The role of education in job seekers’ employment histories

February 2018
Traditional labor market theories assume that higher levels of education and greater work experience produce better employment outcomes and reduce involuntary unemployment spells. The employment dynamics after the Great Recession somewhat challenge these assumptions. Job and wage polarization have continued to create a divide between high and low-skill occupations, and labor force participation among those with more education has dropped.

This report looks at the influence of education on the employment histories of local job seekers. It examines to what extent education increases the length of work experience and reduces involuntary unemployment spells. The data is based on the work histories and resumes of nearly 90,000 job seekers in Allegheny County and the city of Pittsburgh over a two-year period.

Most local job seekers are in the prime of their careers and have less than a bachelor’s degree

Most job seekers that use career services in Pittsburgh and Allegheny County are prime-age job seekers (between ages 25 and 54), 25% are older job seekers (55 and older), and a small portion are young job seekers (ages 24 and younger). More than 50% of young job seekers have a high school diploma or less and just over 40% of prime-age and older job seekers have a high school diploma or less. The levels of educational attainment are constant among prime-age workers and older workers, indicating that education does not necessarily continue to increase with age. For both prime-age and older workers, about 25% of job seekers have a bachelor’s degree or higher, while nearly one-third have an associate’s degree or some post-secondary education.

Local job seekers with higher levels of education report more jobs and experience

In the job search process, greater work experience is typically beneficial in finding and securing employment. One can think of work experience in terms of years of experience (total years a person has worked) and in terms of number of jobs (level of exposure to various positions and organizations). Using these theories, the following analysis finds that these assumptions seem to hold true; local job seekers with higher levels of education, particularly older workers, report both greater years of experience and more jobs than job seekers with lower levels of education.

The years of work experience typically increase with age as older workers have had more years in which to gain experience. Likewise, younger job seekers have more limited work histories, given they have had fewer years to gain experience. The typical local older job seeker reports more than 18 years of work experience, where prime-age workers report an average of nine years of experience. However, the number of jobs reported does not necessarily increase with age. Locally, most people report between two and four jobs; prime-age workers report the most.

Job seekers with higher levels of education reported slightly more jobs and more years of experience than job seekers with lower levels of education. People with a bachelor’s degree report almost 13 years of experience; job seekers with an associate’s degree or some post-secondary education reported 12 years of experience; and job seekers with a high school diploma or less reported almost 11 years of experience, on average. Similarly, individuals with a bachelor’s degree or higher reported four jobs, while individuals with a high school diploma or less reported just under three jobs, on average.

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1 All data in this report is based on job seekers in Allegheny County and the city of Pittsburgh who reported employment history resume data and received public workforce services between July 2015 and June 2017.
When age and education are combined, the trends observed in years of work experience become more apparent and pronounced for older job seekers compared to prime-age job seekers.\(^2\) Thirty-nine percent of local prime-age job seekers with a high school diploma or less reported nine or more years of experience, compared to 79% of older job seekers with a bachelor’s or advanced degree.

<table>
<thead>
<tr>
<th>Years of work experience by age and educational attainment</th>
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<tbody>
<tr>
<td>Bachelor’s or advanced degree</td>
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<tr>
<td>Some post-secondary education or associate's degree</td>
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<tr>
<td>High school diploma or less</td>
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<tr>
<td>Prime-age: Bachelor’s or advanced degree</td>
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<tr>
<td>Some post-secondary education or associate's degree</td>
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The number of jobs reported also increases with education for both prime-age and older job seekers. Local older job seekers at each education level reported fewer jobs than their prime-age counterparts at each education level; for example, 73% of older job seekers with a high school diploma or less reported fewer than three jobs, compared to 57% of prime-age job seekers with a high school diploma or less.

\(^2\) Twenty-five percent of employment data is missing for job seekers ages 24 and younger. Only data on job seekers ages 25 and older is included in the remainder of the analysis.
If individuals with higher levels of education report more work experience and jobs compared to job seekers with lower levels of education, then they might be more likely to find employment. Consistently more than 60% of the online job ads in the Pittsburgh metro area require a bachelor’s degree or higher and the job seekers with these qualifications are more likely to get hired.\textsuperscript{3} While typically more than 80% of online job postings require five years or fewer of work experience, employers might still view candidates with extensive work experience as more qualified than job seekers with less experience.

**Education does not seem to reduce unemployment among the local workforce**

While education seems to play a role in greater levels of experience, it does not seem to reduce unemployment significantly, particularly among older workers. Unemployment can be measured in terms of frequency and duration.\textsuperscript{4} Frequency of unemployment helps capture the level of job changes someone might experience, and average duration of each period of unemployment is a way to estimate how long it takes someone to regain employment after losing or leaving a job. By using these concepts as a base, this report finds that local older job seekers with higher levels of education reported longer average durations of unemployment and greater frequency of unemployment, while there is less distinction by education among prime-age job seekers. This somewhat supports the observed labor market trends where workers with higher levels of education have exited the labor force, at least among older more educated workers in the Pittsburgh region.

Half of all local job seekers reported no gaps in employment on their resumes. If a job seeker reported any unemployment, they typically documented two periods of unemployment; older workers and people with an associate’s degree or some post-secondary education reported slightly more, though there is little differentiation. A higher percentage of people in the local area with a bachelor’s degree or higher reported any unemployment compared to job seekers with lower levels of education. Further, among older job

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\textsuperscript{3} Online job ad data from Labor Insight, Burning Glass Technologies, 2017-2018.

\textsuperscript{4} For the purposes of this report, unemployment is a period of non-employment that exceeds four weeks.
seekers, almost 20% of people with a bachelor’s or advanced degree reported three or more periods of unemployment, versus 8% of those with a high school diploma or less.

Of the job seekers that did document unemployment, many reported long-term average periods of unemployment (averaging more than six months). The average duration of a single period of unemployment for different ages and education groups ranges from about 30 to 35 weeks (seven to eight months). Local prime-age workers reported an average of 33 weeks unemployed and local older job seekers reported just under 35 weeks, on average. The average duration of unemployment is highest for individuals with an associate’s degree or some post-secondary education at 34 weeks, followed by individuals with a high school diploma or less at 33 weeks, and just under 30 weeks for individuals with a bachelor’s or higher. Looking solely at these figures, having a bachelor’s degree appears to relate to a reduction in the time people are without work between jobs.

However, a higher portion of local older workers with at least some post-secondary education also reported average long-term unemployment of 27 weeks or more (greater than six months) than older job seekers with less than a four-year degree. In fact, older job seekers in the Pittsburgh area with a high school diploma or less appear to face the shortest average length of unemployment; 70% report average periods of unemployment that last for less than a month. Among local prime-age workers, job seekers with higher levels of education do not necessarily report more long-term unemployment than job seekers with lower levels of education, but a larger portion reported any unemployment longer than a month, on average.
This suggests that local job seekers with lower levels of education might become reattached to the labor force more quickly after unemployment—if they face any unemployment at all—compared to local job seekers with higher levels of education, particularly among older workers. This also suggests that, overall, many local job seekers either experience very quick turnarounds in employment or experience longer durations of unemployment, on average. Education seems to have some effect on the extent of unemployment that job seekers experience, though these findings go against the traditional education and labor market theories.

Conclusion

The data indicates that higher levels of education are beneficial in acquiring work experience and obtaining a job for local job seekers. Even though more than half of the occupations in the Pittsburgh area typically require only a high school diploma or less for entry-level level positions, more than 50% of online job ads from employers require or prefer job seekers with a bachelor’s or advanced degree. Further, the job postings that prefer higher levels of education also offer higher salaries, indicating a preference for candidates with more advanced degrees.

This analysis also finds that local job seekers with lower levels of education might be able to find employment more quickly than job seekers with higher levels of education and experience less unemployment. This is possibly attributed to the range of occupations available to job seekers with lower levels of education. The occupations that typically require a high school diploma or less are often in the service industry or involve more manual labor, such as food service, construction, maintenance, transportation and administrative support. Not only are these jobs easier to enter, but there are often more of them. For example, in January 2018, the top two positions advertised online in the Pittsburgh area.

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The metro area were truck drivers (heavy and tractor-trailer) and retail salespersons, with a combined 1,350 job postings. Thus, while individuals with lower levels of education seem to reenter the labor force more quickly, the jobs might not be stable, pay well or be considered high quality.

Education can greatly affect people’s career trajectories and experiences with employment and unemployment. It relates to the types of jobs people take and how employers view them. However, the extent of unemployment experienced by job seekers of all education levels suggests that there are other factors influencing their work histories and job search experiences.

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