%	35	79.8%	33	86.9%	29	81.9%	31	88.8%	36	84.3%	20
Seattle	87.7%	20	82.7%	13	86.8%	31	82.9%	16	88.7%	39	84.2%	21
50 Largest Metros	**86.8%**		**79.6%**		**87.0%**		**81.8%**		**89.2%**		**83.6%**	

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS.
* Note: Changes to the Census Bureau's methodology for calculating labor force participation make comparisons of participation rates before and after 2008 problematic.

Table 4

Unemployment Rate, Young College-Educated Workers and Overall, Selected Metros, 2000-2008/10

	2000				2005/07				2008/10*			
	YCE	Rank	Metro	Rank	YCE	Rank	Metro	Rank	YCE	Rank	Metro	Rank
Atlanta	2.0%	33	4.9%	23	3.2%	40	7.1%	42	4.8%	42	10.4%	41
Austin	1.5%	17	4.0%	4	2.6%	18	5.9%	20	3.5%	25	7.2%	7
Charlotte	1.5%	11	5.1%	26	3.2%	39	7.0%	40	4.3%	36	10.5%	42
Denver	1.6%	19	4.0%	5	2.9%	29	5.9%	16	3.6%	27	7.7%	14
Mpls-St Paul	1.4%	9	3.5%	1	1.8%	2	5.6%	7	3.6%	26	7.2%	5
Phoenix	1.9%	30	4.9%	22	2.5%	16	5.1%	4	3.5%	24	8.9%	27
Portland	**2.6%**	**46**	**5.7%**	**35**	**3.6%**	**46**	**6.5%**	**32**	**5.4%**	**46**	**9.9%**	**38**
Raleigh-Durham	1.5%	13	4.2%	7	2.7%	22	5.4%	6	3.5%	23	8.0%	18
Salt Lake City	1.6%	18	4.7%	19	1.7%	1	4.4%	1	3.0%	10	7.2%	4
San Diego	2.3%	43	5.8%	37	2.8%	28	5.4%	5	5.0%	45	9.0%	28
SF-Oakland	2.2%	41	4.7%	18	3.5%	43	6.2%	24	4.9%	43	8.9%	26
Seattle	2.3%	44	4.9%	21	3.1%	38	5.7%	8	3.9%	33	7.7%	12
50 Largest Metros	**2.0%**		**5.6%**		**3.0%**		**6.5%**		**4.2%**		**9.0%**	

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS.
* Note: Changes to the Census Bureau's methodology for calculating labor force participation make comparisons of unemployment rates before and after 2008 problematic.

Table 5

Part-Time Employment Rates, YCE and All Employed Workers, Selected Metros, 2000-2008/10

	2000				2005/07				2008/10			
	YCE	Rank	All Employed	Rank	YCE	Rank	All Employed	Rank	YCE	Rank	All Employed	Rank
Atlanta	8.3%	42	13.6%	47	9.1%	43	16.3%	45	13.9%	33	18.4%	44
Austin	10.9%	18	16.2%	31	11.1%	27	17.9%	31	13.4%	39	18.5%	43
Charlotte	8.2%	43	14.0%	46	9.3%	42	17.8%	34	14.8%	25	20.1%	29
Denver	10.7%	22	16.9%	26	13.1%	8	19.5%	20	15.5%	18	20.9%	23
Mpls-St Paul	11.9%	11	20.6%	4	12.0%	16	22.4%	8	17.1%	12	24.3%	5
Phoenix	9.4%	34	15.8%	36	10.5%	34	16.4%	44	13.8%	36	19.4%	34
Portland	**14.2%**	**2**	**19.1%**	**11**	**15.3%**	**2**	**21.9%**	**11**	**20.2%**	**1**	**23.9%**	**10**
Raleigh-Durham	9.8%	33	15.9%	34	12.0%	15	18.4%	28	14.2%	31	20.1%	28
Salt Lake City	13.6%	3	21.2%	3	16.6%	1	22.6%	5	18.1%	7	23.3%	12
San Diego	10.9%	19	18.7%	14	11.7%	20	19.4%	21	16.0%	14	21.8%	18
SF-Oakland	10.7%	21	18.0%	20	11.8%	18	20.5%	15	17.4%	9	22.8%	13
Seattle	12.1%	9	18.6%	15	12.9%	10	20.1%	18	16.3%	13	21.4%	20
50 Largest Metros	**10.2%**		**17.1%**		**10.9%**		**18.7%**		**14.8%**		**20.5%**	

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS. Part-time employment defined as working less than 35 hours per work.

Table 6

Self-Employment Rates, Young College-Educated and All Employed Workers, Selected Metros, 2000-2008/10

	2000				2005/07				2008/10			
	YCE	Rank	All Employed	Rank	YCE	Rank	All Employed	Rank	YCE	Rank	All Employed	Rank
Atlanta	6.9%	20	9.5%	17	7.9%	15	11.1%	9	6.9%	13	10.2%	14
Austin	7.3%	14	9.8%	12	8.9%	3	11.1%	8	7.9%	5	10.3%	11
Charlotte	6.3%	25	8.6%	25	7.9%	14	9.5%	26	6.3%	20	9.6%	19
Denver	8.1%	4	10.6%	6	8.6%	5	11.8%	5	7.8%	6	11.3%	5
Mpls-St Paul	5.9%	33	8.6%	26	5.2%	46	9.6%	24	5.6%	30	8.8%	26
Phoenix	8.3%	3	9.5%	15	8.2%	11	9.9%	19	7.6%	7	9.5%	20
Portland	**7.9%**	**6**	**11.0%**	**4**	**8.9%**	**4**	**12.1%**	**4**	**8.9%**	**3**	**11.6%**	**4**
Raleigh-Durham	5.8%	35	8.8%	22	6.6%	26	9.8%	21	5.2%	32	8.8%	27
Salt Lake City	7.2%	15	8.6%	27	8.2%	10	8.9%	33	6.8%	15	8.3%	34
San Diego	8.0%	5	10.7%	5	8.0%	13	11.8%	6	7.5%	8	11.0%	6
SF-Oakland	7.5%	10	11.3%	3	8.3%	8	12.7%	3	7.0%	10	12.1%	3
Seattle	6.8%	23	9.5%	14	6.7%	24	10.1%	18	6.2%	22	10.0%	15
50 Largest Metros	**6.8%**		**9.2%**		**7.1%**		**10.1%**		**6.2%**		**9.6%**	

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS.

Table 7

Occupational Underemployment (College Workers in non-College Occupations), Young College-Educated and All College-Educated, Selected Metros, 2000-2008/10

	2000				2005/07				2008/10			
	YCE	Rank	All BA+	Rank	YCE	Rank	All BA+	Rank	YCE	Rank	All BA+	Rank
Atlanta	33.2%	13	32.8%	13	35.8%	7	35.3%	6	33.2%	19	33.2%	18
Austin	28.5%	41	29.0%	39	31.1%	31	31.0%	37	30.8%	31	30.6%	41
Charlotte	34.8%	7	33.3%	7	35.8%	6	34.9%	9	32.3%	25	33.7%	12
Denver	33.7%	9	32.9%	11	34.9%	11	34.6%	10	33.2%	18	33.7%	11
Mpls-St Paul	31.7%	27	30.9%	29	31.6%	29	32.4%	25	30.3%	38	31.4%	33
Phoenix	33.1%	14	33.2%	8	35.0%	9	34.0%	15	31.6%	27	32.6%	24
Portland	**34.8%**	**6**	**34.0%**	**5**	**35.0%**	**10**	**34.1%**	**13**	**34.8%**	**8**	**33.6%**	**14**
Raleigh-Durham	28.4%	43	28.9%	40	30.2%	38	30.1%	43	28.7%	44	30.0%	44
Salt Lake City	35.3%	3	33.0%	10	34.5%	13	33.6%	17	32.5%	24	32.4%	27
San Diego	32.5%	20	32.8%	12	31.7%	28	32.4%	24	33.7%	15	32.7%	21
SF-Oakland	28.9%	38	30.3%	32	30.7%	34	31.7%	34	29.5%	42	30.9%	39
Seattle	32.5%	19	32.5%	14	30.5%	35	31.4%	36	30.8%	33	32.0%	30
50 Largest Metros	**30.3%**		**30.3%**		**31.8%**		**32.2%**		**31.3%**		**32.0%**	

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS.

Table 8

Occupationally Underemployed Young College Educated Workers by Occupational Group, Portland and 50 Largest Metros, 2008/10

	% of Occupationally Underemployed YCEs		% of YCE Workforce	
Occupational group (SOC major groups)	**Portland**	**50 Largest Metros**	**Portland**	**50 Largest Metros**
Office and administrative occupations (SOC 43)	24%	25%	8.2%	8.0%
Sales occupations (SOC 41)	23%	23%	7.9%	7.3%
Professional and para-professional occupations (SOC 11-29)	22%	22%	7.6%	6.8%
Service occupations (SOC 31-39)	21%	19%	7.3%	5.8%
"Blue collar" occupations (SOC 45-53)	11%	11%	3.8%	3.4%
Total, all occupations	**100%**	**100%**	**34.8%**	**31.3%**

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS. For definitions of the SOC groups, see the BLS website at: http://www.bls.gov/soc/major_groups.htm.

Table 9

Median Earned Income (in 2010 $), Young College-Educated and All College-Educated Workers, Selected Metros, 1999-2008/10

	1999				2005/07				2008/10			
	YCE	**Rank**	**All College Educated**	**Rank**	**YCE**	**Rank**	**All College Educated**	**Rank**	**YCE**	**Rank**	**All College Educated**	**Rank**
Atlanta	$52,330	11	$56,199	15	$48,702	19	$54,084	18	$49,600	18	$52,667	19
Austin	$47,674	29	$51,127	34	$46,985	28	$50,262	31	$45,599	30	$49,961	32
Charlotte	$48,450	24	$52,238	30	$46,876	29	$50,200	34	$45,815	26	$49,874	34
Denver	$49,025	23	$52,398	21	$47,368	25	$52,599	20	$48,794	20	$50,821	21
Mpls-St Paul	$49,831	17	$52,458	20	$49,032	18	$53,822	19	$49,111	19	$52,822	18
Phoenix	$49,126	22	$52,317	28	$47,605	23	$52,593	22	$46,712	24	$50,680	24
Portland	**$45,806**	**39**	**$50,929**	**37**	**$44,695**	**37**	**$50,245**	**32**	**$42,659**	**42**	**$48,652**	**38**
Raleigh-Durham	$47,245	30	$51,883	31	$44,713	36	$50,819	29	$45,005	31	$49,912	33
Salt Lake City	$45,336	43	$51,017	35	$40,219	49	$46,925	45	$40,673	47	$48,281	39
San Diego	$49,657	19	$52,466	19	$52,523	10	$55,871	12	$50,636	11	$55,854	10
SF-Oakland	$60,150	2	$65,246	3	$61,026	2	$64,921	3	$60,453	3	$64,004	3
Seattle	$49,644	20	$52,370	24	$52,324	11	$55,875	11	$50,820	8	$55,824	12
50 Largest Metros	**$52,350**		**$55,613**		**$50,502**		**$54,711**		**$50,485**		**$53,994**	
Portland % of 50 Metro Ave	**88%**		**92%**		**89%**		**92%**		**84%**		**90%**	

Source: Authors' analysis of Census Bureau PUMS files for Census 2000, ACS 2005-07 and 2008-10, accessed via IPUMS. Data are for all workers with earnings during the reference period. Earnings levels for 1999 and 2005-07 adjusted to 2010 levels using the CPI-U.

Table 10

Median Earned Income, Young College-Educated Workers by Subgroup, Portland metro, 2008-10

	Portland	50 Largest Metros	Portland % of 50 Metro Average	Rank
All YCEs with earnings	$42,659	$50,485	84.5%	42
YCEs working Full-Time, Full-Year	$53,532	$57,935	92.4%	22
Science and technology occupations	$71,881	$70,929	101.3%	10
All other occupations	$50,272	$54,992	91.4%	27

Source: Authors' analysis of Census Bureau PUMS files for ACS 2008-10, accessed via IPUMS. Full-time, full-year defined as usually working more than 35 hours per week, and working at least 50 weeks in the preceding year. Science and technology occupations defined as the following SOC groups: Computer and Math (SOC 15), Architecture and Engineering (17), and Life, Physical and Social Science (19).