
Long Island's Future: Economic Implications of Today's Choices

Prepared for the Long Island Index
by HR&A Advisors, Inc.

February 10, 2015

Executive Summary

This study examines the impacts of Long Island-wide initiatives that could address some of the region's most intractable issues.

HR&A employed the REMI Policy Insight Model to prepare a baseline scenario that “plays out” current demographic and economic trends. Using this baseline as a jumping off point, HR&A used the REMI Model to analyze how economic development strategies could re-orient Long Island towards sustainable prosperity.

The ultimate goal of this project is to understand how targeted actions could improve job creation, retain young workers, and solidify Long Island's tax base for future generations.

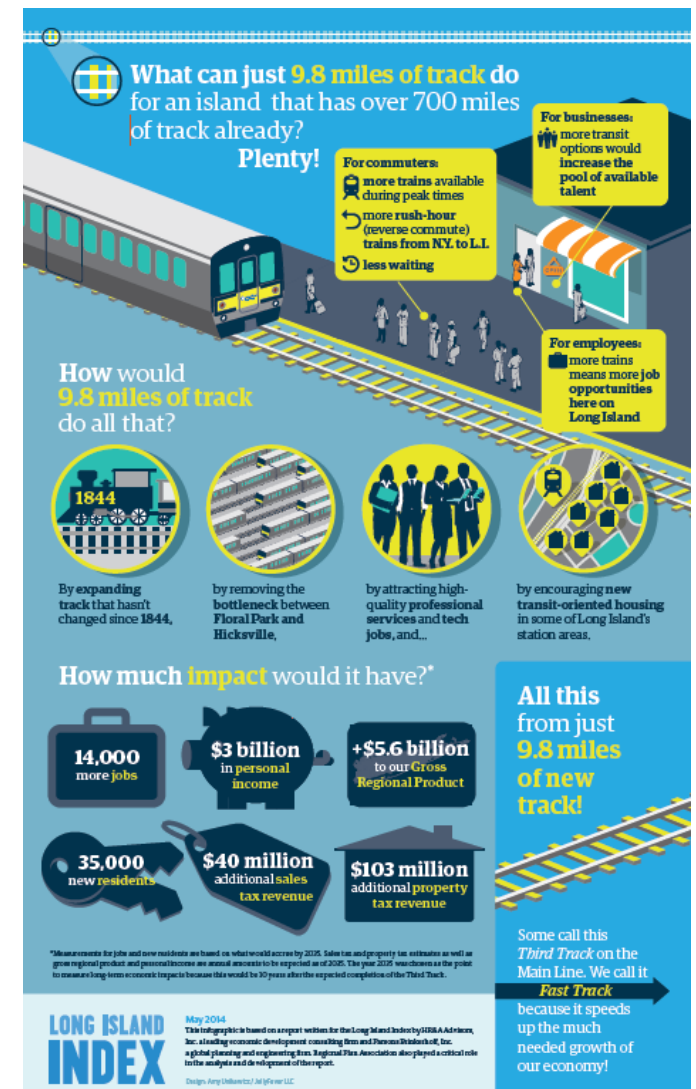


HR&A's 2014 study of the LIRR Main Line Third Track advanced a regional conversation about Long Island's economic future.

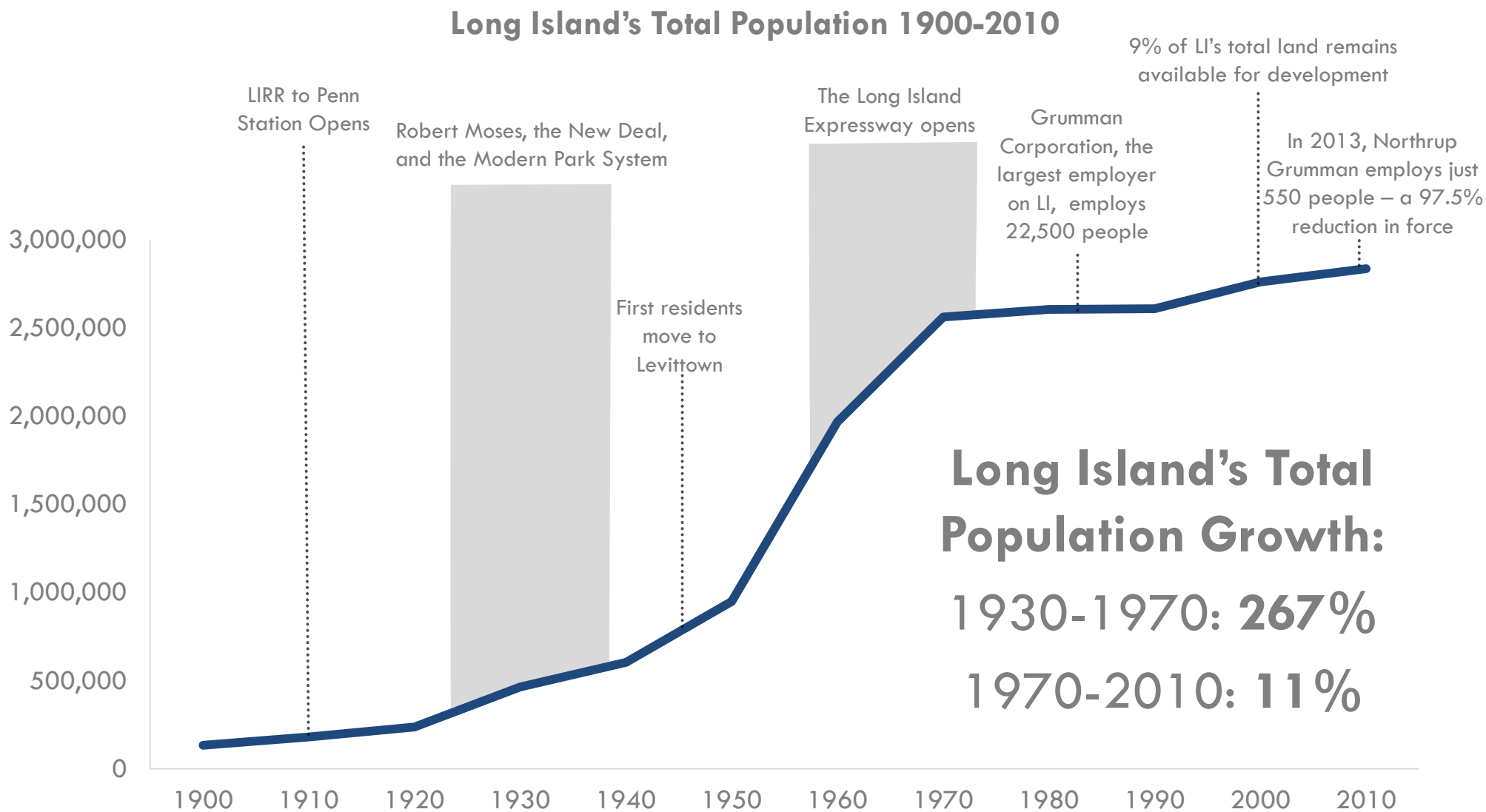
In May, 2014, HR&A and Parsons Brinkerhoff released *The Economic and Fiscal Impacts of the Long Island Rail Road Main Line Third Track*.

The study fueled a regional conversation around the merits of the project and its ability to catalyze economic growth.

HR&A estimated that the initial capital investment of \$1.1 billion in the Third Track would generate a significant return in terms of growth in employment, population, and economic activity.



Since 1970, Long Island's growth has leveled off considerably.

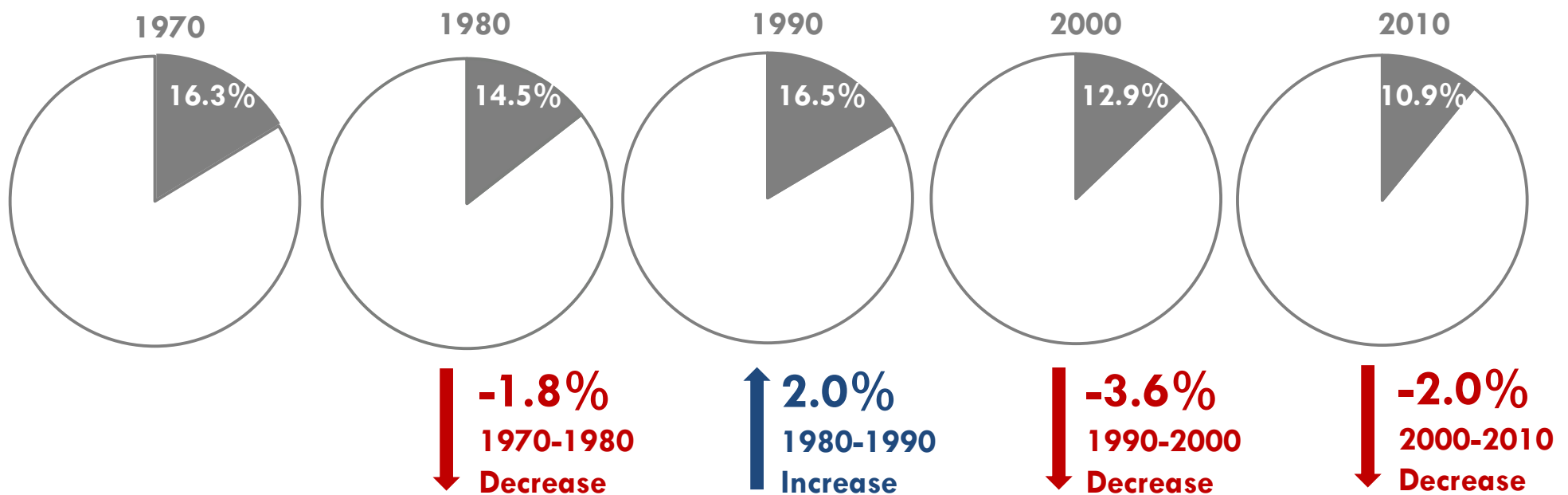


Source: U.S. Census Bureau; Bureau of Economic Analysis; Regional Plan Association; New York Times; Wall Street Journal

Since 1990, the proportion of young workers on Long Island has declined significantly.

From 1980-1990, 25-34 year olds grew as a share of Long Island's total population. Yet since the 1990s, the proportion of young workers has fallen significantly. By 2010, the 25-34 year old age cohort dropped to 10.9% of the total population.

Ages 25-34 Cohort as Percent of Total Population 1970-2010



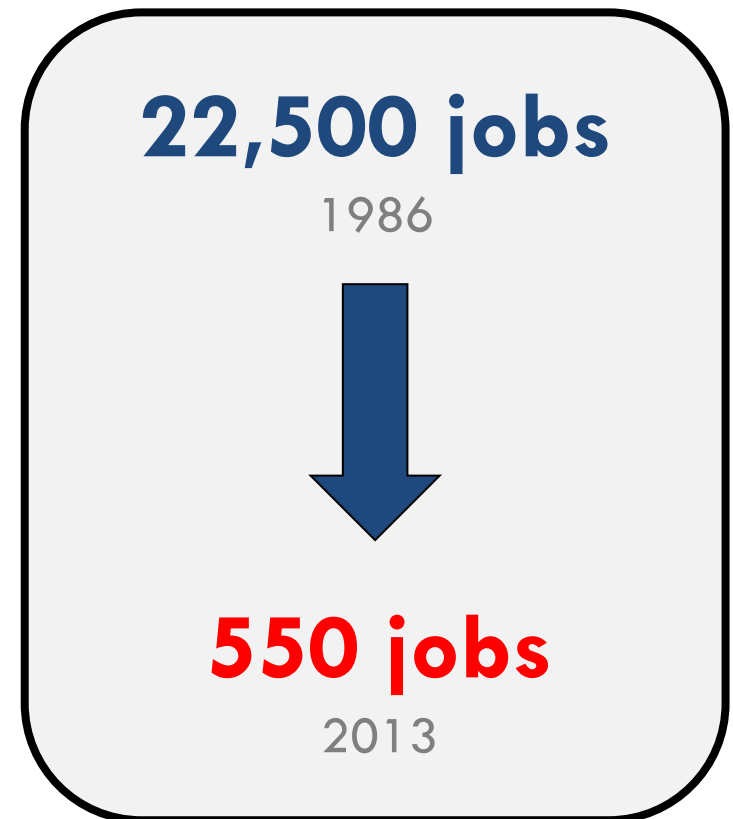
Source: U.S. Census Bureau

The loss of the manufacturing and defense industries leaves an economic void.

Service sector jobs are filling the gap left behind by the shrinkage of the aerospace and defense industry. These jobs tend to pay lower salaries and offer fewer opportunities for career advancement to Long Island residents.

According to the 2014 poll of Long Island residents conducted by Stony Brook University on behalf of the Long Island Index, **50% of Long Islanders believe that the quality of local jobs has decreased compared to five years ago.**

Northrop Grumman Employment on Long Island



Source: Long Island Index 2014 Poll; "A New Vision for Long Island's Economy," Long Island Regional Economic Development Council, 2011; Wall Street Journal

Long Island job growth was historically fueled by the suburbanization of employment and by women entering the workforce in greater numbers.

Long Island has lost the competitive edge in the employment growth it once enjoyed.

Average Annual Employment Growth Rate:

1970-1980: 2.4%

1980-1990: 1.7%

1990-2000: 0.9%

2000-2010: 0.8%

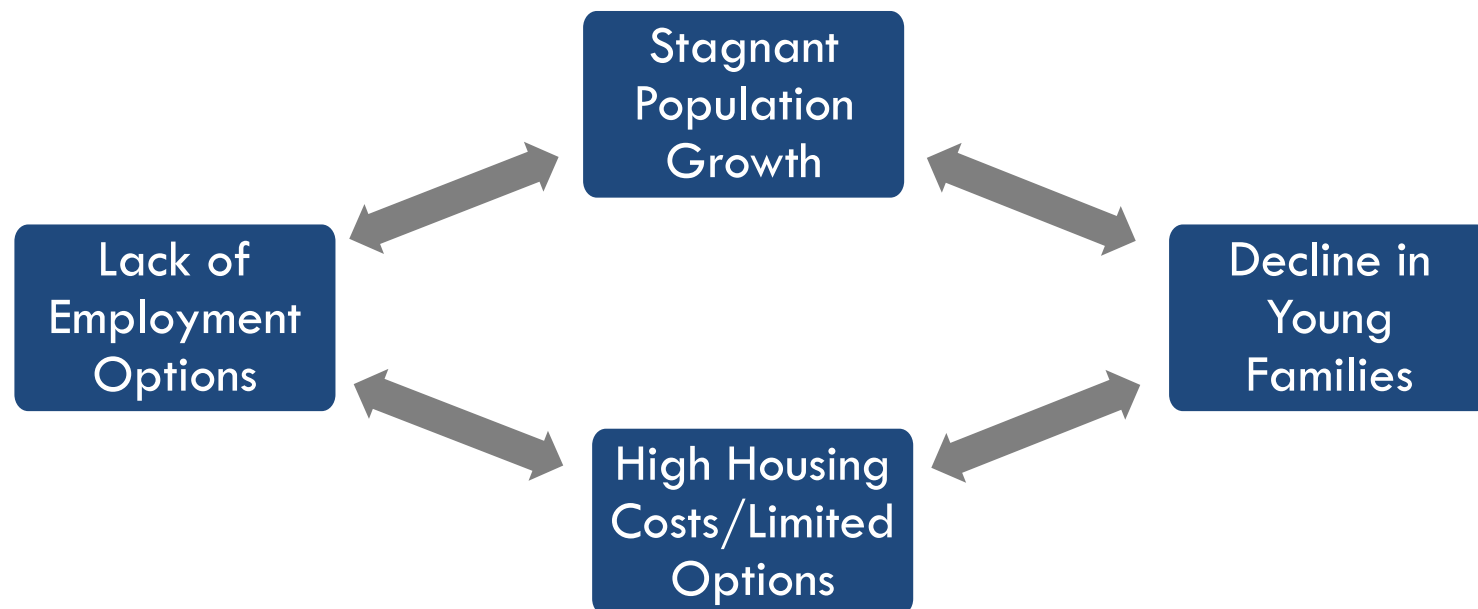
Source: U.S. Bureau of Labor Statistics; U.S. Census Bureau

Long Island's stagnant growth is a product of persistent socioeconomic challenges and structural changes in the economy.

Intractable challenges – from a decline in high paying jobs to the accelerating loss of young workers and families – conspire to dampen Long Island's future.

Without targeted interventions, these challenges threaten to erode Long Island's economic vibrancy and fiscal sustainability, and quality of life.

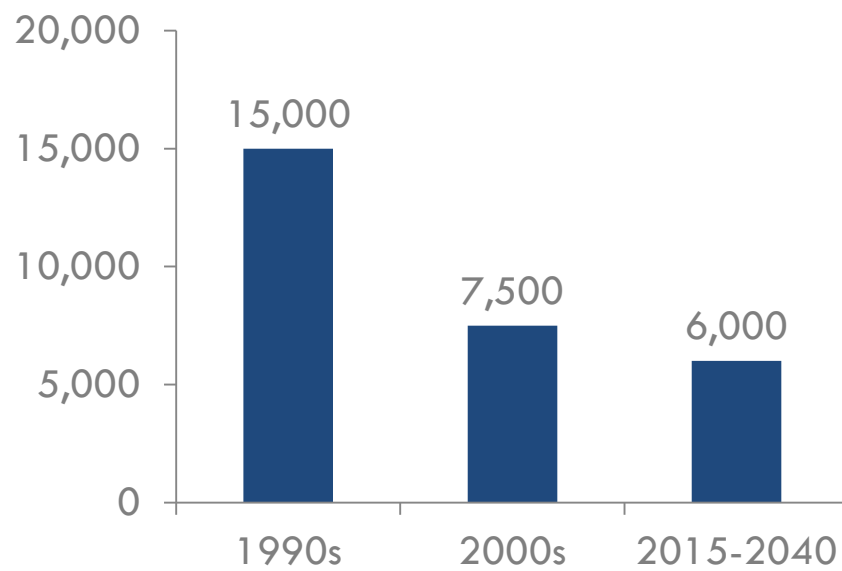
Interconnected Factors Influencing Long Island's Future Prosperity



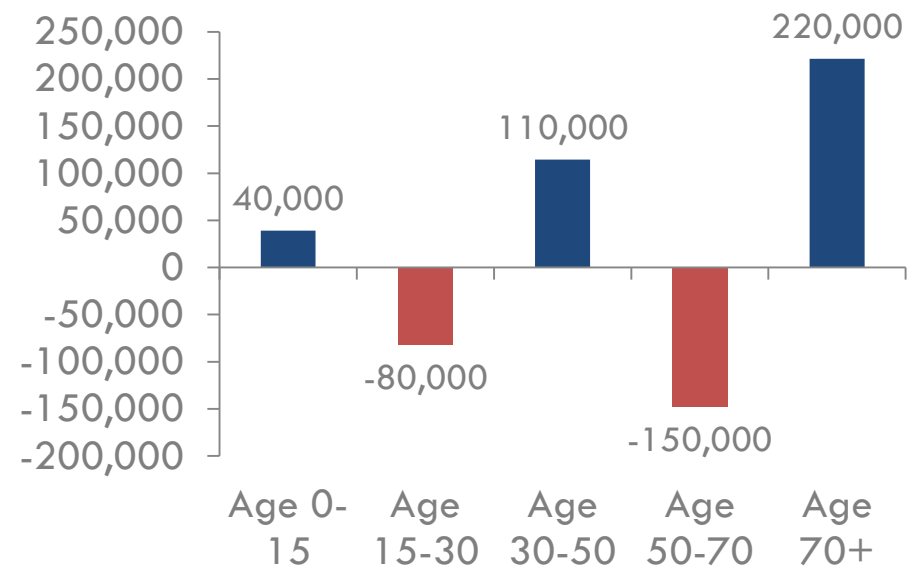
The rate of Long Island's population growth is projected to further decline in the coming decades, in part due to difficulty retaining young workers.

Long Island's rate of population growth has eroded considerably since the 1990s. Going forward, the region is projected to grow at an annual rate of 0.2%, equivalent to only 6,000 new residents per year. Its population will also grow older, as the population aged 15-29 experiences an absolute decline.

Average Annual Population Growth: Historical and Projected



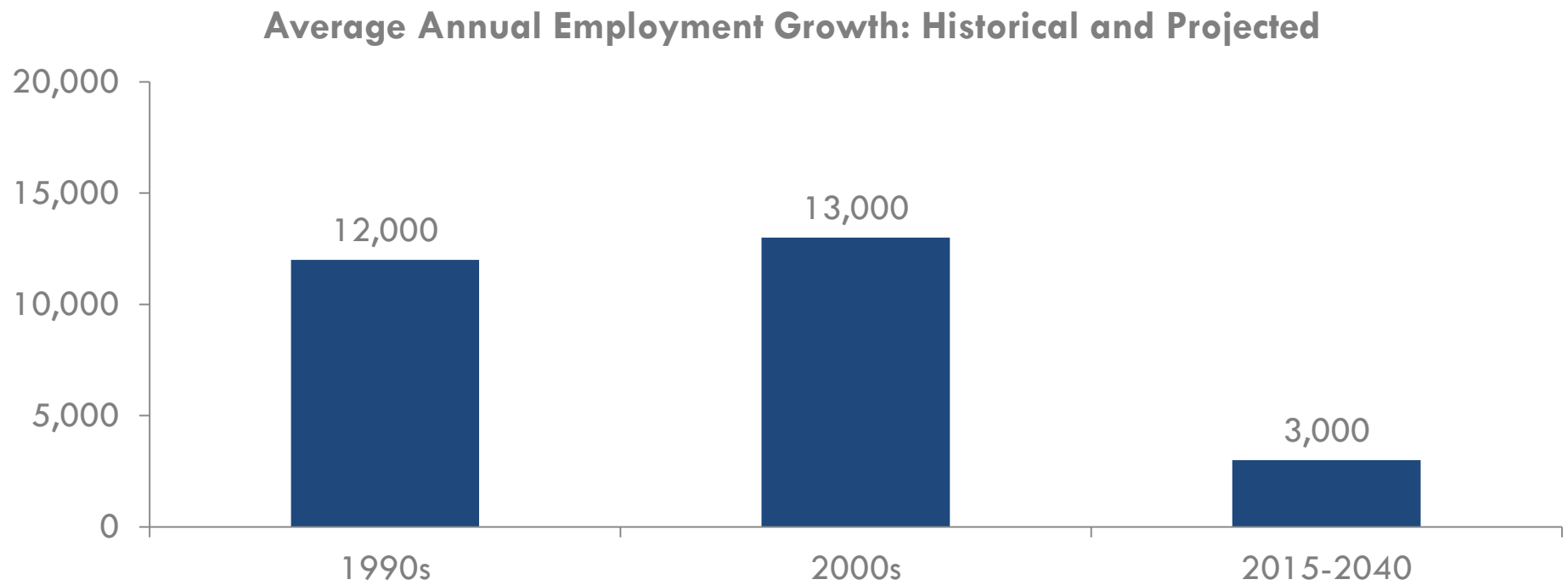
Projected Change in Population by Cohort, 2015-2040



Source: REMI; HR&A Analysis

Employment growth on Long Island is also projected to slow over time.

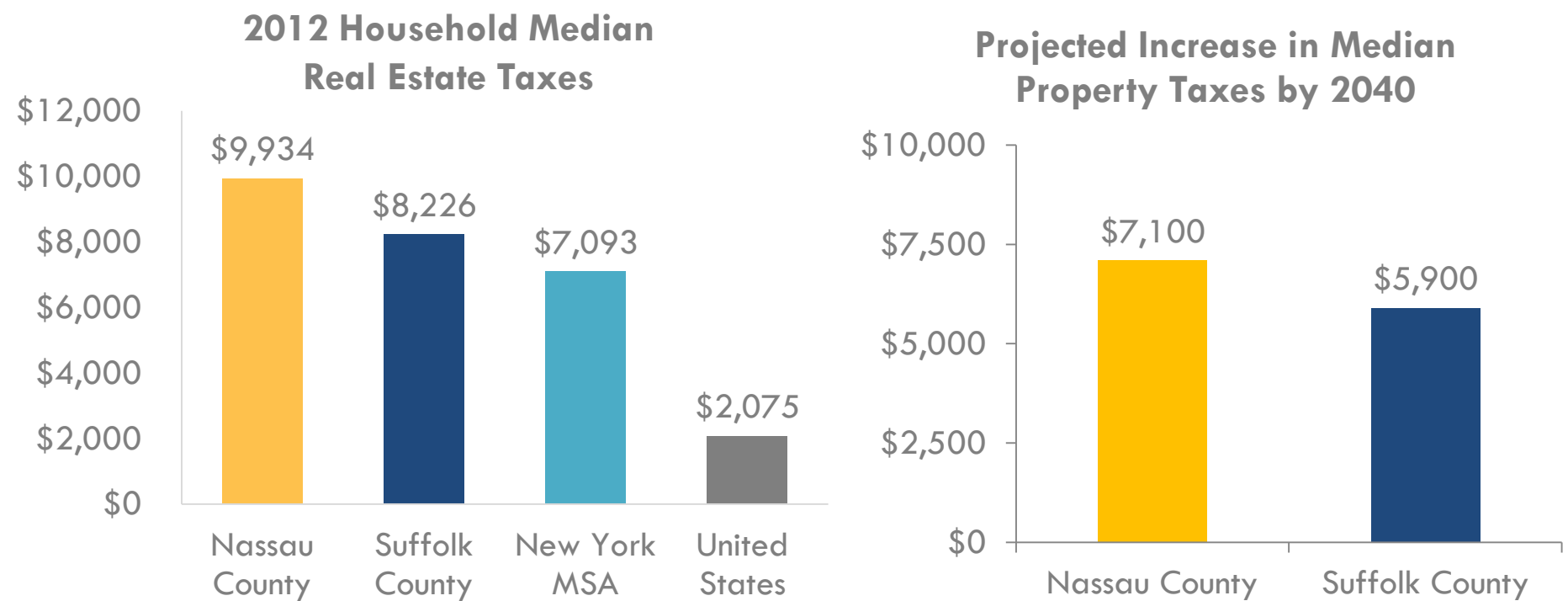
Long Island's economy is projected to stagnate over the next twenty-five years. Overall jobs will grow at a lower rate than in the 1990s and 2000s due to the lack of relative strength of Long Island's economy and amenities compared to other regions in the United States.



Source: Bureau of Economic Analysis; REMI; HR&A Analysis

Long Island's high number of administrative jurisdictions contributes to its heavy tax burden, which is likely to continue to climb in the coming years.

Long Island municipal services, including public schools, libraries, police, fire, and sanitation services, are funded by hefty property taxes. Establishing more extensive shared services agreements, and consolidating some public service districts could help decrease overall municipal expenditures.



Source: U.S. Census Bureau; Long Island Index; HR&A Analysis

While many of these trends are discouraging, Long Island can leverage its existing assets to change its economic course.

Investing in game-changing policy interventions could help re-orient Long Island on the course towards sustainable prosperity.



Image Source: Timo Forchheim, Creative Commons, http://commons.wikimedia.org/wiki/File:Map_of_Long_Island_NY.png

Public and private sector leadership on Long Island has already come together to advance a set of strategic economic development priorities.

The Long Island Regional Economic Development Council is spearheading a multi-pronged strategy to enhance regional prosperity. *The Strategic Economic Development Plan for Long Island* offers tactics to leverage existing strengths to create a robust innovation economy.

This study builds upon these recommendations by positing synergistic strategies to **grow Long Island's biomedical cluster** and **ramp-up multifamily housing production**.

Create Quality Jobs Through
Biomedical Cluster

Expand Housing Opportunities

Image Source: 2014 Strategic Economic Development Plan for Long Island

Long Island's biomedical industry is a logical target for cluster-based economic development strategies.

Long Island is positioned to create jobs in industries in which the region maintains a competitive advantage. Long Island's biomedical industry is relatively small, but growing and highly concentrated compared to the United States.

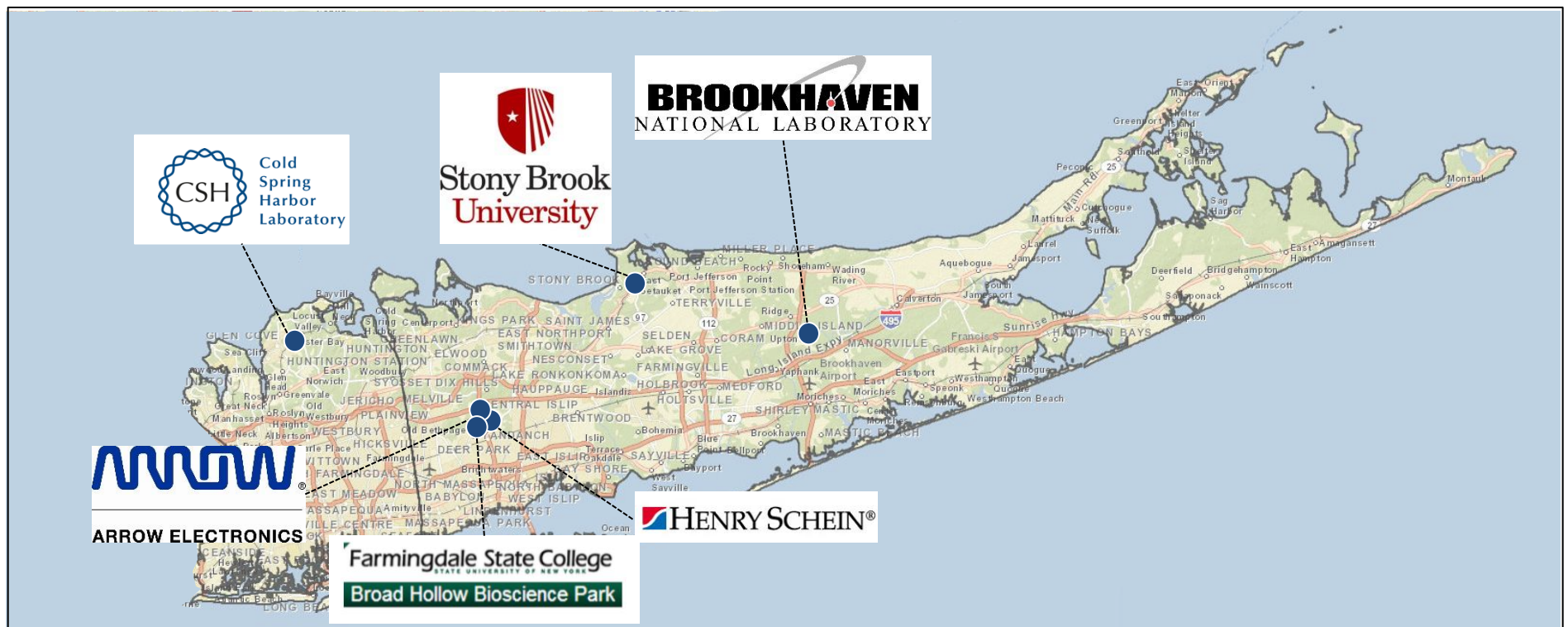


Image Source: ESRI Business Analyst Online

Opportunities for multifamily housing production have been identified on more than 8,300 acres near LIRR station areas and downtowns.

Developing multifamily housing in central areas could maintain the suburban character of Long Island by preserving existing neighborhoods, farmland, and open space. At the same time, increased development in town centers could provide a significant jolt of housing supply, with more affordable and diverse housing options. 2014 Poll results indicate that a majority of Long Islanders support local high density living opportunities in downtown areas.



High Scenario: 43,000 Incremental Units by 2040

Develop 50% of High & Moderate Potential Underutilized Land

Low Scenario: 25,000 Incremental Units by 2040

Develop 50% of High Potential Underutilized Land

Source: Long Island Index; Long Island Index 2014 Poll; Regional Plan Association, "Places to Grow"; Image Source: Long Island Index

Hempstead

Yellow areas represent
vacant land with high potential

HR&A modeled the economic impacts of low and high scenarios of achieving both strategies.

Create Quality Jobs
Through Biomedical Cluster



Expand Housing
Opportunities

50% Growth

**LOW
SCENARIO**

Long Island Gains Additional
8,250 biomedical jobs by 2040

25,000 Incremental Units

Develop 50% of **High Potential**
Underutilized Land

75% Growth

**HIGH
SCENARIO**

Long Island Gains Additional
12,250 biomedical jobs by 2040

43,000 Incremental Units

Develop 50% of **High & Moderate
Potential** Underutilized Land

Implementing strategies to create multifamily housing and grow the biomedical cluster could pay enormous dividends.

*Low Scenario Growth
over Baseline Expectations*

82,000

New Residents
by 2040

12,000

New Residents
aged 25-34 by 2040

44,500

New Jobs
by 2040

\$9.5B

New GRP
in 2040

\$7.7B

New Income
in 2040

\$360M

New Tax Revenue
in 2040

*High Scenario Growth
over Baseline Expectations*

138,000

New Residents
by 2040

23,000

New Residents
aged 25-34 by 2040

73,000

New Jobs
by 2040

\$15.1B

New GRP
in 2040

\$12.6B

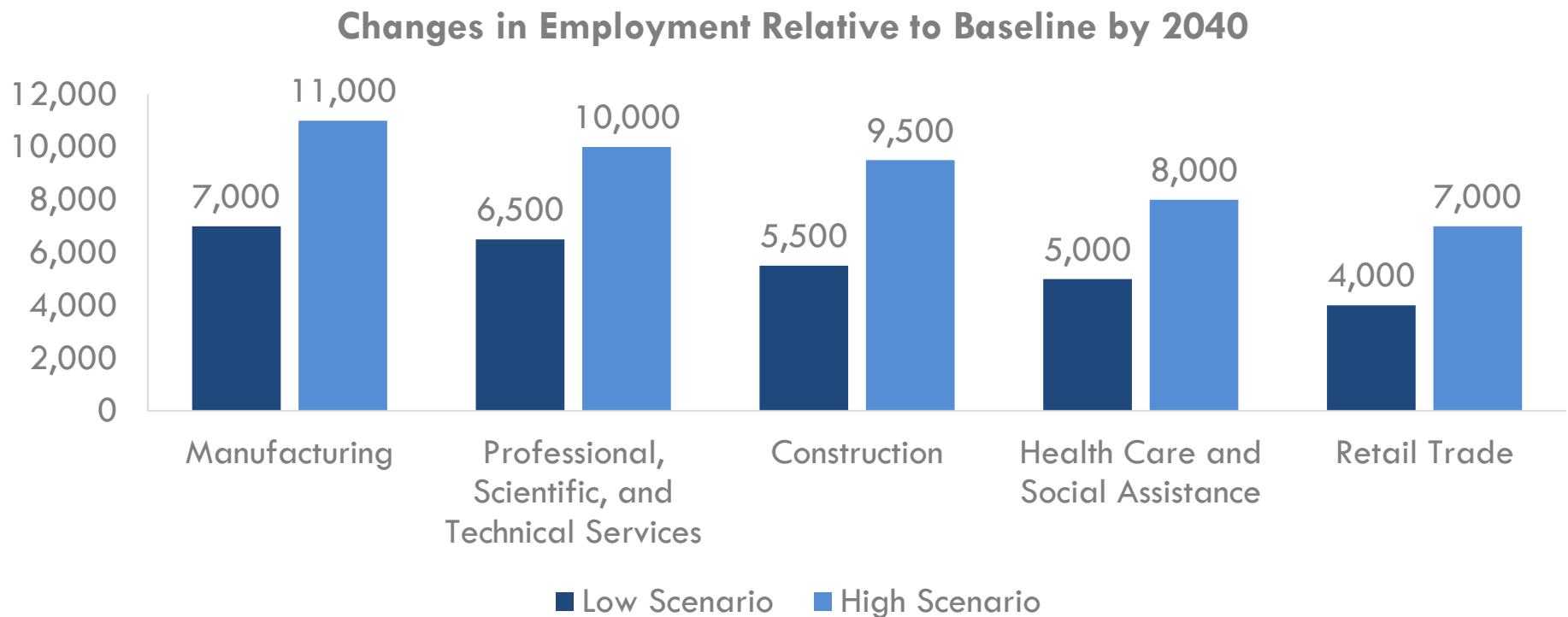
New Income
in 2040

\$600M

New Tax Revenue
in 2040

These interventions would result in significant gains in key Long Island's employment sectors for workers at all income levels.

By 2040, Long Island could gain between 28,000 and 45,500 jobs in these sectors, including Professional Services, Construction, and Healthcare and Retail. These sectors support jobs with diverse income levels, ranging from retail workers (\$25,800) to construction workers (\$64,200) to executives (\$143,400).



Source: REMI; HR&A Analysis

HR&A prepared two case studies to demonstrate how these strategies positively impact specific local communities.

The aggregate impact described in the preceding analysis is ultimately the summation of local impacts felt throughout communities on Long Island. The following case studies demonstrate how the strategies could play out at a local level in Suffolk County along the Route 110 Corridor and in the Village of Westbury in Nassau County.

Route 110 Corridor

Employment and tax revenue impacts of
biomedical cluster growth

Village of Westbury

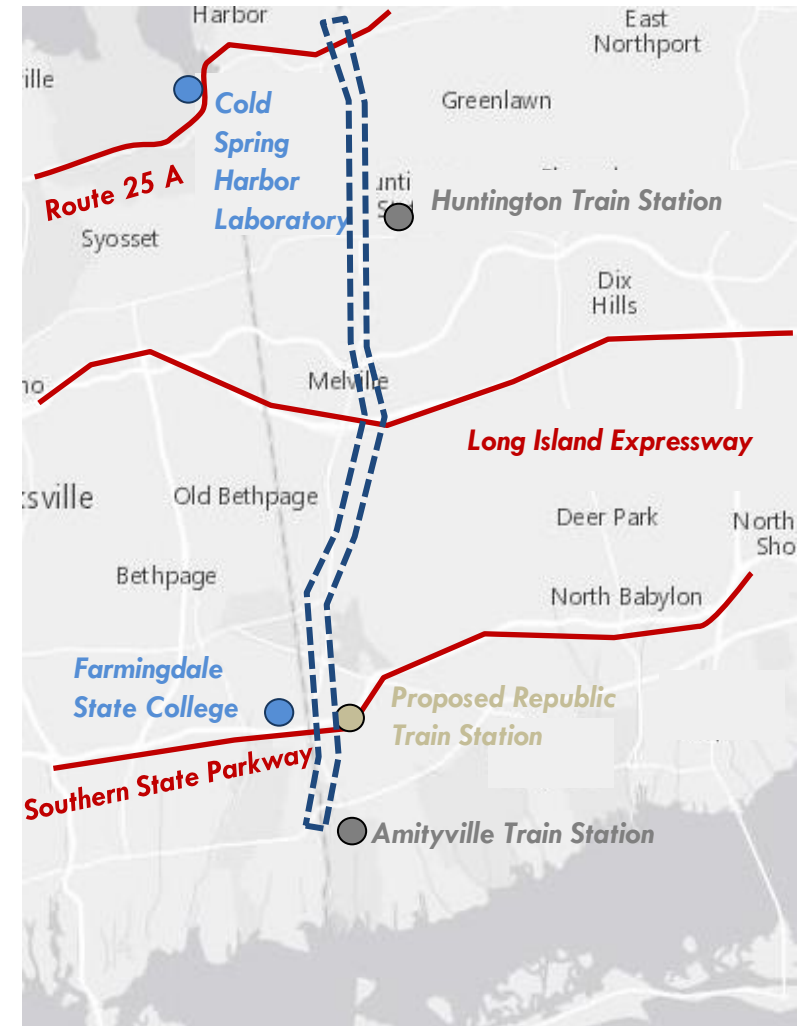
Fiscal impacts of creating downtown, transit-
oriented multifamily housing

The Route 110 Corridor plays a vital role in Long Island's economy, with over 60,000 jobs located within a half-mile of the corridor.

Significant efforts have been made to bolster the corridor, including proposals for a bus rapid transit (BRT) system, and multiple requests for proposals (RFPs) to concentrate new development in the corridor. The corridor holds significant potential for TOD, with large investments being made around the Huntington and new Republic LIRR Stations.

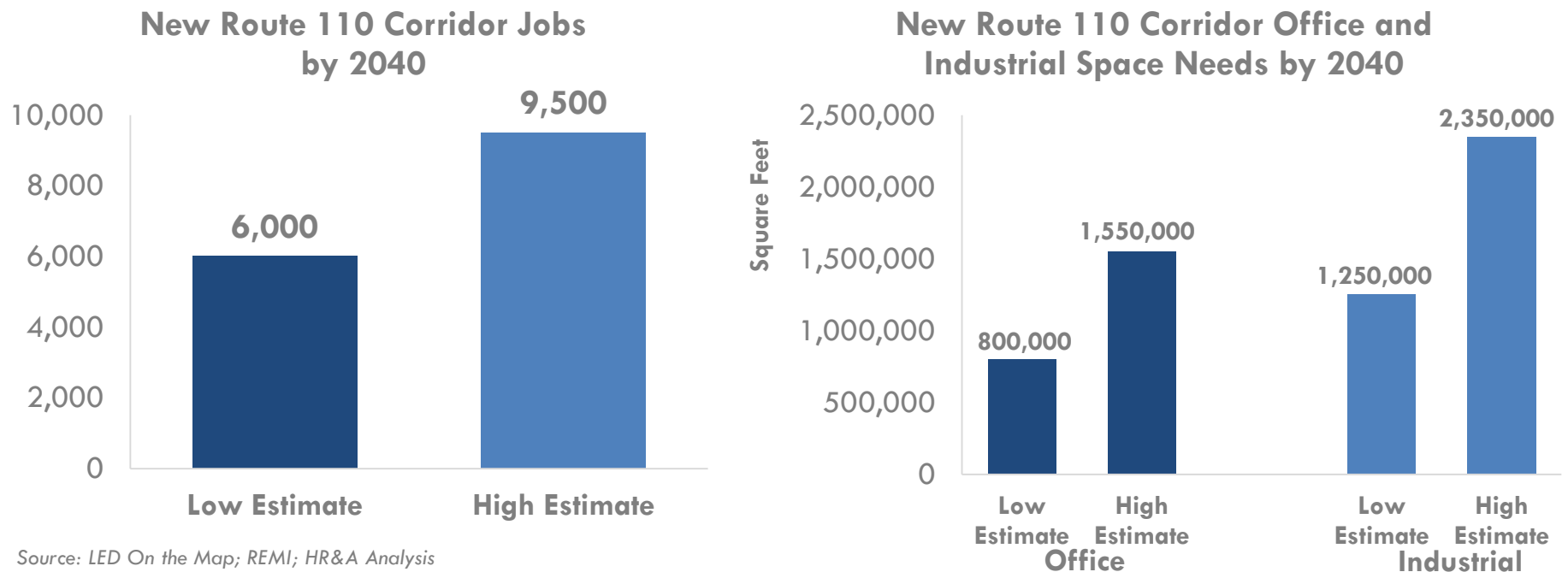
The corridor currently has over 1 million SF of vacant office space and 500,000 SF of vacant industrial space. With this space availability and its proximity to major facilities, the corridor is a logical physical locus for Long Island's biomedical cluster.

Route 110 Corridor



Strategic policies to promote the biomedical sector could attract significant new jobs and drive demand for space in the area.

By 2040, approximately 6,000 to 9,500 additional workers could be located along the Route 110 corridor. Given the corridor's current proportion of square feet per worker, these new workers will require up to 1.55 million SF of office space and up to 2.35 million SF of industrial space.



Transforming the 110 Corridor into a vibrant mixed-use district would enhance Long Island's ability to compete for businesses and workers.

Strategic investments to strengthen Long Island's biomedical cluster could provide:

6,000 - 9,500

New Route 110
Corridor Jobs

\$32M - \$51M

New retail
Spending

\$2.4M - \$3.8M

New Sales Tax
Revenue

By 2040, a reinvigorated 110 Corridor could offer:

- A modern transit system that facilitates travel within the corridor and to the greater region.
- New multifamily housing in proximity to jobs and amenities
- New office spaces designed to maximize interaction and innovation
- Lively, human-scale downtown environments featuring retail and restaurants

The Village of Westbury could accommodate significant fiscal-positive development on two parcels adjacent to the LIRR station.

In January 2014, The Long Island Index released innovative designs for downtown parking structures in Long Island communities through its ParkingPLUS Design Challenge. LTL Architect's proposal, "Train Terraces" is designed to strengthen the connection between the LIRR station and downtown Westbury. HR&A conducted a high-level fiscal impact of the residential component of the proposal, which contemplated approximately 80 new housing units.



Image Source: LTL Architects, Build a Better Burb

Building denser housing in downtown Westbury would create more than \$280,000 in annual net fiscal benefit and add vibrancy to the area.

While this project is based on expectations of the type of development that would occur on this centrally-located parcel, all Long Island communities must make a concerted effort to introduce rental housing that is affordable.

Annual Net Fiscal Benefit to Long Island Governments

Revenue	\$810,000
Cost	-\$530,000
Net Benefit	\$280,000

Transit-Oriented Infill Development in Downtown Westbury could offer:

- Increased vibrancy on Post Avenue retail corridor
- Increased LIRR ridership
- New multifamily housing in proximity to jobs and amenities
- Additional retail spending and sales tax revenue
- Attract more young workers and their families

A variety of levers are available to strengthen Long Island's biomedical cluster.

Third Track and Regional Connectivity

- 1 Improve transportation options and overall transit connectivity by building the LIRR Third Track and creating a multi-modal north-south transit system for the Route 110 Corridor.

Invest in Downtowns

- 2 Amenitize downtown locations with retail and restaurants, streetscaping, and event programming to provide a walkable environment attractive to young workers.

Start-up Capital Funding

- 3 Leverage state funding opportunities and local initiatives such as Accelerate Long Island to provide increased capital funding to early-stage start-ups.

Commercialize Research

- 4 Strengthen the business mentor network and connections to local research institutions to foster new start-up creation and ensure survival of new firms.

Flexible Zoning

- 5 Regionally coordinate local zoning and permitting efforts to build flexible office and industrial space in appropriate locations as need develops.

Business-Friendly Taxes

- 6 Lower the business tax burden through strategic consolidations that enable the realization of economies of scale in service provision.

Similarly, implementation actions, many of them at the local level, will be necessary to achieve a significant increase in housing production.

Flexible Regulatory Environment

- 1** Allow higher densities and mixed land uses in downtown centers and LIRR station areas either by-right or through density bonuses for urban infill projects.

Live-Work-Play Downtowns

- 2** Encourage the strategic development of amenities that downtown residents will require in live-work-play centers, such as grocery stores and entertainment options.

Regional Smart Growth Plan

- 3** Advocate for regional smart growth and the creation of a Long Island-wide general land use policy plan to coordinate denser development.

Construction Permitting

- 4** Expedite permitting for multi-family housing projects to speed up the development timeframe and encourage private-sector investment.

Public Infrastructure Investments

- 5** Continue to invest in public facilities and infrastructure, and consider funding below-market rate loans for denser projects.

Introduction

This study examines the impacts of Long Island-wide initiatives that could address some of the region's most intractable issues.

This report builds off of the momentum of HR&A's study of the Main Line Third Track, diving deeper into Long Island's current economic and demographic trajectory and understanding how broader economic development strategies could alter this trajectory.

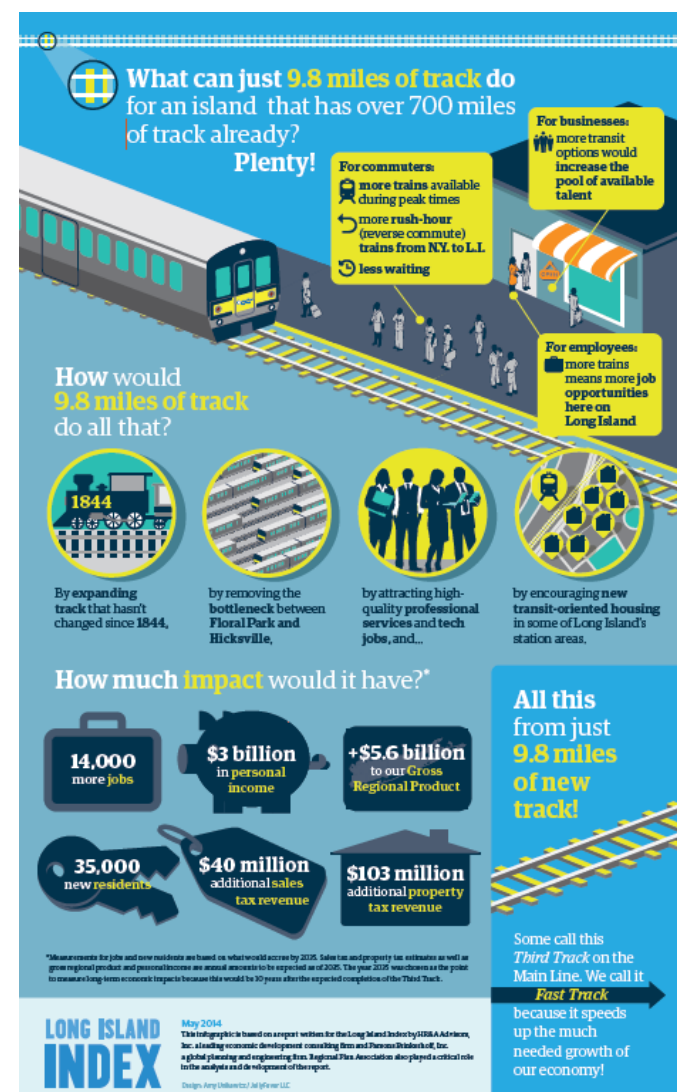
HR&A first prepared a baseline scenario that “plays out” current demographic and economic trends on Long Island. Using this baseline as a jumping off point, HR&A analyzed how strategies could re-orient Long Island towards sustainable prosperity. We examined strategies centered on strengthening Long Island's biomedical industry and expanding the production of multifamily housing.

The ultimate goal of this project is to highlight how targeted actions could improve job creation, retain young workers, and solidify Long Island's tax base for future generations.



HR&A's 2014 study of the LIRR Main Line Third Track advanced a regional conversation about Long Island's economic future.

In May, 2014, HR&A and Parsons Brinkerhoff released *The Economic and Fiscal Impacts of the Long Island Rail Road Main Line Third Track*. The study has fueled a regional conversation amongst transit professionals, policy makers, business representatives, and community members around the merits of the project and its ability to catalyze economic growth. If implemented, the Third Track could create thousands of new jobs, attract residents, and generate substantial local tax revenues. HR&A estimated that the initial capital investment of \$1.1 billion would generate a significant return in terms of growth in employment, population, and economic activity.



Third Track Economic and Fiscal Impacts

Economic Impacts

20,000 jobs
created
by 2040

\$7.1 B GRP in
2040

\$4.4 B income in
2040

53,400 new
residents
by 2040

Fiscal Impacts

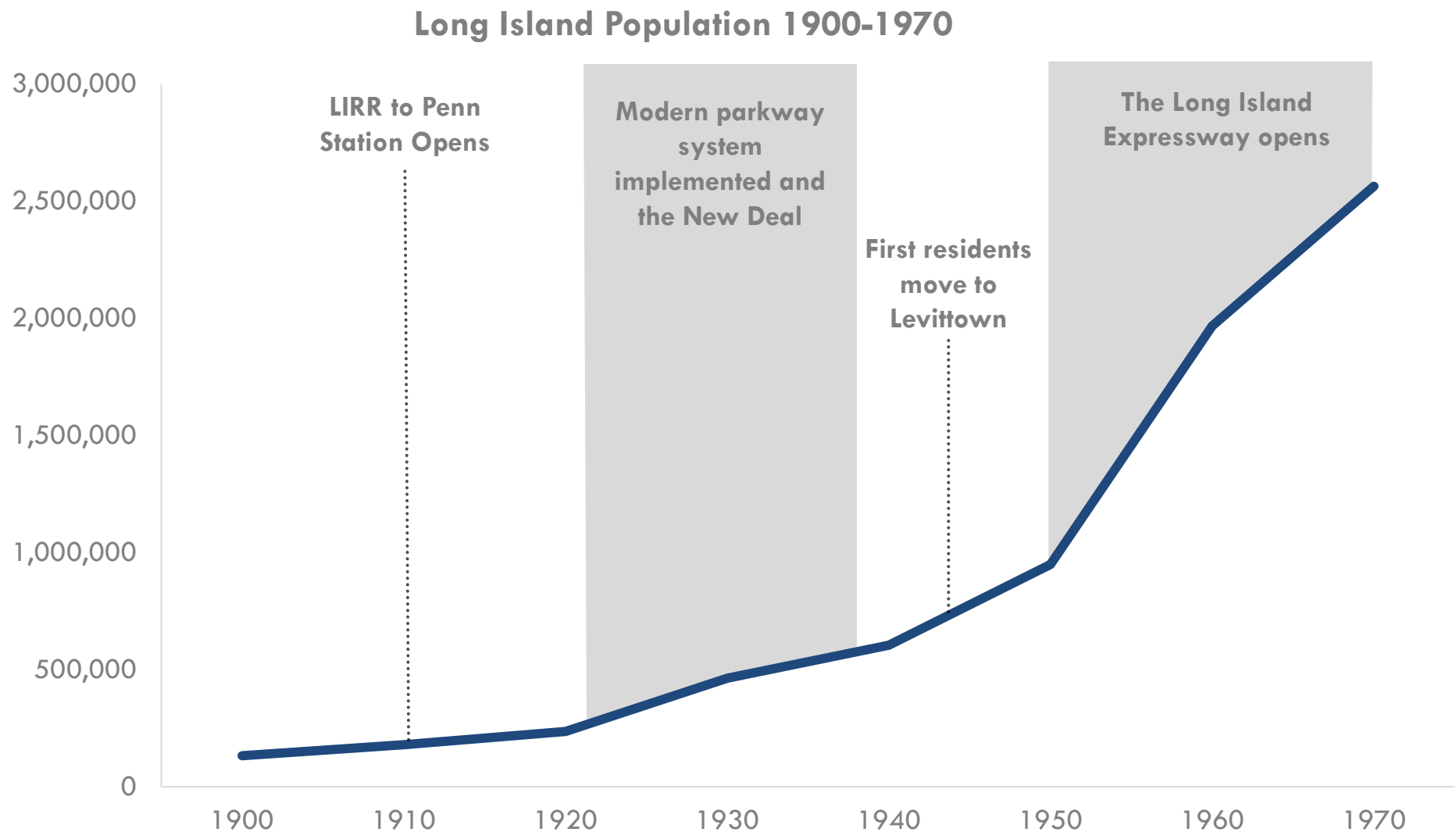
\$57 million
additional annual sales
tax revenue in 2040

\$155 million
additional annual
property tax revenue in
2040

Note: All dollar amounts are in 2013 dollars. Impacts are shown for the year 2040, rather than 2035 as in *The Economic and Fiscal Impacts of the Long Island Rail Road Main Line Third Track*, given the emphasis of the present report. Source: HR&A Advisors; REMI; New York State Department of Taxation and Finance

Long Island's Past

Transportation network enhancements helped Long Island become one of the country's fastest growing regions.



Source: U.S. Census; Bureau of Economic Analysis; Regional Plan Association; New York Times; Wall Street Journal

New suburban housing developments and the expansion of transportation infrastructure drove mass migration in the Postwar era.

The “Golden Years” of Long Island’s development coincided with the broad period of suburbanization throughout the United States following the end of World War II. Defense industry spending and the construction of thousands of homes fueled economic growth and provided housing for workers. Several important research institutions were also founded, enhancing the region’s base of human capital.



1945: 100,000 Long Island residents are employed by aircraft manufacturers

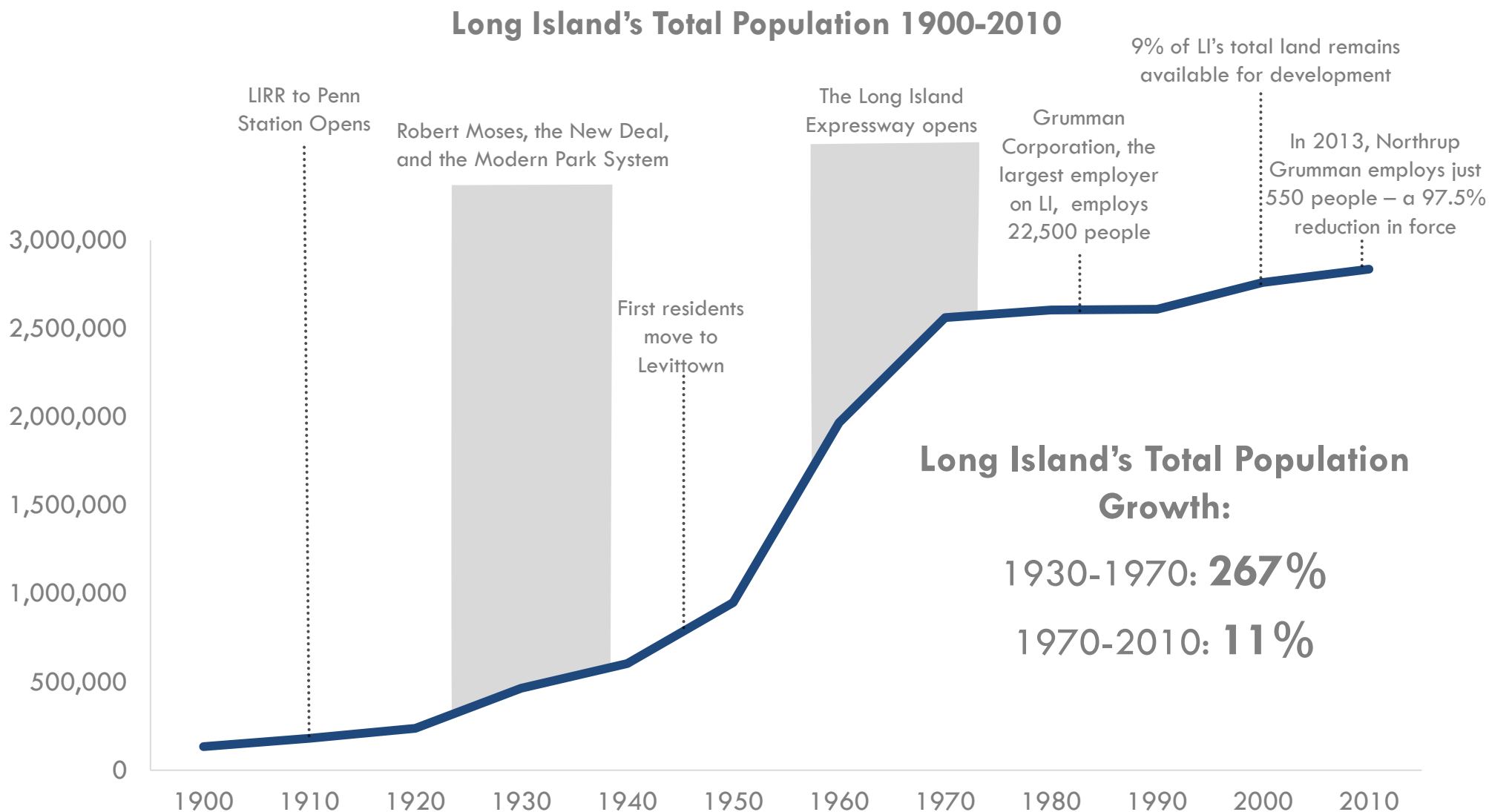
1947: Levittown founded

1947: Brookhaven National Laboratory founded

1957: Stony Brook University founded

Source: Newsday; Image Source: Niknakc, Creative Commons, http://upload.wikimedia.org/wikipedia/commons/c/c9/Artist_in_front_of_Childhood_Home.jpg

Yet since 1970, Long Island's growth has leveled off considerably.

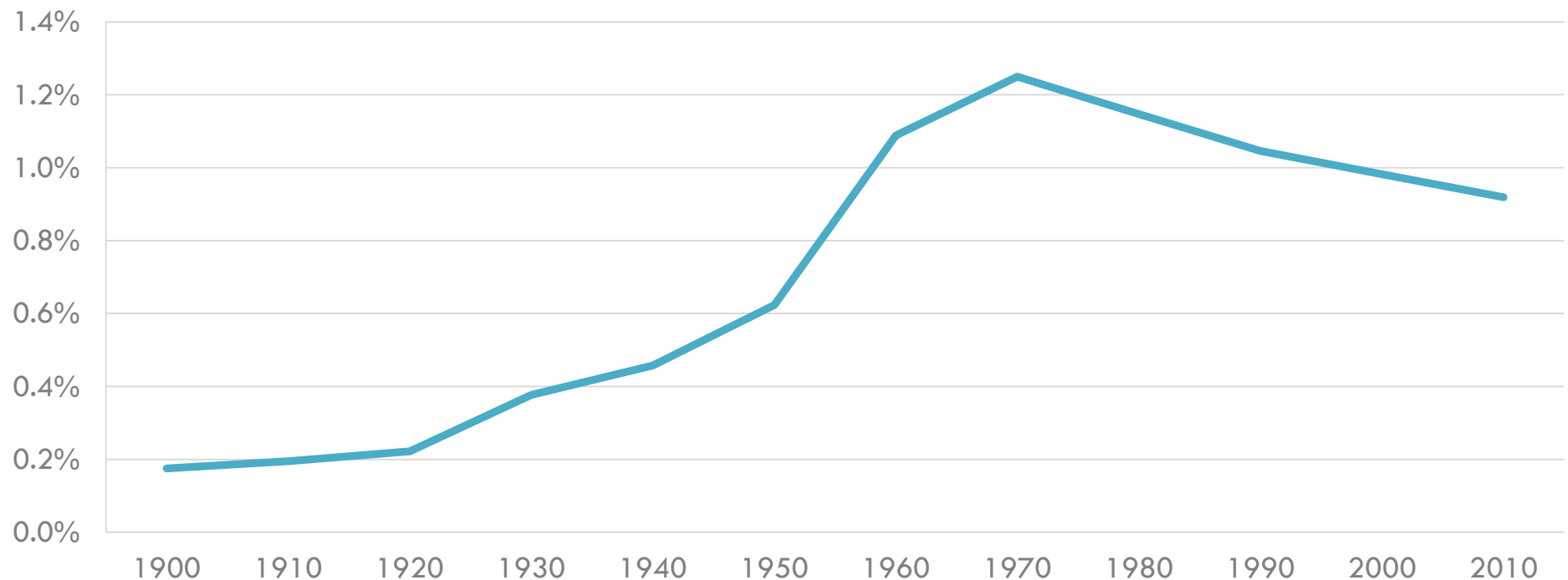


Source: U.S. Census Bureau; Bureau of Economic Analysis; Regional Plan Association; New York Times; Wall Street Journal

Long Island's share of the United States' population has steadily eroded due to its slow growth rate.

In the early and mid-20th century, Long Island's population grew at a faster rate than the national population. Long Island's population, as a proportion of the total United States population, peaked in the 1970s when Long Islanders represented 1.25% of the nation's inhabitants. Since then, Long Island's growth has lagged behind the nation's. Today, Long Islanders comprise just 0.92% of all Americans, less than in 1960.

Long Island's Population as Percent of Total U.S. Population 1900-2010

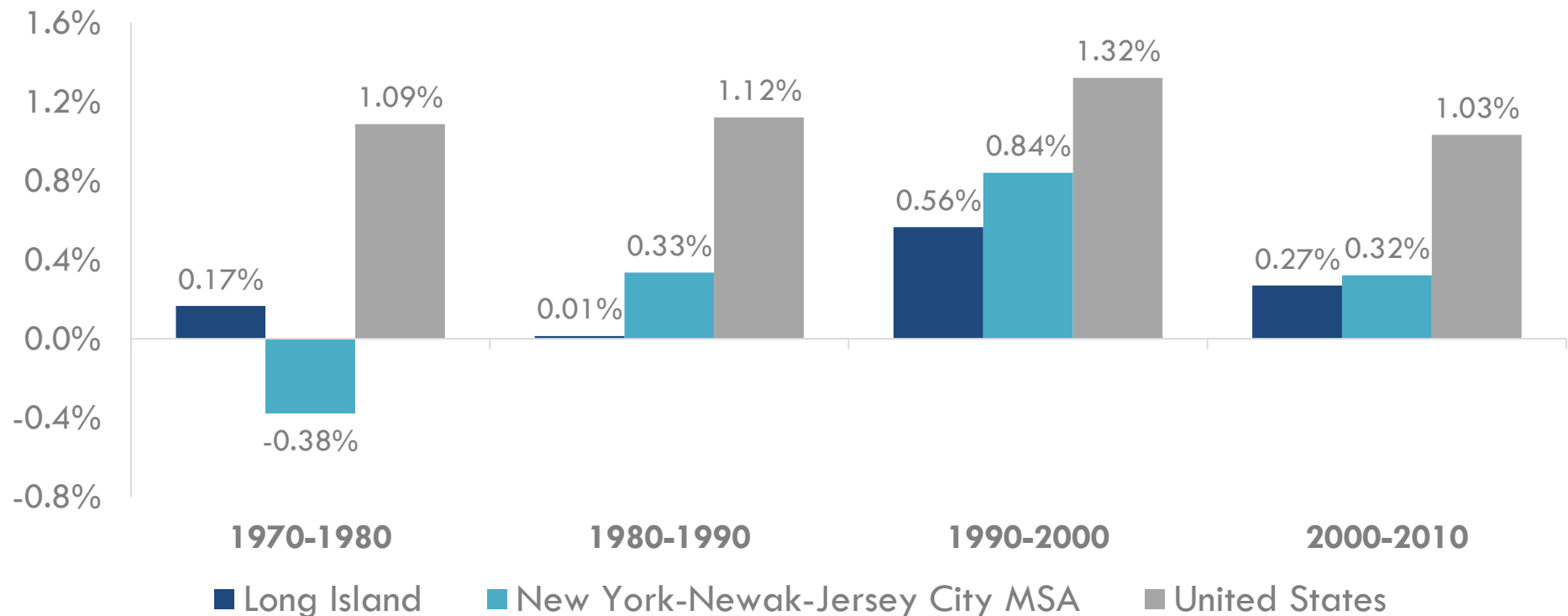


Source: U.S. Census Bureau; Bureau of Economic Analysis

Long Island is also growing more slowly than the New York region.

Long Island's population has grown more slowly than the New York metropolitan region over the past thirty years, which itself is growing more slowly than the United States. Saturated development and the high cost of living contribute to Long Island's sluggish growth.

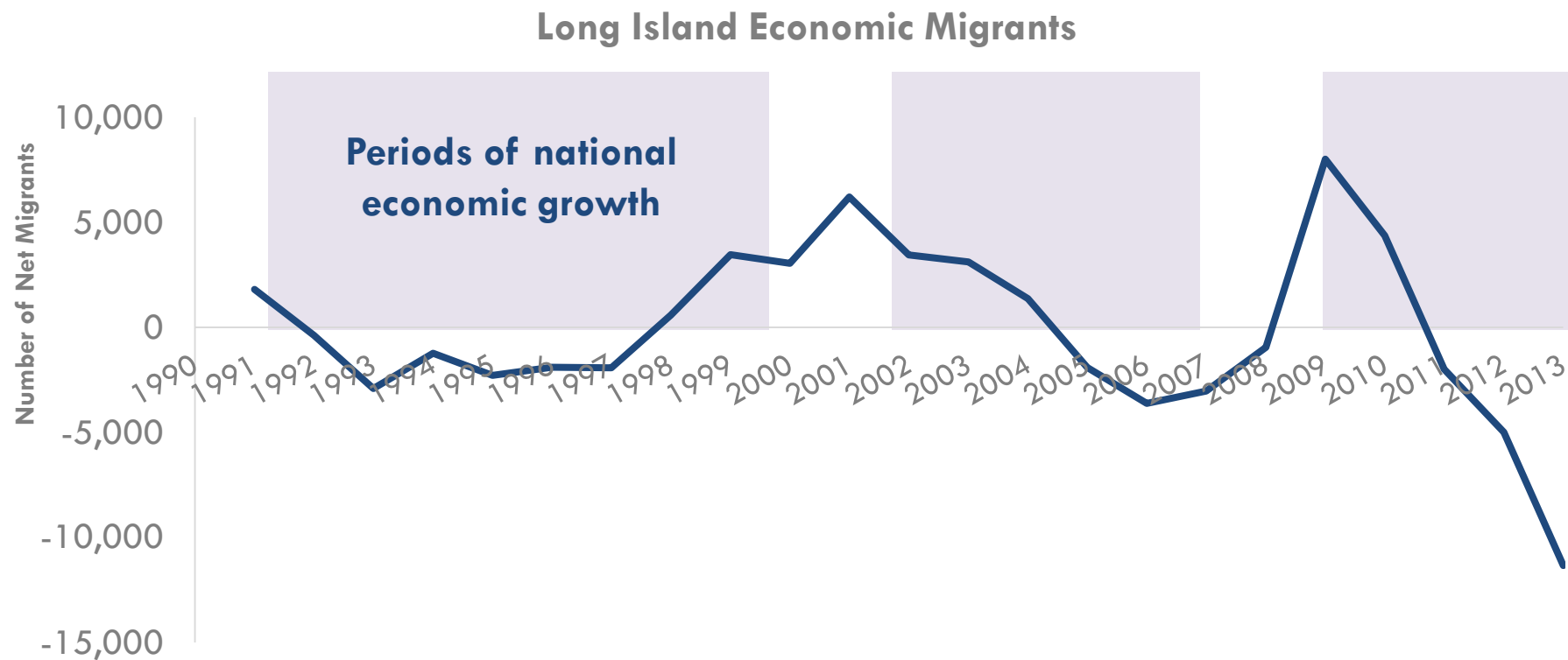
Average Annual Population Growth Rate by Geography



Source: U.S. Census Bureau; Bureau of Economic Analysis

Economic migration to Long Island is strongly countercyclical, indicating Long Island exports talent in periods of national economic growth.

A region's population increases through either natural growth, i.e. children being born, or through migration of workers and families from elsewhere. Economic migrants are those migrants that move to a region specifically to take advantage of employment prospects. Negative net economic migration when the country's economy is performing strongly (e.g. the 1990s, the mid 2000s) indicates that workers attempt to capitalize on economic growth by leaving Long Island and seeking job opportunities in other regions of the country.

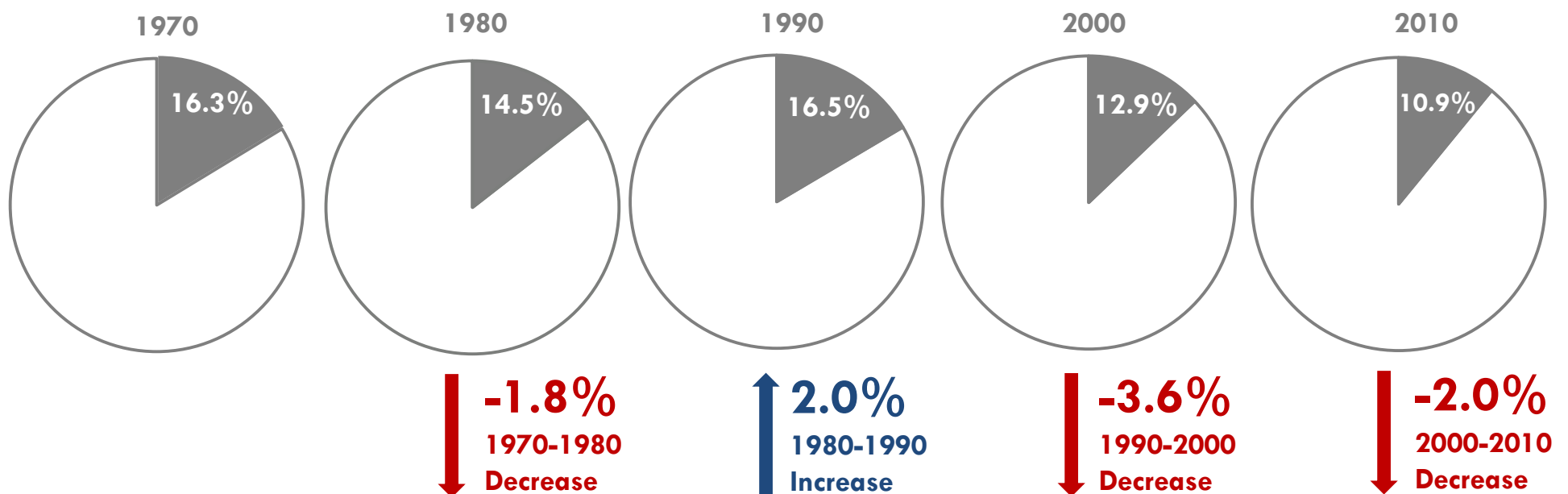


Source: REMI; National Bureau of Economic Research: US Business Cycle Expansions and Contractions

Since 1990, Long Island has aged, reversing trends of the previous era.

Young workers are critical contributors to regional economies. This demographic, ages 25-34, represents new entrants to the labor market, first time homebuyers, and parents of children enrolled in school. From 1980-1990, 25-34 year olds grew as a share of Long Island's total population. Yet since the 1990s, the proportion of young workers has fallen significantly. By 2010, the 25-34 year old age cohort dropped to 10.9% of the total population, the lowest level in the past five decades.

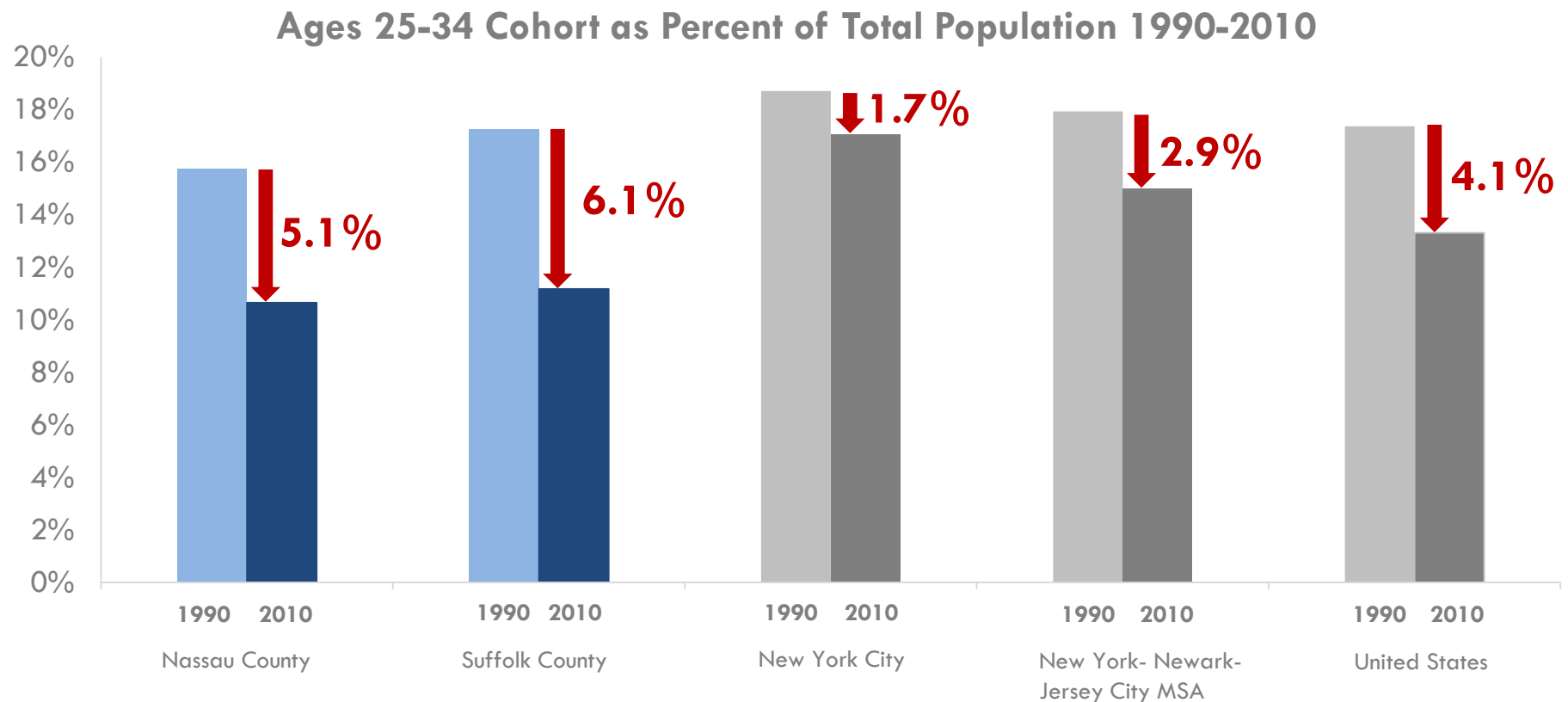
Ages 25-34 Cohort as Percent of Total Population 1970-2010



Source: U.S. Census Bureau

The proportion of young workers on Long Island has declined more than in New York City, the greater New York region, and the nation.

While the share of 25-34 year olds in the total population has decreased nationwide, the decline in Nassau and Suffolk Counties is particularly pronounced. In 2010, the 25-34 year old cohort on Long Island represented a significantly smaller share of the total population than in New York City, the New York Region, or the United States as a whole.



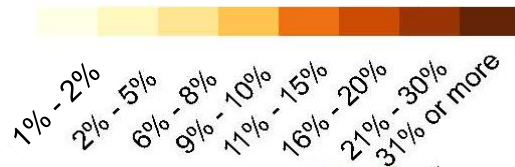
Source: U.S. Census Bureau

The loss of the young workers is felt throughout Long Island.

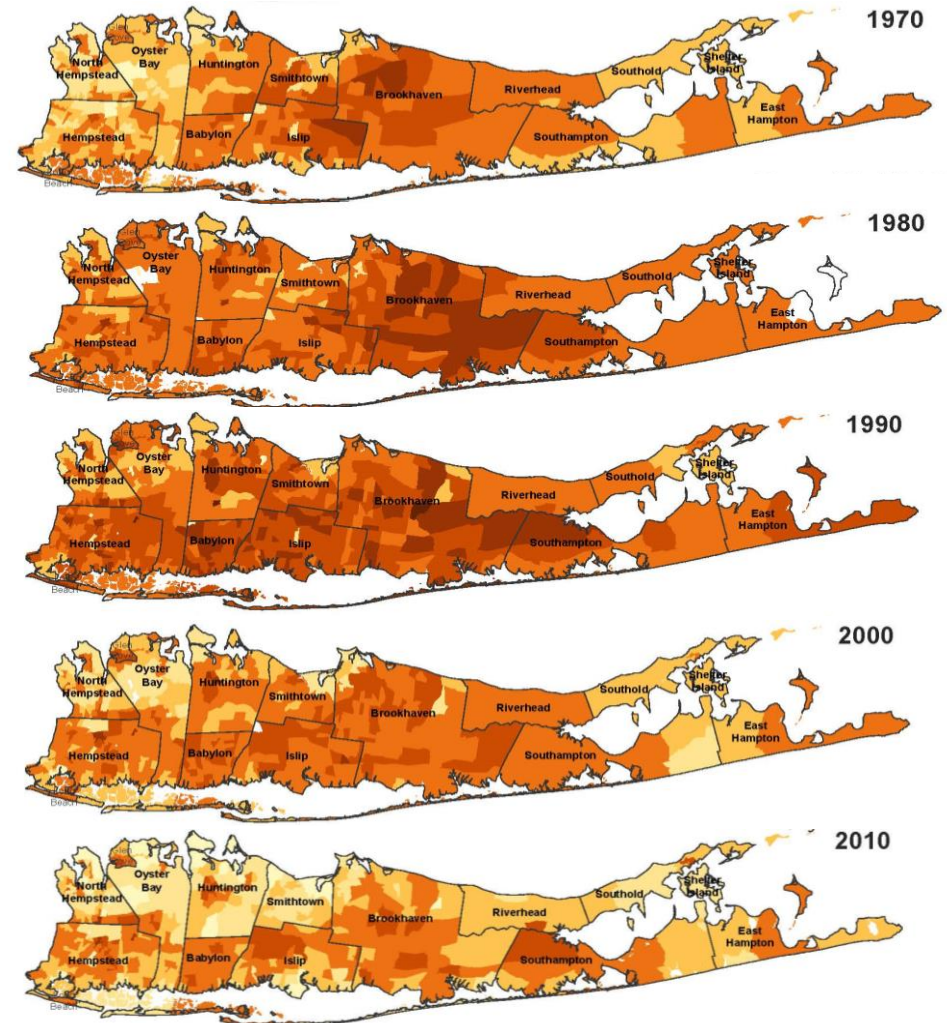
A long literature notes the trend of young workers moving to urban areas with accessible transit and diverse housing opportunities; the lack of these types of environments on Long Island hinders its competitiveness. During the 1990s, 25-34 years old made up a larger proportion of the population and were well-distributed across the region. Today, young workers are concentrated in a few pockets across Long Island. According to the 2014 poll of Long Island residents conducted by the Center for Survey Research at Stony Brook University on behalf of the Long Island Index (“the 2014 Poll”), 80% of Long Islanders view young people moving away as an “extremely” or “very serious” problem.

Legend

Population age 25-34
as a Percent of Total
Census Tract Population



Population age 25-34 by Census Tract 1970 to 2010



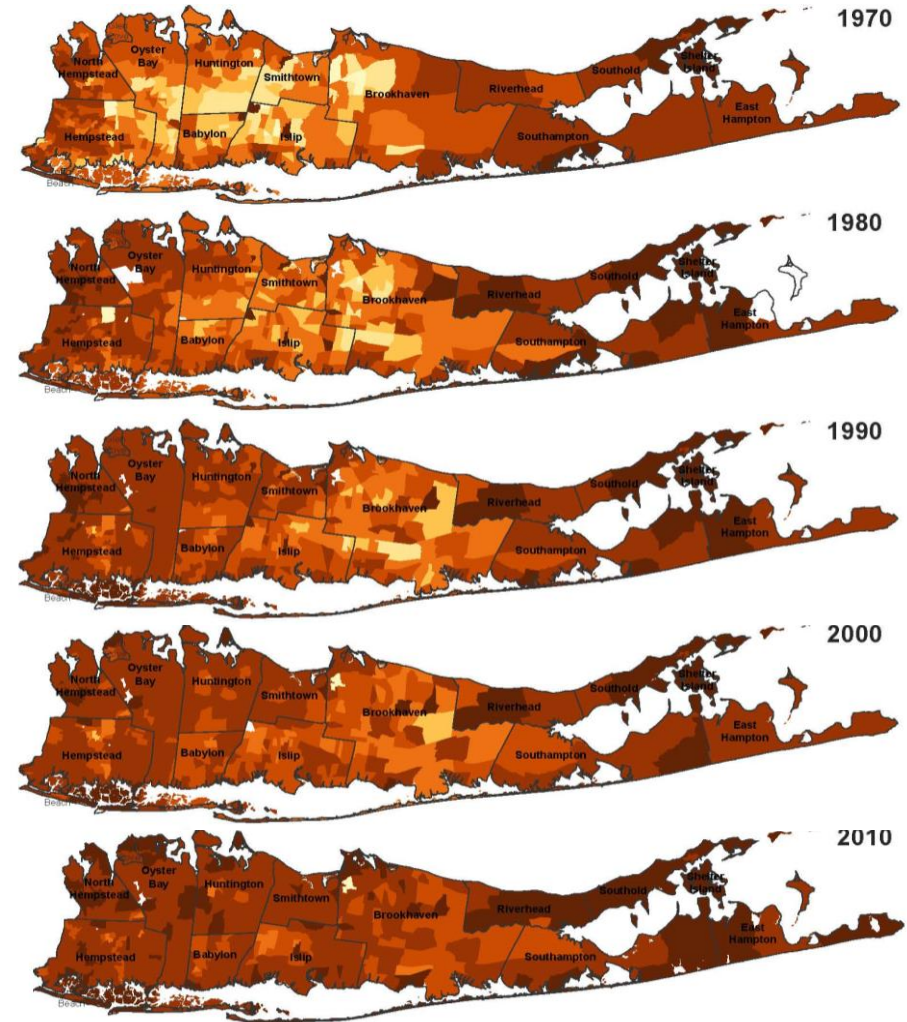
Source: Long Island Index 2014 Poll; NHGIS. Maps prepared by Center for Urban Research, CUNY Graduate Center

The proportion of Long Islanders over 55 has increased considerably as the population has aged and the flow of young workers has subsided.

While Long Island experiences substantial out-migration of retirees to warmer climes, many of Long Island's baby boomers are still aging in place. These residents, who flooded Long Island as young workers throughout the 1960-1980s, have resided in the region for decades and now comprise Long Island's growing senior cohort.

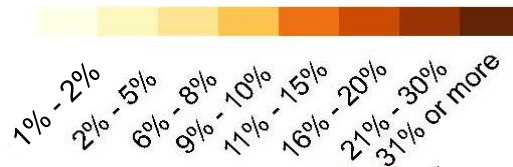
As Long Island's residents age in place, a shrinking cohort of younger residents skews the region's demographic balance and calls into question the long-term outlook of the region's single-family housing stock.

Population age 55-84 by Census Tract
1970 to 2010



Legend

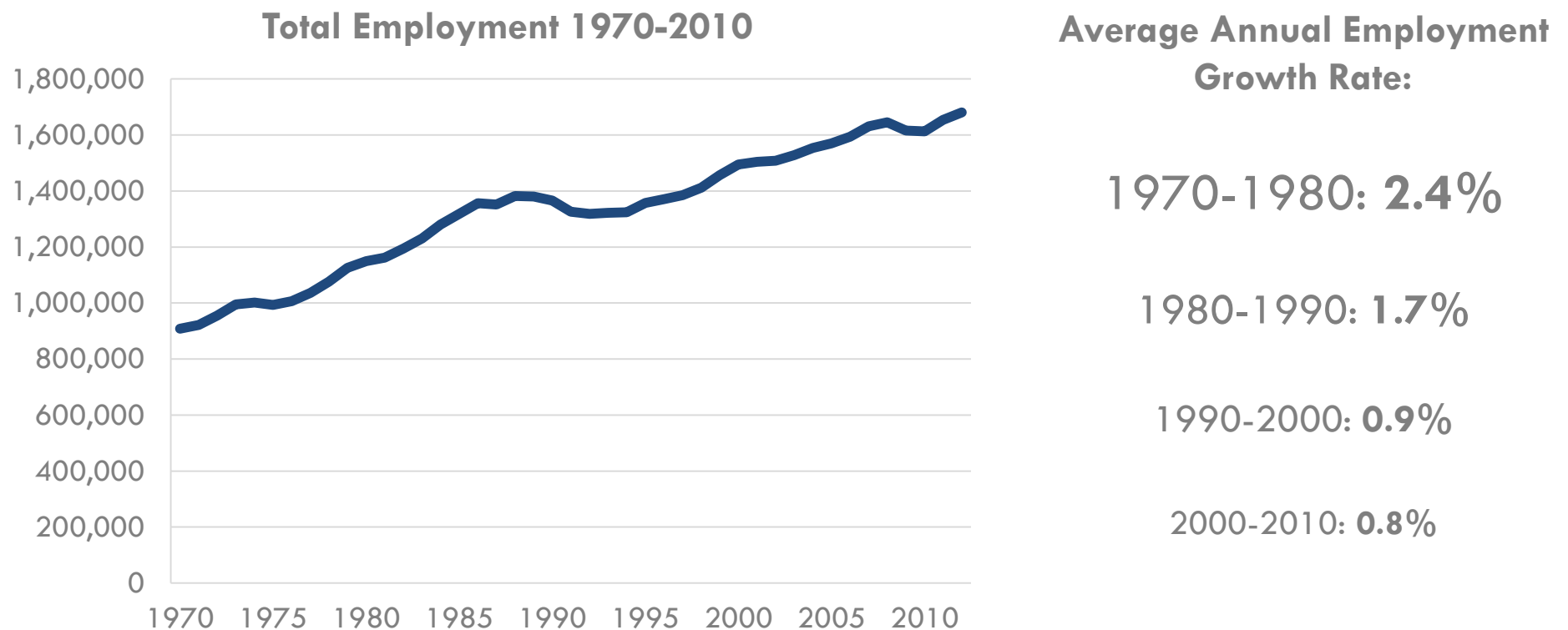
Population age 55-84
as a Percent of Total
Census Tract Population



Source: NHGIS. Maps prepared by Center for Urban Research, CUNY Graduate Center

Job growth on Long Island was historically fueled by the suburbanization of employment and by women entering the workforce in greater numbers.

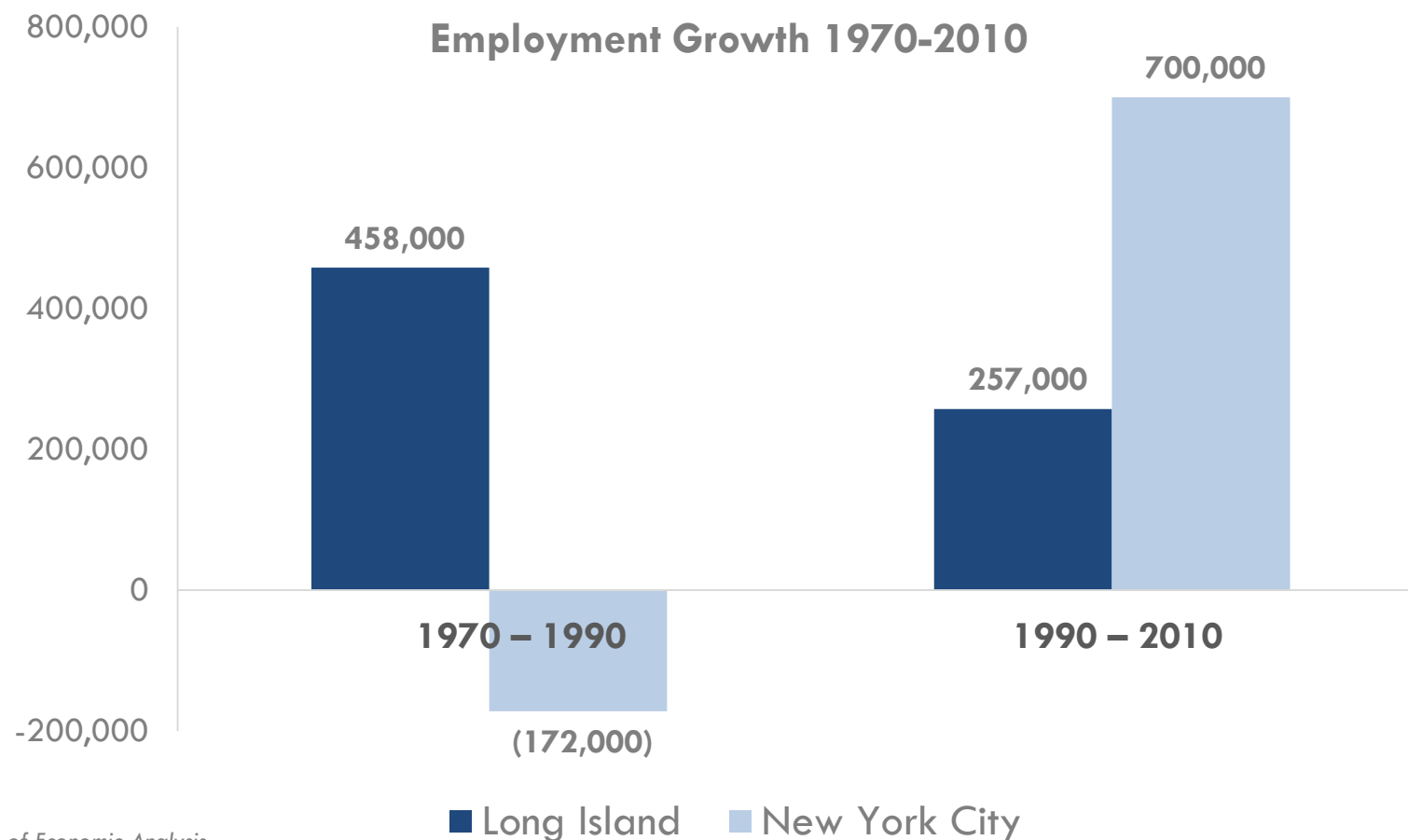
Long Island has lost the competitive edge in employment growth it once enjoyed. While the strong suburbanization of employment was once advantageous to the Long Island, that trend has since eroded. Moreover, between 1970 and 1990 Long Island's female civilian labor force participation rate increased by 19.3%, but between 1990 and 2010 it increased by only 2.3%.



Source: U.S. Bureau of Labor Statistics; U.S. Census Bureau

Over the last two decades, job growth on Long Island has been sluggish, in stark contrast to the revival experienced by New York City.

In the 1970s and 1980s Long Island prospered from the exodus of businesses and their employees to office and industrial parks closer to workers' suburban homes. The nascent move back to urban centers, exemplified by New York City's resurgence, has eroded Long Island's competitive advantage.



Source: Bureau of Economic Analysis

Limited transportation capacity also constrains Long Island's growth.

Deferred transit investments have choked access between Long Island and New York City, limiting Long Island's accessibility to the nation's largest employment hub in Manhattan. While the implementation of East Side Access and the Ronkonkoma Double Track will improve these connections, other game-changing projects like the Main Line Third Track and intra-Long Island bus-rapid transit or light rail transit would further improve transportation resources.

Other subregions in the New York metro area have made recent investments to improve regional connectivity. From 2002-2004, Metro-North constructed a third track along portions of the Harlem line, providing stronger connections to employment centers in Westchester County and enhancing White Plains as an employment center. Hudson and Bergen Counties in Northern New Jersey opened the Hudson-Bergen Light Rail line in 2000, tying a broad geography into the region's existing heavy rail systems. Without comparable investments, Long Island's regional competitiveness is hindered.

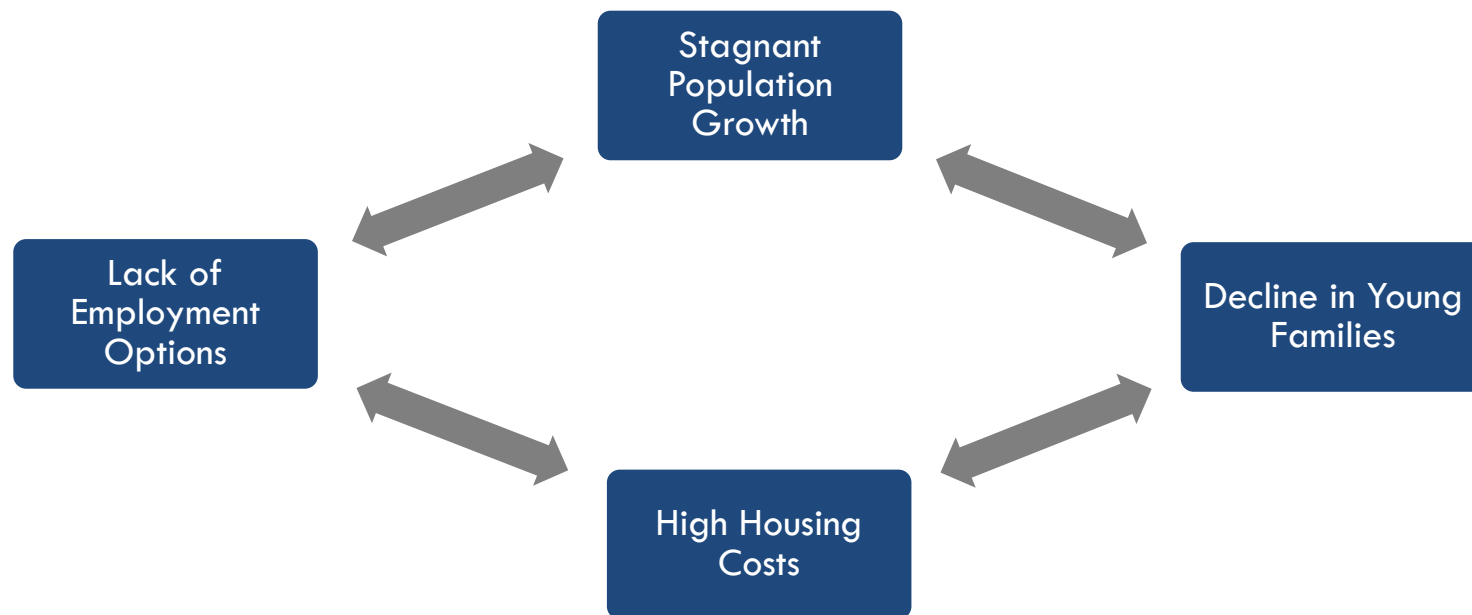


Source: "Mobilizing the Region, A Third Track on the Main Line is Key to Long Island's Economy." Image Source: Yonah Freemark / The Transport Politic.

Long Island's stagnant growth is a product of persistent socioeconomic challenges and structural changes in the economy.

Long Island faces several intractable challenges – from a decline in high paying jobs in export-oriented industries to the accelerating loss of young workers and their families – that conspire to dampen future prospects for its residents and businesses. Without targeted interventions, these challenges threaten to erode Long Island's economic vibrancy and fiscal sustainability, and ultimately, quality of life.

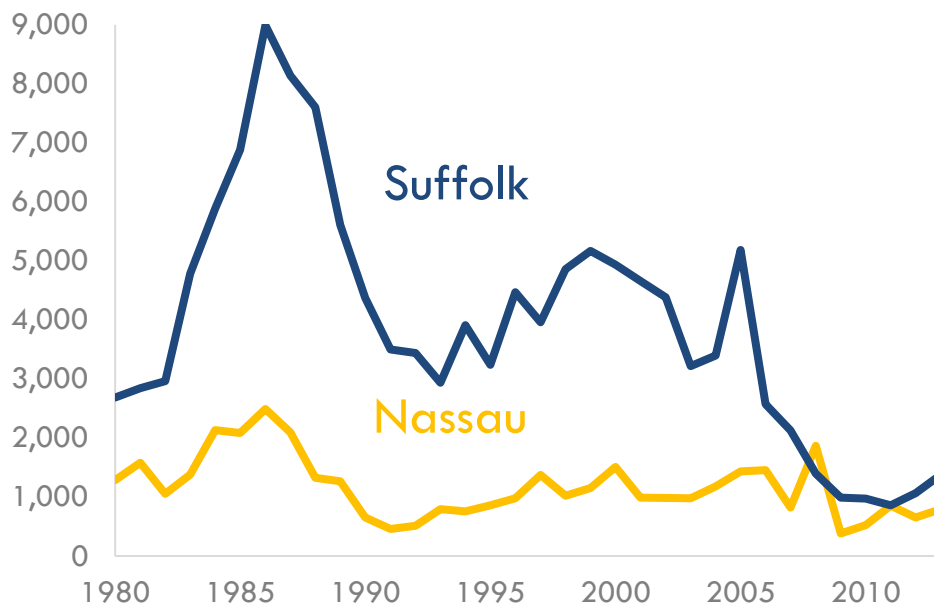
Interconnected Factors Influencing Long Island's Future Prosperity



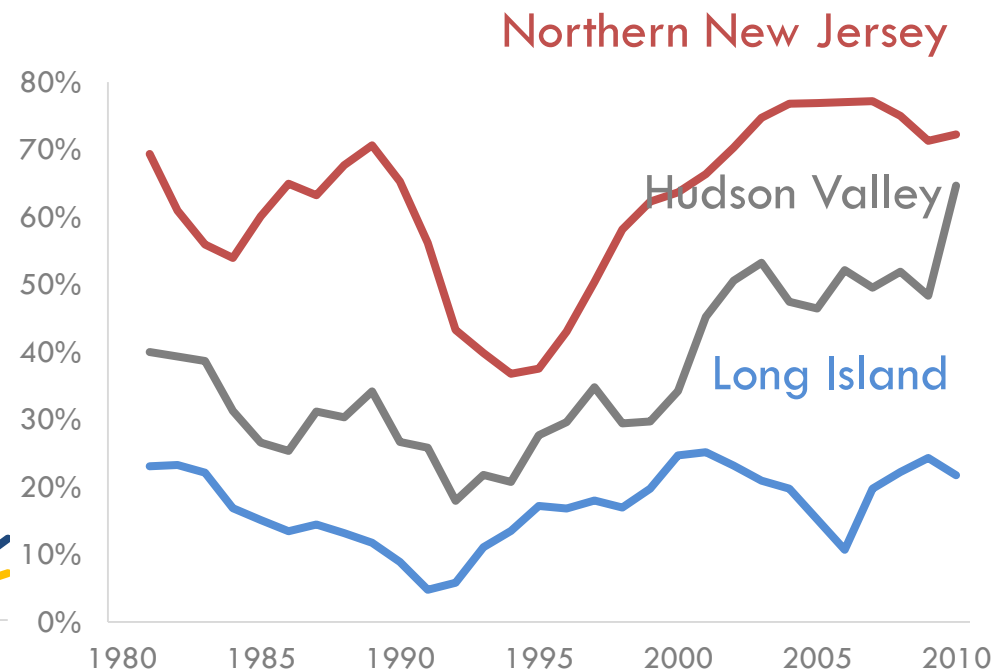
Housing production on Long Island has declined precipitously in the last 10 years.

Long Island has significantly less multifamily units as a percentage of total housing than peer suburbs in the New York metropolitan area. New York area residents seeking multifamily units – today's starter homes – are more likely to find appropriate housing opportunities in communities outside of Long Island.

Long Island Total Building Permits



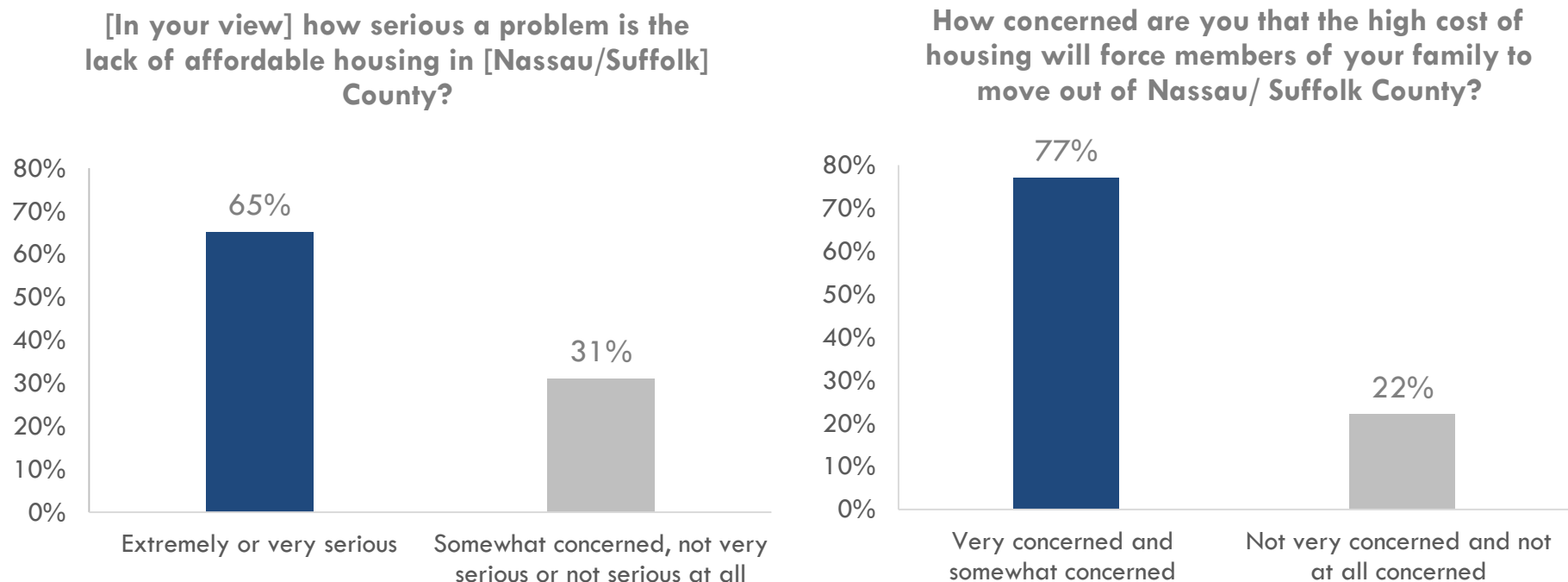
Multifamily Units as Proportion of All Units Permitted, 3-Year Moving Average



Source: US HUD State of the Cities; HR&A Analysis

Long Islanders are deeply concerned with what a lack of affordable housing means for their own families and the region's future.

Long Island's loss of young people is, in part, a reflection of the availability of *right sized and right priced housing*. A lack of appropriate housing options limits opportunities for everyone, including young people, senior citizens, and low-income households. According to the 2014 Poll, 65% of Long Islanders believe that the lack of affordable housing in the region is an extremely or very serious problem. 77% of residents fear that high housing costs will force family members to leave Long Island. Moreover, 27% of Long Island seniors feel that their current dwelling is too big, compared to 8% of younger residents.

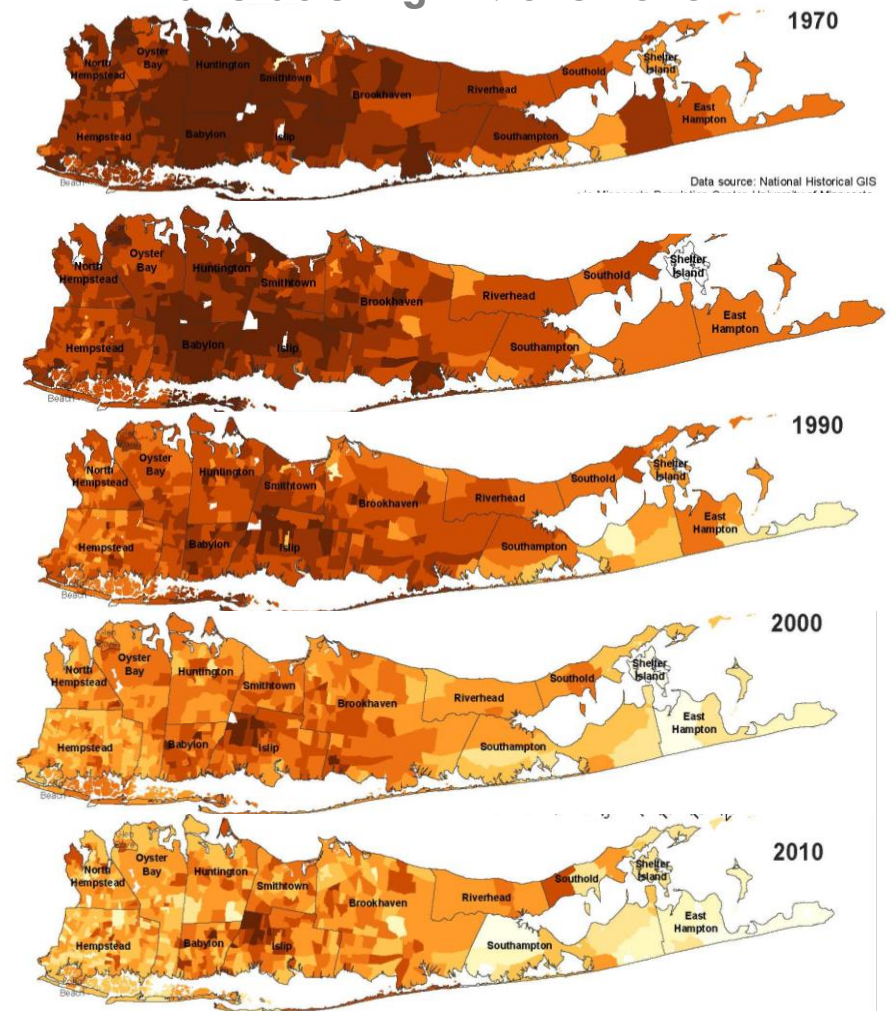


Source: Long Island Index 2014 Poll

The loss of the manufacturing and defense industries leaves an economic void.

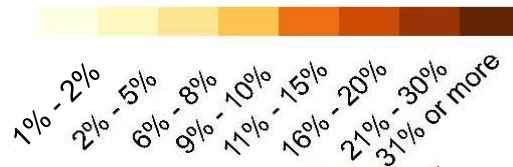
Long Island has steadily lost jobs in its one-time signature industries of manufacturing and defense. In 1970, manufacturing jobs were spread throughout Long Island and made up a significant proportion of employment in many areas. By 2010, there were very few areas on Long Island where manufacturing comprised a significant share of employment.

Percent of Residents Employed in Manufacturing 1970 to 2010



Legend

Percent of each tract employed
(population age 16+)

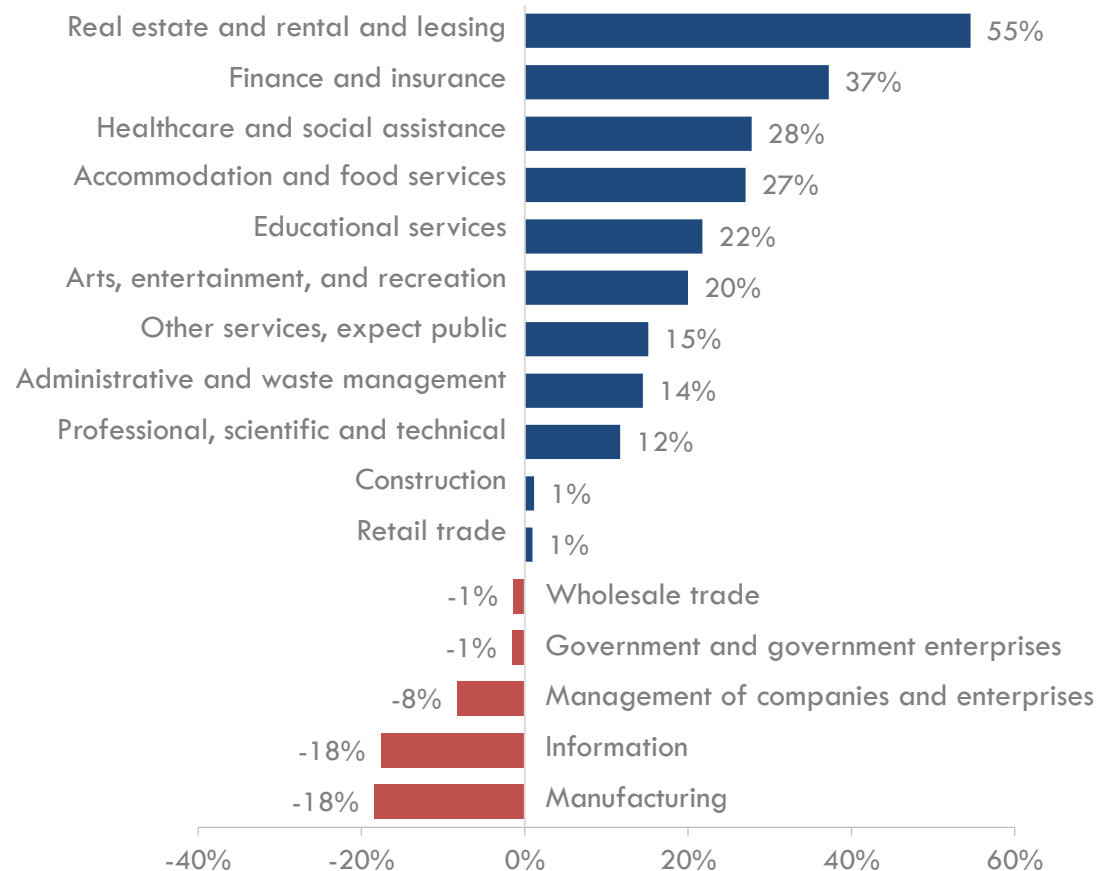


Source: NHGIS. Maps prepared by Center for Urban Research, CUNY Graduate Center

Long Island's strong manufacturing and information sectors have eroded, replaced by industries mirroring NYC's largest sectors.

Over the past decade, Long Island has gained jobs in real estate, finance, healthcare and professional services – similar to the most prominent industries in New York City. While the clustering of these industries contributes to the success of the New York Metropolitan region as a whole, the loss of differentiated industries that draw on its unique assets leaves Long Island with a dependent economy and a waning economic identity.

**Change in Employment by Industry
2002-2012**

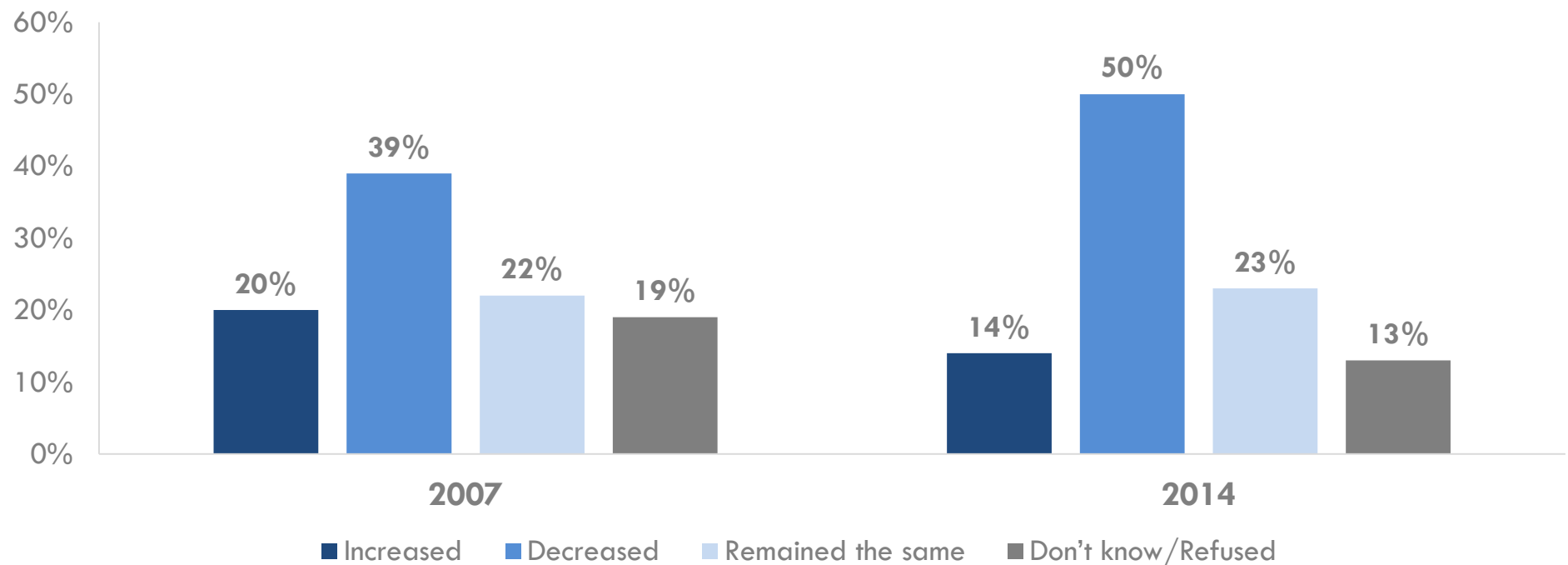


Source: Bureau of Economic Analysis; HR&A Analysis

Local residents' perceptions of job quality on Long Island are increasingly dim.

The waning perception of the quality of jobs on Long Island likely reflects both the impact of the Great Recession and the structural decline in the manufacturing, defense, and information industries. According to the 2014 Poll, 50% of Long Islanders believe that the quality of local jobs has decreased compared to five years ago. In 2007, only 39% of residents felt that local job quality had weakened compared to five years earlier.

How would you rate the quality of jobs in terms of benefits, wages and security in Long Island compared to FIVE years ago?

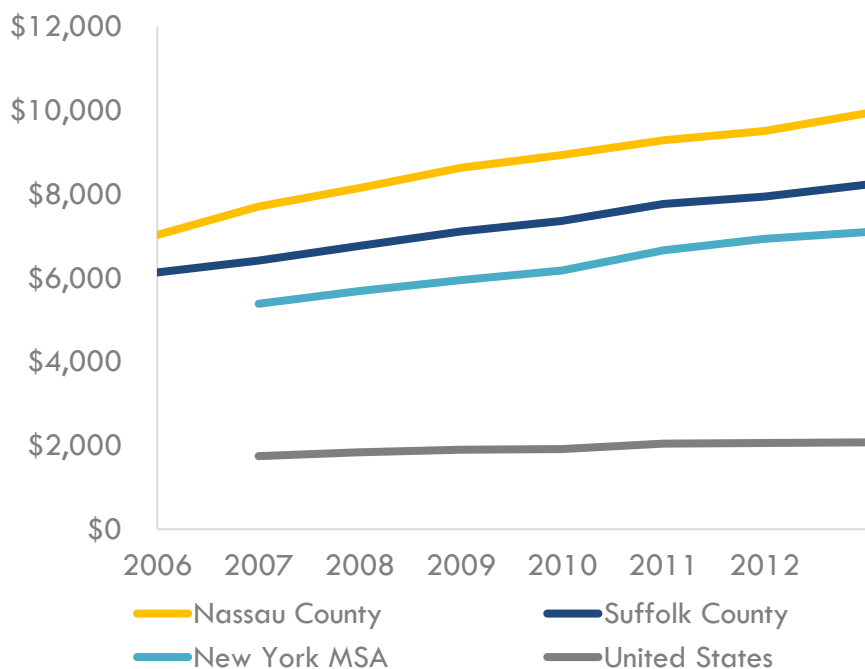


Source: Long Island Index 2014 Poll

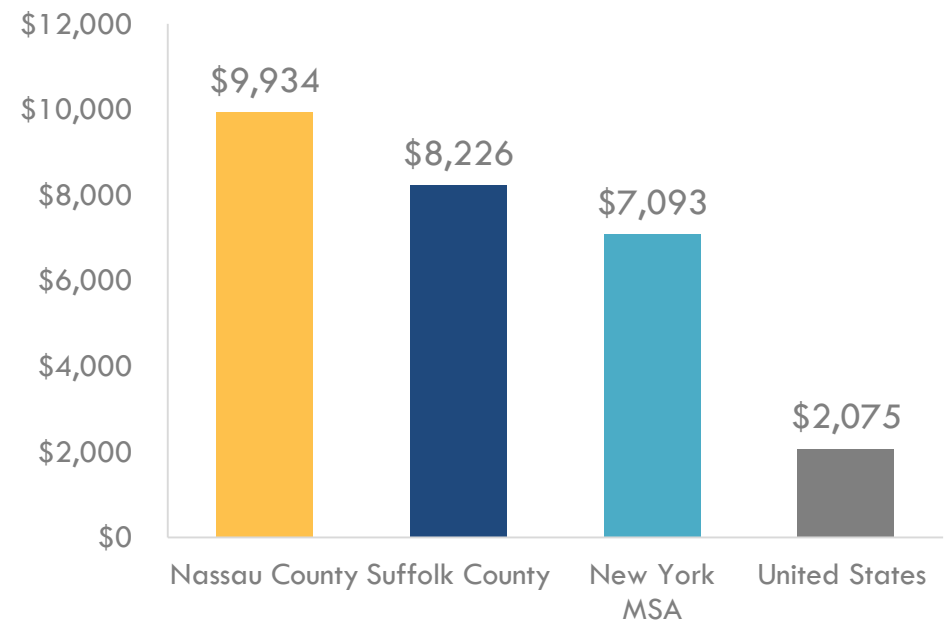
Long Island contains an exceedingly high number of administrative jurisdictions, contributing to its heavy tax burden.

Long Island municipal services, including public schools, libraries, police, fire, and sanitation services, are funded by hefty property taxes that are larger than the region's and the nation. Long Island's high taxes result, in part, from a fragmented government apparatus that fails to take advantage of economies of scale in service provision. In addition to Long Island's 2 counties, 2 cities, 13 towns and 96 incorporated villages, there are 471 different service providers across the region – all of whom rely on tax revenue to operate.

Household Median Real Estate Tax Growth



2012 Household Median Real Estate Taxes

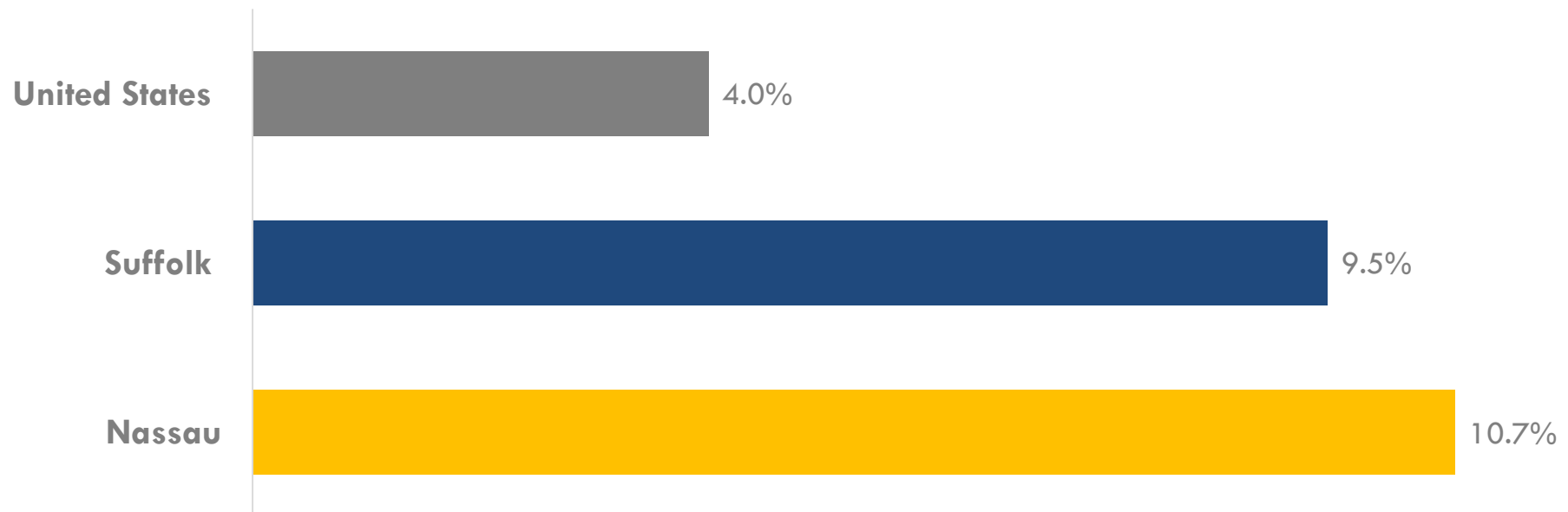


Source: U.S. Census Bureau; Long Island Index

Long Island's higher wages do not compensate for the especially high property tax burden, harming its competitiveness.

While Long Island municipalities traditionally provide quality services, high property taxes are burdensome for the regions' residents. According to the 2014 Poll, 79% of Long Island residents cited high taxes as an “extremely” or “very serious” problem while 42% of residents indicated that high taxes were the single most important problem facing Long Island.

2012 Median Household Property Tax as a Percent of Median Household Income



Source: U.S. Census Bureau; Long Island Index

Long Island's Future

HR&A employed the REMI Policy Insight Model to project Long Island's economic condition between 2015 and 2040 under different scenarios.

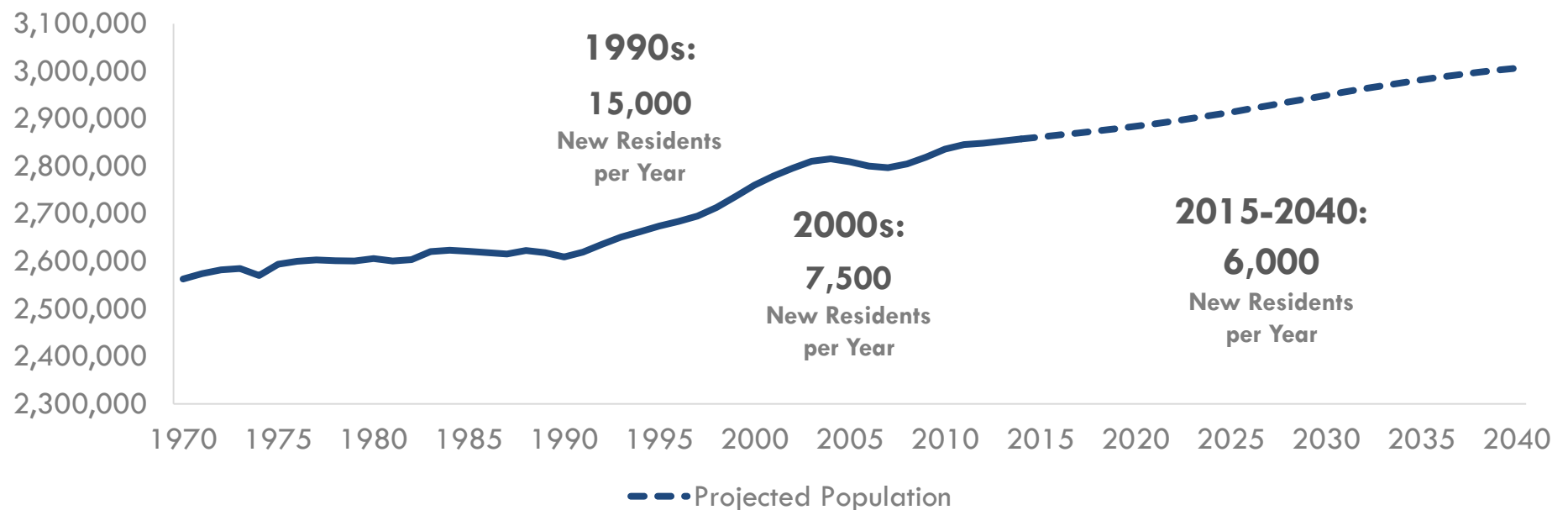
Developed by **Regional Economic Models, Inc.**, the Policy Insight Model is frequently employed by Federal, State, and local governments, economic development and transportation authorities, and private clients to measure the impacts of regional economic changes. Clients include the New York City Economic Development Corporation (NYCEDC), Empire State Development Corporation (ESDC), New York State Energy Research and Development Authority (NYSERDA), and the departments of transportation of 10 states.

As a dynamic econometric model, the Policy Insight Model is particularly adept at modeling the long-term impacts of transformative policy interventions that could fundamentally alter underlying relationships between economic output, factors of production, prices, and corresponding demographics. HR&A also employed the REMI Policy Insight Model in 2013 for its study of the regional impacts of implementing the LIRR Third Track.

The rate of Long Island's population growth is projected to further decline in the coming decades.

Going forward, Long Island's population is expected to grow at a slower rate than it did during the past 25 years. Population grew at a rate of 0.56% annually during the 1990s, gaining more than 15,000 residents per year, while during the 2000s the population growth rate slowed to 0.27%, adding 7,500 residents per year. Going forward, Long Island is projected to grow at an annual rate of 0.20%, adding less than 6,000 new residents per year.

Long Island Population: Historical and Projected

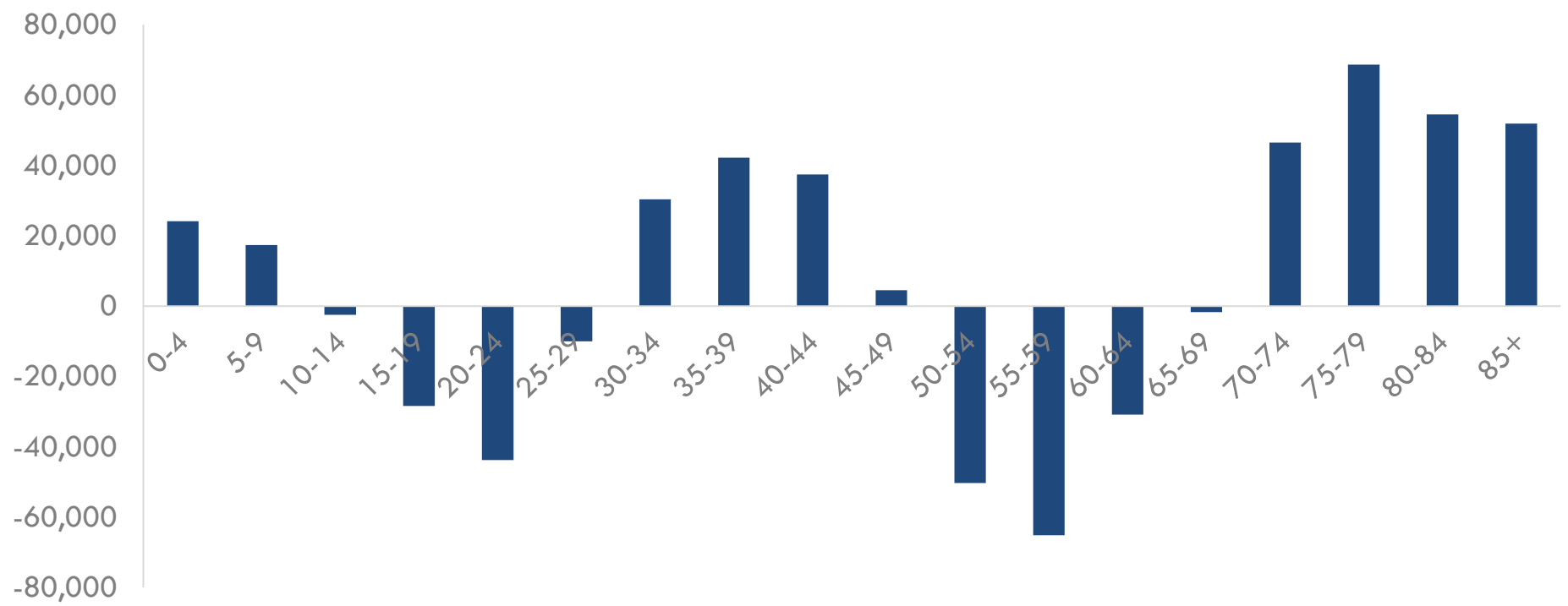


Source: REMI; HR&A Analysis

Long Island's population will also grow older.

Long Island is projected to continue losing young people in their twenties. Long Island will also see a significant decline in residents in their fifties and sixties, as this cohort ages into retirement and is replaced by a smaller cohort of workers in their 30s and 40s. Ageing in place of the baby boomers will fuel the considerable growth of the cohort in their seventies and eighties.

Projected Change in Population by Cohort, 2015-2040

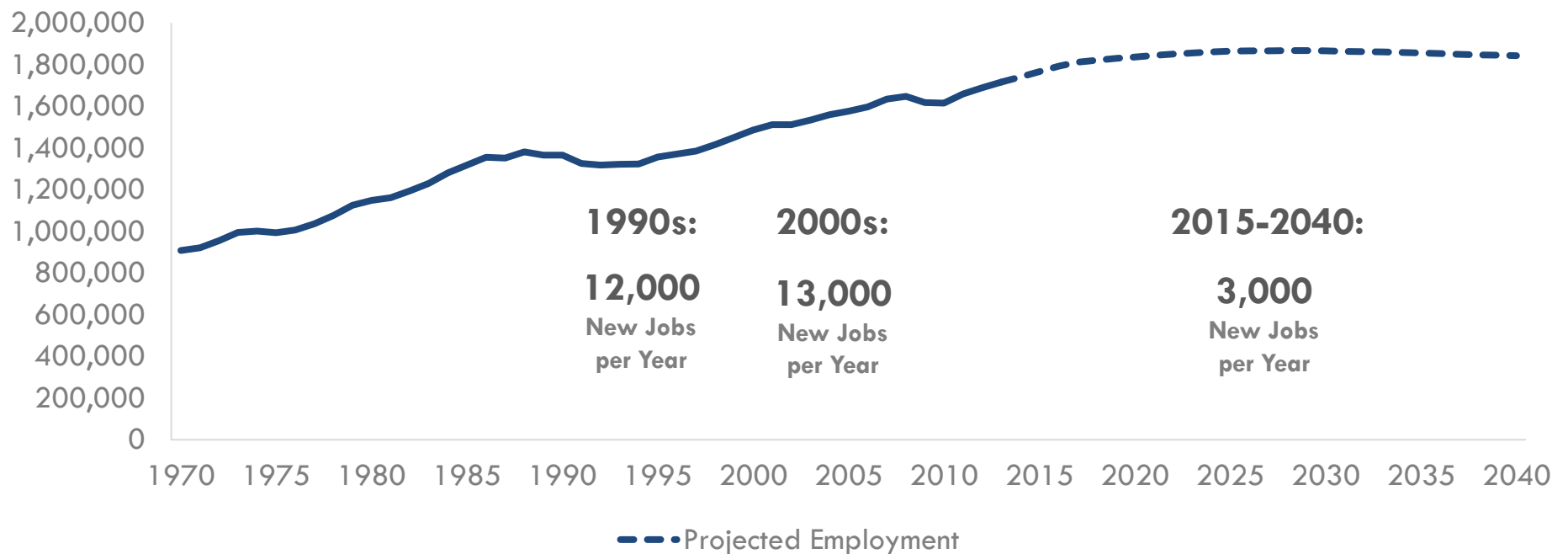


Source: REMI; HR&A Analysis

Employment growth on Long Island is also projected to slow over time.

Long Island's economy is projected to stagnate over the next twenty-five years. Overall, jobs will grow at a much lower rate than in the 1990s and 2000s due to Long Island's relative lack of economic strength and amenities compared to other regions in the United States. Three main factors drive this decline: 1) relative employment opportunity, or the likelihood of finding a well-paying job, 2) the real relative compensation rate, which includes wages and benefits, adjusted for the cost of living, and 3) regional amenities that attract new companies and workers.

Long Island Total Employment: Historical and Projected

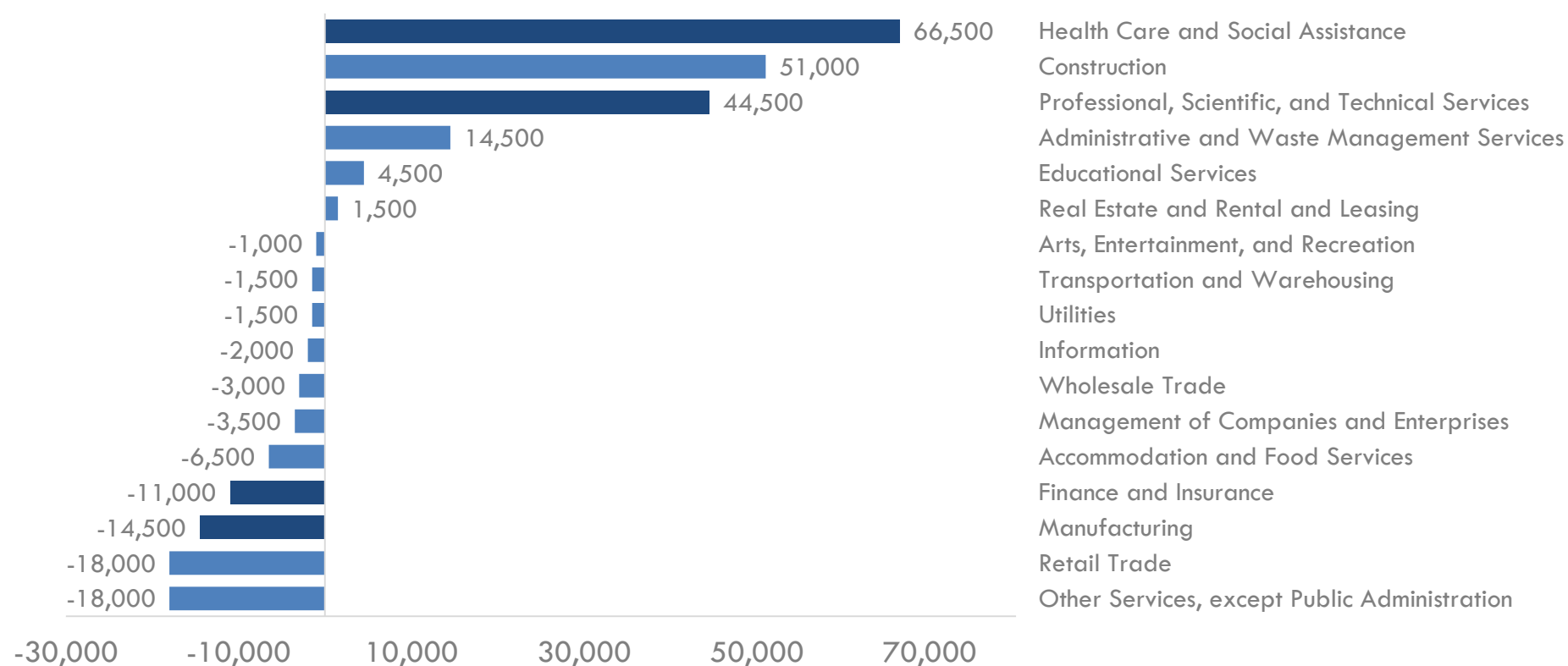


Source: Bureau of Economic Analysis; REMI; HR&A Analysis

While some prominent sectors will experience significant growth in the coming decades, many will lose jobs in absolute terms.

Some of Long Island's leading sectors will see job growth over the next twenty-five years, led by health care, which will benefit from an ageing population. Others will experience net declines, including industries in long-term decline like manufacturing, as well as some that have been healthier like finance and insurance.

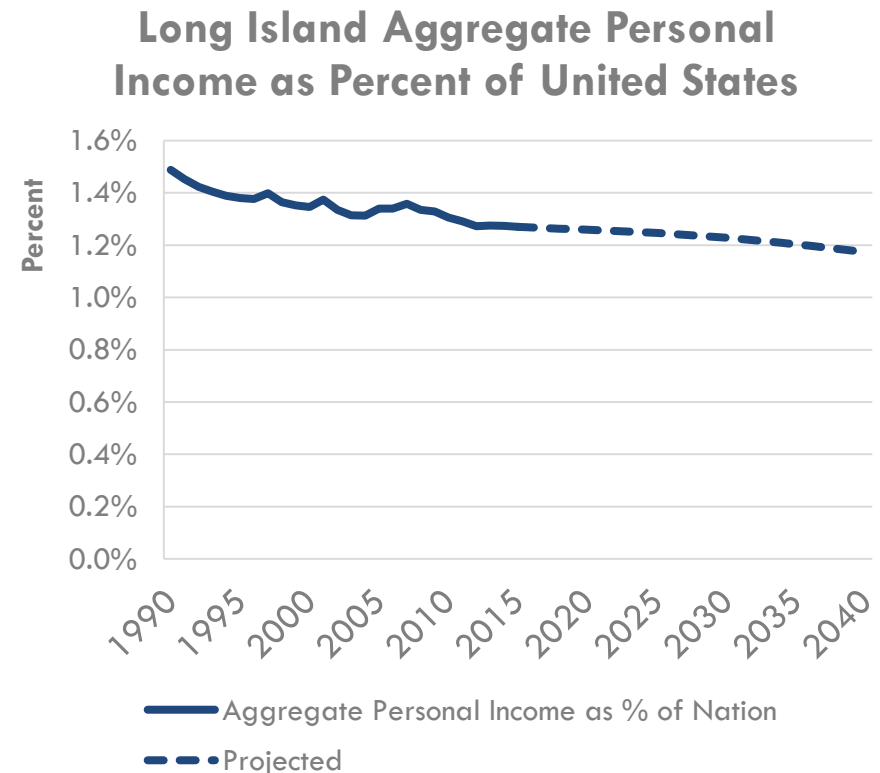
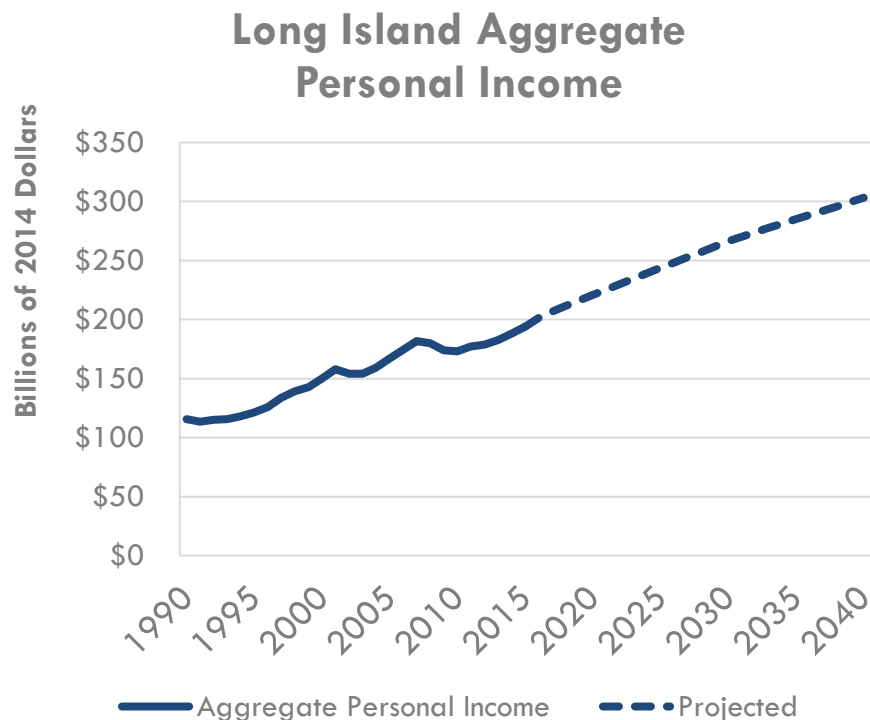
Projected Change in Employment 2015-2040



Source: Bureau of Economic Analysis; REMI; HR&A Analysis

Aggregate personal income of Long Island residents is projected to grow to over \$300 Billion by 2040, but will decline as a share of the nation.

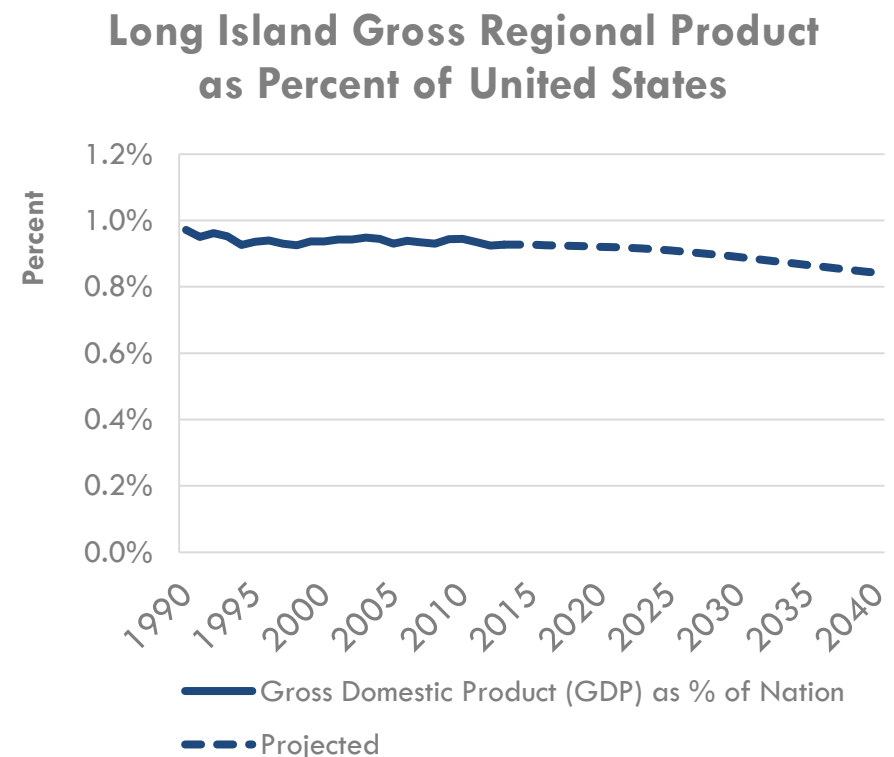
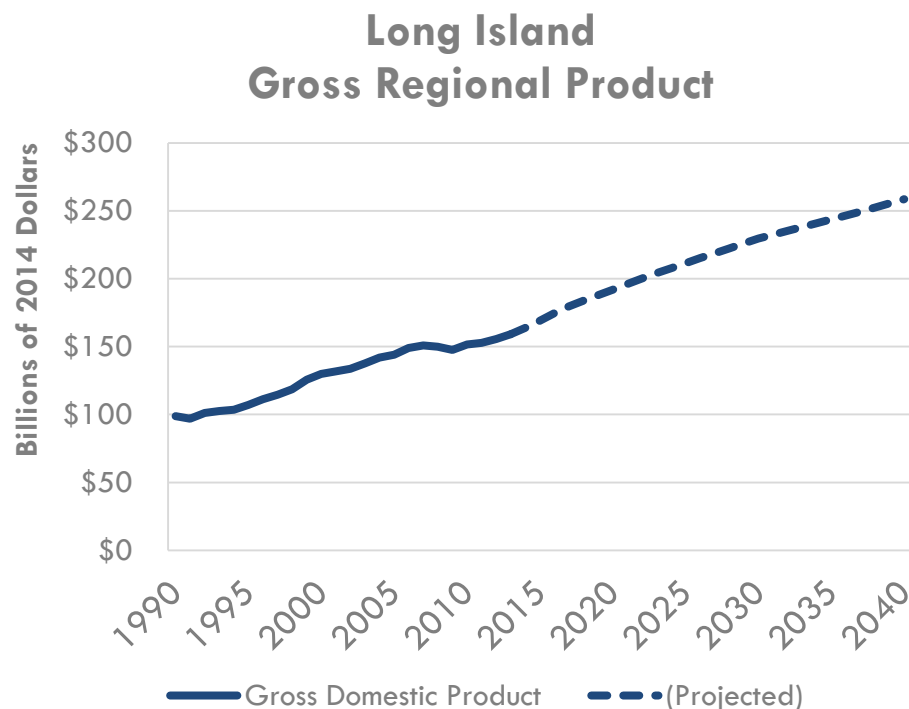
Long Island's per capita personal income is currently approximately \$66,000, compared to \$48,000 nationwide. As employment on Long Island is projected to grow slowly in the future, personal income increases will derive primarily from productivity gains that are passed through to worker salaries. However, personal income on Long Island will decline as a share of national personal income as other regions grow faster.



Source: REMI; HR&A Analysis

Long Island's Gross Regional Product is projected to grow to over \$250 Billion by 2040, but will also make up a smaller share of US GDP.

Long Island's Gross Regional Product (the market value of all final goods and services produced by the region's labor and property) will increase over the next twenty-five years due to modest employment growth and productivity gains. However, the size of Long Island's economy will continue to decrease as a share of the United States' overall economy.

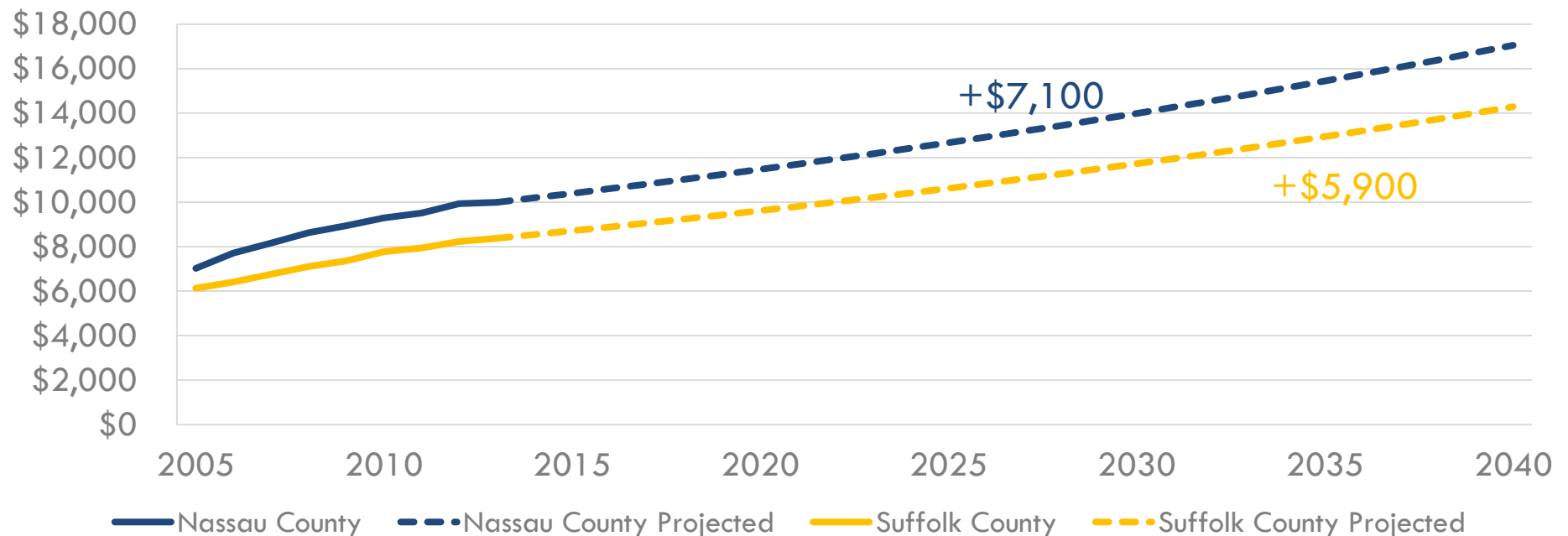


Source: REMI; HR&A Analysis

Long Island's already significant real estate tax burden is likely to continue to climb in the coming years.

Even with the state-wide property tax cap instituted in 2011, median household real estate taxes are expected to grow substantially over the next twenty-five years. If rates continue to grow at 2.00% annually, the maximum imposed by the cap, then by 2040 household real estate taxes will increase by \$7,100 in Nassau County and by \$5,900 in Suffolk County.

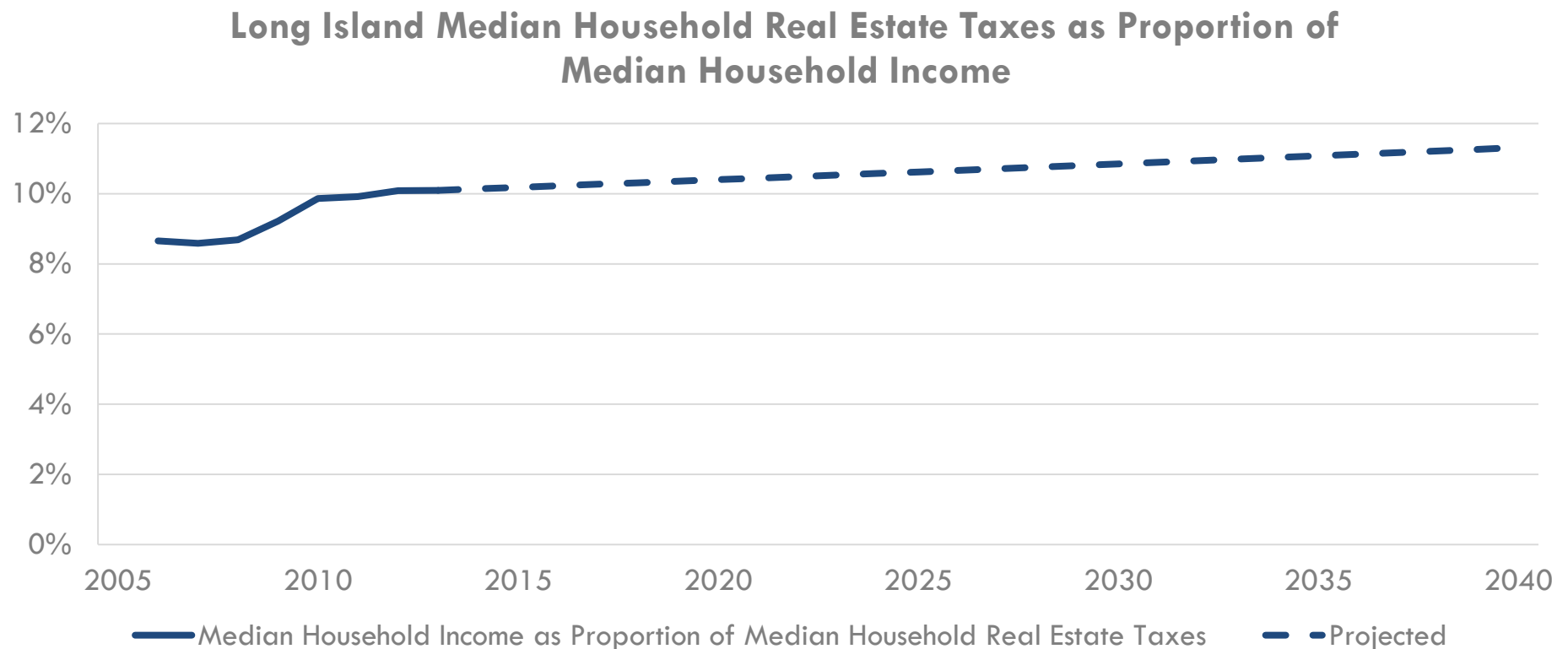
**Long Island Median Household Property Taxes:
Historical and Projected**



Source: U.S. Census Bureau; HR&A Analysis

If recent trends continue, property taxes would rise as a proportion of household income, making Long Island even less affordable.

In 2006, the median Long Island household paid 8.7% of its household income in real estate taxes. In 2013, that figure rose to 9.8% of median household income. If household incomes and property tax levies were to increase at the same rates, by 2040, the median Long Island household would pay 11.1% of its household income in real estate taxes.

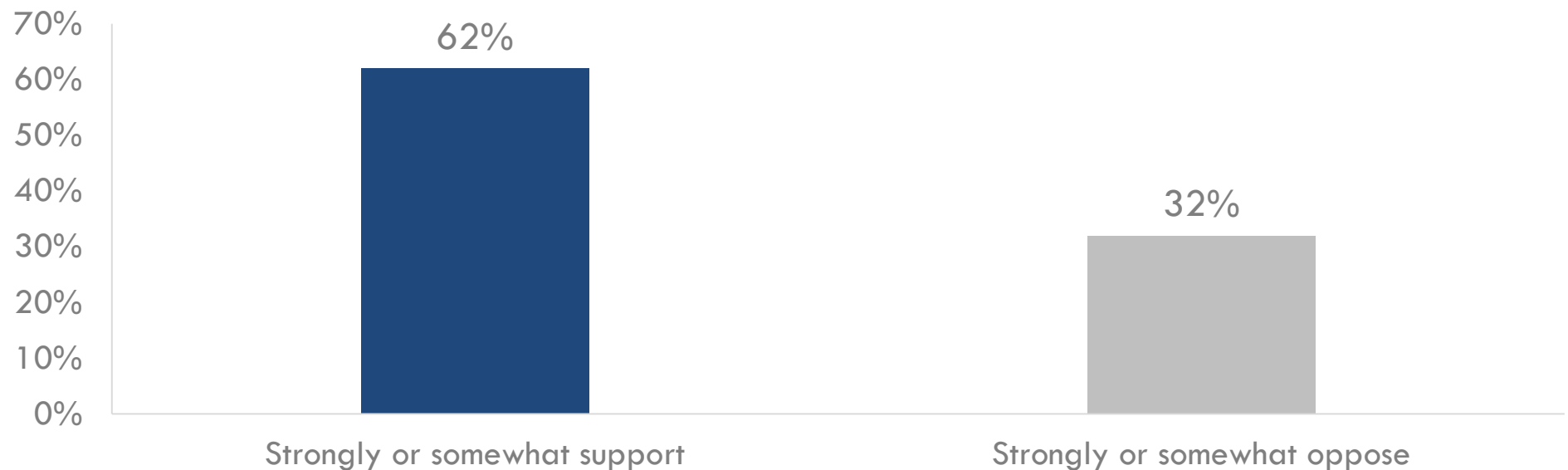


Source: U.S. Census Bureau; HR&A Analysis

To cut costs, Long Islanders support municipal services consolidation.

Establishing more extensive shared services agreements, and consolidating public service districts, such as libraries, police, fire, parks, public parking, water, sewer, and garbage pick-up, has the potential to decrease overall municipal expenditures by achieving greater economies of scale in service provision. The concept of consolidating and combining non-emergency services, such as water, garbage, libraries, and road maintenance is supported region-wide. Overall, 62% of Long Island residents are in favor of service consolidation as a measure to curtail the growing property tax burden.

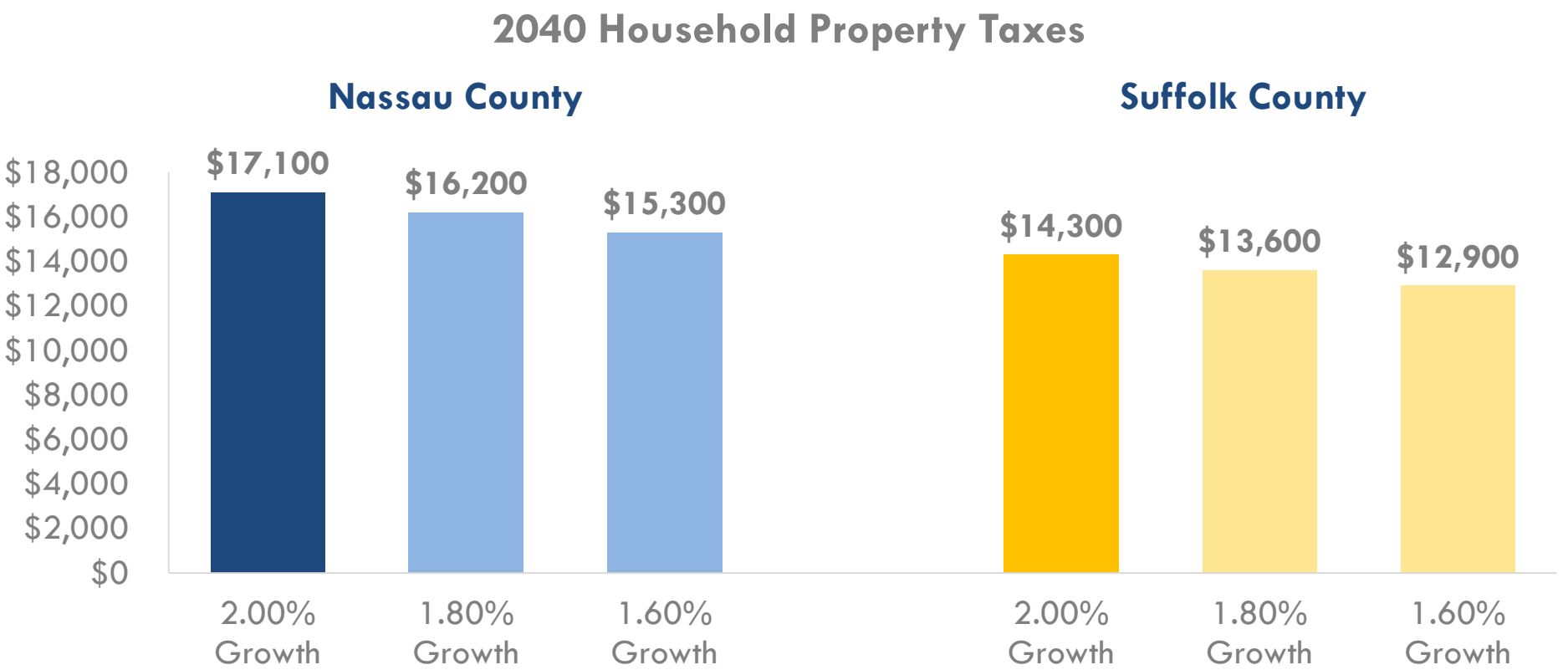
To what extent would you support or oppose the consolidation of non-emergency services into single county-wide districts?



Source: Long Island Index 2014 Poll

Decreasing the growth of property taxes would yield strong pocketbook returns.

Reducing the growth of Long Island’s property tax levy through service consolidation and other efficiencies would save the average household on Long Island up to \$1,300 in property taxes annually by 2040.

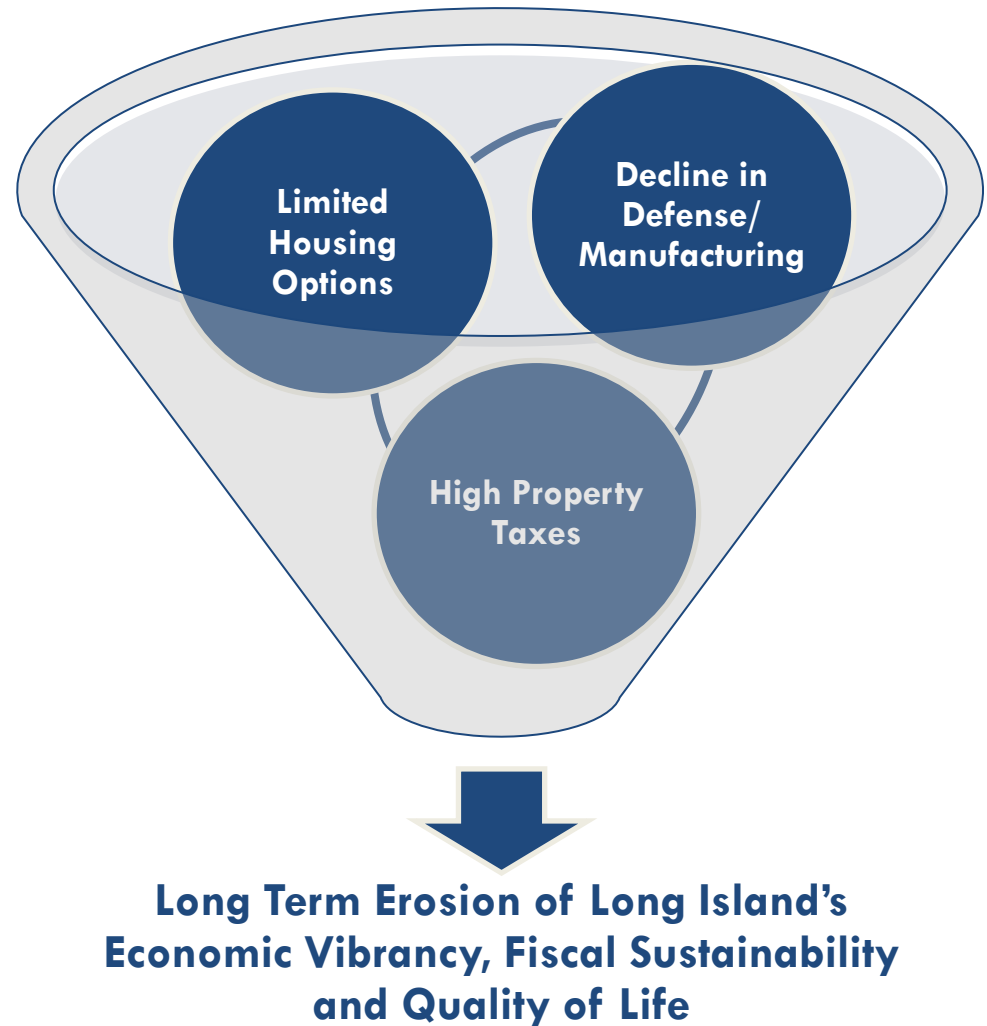


Source: U.S. Census Bureau; HR&A Analysis

Three interconnected issues contribute to Long island's economic malaise.

Long Island's growth is stunted by three interacting, and reinforcing factors:

- **Limited housing options** that contribute to the high cost of living and fail to appeal to millennials
- Failure to replace **defense and manufacturing industries** with well-paying jobs
- **High property tax burden** and resulting loss in economic competitiveness



While many of these trends are discouraging, it is possible for Long Island to leverage its existing assets to change its economic course.

What if Long Island invested in game-changing policy interventions that could help re-orient the region on the course towards sustainable prosperity?



Image Source: Timo Forchheim, Creative Commons, http://commons.wikimedia.org/wiki/File:Map_of_Long_Island_NY.png

Public and private sector leadership on Long Island has already come together to advance a set of strategic economic development priorities.

The Long Island Regional Economic Development Council is managing a multi-pronged strategy to enhance regional prosperity. *The Strategic Economic Development Plan for Long Island* offers tactics to leverage existing strengths to create a robust innovation economy. Three strategies within the plan offer a sound platform for future growth:

- Develop industry clusters in transit-oriented locations with vibrant community life
- Create facilities for incubating and accelerating product commercialization
- Reinvigorate manufacturing by transitioning to advanced technology products



This study builds upon these recommendations by positing synergistic strategies to **grow Long Island's biomedical cluster and ramp-up multifamily housing production.**

Image Source: 2014 Strategic Economic Development Plan for Long Island

Create Quality Jobs Through Biomedical Cluster

Long Island's biomedical industry is a logical target for cluster-based economic development strategies.

Long Island is best positioned to create jobs in industries in which the region maintains a competitive advantage. Research, development, and manufacturing in the biomedical and life sciences have historically been some of Long Island's premier industries. The cluster is bolstered by an invaluable group of institutions, including Cold Spring Harbor Laboratory, Brookhaven National Laboratory, and Stony Brook University.

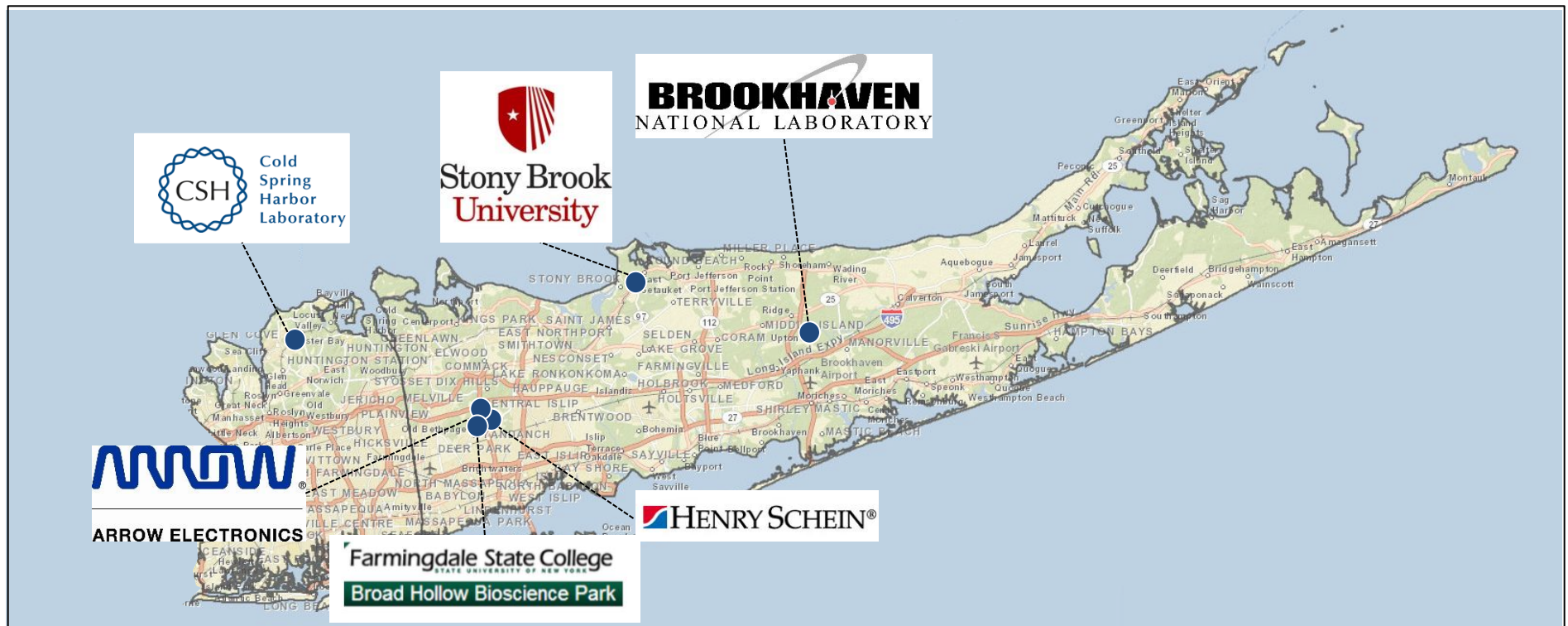
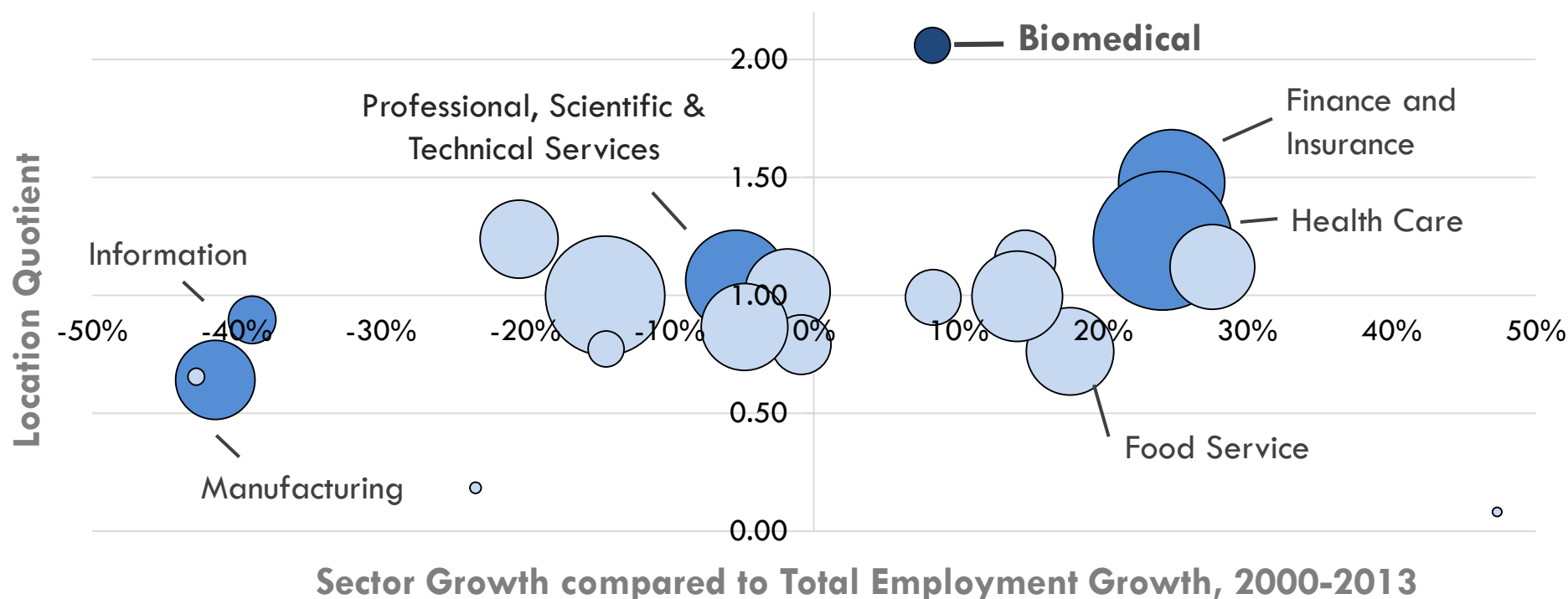


Image Source: ESRI Business Analyst Online

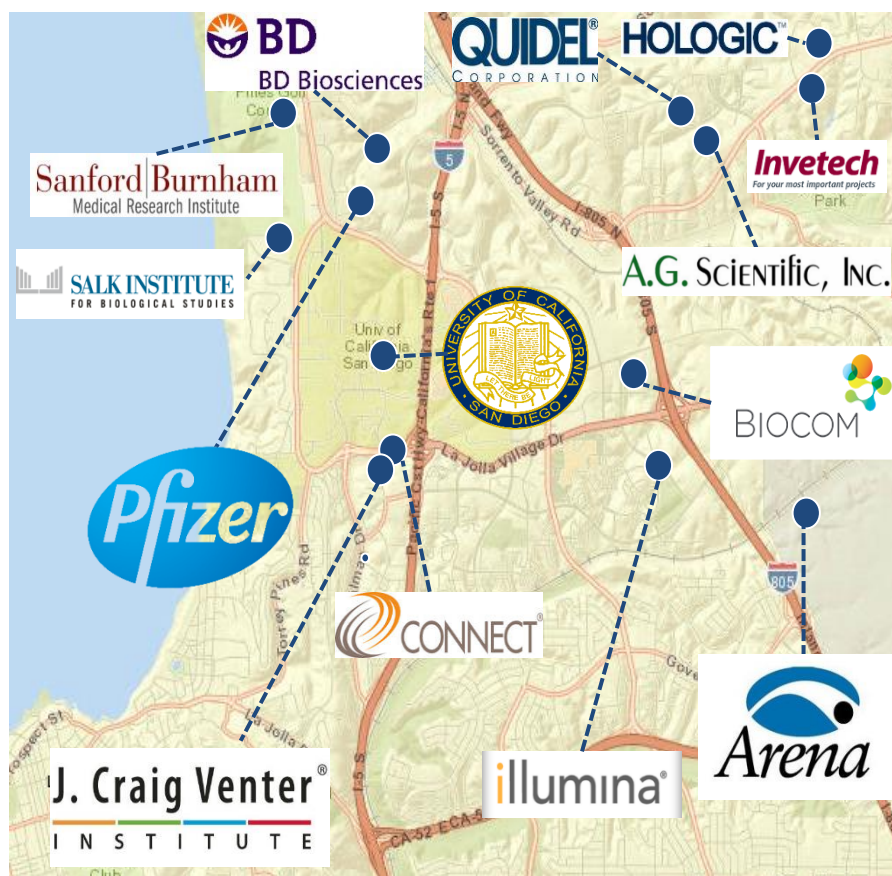
Long Island's biomedical industry is relatively small, but growing and highly concentrated compared to the United States.

Although the sector only accounts for 1.4% of all Long Island jobs, the biomedical field is highly concentrated, with a location quotient higher than 2.0, indicating biomedical jobs on Long Island make up more than double the portion of employment in the local economy as they do in the United States as a whole. Developing policies that help to attract and retain businesses in this knowledge-intensive, high-paying cluster are key to the region's future economic growth.



Source: REMI; U.S. Bureau of Labor Statistics; HR&A Analysis

San Diego developed a deliberate strategy to leverage its existing assets to grow a formidable local biotech cluster.



Biotechnology innovation in San Diego's Torrey Pines Mesa, the area that has become the primary home of San Diego's biotech cluster, is a product of academic, institutional, and entrepreneurial collaboration. In 2013, San Diego County was home to nearly 24,270 jobs in biotechnology,¹ compared to 16,310 on Long Island.

Since the cluster formed in the early 1960s, the city has leveraged state and federal funding and implemented industry-friendly land use policies to harness high-wage jobs in scientific research, pharmaceutical manufacturing, and ancillary services like legal services, marketing, and real estate development. The physical proximity of this web of jobs and businesses has fostered a culture of interdisciplinary development that propels the region's 700 life science companies and 80 research institutes.

Note:

1. Biotechnology jobs are defined based on an approach developed by Hofstra University. To define the cluster, we include four NAICS codes: 3254, 334510, 3391, 54171.

Source: Voice of San Diego, *How San Diego Biotech Started and Where It's Going*; The United States Study Centre at the University of Sydney, *San Diego EDC*, The United States Study Centre at the University of Sydney; U.S. Bureau of Labor Statistics; Image Source: ESRI Business Analyst Online

San Diego's biotech cluster resulted from a virtuous cycle of interactions between leading research intuitions and successful local companies.

Scripps, the University of California, San Diego (UCSD), and the Salk Institute, a non-profit research institute founded by the creator of the polio vaccine, are the pioneers of San Diego's biotechnology industry and the foundation of its success. These institutions were established in the late 1950s and early 1960s and facilitated the growth of the region's defense industry by supplying a trained workforce of engineers and scientists. These institutions have established a culture of collaboration and entrepreneurship, leveraging one another to attract talent and funding, and gain acclaim as world class research facilities.

The discoveries of these universities and laboratories, along with general advances in the field, fueled the growth of the biotech cluster in San Diego. In one example of success, UCSD faculty founded Hybritech, a company that commercialized the first antibody-based screen for prostate cancer in 1985. Hybritech was soon acquired by industry giant Eli Lilly, whose purchase funneled capital into the region. Hybritech's breakthrough established a precedent of collaboration between academic intuitions, non-profit industries, and venture capitalists in San Diego. Hybritech alumni have been directly involved in establishing subsequent biotech firms in San Diego.

Today, San Diego's biotech strength has attracted major pharmaceutical companies, such as Pfizer, Johnson & Johnson, and Merck, whose San Diego offices maintain connections to the area's cutting-edge research. A surge in venture capital funding has also facilitated the growth of local research and drug corporations. In 2011, \$498 million, or 55% of the region's total venture capital, was invested in biotechnology.

Source: PR Newswire Association LLC, San Diego's Original Biotech Company Celebrate 30th Anniversary With Reunion; San Diego EDC; The United States Study Centre at the University of Sydney

Throughout its history, strategic land use planning and local non-profit advocacy groups have empowered the growth of biotech in San Diego.



The City of San Diego's strategic land use planning produced a physical armature for the biotechnology cluster. In late 1950s, the City drafted the master plan for the newly announced UCSD. The plan was designed to create a magnet for private industry and research entities and to ensure a portion of the neighboring area would be compatible with research and development activities. In the 1970s, the city designated parts of the Torrey Pines Mesa as a Life Sciences – Research Zone (today known as the Scientific and Research Zone), to create an environment attractive to talent and enterprise while respecting the area's residential and commercial interests. The end of the Cold War and ensuing contraction of the defense industry prompted the City to further relax zoning and construction regulations to attract new biotech businesses.



As the success of Hybritech and the influence of local research institutions spread in the mid-1980s, several non-profit institutions emerged to facilitate collaboration between San Diego's research capacity and entrepreneurial activity. Notably, CONNECT, a biotechnology incubation program was established by UCSD to leverage regional talent to accelerate the commercialization of high-technology and life sciences. Today, CONNECT is an independent 501c3 charitable foundation that provides networking opportunities and advisory services and has assisted more than 3,000 companies in attracting \$2 billion in life science funding. Similarly, Biocom is an advocacy group that serves as a government liaison for life science industry actors and provides group purchasing and workforce development training.

Source: Sang-Tae Kim, An Emergence of a Biotechnology Cluster, UC Irvine; San Diego EDC; Connect; Biocom Image Source: Google Maps

Like San Diego, Boston's biotechnology industry hinges upon world-class institutions, access to skilled labor, and funding opportunities.

Greater Boston's biotech cluster originated in the 1970s, growing out of the area's renown universities led by MIT and Harvard in Cambridge. Since the cluster's formation, Boston's universities have provided a platform of basic research upon which research-stage firms and start-ups launch product creation. In addition to day-to-day research endeavors, the area hosts workshops, seminars and conferences that gather talent and disseminate ideas worldwide. The universities attract a skilled workforce with advanced degrees, provide training infrastructure, and foster inter-industry connections between researchers, entrepreneurs, and policy makers. Today, the universities leverage patenting and licensing as a source of revenue.

Since Georges Doriot, the father of modern venture capitalism, first invested in the area's promising start-ups mid-century, a long history of lucrative innovation

has made venture capital capital visible and available in the area. In 2013, Massachusetts received 21%, or \$984 million, of all US venture capital investment in biotech, second only to California.



Source: Breznitz and Anderson, *Canadian Journal of Regional Science* "Boston Metropolitan Area Biotechnology Cluster"; Cambridge Historical Society "Innovation in Cambridge"; Mass Benchmarks "Manufacturing Biotechnology in Massachusetts"; Mass Bio 2014 Industry Snapshot; Image Source: ESRI Business Analyst Online

Booming Kendall Square in Cambridge has become the physical manifestation of the region's biotech industry.

As biotechnology firms surfaced from the area's academic and scientific institutions, the expanding industry has consolidated in Kendall Square, adjacent to MIT. The success of a few small labs catalyzed new development, larger projects, and new infrastructure specifically designed for the industry.

In the past ten years, Kendall Square has been reshaped through mixed-use development and an emphasis on street-level planning. Seeking a presence within Kendall Square's biotech network, Pfizer, Novartis, Sanofi, Millennium: The Takeda Oncology Company, and Baxter International are among the leading national research and pharmaceutical firms that have opened offices in the area, employing thousands of people and facilitating public-private development. Growing biotech companies have funded nearly \$2 billion of cutting-edge office and laboratory space and have brought over 1,000 new housing units to Kendall Square.

Kendall Square's Cambridge Innovation Center (CIC) has served as a magnet for biotech collaboration, providing flexible office facilities for over 500 new life science, professional services, and investment firms in Cambridge. The center works to advance entrepreneurship by providing boot-strapping companies with affordable office and laboratory space and events that attract mentors, innovators, and funders in the start-up community. In November 2014, Toaki Pharmaceuticals, a drug development corporation, was honored as the first company to have launched at the innovation center and grown to an IPO.

Source: Cambridge Coworking Center; Cambridge Innovation Center; Cambridge Community Development Department Kendall Square Final Report; Mass Benchmarks, "Manufacturing Biotechnology in Massachusetts"; The New York Times, "Biotech Players Lead a Boom in Cambridge"; Boston Globe, "Kendall Square reached inflection point, passing from tech to biotech center"

The growing biotech sector has helped to revitalize Middlesex County's suburban Route 128 technology corridor.



While Cambridge remains the County's epicenter of biotech and pharmaceuticals, large corporations and smaller startups have moved to the Route 128 Corridor for the familiar needs of inexpensive laboratory space and access to talent. Since 1990, biotech jobs in Middlesex County have grown by 93% to 23,480 jobs, greatly surpassing the 18% increase in biotech jobs nationwide.

Before biotech, suburban Boston's Route 128 Corridor was one of the nation's foremost hubs for technology, reaching its zenith in the 1980s as the home of computing giant Digital Equipment Corporation. Following the 1990s outbreak of personal computing innovation in Silicon Valley that pulled tech corporations west, biotech firms have since filled some of the spaces occupied by earlier waves of tech companies. In the second half of 2013, biotech firms including AstraZeneca and Lexington Pharmaceuticals contributed to 28,000 SF of lab growth in Boston's suburbs. Recently, Beryllium's 23,000 SF expansion resulted in 100% occupancy of the Town of Bedford's 362,000 SF lab inventory.

Source: Route 128 Business Council; National Venture Capital Association; Transwestern, "Boston bioSTATus"; U.S. Bureau of Labor Statistics

Targeted initiatives and policies could help grow and retain biomedical companies and attract high-paying research and manufacturing jobs.

The **Long Island Regional Economic Development Council's** (LIREDC) strategic plan to promote industry clusters on Long Island includes promoting partnerships and collaboration, funding research, educating the STEM (science, technology, engineering and math) workforce, assisting entrepreneurs with tax credits, and developing versatile facilities.

Among the organizations working to cultivate a home-grown biomedical cluster is **Accelerate Long Island**. A start-up accelerator, Accelerate Long Island works to create a tech-oriented entrepreneurial ecosystem by forming collaborations between the region's research institutions and business community to commercialize research and by providing seed funding to start-up companies.

The experiences of San Diego and Middlesex County, as well as Long Island's own experience since 1990, provide a framework for understanding the future growth potential of the cluster over the next twenty-five years.

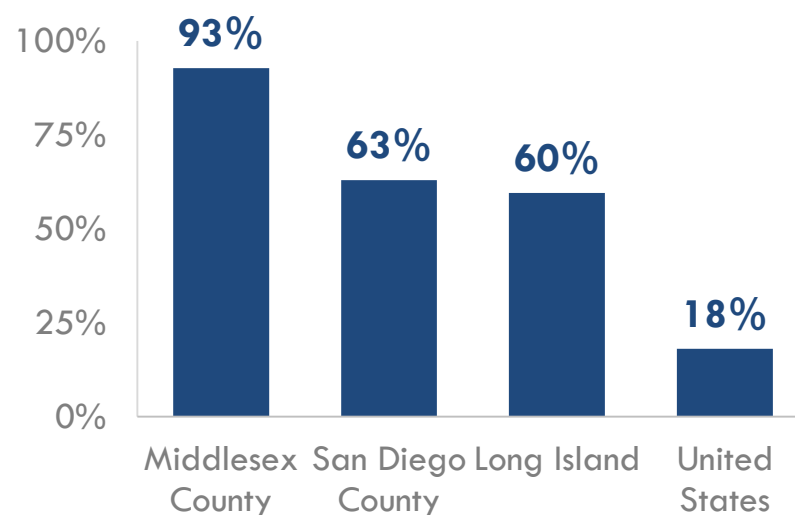
High Scenario: 75% Growth

Long Island gains 12,250 additional biomedical jobs by 2040

Low Scenario: 50% Growth

Long Island gains 8,250 additional biomedical jobs by 2040

Percent Growth of Biotech Jobs,
1990-2013

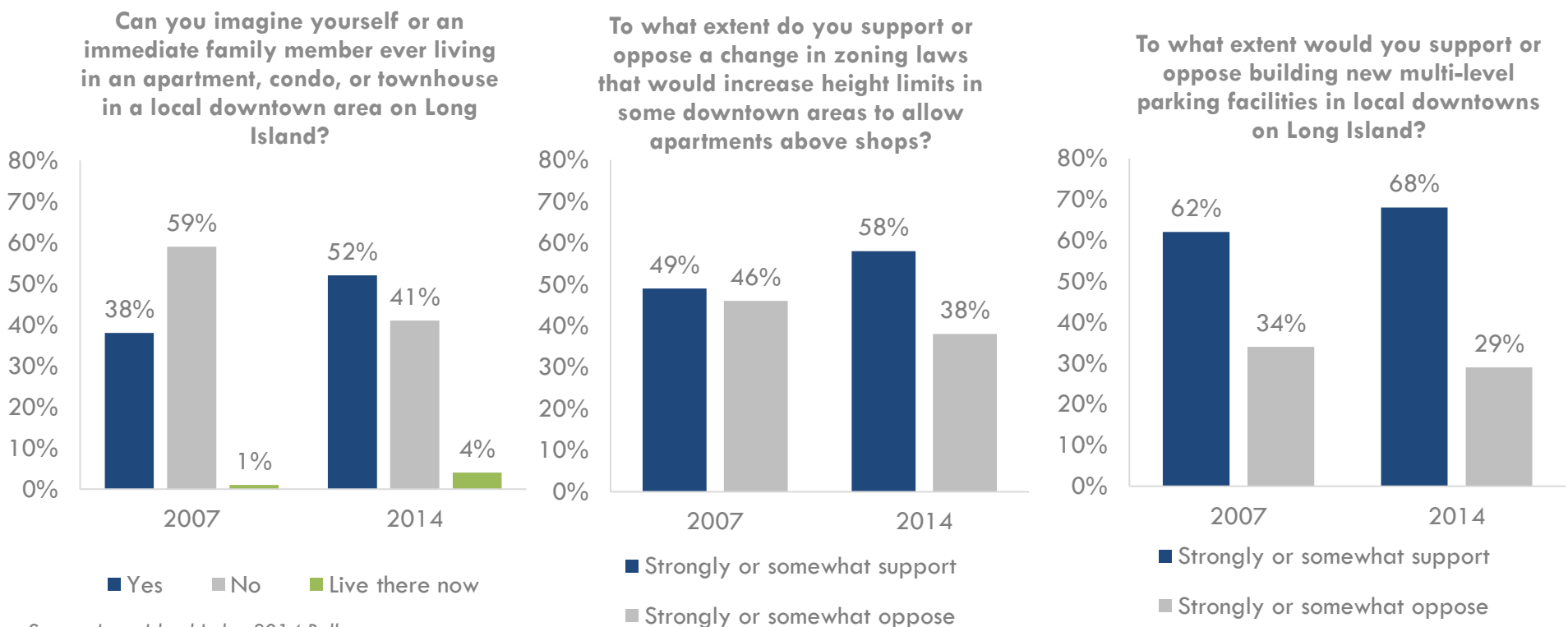


Source: U.S. Bureau of Labor Statistics; HR&A Analysis

Expand Housing Opportunities

Long Islanders increasingly support higher density residential options in downtown areas on Long Island.

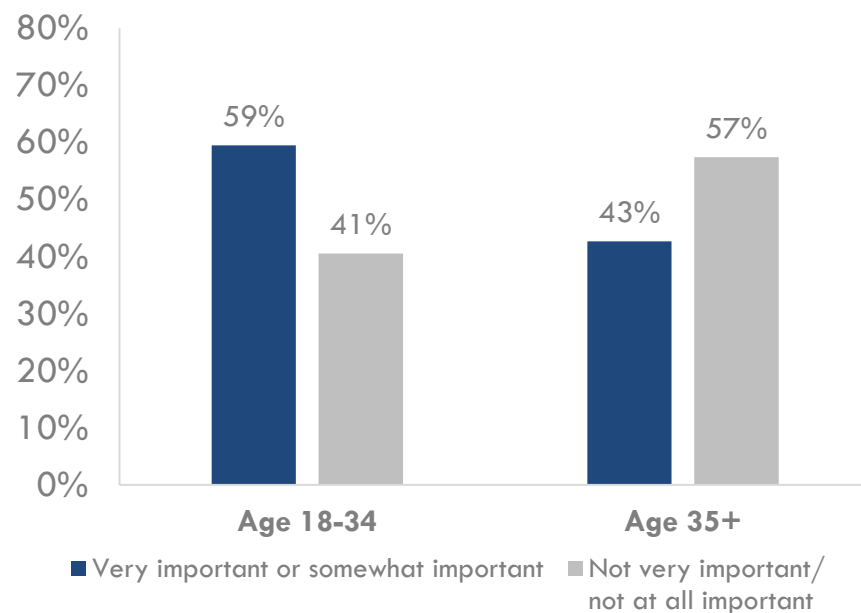
Poll results indicate that a majority of Long Islanders support local high density living opportunities. According to the 2014 Poll, 56% of Long Islanders envision themselves or family members living in a downtown area, or already live there, up from 39% in 2007. Residents are also supportive of proactive changes to local land use legislation to increase multifamily housing opportunities and support downtown commerce. 58% of all residents support increased height limits while 68% support the construction of additional multi-level parking facilities in downtowns.



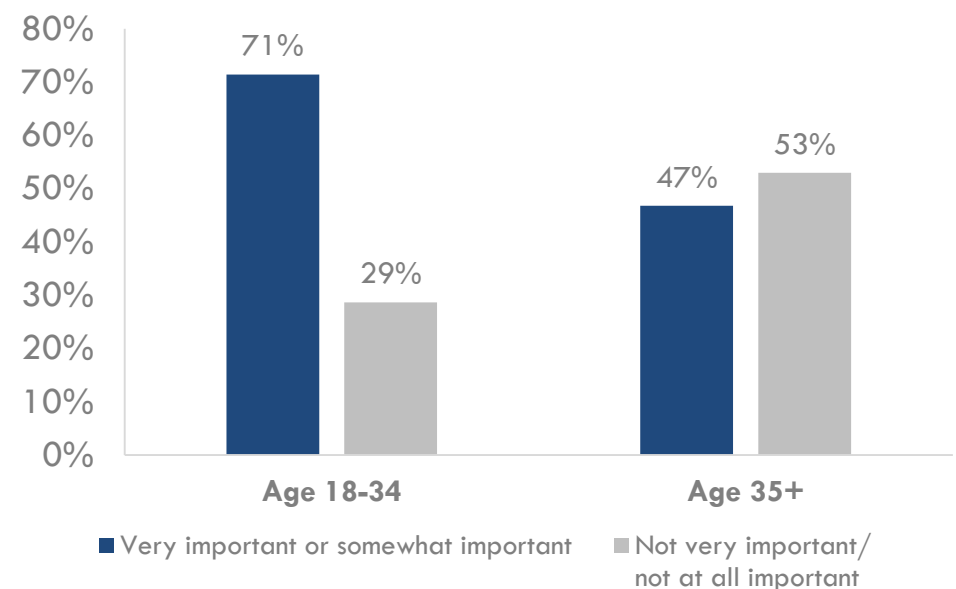
Long Island also lacks accessible transportation and entertainment that young people value.

Long Island has difficulty attracting young workers who value urban amenities, including convenient transportation and entertainment options. According to the 2014 Poll, young people value transit accessibility and entertainment convenience more so than older residents. Of residents aged 18-34, 59% value living within walking distance of public transportation and 71% consider proximity to shops and entertainment very or somewhat important. Of residents aged 35+, 43% value living within walking distance of public transportation and 53% consider proximity to shops and entertainment very or somewhat important.

How important is it to you to live within walking distance of a train or bus stop?



How important is it that you live within walking distance of shops and entertainment options?



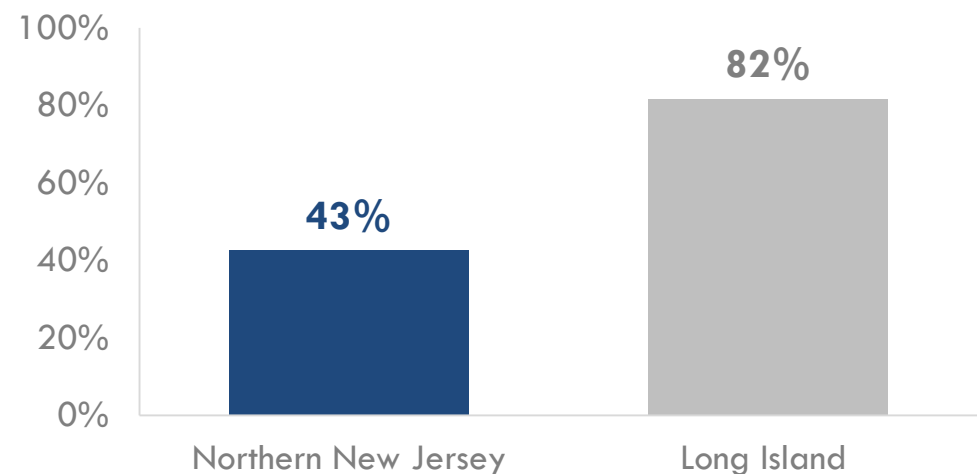
Source: Long Island Index 2014 Poll

Northern New Jersey provides an example of a region successfully producing denser, transit-oriented multifamily housing.

Consisting of Bergen, Essex, Hudson and Union counties, Northern New Jersey has long offered more multifamily housing options than its regional neighbor, Long Island. New York metropolitan area residents have many options for where to reside, and Northern New Jersey has enhanced its competitiveness within this regional context by capitalizing on the potential of transit-oriented development along NJ Transit and the more recent Hudson-Bergen Light Rail (HBLR).



Proportion of Single Unit Housing Stock, 2013



Source: U.S. Census Bureau; Image Source: Kmfl64, Creative Commons, http://upload.wikimedia.org/wikipedia/commons/9/9f/Hudson_bergen_exchange_place.jpg

Northern New Jersey's investment in public transportation has launched residential construction and increased real estate values.



Hudson and Bergen Counties in Northern New Jersey have added over 10,000 new residential units since the Hudson-Bergen Light Rail (HBLR) opened in 2000. These new units in Northern New Jersey represent new residents, generate new spending potential for local retail and restaurants, and help support an emerging sense of place as a part of a revitalized urban environment. To date, the greatest increment of new development has been undertaken and/or planned in areas that contain large, underutilized industrial sites. Communities are also encouraging TOD adjacent to existing NJ Transit stations; a recent master planning effort in the City of Rahway led to over 900 new residential units near the downtown NJ Transit station.

Residential property values have significantly appreciated in areas which previous had poor transit connections to Manhattan. A 2013 study found that properties near HBLR's termini in Jersey City and Bayonne experienced price appreciation rates of 17-20 percent greater than comparable properties not near transit

Source: Voorhees Transportation Center at Rutgers University, Kim and Lahr, *The Impact of Hudson-Bergen Light Rail on residential property appreciation*; *New Jersey Future*; Rahway Redevelopment Agency. Image Source: www.njtransit.com

Northern New Jersey has drawn upon land use development tools to facilitate economic development in the region.



To incentivize and shape development, New Jersey's municipalities have leveraged the state's redevelopment process by implementing tailored zoning laws and introducing a host of complementary amenities including safe and inviting streetscapes. Some of Northern New Jersey's most relevant development tools include the ability to acquire or condemn property for private resale or public development, the ability to offer developers tax abatements in the form of payments in lieu of taxes (PILOTS), the ability to attract businesses with tax relief through the state Urban Enterprise Zone (UEZ) program, and the ability to implement Memoranda of Understanding (MOU) amongst government agencies to expedite the environmental permitting process for brownfields and other underutilized sites for redevelopment.



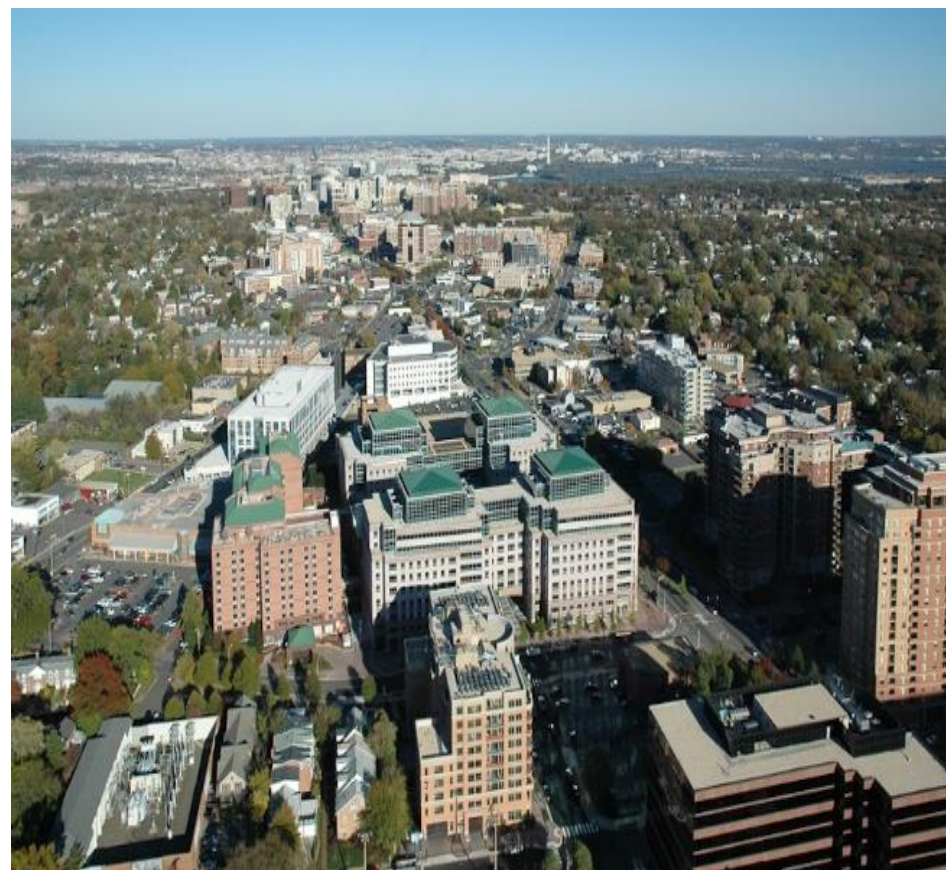
As municipalities have realized the development potential of transit-adjacent property, city officials have expressed more comfort in providing for higher densities and lowering parking requirements. Municipalities have helped reverse public aversion to density through strict oversight of project design. Private developers have since created thousands of new housing units, particularly around transit stations, to accommodate the emerging young professional demographic within the area's strong owner-occupied housing market. In the last several years, Hudson and Bergen Counties have issued more building permits per-capita than New York City.

Source: New York YIMBY, "North Jersey Builds a Lot of Housing, and Here's How They Do It"; Opportunity Newark, "Job and Community Development for the 21st Century"; New Jersey Future, "Smart Growth in New Jersey"; Voorhees Transportation Center at Rutgers University.

Northern Virginia's Arlington County has catalyzed high-density, transit-oriented housing development.

The Rosslyn-Ballston Corridor in Arlington County, Virginia is among the nation's most successful transit-oriented development (TOD) districts. Construction of the Metrorail's Orange Line and implementation of progressive land use policies in station areas has concentrated new multifamily, mixed-use development that complements existing residential neighborhoods. The five neighborhoods that compose the Rosslyn-Ballston corridor offer entertainment and amenities that continue to attract young workers.

Between 1990 and 2000, the number of residents within a quarter mile of the Rosslyn-Ballston metro stations increased by 107%, representing 28% of the County's total growth. Today, over 30,000 housing units, in addition to 26 million square feet of retail and office space, are located within the compact three-mile Rosslyn-Ballston corridor.



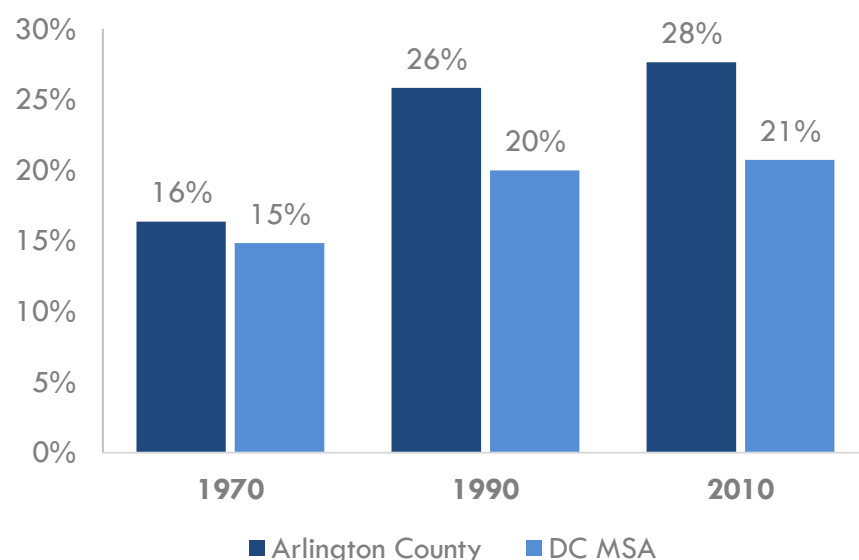
Source: Arlington County Virginia Department of Community Planning; Long Island Index

Image Source: MRPanyGoff, Arlington County, Creative Commons, <http://www.flickr.com/photos/arlingtonva/5221498943/in/photostream/>

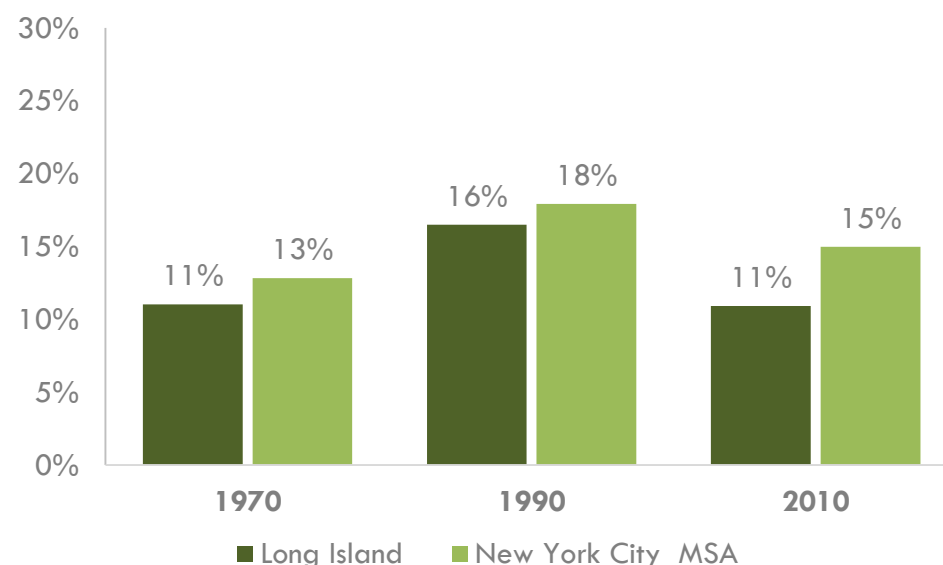
Arlington County has fostered a development regime that helps attract young workers.

Since the implementation of Arlington County's original TOD strategy, the county has captured an increasing share of young workers. By contrast, the 25-34 year old cohort has declined on Long Island as a percentage of Long Island's total population since 1990. Since the 1970s, the overall gap in the proportion of young workers in Arlington County and Long Island versus their respective regions has widened, demonstrating the impact of strategic housing and transportation policy in attracting and retaining a young population.

Arlington County: Age 25-34 Cohort as a Percentage of the Population

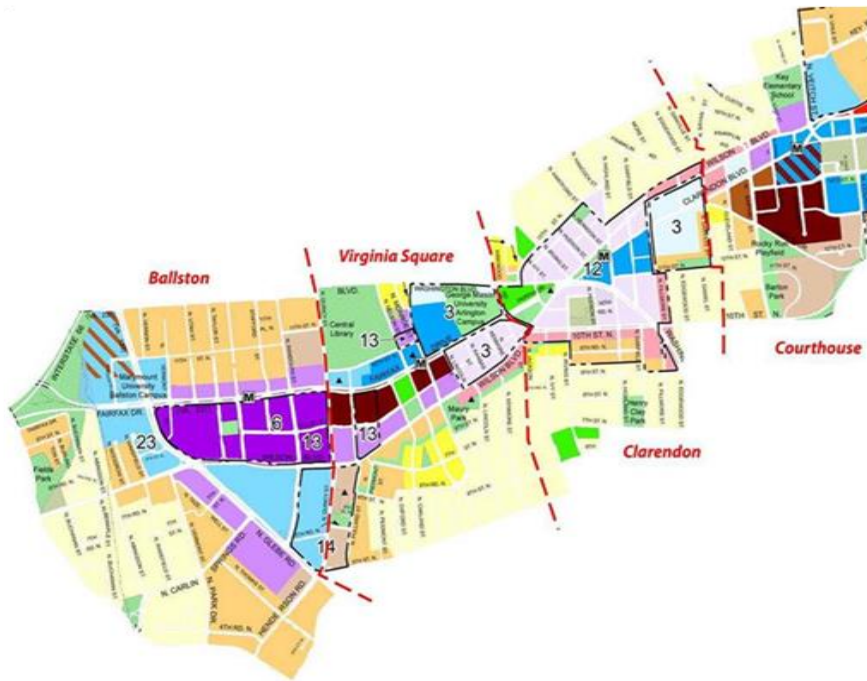


Long Island: Age 25-34 Cohort as a Percentage of the Population



Source: U.S. Census Bureau

Arlington County's proactive and progressive land use policies create the framework for future growth.



The growth of the Rosslyn Ballston Corridor is widely attributed to progressive local land use policy that began decades ago. In the Metrorail's infancy, Arlington County created a general land use plan (GLUP) and sector-specific zoning ordinances (including urban design, transportation, and open space guidelines) to drive focused and pragmatic development in each of the Corridor's station areas.

Since its inception, County officials regularly review and revise GLUP sector plans, maintaining the vision of dense development while adapting to market and resident needs. The County has provided subsequent policy guidelines to protect open space, attract retail, and maintain area affordability while forging public-private partnerships. For instance, the County has implemented the Open Space Master Plan to promote the health of natural resources, developed the R-B Corridor Retail Action Plan to guide decisions on appropriate locations for retail uses, and established the Affordable Housing Investment Fund to provide low interest loans to affordable housing developers.

Source: Transit Cooperative Research Program, Report 102; Walksteps.org Arlington: Transit Oriented Development; Arlington County Virginia General Land Use Plan
Image Source: Department of Community Planning, Housing, and Development, Arlington, VA

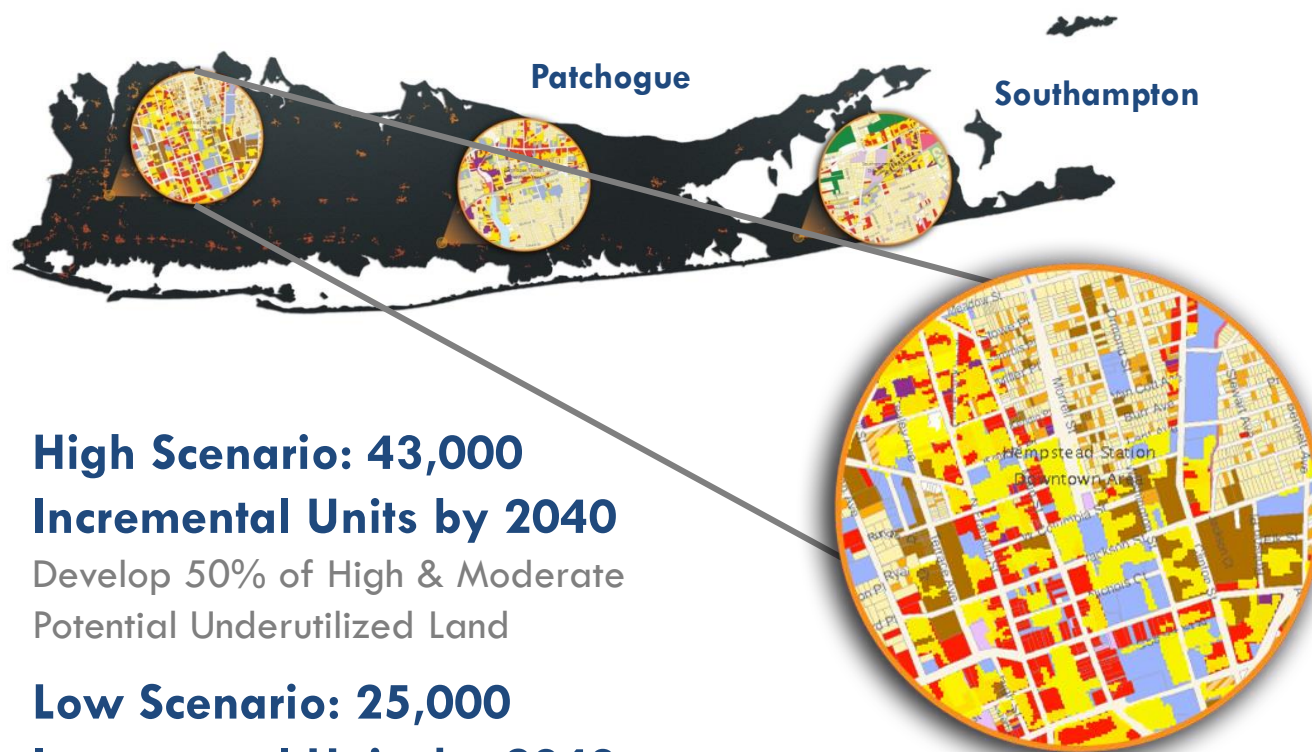
In 2010, the Long Island Index and RPA identified 8,300 acres within a half-mile of LIRR stations and downtowns available for infill development.

Developing new multifamily housing in Long Island's central areas could maintain the suburban character of Long Island by preserving its existing residential neighborhoods, undeveloped farmland, and open space. At the same time, increased development in town centers could provide more affordable and diverse housing options.

Places to Grow

The 2010 Places to Grow Report provides the underlying context for future housing scenarios: If the region builds a conservative mix of townhouses (12 units/acre), garden apartments (24 units/acre), and mid-rise apartment buildings (36 units/acre) in areas already identified as having high or moderate redevelopment potential based on downtown size, existing land use, and LIRR access, the region could support thousands of additional housing units.

Source: Long Island Index; Regional Plan Association, "Places to Grow"; Image Source: Long Island Index



High Scenario: 43,000 Incremental Units by 2040

Develop 50% of High & Moderate
Potential Underutilized Land

Low Scenario: 25,000 Incremental Units by 2040

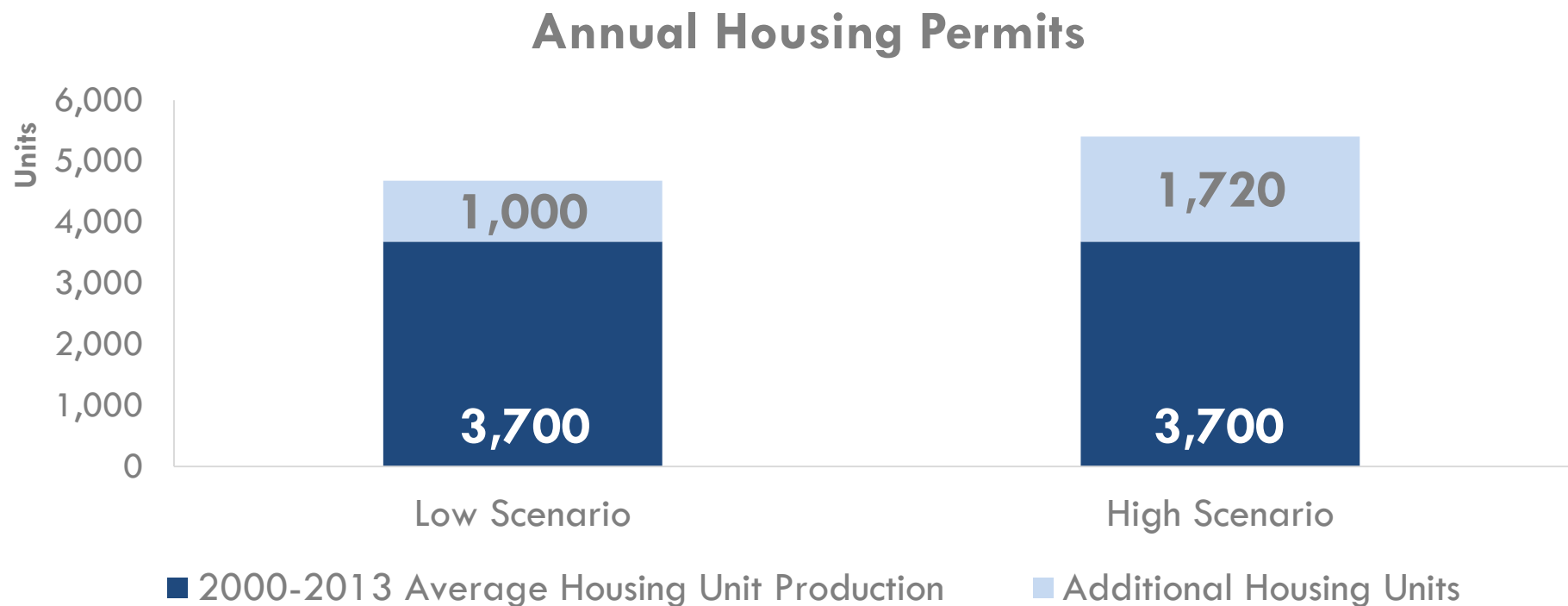
Develop 50% of High Potential
Underutilized Land

Hempstead

Yellow areas on map represent
vacant land with high potential

Using this land for denser housing products would help change housing dynamics on Long Island by introducing a significant jolt of supply.

Since 2000, Long Island has permitted only approximately 3,700 new housing units per year. If Long Island were able to redevelop underutilized land according to either the low or high production scenarios described previously, Long Island would build between 4,700 and 5,400 total units annually, a 27% or 47% increase, respectively, over recent trends.



Source: US HUD State of the Cities; Long Island Index; Regional Plan Association; HR&A Analysis

Impact on Long Island's Economy and Demographics

HR&A modeled the economic impacts of low and high scenarios of achieving both strategies.

Create Quality Jobs Through
Biomedical Cluster

Low Scenario:
50% Growth

Long Island Gains Additional
8,250 Biomedical Jobs by 2040

High Scenario:
75% Growth

Long Island Gains Additional
12,250 Biomedical Jobs by 2040

Expand Housing Opportunities

Low Scenario:
25,000 Incremental Units

Develop 50% of **High Potential**
Underutilized Land

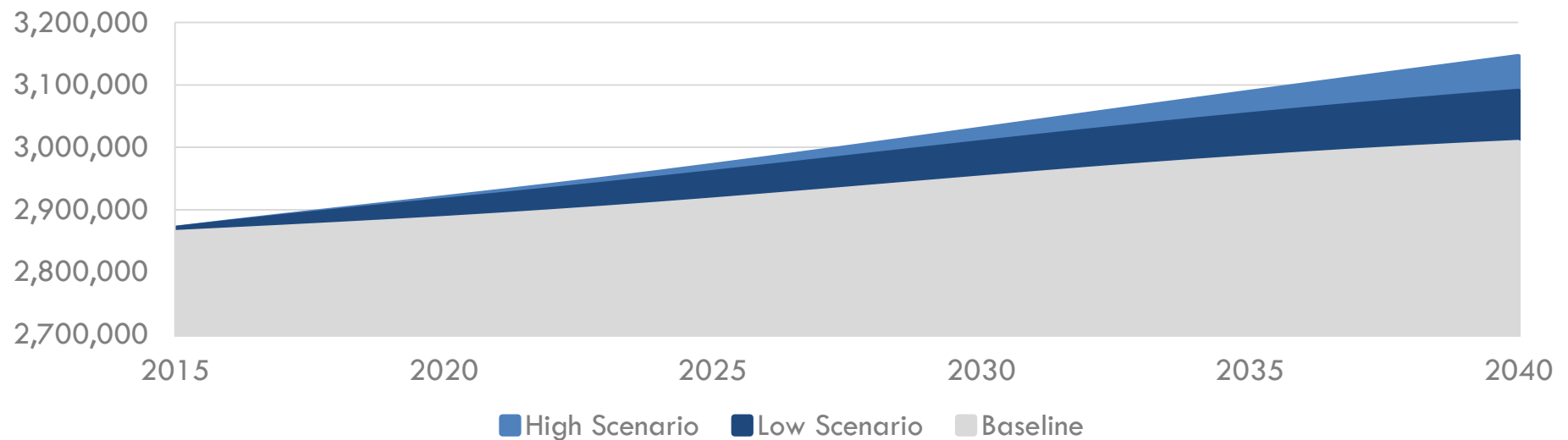
High Scenario:
43,000 Incremental Units

Develop 50% of **High & Moderate**
Potential Underutilized Land

Long Island stands to gain a significant increase in population if both strategies are implemented.

By 2040, Long Island could gain between 82,000 and 138,000 new residents over and above the expected baseline population increase.

New Long Island Residents



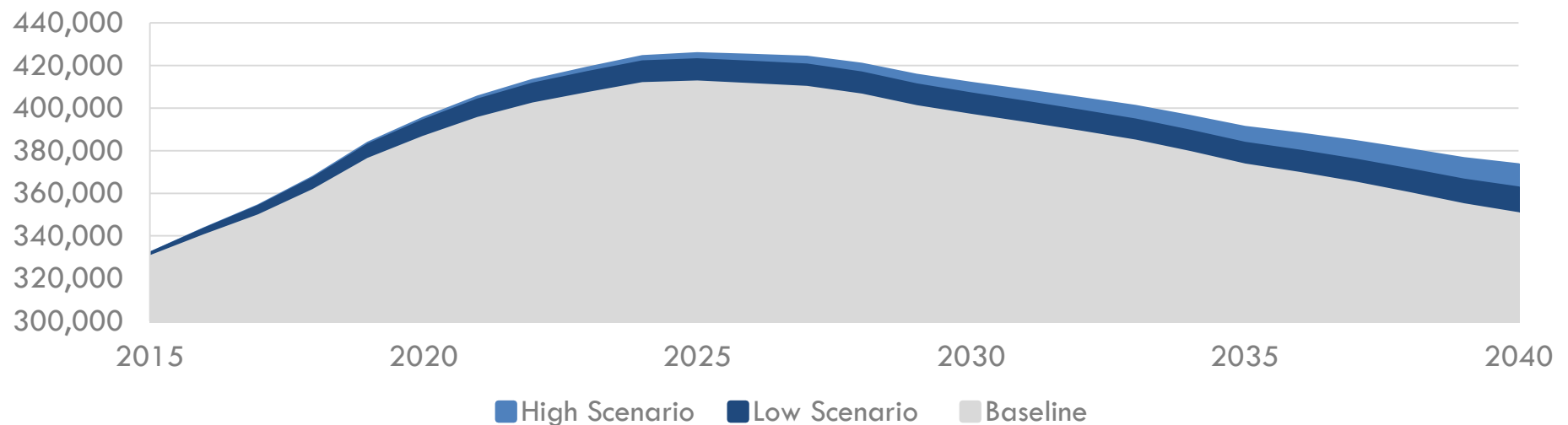
High Scenario	+7,000	+33,000	+55,000	+78,000	+105,000	+138,000
Low Scenario	+7,000	+29,000	+44,000	+57,000	+69,000	+82,000
Baseline	2,862,000	2,884,000	2,914,000	2,949,000	2,982,000	3,007,000

Source: REMI; HR&A Analysis

Long Island would also experience a strong increase in the young worker cohort.

Long Island is expected to follow the nation-wide trend of an absolute decline in the number of residents between the ages of 25 and 34 as the 1990s-born generation of “echo boomers” ages. By 2040, Long Island could retain or attract between 12,000 and 23,000 residents in the 25-34 age cohort over and above the projected baseline.

New Long Island Residents Age 25-34



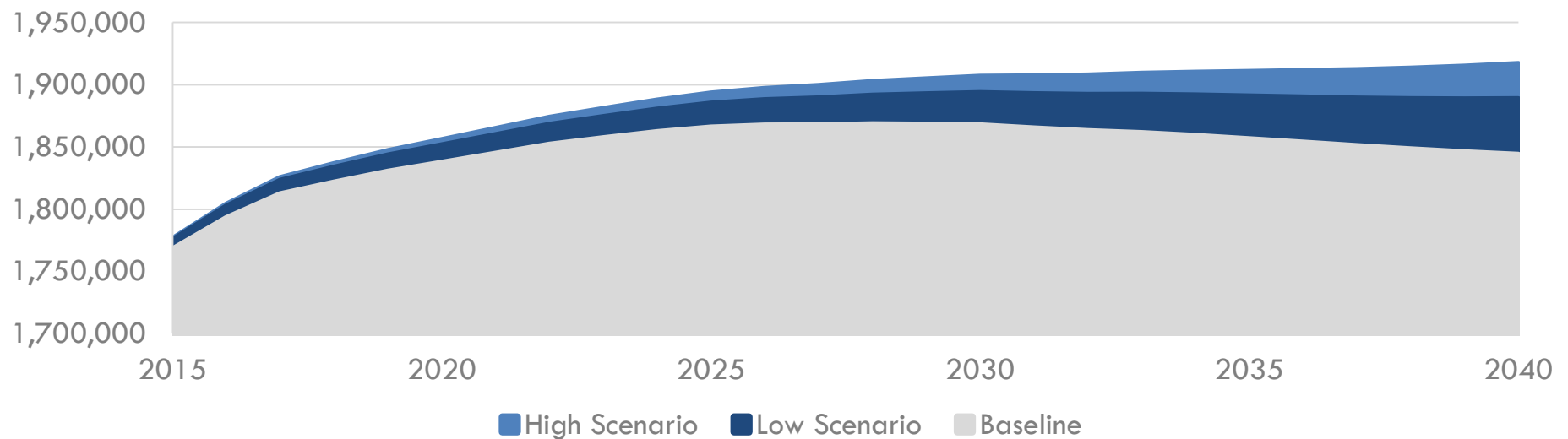
High Scenario	+2,000	+9,000	+13,500	+15,000	+17,500	+23,000
Low Scenario	+1,500	+8,000	+10,500	+10,000	+10,000	+12,000
Baseline	329,000	385,000	411,000	396,000	372,000	350,000

Source: REMI; HR&A Analysis

These strategic interventions would transform Long Island's economy, adding tens of thousands of jobs.

By 2040, Long Island could gain between 44,500 and 73,000 new jobs over and above the expected baseline, preventing a decline in the absolute number of jobs that is currently projected for the region.

New Long Island Jobs



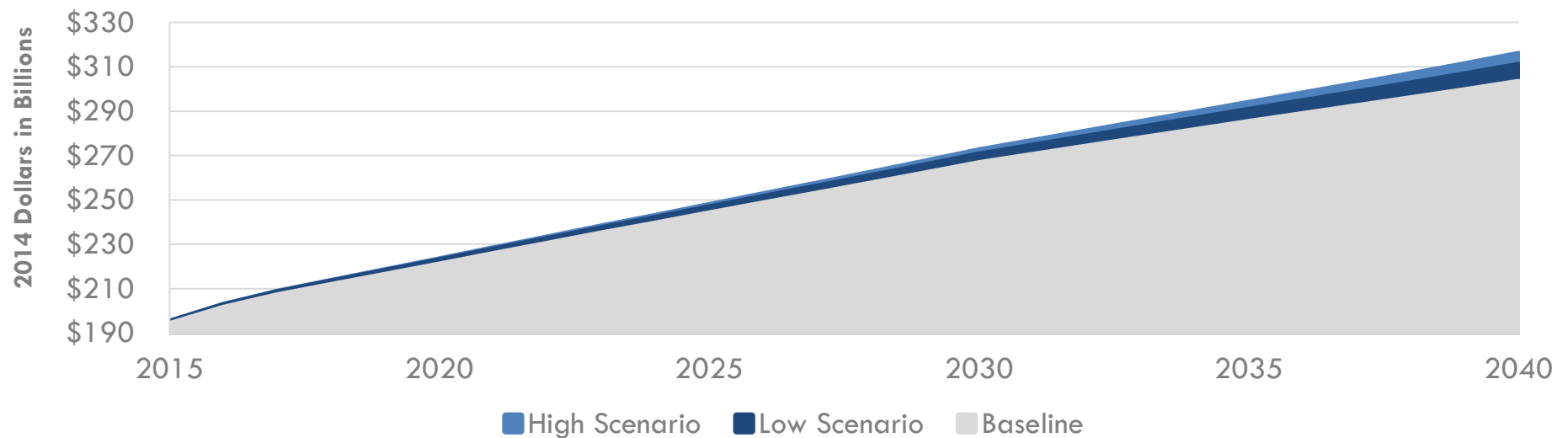
High Scenario	+8,500	+18,000	+27,500	+39,000	+54,000	+73,000
Low Scenario	+7,500	+14,000	+19,000	+26,000	+34,500	+44,500
Baseline	1,767,000	1,837,000	1,865,000	1,867,000	1,856,000	1,843,000

Source: REMI; HR&A Analysis

Personal income on Long Island would also increase, driven by population and employment growth.

By 2040, Long Island's annual personal income could increase between \$7.7 billion and \$12.6 billion over and above the baseline projection. This increase over baseline conditions owes primarily to new residents attracted to the region.

Long Island Aggregate Personal Income



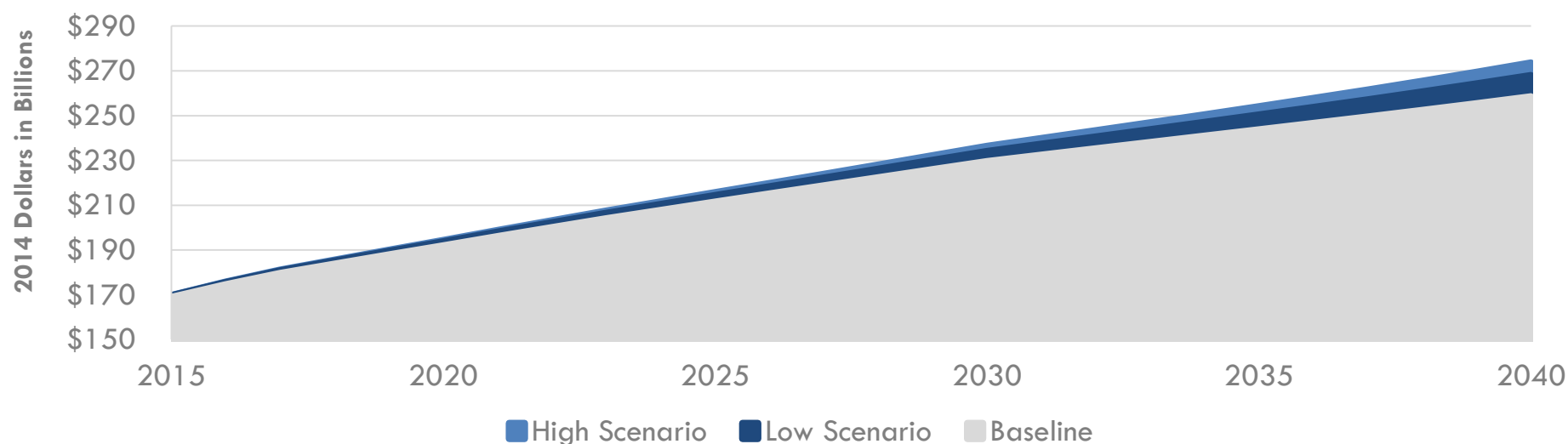
High Scenario	+\$1.05B	+\$2.35B	+\$3.78B	+\$5.81B	+\$8.63B	+\$12.63B
Low Scenario	+\$0.97B	+\$1.89B	+\$2.74B	+\$3.91B	+\$5.48B	+\$7.66B
Baseline	\$193.84B	\$220.68B	\$243.75B	\$266.39B	\$284.98B	\$303.07B

Source: REMI; HR&A Analysis

By 2040, Gross Regional Product on Long Island would increase over baseline expectations.

By 2040, Long Island could gain between \$9.5 billion and \$15.1 billion in additional annual economic activity as the result of both a growing employment base and productivity gains resulting from technological advancements and increases in worker skill levels.

Long Island Gross Regional Product



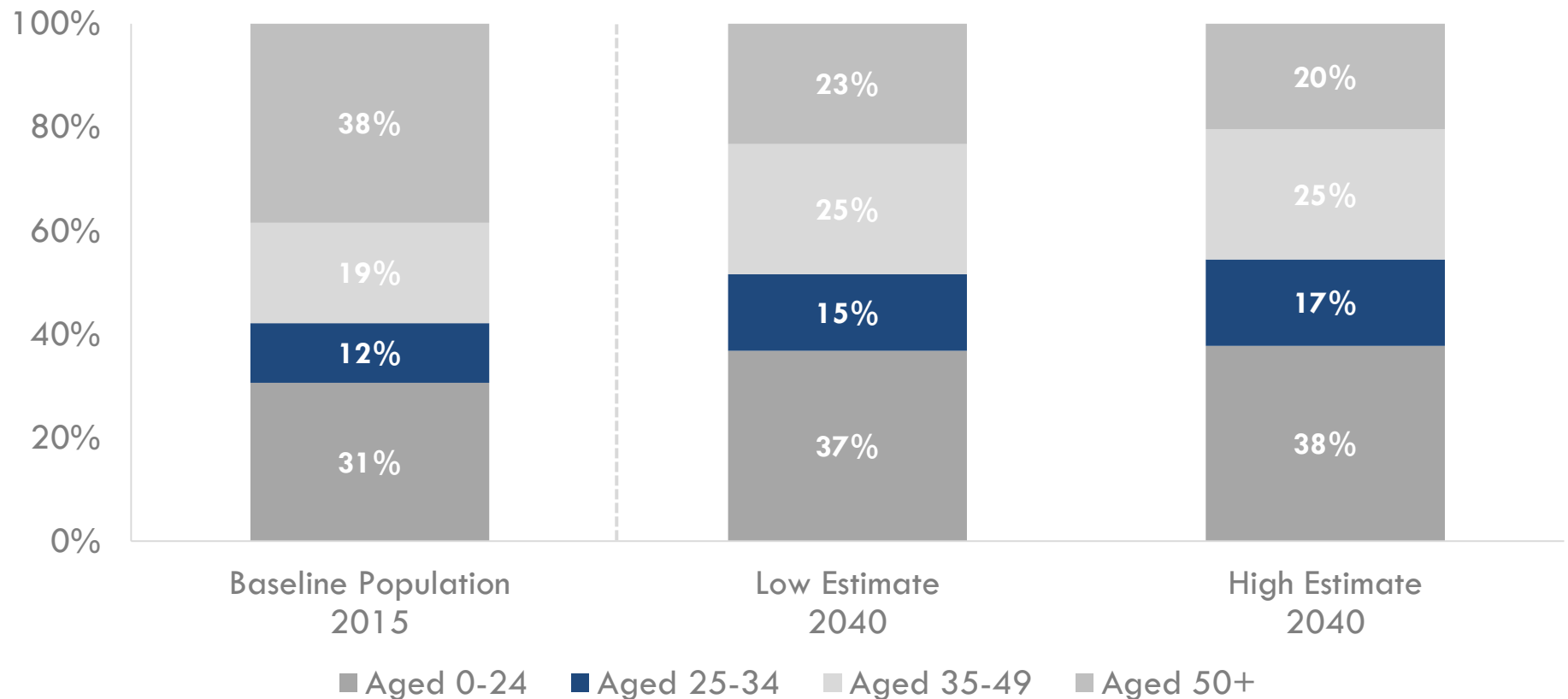
High Scenario	+\$0.86B	+\$2.41B	+\$4.23B	+\$6.82B	+\$10.33B	+\$15.12B
Low Scenario	+\$0.73B	+\$1.80B	+\$2.93B	+\$4.52B	+\$6.64B	+\$9.49B
Baseline	\$168.90B	\$191.94B	\$211.48B	\$229.57B	\$243.76B	\$258.50B

Source: REMI; HR&A Analysis

Younger people would be attracted to move to or stay on Long Island.

By 2040, between 15%-17% of the population attracted to Long Island by the implementation of these strategies would be in the 25-34 age cohort, compared to only 12% of Long Island's total population in 2015.

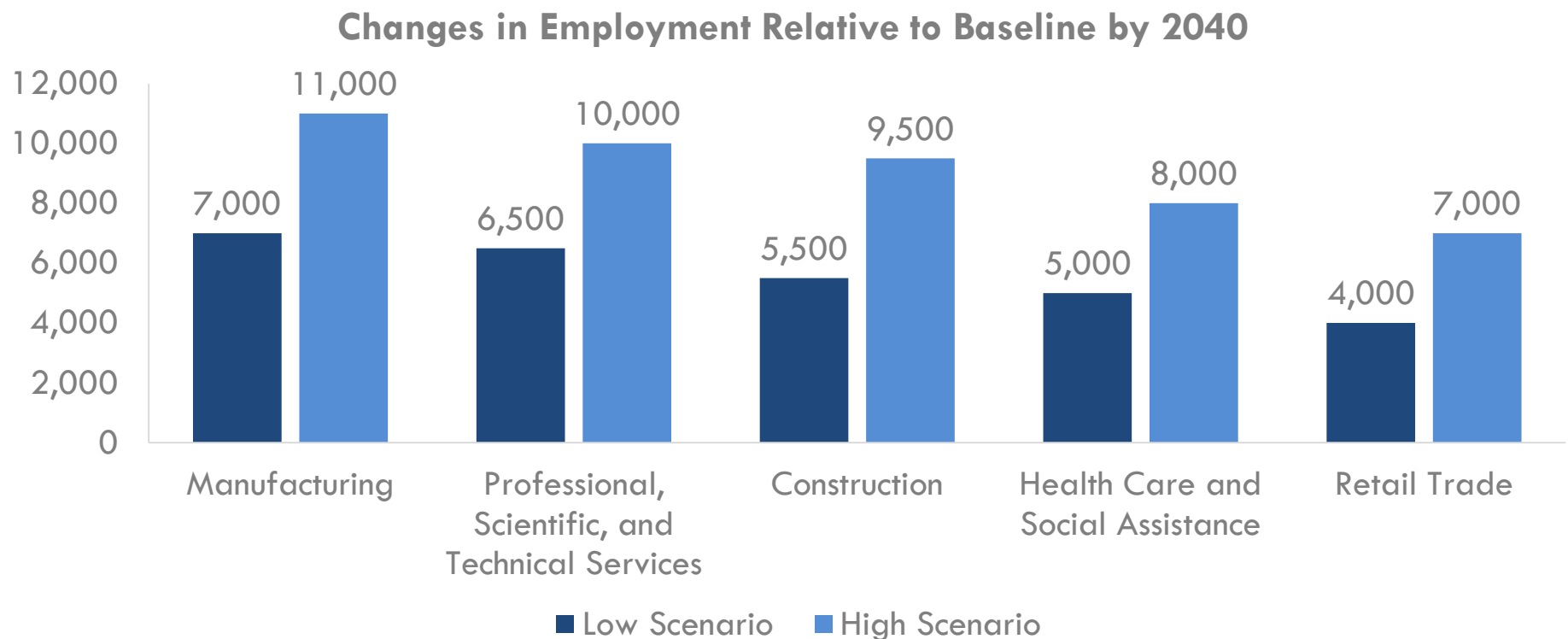
Age Cohorts of Current Residents versus New Residents by 2040



Source: REMI; HR&A Analysis

These interventions would produce significant gains in Long Island's key employment sectors.

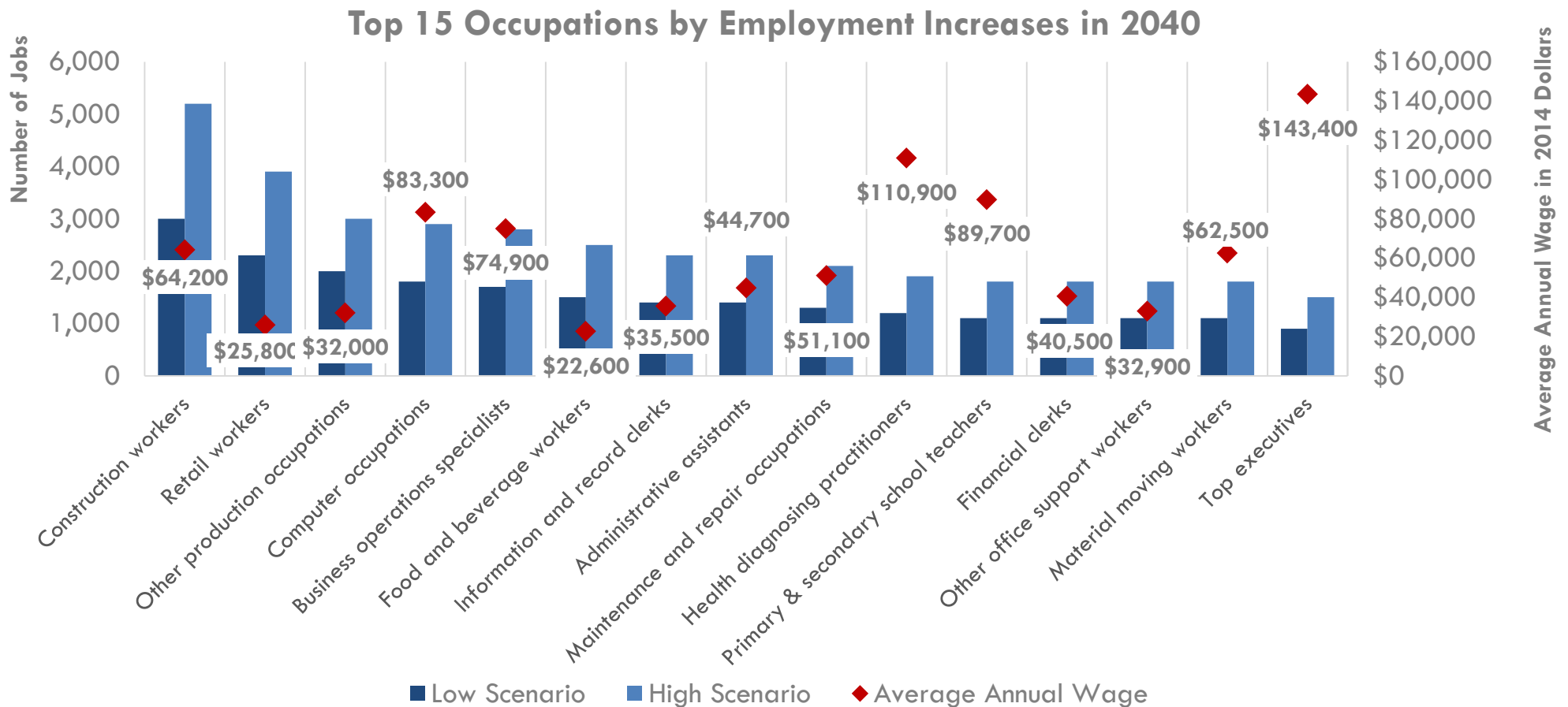
By 2040, Long Island could gain between 28,000 and 45,500 jobs in these sectors. Manufacturing and Professional and Scientific Services would see direct impacts from workers in the biomedical cluster. The Construction sector would see employment gains largely from the increase in new residential housing activity. Long Island's Healthcare and Retail Trade industries would gain jobs as an indirect effect of the larger population resulting from the successful implementation of these interventions.



Source: REMI; HR&A Analysis

These interventions would create jobs with diverse income levels.

A stronger Long Island economy would produce more jobs in all sectors over and above baseline projections. While the top 15 occupations range in annual salaries from \$23,000 to \$143,000 in present dollars, a majority of these occupations would provide solidly middle class incomes.



Source: REMI; HR&A Analysis

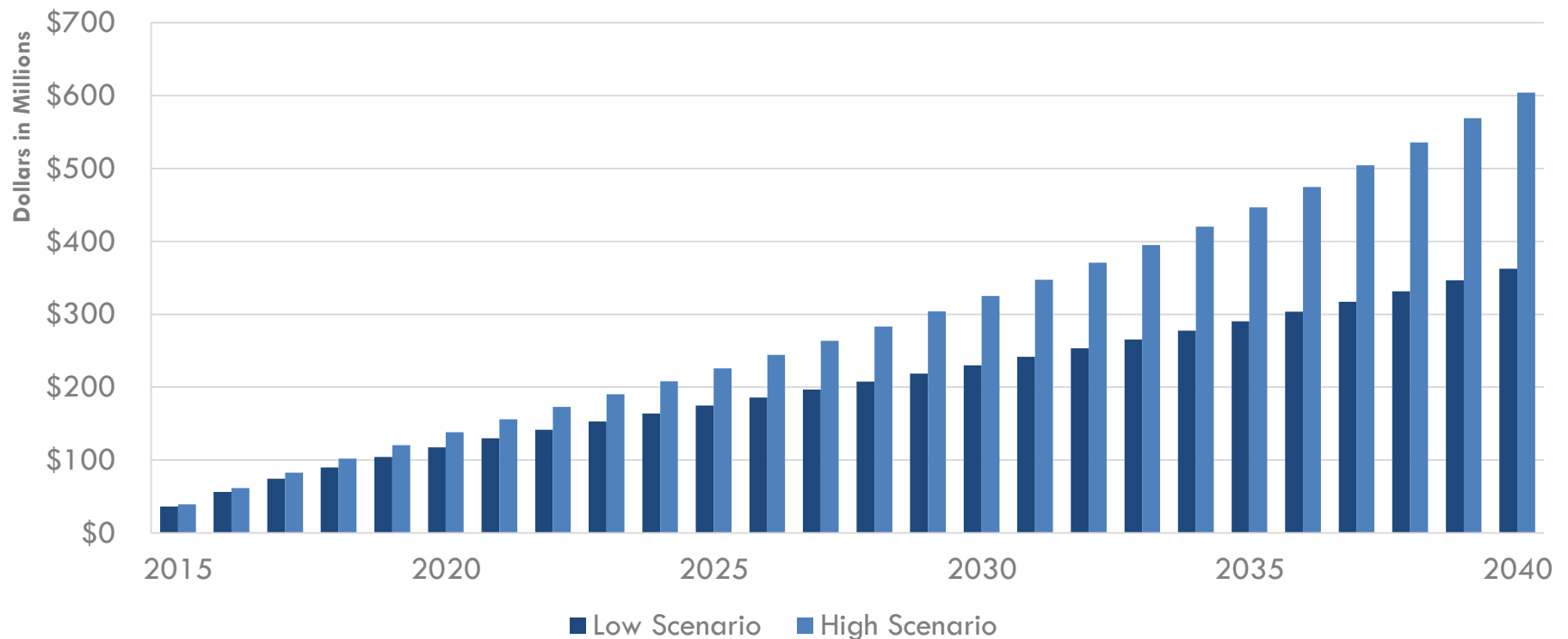
HR&A estimated fiscal impacts based upon the employment and population impacts generated by the REMI Policy Insight Model.

- Sales tax revenues to Long Island were estimated based on the historical ratio between personal income and sales tax revenues to Nassau and Suffolk Counties.
 - In 2012, this ratio was \$1.24 of sales tax revenue for every \$100 of personal income.
 - This ratio is applied to the REMI Policy Insight model's estimate of new personal income generated to measure incremental tax revenues owing to the creation of new biomedical jobs and delivery of new multifamily housing units outlined in these scenarios.
- Property tax revenues were estimated based on the value of the spaces needed to house new residents and workers.
 - HR&A estimated the total number of residential units and amount of commercial square footage that would need to be developed in Nassau and Suffolk Counties, based on the number of new households and jobs projected in the economic analysis.
 - HR&A estimated the market value of this new property based on recent residential and commercial transaction data.
 - Finally, HR&A assumed this new property would be taxed at the current millage rates, based on full market value, for Nassau and Suffolk Counties.

Increases in property and sales tax revenues would provide a significant fiscal benefit to Long Island.

New tax revenues would come from a variety of sources, including property taxes from new residential units and new commercial spaces, and sales taxes from both household and worker spending. By 2040, Long Island could gain between \$360 million and \$600 million in annual sales and property taxes.

Total Fiscal Impact (Sales and Property Tax Revenues)



Source: REMI; CoStar; Bureau of Economic Analysis; Douglas Elliman; Colliers; HR&A Analysis

Implementing strategies to create multifamily housing and grow the biomedical cluster could pay enormous dividends.

*Low Scenario Growth
over Baseline Expectations*

82,000 New Residents
by 2040

12,000 New Residents
aged 25-34
by 2040

44,500 New Jobs
by 2040

\$9.5B New GRP
in 2040

\$7.7B New Income
in 2040

*High Scenario Growth
over Baseline Expectations*

138,000 New Residents
by 2040

23,000 New Residents
aged 25-34
by 2040

73,000 New Jobs
by 2040

\$15.1B New GRP
in 2040

\$12.6B New Income
in 2040

Local Case Studies

HR&A prepared two case studies to demonstrate how these strategies positively impact specific local communities.

The preceding analysis describes the significant regional economic and fiscal impacts of strengthening Long Island's biomedical cluster and ramping up the production of multifamily housing. This aggregate impact is, of course, ultimately the summation of local impacts felt throughout communities on Long Island. The following case studies of the Route 110 Corridor in Suffolk County and the Village of Westbury in Nassau County provide a deep dive into how the strategies could play out at the local level.

Route 110 Corridor

Employment and tax revenue impacts of
biomedical cluster growth

Village of Westbury

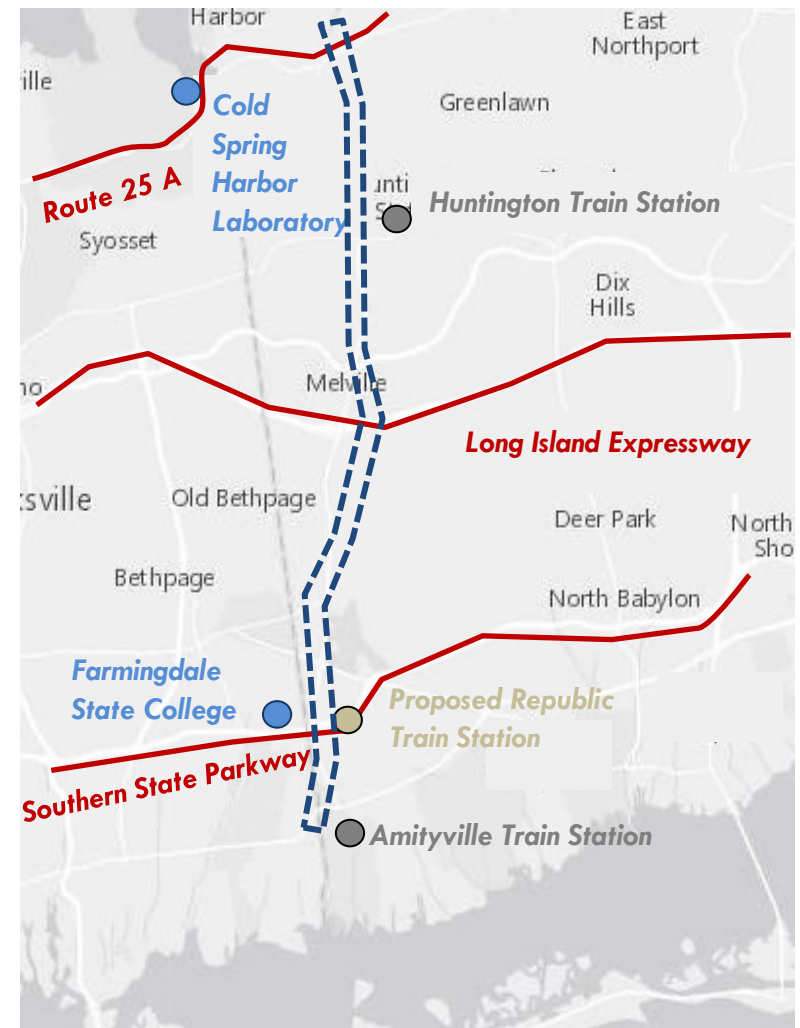
Fiscal impacts of creating downtown, transit-
oriented multifamily housing

The Route 110 Corridor is a critical jobs center on Long Island.

The Route 110 Corridor, stretching from Huntington to Amityville in western Suffolk County, plays a vital role in Long Island's economy. More than 60,000 jobs are located within a half-mile of this corridor, over 5% of Long Island's total work force. Significant efforts have been made to bolster the corridor's role in the regional economy, including proposals for a bus rapid transit (BRT) system to provide a secondary transit network that would function similar to the Hudson-Bergen Light Rail in Northern New Jersey, and multiple requests for proposals (RFPs) to concentrate new office and industrial growth in the corridor. The corridor holds significant potential for future transit-oriented development, with hundreds of millions of dollars being invested in and around Huntington Station and the new Republic Station.

With its large stock of commercial space and proximity to major facilities like Cold Spring Harbor Laboratory, the Route 110 Corridor is a logical physical locus for the biomedical cluster on Long Island. This case study shows how the Corridor would benefit from an infusion of new workers in this cluster.

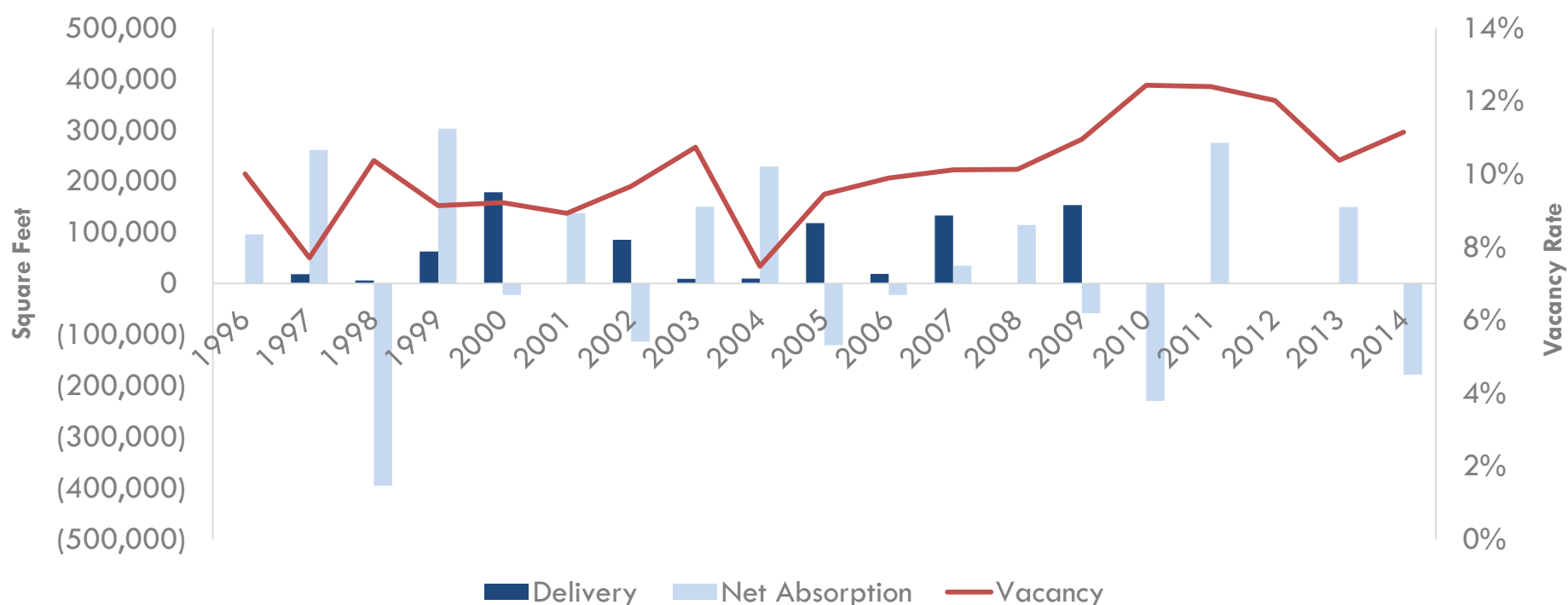
Route 110 Corridor



The Route 110 Corridor contains nearly 10 million square feet of office space, but approximately 11% is currently vacant.

The market for office space within a half-mile of the Route 110 Corridor has stagnated coming out of the Great Recession, with vacancies higher than the 2000s average. Today, there is more than 1 million SF of vacant office space. Since 1996, the corridor has developed approximately 800,000 SF of office space.

Route 110 Corridor Office Market Activity



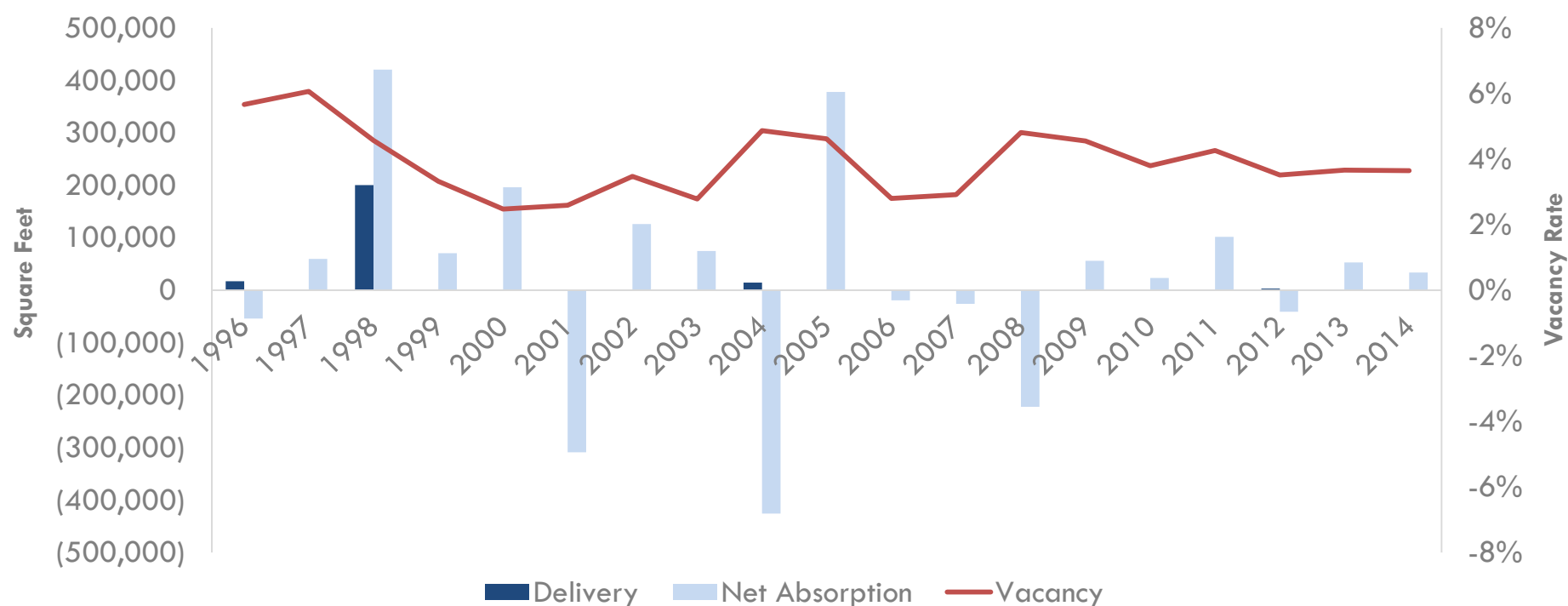
Source: CoStar; HR&A Analysis

Note: Net absorption is a real estate indicator measuring the total change in occupied square footage from one period of time to the next. Positive net absorption indicates more space is being occupied than vacated. Negative net absorption indicates more space is being vacated than occupied.

The Route 110 Corridor contains nearly 13 million square feet of industrial space, with about 4% currently vacant.

The industrial market fared comparatively well during the Great Recession, with vacancy steady around 4% for the half-mile surrounding the corridor. There is currently almost 500,000 SF of vacant industrial space; however, almost no new industrial space has been delivered in the past 15 years. Since 1996, approximately 240,000 SF of industrial space has been developed on the corridor.

Route 110 Corridor Industrial Market Activity



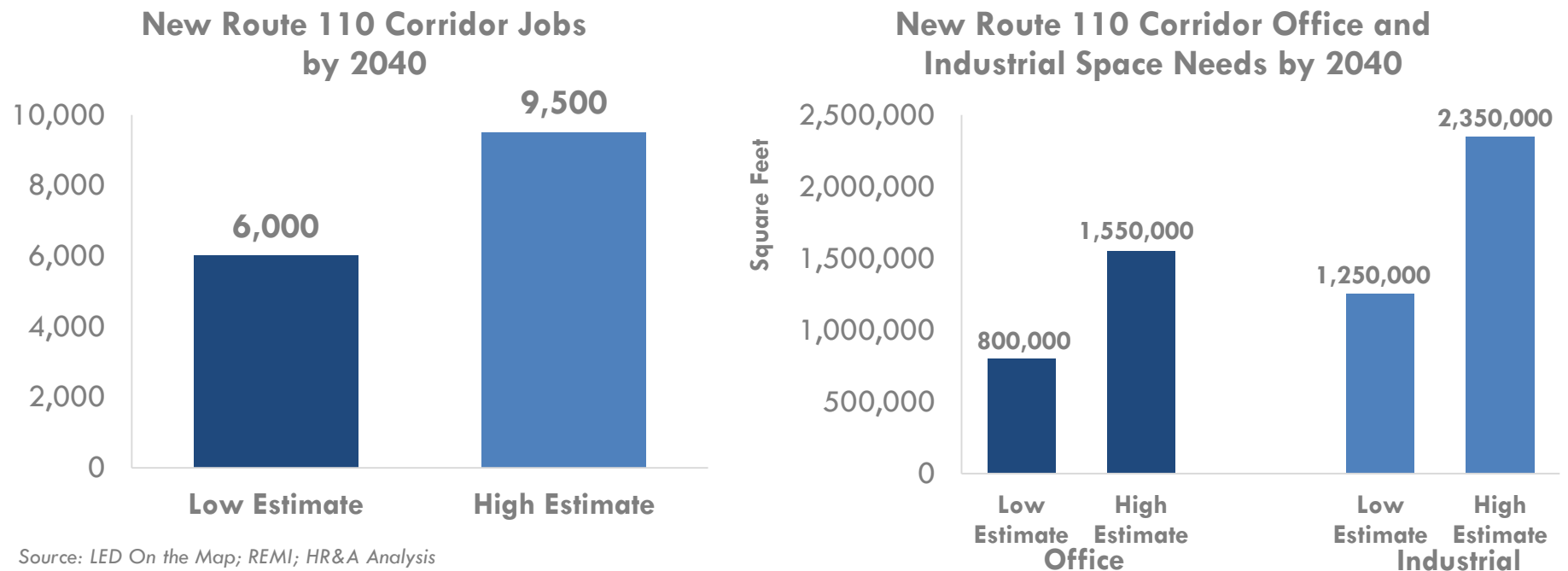
Source: CoStar; HR&A Analysis

Note: Net absorption is a real estate indicator measuring the total change in occupied square footage from one period of time to the next. Positive net absorption indicates more space is being occupied than vacated. Negative net absorption indicates more space is being vacated than occupied.

Strategic policies to promote the biomedical sector could attract significant new jobs and drive demand for space in the area.

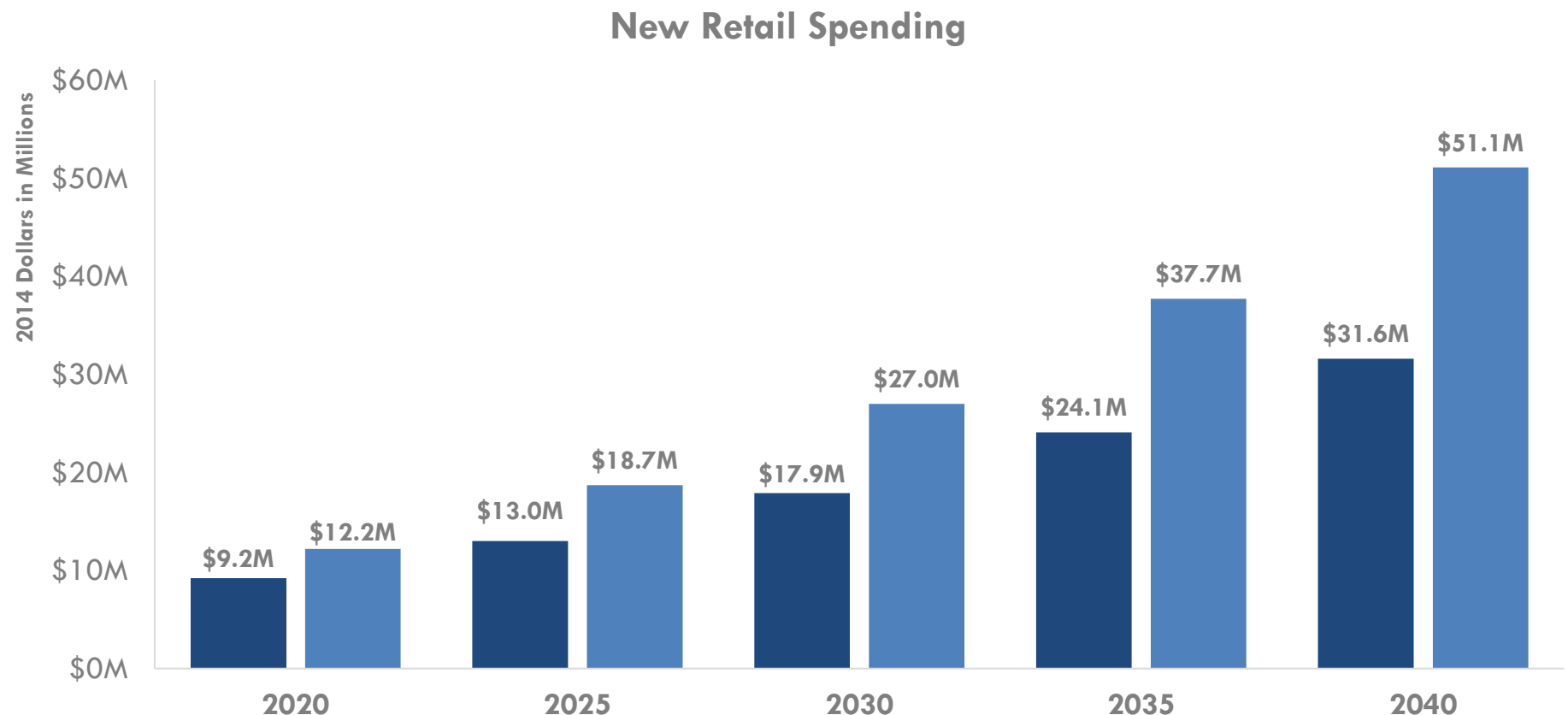
By 2040, approximately 6,000 to 9,500 additional workers could be located along the Route 110 corridor. Given the corridor's current proportion of square feet per worker, these new workers will require up to 1.55 million SF of office space and up to 2.35 million SF of industrial space. This is equivalent to:

- Two times the amount of office space and 10 times the amount of industrial space that has been developed on the corridor in the past 18 years.
- 1.6 times the amount of vacant office space currently on the corridor and 4.7 times the amount of vacant industrial space currently on the corridor.



The absorption of significant office and industrial space would fuel additional retail spending.

Based on national worker spending averages, new workers along the Route 110 Corridor would annually spend between \$32 and \$51 million at stores and restaurants, supporting between 90,000 and 145,000 SF of retail space.

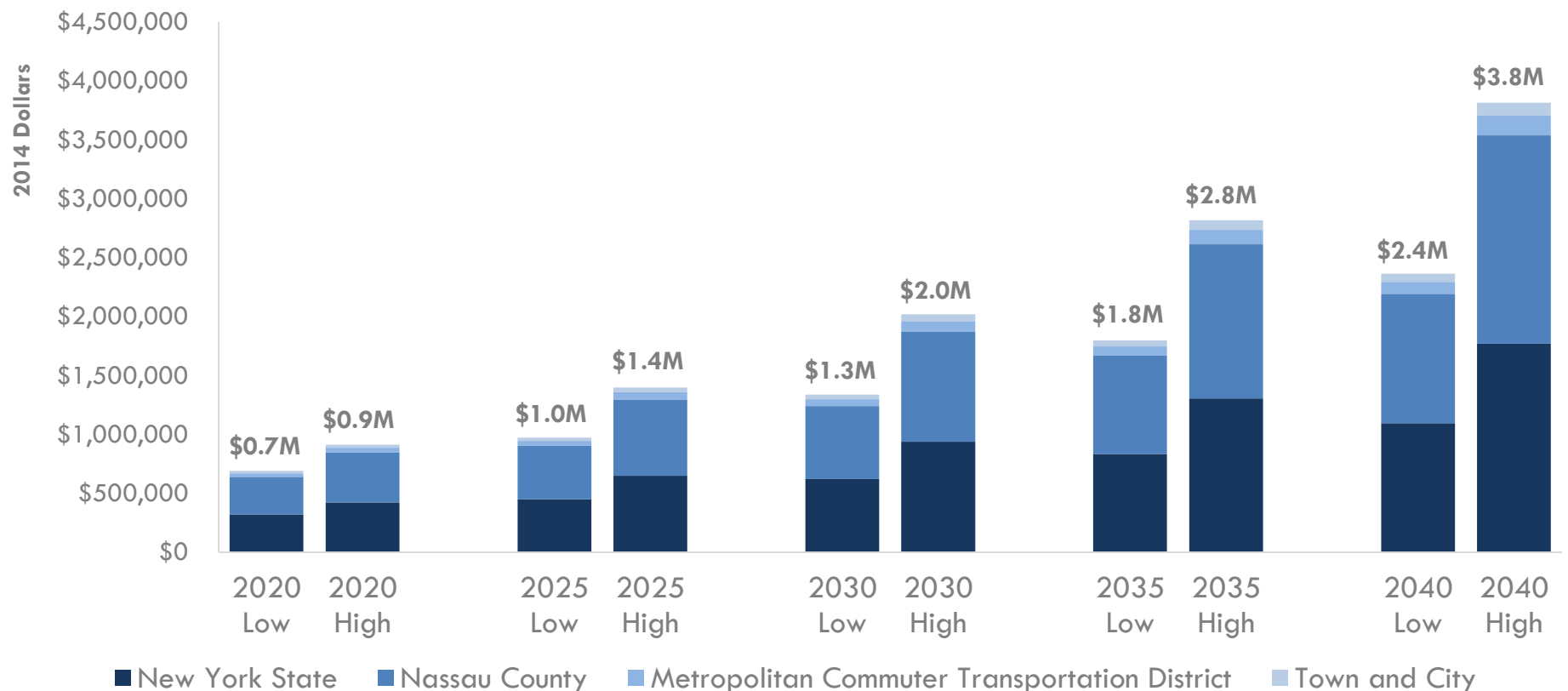


Source: CoStar; LED On the Map; REMI; ICSC; HR&A Analysis

This retail spending could add millions to Suffolk County's coffers.

By 2040, the daytime spending of these additional workers could contribute between \$2.4 and \$3.8 million annually to the county's tax collections.

Annual Sales Tax Revenue from New Worker Retail Spending



Source: CoStar; LED On the Map; REMI; ICSC; HR&A Analysis

Transforming the 110 Corridor into a vibrant mixed-use district would enhance Long Island's ability to compete for businesses and workers.

Strategic investments to strengthen Long Island's biomedical cluster could provide:

6,000 - 9,500

New Route 110
Corridor Jobs

\$32M - \$51M

New retail
Spending

\$2.4M - \$3.8M

New Sales Tax
Revenue

By 2040, a reinvigorated 110 Corridor could offer:

- A modern transit system that facilitates travel within the corridor and to the greater region.
- New multifamily housing in proximity to jobs and amenities
- New office spaces designed to maximize interaction and innovation
- Lively, human-scale downtown environments featuring retail and restaurants

There are more than 4,000 acres of surface parking in Long Island's downtowns that could be better utilized.

Infill development is key to addressing Long Island's future housing and worker needs. Developing new multifamily housing in existing downtowns and LIRR station areas can serve new residents and workers, while at the same time helping to ease the rise in the growth of property taxes by expanding the tax base with fiscal-positive development. In January 2014, the Long Island Index released innovative designs for downtown parking structures in four Long Island communities through its ParkingPLUS Design Challenge. HR&A conducted a high-level fiscal impact analysis to determine the local impacts of transit-oriented residential development on the Village of Westbury.



Image Source: LTL Architects, Build a Better Burb

The Village of Westbury could accommodate a major development on two parcels adjacent to the LIRR station.

LTL Architect's proposal, "Train Terraces," is designed to strengthen the connection between the Long Island Rail Road station and the Village of Westbury's downtown. HR&A's analysis focuses on the impacts of the residential component of the proposal, which contemplated approximately 80 new housing units.



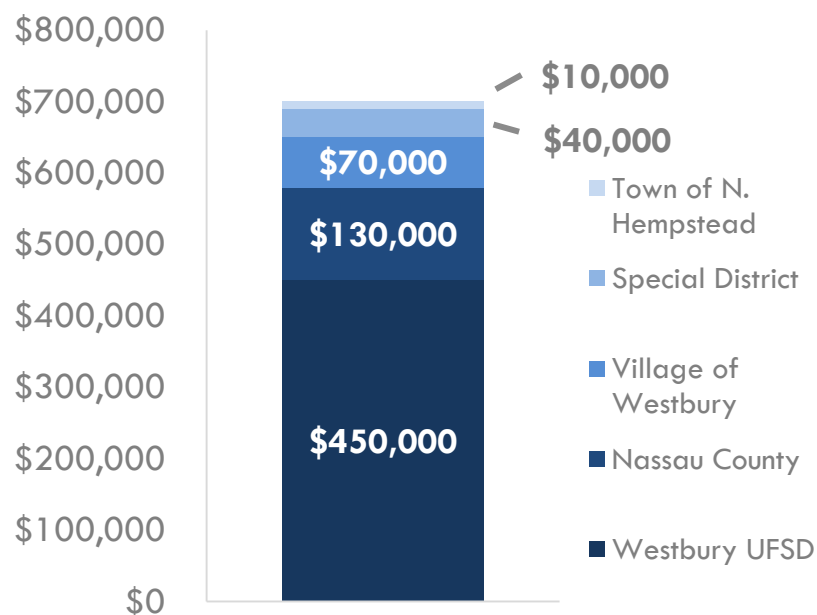
Image Source: LTL Architects, Build a Better Burb

80 New Housing
Units

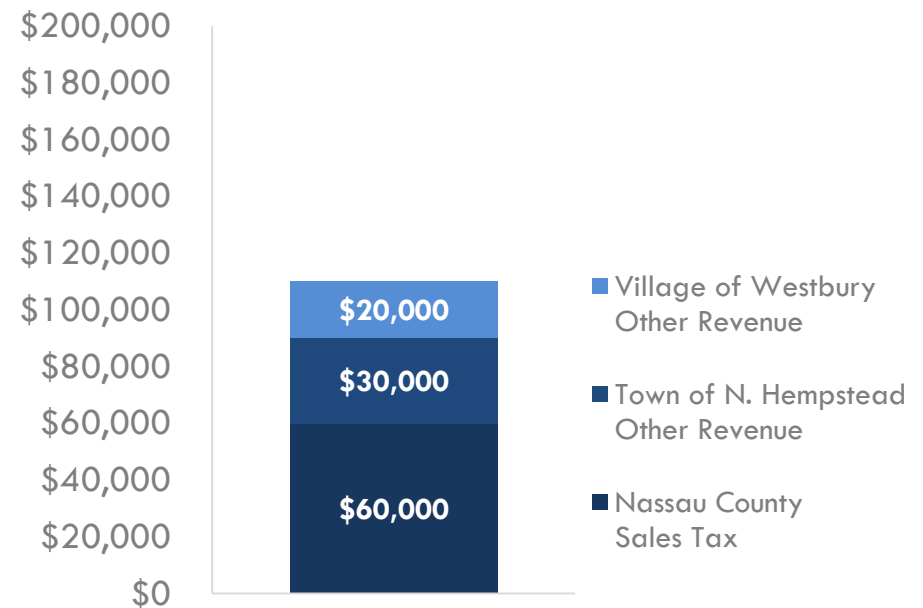
This residential development would significantly increase the local tax base.

Given the central location and strong local demand for downtown living, high quality development is likely to occur on this site, which would provide relatively high property values and therefore robust property tax revenue to the village, town, and county. New residents would also spend the majority of their retail dollars in Nassau County, and a significant portion in the town of North Hempstead and the Village of Westbury, contributing sales tax revenues to local coffers. In total, the project would provide \$810,000 in annual property tax, sales tax, and other revenues.

Annual Property Tax Revenues



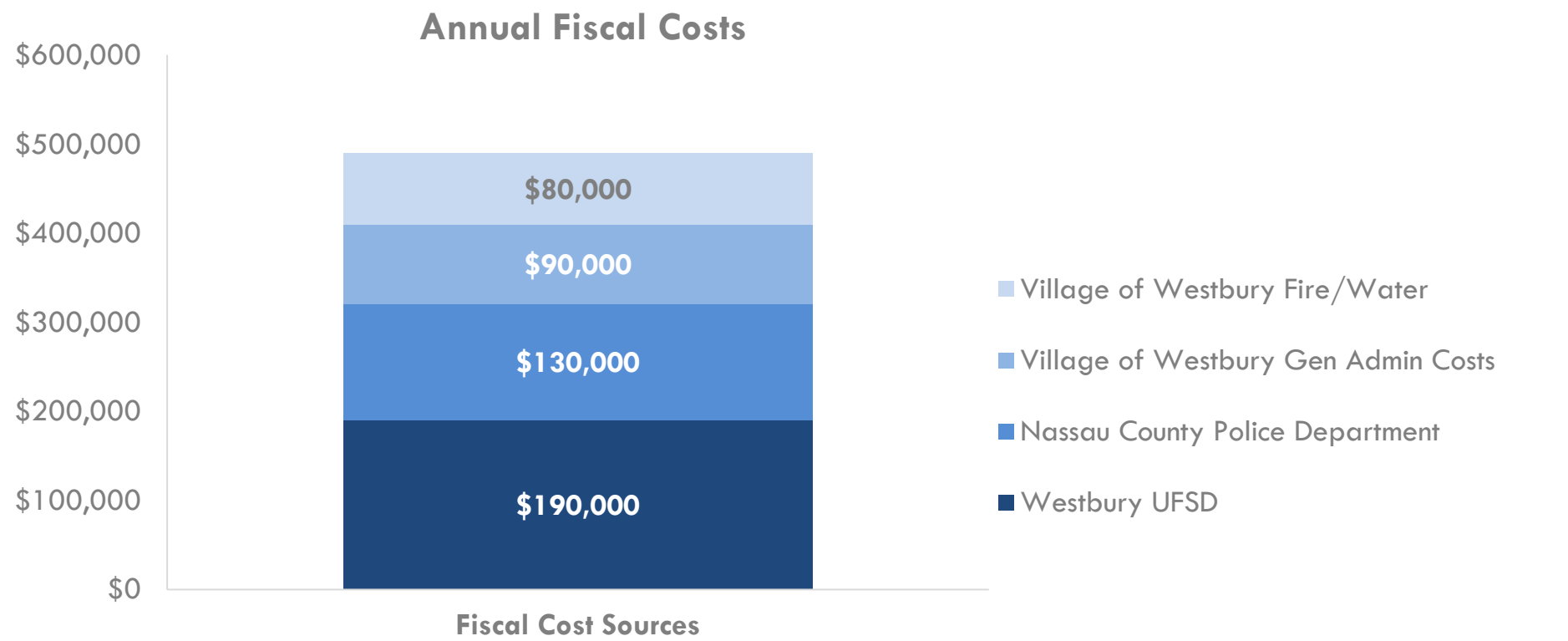
Annual Sales Tax and Other Revenue



Source: Nassau County CAFR; Town of N. Hempstead Adopted 2015 Budget; HR&A Analysis

Tax revenues from the development would be net positive to Long Island governments.

The average cost that each municipal service provider currently expends per capita, per household, or per pupil provides a basis for understanding the development’s fiscal impact. Across all local municipalities, including the Westbury Union Free School District, the project would create approximately \$530,000 in annual fiscal costs, substantially less than the \$810,000 in annual revenues generated.



Source: Nassau County CAFR; Town of N. Hempstead Adopted 2015 Budget; Village of Westbury FY 2014/15 Budget; The National Center for Educational Statistics; HR&A Analysis

Similar multifamily housing developments in the region have not generated a large number of new school-aged children.

Adding additional pupils to the local school system is usually the largest fiscal cost of new residential development. Assuming the unit distribution in the new development is commensurate with other multifamily properties in Westbury, the project would likely contain 50% studios and one-bedrooms, 40% two-bedrooms, and 10% three-bedroom units.

Separate analyses conducted by Dr. Kamer of the Long Island Association and Drs. Burchell and Listokin of Rutgers University suggest that multifamily developments in Nassau County and in the New York metro region produce on average 0.16 school-age children per dwelling unit. By comparison, the overall average number of school-age children for all housing units in Nassau County, comprised mostly of single-family houses, is 0.53 children per dwelling unit, or more than three times as many children as produced by multifamily units.

$$\begin{array}{ccccc} \mathbf{80} & & \mathbf{X} & & \mathbf{0.16} & & \mathbf{=} & & \mathbf{13} \\ \text{Housing} & & & & \text{School-Age Children} & & & & \text{New School} \\ \text{Units} & & & & \text{per Dwelling Unit} & & & & \text{Children} \end{array}$$

Source: Long Island Housing Partnership: Multifamily Housing on Long Island; Rutgers University: Center for Urban Policy Research; HR&A Analysis

Newer multifamily residential projects have produced even fewer children on average.

Dr. Kamer's 2008 report provides the number of children resulting from multi-unit residential developments constructed since 1970. Examining projects in Nassau County developed since 2000 offers an additional estimate for the number of children likely to result from the Westbury infill development. Using this multiplier, the Westbury development would produce approximately 10 students instead of the 13 employed in this analysis.

Year Developed	No. of Units	Type	School District	No. of Children	Children per Unit
2001	40	Condo	Uniondale	8	0.20
2001	371	Condo	Plainview	79	0.21
2002	86	Condo	Herricks	36	0.42
2003	256	Rental	Glen Cove	5	0.02
2004	396	Rental	Uniondale	27	0.07
2004	92	Condo	Westbury	1	0.01
2005	93	Condo	Westbury	1	0.01
2006	32	Condo	Syosset	8	0.25
2006	22	Co-op	Oceanside	9	0.41
1,388				174	0.13

Source: Long Island Housing Partnership: Multifamily Housing on Long Island; HR&A Analysis

Building denser housing in downtown Westbury would create more than \$280,000 in annual net fiscal benefit and add vibrancy to the area.

This development would create an annual net fiscal benefit of approximately \$3,500 per housing unit.

Annual Net Fiscal Benefit to Long Island Governments

Revenue	\$810,000
Cost	-\$530,000
Net Benefit	\$280,000

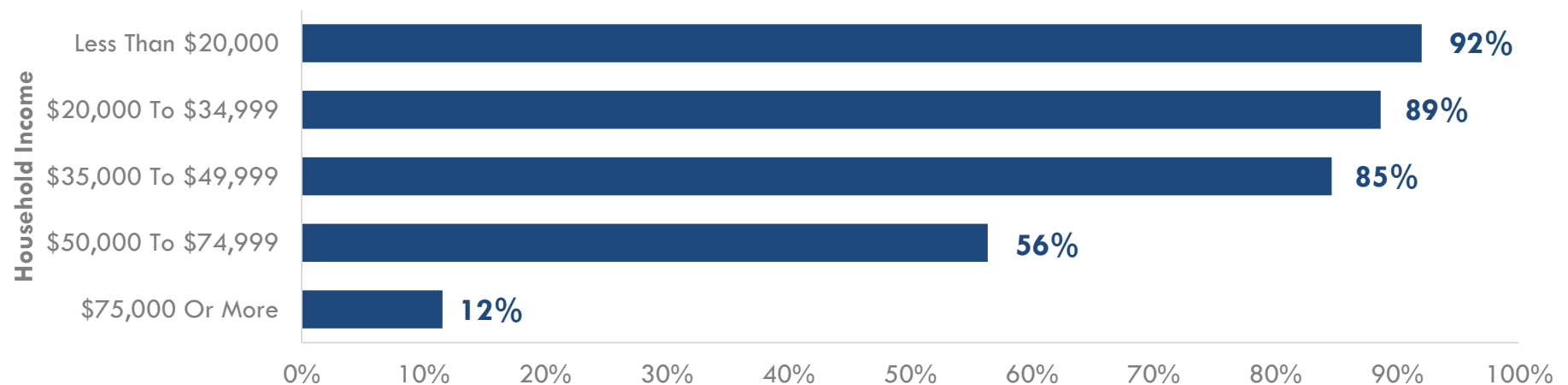
Transit-Oriented Infill Development in Downtown Westbury could offer:

- Increased vibrancy on Post Avenue retail corridor
- Increased LIRR ridership
- New multifamily housing in proximity to jobs and amenities
- Additional retail spending and sales tax revenue
- Attraction of more young workers and their families

Long Island's communities must construct a substantial amount of affordable rental housing in order to provide for its future workforce.

While the 80-unit project in this local case study is based on expectations of the type of development that would occur on that specific, centrally-located, and transit-rich parcel, all Long Island communities must make a concerted effort to introduce rental housing that is affordable. In September 2013, the Regional Plan Association in partnership with the Long Island Community Foundation and the Ford Foundation released a report titled “Long Island’s Rental Housing Crisis,” which advocated for targeted smart-growth investments in downtown areas; committed funding and technical assistance for affordable housing projects; the relaxation of zoning, height, and parking requirements in downtown locations; and the inclusion of local civic associations to encourage an ongoing dialogue to ensure that future projects will meet community needs.

Renter-Occupied Units Paying More than 30% of Household Income on Housing in 2013



Source: Regional Plan Association: Long Island's Rental Housing Crisis; U.S. Census Bureau; HR&A Analysis

Summary and Implementation

Successfully implementing these strategies would provide a much-needed boost to lift Long Island's economy.

*Low Scenario Growth
over Baseline Expectations*

82,000 New Residents
by 2040

12,000 New Residents
aged 25-34
by 2040

44,500 New Jobs
by 2040

\$9.5B New GRP
in 2040

\$7.7B New Income
in 2040

*High Scenario Growth
over Baseline Expectations*

138,000 New Residents
by 2040

23,000 New Residents
aged 25-34
by 2040

73,000 New Jobs
by 2040

\$15.1B New GRP
in 2040

\$12.6B New Income
in 2040

A variety of levers are available to strengthen Long Island's biomedical cluster.

Third Track and Regional Connectivity

- 1** Improve transportation options and overall transit connectivity by building the LIRR Third Track and creating a multi-modal north-south transit system for the Route 110 Corridor.

Invest in Downtowns

- 2** Amenitize downtown locations with retail and restaurants, streetscaping, and event programming to provide a walkable environment attractive to young workers.

Start-up Capital Funding

- 3** Leverage state funding opportunities and local initiatives such as Accelerate Long Island to provide increased capital funding to early-stage start-ups.

Commercialize Research

- 4** Strengthen the business mentor network and connections to local research institutions to foster new start-up creation and ensure survival of new firms.

Flexible Zoning

- 5** Regionally coordinate local zoning and permitting efforts to build flexible office and industrial space in appropriate locations as need develops.

Business-Friendly Taxes

- 6** Lower the business tax burden through strategic consolidations that enable the realization of economies of scale in service provision.

Similarly, implementation actions, many of them at the local level, will be necessary to achieve a significant increase in housing production.

Flexible Regulatory Environment

- 1** Allow higher densities and mixed land uses in downtown centers and LIRR station areas either by-right or through density bonuses for urban infill projects.

Live-Work-Play Downtowns

- 2** Encourage the strategic development of amenities that downtown residents will require in live-work-play centers, such as grocery stores and entertainment options.

Regional Smart Growth Plan

- 3** Advocate for regional smart growth and the creation of a Long Island-wide general land use policy plan to coordinate denser development.

Construction Permitting

- 4** Expedite permitting for multifamily housing projects to speed up the development timeframe and encourage private-sector investment.

Public Infrastructure Investments

- 5** Continue to invest in public facilities and infrastructure, and consider funding below-market rate loans for denser projects.

Case Study: Implementation of the Main Line Third Track would improve transit connectivity and facilitate the growth of the biomedical cluster.

The Third Track Project would add an additional segment of track to the LIRR Main Line, **increasing train capacity, service reliability** and the potential for **reverse commuting**.



The Third Track would make station areas more viable hosts for the biomedical industry by fostering **amenity-rich, transit-oriented development** that focuses knowledge sharing and collaboration.



Source: Metropolitan Transportation Authority, Regional Plan Association. Image Source: The Economic and Fiscal Impacts of the Long Island Rail Road Main Line Third Track

The Third Track project would facilitate intra- and inter- regional connectivity, improving access to Long Island's employment centers.

Spotty transportation access, particularly gaps in daily reverse-commute service, isolates Long Island from the New York region, reducing labor catchment areas and limiting Long Island's business markets. Implementation of the Third Track would increase access to Long Island's employment centers for workers in the New York region, allowing biomedical companies to attract talent that matches their needs.

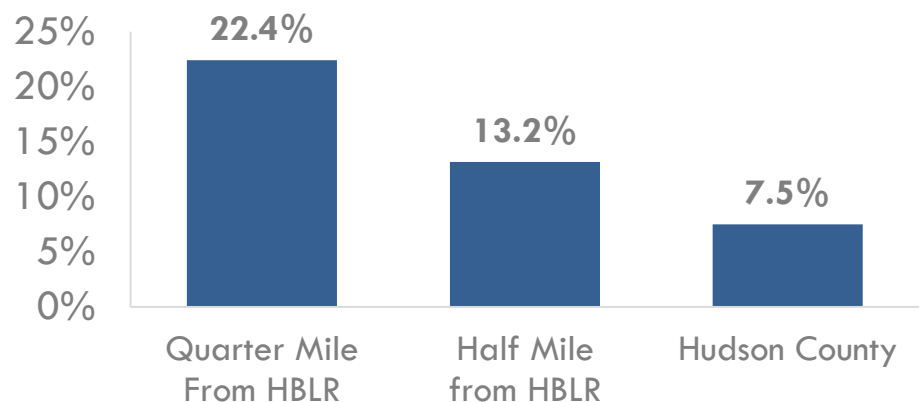
Comparable regional transit systems in the New York metro area have made capital investments to increase service capacity, enabling employment centers to benefit from high service levels. Following initial construction of the Hudson-Bergen Light Rail in 2000, job growth within a quarter mile of the rail corridor grew nearly three times faster than the county average.

Improved access to Long Island's employment centers



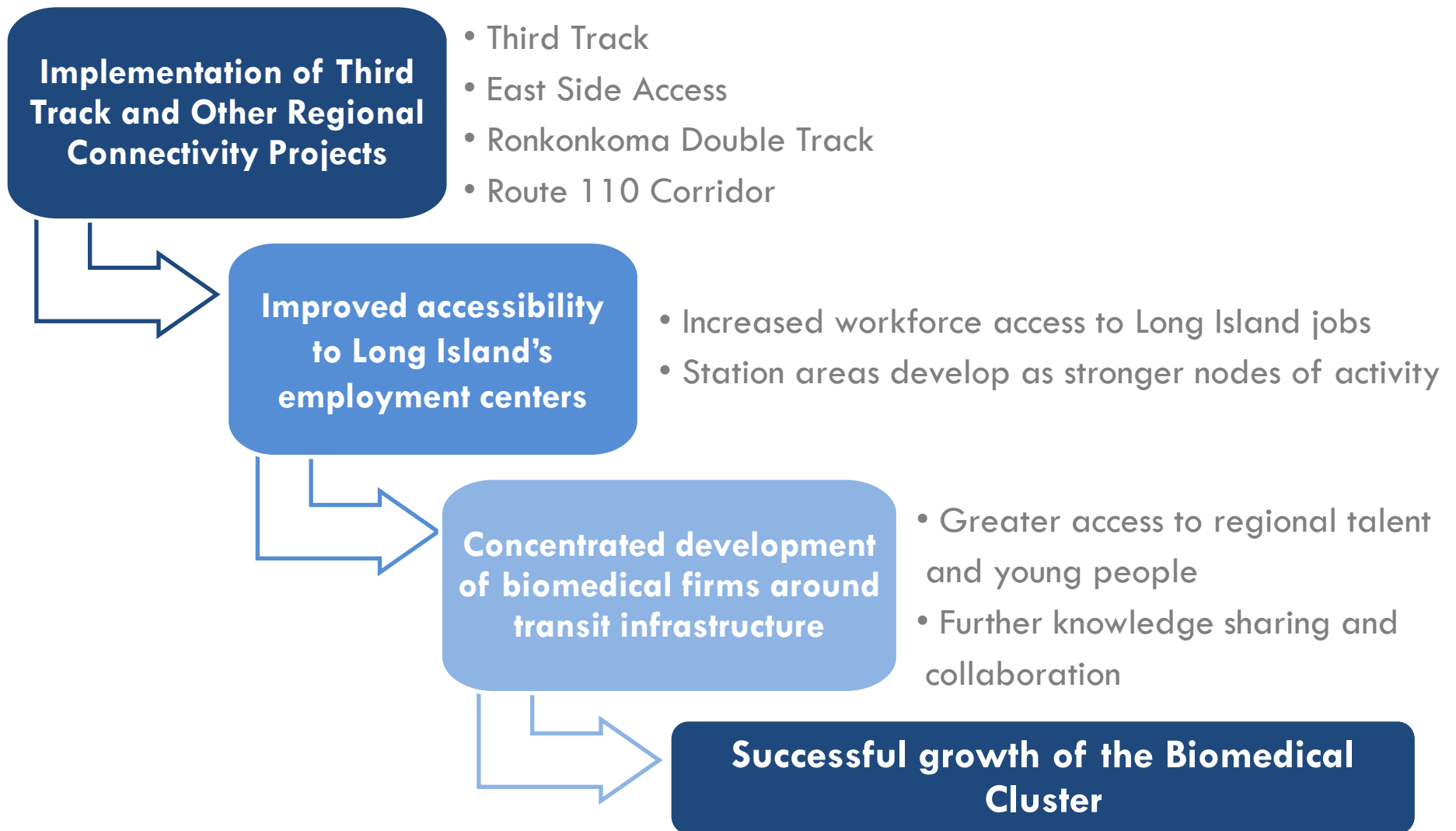
Larger labor market that meets the needs of biotech firms and expands opportunity for Long Island's workers

**Hudson Bergen Line
Total Job Growth, 2002-2011**



Source: LED On The Map

Constructing the Third Track is critically important to realizing the transformative potential of the biomedical cluster.



Appendix: Individual Strategy Impacts

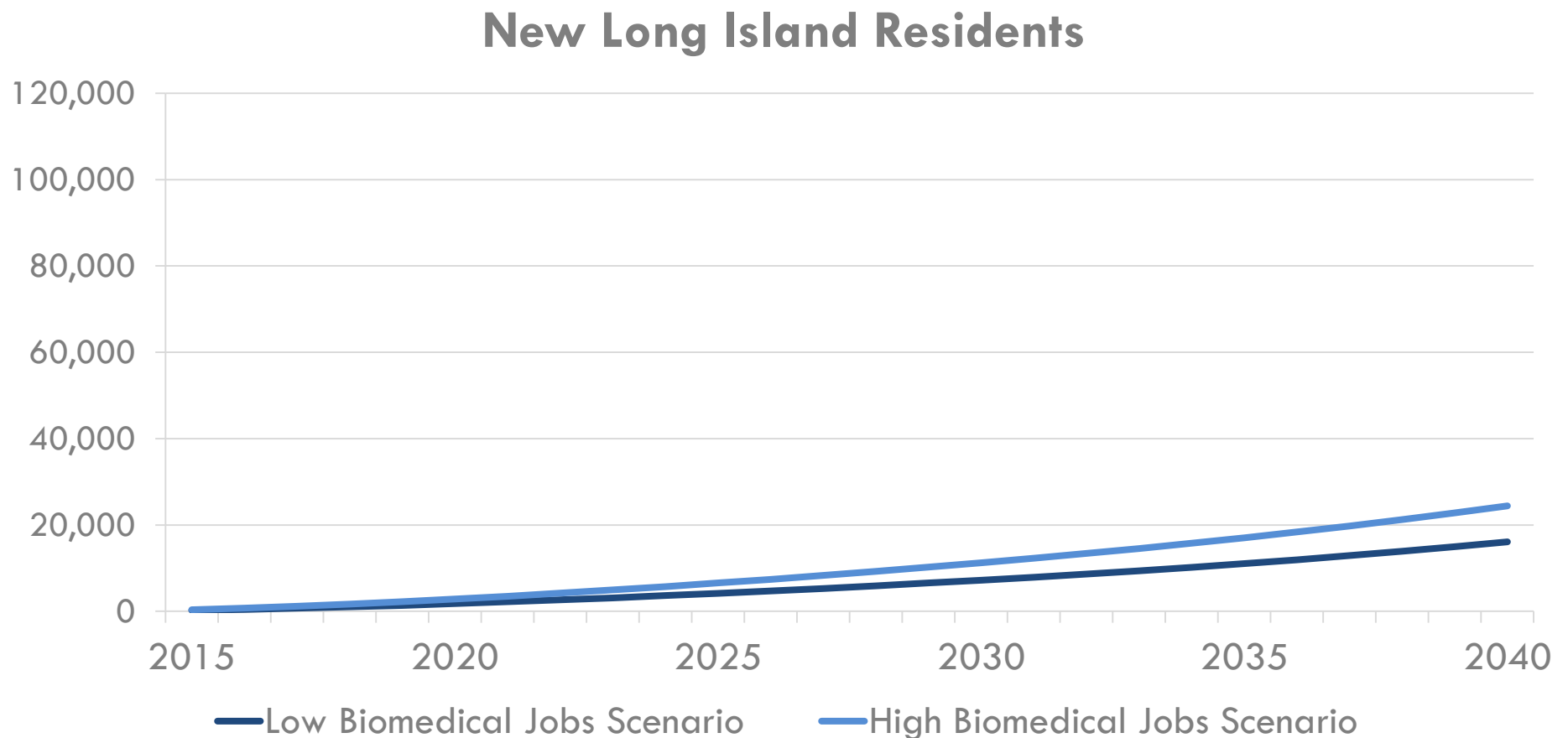


**LONG ISLAND
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New Residents

Biomedical Scenario: An enhanced biomedical cluster would attract new residents into the region.

By 2040, Long Island's population could increase by 16,000 to 24,000 new residents.

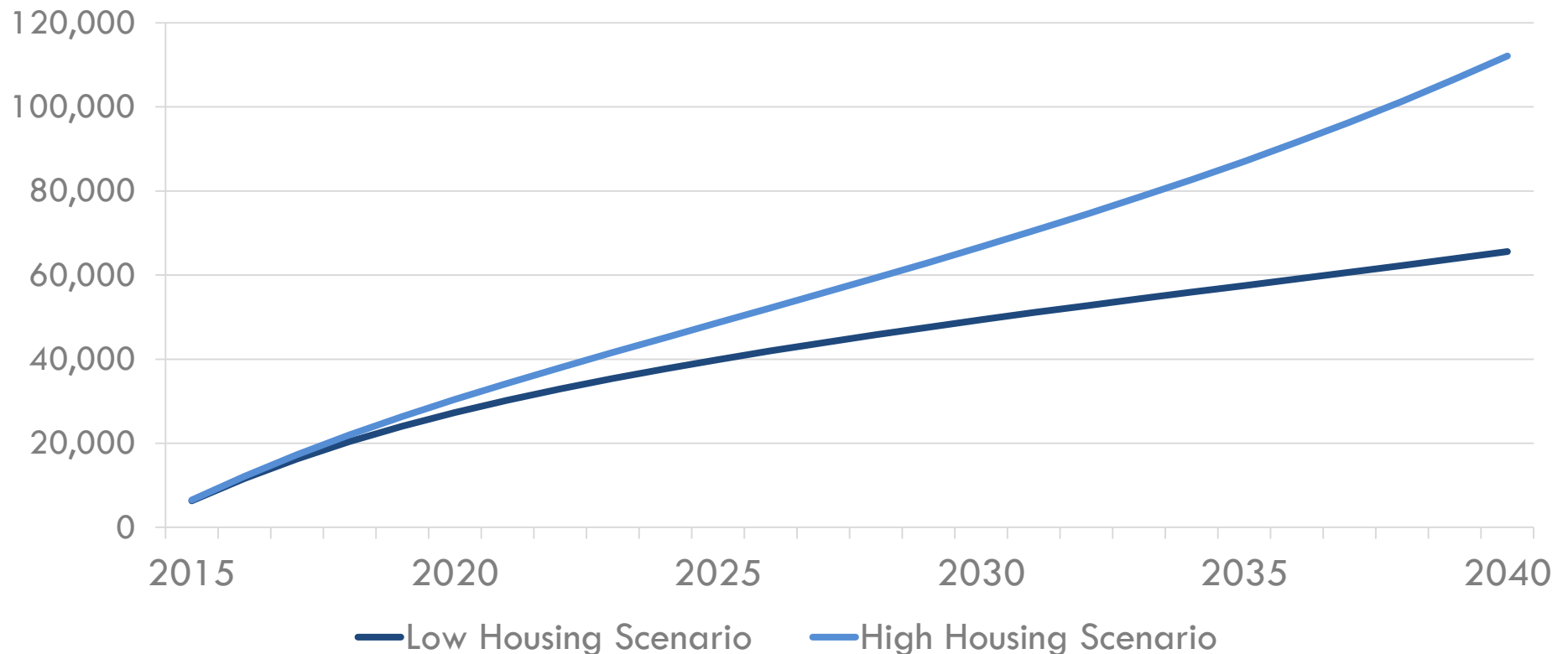


Source: REMI; HR&A Analysis

Housing Scenario: Providing more housing options could attract thousands of new residents.

By 2040, Long Island could attract between 65,000 and 115,000 new residents by constructing new housing units in downtown areas.

New Long Island Residents



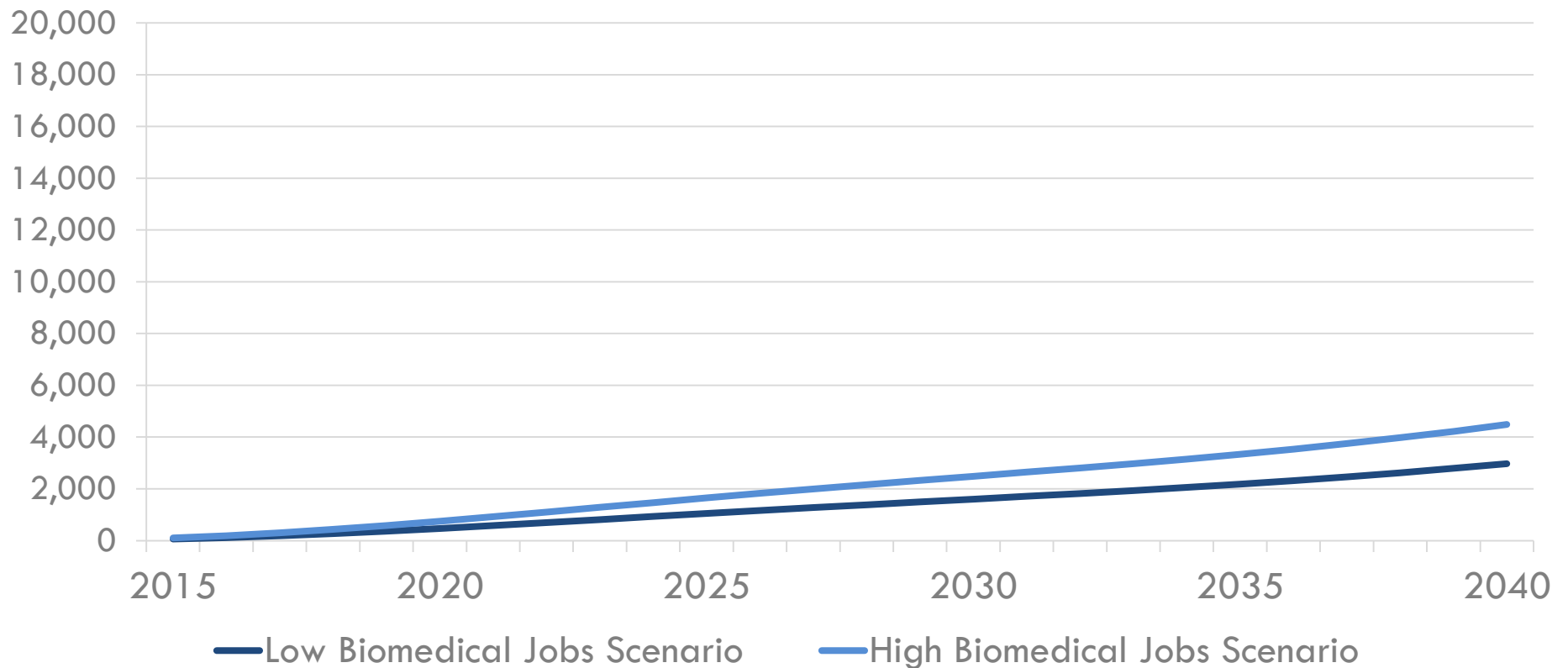
Source: REMI; HR&A Analysis

New Residents Aged 25-34

Biomedical Scenario: Biomedical jobs could attract recent college graduates with advanced degrees.

By 2040, Long Island's young worker cohort could increase by 3,000 to 4,500 residents.

New Long Island Residents Age 25-34



Source: REMI; HR&A Analysis

Housing Scenario: New residential units in central locations provide an attractive housing option for younger workers.

By 2040, Long Island could retain or attract between 9,000 and 18,000 residents in the 24-34 year old cohort.

New Long Island Residents Age 25-34

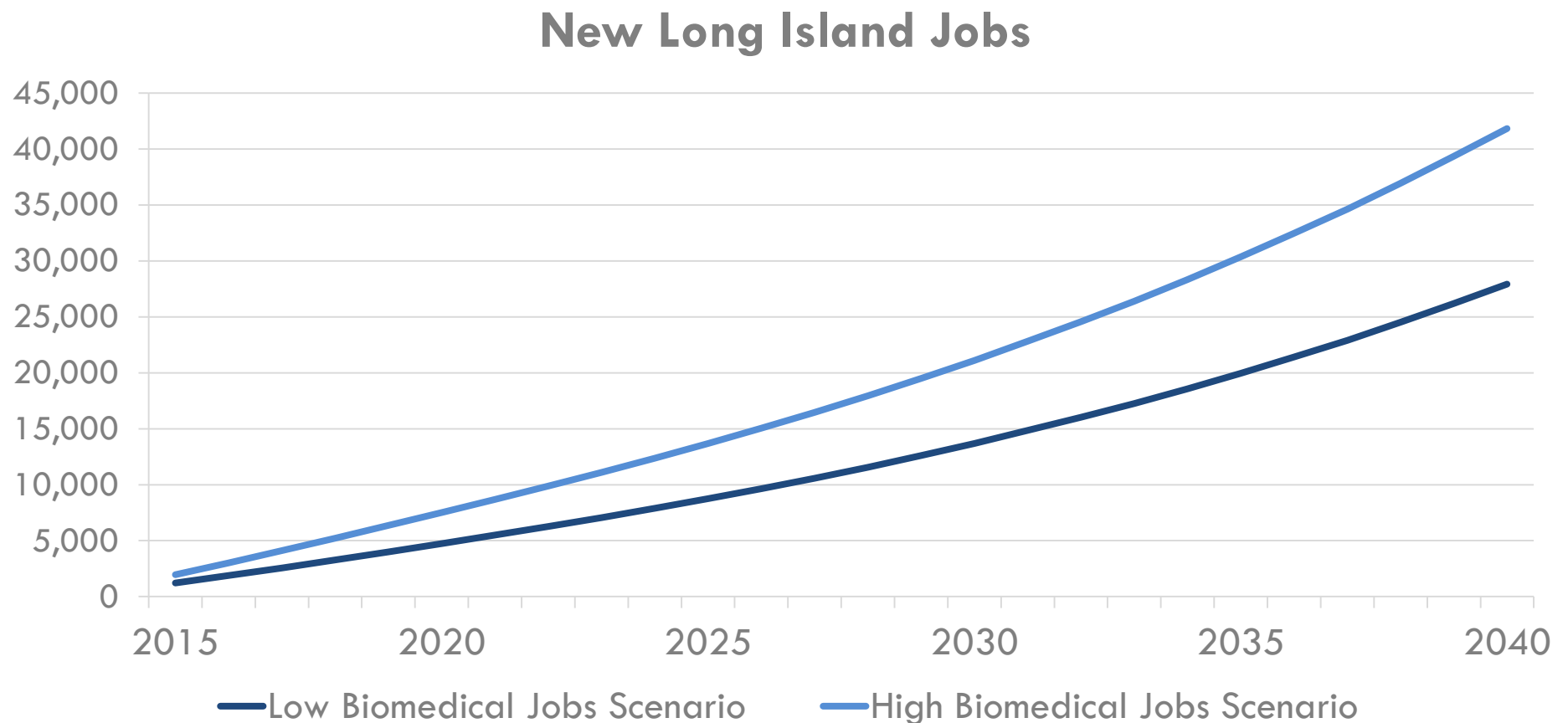


Source: REMI, HR&A Analysis

New Jobs

Biomedical Scenario: High paying tech jobs produce a strong multiplier effect, creating more than two additional jobs for each biomedical job.

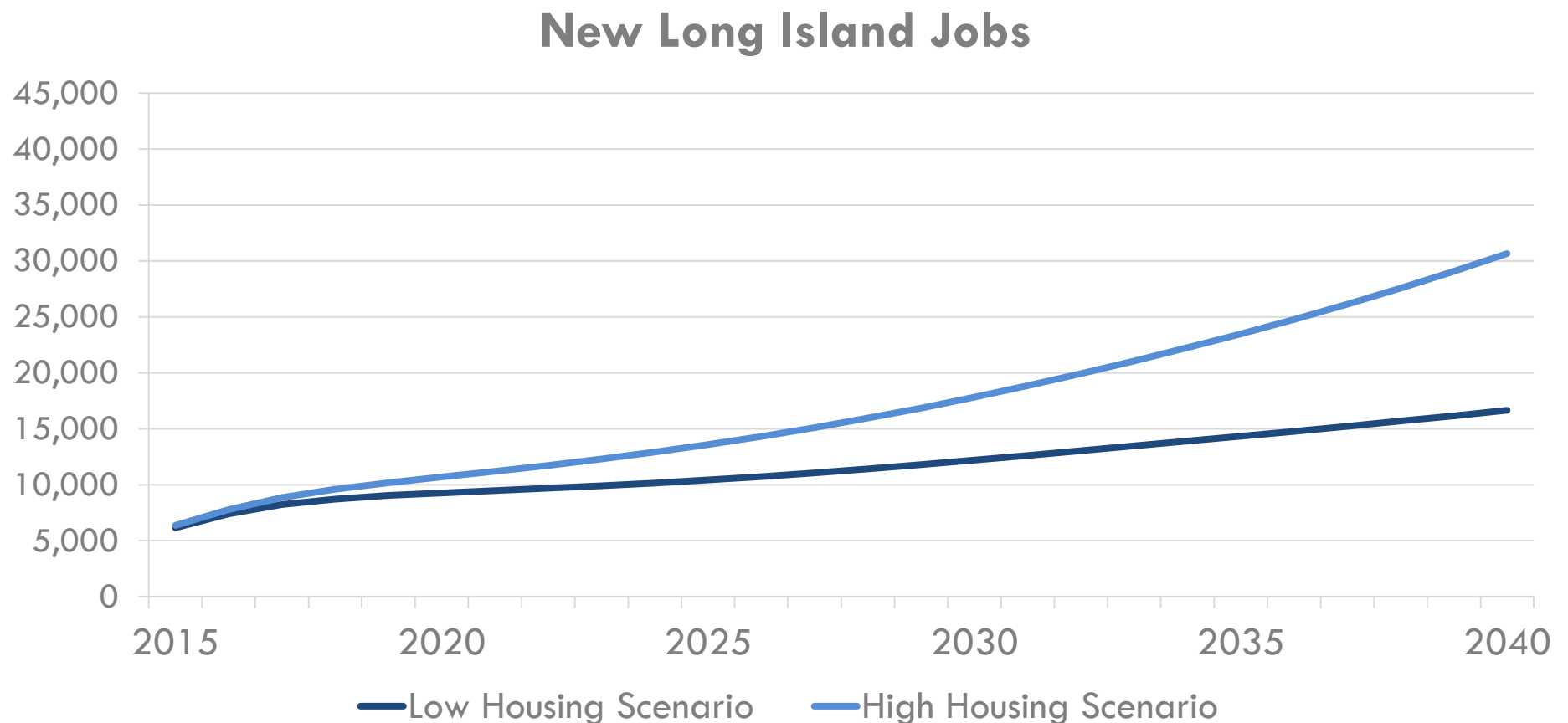
By 2040, Long Island could attract between 28,000 and 42,000 net new jobs.



Source: REMI, HR&A Analysis

Housing Scenario: Constructing denser housing options could add thousands of additional jobs to Long Island's economy.

By 2040, Long Island could gain between 16,500 and 30,500 net new jobs, with many of these jobs in the construction sector.



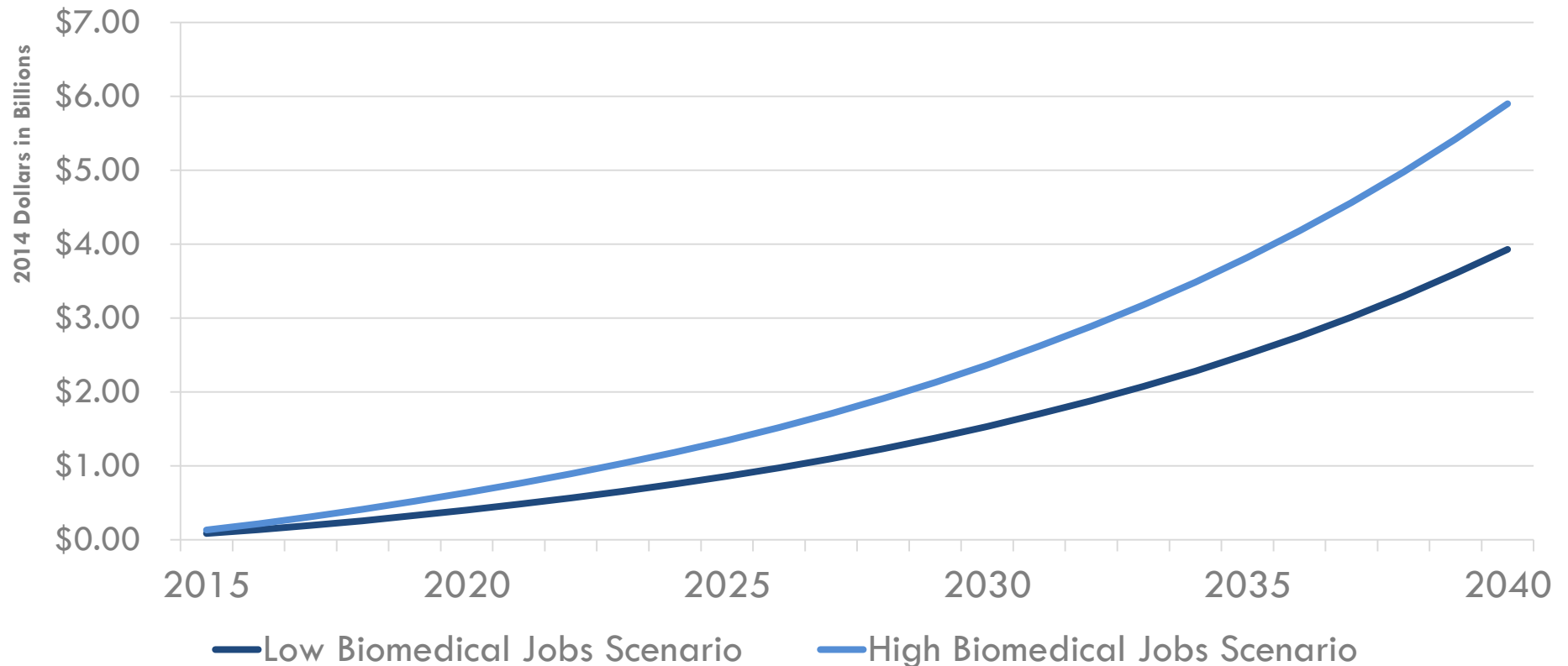
Source: REMI; HR&A Analysis

Aggregate Personal Income

Biomedical Scenario: The personal income of Long Islanders would rise with investment in the biomedical industry.

By 2040, the aggregate personal income of Long Island residents could increase between \$3.9 billion and \$5.9 billion annually.

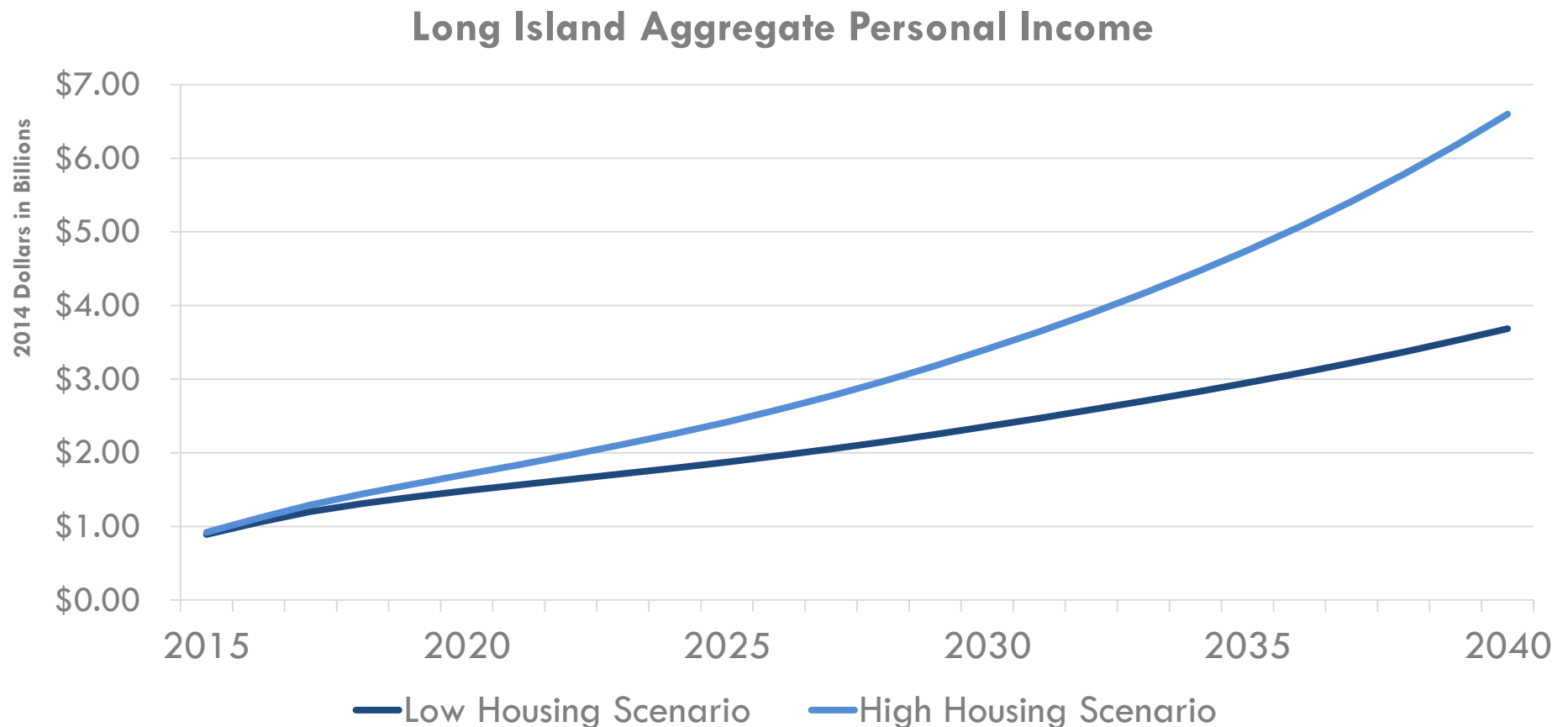
Long Island Aggregate Personal Income



Source: REMI; HR&A Analysis

Housing Scenario: Personal income on Long Island would rise as new housing supply enables more people to live on Long Island.

By 2040, the aggregate personal income of Long Island residents could increase between \$3.7 billion and \$6.6 billion annually.

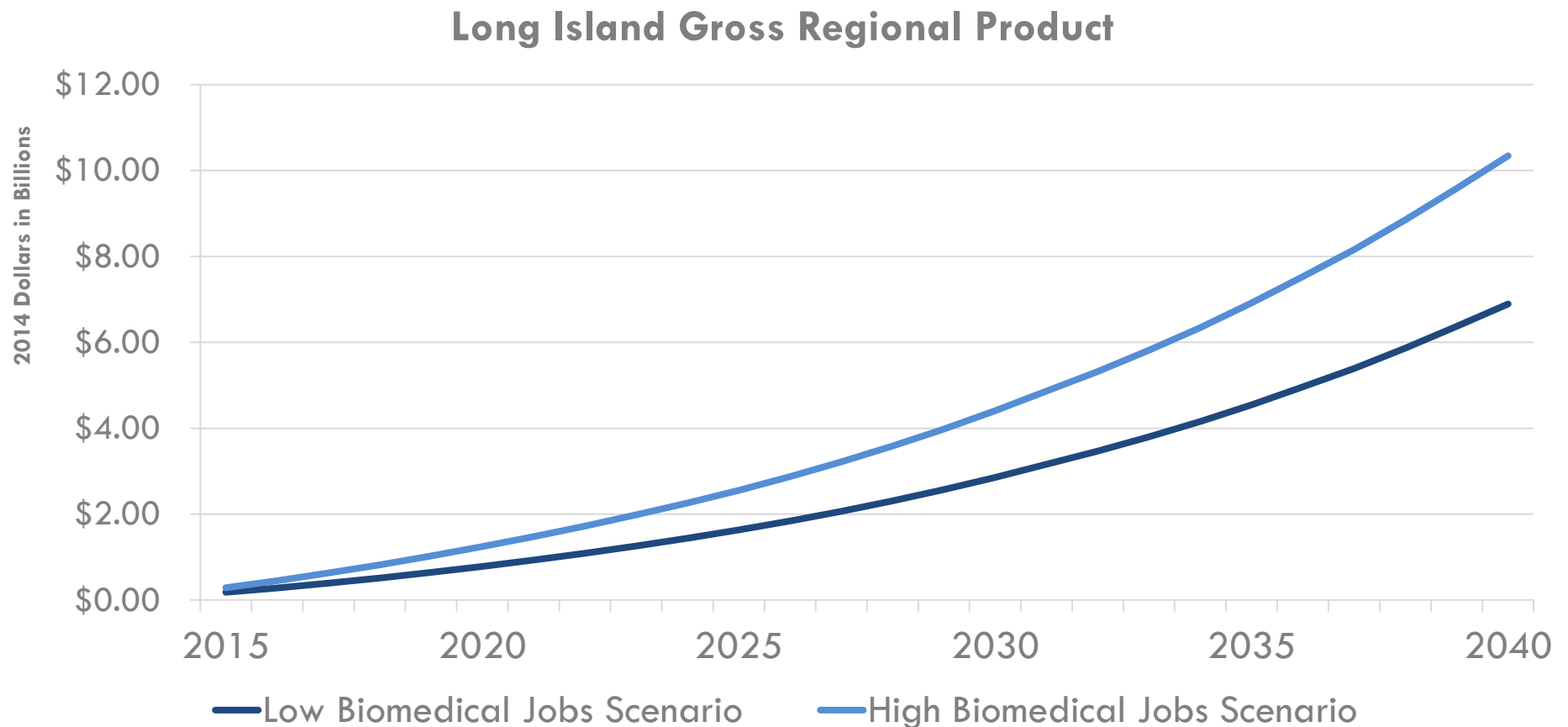


Source: REMI; HR&A Analysis

Gross Regional Product

Biomedical Scenario: Investment in high-tech industries would reverberate throughout the economy, resulting in significant growth.

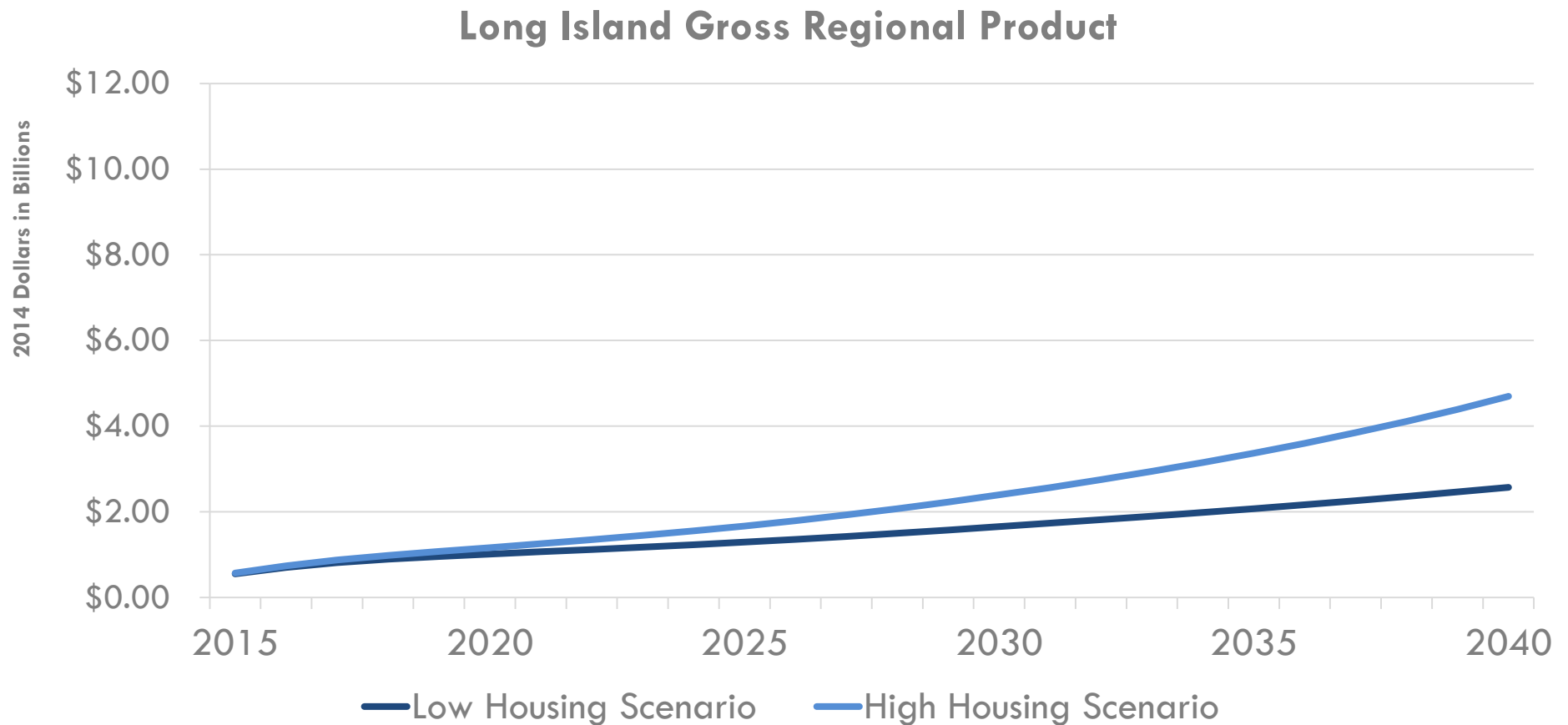
By 2040, Long Island could gain between \$6.9 billion and \$10.3 billion in annual economic activity.



Source: REMI; HR&A Analysis

Housing Scenario: Increased construction activity would add billions of dollars to the economy.

By 2040, Long Island could gain between \$2.6 billion and \$4.7 billion in annual economic activity.

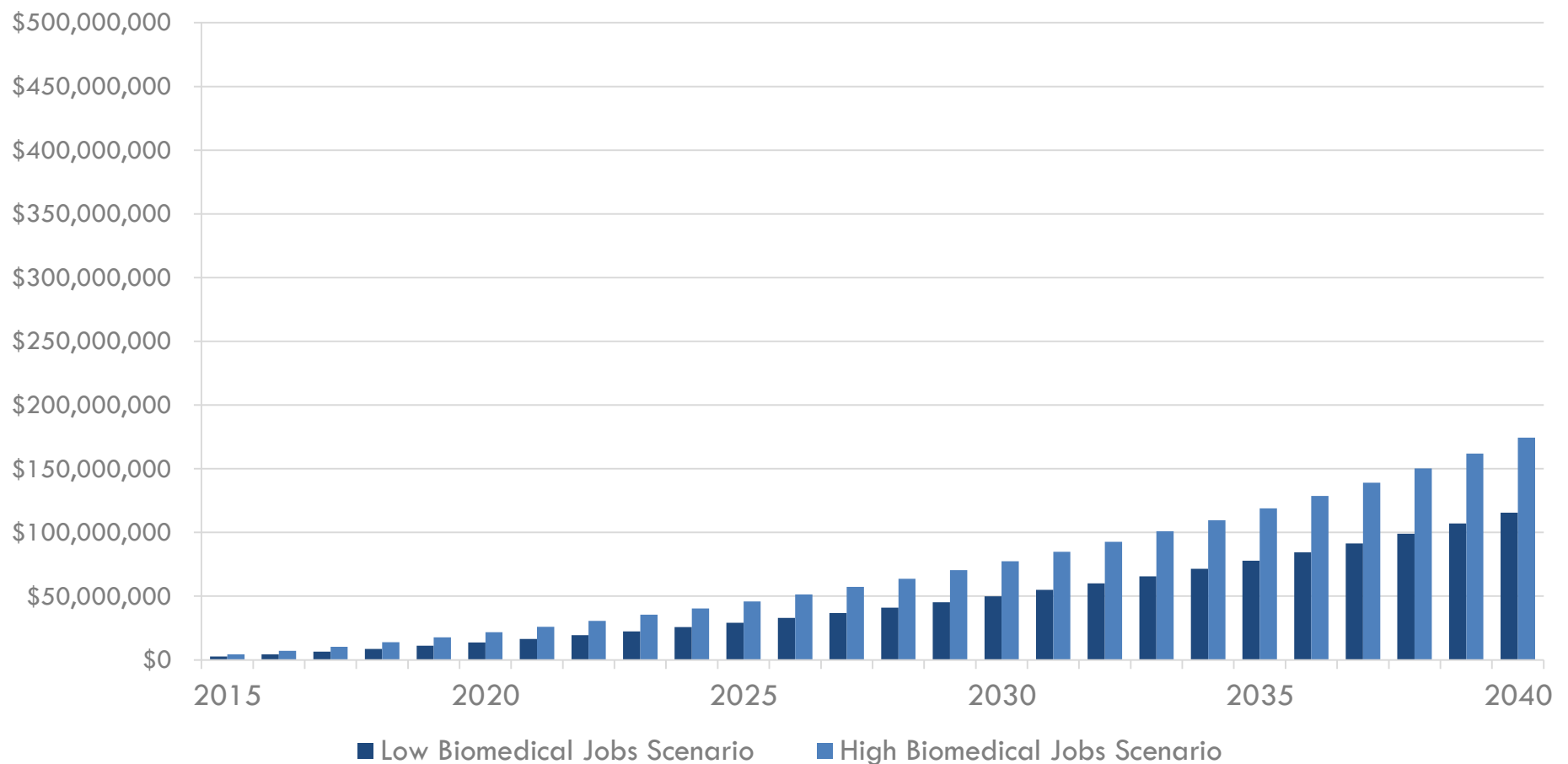


Source: REMI; HR&A Analysis

Fiscal Impact

Biomedical Scenario: New biomedical employees would contribute sales and property tax revenues to Long Island.

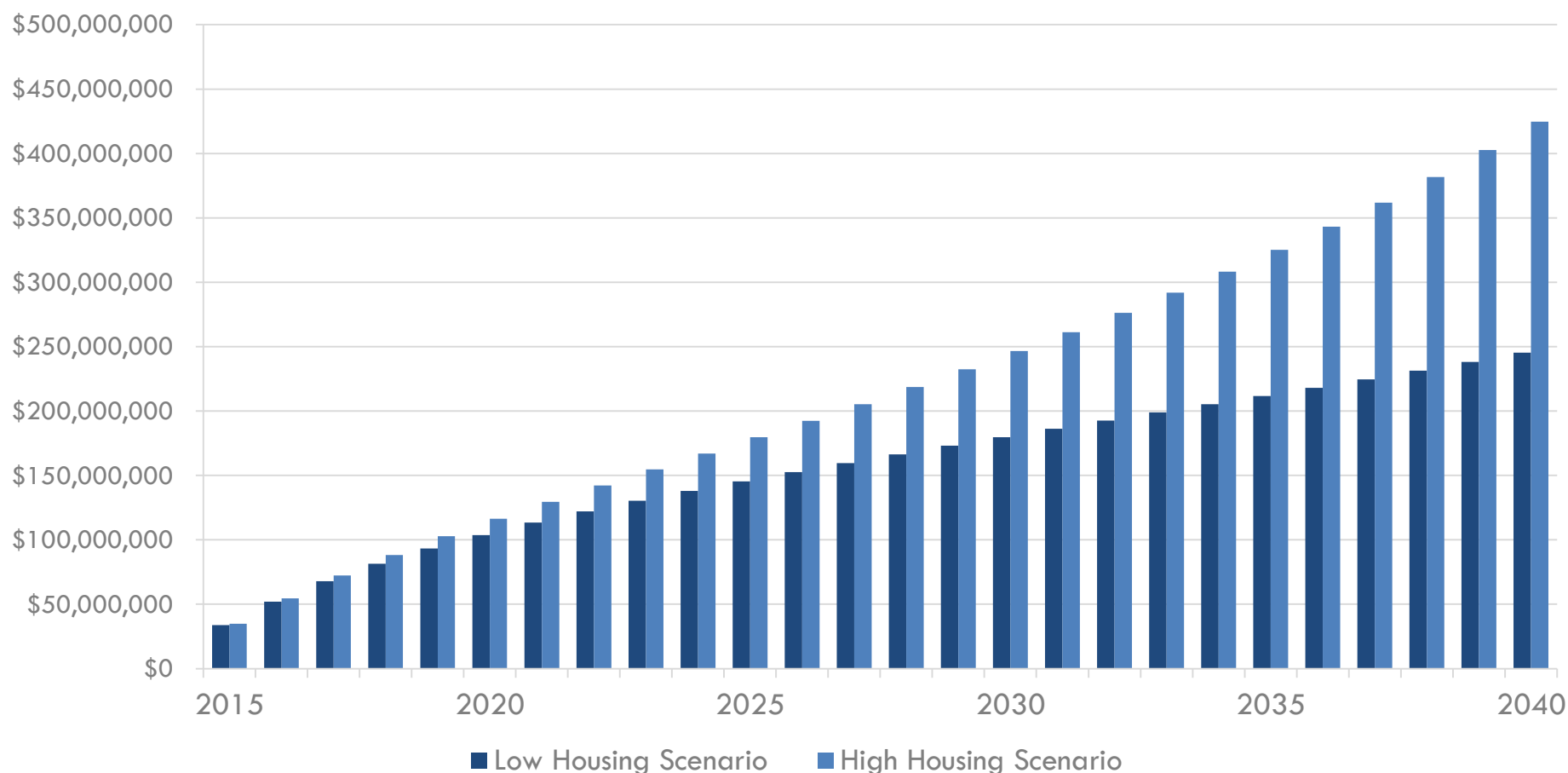
Total Fiscal Impact (Sales and Property Tax Revenues)



Source: Nassau County; Suffolk County; U.S. Census Bureau; Bureau of Economic Analysis; CoStar; Douglas Elliman; Colliers; HR&A Analysis

Housing Scenario: Residents in new homes in the region would provide the bulk of the fiscal impact to Long Island.

Total Fiscal Impact (Sales and Property Tax Revenues)

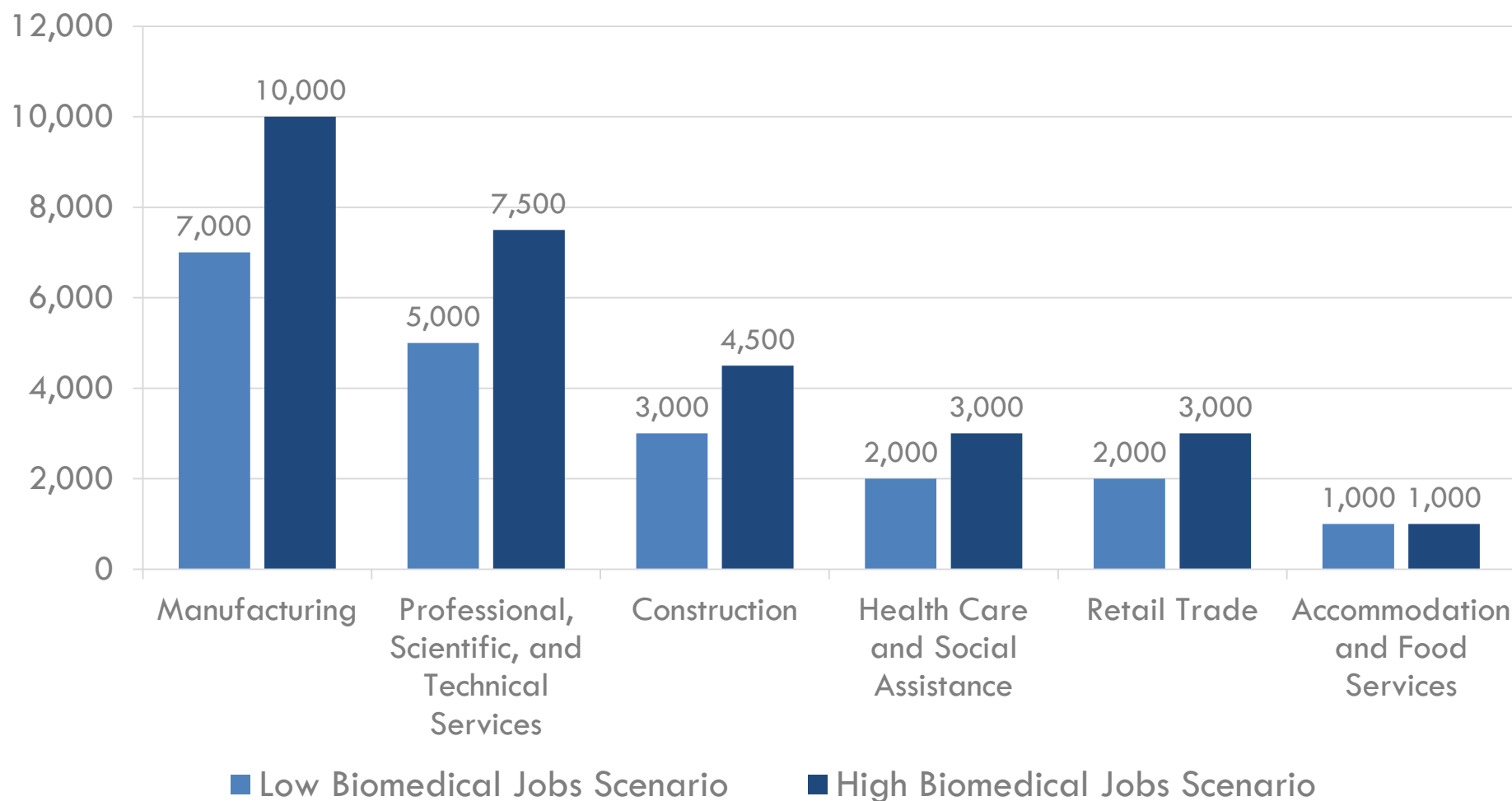


Source: Nassau County; Suffolk County; U.S. Census Bureau; Bureau of Economic Analysis; CoStar; Douglas Elliman; Colliers; HR&A Analysis

Sector Employment

Biomedical Scenario: A strengthened biomedical cluster would create thousands of new manufacturing jobs.

Gains in Employment Relative to Baseline in 2040



Source: REMI; HR&A Analysis

Housing Scenario: Building new housing stock, and providing healthcare for its residents, would create significant new jobs.

Gains in Employment Relative to Baseline in 2040



Source: REMI; HR&A Analysis

Long Island's Future: Economic Implications of Today's Choices

Prepared for the Long Island Index
by HR&A Advisors, Inc.

February 10, 2015