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Communities & Banking

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Growing Inequality in Life Expectancy and Benefits for the Elderly

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Communities & Banking

Communities & Banking magazine aims to be the central forum for the sharing of information about low- and moderate-income issues in New England.

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LETTER FROM THE EDITOR

Greetings from your interim *Communities & Banking* guest editor!

Our cover story by Ronald Lee and Peter Orszag reveals that the shorter life expectancy of poorer people means that federal benefits for the elderly disproportionately help the well-off. Three articles focus on education: Claire Berkowitz covers the work of Maine Children's Alliance to end expulsions of children from early education settings. Bahar Akman Imboden and Yiming Shuang examine how reaching out to low-income families through mobile technology has boosted use of children's savings accounts to help pay for college. And Claire Greene looks at an innovative internship program at a network of charter high schools.



Continuing the theme, Thomas Phillips surveys programs in Connecticut that help opportunity youth and older workers become qualified for further education and better-paying jobs. And Kathleen Cloutier discusses how Dorcas International Institute of Rhode Island is helping local refugees and immigrants integrate into life and work in the United States.

On redevelopment, Lavea Brachman and Torey Hollingsworth write about revitalizing legacy cities, while Joe Short tells of business forces changing the landscape in northern New York and New England's Northern Forest region. An article by Sophie Kelmenson, Todd BenDor, and T. William Lester on the economic benefits of ecological restoration work completes the trio.

Finally, Ludy Biddle describes efforts to make home energy-efficiency measures affordable for low- and middle-income Vermonters, and Amy Higgins presents data on coronary heart disease rates in New England counties.

Enjoy, and please share your thoughts with us, along with your email (for our subscriber database). We'd love to hear from you.

Francesca Forrest

Guest Editor
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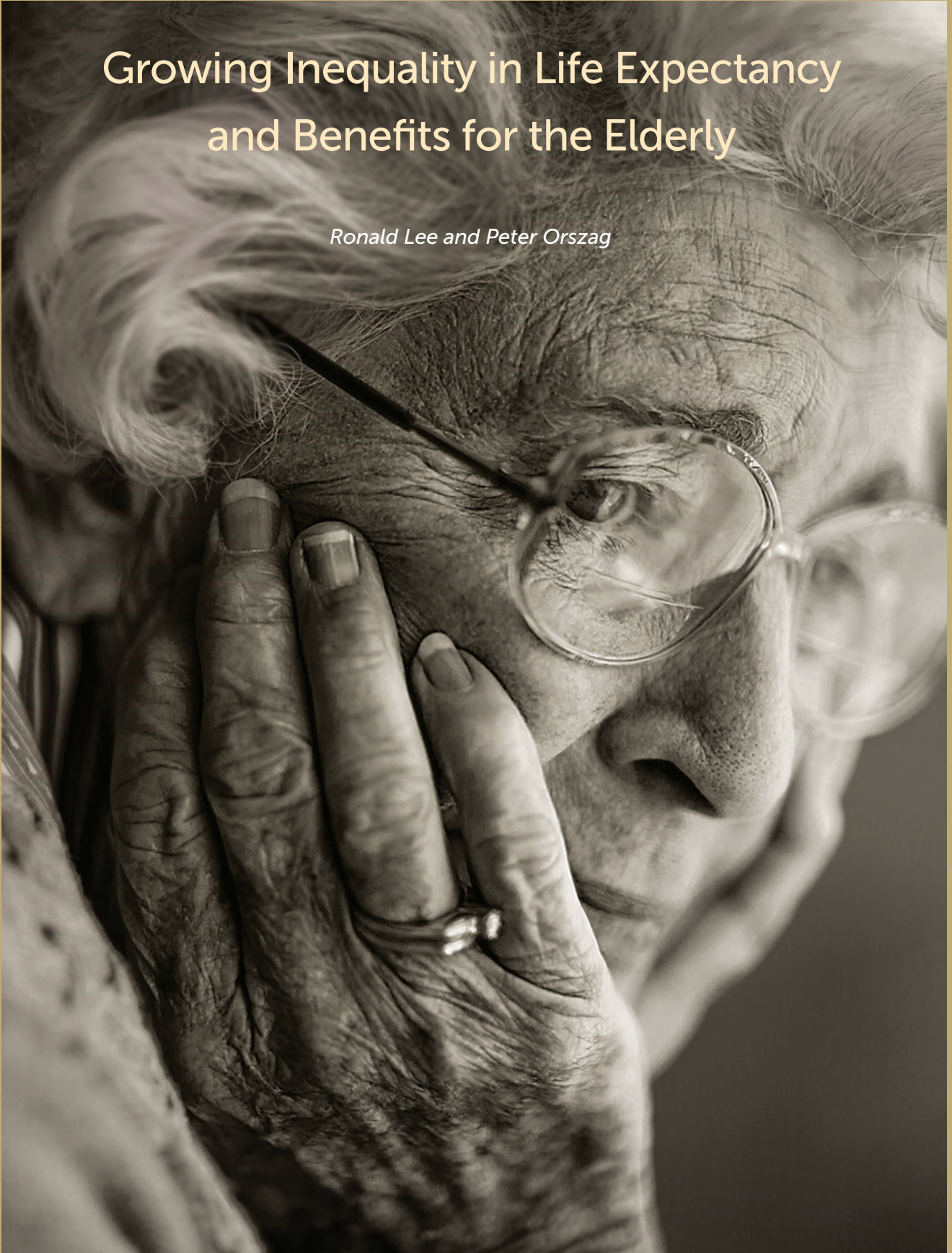
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Growing Inequality in Life Expectancy and Benefits for the Elderly

Ronald Lee and Peter Orszag



The rich live longer than the poor—which means they receive more support from federal programs such as Social Security and Medicare.

Average life expectancy in the United States has been rising for many decades and is expected to continue to rise in the future.¹ However, the overall average masks large differences across social groups: life expectancy is higher for people who have more education or have higher incomes. Furthermore, these differences have grown in recent decades. In fact, recent gains in life expectancy have accrued largely to those with high incomes or high education, while life expectancy for those with lower incomes and little education has stagnated. This is a very serious problem in itself, but it also has other implications.

A Longer Life Expectancy Earns the Rich More Benefits

A committee of the National Academy of Sciences, which we cochaired, investigated the way these growing disparities in survival affect the amount that different income groups receive from the federal government in lifetime benefits from programs such as Social Security, Medicare, and Medicaid. If higher-income people gain more years of life in old age, then they will also receive benefits from these programs for more years. The committee’s report was released a few months ago. Its findings are striking.

We estimated the remaining life expectancy of men and women who were already 50 according to their average earnings levels when they were in their 40s. We found that 50-year-old men born in 1930, with earnings in the bottom 20 percent of the population, would live another 26.6 years, while men in the top 20 percent would live another 31.7 years, for a difference of 5.1 years. For men born in 1960, however, the corresponding numbers are 26.5 years and 38.8 years, for a difference of 12.3 years. The gap in life expectancy, which was already big, more than doubled. Results for women are similar. (See “Remaining Life Expectancy: Men” and “Remaining Life Expectancy: Women.”)

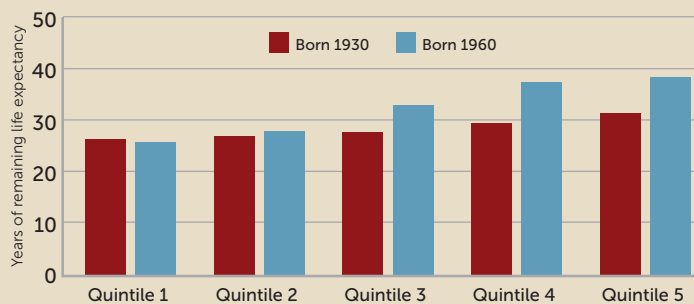
How did these disturbing trends in length of life affect the government benefits received by the elderly? To answer that question, we considered a group of people turning 50 in 2010 and asked what benefits they would have received over their lifetimes (above age 50) under the estimated mortality conditions of this generation on the one hand, and on the other hand what they would have received under the mortality conditions of the generation born in 1930, when differences in life expectancy by income were smaller. We also took into account that those with lower life expectancy would generally have worse health and higher disability, because that would mean that they would receive more benefits each year from Medicare and Medicaid.²

For Social Security retirement benefits, we found, unsurprisingly, that men and women in the top 20 percent received more benefits than those in the bottom 20 percent, because they qualified for higher benefits per year and because they received those benefits over more years on average. However, while the gap in lifetime

benefits for men under the mortality conditions of those born in 1930 was \$103,000, with the mortality of those born in 1960 the gap was \$173,000, or \$70,000 greater. The comparable increase in the gap for women was \$48,000. These larger gaps resulted entirely from the fact that higher-income people gained more years of life in which to receive benefits.

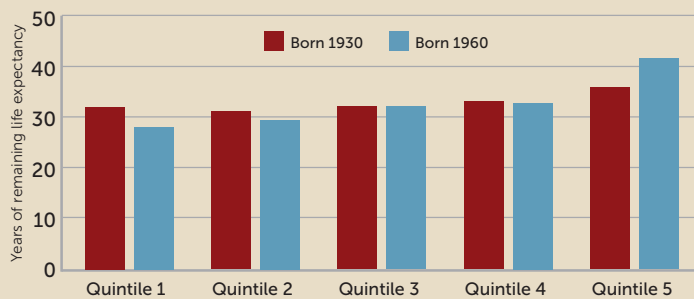
For Medicare benefits, the gap rose by \$53,000 for men and by \$70,000 for women. Even though people with lower incomes use Medicare more in each year that they are alive, because they are

Remaining Life Expectancy: Men (age 50, born in 1930 vs 1960, actual and projected)



Source: “The Growing Gap in Life Expectancy by Income: Implications for Federal Programs and Policy Responses” (report, National Academies Press, 2015).

Remaining Life Expectancy: Women (age 50, born in 1930 vs 1960, actual and projected)



Source: “The Growing Gap in Life Expectancy by Income: Implications for Federal Programs and Policy Responses” (report, National Academies Press, 2015).

on average in worse health, the greater increases in lifespan for the high-income groups more than offsets their lower usage of Medicare per year.

Medicaid funds long-term care for individuals whose assets fall below a threshold value. Lower-income people receive Medicaid benefits for this purpose to a much greater extent than do high-income people, and women receive Medicaid benefits much more

than men because they tend to have more disabilities. The rising gap in lifespan also favors the lifetime Medicaid benefits of higher-income people, in the amount of \$7,000 for men and \$36,000 for women. The committee also carried out similar calculations for Social Security disability benefits and for Supplemental Security Income (SSI).

We can add together the lifetime benefits for all five of these programs for the elderly to get a comprehensive picture. Comparing the mortality conditions of the 1960 generation with those of the 1930 generation, we find that the gap in lifetime benefits between earners in the top 20 percent and bottom 20 percent grows by \$130,000 for men and by \$160,000 for women. These are strikingly large numbers. (See “Total Lifetime Benefits: Men” and “Total Lifetime Benefits: Women.”)

To be sure, we have thus far only considered the increasing gaps for lifetime benefits. Perhaps the picture changes if we take tax payments into account? When we looked at payments of federal income taxes and both employee and employer payroll taxes after age 50, we found that the mortality context made very little

difference to the gap between high- and low-income people—only a \$5,000 increase in the tax gap under the mortality conditions of the 1960 generation. When we put all this together to calculate how the widening disparity in lifespan affects net lifetime benefits (that is, after subtracting taxes paid after age 50), we found that the gap increased by \$125,000 for men and \$155,000 for women.

What Are the Implications for Policy Changes?

Clearly, the widening gap in life expectancy between high- and low-income people has reduced the progressiveness of the federal programs for the elderly in a very important way. It is well known that Social Security, Medicare, and Medicaid will face very serious financial problems as the population ages and as health care prices rise. These systems are not sustainable without policy adjustments. But the same changes in lifespan by income class that swung lifetime benefits in favor of high-income groups may also matter for the policy changes that are being discussed. For example, raising the retirement age or the age of eligibility for Medicare might fall harder on lower-income people whose shorter lives will mean a proportionately bigger cut in lifetime benefits, a topic the committee also investigated. The policy changes considered were raising the early retirement age and the normal retirement age for Social Security, raising the age of eligibility for Medicare, calculating the cost-of-living allowance in a different way, and reducing benefit rates for higher-income groups. For these potential policy changes, we assessed how lifetime benefits would be affected, given the wide disparities in life expectancy. (We were not able to consider another potential change, raising or eliminating the cap on wages subject to the salary cap, because of limitations of our model and data set.)³

The bottom line is that policymakers need to consider the consequences of the widening disparities in health and survival when they evaluate current policies and propose new ones.

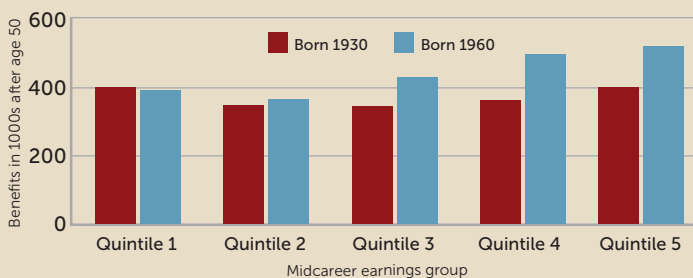
Ronald Lee is an economist and demographer at the University of California, Berkeley. **Peter Orszag** is an economist, author, and chairman of the Financial Strategy and Solutions Group at Citigroup. Contact them at rlee@demog.berkeley.edu.

Endnotes

- According to the Office of the Chief Actuary of the Social Security Administration (see the OASDI Trustees Report for 2015, Table V.A3), life expectancy at birth was 71.1 years in 1970, 73.7 in 1980, 75.3 in 1990, 76.7 in 2000, 78.5 in 2010, and, based on provisional data, 79.1 in 2014. This is the average for males and females of period life expectancy.
- The report is titled “The Growing Gap in Life Expectancy by Income: Implications for Federal Programs and Policy Responses.” It may be downloaded free at <http://www.nap.edu/catalog/19015/the-growing-gap-in-life-expectancy-by-income-implications-for>. To make the calculations described in this article, the committee used a microsimulation program called Future Elderly Model, or FEM, which also took into account the health and disability of individuals according to their income class. To calculate the present values of lifetime benefits and taxes, this program used a discount rate of 2.9 percent.
- The payroll tax for Social Security is applied only to earnings up to the cap, which is \$118,500 in 2016. One policy change that is often discussed is raising the cap to a much higher level or eliminating it altogether. The payroll tax for Medicare is not subject to any cap at all.

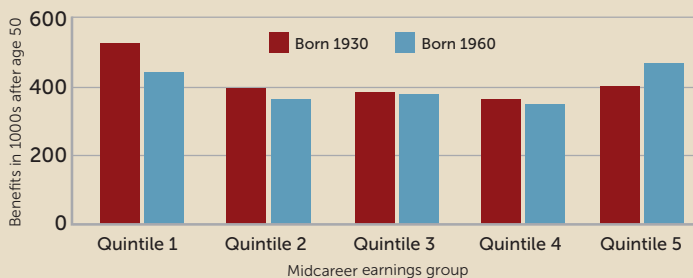
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Total Lifetime Benefits: Men
(with mortality of those born 1930 and 1960,
actual and projected, in thousands)



Source: “The Growing Gap in Life Expectancy by Income: Implications for Federal Programs and Policy Responses” (report, National Academies Press, 2015).

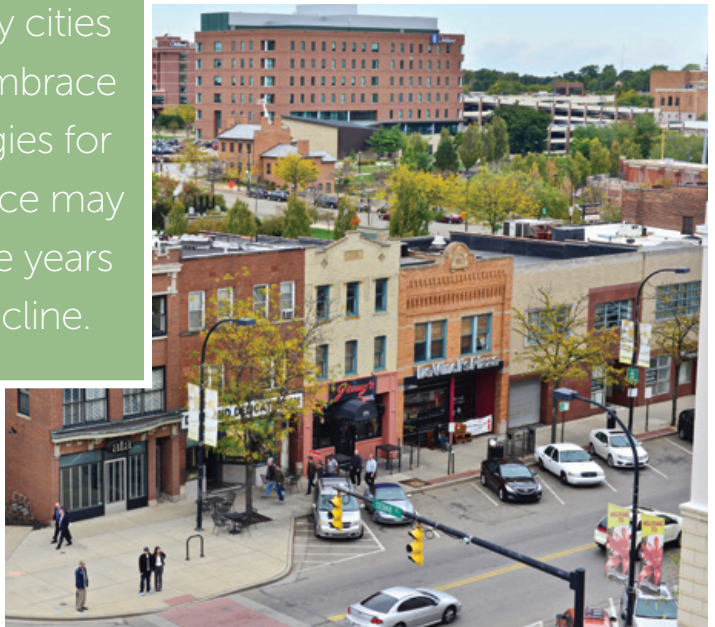
Total Lifetime Benefits: Women
(with mortality of those born 1930 and 1960,
actual and projected, in thousands)



Source: “The Growing Gap in Life Expectancy by Income: Implications for Federal Programs and Policy Responses” (report, National Academies Press, 2015).



Legacy cities that embrace strategies for resilience may reverse years of decline.



Akron, Ohio, is one of the small and medium-sized legacy cities seeking renewal.

photos Shane Wynn, courtesy of akronstock.com

Revitalizing America's Small and Medium-Sized Legacy Cities

Lavea Brachman and Torey Hollingsworth

GREATER OHIO POLICY CENTER

Many older industrial cities struggling to recover from long-term economic downturns, such as Detroit or Pittsburgh, have received attention from academics, practitioners, and the press for their decline and emerging recoveries.¹ The trajectory of small and medium-sized legacy cities (SMLCs)² like Ohio's Akron or Dayton (or, in New England, Springfield, Massachusetts, or New Haven, Connecticut) has received much less consideration. While large legacy cities were engines of our nation's growth for almost a century, smaller cities made important marks on our history as well. Smaller cities face challenges similar to those of larger cities, such as job and population loss, which are often compounded by their smaller size and regional location. In aggregate, these cities' dire economic cir-

cumstances continue to be a drag on the overall health of the state and national economies, slowing economic recovery.

To put the spotlight on the health and needs of SMLCs nationwide, the Greater Ohio Policy Center (GOPC) examined the condition of SMLCs in the Midwest and Northeast. In considering how to reverse economic decline, we sought to understand the factors that enable some SMLCs to be resilient, find their competitive edge, and transform into thriving, sustainable cities. Using US census data, we developed a typology based on urban vitality indicators³ and measured performance through peer comparison. Through data analysis and interviews, we identified several promising strategies and practices for resilience, highlighted (along with case studies, also drawn from our research) on the following pages.⁴

Case Studies

Worcester, Massachusetts

Although its geographic proximity to Boston plays a role in its success, local stakeholders in Worcester credit leadership changes over the past decade with much of its revival. A number of long-term community leaders retired around the same time, creating an opportunity for a new set of leaders to step in—some from the community and others who were actively recruited from other cities. A number of key positions, including the mayor, city manager, and executive positions at major corporations, were filled with new, energetic leaders. This new leadership shepherded the city through the process of developing a new vision for the city's downtown after the closure of a center-city mall. This effort was successful because "the right people in the right positions" were willing to work across sectors. The shift in leadership has not been without bumps, but the city's positive trajectory is tied to the overall willingness of leaders to work collaboratively.

Kalamazoo, Michigan

When 200 city staff members accepted an early retirement package, the median age and experience in city administration suddenly dropped. While there were challenges with loss of institutional knowledge, current city staff report that a new culture of creativity and collaboration has emerged. According to them, one of the most important aspects of this new culture is the fact that almost no one on staff remembers how things were done in "the good old days." All current staff came to their jobs understanding that the city was in a difficult situation and were willing to try new and innovative things to deal with that.

Syracuse, New York

CenterState Corporation for Economic Opportunity (CEO), the regional chamber of commerce and economic development organization for the city of Syracuse and the 12-county surrounding region, has recognized that a vibrant downtown Syracuse is critical to the success of its entire footprint. Its member businesses have come to realize that they can retain a strong workforce better if they are located in places that workers want to be, which has led them to choose downtown office space over suburban office parks. The Downtown Committee of Syracuse, a program of CenterState CEO, underscores the organization's commitment to building a strong downtown. New York State and other regional stakeholders have also invested heavily in the downtown to attract and retain local businesses. For example, the local utility company, National Grid, has created a grant program focusing on downtown development.

Develop, Attract, Retain, and Network Local Leadership

Leadership at the political, institutional, and corporate levels is critical for success. Cities that have been successful in revitalizing after decline frequently credit savvy leaders with guiding the city into a new era. Successful leaders have adopted a "networked" approach to governance—reaching out to their peers across sector boundaries—and have sought new ideas and ways of doing things. Some cities have worked to attract outside candidates for important community and economic development roles, recognizing that the expertise required for some of these positions cannot always be homegrown. This approach is in sharp contrast to the top-down regime style of the 1980s and 1990s, in which one leader managed a series of like-minded colleagues to control a city.

The example in Worcester demonstrates how a future-focused mind-set is important in moving the city forward. A city is more likely to succeed when the leadership has acknowledged the city's current, realistic condition and isn't wedded to doing things the old way. Sometimes, a catalytic event or hitting rock bottom pushed community leaders to such a realization. In Kalamazoo's case, mass early retirements made a new outlook possible.

Focus on Downtown and the Center City, Not Just the Region

Regional cooperation has emerged as an important tool for helping legacy cities of all sizes compete in a global economy. However, economic development strategies for SMLCs must reinforce downtowns and the central cities as the economic heart of their region. Nationwide, communities are recognizing that vibrant downtowns lead to strong regions. Young, creative professionals increasingly prefer downtown living and work options, and cities that provide those are better positioned to attract and retain this coveted demographic. (See the Syracuse case study to the left.)

Additionally, siting new projects in central cities served by bus lines makes them accessible to low-income workers who may



The city of Worcester is benefiting from energized new leadership.

photo: DenisTangneyJr./iStock



photo papabear/Stock

Walton Street is part of Armory Square, a district in downtown Syracuse, New York, that is undergoing renewal.

not have access to a car. When well-paying, lower-skilled jobs are located in outlying areas, access to transportation may prohibit some qualified workers from taking those jobs. Business siting is a particular challenge in SMLCs where many economic development efforts may be regionally focused. (See the Akron case study.) Additional incentives for businesses to locate in the central city may be useful, but an explicit downtown-first or city-first attitude may be even more important in correcting this imbalance so that outlying areas do not become the default option.

Work to Strengthen Local Businesses in a Manner That Addresses Generational Poverty

Successful SMLCs cannot tell a tale of two cities. For a true rebound, SMLCs must attract new talent and must invest in the economic health of current citizens. Generational poverty is an intractable problem in many SMLCs, and few have tackled the issue head on, though Syracuse, New York, is one that has. (See the Syracuse case study to the right.) All will need to if they are to build stronger communities and make their cities more attractive places to live and work.

Although SMLCs face challenges, many have an opportunity to reinvent themselves as more collaborative, creative, and equitable places to live and work. Charting a future for these places will require doing things differently than they have been done in the past, but many SMLCs are already demonstrating how embracing change can lead to positive outcomes.

Lavea Brachman is the executive director and a founder of the Greater Ohio Policy Center. **Torey Hollingsworth** is a researcher at the center. Contact them at LBrachman@greaterohio.org.

Endnotes

- ¹ See, for example, Alan Mallach and Lavea Brachman, *Regenerating America's Legacy Cities* (2013); and "Legacy Cities Partnership," a website of the Center for Community Solutions (<http://www.legacycities.org/>).
- ² SMLCs are defined here as cities with populations between 30,000 and 200,000 as of 2013, historical manufacturing bases (and not college towns), more than a 30-minute commute to major, strong-market cities such as New York City and Boston, and that experienced significant population loss between peak population in the mid-twentieth century and 2000.
- ³ Cities were evaluated based on percent change between 2000 and 2013 data for six indicators of urban stability and vitality: population change, median household income, unemployment, vacant properties, poverty, and attainment of a bachelor's degree. The study selected 65 SMLCs in seven states on the basis of (1) their current condition and (2) the direction of recent trends from 2000 to 2013, using the decennial censuses for peak population year (usually 1950, 1960, or 1970), 2000, and 2013 American Community Survey data.
- ⁴ This article is part of a longer report on SMLCs due out later this year in partnership with the Lincoln Institute of Land Policy.

Akron, Ohio

The city of Akron and its regional partners have worked together successfully to attract businesses to the region. Officials from the city, county, and regional chambers of commerce have created a partnership focused on regional job growth that has drawn foreign businesses to the area. But the city did not encourage businesses to locate downtown or within Akron proper. Consequently, suburban office and industrial parks have become the default location for many new employers, leading to transportation challenges for transit-dependent workers and increasing downtown office vacancy rates in the last five years. However, evidence suggests that new local leadership may deploy new strategies this year that include prioritizing downtown.

Syracuse, New York

Syracuse came to view generational poverty as a liability for the local business sector and government. Syracuse's poverty and inequality created a negative city image; the long-term costs of blight reduction and lost tax revenues were massive drags on the city's finances; and visible poverty in the city's urban core discouraged businesses from locating there. CenterState CEO took on the issue by creating the Work Train Collaborative, a workforce development program that aims to find good jobs for low-income workers while also training good employees for local businesses. CenterState CEO and grassroots organizing initiatives piloted a workforce development strategy that tied a redevelopment project near a local hospital to high-paying jobs and skills training. The program has since expanded from construction into health care jobs and has expanded its geographic reach.



photo DenisLangneyJr./Stock

With support, legacy cities like Syracuse can reverse decline.



Corey Trimmer is an energy auditor and building analyst for the HEAT squad.

photos Expressions by Donna

The Many Benefits of Western Vermont's HEAT Squad

Ludy Biddle

NEIGHBORWORKS OF WESTERN VERMONT

Making homes energy efficient not only saves money, it also improves health outcomes and stimulates the local economy.

In 2010, NeighborWorks of Western Vermont, a nonprofit housing agency located in West Rutland, Vermont, received a grant from the Department of Energy and started the HEAT Squad program. It was betting that low- and moderate-income homeowners would take on the job and cost of making energy improvements to their homes if they had access to three things:

1. A trusted, objective source of information on the new science and technology of efficiency measures that could also connect homeowners with local, trusted contractors
2. Low-cost energy audits
3. Affordable home-energy loans

As an advocate for low- and moderate-income households, NeighborWorks is always looking for ways to make homeownership affordable and sustainable. We work in Rutland County, the third-poorest county in Vermont, and were particularly determined to show the possibilities and impact of this endeavor in places where people said it couldn't be done.

Even before the ink was dry on a contract with Department of Energy (DOE), members of the newly formed HEAT Squad and five volunteers from the Shrewsbury, Vermont, Conservation Commission made a personal call to every neighbor in Shrewsbury, offering them a \$50 audit—much cheaper than the typical \$400 audit. The team also offered to help their neighbors understand and prioritize the results of the audit free of charge and promised them practical assistance with scheduling and monitoring the work of contractors.

Lastly, as a licensed lender and Community Development Finance Institution (CDFI), NeighborWorks was able to offer a low-cost, unsecured 10-year loan with an interest rate of approximately 5 percent, with some credit enhancement funding available to lower-income clients. For many homeowners who accepted these offers, their new energy bill and the cost of the loan combined was less than their old monthly energy bill. Forty percent of Shrewsbury's residents signed up for an audit, and the HEAT Squad was launched. To date NeighborWorks of Western Vermont has issued 306 loans with a total value of \$2.5 million, with not a single default.

Household and Regional Economic Benefits

In 2009 only 26 households in Rutland County went through with an energy retrofit. In subsequent years, with help from the HEAT Squad, working in partnership with Efficiency Vermont, 14 contractors, and many town energy groups, more than 4,000 homeowners have accepted a detailed audit, and more than 1,300 homeowners have completed the energy retrofit process, each achieving about a 30 percent reduction in energy use, or an average of \$900 a year savings (based on 2014 costs). The households have reduced their carbon output, on average, by 5,000 tons per household. The aggregate savings for Rutland County is more than \$1 million every year, which amounts to an ongoing grant to the economy.

The local economy has benefited in other ways as well. Contractors have earned more than \$9 million from HEAT Squad-induced energy retrofits, close to 10 times the \$182,000 earned in 2009. Sixty-two new jobs, names and addresses known, were created as contractors grew their companies to meet this demand. As the efficiency program expands, contractors and homeowners are

venturing into installations of heat pumps, solar panels, and other renewable-energy improvements to their homes.

A Boost for Sustainable Home Ownership

Prior to outreach by NeighborWorks of Western Vermont, few low- and moderate-income households in Rutland County were able to make energy-efficiency home modifications because the cost was prohibitive. More than 60 percent of HEAT Squad customers earn less than \$54,000 a year. It goes without saying that energy cost reductions, which can total as much as \$900 a year, are particularly meaningful to lower-income households. Indeed, that money sometimes allows a family to avoid mortgage delinquency or foreclosure.

Typically, HEAT Squad's clientele live in older homes (about half Vermont's homes were built before World War II) and maintenance is tough to keep up with. Like Sara, who felt like she lived in a three-sided house, these customers often do not feel physically able to make improvements to their homes themselves, nor can they afford to pay someone to do the work for them or find a lender willing to advance the money on a home that is perhaps financially underwater to begin with.

To address the problem, the HEAT Squad team drew on the experience of NeighborWorks of Western Vermont staff, which has been helping families in Addison, Bennington, and Rutland counties with health-and-safety home repairs since 1986. It uses the tried-and-true method embraced by most of the 250 NeighborWorks America organizations across the country: namely, it provides education, counseling, and technical assistance until the homeowner is secure in new, safe, healthy, and warm surroundings.

Health Benefits

Studies prove that asthma, which can be environmentally triggered, improves dramatically after home energy retrofits. Simple air sealing and insulation will keep rodents and water out of the house and improve air quality.

A recent study in the South Bronx followed clients 6, 12, and 18 months after they moved into "green" housing units and found significant improvements in their respiratory health: "Outcomes included decrease in continuous daily respiratory symptoms, asthma symptoms disrupting sleep in the past month ... and urgent visits to a healthcare professional ... Clinically relevant outcomes included fewer days with asthma symptoms, or episodes; fewer days of work, school or daycare missed and fewer emergency room visits."¹

A project in Seattle took families with children whose asthma attacks persisted despite prescription medicines and moved them into what were called Breathe Easy homes. Key features of these homes included airtight exterior construction and walls and insulated foundations and attics, which optimize moisture control. These severely asthmatic children had 63 percent more symptom-free days and a 66 percent reduction in the need for emergency care.² And, the families'

situations improved as their children's health improved: families were spared sleepless nights, lost work, and huge medical bills.

Collaboration Helps Assure Success

The HEAT Squad has almost as many partners in its work as it has customers, including town energy committees, contractors, and other civic groups. Foremost has been Efficiency Vermont, the state's efficiency utility, which manages the home performance contractors and dispenses important financial incentives to customers. Green Mountain Power, which supplies electricity in Vermont, has provided post-DOE funding to support operations and agreed to

on-bill repayment for customers who wish to pay their loan on their monthly utility bill for convenience. In 2014, the Vermont state treasurer provided post-DOE loan capital of \$2.5 million through the state's new local investment program, and recently Bank of America Merrill Lynch has rounded out the circle of investors with a private capital infusion of \$1.5 million.

NeighborWorks America has provided a grant to pilot the expansion and adaptation of the HEAT Squad to a NeighborWorks affiliate called Fahe, which provides similar services through a network of 57 agencies in five states of Appalachia. Work has begun with the Housing Development Alliance in Hazard, Kentucky, where, with the cutbacks in coal production, electricity costs are rising, and lower-income households that are already challenged will have even more pressure on their household budgets unless some costs can be reduced through energy savings.

NeighborWorks of Western Vermont and the HEAT Squad are subject to the perpetual challenge of finding the resources to continue operations, and 2016 is a pivotal year. Following the completion of the DOE grant period in 2014, the HEAT Squad began performing the

energy audits in-house using certified energy auditors and charging participating contractors project lead fees.

However, the secret to the program's success with so many customers is the labor-intensive education, counseling, and technical assistance offered, along with the CDFI-style underwriting of loans. Until such time as 20 percent (as opposed to today's 5 percent) of Vermonters are making energy retrofits, the model that gets homeowners, particularly low- and moderate-income homeowners, to the other side of these projects and gains them so many ancillary benefits is the HEAT Squad model. For it to continue, the HEAT Squad will need ongoing public support.

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Endnotes

¹ E. Garland et al., "Impact of LEED-Certified Affordable Housing on Asthma in the South Bronx," *Progressive Community Health Partnership* 7, no. 1 (Spring 2013): 29–37.

² "A New Prescription for Asthma Sufferers: Healthier Homes" (report, National Center for Healthy Housing), http://www.nchh.org/Portals/0/Contents/breathe_easy_r2.pdf.



"We might as well have been living in a three-sided house, our old farmhouse was so drafty and cold, but I never believed anything could be done about it until the HEAT Squad explained it all and did it all for us."

—Sara, an early HEAT Squad customer

Welcoming Immigrants and Refugees to Rhode Island

Kathleen Cloutier

DORCAS INTERNATIONAL INSTITUTE OF RHODE ISLAND



Students from Dorcas International's programs give feedback on the direction of the public education system.

A 95-year-old nonprofit shifts the emphasis from struggle to triumph.

Immigration and refugee issues have seized the public's attention in recent months. In Rhode Island, which has a sizable immigrant and refugee population, Dorcas International Institute of Rhode Island has been helping newcomers to feel at home—and long-time residents to welcome them—through interaction and an emphasis on positive narratives.

Dorcas International Institute of Rhode Island, a 95-year-old nonprofit located in the heart of South Providence, offers a wide range of programs to help integrate the state's sizable immigrant and refugee population. It supports all individuals who are working to overcome cultural, educational, economic, and language barriers, empowering them to achieve self-sufficiency and to participate actively in their community. We envision all people, including immigrants and refugees, having the opportunity to reach their greatest potential, engage with their community, and fully contribute their talents—expanding prosperity and well-being for everyone.

Rhode Island's Immigrant Population

As of 2013, Rhode Island was home to 135,972 immigrants, who represent nearly 13 percent of the population.¹ This makes Rhode Island second only to Massachusetts among New England states as a host to newcomers and puts Rhode Island among the 15 states with the highest percentage of immigrants.² These immigrants contribute mightily to the economy, both as consumers and employers. As consumers, Latinos' 2014 purchasing power in Rhode Island totaled \$2.8 billion, while that of Asians totaled \$1.1 billion.³

There's something inherently entrepreneurial about starting a new life in another country, which may be why immigrants tend to start businesses at a disproportionately higher rate than native-born Americans. As employers, foreign-born entrepreneurs accounted for 12.9 percent of all Rhode Island business owners in 2010.⁴ In the Providence metro area in 2013, that percentage was even higher: 24.5 percent for "Main Street" business owners.⁵ From 2006 to 2010, revenues from Rhode Island's new immigrant business owners accounted for 13 percent of the state's net business income.⁶ And immigrant businesses are providing jobs: in 2007, the last year

photo: Dorcas International Institute of Rhode Island

photo Courtesy the Rhode Island Historical Society



Activists at the International Institute of Rhode Island raise awareness of the plight of low-wage workers, circa 1929.

for which US census data is available, Rhode Island's Latino and Asian-owned businesses employed 5,726 people.⁷

While Rhode Island has not conducted a comprehensive economic development report specific to the state's refugee population, research in other states concludes that refugees also make a significant economic contribution to their communities. A 2014 study

Immigrants and refugees make vital contributions to Rhode Island's economy and culture, but often need help at first.

commissioned by the city of Columbus, Ohio, found that resettlement agencies spend about \$6 million a year, and from that investment, the surrounding region realizes an annual economic impact of \$1.6 billion, including nearly \$36 million in direct spending.⁸ In 2013 the Tennessee legislature's Fiscal Review Committee found that refugees had contributed almost twice as much in tax revenues as they had consumed in state-funded services over the past two decades.⁹

How Dorcas International Institute Helps

Immigrants and refugees make vital contributions to Rhode Island's economy and culture, but when they first arrive, they often need assistance. Dorcas International takes a two-pronged approach.

Wraparound Case Management

First, we provide a wide range of client-centered services and opportunities for newcomers based on our expertise in family literacy, adult education, workforce development, refugee resettlement, translation, US citizenship, and immigration legal services. We have integrated these services with wraparound case management (intensive, individualized service planning) to create a seamless continuum of support at each stage of our clients' integration. Our organization recognizes and respects the gifts and strengths of those we

serve: we see our work as an investment in a stronger and more connected community.

Here is an example of how wraparound services work: Marie U., originally from the Democratic Republic of Congo, arrived with her husband and twin sons in 2010. Her husband got a job with help from Dorcas International, while Marie learned English in our adult education center. We assisted with their children's school enrollment and health care access by providing translation services and a school liaison to facilitate the parents' full engagement in their sons' education. Volunteers mentored the family and helped orient them to American culture. Marie continued with her education, ultimately completed her high school equivalency exam, and enrolled in a training program we provide for careers in health care. We introduced Marie to the refugee community garden, where she eventually took on a leadership role. We later helped her prepare to become a US citizen, and using our immigration services, Marie was recently successful in petitioning to bring her mother and sister to Rhode Island.

Community Support

Secondly, we draw on the community to assist us with newcomer integration. In order to break down barriers, people must have meaningful opportunities for interaction with each other. At Dorcas International, we create these opportunities through our Welcoming Rhode Island initiative, whose objective is to bridge the divide between foreign-born and native-born Rhode Islanders in order to foster a more inclusive and welcoming environment. The initiative is staffed by volunteers.

Our Outreach Strategies

Dorcas International Institute has been extremely successful in developing community support through the use of outreach and education strategies that bring immigrants and community members together to increase their understanding and connection across differences in race, class, culture, language, national origin,

and more. We do that by providing information, education, and meaningful storytelling to those who do not always see the benefits of having immigrants and refugees in their community. We use these tools to reframe the local conversation about newcomers and attempt to shift people's perception of refugees and immigrants by defining them less by their struggles and more by their triumphs. We illustrate in very practical ways how welcoming our immigrant neighbors can be a force for economic growth.

Almost 100 immigrants and refugees have participated in My Story, Our Community.

We continuously collect and compile both qualitative and quantitative data regarding the benefits of immigration. This information goes into an annual report we issue to inform the Rhode Island public about the impact of our foreign-born population. In addition, we develop complementary publications as informative outreach tools for use at our agency-sponsored events and meetings. We also create "one-pagers" targeted to specific audiences, such as elected or appointed officials, business leaders, and employers. The research and data are also useful for social-media postings designed to stimulate further public discourse.

Faith groups and educators often ask for cultural competency training and/or information on the refugee resettlement process. We are currently transforming our agency website into a portal for information, resources, tool kits, and directories. Local educators, students, tourists, nonprofits, government agencies, and the community at large will soon have a single place at which they can find information on our foreign-born population, immigrant-owned businesses, cross-cultural competencies, and more.

The Importance of Stories

Although Dorcas International makes sure to have the most pertinent facts available to share, facts rarely change how people think and feel. In fact, the opposite is true: people tend to process facts differently based on their previously held understanding of a sub-

ject, especially when the topic is emotionally or politically charged. We have found that presenting facts to people who do not already agree with us does not change what they think. People have to be ready to hear our information and be primed to believe it in order to actually process it. We use personal stories to prepare a more fertile foundation for our information. Through stories, we get people to process, remember, and share our information.¹⁰

Dorcas International's annual My Story, Our Community project, conducted in partnership with Providence College's Global Studies Department, has proven a successful model for effective community storytelling. Through it, we have been able to put a human face on our compiled data. Each fall, Providence College students interview local immigrants and refugees, documenting their success stories and introducing these stories at the annual My Story, Our Community public event. Almost 100 immigrants and refugees have participated in the project to date, and we now plan to use a rotating selection of their stories and photos as a traveling exhibit to be publicly showcased in each of Rhode Island's 39 cities and towns, creating greater statewide understanding of and support for our new neighbors.

These efforts give a sense of Dorcas International's strategic approach to ensuring that immigrants and refugees can fully integrate, with equitable access to services, economic opportunity, education, civic engagement, and safe and connected communities.

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Endnotes

- ¹ "New Americans in Rhode Island," American Immigration Council, 2015, <http://www.immigrationpolicy.org/just-facts/new-americans-rhode-island>.
- ² Jens Manuel Krogstad and Michael Keegan, "15 States with the Highest Share of Immigrants in Their Population," Pew Research Center, 2015, <http://www.pewresearch.org/fact-tank/2014/05/14/15-states-with-the-highest-share-of-immigrants-in-their-population/>.
- ³ "New Americans in Rhode Island," American Immigration Council, 2015, <http://www.immigrationpolicy.org/just-facts/new-americans-rhode-island>.
- ⁴ Ibid.
- ⁵ Ibid.
- ⁶ Ibid.
- ⁷ Ibid.
- ⁸ Encarnacion Pyle, "Refugees Bring Economic Boost to Ohio, Supporters Say," *Columbus Dispatch*, September 18, 2015, <http://www.dispatch.com/content/stories/local/2015/09/17/refugees-impact-on-community.html>.
- ⁹ "Study: Refugees in TN Contribute More Than They Consume," *Tennessean*, via WBIR.com, November 13, 2013, <http://www.wbir.com/story/news/nation/2013/11/13/study-refugees-in-tn-contribute-more-than-they-consume/3514031/>.
- ¹⁰ Welcoming America's Reframing Refugees Messaging Toolkit; <http://www.welcomingrefugees.org/>.



photo Dorcas International Institute of Rhode Island

Participants map their educational goals and objectives.

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Reinventing Rural: Regional Rural Development in the Northern Forest

Joe Short

NORTHERN FOREST CENTER

Sustainable forestry and recreational tourism are the new economic forces in the Northern Forest.

The rural Northern Forest spans much of northern New England and upstate New York, a 30-million-acre swath of forest reaching 740 miles from the Atlantic coast of Maine to the shores of Lake Ontario. Historically, forest-based industries dominated the Northern Forest economy, but today the region is formulating new types of rural economy by combining the region's assets with leadership, human capital, and catalytic investments.

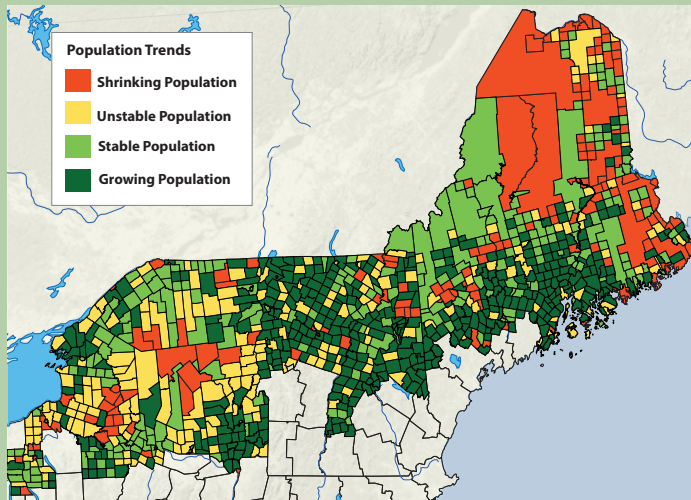
An Economy Built on Mills

In the 1800s, entrepreneurs coupled innovation, vision, and investment with the region's powerful rivers and vast forests to make the Northern Forest an industrial powerhouse. Jobs in sawmills, turning mills, paper mills, and other industrial operations attracted workers from around the world. Communities like Millinocket, Maine, and Berlin, New Hampshire, grew up around the mills and became the region's commercial and cultural centers. By the 1970s, manufacturing accounted for nearly 180,000 jobs in the region.¹

Current realities are dramatically different. As in the rest of the United States, manufacturing employment in the Northern Forest began a precipitous decline in the 1980s as efficiency grew and companies shifted production to lower-cost regions of the world. Since 1988, nearly 50 Northern Forest communities have experienced the permanent closure of one or more forest products mills and loss of the jobs associated with them.² Today, manufacturing of all types accounts for 86,000 jobs in the region—a 52 percent decline since 1970.³

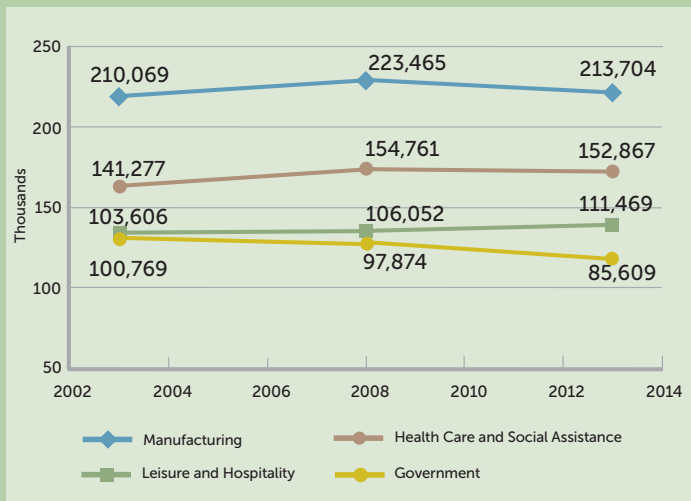


Northern Forest Population Trends: 1980–2010



Data source: US Decennial Census (1980, 1990, 2000, 2010).
Northern Forest Center map based on research and analysis by NH Center for Public Policy Studies, with assistance from Center for Community GIS.

Change in Employment in the Northern Forest Key Industries



Data Source: Bureau of Labor Statistics.
"Northern Forest Region Demographic Trends & Characteristics" (report, New Hampshire Center for Public Policy Studies, 2015).

These economic shifts have had lasting effects on people and communities. Median household income in many parts of the Northern Forest trails the national average, and well-paying manufacturing jobs have given way to employment in services, health care, and government.

Population has declined in many manufacturing-dependent communities as residents have left to seek employment. Conversely, many recreation-dependent communities are growing quickly. Yet across the board, the region is aging more quickly than the rest of the country and is having a hard time retaining young people. Between 2003 and 2013, the share of the population over the age of 65 increased by almost 22 percent in the region, while the number of individuals aged 25–34 declined by almost 6 percent.⁴ (See "Northern Forest Population Trends: 1980–2010.")

A New Question for a New Economy

While these realities are daunting, the natural-resource base that has always been the region's economic foundation remains in place. For many leaders working to address economic distress in the Northern Forest, the question now becomes "How do we optimize the use of our natural assets to revitalize our places?"

In November 2015, the Northern Forest Center and the Neil and Louise Tillotson Fund of the New Hampshire Charitable Foundation hosted the Northern Forest Symposium to address this question. Support from the Federal Reserve Bank of Boston and others enabled 130 community development leaders from across the Northern Forest to gather for three days of learning about shared community development challenges and—more importantly—successes in the region.

As community leaders shared their stories, a common theme emerged: new types of rural economy hold promise for the Northern Forest when the region's assets are combined with leadership, human capital, and catalytic investments. Consider Hardwick, Vermont, where fires devastated Main Street businesses and an important agricultural business. Community leaders worked with local lenders and residents to reopen businesses quickly and focused on increasing the town's "local food" markets. Today, 75 businesses are flourishing, employment is up by nearly 6 percent, and the average annual wage is 4 percent higher than the regional average.⁵

Other small towns have created and branded local promotional events like a hiking challenge (Saranac Lake, New York) or a jack-o'-lantern festival (Littleton, New Hampshire) to draw thousands of new visitors to their downtowns and the surrounding region. Similarly, new recreational assets and events for mountain bikers, cyclists, and off-road vehicle enthusiasts are supporting new businesses across the region. (See "Change in Employment in the Northern Forest Key Industries.")

Galvanizing Community Development

These stories and many others inspired Northern Forest Symposium participants: they show the tangible ways in which many Northern Forest communities are revitalizing their economies and building civic pride. A common ingredient in each success is a strong commitment of personal time—and often money—by a group of individuals. For community leaders and for supporters like the Federal Reserve Bank of Boston, the challenge is to understand how to

use the energy and innovation of the motivated few to catalyze community development momentum across the broader region.

Events like the symposium itself may be part of what will necessarily be a multifaceted answer. In connecting with peers from beyond their usual boundaries, symposium participants reported that they tapped into new inspiration and energy for their work, which they consider essential for sustaining their efforts in rural community development. “Meeting peers, potential partners, and mentors was priceless. ‘People with passion’ are often out ahead of most of their home communities. Being able to think with and learn from counterparts from across the region is energizing and sends everyone back to their home communities knowing they have a large network to call on,” said one participant.

In a region like the Northern Forest, which has a shared cultural and economic history, peer-to-peer sharing also accelerates the adoption of successful community development approaches. Through these established relationships and networks, leaders in a community dealing with a paper mill closure can now connect with people who experienced a similar loss elsewhere or at another time and respond more nimbly as a result of what they learn.

While there are good ideas to be replicated, participants at the symposium consistently concluded that there is no magic bullet for reinventing the Northern Forest economy. If anything, the group was united in the sense that economic development takes time and requires a willingness and ability to take risks, learn from failure, and keep a positive attitude.

The symposium highlighted the importance of small, easy wins to engage a community in its own economic revitalization and overcome pessimism. Small, authentic initiatives that bring a community together and demonstrate potential are a key way to build new leaders and set the stage for larger efforts. There is also work under way to get more people involved in these endeavors. Informed by the symposium and a recent strategic-planning process, the Northern Forest Center will work with a few communities in the region to test strategies aimed at attracting new residents—including people who can help fill the growing gap of 25- to 34-year-olds in the region.

Data alone might suggest a challenging economic road ahead for Northern Forest communities. What the numbers don’t reflect, however, is a region full of creative, energetic people dedicated to making a difference in their local economy. As the region charts its future, combining this human capital with the natural capital of the Northern Forest paints a much more promising picture.

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Endnotes

- ¹ “Social and Economic Overview of the Northern Forest Region” (report, Carsey Institute, October 2007), https://northernforest.org/images/resources/regional-economy-research/Carsey_NFSEL_Report_102007.pdf.
- ² Northern Forest Center data.
- ³ “Northern Forest Region Demographic Trends & Characteristics” (report, New Hampshire Center for Public Policy Studies, 2016).
- ⁴ Ibid.
- ⁵ Annie Gaillard and Sarah Waring, “The Hardwick Story: Using Food and Agriculture and Community as our Foundation” (Presentation, Northern Forest Symposium, November 2015), <https://northernforest.org/images/programs/regional-strategy/northern-forest-symposium/Gaillard-Waring-Hardwick-opt.pdf>.

Turning Natural Assets into Community Revitalization Success

Across the Northern Forest, a number of communities and businesses are using natural assets to revitalize local communities in innovative ways.

- The Model Neighborhood Wood Heat Initiative, which operates in Maine, New Hampshire, Vermont, and northern New York, has combined local wood with modern technology to create \$3.6 million in economic impact.⁶
- Vermont’s Kingdom Trails Bike Association drew nearly 70,000 mountain bike user visits in 2014, with each visit leaving \$100 in the regional economy.⁷
- A community-owned forest in Errol, New Hampshire, has generated \$3.7 million in timber sales through sustainable forest management and will net \$100,000 annually to the town budget over time.⁸
- Vermont’s investment in its working-lands economy has created 65 jobs and a 54 percent increase in average product output.⁹
- Essex County, New York, has become a hub for young entrepreneurs finding success in incubating viable agriculture businesses.¹⁰
- Coös County, New Hampshire, is now home to the largest interconnected ATV trail system in the Northeast, becoming a hub for thousands of visitors each summer.¹¹

⁶ “Save Money with Wood Pellets,” <https://northernforest.org/programs/modern-wood-heat/dashboard-regional>.

⁷ Tim Tierney, “Private Lands, Public Benefit: Kingdom Trails” (presentation, Northern Forest Symposium, November 2015), <https://northernforest.org/images/programs/regional-strategy/northern-forest-symposium/Tierney-Kingdom-Trails-opt.pdf>.

⁸ Elizabeth Reaves and Marta Ceroni, “Economic Impacts of the 13 Mile Woods Community Forest in Errol, New Hampshire” (report, Donella Meadows Institute, March 2013), <https://northernforest.org/programs/community-forests/13-mile-woods-community-forest>.

⁹ Lucy Leriche and Michael Snyder “Working Lands Enterprise Initiative” (presentation, Northern Forest Symposium, November 2015), <https://northernforest.org/images/programs/regional-strategy/northern-forest-symposium/Leriche-Snyder-Working-Lands-opt.pdf>.

¹⁰ Katie Petronis and Ashlee Kleinhammer, “Investing in Young Farmers” (presentation, Northern Forest Symposium, November 2015), <https://northernforest.org/images/programs/regional-strategy/northern-forest-symposium/Kleinhammer-Petronis-Young-Farmers-opt.pdf>.

¹¹ Pamela Laflamme, “ATVs in Coös County, NH: Challenges & Opportunities” (presentation, Northern Forest Symposium, November 2015), <https://northernforest.org/images/programs/regional-strategy/northern-forest-symposium/Laflamme-ATVs-in-Coos-County-opt.pdf>.

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"I had to go through the coach's roster and medical forms of each kid to ensure that they were eligible to play."
— Raul Saldivar



High School Internship Fundamentals

Claire Greene

FEDERAL RESERVE BANK OF BOSTON

At High Tech High, the junior-year internship is a graduation requirement for all students.

About 70 percent of US high schools offer work-based learning, according to the National Research Center for Career and Technical Education (NRCCTE).¹ Internships and other workplace programs for high school students come in many different shapes and sizes. For some schools, internships focus on preparation for a career, like baking or auto maintenance. At others, internships are a strategy to address a student's problems with attendance or study habits. At others, internships focus on encouraging participation in STEM fields.

A recent report by NRCCTE lists some elements of successful internships, among them that students reflect on their learning, that they complete a project that demonstrates learning, and that there are measureable outcomes of the internship.² This article describes the internships program at the five high schools in San Diego's High Tech High public charter school network. At these schools, project-based learning is central to the curriculum and students work intensively within a highly structured internship design. Within this structure, students have freedom to find workplaces and choose activities.

Internships as College Prep

At the five High Tech High schools, internships are an integral part of the curriculum. The junior-year internship is a graduation requirement for all students. Internships are not just for students who do not like school or who are not going on to college. They are not exclusively for students interested in STEM careers. Rob Riordan, a cofounder of High Tech High in 2000, identifies the inclusive nature of internships as central to the school's philosophy: "All High Tech High students end up in internships where they and their advisers think they will grow. Everyone has the opportunity to benefit."

And while "college prep" could be defined as a particular group of courses in the high school curriculum (biology, chemistry, physics, three years of a foreign language, etc.), the High Tech High experience shows that internships, too, can prepare students for

college. Research has found that among the challenges for first-generation college students is the initial feeling of not fitting in or of being ill-prepared for college work. Many High Tech High students, reporting on their internship experiences, describe overcoming initial fears or feelings of inadequacy. For example, Angel Mazzeo wrote in the 2015 student-published book *Ampersand*, "Over the course of a month, I had become far more confident about what I did and learned a valuable lesson to always be positive, no matter how bad things looked or seemed."³

High Tech High's Intensive Approach

At High Tech High, all juniors complete three- to four-week, full-time internships at workplaces including schools, hospitals, retail stores, restaurants, churches, media and marketing firms, fire and police departments, law firms, and research labs. Students receive course credit for their internships.

High Tech High is unusual in that mentors at the workplaces receive training in mentoring. Of 12 internship programs studied in the NRCCTE report mentioned above, High Tech High was the only program to include mentor training and a handbook for mentors as part of the program. There are specific expectations for mentors, for example, that they help the student plan a substantive project, including a formal proposal, within the first week of the internship.

Although the school has some recurring placements that about half the students use, many students find their own internships. Doing so prompts students to think about their networks. Students are guided to think about their connections through family and friends. They practice cold calls and informational interviews, which in turn helps them build new networks—for example, by cold calling a store at which they have shopped or a business in which they have an interest.

Chris Shannon, deputy director at the Federal Reserve Bank of Boston, works extensively with the Boston Fed's high school interns. She cited this aspect of High Tech High's program as potentially challenging for students, but also said that students could benefit from the freedom it gives them: "When students believe they have made a choice, they are more likely to succeed."

As is the case with many internship programs, High Tech High's internships are connected to the classroom. Classroom teachers, not internship coordinators, monitor students' activities and visit work-sites. Back at school, students reflect on their experiences within an academic framework. While internships often are seen as an entry point for STEM subjects, teacher Randy Scherer points out that there are many opportunities to connect internship experiences to the academic study of history and literature, for example, with readings about the early-20th-century labor movement. Students report on formal interviews with their mentors, create an internship portfolio, and use journal entries to create long-form, written work and the student-published book, *Ampersand*.

It is unusual for a high-school internship to involve full-time work. In the past, High Tech High internships followed a fairly typical model for high schools in the United States. Students worked at job sites two afternoons per week for a semester. But under that model, when students wrote about their most important high school experiences, internships did not come up. Instead, they tended to cite short, intense experiences. "We found this was not a life changing experience," Riordan said. So, in 2010, the school changed to the full-time, month-long intensive model.

Since then, students have had more opportunity to dig in to more complicated projects, to see projects through to completion, and to connect their experiences to their futures, Riordan says. Because the internships are full-time work, they are expected to produce substantive results, and students present what they have learned at the conclusion of the project. Students have transcribed interviews for attorneys, designed surfboards, presented results of medical research, and assisted in elementary school classrooms.

For example, Raul Saldivar interned with the High Tech High athletics director. He helped manage a soccer tournament:

"There were a lot of teams and a lot of coaches coming in to register their teams, so that meant a lot of people. I had to go through the coach's roster and medical forms of each kid to ensure that they were eligible to play. As the day went on, I had a number of different tasks—I moved boxes around, I used golf carts to deliver soccer balls to each station (because the tournament was huge—it had 22 soccer fields), and I helped with trophy presentations."⁴

Kush Kakaiya interned at Stalwart Communications, a public-relations company. He researched two clients:

"I researched practically everything there is to know about those companies. I had to research what each company is, what product they are selling, who their competitors are, and how can their social media platforms improve."⁵

A Portal into the Adult World

The educators at High Tech High emphasize that the school's internships are not about making a career choice or getting a start on a career. "Internships provide students with a glimpse of what life may be like beyond high school and a chance to develop a sense of agency in their identity and education," Scherer says.

One important goal is helping students understand the sometimes meandering path that people take to arrive at career satisfaction. As part of the formal interview with their mentors, students may find out that their mentors had never expected to go to college, or that they changed majors more than once, or that a first job out of school proved disappointing. "Students realize it's OK to go to college and not know exactly what they want to major in," Scherer says. "They also realize there are more careers than lawyer, doctor, police officer,

firefighter, and teacher. They get a glimpse of the different lives that might be out there."

In the Spring 2015 volume of the student-published book *Ampersand*, students Tyler Carter and Lea Ortiz described the power of their mentors' stories:

• Tyler: "Hearing my mentor, some[one] that I looked up to, say that they wished they went to college made me think that it was something I should rethink."⁶

• Lea: "This is something my mentor taught me: we all take different paths and make our own decisions. But at the end of the day, you have to chase what you believe in."⁷

Brianna Gomez, now a senior at Boston University, learned from her internship in a mayor's office that she was not interested in politics. "I'm more into human services. Even though politics isn't what I want to do, my internship helped me understand what I did want to do."

"We all take different paths and make our own decisions. But at the end of the day, you have to chase what you believe in."

— Lea Ortiz



Internships for Everyone

Research reported in the spring 2016 issue of *Communities & Banking* found that in summer 2013 and summer 2014, teens from affluent families were more likely to find summer employment than teens from low-income families.⁸ At High Tech High, 46 percent of students receive subsidized or free school lunch, compared to the 2012–2013 statewide average of 55 percent.⁹ These are students who, were they not attending High Tech High, might not have had the opportunity for an internship, with all the benefits an internship brings. "We are not teaching students to be architects," says Scherer. "We are helping students to see that they belong." Internships for everyone have the potential to level that playing field.

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Endnotes

¹ Corinne Alfeld et al. "Work-Based Learning Opportunities for High School Students" (report, National Research Center for Career and Technical Education, February 2013), http://www.nrccte.org/sites/default/files/publication-files/nrccte_work-based_learning.pdf.

² Ibid.

³ Angel Mazzeo, "Burned!" *Ampersand: The Student Journal of School & Work 7* (Spring 2015): 48.

⁴ Raul Saldivar, "The Responsibilities of an Athletic Director," *Ampersand: The Student Journal of School & Work 7* (Spring 2015): 108.

⁵ Kush Kakaiya, "Internship, a Hope for the Future," *Ampersand: The Student Journal of School & Work 7* (Spring 2015): 46.

⁶ Tyler Carter, "Oh, You're Going to College," *Ampersand: The Student Journal of School & Work 7* (Spring 2015): 28.

⁷ Lea Modelo Ortiz, "Don't You Think It's Time for a Change?" *Ampersand: The Student Journal of School & Work 7* (Spring 2015): 50.

⁸ Paul Harrington and Ishwar Khatiwada, "US Teens Want to Work," *Communities & Banking 27* no. 2 (Spring 2016): 9–11.

⁹ Motoko Rich, "Percentage of Poor Students in Public Schools Rises," *New York Times* (January 16, 2015), http://www.nytimes.com/2015/01/17/us/school-poverty-study-southern-education-foundation.html?_r=0.

Leveraging Technology to Boost Children's Savings Account (CSA) Programs



*Bahar Akman Imboden
and Yiming Shuang*
INVERSANT

Mobile and online technologies can help make college a possibility for low-income and minority families.

Encouraging families to save for their children's college education is increasingly championed as a way to address the educational attainment gap facing low-income and minority students. Research shows that resource and asset differences are the primary causes of the racial-ethnic attainment gap,¹ and that children with even only small amounts of school savings are three times more likely to enroll in college and four times more likely to graduate from college than those without savings.² Motivated by this potential for change, many communities, cities, and even entire states are establishing children's saving account (CSA) programs.³ CSAs are like traditional savings accounts, but they are typically established for children as early as at birth to allow the savings to grow over their lifetime. CSAs can also offer a variety of financial incentives: savings can be tax-free (in the case of 529 accounts) and can be augmented with matching deposits from the CSA program and its partners.

Seeking Scale

As CSA programs are maturing, practitioners are focusing on increasing their scalability and sustainability without raising administrative burdens and cost. They are also looking for better ways to reach those who would benefit from these programs the most: low-

to moderate-income households.⁴ At a recent national conference sponsored by the Federal Reserve Bank of St. Louis, practitioners agreed that web-based and mobile-phone technologies offer promising means of addressing these challenges by enabling low-cost but effective strategies to reach and serve the targeted population.

Using technology only became an option in recent years. In 2009, when Inversant, a community-based CSA program headquartered in Massachusetts, first began reaching out to low- and middle-income families, cellular phones and Internet were not commonly used among that population. The program had to rely on direct communication and outreach. This method was quite successful in getting families to establish CSAs, but it was expensive and time-consuming. Additionally, the scalability was weak: that is, it couldn't easily be expanded to serve larger populations.

National surveys show that now at least three-quarters of low-income Americans have access to Internet.

In recent years, however, Internet access and cell phone use has penetrated all income brackets. National surveys show that now at least three-quarters of low-income Americans have access to Internet (up from only 34 percent in 2000).⁵ Greater numbers of people are also accessing the Internet through smartphones, especially low-income individuals. Additionally, low-income families have been

forced to familiarize themselves with technology in order to access and take advantage of various financial and educational services, as more and more banking services, college application processes, and financial aid processes are conducted online. These developments mean that technology is now a more attractive solution for reaching larger scale and reducing costs.

Inversant's Innovations

Starting in 2012, Inversant gradually introduced and tested a series of new tech features on its participants: text-message reminders, email newsletters, and online sweepstakes. Inversant's teams use these technological communication and outreach methods to achieve various goals. Text messages are geared to motivate families to save regularly and to remind them of important college-related deadlines. The email newsletters are providing families with a college-focused financial education that complements the workshops' content. Sweepstakes were introduced to mimic the logic behind increasingly popular and successful prize-linked savings accounts.⁶ With the sweepstakes, participants are enticed by the opportunity to win some additional money for their savings accounts if they answer some questions. The results are very encouraging: what follows is what we've learned so far.

Text-Message Reminders

Knowing that text messaging is the most widely used basic feature of a cell phone (research shows that 97 percent of smartphone owners use text messaging),⁷ Inversant uses messaging to send reminders to save and to make reference to a monetary bonus participants can earn by saving regularly. Because Inversant helps families not only with financial preparation for college but with other aspects as well, it also uses text-message reminders to help keep students on track in their college application process. Leveraging insights from behavioral economics, the content of the text messages is carefully drafted to be simple, clear, positive, inclusive, and motivational. It is noteworthy that after participants started receiving text-message reminders, regular savers increased from 22.4 percent to 32.5 percent (a 10 percent increase).

Email Newsletters

Inversant introduced a series of monthly email newsletters designed to help parents better engage in saving and planning for college. These newsletters seek to break down the complex college preparation and application process to simple action steps. They provide information, positive reinforcement, and achievable goals (for instance, participants are reminded of the deadline to fill out taxes and urged to put some of their returns aside for their child's college

Text messages are geared to motivate families to save regularly and to remind them of important college-related deadlines.

savings), all designed to strengthen the belief that saving today—any saving—will help families ensure their children attain higher education and greater financial stability.⁸ Preliminary evaluation of the effectiveness of these newsletters shows that they improve participants' motivation to save. Participants who received newsletters and read them regularly saved on average \$274 per year more than those who did not access them.

Sweepstakes

Behavioral economists have shown that people are more attracted by the possibility of winning a large prize—although the chance of winning is quite low—than they are by the prospect of a sure reward that's much smaller in value. Thus lotteries are a more effective way to attract attention and reward positive behavior than a prize equally divided among all participants.⁹ With this knowledge, Inversant is experimenting with monthly sweepstakes to motivate ownership of the savings accounts and to encourage more savings. In order to win \$100, families are asked to fill out an easy online survey consisting of three to four questions. To make this exercise a win-win, Inversant designs the questions so that it can gather useful information



Some of Inversant's clients celebrate the money they have saved for college.

photos Inversant



photo: ijjian/iStock

Families that receive text reminders save more for their children's college education.

about the families it serves, such as the financial services they use, their knowledge level, and the struggles they face.

Inversant's data shows that sweepstakes are successful at motivating savings as well. While participants who do not have access to or who choose not to participate in the sweepstakes saved about \$350 a year, regular sweepstakes participants saved as much as \$670 per year. Among the 79 percent of families who provided us with email addresses, we found that 81 percent of them participated in our sweepstakes surveys and/or read our monthly newsletter. Achieving this level of online participation has encouraged us to offer more online features: we have created a bilingual online portal where families can access their personalized savings, a video library showcasing two-minute informational presentations on financial topics and the college application process, and various other online resources.

Evaluating Tech-Enabled Outreach

Our preliminary evaluation indicates that online outreach methods are successfully increasing engagement and investment in saving accounts. But it also shows that there might be some limitations to tech-driven solutions: face-to-face enrollment and orientation sessions may still be more effective at creating a trustful relationship with parents and instilling a sense of the importance of savings. More research is needed to determine how technology can best be used to supplement, and if it can effectively replace, the one-on-one exchange that is currently most effective for recruiting parents.

Inversant is not alone in experimenting with tech-driven solutions to increase scalability and sustainability of programs. EARN, a national nonprofit based in California and focused on family savings, and the City of Boston are also developing tech platforms able to serve large populations. This is a critical time, when exchange of knowledge and lessons learned can encourage healthy growth of the field. Nationally, the Corporation for Enterprise Development has been active in raising the profile of CSAs by hosting children's savings policy conferences and by launching the Campaign for Every Kid's Future, with the goal of raising the visibility of CSAs and ensuring that at least 1.4 million children have a savings account in their name by 2020. Regionally, the New England Children's

Savings Account Consortium, supported by the Federal Reserve Bank of Boston, sponsors quarterly meetings that bring together CSA practitioners. We are fortunate to have this opportunity to collaborate and learn from each other's experience.

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Endnotes

- ¹ Doris R. Entwisle, Karl L. Alexander, and Linda S. Olson, "First Grade and Educational Attainment by Age 22: A New Story," *American Journal of Sociology* 110, no. 5 (March 2005): 1458–1502. See also Mesmin Destin and Daphna Oyserman, "From Assets to School Outcomes: How Finances Shape Children's Perceived Possibilities and Intentions," *Psychological Science* 20, no. 4 (April 2009): 414–18.
- ² William Elliott, "Small-Dollar Children's Savings Accounts and Children's College Outcomes," *Children and Youth Services Review* 35, no. 3 (March 2013): 572–85.
- ³ You can find an up-to-date directory of all CSA programs at <http://cfed.org/programs/csa/directory/>.
- ⁴ Michal Grinstein-Weiss, Kristen Wagner, and Fred M. Ssewamala, "Saving and Asset Accumulation among Low-Income Families with Children in IDAs," *Children and Youth Services Review* 28, no. 2 (2005): 193–211.
- ⁵ Andrew Perrin and Maeve Duggan, "Americans' Internet Access: 2000–2015," (report, Pew Research Center, June 2015), http://www.pewinternet.org/files/2015/06/2015-06-26_internet-usage-across-demographics-discover_FINAL.pdf.
- ⁶ See the work of the Boston-based Doorway to Dreams Fund (D2D) on prize-linked savings, http://www.d2dfund.org/prize_linked_savings.
- ⁷ Aaron Smith et al., "U.S. Smartphone Use in 2015" (report, Pew Research Center, April 2015), http://www.pewinternet.org/files/2015/03/PI_Smartphones_0401151.pdf.
- ⁸ Although we encourage any level of saving, we make sure to explain clearly all the costs associated with higher education, as well as the financial aid families may be eligible for, so they have a better idea of the amount they should aspire to save.
- ⁹ Owain Service et al., "EAST: Four Simple Ways to Apply Behavioural Insights" (report, Behavioral Insights Ltd., 2014), http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf.

Supporting Children's Savings Accounts since 2013

For more information and resources, visit:
www.bostonfed.org/commdev/childrens-savings-accounts/index.htm

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Addressing Early Childhood Expulsions in Maine

Claire Berkowitz

MAINE CHILDREN'S ALLIANCE

A study commission looks for solutions to the problem of young children being suspended and even expelled for disruptive behavior.

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Science tells us that stable, consistent experiences and relationships early in life shape the architecture of the developing brain.¹ Since all future development is based on the strength of early foundations, a goal of the Maine Children's Alliance (MCA) is to ensure that all Maine children aged birth to eight have the opportunities for the positive experiences and relationships that are the building blocks of future success. Over the past year, MCA has focused on a growing problem: expulsion of very young children from school.

The Troubling Increase in Expulsions of the Very Young

In Maine, as in the country as a whole, there have been increased reports of children exhibiting challenging behaviors in the classroom and, as a result, child expulsion from those settings. Recent studies have indicated that children are being expelled from early care and education settings at alarmingly high rates. In 2005, the first nationwide study to focus specifically on preschool expulsion found that preschoolers were expelled at more than three times the rate of K-12 students.² Maine had the second-highest preschool expulsion rate in the country, with 14.73 preschool expulsions per 1,000 children enrolled.³

This phenomenon is particularly troubling given that research suggests that children who are suspended or expelled in the early school years may be more likely to experience negative educational and life outcomes.⁴ The consequences fall especially heavily on minorities: the Office for Civil Rights found that African-American children make up 18 percent of preschool enrollment, but 48 percent of preschoolers suspended more than once.⁵ Further, while Hispanic and African-American children combined represent 47 percent of all children in preschool, they represent 68 percent of preschoolers suspended multiple times.⁶ The gender disparity is also large: boys account for 79 percent of preschoolers suspended once and 82 percent of preschoolers suspended multiple times.⁷

Because of the troubling facts regarding expulsion in early care settings, the US Department of Health and Human Services and the US Department of Education released a joint policy statement,

"Policy Statement on Expulsion and Suspension Practices in Early Learning Settings." This statement encourages states to establish policies on expulsion and suspension of young children, applicable across settings, that promote children's social, emotional, and behavioral health and eliminate or severely limit the use of expulsion, suspension, and other exclusionary discipline practices.⁸ In addition, the Child Care Development Block Grant Act of 2014 requires states to provide consumer education information to families, the general public, and where applicable, providers. This information must include their policies regarding the social, emotional, and behavioral health of young children, which may include policies on expulsion of preschool-aged children.⁹ Finally, the proposed Head Start per-

formance standards set forth policies that limit the use of suspension and prohibit Early Head Start and Head Start programs from expelling children because of their behavior.¹⁰

Core Social and Emotional Skills

- Regulating behavior
- Developing empathy
- Building and maintaining relationships
- Coping and managing emotions



Efforts by the Maine Children's Alliance

In early 2015, in response to stories of increased expulsions, MCA invited stakeholders together to explore issues surrounding social and emotional development in children. The goal of both the initial meeting and subsequent meetings was to generate ideas for policies that could address and support the social and emotional development of young children, especially those who are already at a high risk of failure in social and academic environments. We know children's executive-function skills are affected by their relationships and early environment. Science also tells us that severe or repeated exposure to hardship or traumatic events—such as poverty, violence, abuse, or neglect—can cause toxic stress responses in children who lack supportive adults in their lives, with lifelong effects on health, learning, and behavior.¹¹ But we also know that timely and appropriate interventions can ameliorate these effects and change the course of children's development.

As a result of those important conversations and related advocacy efforts, the Maine Legislature's Education Committee established a study commission on the following charge:

This resolve creates the Study Commission on the Social Emotional Learning and Development of Maine's Young Children to promote the social emotional learning and development of young children and reduce expulsions in early child care and education settings in the State by making an inventory of policies, rules, funding and services regarding early child care and education in the State and making recommendations, including suggested legislation, to strengthen the support for young children's social emotional learning and development and to address young children's behavioral needs.¹²

The Committee has asked the Maine Children's Growth Council and Maine's Department of Education to gather additional data on the social and emotional development of children and to develop appropriate policy recommendations. MCA is working with the Growth Council and the Department of Education on this effort, which is also supported by three national early-childhood research organizations: the Ounce of Prevention Fund, the National Center for Children in Poverty at Columbia University, and Zero to Three. This exploration includes gathering information through a survey of Maine's licensed childcare providers, Head Start, and preschool teachers regarding the social and emotional needs of young children in early care settings. In addition to asking questions about the child care setting (center-based or family care, rural or urban, staffing ratios, etc.), the survey asks about the prevalence of challenging behaviors that interfere with a child's ability to play, learn, and get along with others and the practices used to address the behaviors. The results of this survey will provide Maine-specific information about exclusionary practices, staff perceptions of the prevalence of child behavior problems, and available supports to promote young children's social and emotional health and address behavioral problems.



Several characteristics of early care settings and child care programs are associated with an increased likelihood of expulsion, including large class size, high student-teacher ratios, longer program duration, poor teacher-student interaction, and teacher job stress.¹³ As the study commission's work proceeds, considerations for developing policies on expulsion and suspension of young children will include early childhood mental health consultation (ECMHC) models and professional development opportunities for providers and teachers. An evaluation of early childhood consultation programs found ECMHC to be an effective means for reducing the disruptive classroom behaviors that are likely causes of preschool expulsion.¹⁴ Early intervention is more likely to change behaviors, thereby avoiding exclusions from the classroom settings where children can learn the skills they need for success in school and life.

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Endnotes

- 1 J.P. Shonkoff and D.A. Phillips, *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Washington, DC: National Academy of Sciences, 2000).
- 2 Walter S. Gilliam, "Prekindergartners Left Behind: Expulsion Rates in State Prekindergarten Systems" (report, Yale University Child Study Center, May 2005), http://ziglercenter.yale.edu/publications/National%20Prek%20Study_expulsion_tcm350-34774_tcm350-284-32.pdf.
- 3 Ibid.
- 4 Maryam Adamu and Lauran Hogan, "Point of Entry: The Preschool-to-Prison Pipeline" (report, Center for American Progress, October 2015), <https://cdn.americanprogress.org/wp-content/uploads/2015/10/08000111/PointOfEntry-reportUPDATE.pdf>.
- 5 "Data Snapshot: School Discipline" (Civil Rights Data Collection Issue Brief no. 1, US Department of Education Office for Civil Rights, March 2014), <https://www2.ed.gov/about/offices/list/ocr/docs/crdc-discipline-snapshot.pdf>.
- 6 Ibid.
- 7 Ibid.
- 8 "Policy Statement on Expulsion and Suspension Policies in Early Childhood Settings" (policy statement, US Department of Health and Human Services and US Department of Education, December 2014), <http://www2.ed.gov/policy/gen/guid/school-discipline/policy-statement-ecce-expulsions-suspensions.pdf>.
- 9 See the Office of Child Care "CCDF [Child Care and Development Fund] Reauthorization" page for a link to FY 2016–2018 Final Plan Preprint for States and Territories, <http://www.acf.hhs.gov/programs/occc/ccdf-reauthorization>.
- 10 "Head Start Performance Standards" (proposed rule, Administration for Children and Families, June 2015), <https://www.federalregister.gov/articles/2015/06/19/2015-14379/head-start-performance-standards#h-31>.
- 11 "Excessive Stress Disrupts the Architecture of the Developing Brain" (working paper no. 3, National Scientific Council on the Developing Child, January 2014), http://developingchild.harvard.edu/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf.
- 12 "Resolve, To Establish the Study Commission on the Social Emotional Learning and Development of Maine's Young Children," 127th Maine Legislature, http://www.mainelegislature.org/legis/bills/bills_127th/billtexts/SP039001.asp.
- 13 Walter S. Gilliam, "Implementing Policies to Reduce the Likelihood of Preschool Expulsion" (Federal Child Development Policy Brief Advancing PK–3 no. 7, 2008), <http://fcd-us.org/sites/default/files/ExpulsionBriefImplementingPolicies.pdf>.
- 14 Walter S. Gilliam, "Early Childhood Consultation Partnership: Results of a Random-Controlled Evaluation" (report, Child Study Center, Yale School of Medicine, May 2007), http://www.chdi.org/files/3814/1202/7645/evaluation_of_cts_early_childhood_consultation_partnership.pdf.



The Economic Impacts of the US Ecological Restoration Sector

*Sophie Kelmenson, Todd BenDor,
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UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

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Government-mandated restoration work provides jobs and economic growth, often in low-income and rural areas.

Debate continues over the economic impacts of environmental regulations that require environmental restoration. One question under discussion is what impact environmental restoration, restoration-related conservation, and mitigation actions—activities that are part of what we term the “restoration economy”—have on economic output and employment. The literature indicates that the restoration industry not only protects public environmental goods but also contributes to national economic growth and employment.¹ But the debate has lacked broad-scale empirical research to back up these findings.² To address this lack, we conducted a national survey of businesses that participate in restoration work to estimate the total sales and number of jobs directly associated with the restoration economy and to provide a profile of this nascent sector in terms of workforce needs and growth potential.³

What Is the Restoration Economy?

Restoration, for our purposes, is any combination of activities that are intended to improve ecosystem health and that result in a functioning ecosystem that provides a suite of ecosystem services (the beneficial functions of ecological systems).⁴ A major challenge to quantifying the economic and employment impacts of the restoration industry is that it is spread across a diverse set of actors. The

economic activities that contribute to restoration include project planning, engineering, legal services, intermediate supply of inputs, earthmoving, forestry, and landscaping.

Restoration is driven by complex legal requirements and public-sector investment arrangements. There are at least 25 federal statutes driving ecological restoration. Estimating conservatively, these statutes have guided at least 134 restoration programs, which have led to more than 1,118 restoration projects since 2000, ranging from \$94,457 to \$1.5 billion per year in restoration-budgeted spending.⁵ There are restoration programs in every state, and these have led to at least 704 restoration projects since 2000.⁶ (These figures omit restoration for which spending and activity statistics are not easily accessible; there is evidence of much higher levels of restoration work.)

There is ample evidence that public and private investments driven by federal regulations stimulate economic output and employment in restoration-related industries, contributing growth and jobs to the national economy in the short term, as well as long-term value and cost savings. In order to produce economic output, firms purchase input materials and services from other sectors of the economy (e.g., construction equipment, tools, computers, and specialized services). Thus, other sectors are stimulated indirectly from the direct sales of restoration firms (indirect impact). Finally, workers employed directly by restoration-related firms and indirectly in other sectors that sell inputs to restoration firms spend earnings on goods and services needed to support their households (induced impacts). Restoration is not limited to any single industry; it comprises a mixture of industries. Assessing the direct, indirect,

and induced effects requires constructing a custom input–output model. We did this by weighting multipliers from multiple industries by their relative contribution to the restoration program or project of interest.

What Our Model Revealed

We estimate that the US restoration economy as a whole produced \$9.47 billion in economic output during 2014. This figure includes the value of all sales or revenue to firms engaged in all aspects of restoration work, from the environmental scientists and engineering companies that plan a wetland restoration project, to the construction firms hired to complete the work, to the greenhouses and nurseries that grow plants for the restoration. This activity directly generated 126,111 jobs and approximately \$6.27 billion in labor income. The average labor income per direct job

Restoration is driven by complex legal requirements and public-sector investment arrangements.

was \$49,734 in 2014 dollars, which represents a figure close to the median annual US wage. This direct restoration activity results in \$6.29 billion in value added to the US economy. Our analysis indicates that restoration activity generates approximately \$75,170 in output per job. While this figure is lower than some highly capital-intensive industries like oil extraction and manufacturing, it is only slightly smaller than construction (\$111,722) and is greater than retail (\$58,836), which are some of the sectors most impacted by land development regulations. And the indirect effect repre-

sents an additional 26,444 jobs and \$4.61 billion in output, while 68,843 jobs and \$10.76 billion in output are generated through household spending.

All included, we estimate that the restoration economy generates approximately 221,000 jobs and \$24.86 billion in economic output. The economic impact of \$24.8 billion contributes approximately \$1.02 billion to local and state coffers in tax revenues and an additional \$2.13 billion to the federal government. These tax impacts measure revenue collected due to restoration work and are not net of any public procurements that pay for restoration.

The largest segments of restoration work involve planning, design, and engineering activities and physical restoration—the actual earth moving and site construction. Agriculture and forestry, architectural, engineering and related services, and environmental and other technical consulting services sectors represent nearly 90 percent of the direct employment and half of the total jobs supported by the restoration economy. This indicates that restoration job creation results in high-income and low-income employment opportunities without many in the middle. Although contractors and workers may experience seasonal and interannual fluctuations in income and employment, preliminary evidence indicates that restoration jobs are well compensated in comparison to average wages.⁷

The top 10 highest-emplying occupations account for half of the jobs created directly. The top five occupations are in agriculture, and the next five are office and administrative jobs. These occupations range in typical education, work experience, on-the-job training, and compensation. (See “The 10 Highest-Employing Occupations with More Than 10 Employees.”) The highest-paid occupations include chief executives, engineers, managers, and lawyers. (See “The 10 Highest-Paying Occupations with More Than

The 10 Highest-Employing Occupations with More Than 10 Employees

Occupation	Number Employed	Typical Education Required	Typical Work Experience Required	Typical On-the-Job Training Received	Mean Hourly Wage	Mean Annual Income
Farm workers and laborers, crop, nursery, and greenhouse	39,830	*	*	*	\$10.01	\$20,820.00
Graders and sorters, agricultural products	3,705	less than high school	none	short-term on-the-job training	\$10.73	\$22,320.00
Agricultural equipment operators	2,770	*	*	*	\$13.70	\$28,490.00
Farm workers, farm, ranch, and aquaculture	2,586	*	*	*	\$12.10	\$25,160.00
Packers and packagers, hand	2,468	less than high school	none	short-term, on-the-job training	\$11.08	\$23,040.00
Office clerks, general	2,293	high school diploma or equivalent	none	short-term, on-the-job training	\$14.82	\$30,820.00
Accountants and auditors	2,130	bachelor's degree	none	none	\$35.42	\$73,670.00
Lawyers	2,043	doctoral or professional degree	none	none	\$64.17	\$133,470.00
Bookkeeping, accounting, and auditing clerks	1,954	high school diploma or equivalent	none	moderate-term, on-the-job training	\$18.30	\$38,070.00
General and operations managers	1,822	associate's degree	1–5 years	none	\$56.35	\$117,200.00

* Indicates no data available for this occupation.

Source: Authors' analysis of survey data and US Bureau of Labor Statistics Current Employment Statistics Program (January 2014).

10 Employees.”) Executives and engineers earn higher incomes than any of the 10 highest-employing occupations. Interestingly, lawyers appear on both the most-common and the highest-paid tables. The highest-paying jobs and jobs with fewer than 10 employees account for just over 3 percent of the total jobs analyzed.

The longevity of firms responding to our survey indicates a strong presence of mature companies that are looking to restoration work to expand their business. Their labor demand is multidimensional: they need workers with limited post-secondary education (e.g., in construction and landscaping industries), with a bachelor’s degree, and also those with an advanced degree in engineering.

Restoration tends to occur in rural, low-income areas, where job creation is especially beneficial.

Previous and repeated assessments of biodiversity markets⁸ and watershed investments and payments⁹ suggest a global trend of increasing investments in ecological restoration. Restoration investments appear to have particularly localized benefits, which can be attributed to the tendency for projects to employ local labor and materials. However, the different compensation standards across states affect labor costs, and the different rules governing collective bargaining and public procurement affect the shares of labor and equipment that are locally supplied.

Another benefit of restoration is that it tends to occur in rural and largely low-income areas, meaning job creation tends to benefit low-income populations. Many firms transitioning to restoration are moving away from industries that are declining in the United States, such as logging, so restoration may represent welcome and needed job alternatives in low-income areas. While more research is

needed, overall these trends provide useful insight into a growing restoration economy that creates a wide range of jobs.

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Endnotes

- ¹ For a small sampling of articles, see. A. Ghermandi et al., “Values of Natural and Human-made Wetlands: A Meta-analysis,” *Water Resources Research* 46, no. 12 (December 2010); R.H. Bark et al., “Habitat Preservation and Restoration: Do Homebuyers Have Preferences for Quality Habitat,” *Ecological Economics* 68, no. 5 (2009): 1465–75; and P.E.T. Edwards, A.E. Sutton-Grier, and G.E. Coyle, “Investing in Nature: Restoring Coastal Habitat: Blue Infrastructure and Green Job Creation,” *Marine Policy* no. 38 (2013): 65–7.
- ² Todd K. BenDor et al., “Defining and Evaluating the Ecological Restoration Economy,” *Restoration Ecology* 23, no. 3 (2015): 209–19.
- ³ Todd K. BenDor et al., “Estimating the Size and Impact of the Ecological Restoration Economy,” *PLoS ONE* 10, no. 6 (2015): <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0128339>.
- ⁴ “Ecosystems and Human Well-being: Biodiversity Synthesis,” (report, Millennium Ecosystem Assessment, 2005), <http://www.unep.org/maweb/documents/document.354.aspx.pdf>.
- ⁵ BenDor et al., “Defining and Evaluating the Ecological Restoration Economy.”
- ⁶ Ibid.
- ⁷ R. Shropshire and B. Wagner, “An Estimation of Montana’s Restoration Economy” (report, Montana Research and Analysis Bureau, September 2009), <http://ourfactsyourfuture.mt.gov/media/9321/restoration.pdf>.
- ⁸ See, for example, B. Madsen, N. Carroll, and K. Moore Brands, “State of Biodiversity Markets Report: Offset and Compensation Programs Worldwide” (report, Ecosystem Marketplace, July 2010), <http://www.ecosystemmarketplace.com/documents/acrobat/sbdrm.pdf>.
- ⁹ For example, G. Bennett, N. Carroll, and K. Hamilton, “Charting New Waters: State of Watershed Payments 2012” (report, Ecosystems Marketplace, 2013), http://www.forest-trends.org/documents/files/doc_3308.pdf.

The 10 Highest-Paying Occupations with More Than 10 Employees

Occupation	Numbers Employed	Typical Education	Typical Work Experience	Typical On-the-Job Training	Mean Hourly Wage	Mean Annual Income
Chief executives	216	bachelor’s degree	more than 5 years	none	\$86.88	\$180,700.00
Petroleum engineers	22	bachelor’s degree	none	none	\$70.92	\$147,520.00
Architectural and engineering managers	331	bachelor’s degree	more than 5 years	none	\$66.69	\$138,720.00
Marketing managers	183	bachelor’s degree	1–5 years	none	\$66.06	\$137,400.00
Natural sciences managers	96	bachelor’s degree	more than 5 years	none	\$65.60	\$136,450.00
Computer and information systems managers	462	bachelor’s degree	more than 5 years	none	\$65.52	\$136,280.00
Lawyers	2,043	doctoral or profes-	none	none	\$64.17	\$133,470.00
Financial managers	324	bachelor’s degree	more than 5 years	none	\$62.61	\$130,230.00
Sales managers	188	bachelor’s degree	1–5 years	none	\$60.60	\$126,040.00
Compensation and benefits managers	16	bachelor’s degree	1–5 years	none	\$57.05	\$118,670.00

* Indicates no data available for this occupation
Source: Authors’ analysis of survey data and US Bureau of Labor Statistics Current Employment Statistics Program (January 2014).

How Collaboration Creates Opportunity in Connecticut

Thomas Phillips

CAPITAL WORKFORCE PARTNERS

A combination of workforce experts and private-sector and government organizations are helping bring low-literacy adults and disconnected youth into the workforce.



photo skynesher/iStock

There is a well of hidden talent in New England, and through convening the region's workforce development boards in collaboration with education, economic development, and community-based partners, the people comprising this untapped resource are getting the attention they need to round out their skills and connect to sustainable careers. Employers often disregard individuals with low literacy rates, urban high school teens, and youth who have disconnected from school and work, viewing them as too risky to employ.

Yet these groups represent a significant portion of our population in New England. In 2014 in Connecticut alone, 15,329 adults were enrolled in adult education and were either unemployed or not receiving livable wages.¹ Connecticut's Department of Education noted in its 2014 statewide profile that more than 11,000 adults enrolled in classes in citizenship and English as a second language.² Over 30 percent of the youth population (ages 16–24) in Hartford lack a high school diploma or have a diploma but are not in college or working.³ (See "New England's Vulnerable Working-Age Population.") Converting these populations from existing, perceived liabilities to assets in the workforce should be an economic imperative. It is a heavy lift, however, and one that requires systemic changes through collaboration.

Collaboration—partnerships between the public and private sector—can support multiple strategies and approaches. Oz Griebel, the president and CEO of the MetroHartford Alliance, said it best in a recent *Hartford Business Journal* article: "At a time when every state faces economic volatility, underfunded retiree pension and healthcare benefits and growing municipal deficits, Connecticut's greatest advantage lies in the powerful combination of private-sector and government leaders working imaginatively and collaboratively to fix our state's finances and to restore private-sector confidence."⁴ Griebel pointed to Atlanta and Oklahoma City as examples of vibrant metro areas that benefit from strong private-public partnerships.

In north central Connecticut, Capital Workforce Partners and other collaborative organizations are using many approaches to stoke the pipeline with skilled talent in areas of current or expected business demand through a web of integrated partnerships.

Move UP! Collaborative

Move UP! is providing leadership in the development of a regional adult-literacy system in the capital region of Connecticut. The collaborative includes 26 adult-education providers, workforce training programs, and community colleges. Move UP!'s partners envision a regional adult-literacy system that offers:

- A coordinated continuum of literacy services that can meet the education and training needs of all adult learners.
- Connections to and support from supportive services such as childcare, counseling, and other social services.
- Career pathways that lead to jobs with sustainable wages.
- Coordination, communication, and collaboration among all providers of adult literacy services, employers, and business leaders.

The collaborative's leaders believe that coordination, networking, professional development, and other supports will create a stronger adult-literacy system and better outcomes for learners. Raising literacy levels is a first step toward improving hard and soft skills, the development of which will eventually position these individuals to be assets in the workforce.

Hartford Opportunity Youth Collaborative

The Hartford Opportunity Youth Collaborative includes leaders in education, youth development, and workforce development committed to addressing the needs of 16- to 24-year-olds who are not in school, not working, and who have no high school diploma. The collaborative helps them obtain their high school diploma, explore careers, continue their education, and eventually find employment.

With financial support from the Aspen Forum for Community Solutions, Hartford Foundation for Public Giving, and the Social Innovation Fund (as a subgrantee of Jobs for the Future), the collaborative has developed a full-scale, multiyear comprehensive plan. Several youth-centered programs are under way, including college and university partnerships, career-based contextualized learning, youth leadership development training, and Opportunity Works Hartford, a full-pathway approach that includes postsecondary/career bridging, technical training, and job experience. The Oppor-

tunity Works Hartford model will be built out to other cities and towns, as there are nearly 20,000 opportunity youth in Hartford County, with over 6,300 in the city of Hartford alone. Given the US decline in growth rate of working-age people, especially in New England, equipping our youth for the future is key.

Hartford Student Internship Program

In 2012, the superintendent of Hartford Public Schools convened a public-private work group charged with linking secondary education and workforce development. It includes the City of Hartford, Capital Workforce Partners, MetroHartford Alliance, and Connecticut Business and Industry Association, along with Hartford Public Schools. The program employs rigorous standards and offers meaningful internships at worksites that have included law firms, banks, insurance companies, health care institutions, nonprofits, and production facilities.

To date, nearly 200 high school juniors and seniors have benefited from rewarding after-school and summer internship opportunities. The Hartford Student Internship Program is part of the larger Summer Youth Employment Program, funded by the State of Connecticut, City of Hartford, and philanthropic organizations, which has provided an additional 1,980 teens from throughout the north central Connecticut region with summer jobs.

B.E.S.T. (Bringing Every Stakeholder Together) Summit

In November 2015, 175 key Connecticut leaders convened for a first-ever economic summit collectively organized by the Connecticut Conference of Municipalities (CCM), the Connecticut Business and Industry Association (CBIA), and the Connecticut AFL-CIO. These are unlikely bedfellows, more often seen lock-

ing horns over diverging ideologies and approaches to policy-related workforce issues. The three statewide organizations partnered for the first time, along with key business, government, labor, education, and social service leaders to brainstorm the best pathways for Connecticut's economic future. Summit participants proposed speaking with one coordinated voice to address unfunded state mandates and to press for more equitable funding formulas. They also supported more collaboration between education and business.

All of these initiatives share one common thread—collaboration. In the months ahead, it will take all community stakeholders working together to ensure there are enough people trained and ready to work in the jobs that are in demand today and will be in demand tomorrow. It will take public-private partnerships to guarantee that the education system is preparing youngsters with the mastery they will need to be successful in their career pathways. And it will take groups with differing ideologies continuing to convene until as much common ground can be identified as possible for progress.

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Endnotes

¹ "Adult Literacy," Move UP! website, <http://moveupct.org/adult-literacy>.

² Ibid.

³ "Our Youth," Hartford Opportunity Youth Collaborative, <http://youthreconnect.org/our-youth/>, and data from the 2009–2013 American Community Surveys, public-use files.

⁴ Oz Griebel, "Time for Public-Private Partnerships to Drive CT's Economic Growth, Development," *Hartford Business Journal*, November 23, 2015, <http://www.hartfordbusiness.com/article/20151123/PRINTEDITION/311209940/time-for-public-private-partnerships-to-drive-ct>.

New England's Vulnerable Working-Age Population

Amy Higgins

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Compared with other New England states, Connecticut has the second-highest percentage of foreign-born population as well as the second-highest percentage of population speaking a language at home other than English. Connecticut's unemployment rate for individuals ages 25–64 years old and lacking a high school degree is the highest in the region, as is the unemployment rate among those with an associate's degree or some college. Among the New England states, Connecticut has the lowest percentage of skill underutilization. Finally, the percentage of youth not employed and not attending school is the second-highest in the region.

State	Population	Percentage foreign born	Percentage speaking a language at home other than English, age 5 and up	Unemployment rate, age 16 and up*	Unemployment rate, ages 25–64, lacking a high school degree	Unemployment rate, ages 25–64, with a high school degree or GED	Unemployment rate, ages 25–64, with an associate's degree or some college	Unemployment rate, ages 25–64, with a bachelor's degree or higher	Percentage of skill underutilization, age 25 and up**	Percentage of youth ages 16–24 not in school and not working***
CT	3,596,677	13.7	21.8	6.6	13.0	9.0	7.1	3.8	17.6	10.6
ME	1,330,089	3.7	6.8	5.7	11.1	7.0	5.2	2.3	20.6	9.8
MA	6,745,408	15.7	22.6	5.8	11.9	8.6	6.6	3.3	17.7	9.8
NH	1,326,813	6.0	7.5	4.2	8.3	6.2	4.5	2.5	18.6	10.1
RI	1,055,173	13.4	21.0	7.7	12.5	9.7	6.5	3.0	19.0	12.4
VT	626,562	4.1	5.0	3.7	12.0	7.2	4.9	1.9	18.7	8.9

Data Sources: With the exceptions noted below, all statistics come from the One-Year 2014 American Community Survey Estimates.

*From the Bureau of Labor Statistics 2014 Local Area Unemployment tables, <http://www.bls.gov/lau/#tables>.

**From Migration Policy Institute data, <http://www.migrationpolicy.org/programs/data-hub/state-immigration-data-profiles>. Skill underutilization is defined as individuals with a college degree who are either unemployed or employed in low-skilled jobs.

***From Opportunity Nation Opportunity Index, <http://opportunityindex.org/#4.00/40.00/-97.00/>.

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Mapping New England

Coronary Heart Disease Death Rates

Amy Higgins

FEDERAL RESERVE BANK OF BOSTON

This map shows age-adjusted¹ coronary heart disease (CHD) death rates by county in New England. Heart disease is the leading cause of death in the United States, and CHD is one of the most common types of heart disease.² At the national level, as of 2011–2013, the CHD death rate was 105.7 per 100,000 individuals. The Office of Disease Prevention and Health Promotion's Healthy People initiative strives for a national CHD death rate of 100.8 by 2020.³

Massachusetts is the only state in the region where all counties have already met the Healthy People 2020 target rate of 100.8, and most county CHD death rates within New England are still lower than the national rate.

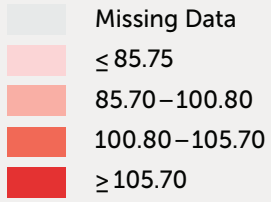
There are 16 counties within the region where county-level CHD death rates exceed the nation's CHD death rate. Most of these counties experience poverty rates greater than 10 percent. Franklin County, Vermont, and Washington County, Maine, have the highest CHD death rates in New England, recording 134 deaths per 100,000 individuals, and the poverty rate in these counties is 17.1 percent and 16.8 percent, respectively.

¹ Age adjustment is used to compare two or more populations, or in this case populations across counties. Age adjustment eliminates differences that are a direct result of age. See <http://www.cdc.gov/nchs/data/statnt/statnt20.pdf> for more details.

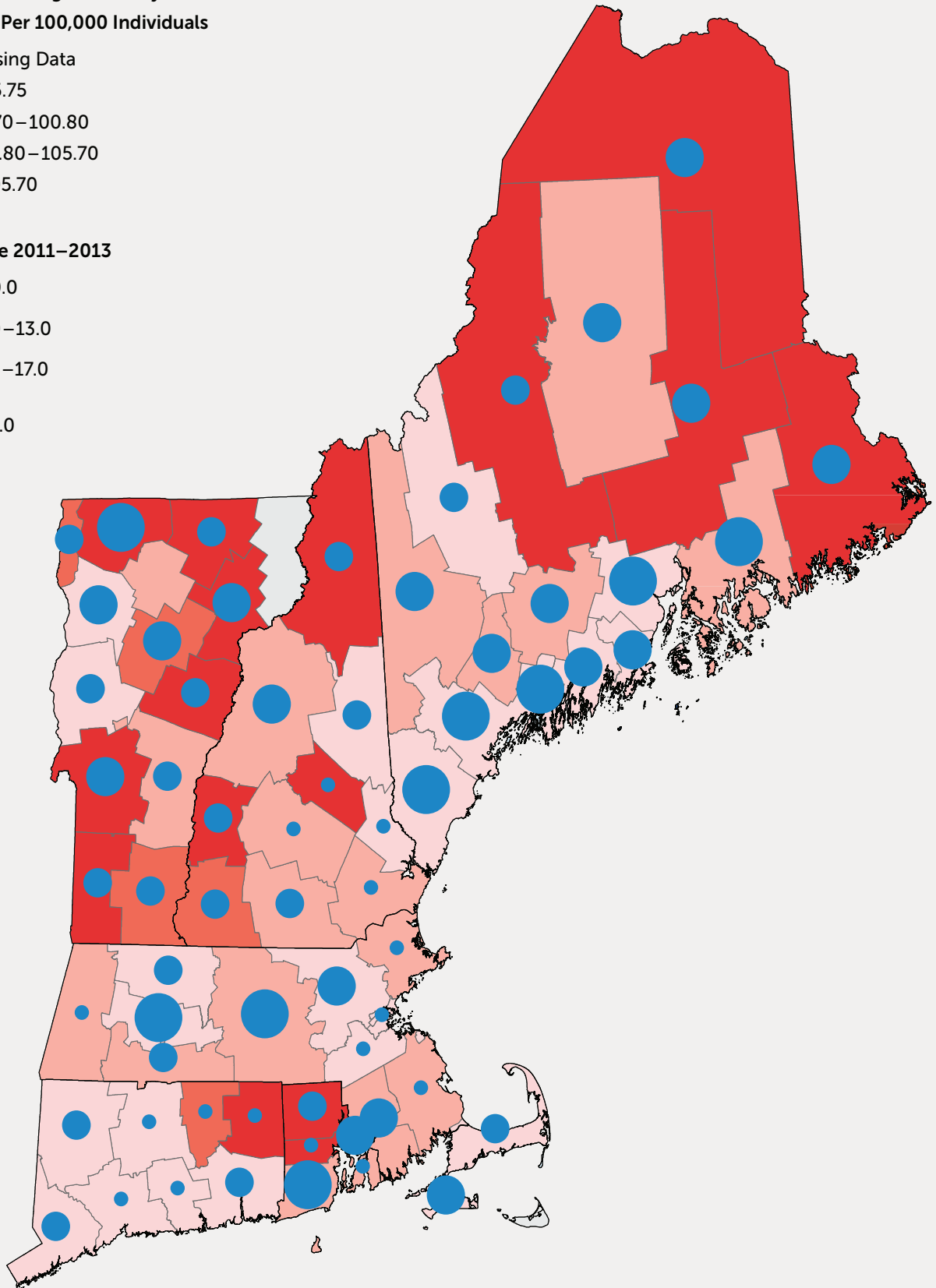
² "Heart Disease Facts," Centers for Disease Control and Prevention, August 10, 2015, <http://www.cdc.gov/heartdisease/facts.htm>.

³ See "About Healthy People," <http://www.healthypeople.gov/2020/About-Healthy-People>.

**2011–2013 Average Coronary Heart Disease
Death Rate Per 100,000 Individuals**



Poverty Rate 2011–2013





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