

## GOAL #1

# Growth and Prosperity

*Our economy grows at a rate which results in an improved quality of life for all.*

Nassau and Suffolk's economy continues to expand, but not by enough or in the types of industries to raise standards of living for everyone.

Nearly every indicator charting Long Island's economy since the turn of the century tells a similar story. Nassau and Suffolk's economy continues to expand, but not by enough or in the types of industries to raise standards of living for everyone. Gross domestic product, the broadest measure of how much wealth and income the economy is producing, has expanded at a relatively modest pace, and less than the U.S. as a whole. Without robust growth in GDP, it is hard to raise

incomes or pay for public services. The number of jobs on Long Island has similarly grown at a slow rate, limiting opportunities for both those entering the workforce and those seeking to advance their careers. Job growth is also an indicator of how much businesses are investing in Long Island, and how much they are contributing to the local tax base, an important factor in holding down residential property taxes.

One of Long Island's main challenges is to grow one or more export industries that can bring investment and high-wage jobs. It's telling that the three industry clusters that have provided most of Long Island's job growth in the last sixteen years—regional recreation, health services and construction—are driven more by spending from people who live on the island than goods or services that are sold to other parts of the world. To be sure, visitors and tourists contribute to growth in hotels, restaurants and recreation; hospitals and health care companies get some of their business from New York City and elsewhere, and construction includes buildings and infrastructure for new businesses and residents. They are also vital parts of a diverse economy that provide jobs and services necessary to maintain a high quality of life and keep the rest of the economy working.

But they do not grow the economy and incomes in the same way as export sectors like manufacturing, finance or technology that bring in new wealth to the island by selling goods and services to other regions. Sectors which show the most promise include biomedicine, finance, business services and research & development. Financial and business services are already relatively large





industries and continue to grow, although at a modest pace. Biomedicine is small in terms of employment, but has grown substantially over the last six years. Employment in research & development has been flat since 2010, but is a sizable industry cluster that can support growth in other industries. Other industry clusters, manufacturing and information & communication, are shrinking but are still important sources of high-wage jobs.

Slow wage growth is partly attributable to the industries where jobs have grown. The recreation industry cluster largely consists of low-wage jobs, and other growing industries are mixed. But wage growth has been slow nationally as well, and achieving a higher-wage economy is likely to require outperforming the U.S.

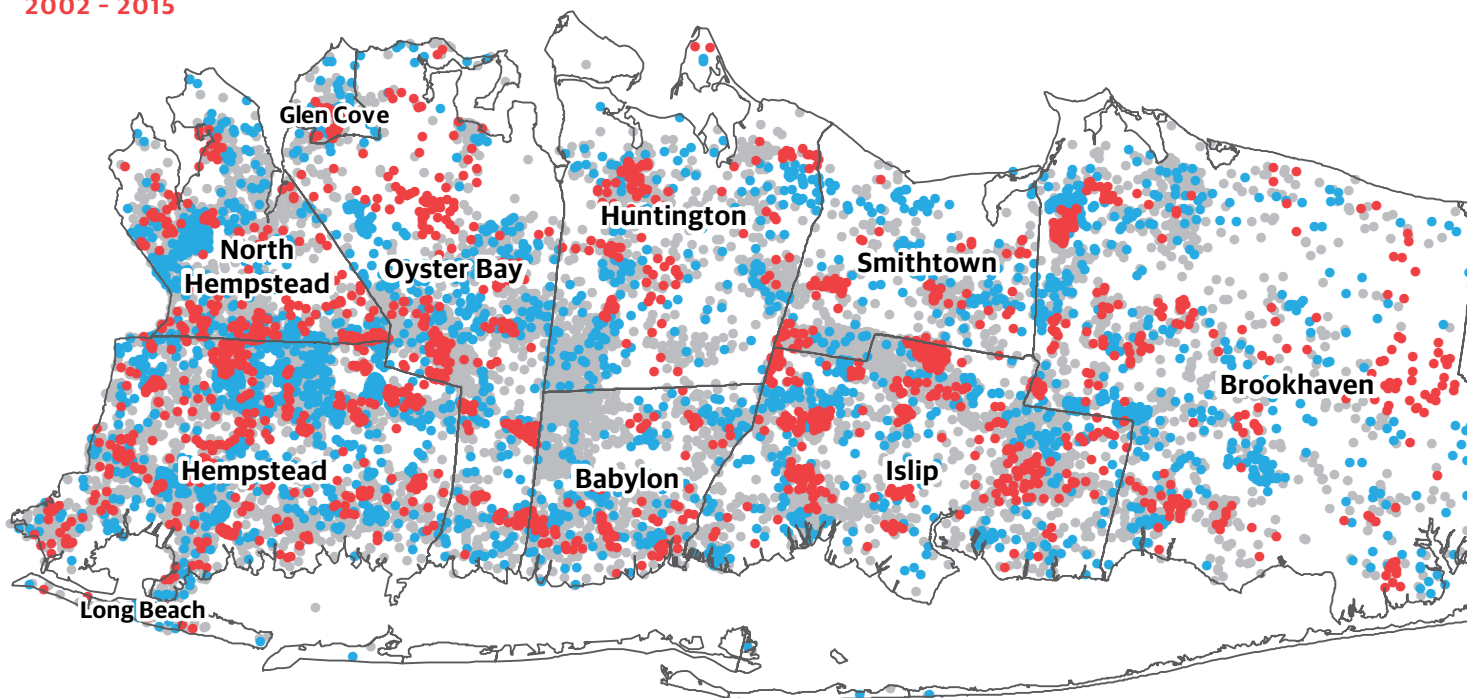
A large part of Long Island's economy is driven by its connection to New York City, and looking solely at businesses and jobs located in Nassau and Suffolk misses the contribution of wages from people who commute to jobs in Manhattan, Queens and other parts of the New York region. In 2011, 30% of Nassau's workforce and 11% of Suffolk's commuted to jobs in New York City. They accounted for 34% and 14%, respectively, of all income earned by residents of the two counties. Those shares have almost certainly gone up in the last five years as job growth in New York City has far outpaced growth on Long Island. And once East Side Access on the Long Island Rail Road is completed, those shares are likely to rise even further.



That connection to New York City is likely part of the reason that Long Island has done better than suburban New Jersey or Connecticut that have somewhat weaker ties. While sometimes viewed as a source of dependency, strengthening ties to New York City should be complementary to expanding jobs and businesses within Nassau and Suffolk. Career and business opportunities from the city can help support job growth on the island, and be an important source of income growth.

Collectively, these trends have resulted in relatively slow growth and widening disparities in household income. Like the nation and New York State, but to an even greater degree, income growth over the last decade has been almost entirely in high-income households.

## CHANGE IN ALL JOBS ON LONG ISLAND, 2002 - 2015



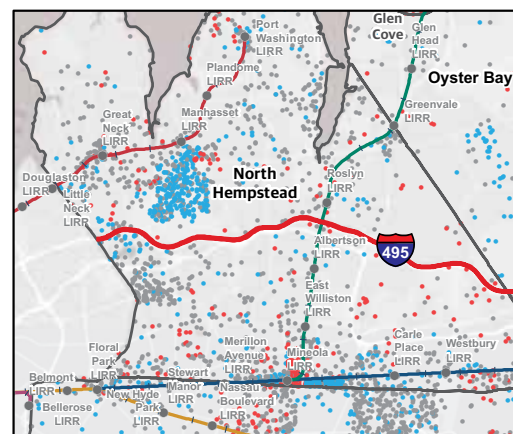
1 dot • = 100 jobs per Census block group

• = decline in number of jobs

• = increase in number of jobs

• = number of jobs that stayed the same

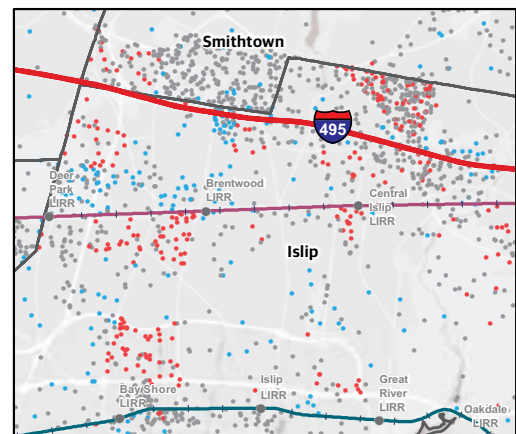
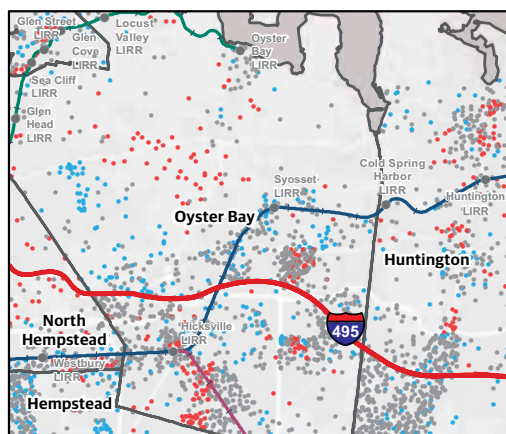
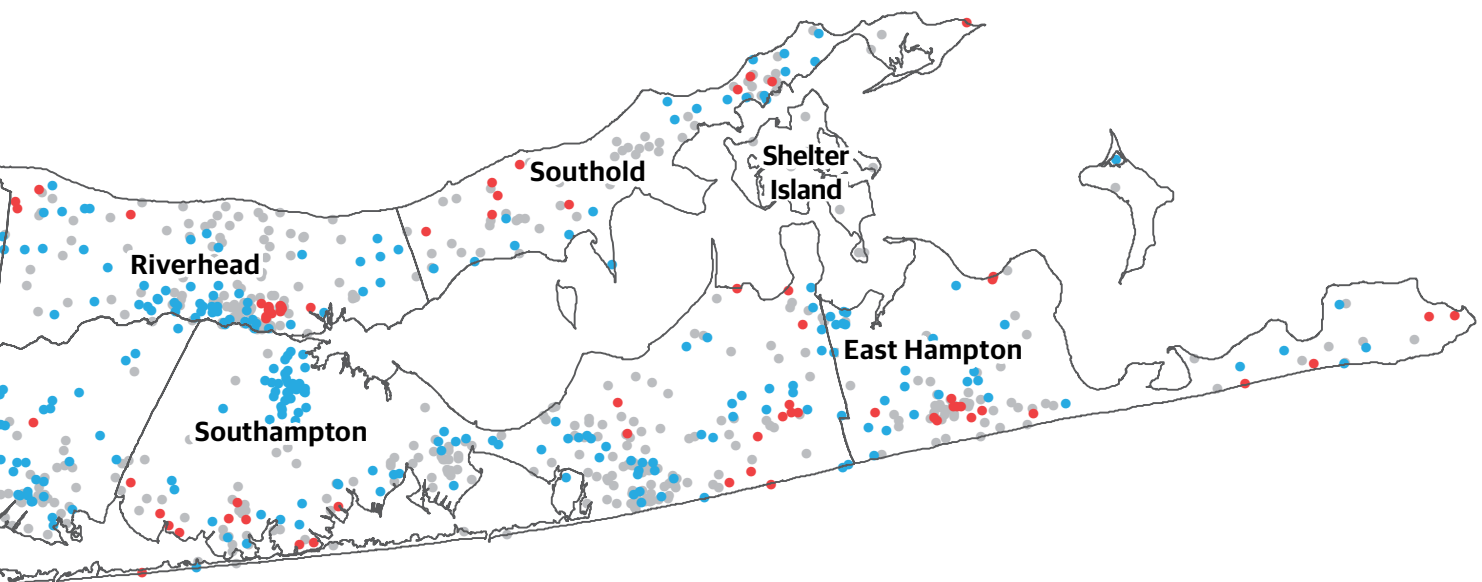
Data source: Longitudinal Employer-Household Dynamics,  
U.S. Census, via Regional Plan Association.  
Map prepared by Center for Urban Research, CUNY Graduate Center.





Future growth and prosperity will depend on how well Long Island adapts to a global economy that favors diverse urban areas with walkable, mixed-use downtowns. Nassau and Suffolk have a number of assets to make that transition—a highly educated workforce, world-renowned research institutions, natural beauty and proximity to New York City. It also has latent potential in its network of town and village centers linked by an extensive commuter rail network. For example, a 2017 study by George Washington University and Regional Plan Association found 14 regionally significant, walkable centers (“WalkUps”) that had the attributes for attracting high-value economic activity—places ranging from downtown Long Beach to Riverhead—as well as 12 emerging and potential centers.\*

\* Center for Real Estate and Urban Analysis, George Washington University, with Regional Plan Association, *The Wake Up WalkUp* Call: New York, April 2017





Long Island has underperformed the national economy in the first part of the 21st century.

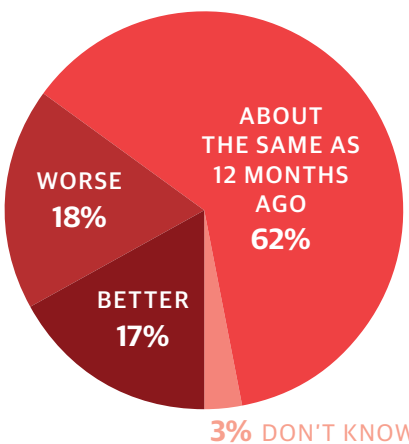
Long Island's \$194 billion economy has been expanding by an average of 1.2% per year since 2000. That's slower than the national average of 1.6% per year, which itself is relatively slow by historical standards. The period included two recessions—the first after the dot.com bubble burst in 2001, and the second after the housing bubble burst in 2007. Long Island generally tracked the nation, but did not grow nearly as fast from 2004-2007 and from 2010-2014. Unlike the 1980s and

1990s, when there was a clear pattern of national economic growth moving to the south and west, recent growth patterns have been more complex with stronger growth in major metropolitan areas in the Northeast as well as the Sun Belt.

Long Island's gross domestic product also grew slightly slower than the GDP of the New York metropolitan region, which grew by 1.3% during this period, with the strength of New York City's economy balancing weakness in Connecticut and New Jersey.

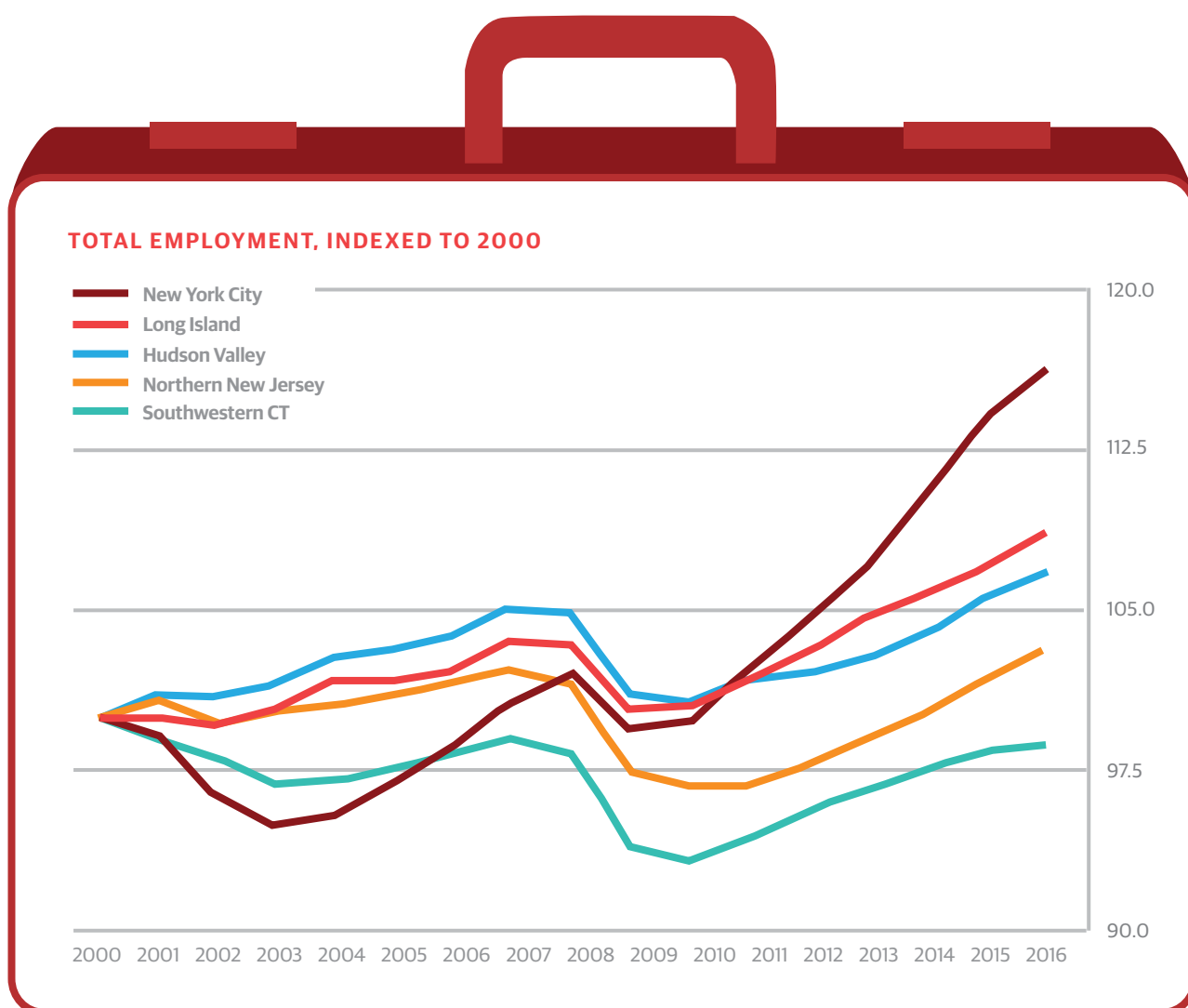


Would you say that the economy is better, worse, or about the same as it was 12 months ago?



Numbers may not add to 100% due to rounding.  
Source: 2017 Long Island Index survey





Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages- Average Annual Employment

Jobs are growing slowly on Long Island compared to New York City, but faster than other suburbs

Job growth picked up steam on Long Island following the 2007-2009 recession. In the last seven years, Long Island has added 100,000 jobs, an increase of 8%. By contrast, jobs grew by only 4% in the seven years prior to the recession. Part of the reason for the stronger growth since 2009 was catching up to pent up demand. Another likely cause is increased income from Long Islanders who work in New York City, who earn more on average than people working in jobs located on Long Island and create jobs in restaurants, retail, real estate and other industries when they spend those earnings back home. Jobs in New York City barely grew at all from 2000-2007 but have expanded by 17% since 2009, more than twice as fast as Long Island jobs.

Over the full period from 2000-2016, the number of jobs in Long Island grew by 9%, a far cry from New York City's 16% growth but well above the other suburban parts of the New York region. Long Island's relative strength compared to other suburbs could be due to a number of factors—its educated workforce, its closer ties to NYC economy and its particular mix of industries. Jobs in Suffolk County grew by 12%, much faster than jobs in Nassau County, which grew by 5%.

On an annual basis, jobs have grown by 0.5% per year since 2000, a slower rate than the 0.8% annual growth in the 1990s, a decade that began with an even deeper recession than the 2007-2009 downturn.



## Where people live by industry:

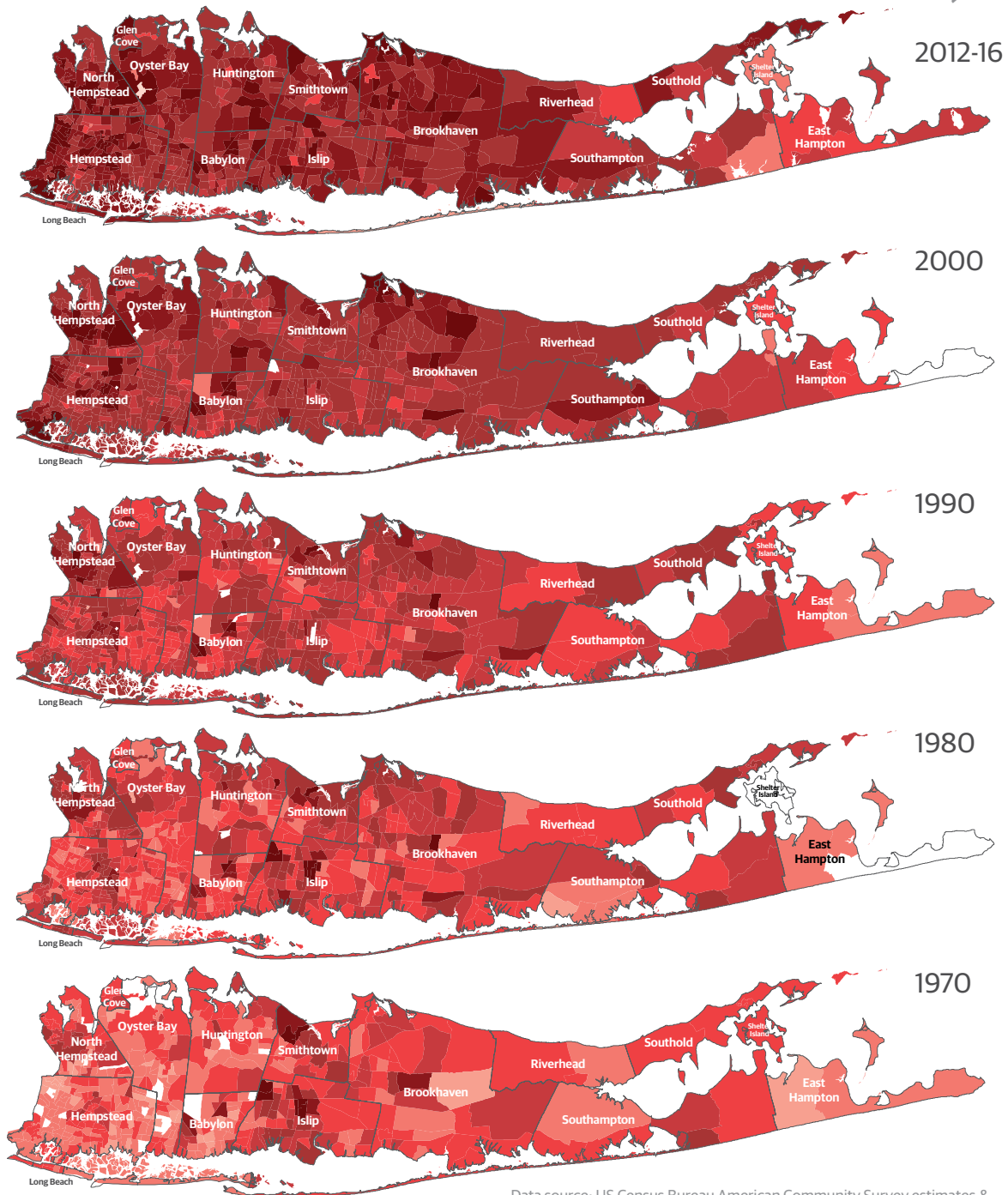
**HEALTH CARE/SOCIAL SERVICES**

by Census track, from 1970 to 2012-16

(Blank areas = no population in the mapped category)

Employed in health care/social services  
as % of employed population age 16+

less than 1% 1% - 2% 2% - 3% 3% - 5% 5% - 7.5% 7.5% - 10% 10% - 15% 15% - 20% 20% or more



Data source: US Census Bureau American Community Survey estimates & National Historical GIS via Minnesota Population Center, University of Minnesota. Maps prepared by Center for Urban Research, CUNY Graduate Center.

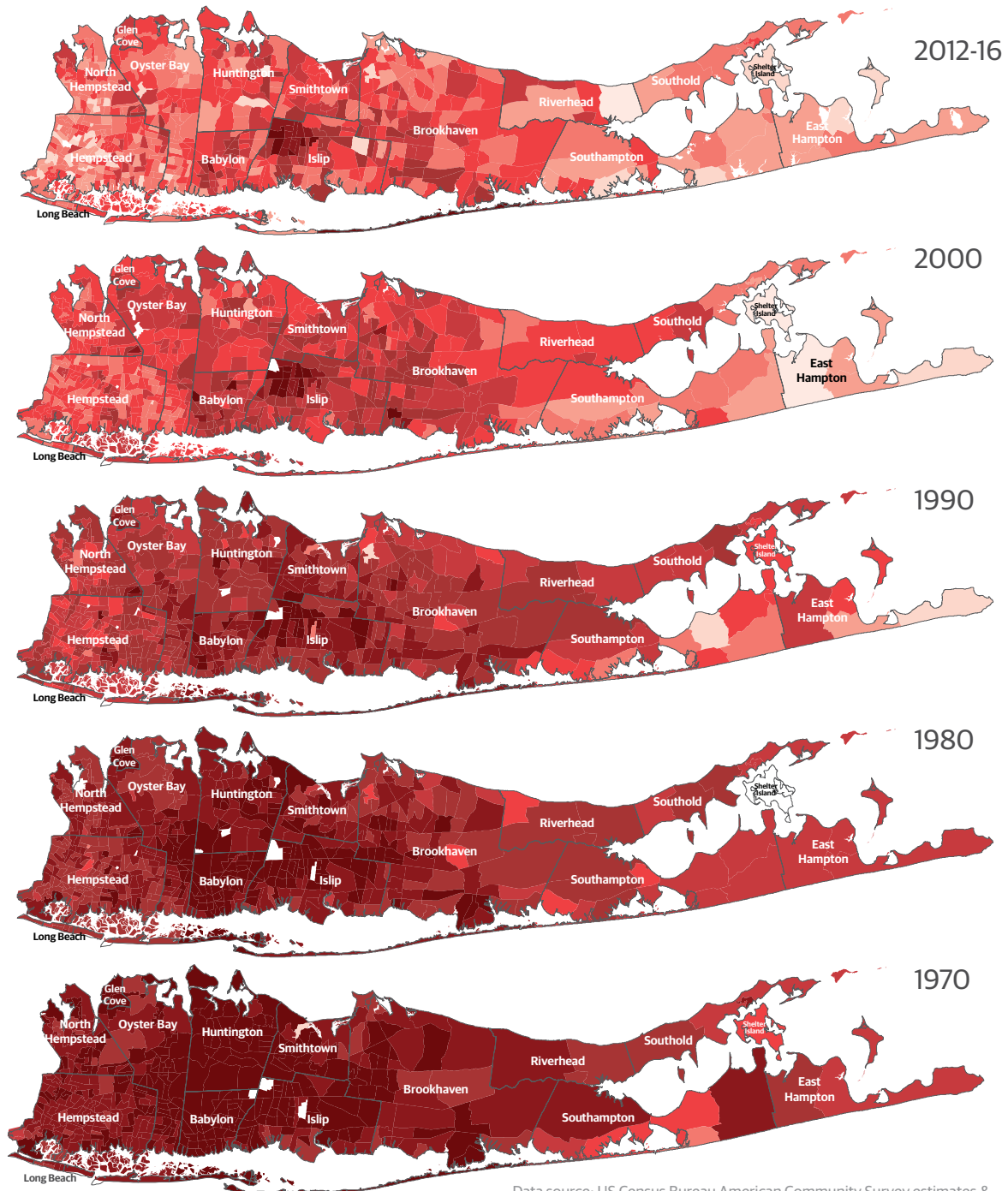
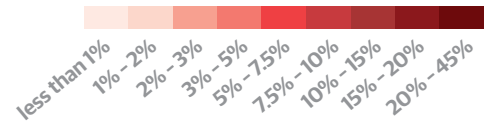


## Where people live by industry:

**MANUFACTURING**

by Census tract, from 1970 to 2012-16

(Blank areas = no population in the mapped category)

Employed in manufacturing  
as % of employed population age 16+

Data source: US Census Bureau American Community Survey estimates & National Historical GIS via Minnesota Population Center, University of Minnesota. Maps prepared by Center for Urban Research, CUNY Graduate Center.



## LESSONS LEARNED BY KEVIN LAW

# The Key to Growing our Economy

Long Island is cultivating a world-class research corridor that spans from Eastern Suffolk County into Manhattan. Institutions such as Brookhaven National Laboratory, Stony Brook University, Cold Spring Harbor Laboratory, Hofstra University and Northwell Health are at the forefront of scientific discovery and boast a highly-skilled, educated workforce galvanized to grow our economy to greater prosperity.

We all share the goal of our economy growing at a rate which results in an improved quality of life for everyone. Our region has a number of unique, enviable assets that provide us with a distinct advantage in developing an ecosystem of ideas and advanced technologies that will propel our 21st century economy forward.

Long Island is capable of becoming the East Coast capital of innovation. In order to achieve these heights, we need to continue investing public and private dollars into the physical and intellectual infrastructure essential to this vision while also taking additional steps to improve the region's business climate, keep and attract young professionals and support the universities and facilities sustaining our economic progress.

*Mr. Law is the President and Chief Executive Officer of the Long Island Association.*

## Wages are growing on a par with the national economy.

The average wage for jobs located in Nassau or Suffolk grew by 9.5% from 2001 to 2016, about the same as the 9.6% recorded for the United States as a whole and slightly more than the 8.9% growth experienced in the 1990s. It is important to note that this mean average is computed by dividing all wages by all workers. The median wage, which shows how much a worker who is exactly in the middle of the wage

distribution makes, is unattainable from available data and would likely show a much slower rate of growth. Both nationally and regionally, wage increases have been concentrated at the top of the wage scale and median wages have risen much more slowly than mean average wages.

Most of this wage growth occurred before the 2007-2009 recession, and it wasn't until 2015 that wages surpassed their 2007 peak. This mirrored the national pattern, which also surpassed its pre-recession peak in 2015.

The divide in wages by type of job plays out geographically as well. Manhattan, where jobs have always paid much more than jobs on Long Island, grew by 12.3%, considerably faster than on Long Island. But Long Island did outpace Westchester County, which has a more similar job profile to Nassau and Suffolk than to Manhattan. Westchester wages grew by 5.5%, just more than half the rate as on Long Island.

## Since 2010, the biggest job generators on Long Island have been recreation, construction and health services.

Since emerging from the recession, 80% of Long Island's job growth has been generated by three industry clusters—regional recreation, construction and health care. Recreation, which includes restaurants, hotels, arts and culture and leisure activities, added 25,200 jobs, growing by 23% in just six years. Construction grew by 19,500 jobs, or 26%, while health services added 14,000 jobs and grew by 10%.

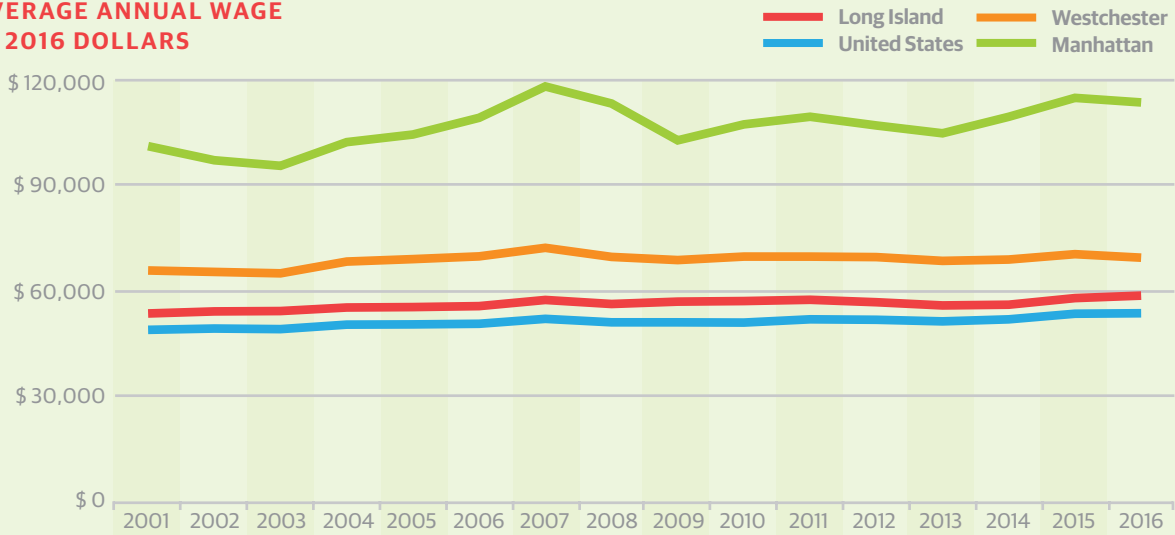
Recreation and health care have been growth sectors for some time. The economic recovery boosted restaurants and other leisure activities as people had more discretionary income to spend. Health services are driven by an aging population and growing demand. Construction is a cyclical industry that has been bolstered both by public infrastructure projects and private construction from home remodeling to major development projects.

While construction pays relatively high wages, regional recreation jobs are among some of the lowest paid. Health services jobs cover a wide range from low-paid home service occupations to highly paid doctors and specialists. Other growing industry clusters include highly paid sectors like biomedicine, business services and transportation & freight services, and low paid industries like retail.

Compared to the national economy, Long Island's jobs are more concentrated in high-skill sectors like bio-medicine and research & development, and less in goods-related industries like manufacturing and transportation & freight services. Growth patterns since 2010 have reinforced that divergence.

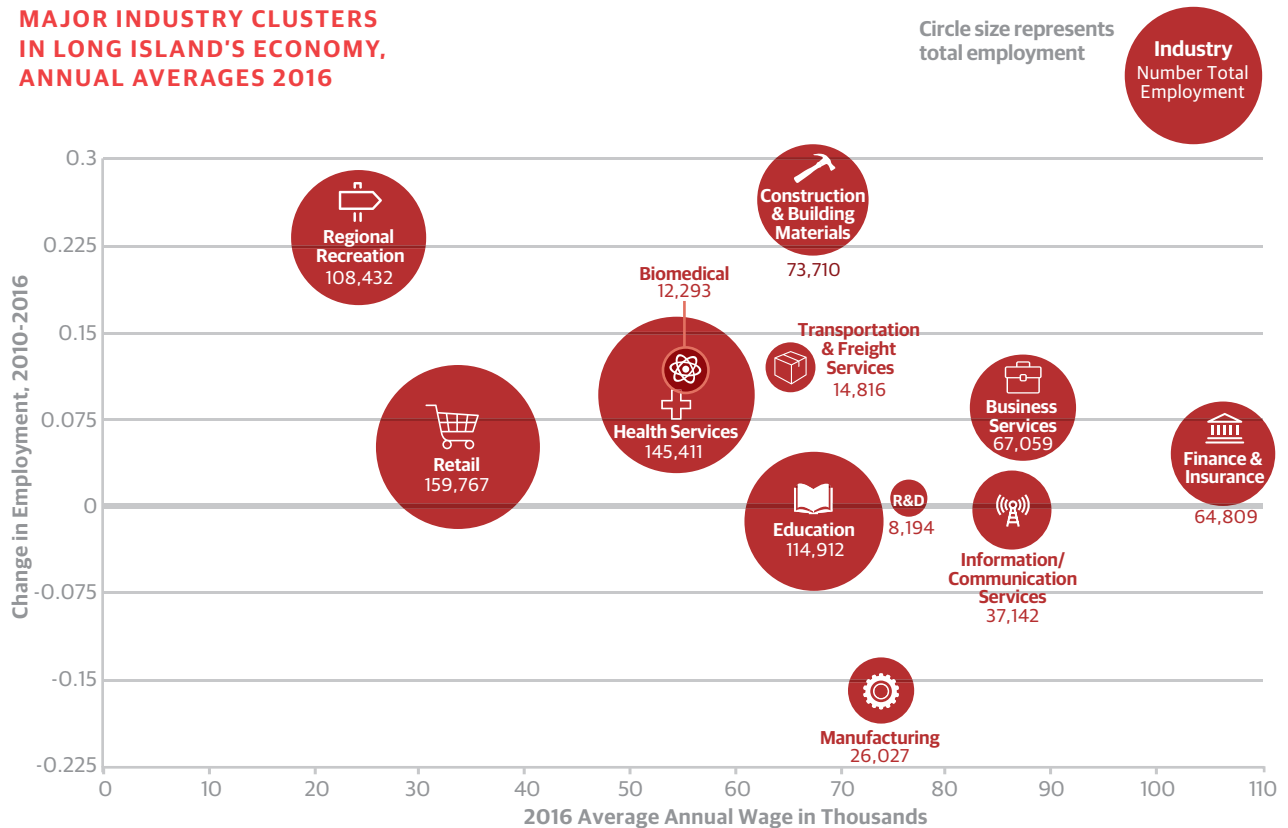


### AVERAGE ANNUAL WAGE IN 2016 DOLLARS



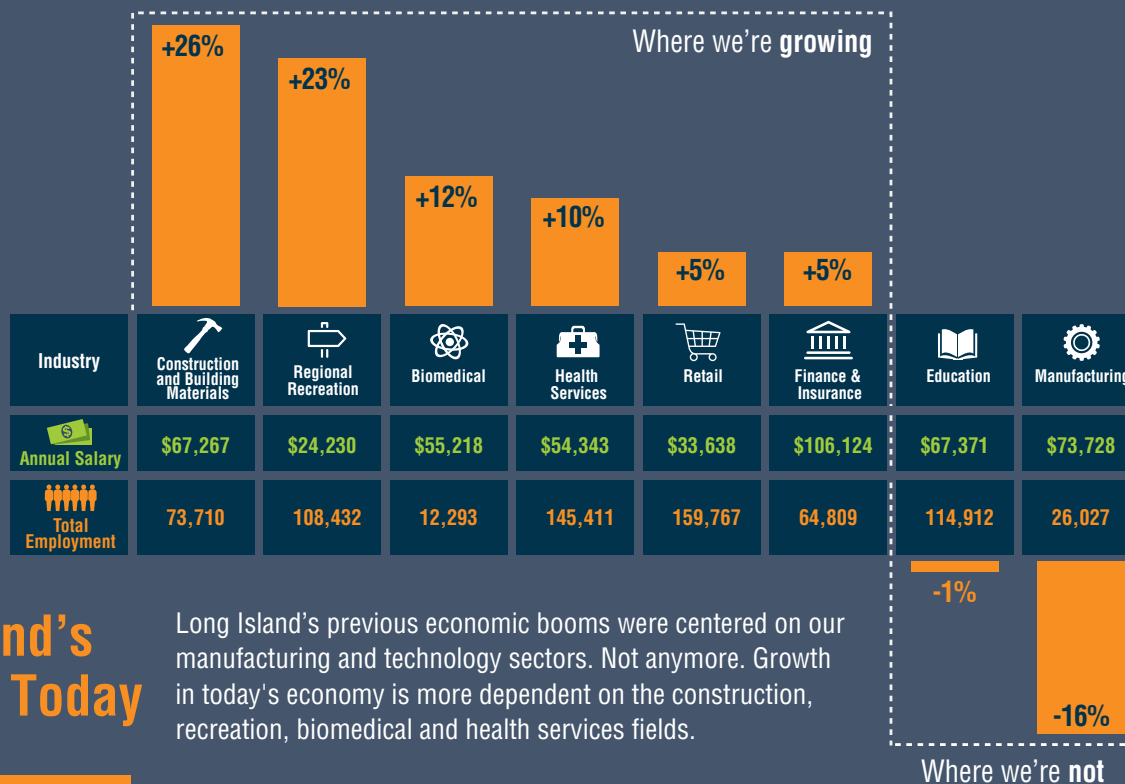
Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages- Average Annual Wages; Inflation Adjusted to 2016 dollars.

### MAJOR INDUSTRY CLUSTERS IN LONG ISLAND'S ECONOMY, ANNUAL AVERAGES 2016



Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages- Average Annual Employment





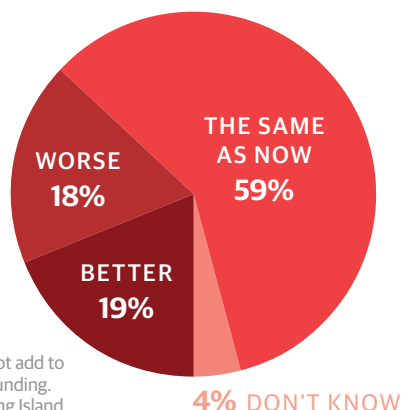
## Long Island's Economy Today

% Change in employment measured from 2010–2016

Long Island's previous economic booms were centered on our manufacturing and technology sectors. Not anymore. Growth in today's economy is more dependent on the construction, recreation, biomedical and health services fields.

Average wage on Long Island in 2016: **\$58,620**

Now, looking ahead, do you think that 12 months from now the economy will be better, worse or about the same as it is now?



Numbers may not add to 100% due to rounding.  
Source: 2017 Long Island Index survey

Income disparities are growing, with wealthier Long Islanders seeing the largest gains in income.

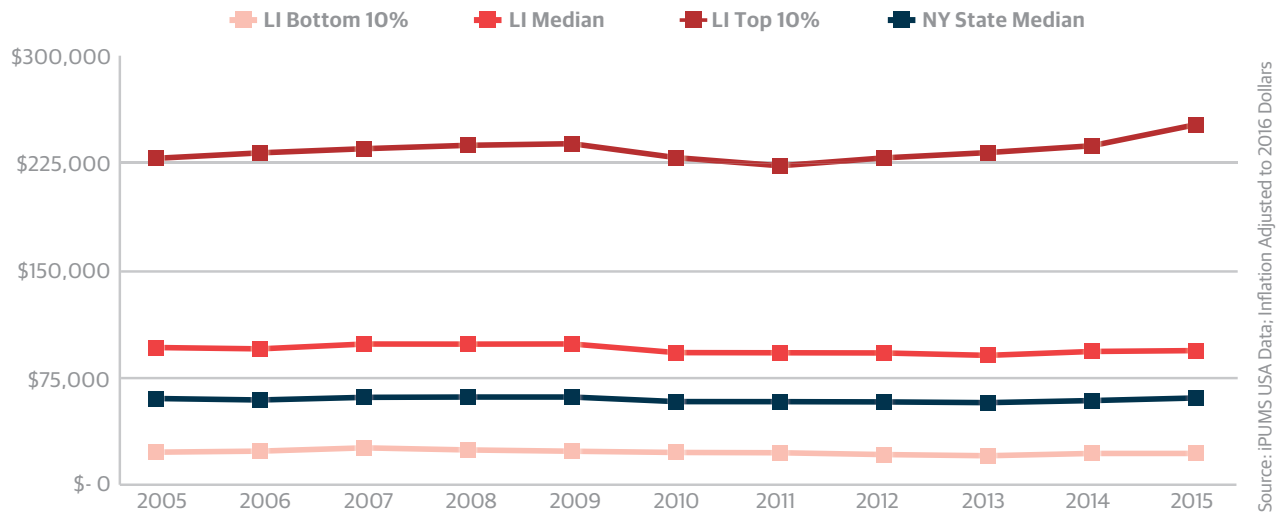
The median Long Island household had an income of \$94,000 in 2015, lower than the inflation-adjusted \$96,300 median income in 2005. This reflects relatively slow growth in wages generally, a decline in real wages in lower-paid sectors, and declining participation in the workforce. In many ways, the trajectory for that average household masks a more complex picture of how well Long Island families and individuals have done economically over the last decade.

Incomes rose slowly before dropping sharply in 2010, and only started rising appreciably in 2014. Income can often lag job growth in economic recoveries, and wages were particularly slow to rise following the last downturn.

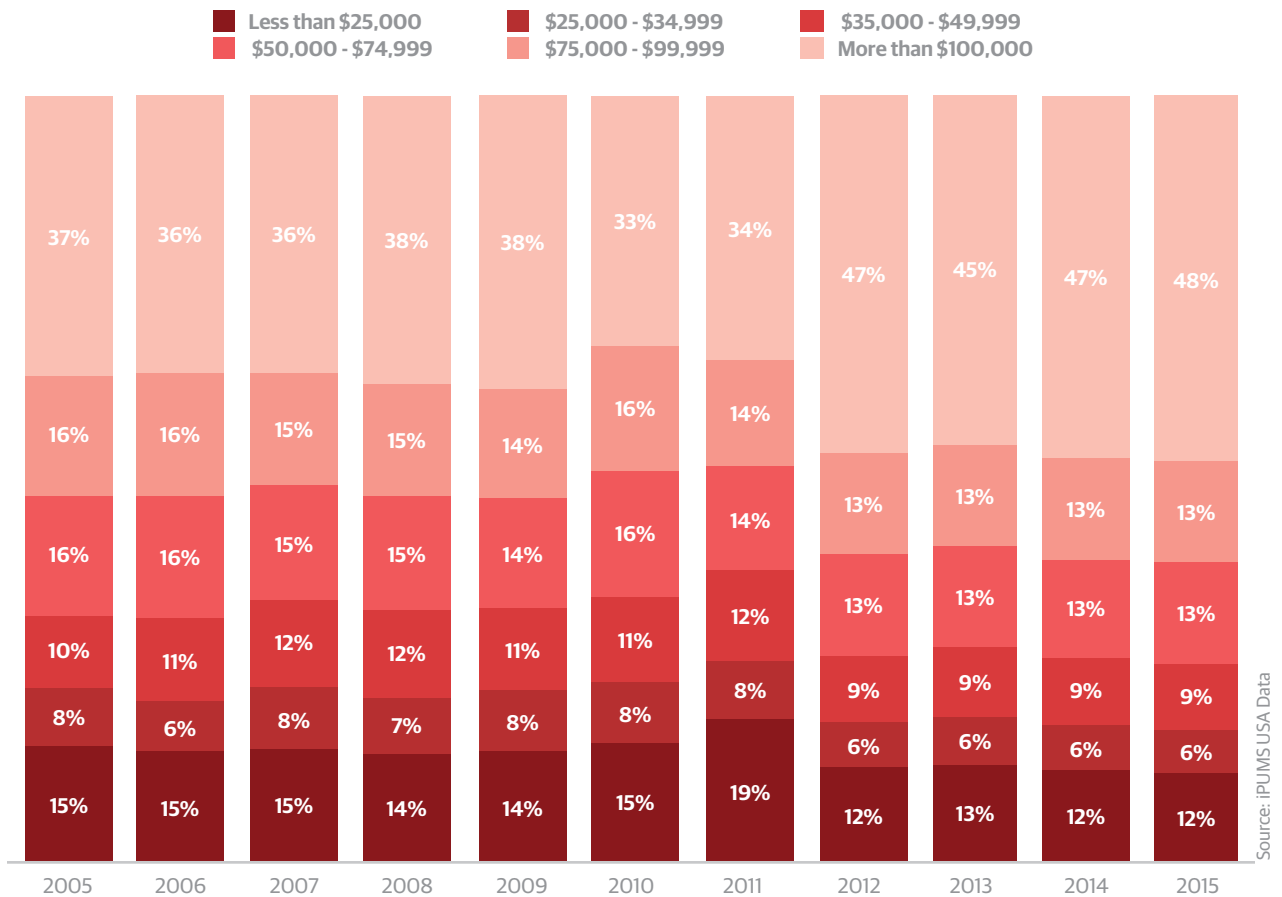
The average income for the bottom 10% of households, \$22,200, declined by 4% since 2005. By contrast, the average income for the top 10% of households increased by 10% to \$252,100. A similar trend occurred nationally and for New York State as a whole, but it was more pronounced on Long Island. For New York State, incomes declined by 2% for the bottom 10% of households and increased by 7% for the top 10%.



## HOUSEHOLD INCOME, 2016 DOLLARS



## HOUSEHOLD INCOME DISTRIBUTION





## GOAL #2

# Supportive Business Environment

*Long Island provides a business friendly environment for companies to grow.*

Business formation and expansion are essential to a healthy economy. New and growing businesses are the engines of job growth, and evidence of an entrepreneurial culture that can respond to and capitalize on changes in technology, consumer tastes, business cycles and structural economic changes. A supportive business environment includes tax and regulatory policies that allow firms to flourish, but also requires a skilled workforce, reliable infrastructure and effective governance.

Data on firm births, deaths and expansion are sparse, but two indicators provide a window into how well Long Island's business environment is supporting entrepreneurship and growth. The change in the number of businesses from County Business Patterns shows whether the number of new firms exceeds the number of firms that go out of business. A small change in the numbers of businesses does not necessarily indicate a poor business environment since a dynamic economy will have a large number of firms going both in and out of business. On balance, however, a strong business environment is likely to see robust growth in the number of businesses. Further insights can be gained from looking at the retail sector, for which information is available on changes in inventory, rents and vacancy rates. While these are primarily driven by changes in demand for retail goods, the number of vacant stores, whether the amount of space is expanding or not, and how much rents are can also be influenced by land use policies, business regulations, the attractiveness of streets and downtowns, and other aspects of the business environment.





These two indicators create a mixed picture of Long Island's business environment, but one that is consistent with an economy that is not reaching its full potential.

retail market, even though the number of retail businesses declined over this decade. It's likely that these changes were driven primarily by weak economic demand over this period, but high property taxes, regulations that limit new commercial or mixed-use development, traffic congestion and a limited number of vibrant downtowns are also likely to have contributed.

Long Island's challenges are not unique. Other suburban parts of the New York region had similar or worse trends in the number of new businesses, and shifting business preferences for more urban environments require different business models for both public and private sectors. One particular challenge for businesses on Long Island is the large number of jurisdictions, each with their own land use and regulatory environment. As documented in the 2011 Long Index report, *Getting It Done*, many villages and towns have complex, unpredictable approval processes, and lack the technology and capacity of jurisdictions elsewhere.

These two indicators create a mixed picture of Long Island's business environment, but one that is consistent with an economy that is not reaching its full potential. There was almost no growth in the number of businesses from 2005-2015, a period that included a deep recession. Retail space expanded and vacancy rates declined, indicating a healthy



There has been little recent growth in number of establishments.

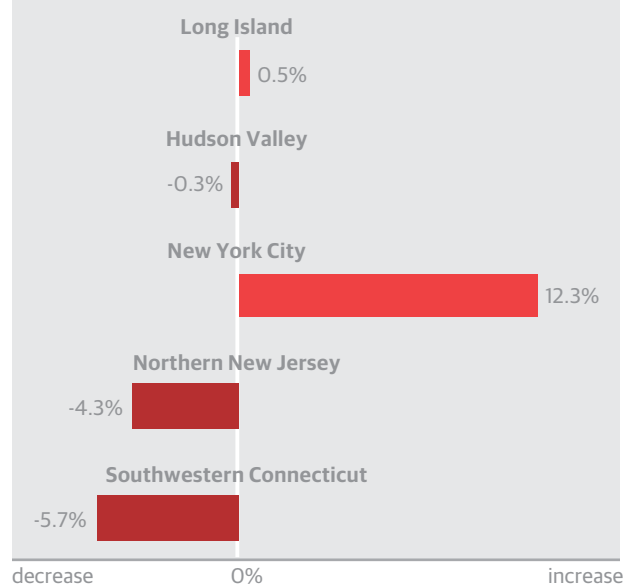
The number of businesses on Long Island stayed largely flat on Long Island between 2005 and 2015, growing by only 0.5%. The industries that increased are consistent with industries that added the most jobs over the last decade. Hotels and restaurants added over 1,000 establishments. Health care added 750 establishments and miscellaneous services added nearly 900.

The industries that lost firms included retail trade (-900), wholesale trade (-748) and manufacturing (-709). Since retail inventory increased over this period, either existing retail firms increased in size or firms consolidated.

The lack of expansion in the number of businesses is consistent with other suburban parts of the New York region. In fact, the number of businesses declined by 4% in northern New Jersey and 6% in southwestern Connecticut. By contrast, the number of establishments in New York City increased by over 12%, another sign of how much recent economic growth has been concentrated in the city.

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#### CHANGE IN NUMBER OF BUSINESSES, 2005-2015



#### LESSONS LEARNED BY RICHARD C.D. FLEMING

## Lessons Learned from Building Innovation Districts

*Mr. Fleming is chairman and chief executive of Community Development Ventures Inc., a St. Louis-based advisory firm specializing in economic, entrepreneurial, and urban development strategies.*

The mantra for establishing real estate value has been "Location, Location, Location." But recently it's been expanded to include Mixed-Use Placemaking, Walkability, and Innovation. The Nassau Hub Innovation District, proposed in the Long Island Index, could combine all four factors to energize Long Island's economy.

National research, and my firm's experience planning and building innovation districts in Denver and St. Louis, underscore several priorities to maximize this opportunity. In St. Louis, these priorities are shaping several innovation districts simultaneously: the CORTEX Innovation District, the 1,500-acre NorthSide Regeneration Mixed Use Development, and the \$1.75-billion National

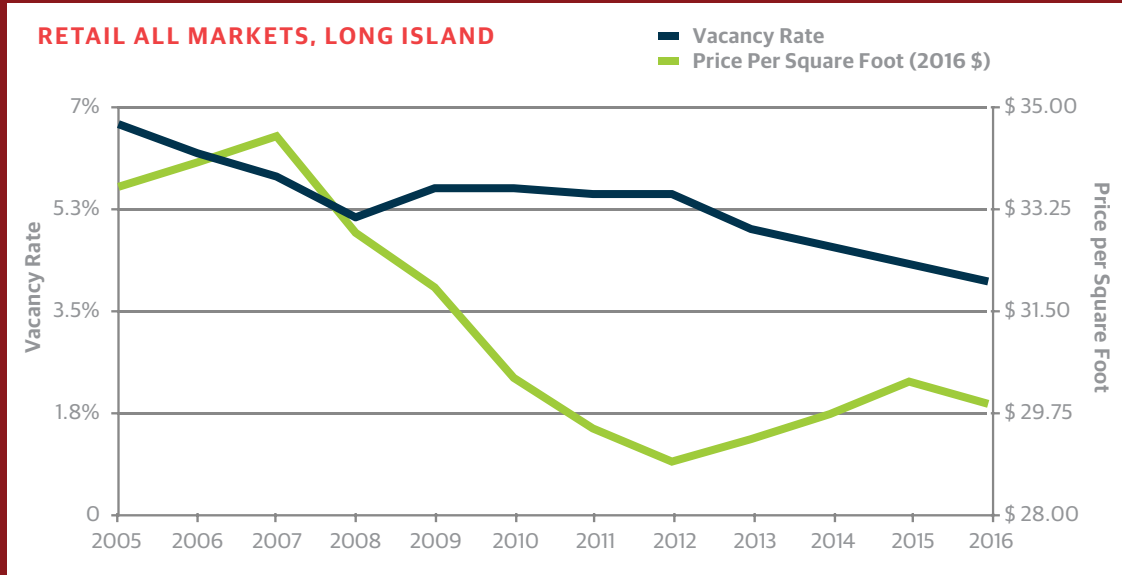
Geospatial Intelligence Agency's new headquarters. The priorities are these:

First, innovation districts should be mixed-use, so a unique character emerges. And the mix of office, retail, and housing is crucial. Long Island faces a challenge in ensuring that housing is accessible, affordable and appealing to the talent needed in an innovation economy, including young professionals.

Second, this sense of place should generate synergies among the institutions and individuals who populate it. It's not enough to simply place them near each other; they must interact and connect in ways that create ongoing collisions of people and ideas that facilitate innovation.



Source: Costar LI Retail Report



Third, it's vital to make the development transit-oriented, which can include bus and internal shuttles, as well as train service. Public transit must be frequent, reliable, and affordable.

Fourth, parking should not dominate a site, as it has historically at Nassau Coliseum. Developers can wrap parking decks with housing and retail, so parking is invisible from street level.

Finally, walkability is both a vital place-making asset and a real estate value.

If Long Island achieves this level of creativity, the Nassau Hub Innovation District can be an economic powerhouse for the entire region.

Retail vacancy rates have declined over the last decade, but so have rents for retail space.

In spite of the trend toward online shopping, the amount of space devoted to brick-and-mortar retail space has grown over the last decade. Total retail inventory increased from 126 million to 132 million square feet between 2005 and 2016. And vacancy rates have

declined, meaning that there has been even faster growth in the amount of occupied retail space. The overall vacancy rate has declined from 6.7% in 2005 to 4.0% in 2016. Even during the recession, the vacancy rate held relatively steady.

Even so, retail landlords were not able to command the same rents that they could a decade ago. Rents for retail space dropped from \$33.62 per square foot in 2005 to \$29.90 in 2016. Here, the business cycle did have an effect with a steep drop from 2007-2012 and some recovery since then.

Neighborhood retail centers have expanded more slowly and vacancy rates have risen faster than for other types of retail. Total square footage of neighborhood centers increased by 2% from 2005 to 2016 compared to 4% overall. And while the average vacancy rate declined for all retail, it increased from 4.1% to 6.1% for neighborhood centers. Rents, however, increased for neighborhood centers, from \$25.73 to \$27.82 per square foot.

Shopping malls remained healthy over the last decade, with inventory increasing by 2%, vacancy rates remaining around 1%, and rents increasing from \$45.43 to \$47.99 per square foot.



LESSONS LEARNED BY GEMMA DE LEON

## Building a Supportive Work Environment



Wage stagnation impacts every aspect of our regional economy. A decline of brick and mortar retail establishments could adversely affect our main streets and downtowns and have a cascading effect on our overall job climate. And despite record corporate profits, many workers continue to face prospects of losing their pensions and paying more for skyrocketing healthcare and insurance costs. Young workers lack access to affordable, quality daycare, after-school and pre-kindergarten programs, often forced to choose between their jobs and their families. These factors add to the burden of an already expensive place to live.

When we reimagine jobs on Long Island, in addition to highly skilled high-tech jobs of the future, we must also prioritize attracting and maintaining great companies that offer quality jobs with decent benefits in industries that support our existing workforce—such as construction, hospitality, retail, manufacturing, healthcare and transportation. We must also foster workforce education programs, utilize the vast resources of our community colleges, improve our childcare system and continue to lift working people's chances of achieving their highest potential.

*Ms. De Leon is the National Director of Strategic Planning for the Retail Wholesale and Department Store Union.*





The background of the page features silhouettes of several people in an office setting. Some are standing and talking, while others are sitting at desks with computer monitors. The silhouettes are dark and set against a lighter background, creating a professional and collaborative atmosphere.

## GOAL #3

# Innovative Economy

*Our economy incubates, supports and retains companies.*

Creative content—scientific, technological, artistic, intellectual, organizational—is the fuel for a successful economy. Regions that attract and nurture the people, businesses and institutions that develop this content and turn it into products and services that people and companies want are the places that have the most robust economic growth and the highest incomes. In 2012, the Long Island Index produced a comprehensive survey of the island's innovation assets and systems. It found a number of strengths, including world-class research institutions and a growing number of innovation companies, particularly in the areas of biosciences, information technology and clean energy. It also found that Long Island's regional innovation system is not yet fully developed compared to other leading innovation regions, and areas for improvement included the need for continued investment in Long Island's talent and R&D and greater commercialization of its technology resources.

In 2017, several indicators show that Long Island's innovation economy is still developing.

In 2017, several indicators show that Long Island's innovation economy is still developing. New businesses are emerging, as evidenced by 10 technology startups that were given \$10 million by two Long Island investment funds (the Accelerate Long Island

Seed Fund and the Long Island Emerging Technologies Fund) and have attracted \$24 million from venture capital, government agencies and other businesses.\* However, several broader indicators provide a more mixed picture, albeit one that is obscured by limited data and the overall performance of Long Island's economy.

Jobs in innovation-related sectors such as information and professional, scientific and technical services have grown slowly over the last fifteen years, but so has the rest of Long Island's economy. Sectors like biomedicine and professional services have grown more rapidly since the recession ended in 2010, but most are still outpaced by the U.S. and New York City.

Data on venture capital was not available for this report, but small technology companies on Long Island continue to receive their share of government funds intended to accelerate the commercialization of new technologies. The number of patents issued on Long Island remains low, in part because it has a small information technology sector, an industry that generates an outsized share of patents.

The digital infrastructure that supports innovation is more robust on Long Island than in other parts of the New York region, but a majority of homes still lack fiber optic service and nearly half of low income households have no internet service at all.

\* James Madore, *Nurturing Seedling Companies*, Newsday, December 17, 2017.



Jobs in industries related to innovation are growing slowly along with the rest of Long Island's economy.

Jobs in industries requiring a high degree of innovation—information and communications, professional, scientific and technical services, and arts and entertainment—grew by 8% between 2002 and 2015. This relatively low rate of job growth matches Long Island's growth rate for the economy as a whole and reflects more on the state of the overall economy than on the competitiveness of innovation-related sectors. Innovation jobs soared with the rest of New York City's economy in this period, growing by 41% compared to a growth of 29% for all jobs in the city. Every other part of the region fared worse than Long Island, with only small gains in all jobs and even less growth in innovation jobs.

One recent bright spot for Long Island is the biotechnology cluster, which grew by 12% from 2001-2016, matching the rate of growth for biotech in the US economy as a whole.

A challenge for Long Island in attracting innovation jobs is the type of business environments where these jobs are clustering. Nearly all of the large increase in innovation jobs in New York City occurred in very walkable, transit-oriented places, the types of downtown business environment that Long Island has relatively few of.

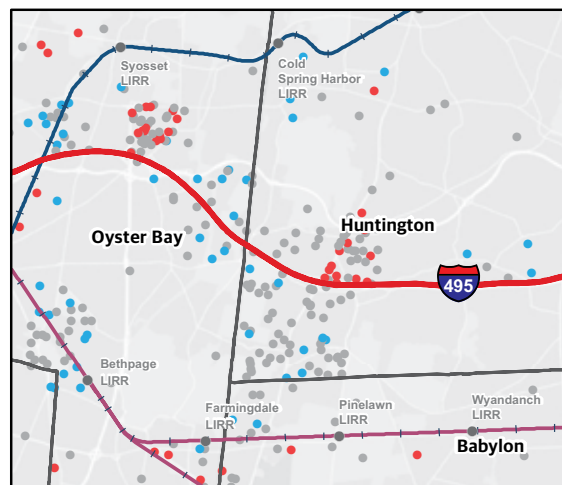
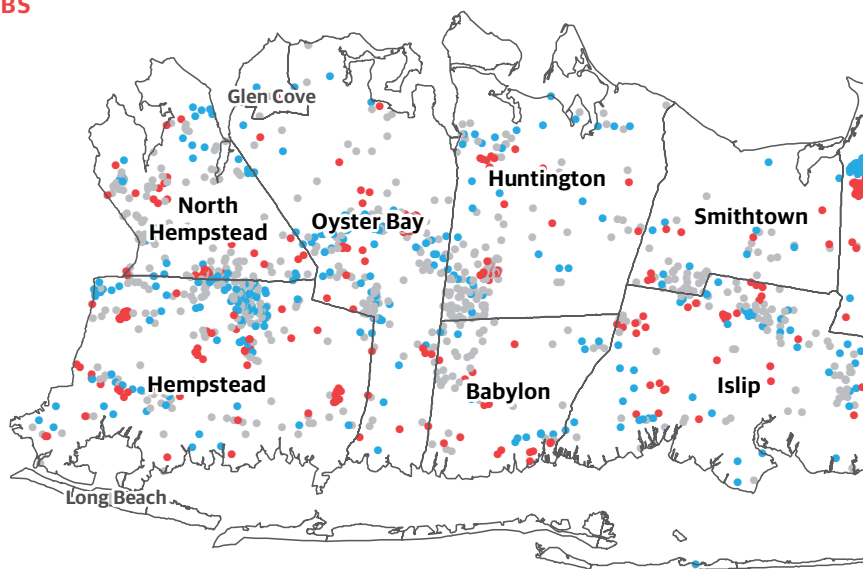
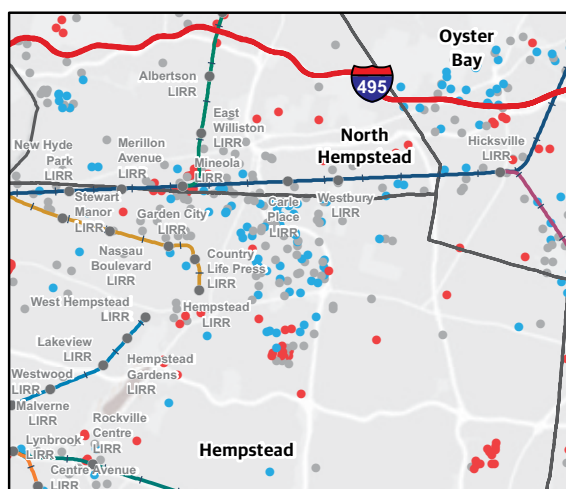
#### CHANGE IN KNOWLEDGE AND INNOVATION JOBS ON LONG ISLAND, 2002 - 2015

1 dot • = 100 jobs per Census block group

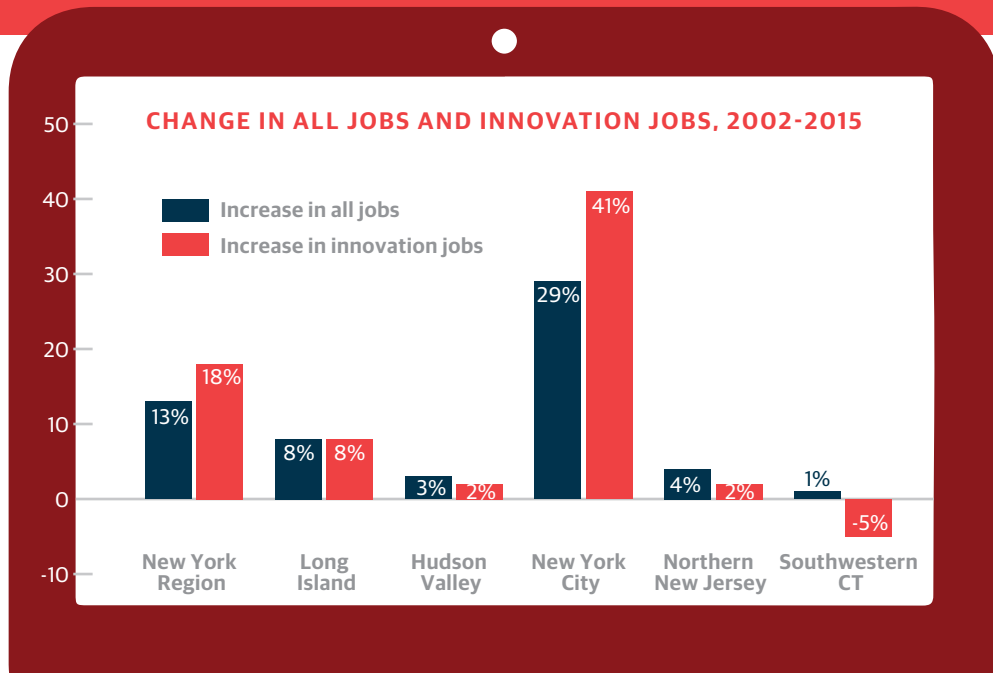
● = decline in number of jobs

● = increase in number of jobs

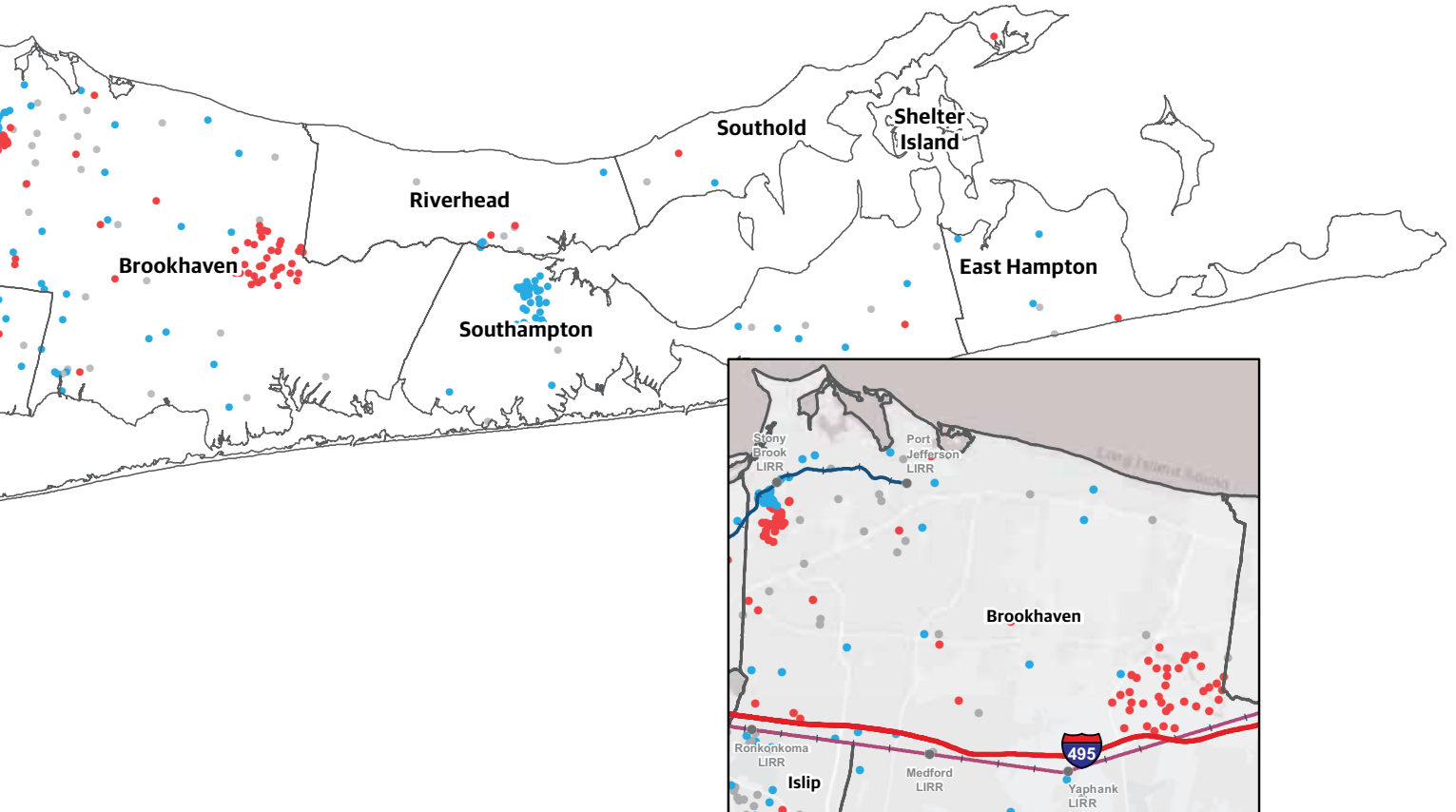
● = number of jobs that stayed the same







Source: Longitudinal Employer-Household Dynamics, U.S. Census



Data source: Longitudinal Employer-Household Dynamics, U.S. Census, via Regional Plan Association.  
Map prepared by Center for Urban Research, CUNY Graduate Center.

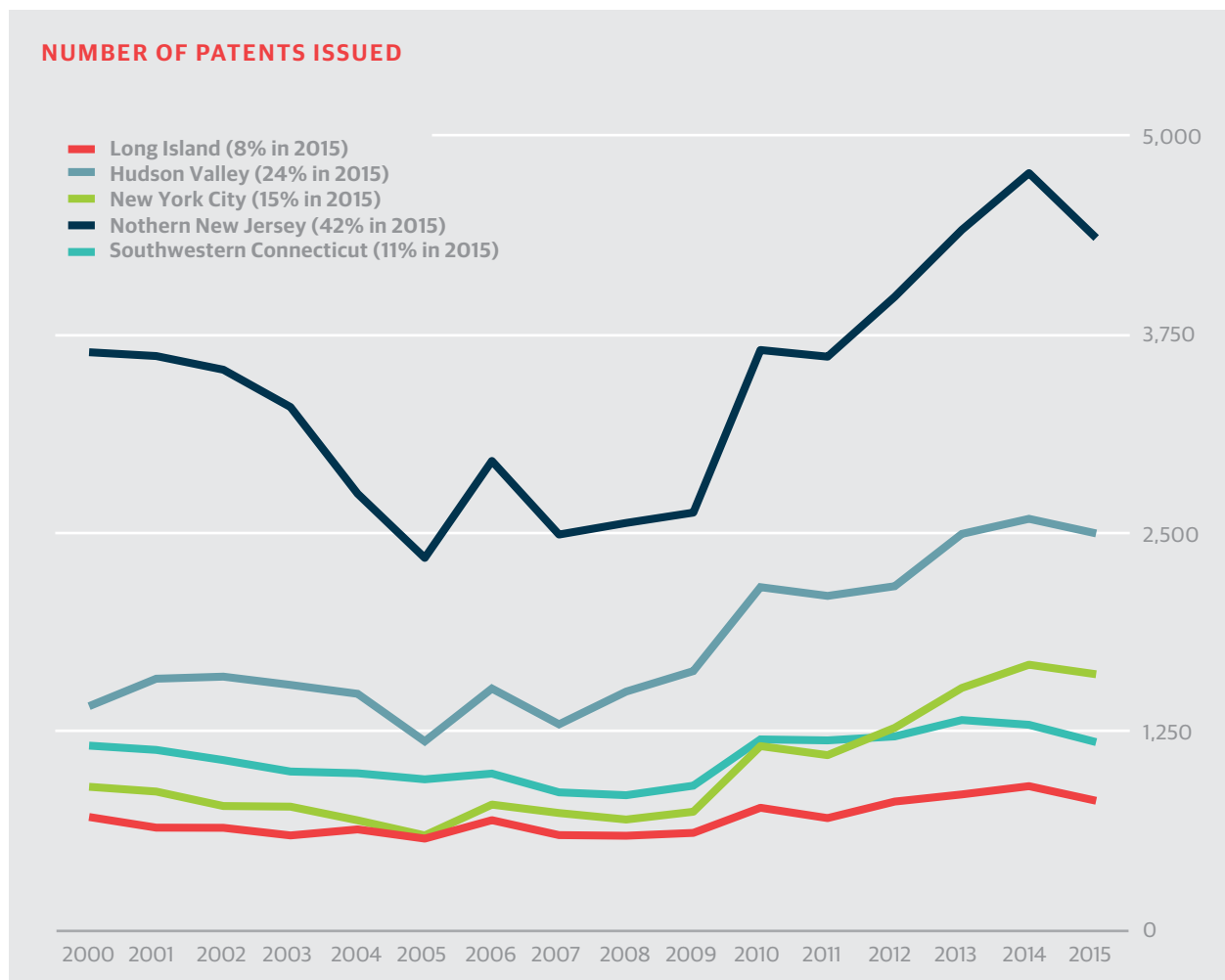


The number of patents issued on Long Island has grown slowly compared to other areas.

The number of U.S. patents issued on Long Island has grown significantly since the beginning of the century, from an average of 668 patents per year from 2000-2002 to 859 per year from 2013-2015. However, the number of patents issued on Long Island is considerably lower than in other parts of the region, and growth has been slower than it has been nationally and in other parts of the region and New York State. In the last three years, an average of 4,509 patents per year were issued in New Jersey and 2,507 were issued in the Hudson Valley. The number of patents grew by 29% between 2000-2002 and 2013-2015 on Long Island, while they grew

61% nationally and 39% in the New York region. The most rapid growth within the region occurred in New York City and the Hudson Valley.

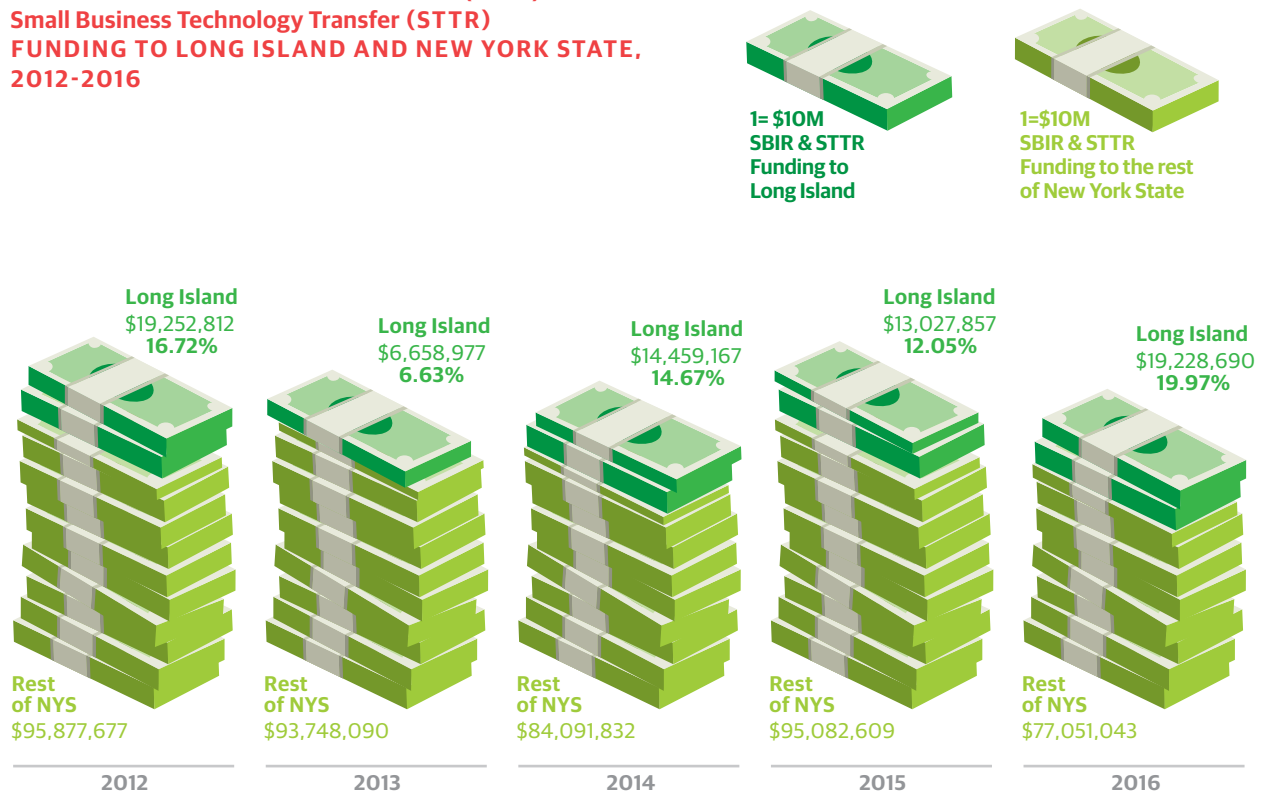
The relatively low number of patents issued on Long Island is due in part to its industry structure. The information technology sector, for example, issues a large share of patents but is a relatively small industry on Long Island. Nationally, for example, California with its large technology sector issues far and away the most patents in the U.S. even after size is taken into account, and has doubled the number of patents issued since 2000-2002.



Source: United States Patent and Trademark Office



**U.S. Small Business Innovation Research (SBIR) and  
Small Business Technology Transfer (STTR)  
FUNDING TO LONG ISLAND AND NEW YORK STATE,  
2012-2016**



Source: U.S. Small Business Innovation Research

Small technology companies on Long Island receive a relatively high share of federal grants compared to other parts of New York State.

Small technology companies on Long Island continue to be competitive in securing funding from the Small Business Research and Innovation (SBIR) and Small Business Technology Transfer (STTR) programs, which provide funding to small technology companies of less than 500 employees to accelerate the development and commercialization of scientific discoveries and innovative ideas into commercial products and services. In 2016, Long Island technology companies attracted over \$19M in SBIR/STTR funding, representing almost 20% of the SBIR/STTR funding secured by small technology companies across New York State (\$96.2M).

The average SBIR/STTR award to companies on Long Island in 2016 was \$549,391, significantly higher than the New York State average of \$471,000. The \$19M in SBIR/STTR funding to Long Island companies in 2016 is practically identical to the funds secured in 2012, and up 48% from \$13M secured in 2015. By comparison, New York State attracted \$96.2M in SBIR/STTR funding in 2016, compared to \$115M in 2012, and down 11% from \$108.1M in 2015.

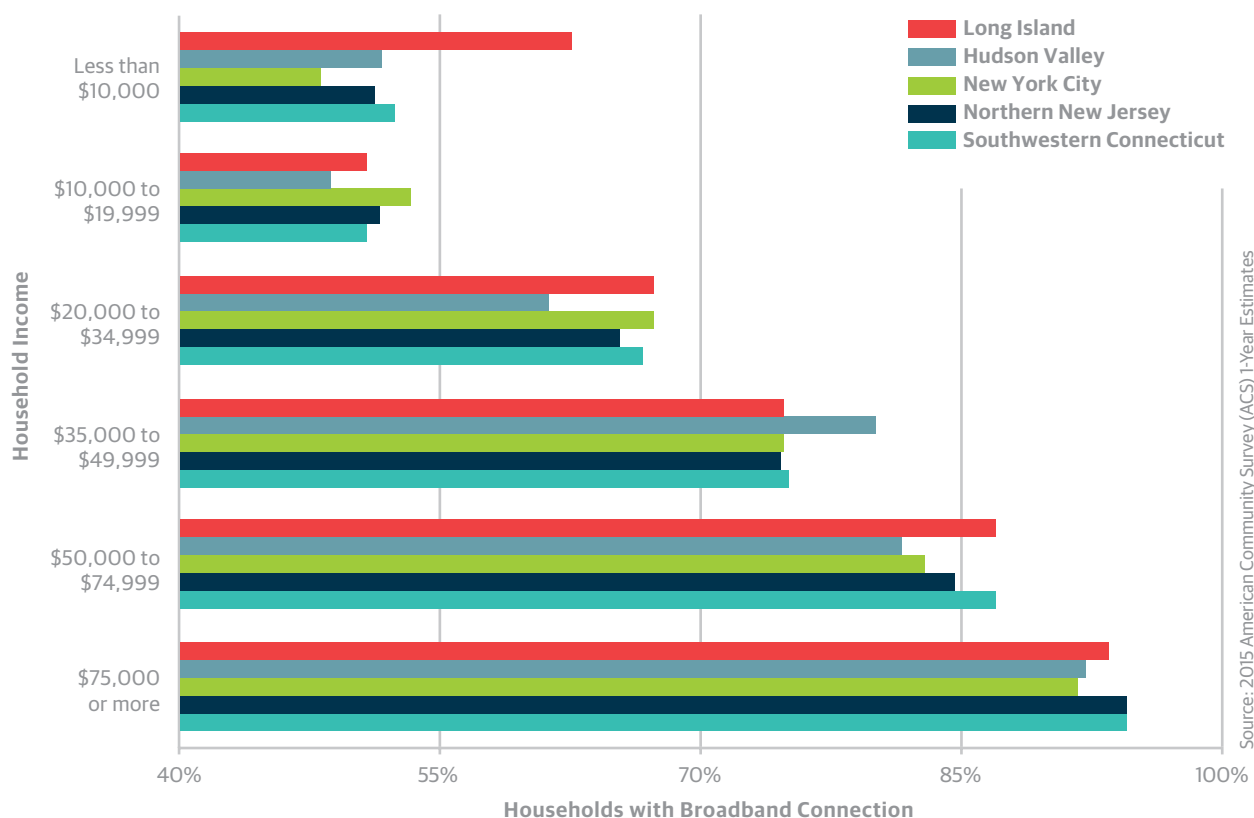


Long Island ranks relatively well for internet service, but there is a steep digital divide and a long way to go for fiber optic service.

As the innovation economy in Long Island develops, so do its infrastructure needs. Many businesses already use digital technologies very heavily, and this typically requires very reliable and high speed access to the internet. These are not only technology businesses but also core sectors such as finance and health. And the need to move data via the internet will only increase. Workers will increasingly need higher and higher internet speeds in order to work from home. Already 80% of those workers who work from home part of the week report relying on the internet. As the needs of the businesses they work for or consult with evolve, so will their home internet needs.

Long Island is comparatively well prepared for such a future, with 24%, the highest share of households in the New York region with fiber-optic service, which is typically the fastest, most reliable services. Still, that leaves three-fourths of households without this service at a time when it will become more and more essential for tomorrow's economy. Access to the internet at home is also very stratified by income. 93% of households earning \$75,000 or more have a wired internet connection at home, as opposed to only about 57% of households earning less than \$20,000. In this respect, Long Island is very similar to the rest of the region. And like the New York region overall, Long Island fares relatively poorly when compared to other U.S. innovators such as San Francisco and leading metro areas across the country.

#### HOUSEHOLD INCOME BY PRESENCE OF A BROADBAND CONNECTION IN HOUSEHOLD, 2015





## LESSONS LEARNED

BY DAVID L. CALONE

# Long Island as an Innovation Hub

Long Island—a high-cost location with an incredible array of research institutions, a highly educated workforce, and close proximity to the world’s financial capitol—has wisely placed its bet that “economic gardening” (catalyzing business growth by harnessing existing economic strengths) rather than “economic hunting and gathering” (enticing companies to relocate here) is the key to restoring steady economic growth and expanded opportunity.

In recent years, regional collaborations such as Accelerate LI and governmental initiatives like the LI Regional Economic Development Council have helped local businesses grow our innovation economy

by making sure that Long Island research leads to Long Island companies and jobs. We must continue that momentum to ensure that the Long Island garden’s early green shoots continue to grow. And we must never forget that Long Island’s economic potential will be maximized only when all Long Islanders have the tools and access—such as home broadband connections, STEM programs in each of our high schools, community college-based training programs, and intentionally nurtured pathways to technology careers from every community—that they need to participate in that growth.

*Mr. Calone is President and CEO of Jove Equity Partners, LLC.*

