Trends in Educational Attainment within the Pittsburgh Region’s Labor Force

by Christopher Briem

Over recent decades, the Pittsburgh region’s workforce has experienced a significant shift away from what was once a predominantly blue-collar employment base. By 2009, over 48% of employed workers in the region were estimated to have a bachelor’s degree or higher, one of the five highest percentages among large metropolitan areas in the nation (PEQ, March 2010). However, the most recent workforce trends have not continued along a similar path. Over the most recent decade, the largest regional employment gains have been generated by workers with less than a high school degree.

Employment levels in the region did not fluctuate as widely as did the national workforce either during or after the Great Recession which extended between December 2007 and June 2009. Overall employment in the Pittsburgh Metropolitan Statistical Area (MSA) remained relatively stable during the recession and grew only modestly (+3.5%) between 2007 and 2017. Other the recent decade, the Pittsburgh region has experienced larger shifts in the composition of the workforce, and specifically diverging trends in the employment levels across educational levels. Though workers with less than a high school degree make up a small and historically declining part of the Pittsburgh region’s labor force, these workers make up a disproportionate share of the region’s recent employment gains.

Here, data from the Census Bureau’s Quarterly Workforce Indicators (QWI) program is compiled.

UCSUR 2018 Manners Awards

UCSUR has announced the winners of the 18th Annual Faculty Development Awards. This year three grants were awarded to Junia Howell, PhD, Assistant Professor in the Department of Sociology; Chelsea Pallatino, PhD, MPH, Postdoctoral Associate in the University of Pittsburgh Department of Obstetrics, Gynecology, and Reproductive Sciences, and Lecturer in the Department of Behavioral and Community Health Sciences; and Jamie Hanson, PhD, Assistant Professor in the Department of Psychology, and Research Scientist at the Learning Research & Development Center (LRDC).

Each year, the University of Pittsburgh University Center for Social and Urban Research (UCSUR) awards the Steven D. Manners Faculty Development Awards to promising research projects in the social, behavioral, and policy sciences on campus. These awards honor the memory of Steve Manners, a sociologist who began working at the Center in 1974 and served as its Assistant Director from 1989 until his death in September 2000. His research and service to the Center and the University community were dedicated to improving social conditions in the urban environment.

UCSUR awarded the first Steven Manners grants in 2001, and this year is awarding three research development grants to support pilot research with scientific merit and a strong likelihood that the project will lead to subsequent external peer reviewed funding. Special consideration is given to applications that are related to areas of particular interest to UCSUR or applications using data collected UCSUR.
Jamie Hanson, PhD  
Assistant Professor  
Department of Psychology and  
Research Scientist  
Learning Research & Development Center (LRDC)  
University of Pittsburgh

Project: Leveraging ecological momentary assessments to understand associations between poverty, stress exposure, and environmental volatility

Project Abstract: Poverty is associated with a 20% increase in subsequent aggression, oppositional behavior, and other forms of “externalizing” psychopathology. Despite the shocking prevalence of poverty in our society and the profound influences of this early life stress, limited progress has been made on understanding the mechanisms linking poverty to later problem behavior. Particularly salient and missing from past conceptualizations of poverty are the daily-experiences of youths and families residing in these challenging conditions. While many features of poverty have been unexamined in past approaches, particularly surprising is an absence of studies linking physical chaos, caregiving volatility, and day-to-day stress exposure. Previous work has examined these factors in isolation and with methodology that is subject to recall and other biases. In this investigation we will attempt to answer interlinked questions about the role of chaos and physical and socioemotional volatility in creating risk for externalizing problems in the context of poverty. We propose to use ecological momentary assessment (EMA) to assess behaviors as they occur in individuals’ natural environments. We first propose to examine day-to-day physical chaos and parental inconsistency (assessed by EMA) in a sample of families from across the SES spectrum. We believe these factors will explain relations between SES and externalizing behaviors. We also aim to connect day-to-day stressors to physical chaos and parental inconsistency. We predict periods of day-to-day higher stress will be linked to increased levels of physical chaos and parental inconsistency. This project has the potential to increase our understanding about the daily experiences of individuals and how this may create risk for aggression and externalizing problem behaviors. These results would have important implications for applied questions related to education, child development, mental health, and interventions for at-risk youth.

UCSUR's Faculty Development Awards are awarded annually in honor of Steven D. Manners, who served as a researcher and administrator at the center between 1974 and his passing in 2000. Originally hired as a programmer and analyst, Steve eventually rose to the rank of assistant director. His efforts were instrumental in building a major survey research center at UCSUR and promoting interdisciplinary applied and basic research in the social and behavioral sciences. Manners earned a BS in biological sciences and chemistry at Pitt in 1973 and did postbaccalaureate studies in computer science between 1974 and 1976 before earning an MS in radiation health physics in 1980. Upon his passing in 2000, UCSUR created the Manners Faculty Development Awards to honor his memory.

Steven D. Manners

UCSUR 2018 Manners Awards

continued from page 1
Junia Howell, PhD
Assistant Professor
Department of Sociology
University of Pittsburgh

Project: The Role of Local Government in Allegheny County’s Neighborhood Transformation from 1986 to 2018

Project Abstract: Academics and the public alike debate who gentrification benefits and what is driving the change. Although much work has been done on the topic, few have explicitly linked contemporary processes of neighborhood change to the role racialized land appraisals pay in perpetuating change. This project will investigate how changes in home appraisal values correspond with changes in neighborhood racial composition, using data from the Western Pennsylvania Regional Data Center’s Allegheny County Property Sale Transactions dataset and the Allegheny County Department of Real Estate. These data will be geocoded and merged with data on neighborhood demographics, crime rates, and school quality. This project will highlight local processes that have and continue to cultivate neighborhood change in Pittsburgh, with particular attention to the role the City of Pittsburgh has played in recent housing and commercial development. The project will contribute to larger theoretical conversations regarding urbanization processes as well as local policy decisions on gentrification.

Chelsea Pallatino, PhD, MPH
Postdoctoral Associate
Department of Obstetrics, Gynecology, and Reproductive Sciences and Lecturer
Department of Behavioral and Community Health Sciences
University of Pittsburgh

Project: Co-occurring Intimate Partner Violence and Substance Use: Understanding Barriers to Collocated Integrated Services

Project Abstract: Despite the high prevalence of co-occurring substance use disorders (SUD) and intimate partner violence (IPV) among pregnant women, these issues are treated separately, and women experiencing both are often provided referrals with little follow-up. This study will involve interviews with pregnant and postpartum women with co-occurring IPV and opioid use disorder (OUD) and stakeholders interfacing with women with co-occurring OUD and IPV. Studies have found support among IPV and SUD providers for service integration, and this study will assess service integration feasibility. Stakeholders will include providers who are currently engaged in prenatal, IPV, substance use, harm reduction, addiction medicine, law enforcement, criminal justice, batterer intervention, and child protective services, and the welfare service provision setting. Provider conversations will focus on service provision experiences with women with co-occurring IPV and SUD, perceived ability to connect and engage women with SUD and IPV-related services, service provision barriers and facilitators, record-keeping and information dissemination practices regarding program outcomes, and evidence-based SUD and IPV treatment practices for pregnant and postpartum women with OUD. Conversations with pregnant and postpartum women with OUD will focus on experiences accessing SUD treatment, IPV, healthcare, social, legal, and health services; service quality; perceptions of treatment by providers; and experiences of service refusal due to history of SUD or IPV. Participants’ insight will help researchers identify evidence-based practices to improve outcomes for women with co-occurring SUD and IPV and their children across the lifespan.
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Continued from page 1

to show recent employment trends in the seven-county Pittsburgh MSA (comprised of Allegheny, Armstrong, Beaver, Butler, Fayette, Washington and Westmoreland Counties), focusing on trends across different levels of educational attainment. The QWI program is part of the Longitudinal Employer-Household Dynamics (LEHD) dataset compiled by the Census Bureau by linking multiple data sources, including unemployment insurance earnings data, the Quarterly Census of Employment and Wages, Business Dynamics Statistics, and administrative records. Data reflects employed workers and compiled here for the Pittsburgh MSA.

Table 1 compares employment levels in 2007 and 2017 for workers in the seven-county Pittsburgh Metropolitan Statistical Area (MSA) broken down by educational attainment. Educational attainment refers to the highest level of education completed, and data is for the population age 25 and over. Over this period, the most significant employment gains within the region have been generated by workers with less than a high school degree. The number of workers with less than a high school degree increased by just under 25,000 between 2007 and 2017, or a 34% increase. This contrasts with an increase of 10,825 for workers with some college or an associate degree, a 3.6% gain over the period; and modest declines in both the number of workers with a high school degree and those with a bachelor’s degree or higher.

Figure 1 shows the relative trend in regional employment by educational attainment from 2000 through 2017 for the Pittsburgh MSA. Regional employment trends across different education levels showed little variation between 2000 and 2010, but show an ongoing divergence beginning

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**Table 1. Employed workers by educational attainment—Pittsburgh MSA, 2007-2017**

<table>
<thead>
<tr>
<th>Workers age 25 and over</th>
<th>Change 2007-17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
</tr>
<tr>
<td>2007</td>
<td>2012</td>
</tr>
<tr>
<td>Less than high school</td>
<td>73,177</td>
</tr>
<tr>
<td>High school or equivalent, no college</td>
<td>300,417</td>
</tr>
<tr>
<td>Some college or Associate degree</td>
<td>299,920</td>
</tr>
<tr>
<td>Bachelor’s degree or advanced degree</td>
<td>281,339</td>
</tr>
<tr>
<td>Total employment</td>
<td>954,853</td>
</tr>
</tbody>
</table>

Source: Compiled from Census Bureau, Quarterly Workforce Indicators (QWI)

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**Figure 1. Relative change in Pittsburgh MSA employment by educational attainment**

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works age 25 and over (2000 = 1.0)
in 2010. Of the region’s overall employment gain between 2007 and 2017, QWI data indicated that over 2/3rds was accounted for by workers with less than a high school degree.

For both Pennsylvania and the nation, workers with less than a high degree have had similar increases over the recent decade. Table 2 compares the scale of employment changes across different education levels with similar trends data for Pennsylvania and the United States. But for the nation, employment gains have extended across all education levels, while in the Pittsburgh region, workers with a bachelor’s degree or higher, or with just a high school degree have remained relatively unchanged between 2007 and 2017.

Employment gains for workers with less than a high school degree extend across a wide range of industries. Table 3 breaks down the employment shifts for workers with less than a high school degree by industry. Health Care and Social Assistance industries generated the largest net gain in employment for these workers, increasing by 6,718, (+69.2%) between 2007 and 2017.

Though workers with less than a high school degree are exhibiting employment gains both regionally and nationally, this group of workers continues to have the highest unemployment rate. As of June 2018, the unemployment rate for workers with less than a high school degree was 5.5% nationally, compared to the nation’s overall employment rate of 4.0% that month. However, these workers have experienced the largest decline in unemployment rates over the most recent decade. As the most recent national recession was ending, workers with less than a high school degree experienced a peak unemployment rate of 15.8% in February 2010, more than three times the 4.9% for workers with a bachelor’s degree or higher. The decline of over ten percentage points is a far larger decline than experienced by workers with higher levels of educational attainment.

### Table 2. Employment change between 2007 and 2017 by educational attainment

<table>
<thead>
<tr>
<th>Pittsburgh MSA, Pennsylvania and the United States—Workers age 25 and over</th>
<th>Pittsburgh MSA</th>
<th>Pennsylvania</th>
<th>United States*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>+34.0%</td>
<td>+32.1%</td>
<td>+27.6%</td>
</tr>
<tr>
<td>High school or equivalent, no college</td>
<td>-0.1%</td>
<td>-0.1%</td>
<td>+6.8%</td>
</tr>
<tr>
<td>Some college or Associate degree</td>
<td>+3.6%</td>
<td>+4.5%</td>
<td>+6.1%</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>-0.6%</td>
<td>-0.3%</td>
<td>+5.4%</td>
</tr>
</tbody>
</table>

* US data reflects private sector workers only

### Table 3. Workers with less than a high school degree (age 25 and over) by industry

<table>
<thead>
<tr>
<th>Pittsburgh MSA, 2007 and 2017</th>
<th>Change 2007-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Fishing and Hunting</td>
<td>116 104, -12, -10.3%</td>
</tr>
<tr>
<td>Mining, Quarrying, and Oil and Gas Extraction</td>
<td>412 1,055, +643, +156.1%</td>
</tr>
<tr>
<td>Utilities</td>
<td>206 580, +374, +181.6%</td>
</tr>
<tr>
<td>Construction</td>
<td>6,023 6,512, +489, +8.1%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>7,808 8,069, +261, +3.3%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>3,162 3,456, +294, +9.3%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>11,002 11,901, +899, +8.2%</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>4,033 4,536, +503, +12.5%</td>
</tr>
<tr>
<td>Information</td>
<td>776 1,178, +402, +51.8%</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>1,703 4,001, +2,298, +134.9%</td>
</tr>
<tr>
<td>Real Estate and Rental and Leasing</td>
<td>1,067 1,289, +222, +20.8%</td>
</tr>
<tr>
<td>Professional, Scientific, and Technical Services</td>
<td>2,097 5,495, +3,398, +162.0%</td>
</tr>
<tr>
<td>Management of Companies and Enterprises</td>
<td>1,427 2,882, +1,455, +102.0%</td>
</tr>
<tr>
<td>Administrative and Support Services</td>
<td>5,527 6,814, +1,287, +23.3%</td>
</tr>
<tr>
<td>Educational Services</td>
<td>3,058 5,074, +2,016, +65.9%</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>9,711 16,429, +6,718, +69.2%</td>
</tr>
<tr>
<td>Arts, Entertainment, and Recreation</td>
<td>1,211 1,671, +460, +38.0%</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>8,886 10,994, +2,108, +23.7%</td>
</tr>
<tr>
<td>Other Services (except Public Administration)</td>
<td>3,375 3,843, +468, +13.9%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>1,570 2,174, +604, +38.5%</td>
</tr>
</tbody>
</table>

*Source: Quarterly Workforce Indicators (QWI)*
One of the core programs at the University of Pittsburgh’s Center for Social and Urban Research (UCSUR) is the Graduate Certificate in Gerontology, open to both current University of Pittsburgh students and non-traditional students.

Gerontology is the study of the social, psychological, and biological changes in older people as they age. With one out of every eight persons in American age 65 or older, understanding the challenges facing the elderly is critical to our society. The aim of the Graduate Certificate in Gerontology program is to train people to think critically about the issues of aging and how to support the wellbeing of adults as they grow older. The program is the result of a collaboration between UCSUR, the College of General Studies (CGS), and the Aging Institute of UPMC Senior Services.

The Graduate Certificate in Gerontology program serves as a helpful complement to many other degrees. Whether you’re a researcher, a nurse, a social worker, a rehabilitation specialist, or just someone who’s passionate about the issues of aging, you’ll be able to craft a program that fits your special interest. Our specializations include: Law, Mental Health, Nursing, Occupational Therapy/Rehabilitation, Public Health, Social Work, Gerontechnology, and two multi-disciplinary tracks—General, and Prevention & Healthy Aging.

With our program, you can attend 100% of your classes online, 100% in the classroom, or a mix of both—whatever suits your needs. With online classes, you attend classes when it’s convenient for you—the convenience and flexibility working students appreciate.

Highlights of the Graduate Certificate in Gerontology program:

- With only 15-16 credit hours needed, you can complete your certificate in as little as nine months.
- You can often apply the credits you earn toward a graduate degree at the University of Pittsburgh should you decide to pursue one.
- Our instructors are leaders in the field of gerontology.
- Eighty-eight percent of attendees surveyed said that an understanding of the challenges faced by the elderly helped them in their professional lives, and 100% said that it helped in their personal lives.
- Unlike programs at other universities, the certificate program offers the same tuition rates to in-state and out-of-state students. And 94% of attendees surveyed said the certificate program is a good value for the money.

For more information:  
Facebook: https://www.facebook.com/pg/UPittAging/about/  
Web: https://ucsur.pitt.edu/gerocert.php  
Phone: (412) 624-1019  
E-mail: bissell@pitt.edu
Upcoming event

Creating education opportunities for small businesses and entrepreneurs in the region is essential for strengthening our economy. In doing so, the University of Pittsburgh Institute for Entrepreneurial Excellence (IEE) offers monthly educational programs, startup workshops, specialized training events, certificate programs, and more.

Disney Leadership Excellence
Thursday, September 13, 2018 • Marriott City Center
8:00 AM – 4:30 PM

Following their very successful program in 2017, Disney is coming back to the IEE! A leader is far more than a label—leadership is about taking actions to create sustained, positive transformations within an organization. Disney Institute offers leadership development through a time-tested approach that demonstrates the values and behaviors of exemplary leaders.

To register for any of our events, visit entrepreneur.pitt.edu.

• As a student in the Graduate Certificate in Gerontology program, you have the world-class resources of the University of Pittsburgh behind you.
• The University of Pittsburgh is a world leader in transformational research on aging.

Overview of UCSUR’s Gerontology Program

The study of adult development and aging has become a central focus of researchers and educators in almost every university in the United States. At the University of Pittsburgh, social science, medical, and legal expertise on aging issues can be found throughout the University. These human resources are augmented by extensive research, service, and training facilities that provide both direct services to older adults in the Pittsburgh region and hands-on training to students and research fellows.

The mission of the Gerontology Program is to initiate, coordinate, and facilitate research on aging in collaboration with faculty in more than a dozen different disciplines (e.g., Psychiatry, Anesthesiology, Rheumatology, Nursing, Epidemiology). Program faculty and staff play an active role in developing proposals for research focused on psychosocial, behavioral, cognitive, and physical aspects of aging.

The principal goals of the Gerontology Program are to:
1. Stimulate the development of externally funded research in six areas: physical and mental health of older adults; the use of technology to improve older adults’ quality of life; work and retirement; aging and social institutions; socialization and social support; and cultural differences and aging.
2. Operate as the information hub for interdisciplinary, aging-related research and training resources throughout the University.
3. Assist in the development of new gerontological training and service programs that serve the research and training missions of the University.

Services
• Regional Survey and Census Data on Baby Boomers and Older Adults
• Consultation on Proposal Development/Writing
• Access to Longitudinal Data on Adult Development and Aging
• Application of Life-Course Theory to Research Design and Analysis
• Conducting Randomized Trials in the Social and Behavioral Sciences