

2019

OVERVIEW OF THE

RHODE ISLAND

ECONOMY



The Executive Office of Commerce submits its 2019 Overview of the Rhode Island Economy in accordance with R.I.G.L. § 42-64.19-6(6) which provides that the Secretary of Commerce shall be authorized to “Prepare and submit to the governor, the chairpersons of the house and senate finance committees, and the caseload estimating conference, by no later than April 15 of each year, a comprehensive overview of the Rhode Island economy. The secretary shall determine the contents of the overview and shall determine the important economic data and information that will inform the governor, and the revenue estimating committee on the economic conditions of the state and future issues and forward-looking projects of the Rhode Island economy.”

THE 2019 OVERVIEW OF THE RHODE ISLAND ECONOMY

EXECUTIVE OFFICE OF COMMERCE

THE 2018 OVERVIEW OF THE RHODE ISLAND ECONOMY

TO THE GOVERNOR AND THE GENERAL ASSEMBLY:

Rhode Island's economy has made significant strides since 2014. As Rhode Island has steadily made progress since the Great Recession, it has been exciting to see the real impacts on the communities within our state. The state's average annual unemployment rate drop was the fastest in the nation from 2014 to 2018. The state has continued to add jobs and Rhode Island's real gross domestic product continued to grow. Our state's economic progress is very promising when you look at how far we have come in such a relatively short amount of time.

The economy in our state has also improved over the course of 2018. Last year, the economy continued to improve and positively impact the lives of Rhode Islanders. Rhode Island added thousands of jobs and set records for job growth. In December 2018, Rhode Island set a record high for the number of jobs in the state. The unemployment rate continued to improve throughout the year, reaching 4 percent by the end of the year. The average annual unemployment rate in 2018 was the lowest that it has been since 1988.

However, much work remains to be done in order to ensure that all Rhode Islanders' hard work is rewarded with opportunity and advancement. This 2019 Overview of the Rhode Island Economy provides an overview of the 2018 economy and details the Raimondo Administration's economic policies that are creating opportunity for all Rhode Islanders. These policies are ensuring that all Rhode Islanders share in the full benefits of the recovery and are putting the economy on a path toward long-term, sustainable growth. The report also briefly examines some policy proposals that have been made by the administration and examines the potential impact they could have.

Over the past few years we have laid many of the foundation stones of Rhode Island's future prosperity. The economic development tools administered by the Commerce Corporation continue to help small businesses and large employers to grow the economy in our state. We are also making clear investments in developing a workforce that will be prepared for the changing knowledge-based economy. Investments in the expansion of prekindergarten and higher education access are preparing Rhode Islanders for the jobs of the future. From newly rebuilt roads and bridges across the state to the nation's first offshore wind farm off the coast of Block Island, Rhode Island's infrastructure is strengthening, too.

In 2018, we worked together to grow Rhode Island's economy and improve the prospects of families and businesses throughout our state. Now, the work continues as we harness the potential that exists across the state to create a Rhode Island economy built to thrive with opportunity for all.

STEFAN PRYOR
SECRETARY OF COMMERCE

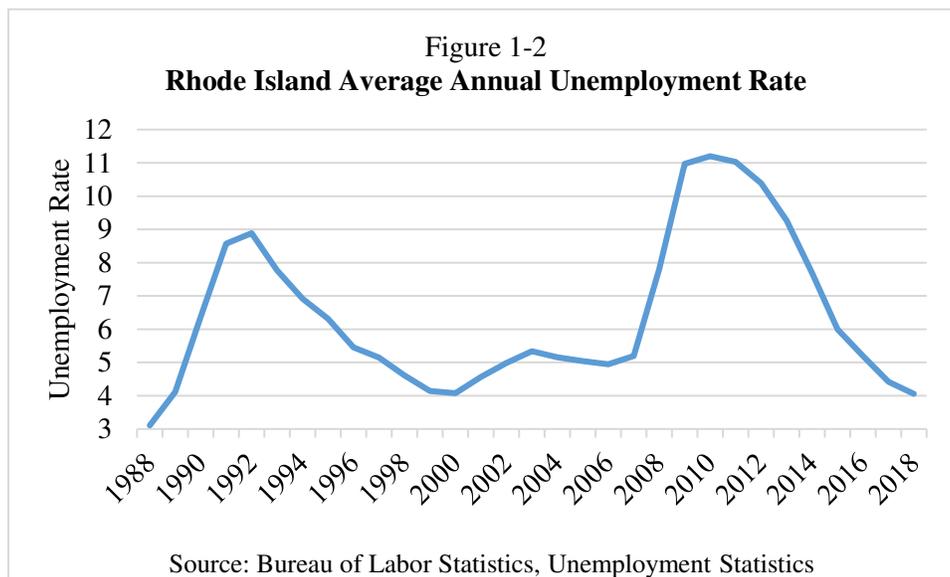
EXECUTIVE OFFICE OF COMMERCE
**THE 2019 OVERVIEW OF THE RHODE ISLAND ECONOMY: HIGHLIGHTS FROM THIS
YEAR'S REPORT**

This annual Overview of the Rhode Island Economy reviews the state's economic progress and suggests ways to further prepare Rhode Island's workforce for full participation in the advanced economy of today. In 2018, businesses created thousands of jobs and Rhode Island set a new record high for the number of jobs recorded. The annual average unemployment rate (4.06 percent) reached a thirty-year low. The Rhode Island economy is strong and has continued in a positive direction over the year. The state's economic policies aim to ensure that all Rhode Islanders share in the benefits of the recovery and that the economy is on a path toward long-term, sustainable growth.

Below are several highlights from this year's report.

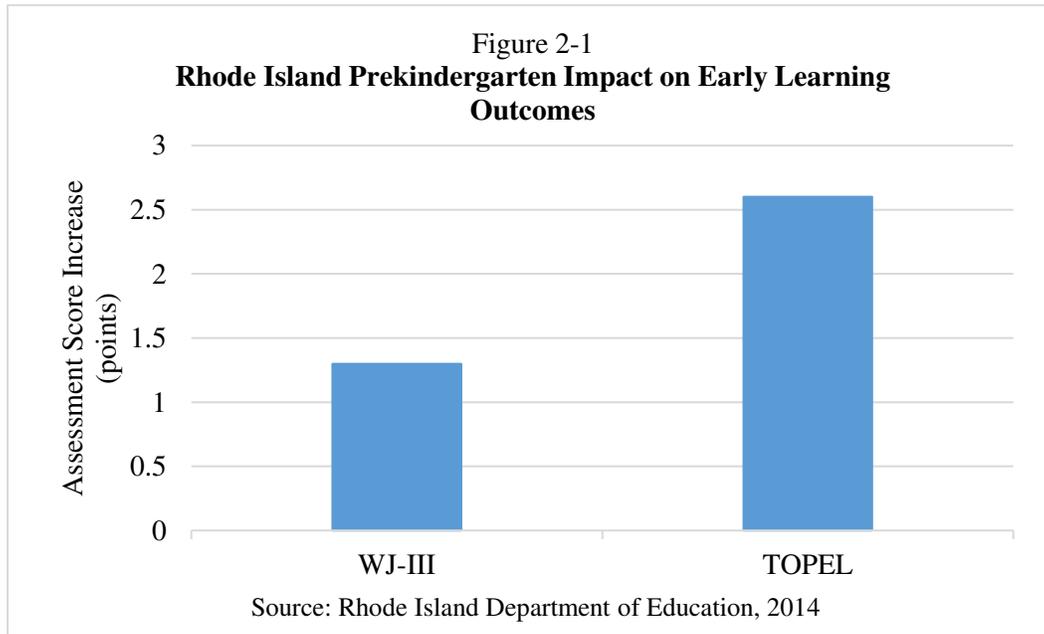
RHODE ISLAND'S ECONOMY STRENGTHENED IN 2018

The Rhode Island continued to improve in 2018. From 2014 to 2018, Rhode Island's average annual unemployment rate fell by 3.6 percentage points. Rhode Island's average annual unemployment in 2018 was the lowest that it has been since 1988 (Figure 1-2). This decrease from 2014 to 2018 was the largest decrease among all states. The state's labor force grew improved markedly in 2018. Nonfarm employment increased by 4,100 jobs from January 2018 to December 2018 with notable growth in the education and healthcare, construction, and professional and business services sectors. During the course of the year, Rhode Island workers saw their earnings rise by 2.3 percent and the average annual weekly wage in Rhode Island for 2018 was 4.0 percent higher than for 2017.



EARLY CHILDHOOD EDUCATION PROGRAMS ARE LONG-TERM INVESTMENTS IN RHODE ISLAND'S YOUTH

Early childhood education has been broadly looked at as one type of investment that has the potential to increase economic potential for individuals while yielding returns for governments. The positive impacts of such early childhood programs include more than just financial benefits. A study on Rhode Island's pilot prekindergarten program found that children who participated in the program had positive learning outcomes that lay the groundwork for students' K-12 education and future success (Figure 2-1). Rhode Island has made significant investments in early childhood education in recent years. As a result, Rhode Island has been recognized for its focus on high-quality preschool education and the public prekindergarten program has been ranked by at least one organization as the highest-quality prekindergarten program in the country. The state has also expanded access to all-day kindergarten, a policy that is preferred by both educators and parents. Governor Raimondo has proposed an expansion of Rhode Island's prekindergarten program in order to bring universal prekindergarten to the state. This approach to investing in early childhood education has the potential to yield significant positive impacts in the state for years to come.



RHODE ISLAND'S FOCUS ON HIGHER EDUCATION, CAREER CONNECTIVITY, AND JOB TRAINING WILL CONTINUE TO BENEFIT THE STATE'S WORKFORCE

As the economy in the United States becomes increasingly knowledge-based, it is important that Rhode Island is working to prepare the workforce for full economic participation. Rhode Island has made significant investments in job training in recent years and has plans to continue these efforts going forward. Computer Science for Rhode Island (CS4RI) has expanded computer science education to every public school and has more

than tripled the number of AP computer science programs in Rhode Island. The Pathways in Technology Early College High School initiative has created high school to career pathways in six schools. PrepareRI has encouraged college enrollment and employment. Rhode Island is also investing in a significant job training program, the Real Jobs program. This program has trained or placed over 5,000 workers to date. One of the most significant recent proposals from Governor Raimondo's administration is the expansion of the Rhode Island Promise Scholarship to include Juniors and Seniors attending Rhode Island College as well as adults attending CCRI. This program has experienced early success and has enabled Rhode Island high school graduates to attend the Community College of Rhode Island tuition-free.

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CHAPTER 1

THE YEAR IN REVIEW AND THE YEARS AHEAD

The Rhode Island economy continued to improve in 2018. Over the past year, the economy added thousands of jobs and continued to set records for Rhode Island job growth.¹ Rhode Island's unemployment rate improved to 4.0 percent by the end of the year, and the state's annual average unemployment rate, at 4.1 percent, was the lowest it has been since 1988. From 2014 to 2018, Rhode Island's average annual unemployment rate fell by 3.6 percentage points, the largest drop in the U.S. The average annual unemployment rate was also down from 4.4 percent in 2017 to 4.0 percent at the end of 2018. In the third quarter of 2018, Rhode Island's real gross domestic product (GDP) continued to grow, remaining above its pre-recession peak, which was surpassed in 2017 (Figure 1-1).²

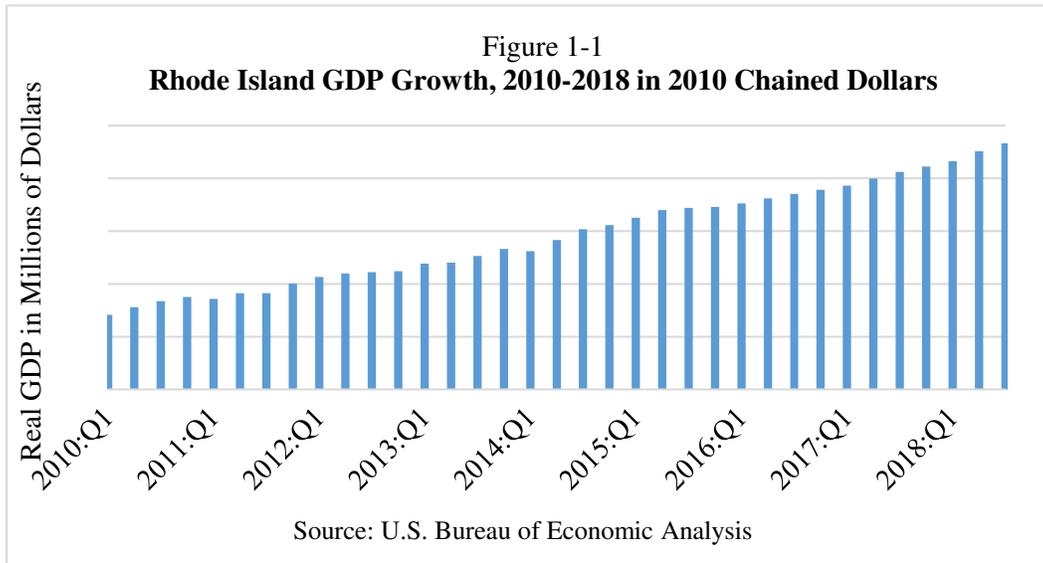
In 2018, the average weekly earnings of Rhode Island employees also grew by 2.3 percent. A comparison of the average annual weekly wage from 2017 to 2018 shows that Rhode Island's increase was greater than the increase in the nation as a whole.

This chapter focuses on the key economic policy developments in Rhode Island over the past year. It examines trends in fiscal policy, the state's labor and housing markets, investment, and trade. During the past year, regional and U.S. economic developments impacted Rhode Island's economy and those are also examined. Finally, this chapter looks at long-range forecasts of the Rhode Island economy and its prospects for sustained growth.

¹ Rhode Island Department of Labor and Training (DLT); U.S. Bureau of Labor Statistics (BLS). Throughout this chapter, unless otherwise specified, labor market data and statistics are from DLT and BLS or EOC calculations from these data. Housing market data and statistics are from U.S. Census Bureau (BOC) surveys, IHS Markit, Zillow, and the Rhode Island Association of Realtors. International trade data and statistics are from BOC and the International Trade Administration. Unless otherwise noted, all dollar figures are in current dollars and all employment data and statistics are based on seasonally adjusted values.

² GDP data and statistics are from the U.S. Bureau of Economic Analysis or EOC calculations from these data.

KEY POLICY DEVELOPMENT



Fiscal Policy

Over 2018, revenues began to fall short of estimates after a year of surpassing them. Though still exceeding estimates in February 2018, by May the revenues fell in line with the estimates and by the end of the year, revenues were 1.7 percent lower than estimated. This placed a strain on the FY2019 budget and has necessitated revisions in the FY2019 budget that are pending before the General Assembly as of this writing. Throughout this time, the state continued to cut the motor vehicle tax in line with the policy enacted in the FY2018 budget. Though revenue shortfalls are cause for concern and do require budget adjustments, it is necessary to consider which specific tax revenues are falling short of estimates. Importantly, sales and use tax revenues continued to outperform estimates, which is significant in that this is one of the best indicators of the current state of the economy among taxes levied by the State.

The economic impact of state tax incentive programs created in 2015 continued to be favorable, leading to projections of revenue positive results. Over the next 12 years, economic development projects incentivized by the Rhode Island Commerce Corporation are expected to contribute an additional \$237.7 million in revenue once the incentive amounts are taken into account.

In 2018, Rhode Island continued to make important investments in public education and job training that will pay dividends in the years to come. The P-TECH program, which aligns high schools, the Community College of Rhode Island, and employers is active in six high schools. Students in this program will leave high school with a diploma and an associate degree, will have completed job

training with a partner employer, and be in line for employment. The Rhode Island Promise Scholarship enables all eligible Rhode Island students to attend the Community College of Rhode Island tuition-free for two years, and the program is being considered for expansion to Rhode Island College and adults attending CCRI in 2019. This scholarship program is making higher education more affordable and access to higher education to more Rhode Islanders, which will contribute to growing the state's economy. Initial economic impacts of the Rhode Island Promise Growth and other education investments are discussed in subsequent chapters.

Box 1-1

Site Readiness:

Positioning Rhode Island's Cities and Towns for Long-Term Growth

Great strides have been made in improving Rhode Island's business climate, including the creation of economic development tools, the launch of e-permitting, consolidation of building and fire officials at DBR, Lean programming, and the small business omnibus relief bills. This progress will be built upon a policy proposal before the General Assembly will build upon these recent improvements. The proposal will enable municipalities to opt in to a set of services and supports in order to advance projects that will grow the local and state economy.

In some cases, municipalities have limited resources – lack of full-time building officials, not enough staff to support planning and land use initiatives, and a lack capacity to update comprehensive plans and zoning codes. This lack of resources can have a significant impact on development projects in communities across the state. The Site Readiness Partnership will help municipalities access resources, tools and strategies to unlock development potential throughout the state.

This pilot program would be funded at \$1.45 million with access to an additional \$1 million in RICAP funding. It would enable and speed development around the state by providing municipalities, at their request, with:

1. Training and technical assistance,
2. Investments in site readiness, and
3. Opportunities for building capacity.

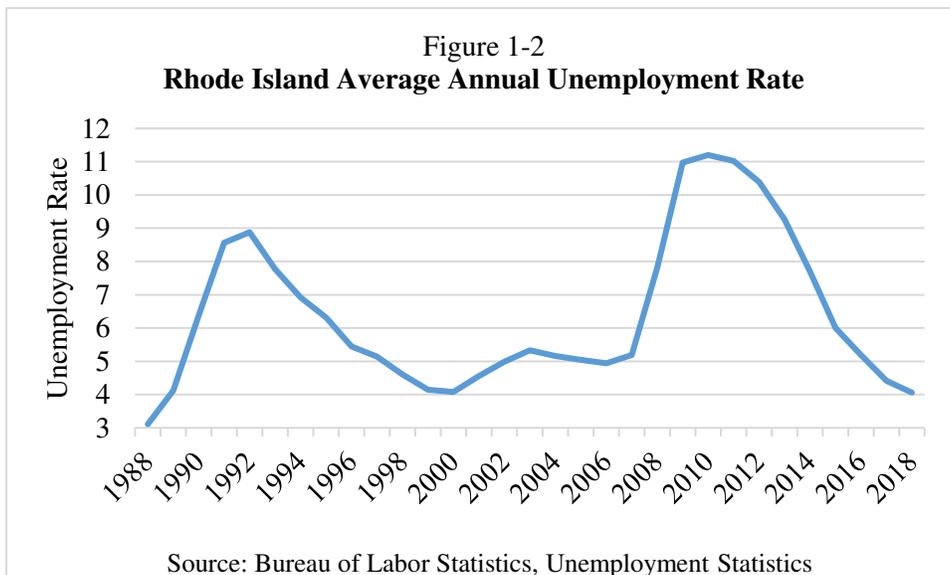
Labor and Housing Markets

Rhode Island's labor market improved markedly in 2018. The average annual unemployment rate fell 0.36 percent from 4.42 percent in 2017 to 4.06 percent in 2018, the lowest average annual unemployment rate since 1988 (Figure 1-2).

From 2014 through 2018, Rhode Island's average annual unemployment rate fell by 3.6 percentage points, the largest decrease in the nation. Nonfarm

employment increased by 4,100 jobs from January 2018 to December 2018 with notable growth in the education and healthcare, construction, and professional and business services sectors. The education and healthcare sector grew by 6.0 percent, or 1,100 jobs, from January 2018 to December 2018. Professional and business services grew by 1.9 percent, or 1,300 jobs, in 2017 while healthcare and social assistance jobs grew by 1.9 percent, or 2,000 jobs.

Since 2015, the economy has added 14,700 nonfarm jobs. The state’s labor force grew by 2,130 people from 2017 to 2018, which represents the largest average annual growth in Rhode Island’s labor force since before the recession, while nonfarm employment continued to set records. Rhode Island ended 2018 with 497,700 jobs, which remains the highest number of jobs ever recorded, even when taking into account a recent downward revision of jobs data that affected most states in the country.



Despite this, several factors continue to be items concerns for the future strength of Rhode Island’s labor force. Though the labor force grew in each of the last two years, it remains significantly below its pre-recession peak. Factors contributing to this include the state’s aging population, net outflow of prime-age workers, and lower than average rates of educational attainment. As will be detailed in subsequent sections, this is a vulnerability that state leaders are taking seriously and are implementing myriad initiatives to reverse.

In 2018, Rhode Island had a per capita personal income (PCPI) of \$54,523. This PCPI ranked 17th in the United States and was 102 percent of the national average, \$53,712. The 2018 PCPI reflected an increase of 3.0 percent from 2017. The 2017-2018 national change was 3.8 percent. In 2008, the PCPI of Rhode Island

Box 1-2
Rhode Island Housing Investments

Housing, especially housing that is affordable to working class Rhode Islanders, is a continued concern in our state. However, there are several recent investments that are important to note when looking at the state of Rhode Island's housing market.

Building Homes Rhode Island III

In November 2016, voters approved housing bonds totaling \$50 million to be used to support affordable housing and urban blight remediation. \$40 million was designated to be used for affordable housing programs while the remaining \$10 million was reserved for improvement of blighted areas or areas in need of revitalization (Rhode Island Office of Housing and Community Development, n.d.). While all the funds have not yet been distributed, this increased funding is already having a positive impact in Rhode Island.

Previous Affordable Housing Bonds

Rhode Island voters have approved two previous housing bonds: Building Homes Rhode Island II and Building Homes Rhode Island I. The public support for financing affordable housing was made clear when, in 2006 and 2012, voters approved these bonds. Totalling \$75 million, these bonds have been extremely important in developing affordable housing in the state. The 2006 bond helped create affordable homes for 1,261 unit in the state. The 2012 bond also helped to create approximately 700 units. These units were assisted in more than 30 communities across the state (Rhode Island Office of Housing and Community Development, n.d.).

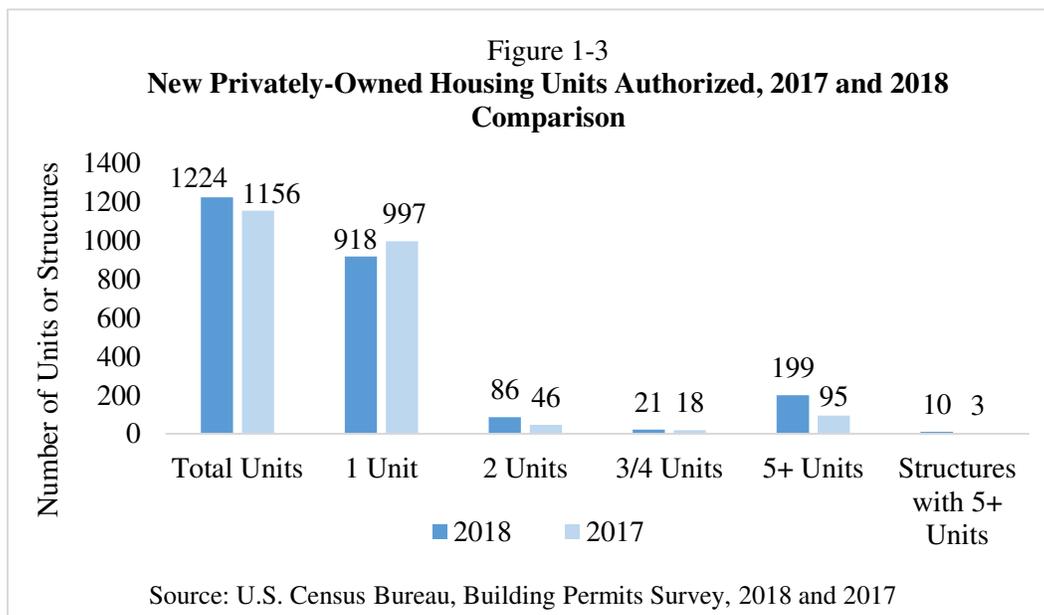
Pay for Success Proposal

In the 2019 legislative session, Governor Raimondo has proposed a \$500,000 budget allocation towards a Pay for Success program that would increase permanent supportive housing. This small investment by the state would be necessary to enable the state to draw down a \$1 million federal grant from the U.S. Department of Housing and Urban Development and attract outside investors to execute the project. While this proposal is still in early stages, this proposal has seen a significant amount of public support and could be an important evidence-based intervention to support individuals in need of housing and wraparound services.

was \$41,787 and ranked 16th in the United States. The 2008-2018 compound annual growth rate of PCPI was 2.7 percent. The compound annual growth rate for the nation was 2.8 percent.

In 2018, Rhode Island continued to see significant progress in wage growth. Between 2017 and 2018, Rhode Island saw a 3.88 percent growth in average weekly earnings. This was the best of all New England states and the 15th best in the country.

There were important changes to Rhode Island’s housing market throughout the year. Median prices for single family homes increased by 5.88 percent from 2017 to 2018 (Rhode Island Association of Realtors, 2018). The number of new housing units authorized over the course of the year was 1,224, up from 1,156 in 2017 and 990 in 2015. While the number of single-unit structures authorized decreased in 2018 as compared to 2017, the number of structures with over five units increased (see Figure 1-3). The home-price index increased 6.1 percent year over year in November 2018, the highest growth rate in New England (PBN, 2019).



Investment and Trade

International trade remains an important part of the state’s economy, with the value of the state’s imports and exports roughly 20 percent of the size of the state’s economy as a whole. However, exports make up only 4 percent of the state’s GDP, as compared to 11.2 percent of the country as a whole. In 2018, Rhode Island exported \$2.4 billion worth of goods while importing \$10.5 billion.

Rhode Island’s imports grew by 12.3 percent in 2018, due largely to increases in imports of passenger vehicles through the Port of Davisville, which increased 24 percent from 2017 to 2018. Reflecting this activity, Mexico and Germany remain Rhode Island’s top two sources of imports, with China coming in third. Mexico was responsible for 23.8 percent of imports to Rhode Island in 2018,

followed by Germany (21.5 percent); China (9.2 percent); Slovakia, which saw a 75 percent increase in exports to Rhode Island, (9.2 percent); Japan (9.2 percent); and Canada (7 percent). Passenger vehicles accounted for greater than 50 percent of all imports to Rhode Island in 2018, underscoring the importance of the Port of Davisville to the state's import/export economy. After passenger vehicles, petroleum products and medical devices were Rhode Island's top imports.

Rhode Island's exports grew by 0.34 percent from 2017 to 2018, a roughly \$8 million increase. In 2018, Canada was Rhode Island's top export market, accounting for 21.3 percent of total exports, followed by the Dominican Republic (10 percent), Mexico (8.3 percent), China (6 percent), Turkey (5.4 percent), and Germany (5.14 percent). The state's top export was scrap metal, accounting for 24.5 percent of total exports, followed by miscellaneous manufactured products (16 percent), and chemicals (14 percent).

There is some uncertainty at the federal level surrounding trade and tariff agreements. The impacts to Rhode Island of the newly revised policies as well as other fluctuations in global trade dynamics remain to be seen. This is an issue to closely monitor in the coming year.

Though Rhode Island has limited exposure to most items currently under discussions for new tariffs and duties, the Trump administration continues to use the threat of import duties on European automobiles as leverage in its trade dispute with the European Union, as well as on Mexico as leverage in its dispute over the U.S. southern border. Should those tariffs come to pass, it will have a significant impact on Rhode Island, and the Port of Davisville in particular.

Box 1-3

Upcoming Long-Term Economic Development Planning Process

Every four years, the Rhode Island Commerce Corporation and the Division of Planning are tasked with the creation of a long-term economic development plan. Plans must be developed in the first year following a gubernatorial election, as dictated by state statute. In 2015, the document "Rhode Island Innovates" was produced by a consortium led by the Brookings Institution, and provided a roadmap for many economic development initiatives undertaken over the last several years.

Over the course of 2019, the State will once again undertake this long-term planning process. To guide the process, a new Long-Term Economic Development Planning Council will be appointed, and staff at the Executive Office of Commerce will manage the process of developing the plan for the Council's approval. The upcoming plan is likely to expand upon many of the initial themes of "Rhode Island Innovates," identify areas of success and areas for continued focus, as well as suggest new proposals specific to Rhode Island's key industry sectors.

2018 saw international firms expanding in Rhode Island, with the growth of the Infosys Design and Innovation Hub as an important example. Over the course of 2018, the company built out space and hired employees in Providence. This expansion is part of the Indian firm's commitment to hire 500 Rhode Islanders, part of a larger push to hire thousands of Americans in the coming years.

U.S. and Regional Economic Developments

In 2018, the U.S. economy showed continued growth. The unemployment rate fell 0.2 percent over the year to 3.9 percent by December 2018. During 2018, 2.6 million jobs were added in the U.S. economy, while U.S. real GDP grew by 2.68 percent over the year on an annualized average basis. Inflation also increased over 2018 with the Consumer Price Index for All Urban Consumers (CPI-U) rising by 1.2 percent from January 2018 to December 2018. In response to increasing inflation as well as improving economic conditions, the Federal Reserve's Open Market Committee voted to raise the interest rate in March 2018 to 1.75 percent; June 2018 to 1.95 percent; September 2018 to 2.20 percent; and in December 2018 to 2.40 percent.

U.S. growth supported improvements in economic indicators across New England in 2018. Though employment levels increased in all New England states from 2017 to 2018, no New England states created jobs at a faster rate than the country. In fact, even Massachusetts, New England's top performer, created jobs at just about half the rate of the country overall.

THE LONG-TERM OUTLOOK

Rhode Island's economy saw positive signs throughout 2018, yet some warning signs lie ahead. The state's 2018 Consensus Economic Forecasts projected slow to flat growth in the coming years. Investments in infrastructure and development, education, and economic development, as well as the policies proposed in the Governor's FY 2020 budget, are designed to further expand the state's labor force and increase economic growth going forward.

Economic Forecasts

Twice a year, Rhode Island's Revenue Estimating Conference meets to develop and adopt official estimates of the state's general revenue receipts. Members of the Conference include the State Budget Officer, the House Fiscal Advisor, the Senate Fiscal Advisor, as well as representatives from state agencies responsible for revenue sources. The Governor uses these official estimates when developing the state budget and the General Assembly similarly relies on the official estimates when making appropriations. As part of revenue estimating

process, the Conference regularly forecasts developments in the U.S. and Rhode Island economies. In 2018, economic forecasts from IHS Markit and the Department of Labor and Training informed the consensus economic forecasts adopted by the Conference (Table 1.1).

The 2018 consensus economic forecasts showed that while national GDP growth is strong, and indeed performing above projections, a recession is likely within the next five years, though recession risks remain “contained” for the time being. Continued uncertainty in international trade, especially the stalled position of the recently-negotiated United States-Mexico-Canada Trade Agreement (USMCA) and the inconsistent nature of trade negotiations with China contribute to economic uncertainty on the domestic front. Internationally, the continued dysfunction of the Brexit negotiations is wreaking havoc on the European and global economies, as is the continually uncertain future of the European Union as the bloc shows signs of splintering. Additionally, the potential for an economic slowdown in China looms, though when and to what extent this will occur remains a significant point of debate among economists. The forecast also noted other domestic factors that could contribute to slowed growth rates included rising real rates, an increase in energy prices, and tighter mortgage lending standards. Additionally, the stimulus provided through the 2017 Tax Cuts and Jobs Act will wane after 2020.

Table 1-1 – Consensus Economic Forecast, November 2018

November 2018 Consensus Economic Forecast										
Annual Growth	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026
Northern Employment (2026)	494.4	501.4	506.7	510.2	513.7	518.8	519.1	510.2	510.7	511.7
Northern Employment Growth	1.0	1.4	1.1	0.7	1.1	1.0	(0.1)	(0.0)	0.1	0.1
Personal Income (mil.)	\$ 56,574.67	\$ 56,956.48	\$ 59,615.64	\$ 62,206.66	\$ 64,953.66	\$ 67,581.09	\$ 70,505.66	\$ 73,997.75	\$ 75,705.75	\$ 78,555.14
Personal Income Growth	4.1	4.5	4.3	4.3	3.9	3.8	3.7	3.8	3.8	3.8
Wages and Salaries Income	3.5	3.3	4.4	4.6	4.1	4.1	3.9	4.0	4.1	4.0
Dividends, Interest and Rent	4.6	4.2	3.9	3.5	4.2	4.0	3.7	3.3	3.2	2.9
Rates										
Unemployment Rate	4.5	4.2	3.9	4.0	4.2	4.6	4.9	5.0	5.0	5.0
Consumer Price Index (US)	2.1	2.6	3.4	3.5	2.3	2.3	2.2	2.1	2.0	2.0
Personal Consumption Growth	3.2	3.9	4.3	4.2	3.9	3.7	3.9	3.5	3.3	3.3
Housing Starts	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4
Annual Growth	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Northern Employment (2026)	491.4	497.8	504.6	508.9	513.3	518.5	519.8	510.1	510.4	511.0
Northern Employment Growth	0.6	1.3	1.4	0.9	0.3	0.1	(0.1)	(0.1)	0.1	0.1
Personal Income (mil.)	\$ 54,694.41	\$ 57,126.82	\$ 59,371.55	\$ 61,901.34	\$ 64,458.94	\$ 66,937.39	\$ 69,416.83	\$ 72,051.48	\$ 74,780.73	\$ 77,646.14
Personal Income Growth	2.5	4.5	3.9	4.4	4.0	3.8	3.7	3.8	3.8	3.8
Wages and Salaries Income	2.8	3.5	4.0	4.4	4.0	4.0	4.0	3.9	4.1	4.1
Dividends, Interest and Rent	3.1	4.5	4.0	3.9	4.3	4.1	3.8	3.4	3.2	2.9
Rates										
Unemployment Rate	4.7	4.3	3.9	3.9	4.1	4.4	4.8	5.0	5.0	5.0
Consumer Price Index (US)	1.9	2.2	3.6	3.4	2.4	2.4	2.2	2.1	2.0	2.0
Personal Consumption Growth	3.0	3.7	4.8	4.1	4.0	3.8	3.6	3.5	3.3	3.3
Housing Starts	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4

Source: Rhode Island Revenue Estimating Conference, Office of Management and Budget
[http://www.omb.ri.gov/documents/revenues/conference/5300_November percent202018 percent20Revenue percent20Estimating percent20Conference](http://www.omb.ri.gov/documents/revenues/conference/5300_November%20percent202018%20percent20Revenue%20percent20Estimating%20percent20Conference)

As labor markets continue to tighten, however, forecasters expect the dollar will lose strength and inflation may pick up in 2019 and 2020. The Conference projected the U.S. Consumer Price Index to continue to rise by 2.4 percent in 2019, 2.5 percent over 2020, and 2.3 percent in 2021. The Federal Reserve targets 2 percent inflation as a long-term objective and inflationary trends have put increasing pressure on the Federal Reserve to raise interest rates, though as noted above it has resisted doing so in the latest meeting of the Federal Open Markets Committee, which maintained the interest rate at 2.4 percent.

The Conference projected growth for some areas of Rhode Island's economy in the November 2018 forecast. Nonfarm employment is expected to continue growing but this growth is projected to slow around 2020 as the labor market tightens and is projected to hold steady between 510,000 and 511,000 jobs from 2020-2026. The unemployment rate is projected to increase to 5.0 percent around 2024, which, though higher than the current unemployment rate, remains within the bounds of the traditionally conceived natural rate of unemployment at which the economy is considered to be at full employment. As a note, this should be considered in the context of the discussion on unemployment and the potential of the labor force detailed above. Forecasters also projected wage and salary growth of 4.4 percent in 2019, which is unchanged from the previous projection.

Box 1-4

Policy Proposals to Grow the Economy Over the Long Term

Governor Raimondo's FY 2020 budget includes a series of proposals that would contribute to the long-term growth of the Rhode Island economy by expanding the labor force and increasing productivity. These proposals include the productivity increases associated with promoting 21st century education and training; policies that help working families contribute to the economy; investments in small businesses and entrepreneurs that grow the labor force; and economic development tools that will continue to create jobs and opportunities for Rhode Islanders.

Rebuild RI Enhancements

The proposed budget article continues the successful Rebuild RI Tax Credit Program and further enhances the program's ability to address projects involving historic preservation, affordable/workforce housing, and manufacturing. These changes would extend the sunset of the program to December 31, 2023 and increase the total program cap on authorizations to \$250 million. The proposed \$15 million appropriation continues funding toward the overall program obligations.

CONCLUSION

Positive trends in Rhode Island's important economic indicators over 2018 pave the way toward a stronger, more resilient economy. The continued improvement of the unemployment rate, growth in average weekly earnings, and job growth suggest that Rhode Island's economy will continue to improve. As the state looks to the future, it is important to consider the impacts of broader policies in the United States and in the world. The uncertainty around international trade and negotiations for Brexit will likely have some impact in the economy in Rhode Island that have yet to be seen. In early 2019, the federal government shutdown was also expected to impact the economy in the United States, though there is not yet data to be sure how much of an impact it has had in Rhode Island. Policy proposals such as the R&D tax credit are focused on increasing economic activity, especially in advanced sectors. Forecasts suggest that Rhode Island should continue to see growth in the future.

CHAPTER 2

INVESTING IN EARLY CHILDHOOD EDUCATION

As discussed in Chapter 1, the economy in Rhode Island and in the United States continues to change and evolve. As the economy changes, it is increasingly important that governments are focused on preparing the workforce for the types of jobs that are available in the advanced economy. State and federal governments can play a large role in preparing future generations to excel in today's economy and to have the skills that will be required in the future. Investments in education can have an important positive impact on individuals and governments by laying the groundwork for increased earnings and decreasing reliance on social assistance programs.

This chapter focuses on the importance of early childhood education investments and presents the main arguments for why these types of state investments offer considerable returns to taxpayers, individuals, and to society. Research on early childhood investments and the potential impacts of such investments both in the United States and in Rhode Island will be explored. It then examines recent early childhood education investments that have been made in Rhode Island. The chapter concludes with a discussion of the Raimondo Administration's plan to invest in early childhood learning.

PREKINDERGARTEN EDUCATION INVESTMENTS

As states look to make education investments that have high rates of return both to the individual and to governments, much attention has been focused on early childhood education such as prekindergarten. The research on the importance of prekindergarten has grown significantly in recent decades. As states look to maximize investments in education, early childhood education has been looked at as having the potential to increase economic potential for individuals while yielding returns for governments. This section will examine the economic impact of prekindergarten investments as well as other impacts that are not necessarily economic in nature.

Economic Impact in United States

As policy leaders have looked to determine the types of investments that they should be making with government funds, prekindergarten and other early childhood education programs have been studied to determine the economic impact that they could have in the United States. Research has shown that investments in early childhood education, including kindergarten and prekindergarten, can have significant economic impacts in the United States. Not only have studies concluded that these types of investments have positive impacts on the participants in the programs, they have also shown greater social and economic impacts to the community at large as well as positive financial gains for governments. One study estimated that a universal prekindergarten program, if implemented nationwide, would yield \$304.7 billion in benefits, including government benefits, increased compensation, and savings to individuals (Lynch & Vaghul, 2015). Another found that a high-quality prekindergarten program could add \$2 trillion to the annual GDP (Sawhill, Tebbs, and Dickens, 2006).

As the research on this topic grows, several scholars have emerged as experts in the field. Dr. Robert Lynch is a leading scholar on the economic and societal impacts of investments in early childhood education who has been researching the topic for more than a decade. His research has made clear that these types of investments not only lead to improved societal outcomes, but also lead to economic gains for both individuals and governments. Lynch estimated that by 2050, government and society would gain \$8.90 in benefits for every dollar invested in a high-quality universal prekindergarten program that began in 2016 and that the positive benefits of such a program would begin to outweigh the implementation costs after eight years (Lynch & Vaghul, 2015).

Other research has pointed to economic benefits of these types of investments. A report from The Brookings Institution also found that investments in early childhood education would have positive economic impacts. The report analyzed the impact of universal preschool on economic growth and concluded that a high-quality universal preschool program beginning in 2005 could add \$2 trillion to the United States' annual GDP by 2080. The study found three clear effects of a high-quality preschool program for all three- and four-year-old children in the U.S.: first, the supply of labor is reduced when the first cohort of children reaches the age at which they would normally enter the labor force as they extend their time spent in school rather than immediately entering the labor force; second, when the cohort enters the labor force, they are more productive due to the education that they received; third, the cohort has greater economic output when they enter the labor force due to the additional education. The report estimated that the positive impact on GDP because of such a program outweighed the negative impact of the delayed entry to the labor force by the year 2046 under all three values in the plausible range that were tested (Sawhill, Tebbs, and Dickens, 2006).

Still other reports have looked to determine the economic effectiveness of such programs. A report from the Society for Research in Child Development and the Foundation for Child Development examined various benefit-cost ratios for preschool investments, including the Perry Preschool program, Chicago Child-Parent Centers, and recent estimation efforts. This report found that the benefits of these early education investments were consistently found to exceed preschool program costs. The report concluded that the consistent finding “indicates that high-quality early childhood education programs are among the most cost-effective educational interventions” (Yoshikawa, et al., 2013).

Economic Impact in Rhode Island

While understanding the research on the impact of prekindergarten investments in the United States is important, state investments should also look at the local impact of using government funds for this purpose. Fortunately, there is also state-specific research on this topic. It is clear from this research that early childhood education investments would also have significant positive economic impacts in Rhode Island. One estimate stated that such a program would begin to pay for itself after nine years and that the ratio of benefits to costs roughly 40 years down the road would be 8:1 (Lynch, 2007). One estimate found that a universal prekindergarten program could save Rhode Island \$126,055,097 in prekindergarten – 12th grade education costs by 2030 (RIDE, 2014).

In 2007, Lynch published individual state examinations of the costs and benefits of universal prekindergarten programs and their potential economic impact over time. As estimated by Lynch, a universal prekindergarten program for all 3- and 4-year-old children in Rhode Island would start to pay for itself in nine years, the same amount of time as would a national program. The annual cost of a fully operating program in 2008 was estimated at \$114 million. While the cost is certainly a consideration, it is clear that the benefits of this type of long-term investment far outweigh the costs of implementation. This analysis determined that the ratio of total benefits to costs in the year 2050 would be 8:1 and that the program would begin to pay for itself in budget benefits alone in 18 years. The increased compensation to individuals who receive high quality prekindergarten is also an important factor in determining the importance of this type of investment. Lynch estimated that total increased compensation in 2050 would be \$1.3 billion. The data reveals that these types of investments can result in cost benefits for governments and individuals on a large scale. While a new analysis of the data would provide additional insights, the research from 2007 makes a clear case for investment in high-quality universal prekindergarten programs (Lynch, 2007).

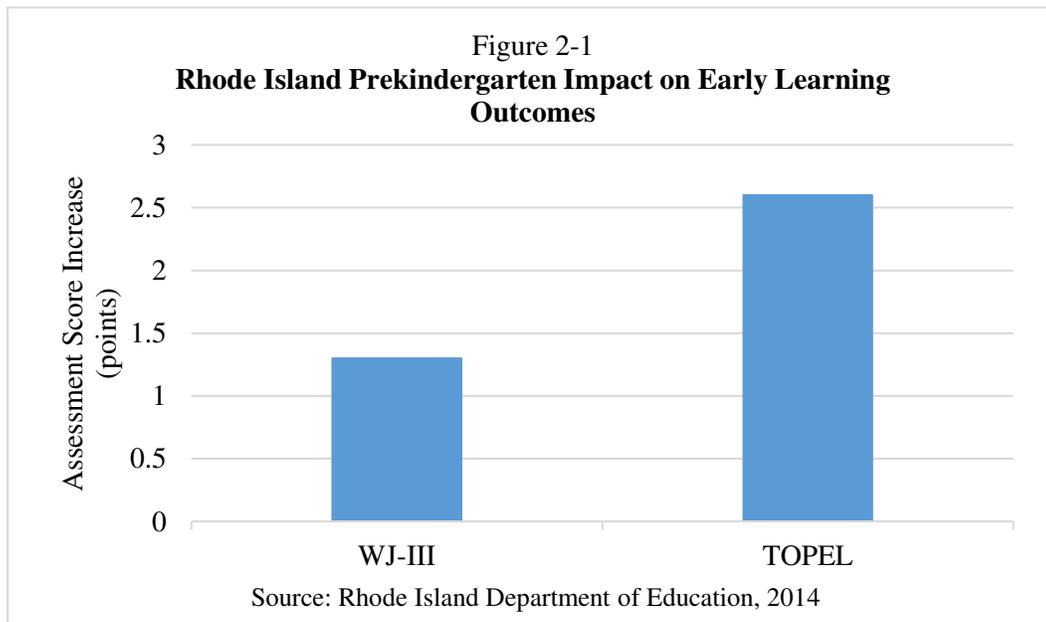
Dr. W. Steven Barnett, an early childhood policy expert, projected that if Rhode Island were to further invest in its high-quality prekindergarten model and expand access to the program to all four-year-olds, “the state would potentially save \$126,055,097 on pre-K through grade 12 education by 2030.” This estimate and

the results of the Rhode Island Pre-K Demonstration Project support further investment in early childhood education in the Ocean State. (RIDE, 2014).

Additional Positive Impacts

While the economic impact of these investments, especially to governments, is vital to assessing the worthiness of such investment, there are also significant positive impacts associated with these types of investments. Robert Lynch found that a high-quality universal prekindergarten program would result in \$114.7 billion in private savings due to improved health and reduced crime and child maltreatment (Lynch & Vaghul, 2015). There are also impacts that extend beyond financial savings. The Rhode Island Department of Education found positive effects on early learning outcomes as a result of the Rhode Island Pre-K Demonstration Project (2014).

The positive effect of high-quality prekindergarten education on learning outcomes makes a clear case for these types of investments. The National Institute of Early Education Research (NIEER) conducted a study on Rhode Island’s Pre-K pilot program to evaluate the effects and to inform state policy decisions. The study found that children who participated in the prekindergarten program for one year had positive learning outcomes including significant gains in print knowledge and math skills (RIDE, 2014). The study found increases on assessment scores for early math (WJ-III) and print knowledge (TOPEL). The effects of Rhode Island’s publicly funded prekindergarten programs on learning outcomes can be shown in figure 2-1. These learning outcomes lay the groundwork for K-12 education and set children up for future success.



Finally, the potential impact that early childhood education could have on inequality is an important consideration when discussing such investment, especially in the face of rising inequality in the United States. While it is clear that there is greater need for broader research on the long-term impacts of such investments, there are some studies that point in a positive direction. The NIEER study on Rhode Island’s prekindergarten pilot program found greater positive effects of pre-K program participation for children from families below 185 percent of poverty. The study concluded that, “long-term, increased achievement for children from low- and middle-income families will reduce educational inequality and social problems” (RIDE, 2014). A 2013 report found evidence that suggests that high-quality prekindergarten programs have “the greatest impact in children living in or near poverty” (Yoshikawa, et al.). The report stated that two studies of public prekindergarten programs found substantial positive impacts on achievement outcomes for low- and middle-income children with much larger impacts for children living in or near poverty (Yoshikawa, et al., 2013). These findings, while in need of further corroboration, point to early childhood education as one policy approach that could have potentially positive impacts on decreasing inequality.

RECENT EARLY CHILDHOOD EDUCATION INVESTMENTS

Early childhood education, including prekindergarten and kindergarten, has been expanded significantly to increase access for Rhode Islanders. High-quality prekindergarten programs in the state have had recent increases in funding that have boosted enrollment in the programs. Public kindergarten was expanded to full-day kindergarten, as supported by both parents and teachers. These changes have been influential in the state and have laid the groundwork for future investments in early childhood education.

Prekindergarten

By at least one analysis, Rhode Island has one of the highest quality prekindergarten programs in the United States (Box 2-1 further explains the quality standards present in Rhode Island’s prekindergarten program). In their assessment of all state preschool programs in 2017, the National Institute for Early Education Research found that Rhode Island was one of three states to meet or exceed all ten quality standards established by NIEER. Rhode Island was also ranked fourth in the nation based on all reported spending (Friedman-Krauss, et al., 2018). The U.S. News and World Report also recognized Rhode Island’s focus on high-quality

preschool education; Rhode Island is ranked as the highest-quality prekindergarten program in the country (U.S. News & World Report, 2019).

Box 2-1

Prekindergarten Quality Standards

The quality of programs is clearly tied to the monetary impacts of early childhood services, such as prekindergarten (Kilburn & Karoly, 2008). Ensuring that Rhode Island’s prekindergarten program quality remains high as the program expands has been a clear focus in the state. The Rhode Island pre-K expansion plan published in 2019 stated, “As the state begins to implement universal pre-K, we will continue to align the state’s quality standards with national standards and best practices.

While definitions of high-quality prekindergarten programs can vary, an examination of the research identifies several key factors that contribute to a determination that a specific program is “high quality.” The National Institute for Early Education Research assesses state prekindergarten programs based on ten quality standards, such as staff-child ratio, support services, teacher training and ongoing professional development, etc. (Friedman-Krauss, et al., 2018). State prekindergarten standards that meet these standards are commonly considered high-quality programs. A report from the Washington Center for Equitable Growth recognized similar measures for defining a high-quality prekindergarten program (Lynch & Vaghul, 2015).

Preschool Quality in Rhode Island.

In the NIEER factbook published in 2019, Rhode Island was one of only three states to meet all ten benchmark standards for preschool quality. NIEER found that the staff-child ratio was 1:9, maximum class size was 18, teacher training was thorough, professional development opportunities were above the standard, and support services such as health screening and meals were above the recommended standards (Friedman-Krauss, et al., 2018). A Rhode Island Department of Education report in 2014 emphasized that the professional development opportunities and technical assistance that Rhode Island provides to state-funded prekindergarten programs is key to ensuring the continued quality of those programs (RIDE, 2014). As Rhode Island continues to expand access to preschool quality, the state has recognized clear standards to ensure ongoing quality of such programs (State of Rhode Island Children’s Cabinet, 2019).

Preschool Development Grants (PDG) are an important piece of preschool funding both nationally and in Rhode Island. Rhode Island was awarded a grant

totaling \$19 million in 2014. “Prior to PDG, Rhode Island served only 300 children in their state-funded preschool program. After two years of PDG, Rhode Island now enrolls more than 1,000 children, a nearly 230 percent increase.” As a result of PDG, Rhode Island nearly doubled state-funded preschool enrollment between the 2015-2016 school year and the 2016-2017 school year (Friedman, et al., 2018). The Providence Journal also reported that since Governor Raimondo took office, preschool enrollment in Rhode Island increased from 306 children in 2014-2015 to 1,080 children in the 2017-2018 school year (Anderson, 2018).

Rhode Island has also increased state investment in preschool programs. “The Rhode Island General Assembly increased the investment in the Rhode Island State Pre-Kindergarten Program by \$1 million for the 2016-2017 school year and the legislature committed another \$1.1 million increase for 2017-2018” (Friedman, et al., 2018).

Kindergarten

In the last several years, Rhode Island has made significant investments in early K-12 education. In her first year of office, Governor Raimondo expanded access to all-day kindergarten, making it universal in the state (Krause, 2016). By October 2017, “100 percent of the 10,006 children enrolled in public kindergarten in Rhode Island were in full-day kindergarten classrooms” (Rhode Island Kids Count, 2018). This expansion is an important investment for several reasons. First, all-day kindergarten is preferred by both teachers and parents (National Education Association, n.d.). All-day kindergarten is also “associated with higher subsequent performance in both reading and math” (Gibbs, 2017). It should be noted that the impact does shrink at higher grade levels, but the estimates from Gibbs’ research “suggest persistence of effects well beyond the kindergarten year” (2017).

RHODE ISLAND’S PLAN FOR EARLY CHILDHOOD EDUCATION

As Rhode Island looks to continue to improve access to the state’s high-quality prekindergarten program, the Raimondo Administration has looked to expand the pilot program to a broader statewide program. The National Institute for Early Education Research’s findings related to Rhode Island’s prekindergarten pilot program, as discussed above, have made a case for further investment in the program.

Universal Prekindergarten Education

In 2018, Governor Raimondo committed to bringing universal prekindergarten to Rhode Island in her second term as governor. As discussed

earlier in this chapter, there is a large body of research on the benefits of investing in prekindergarten education, not only in those who participate in the program, but also for society and the governments making such investments. The FY 2020 budget from Governor Raimondo proposes an additional \$10 million in funding to ensure that prekindergarten access is expanded to reach all Rhode Islanders (McGowan & Kalunian, 2019).

CONCLUSION

As the Raimondo Administration looks to invest heavily in prekindergarten education, the research on the impacts of these investments will be important in determining the value that such investments may have in the state. Recent state investments in kindergarten and prekindergarten have significantly expanded access to these programs for more Rhode Islanders and further investment in these areas would continue to expand these programs to reach more state residents. As discussed in this chapter, estimates have shown that investments in Rhode Island's early childhood education programs have the potential to result in significant benefits to individuals and to the state.

CHAPTER 3

HIGHER EDUCATION, CAREER CONNECTIVITY AND JOB TRAINING

As discussed in Chapter 1, the economy in Rhode Island and in the United States continues to change and evolve. Early learning is a key indicator of later success and lays the groundwork for full participation in today's economy, as explored in Chapter 2. State government can play an important role in encouraging education and workforce training for those in industry sectors that are economically sensitive. Investments in workforce training that is driven by opportunities in today's economy and in future fields.

This chapter focuses on higher education and job training investments and presents the main arguments for why these types of state investments can have a positive impact on the economy as well as individuals. It then examines the impact of recent investments in these areas in Rhode Island. The chapter concludes with a discussion of the Raimondo Administration's planned investments in job training as well as high school and career connectivity.

HIGHER EDUCATION INVESTMENTS

Access to higher education has become increasingly important in recent decades. Post-secondary education is in high demand as the United States' economy continues to change. Higher education has been tied to economic resiliency and is extremely important in today's knowledge-based economy. Educational attainment continues to be a focus of many state governments and investments that increase access to higher education have been an important topic for debate in Rhode Island and other states. As Rhode Island looks to continue to improve its economy and to increase the skilled workforce, higher education investments are one important consideration.

Increasing Importance of Higher Education

The pioneering work of Nobel Laureate Jan Tinbergen included early findings on the increasing demand for educated workforce in 1974 (Tinbergen, 1974). Since that time, the rising demand for education in today's workforce has been studied extensively. Higher education attainment has become more widespread in today's workforce. In 1940, 6 percent of Americans had a four-year college education (Autor, 2014). In 2018, 34.9 percent of the American population above age 25 had completed at least a bachelor's degree (U.S. Census Bureau, 2019). Higher education has also become increasingly important to successful participation in today's economy. It is clear that higher education attainment is a valuable prerequisite for full participation in the United States' economy today.

In a 2014 report on inequality and education, Autor noted that, "the earnings gap between college and high school graduates has more than doubled in the United States over the past three decades" (Autor, 2014). This negative consequence of greater educational achievement has been an important topic of policy discussions in Rhode Island, as will be discussed in this chapter.

Higher Education and Economic Resiliency

The importance of higher education, especially in an economic downturn, has been the focus of much research following the Great Recession. Several studies indicate that an individual's resiliency in face of an economic downturn is influenced by his or her educational achievement. A report from The Hamilton Project noted that, "A postsecondary degree can also serve as a buffer against unemployment during economic downturns" (2017). David Autor, an American economist, also found an important link between college education and earnings. Autor noted that "the economic payoff to college education ... was barely affected by the Great Recession starting in 2007" (Autor, 2014). This tie between higher education and resiliency is an important consideration when examining potential policy changes.

In 2016, Georgetown University published an in-depth report that analyzed the impact of the recession on the economy and how that related to higher education attainment. Their research found that, "the economy has added 11.6 million jobs since the recession bottomed out – 11.5 million, or 99 percent of them, have gone to workers with at least some college education" (Carnevale, Jayasundra & Gulish, 2016). Their finding that education was tied to greater inequality and that those with a college education were better positioned for economic participation after the Great Recession is consistent with David Autor's findings, as detailed above. As noted in the Georgetown study, education beyond high school is an important predictor of participation in today's advanced, knowledge-based economy.

Economic Impact of Government Investments in Higher Education

As illustrated above, educational attainment can be extremely important for individuals in the labor market. While this is an important factor for policymakers to consider when weighing potential uses for tax dollars, the benefits of education extend beyond the individual. Higher levels of education can also have positive impacts on taxpayers and governments that make education investments. These financial benefits come primarily from the increase of earning potential that occurs on an individual level as a result of higher education.

One important benefit that taxpayers receive as a result of higher education achievement is increased contributions from higher earnings taxation. The College Board, RAND, and Trostel provide similar estimates that individuals with a high school diploma paid a median of roughly \$5,000 in taxes in 2015 while those with associate degrees paid twice as much at roughly \$10,000 and those with even higher educational attainment contributed much greater amounts in taxes (Blagg & Blom, 2018). When governments invest in programs that increase higher educational achievement, the increase in revenue from taxation of increased earnings is an important benefit to the government.

A second benefit that has an impact on the bottom line for government is the reduction in need for welfare and social support programs as a result of higher earnings. Evidence has shown that “the higher an individual’s level of education, the less likely she is to rely on government assistance” (Blagg & Blom, 2018). In 2008, the total expenditure savings to state and local governments for each four-year-equivalent degree were estimated to be \$34,773 by Phillip Trostel, Professor of Economics at the University of Maine (Trostel, 2008). Trostel also examined the net fiscal payoffs per degree by state in New England. He estimated that the net fiscal payoff per degree in Rhode Island would be \$121,000 and that the fiscal rate of return would be 4.7 percent (Trostel, 2008).

Additional Benefits of Higher Education

Research published by the Irish Universities Association identified several positive societal impacts of higher education attainment. The paper examined commonly held beliefs about the spillover impacts of higher education in order to determine if relationships were causal, correlated, or in need of more study. One noted study was a from Moretti on the impact that an educated workforce has on others within the labor market. “The main finding of the Moretti study is that an increase in the supply of graduates to the labour market is beneficial to society as it increases the wages for all workers” (Farrell, Harmon, Laffan, & O’Carroll, 2006). While many other societal impacts discussed in the paper from Farrell, et al. required more research, this finding in itself is significant. Moretti’s conclusion that greater college achievement has an impact on wages for not only those graduates but also for others in the community is an important consideration when analyzing

policy changes that would promote higher education attainment. This study concluded that “a percentage point increase in the supply of college graduates raises high school drop-outs’ wages by 1.9 percent, high school graduates’ wages by 1.6 percent and college graduates’ wages by 0.4 percent” (Moretti, 2002).

WORKFORCE TRAINING

Preparation for career through education and workforce training are increasingly important to economic security and success in our global economy. Researchers have estimated that by 2020 more than 70 percent of Rhode Island’s jobs will require postsecondary education of some kind (Carnevale, Smith, and Strohl, 2013). This emphasis on skills development is not unique to Rhode Island or the United States. Recently, all G20 countries identified skills development as an important strategic objective (International Labour Organization, 2011).

Technology and globalization are continuing to alter the workforce and types of jobs that are available in the United States. One estimate found that “more than 30 percent of US workers will need to change jobs or upgrade their skills significantly by 2030, and 65 percent of today’s primary-school students will hold jobs that don’t exist today” (Cheng, et al., 2018). In order to continue to compete for these jobs, workforce and education efforts need to be focused on the needs of the advanced economy.

An assessment of workforce development efforts at the federal level found “statistically significant impacts of public employment and training programs on participant earnings” (King and Heinrich 2011). As governments consider investments in workforce training, it is essential that those investments are demand-driven and are creating pathways to prepare workers for the future. As will be discussed later in this chapter, many of Rhode Island’s recent investments in workforce development have been aimed at these goals.

RECENT EDUCATION AND WORKFORCE INVESTMENTS

Recent investments in education and workforce training have been focused at preparing Rhode Island’s workforce to participate in the economy both today and in the future. Changes to K-12 education included an emphasis on computer science, technology education, and career readiness. Real Jobs, a workforce training program, has increased skills of thousands of workers while elimination of apprenticeship fees has helped reduce the burden on individuals and new employers. Finally, Rhode Island Promise was created to help Rhode Island high school graduates access a higher education through the Community College of Rhode Island. While each of these investments is notable alone, together they lay the groundwork for Rhode Island’s future and create a talent pipeline that will be better prepared for the careers of the future.

Public Education and Career Connectivity

In recent years, there have been significant investments in high school and career connectivity in order to better prepare today's students for the jobs of the future. Computer Science for Rhode Island (CS4RI) was created in 2016 to increase computer science education in Rhode Island's public schools. Pathways in Technology Early College High School (P-TECH) was established in order to encourage career readiness in technology. Finally, PrepareRI works to create pathways from education into career and higher education.

Governor Raimondo's administration recognized that computer science is an industry sector that has experienced recent growth. This industry is also projected to grow in the future; according to the U.S. Bureau of Labor Statistics, "employment of software developers is projected to grow 24 percent from 2016 to 2026, much faster than the average for all occupations" (U.S. Bureau of Labor Statistics, 2018).

In order to better prepare Rhode Island's public school students for future occupational opportunities, Governor Raimondo's administration launched Computer Science for Rhode Island (CS4RI) in 2016 to increase access to computer science education for all public school students. Before this launch, AP Computer Science was only offered in nine public schools and only 42 Rhode Island public school students took the Computer AP test in 2015 (CS4RI, 2019). In December 2017, CS4RI reached their goal of having computer science education taught in every public school (CS4RI, 2019). CS4RI continues to bring computer science learning experiences to students across Rhode Island. According to a 2018 report, CS4RI has more than tripled the number of AP computer science programs in Rhode Island since March 2016 (Prepare Rhode Island, 2018).

Rhode Island also introduced the Pathways in Technology Early College High School initiative in 2016. The initiative was based upon IBM's grade 9-12 model and was created to prepare high school students for the jobs of the future. P-TECH encourages collaboration between the state, school districts, the Community College of Rhode Island, and Rhode Island employers to allow high school students to take college-level courses in high school, participate in internships, and graduate with an associate degree. Six schools currently participate in Rhode Island's P-TECH initiative: Davies Career and Technical High School, Providence Career and Technical Academy, Woonsocket High School & Career and Technical Center, North Providence High School, Rogers High School, and Westerly High School (Rhode Island Commerce Corporation, 2018).

PrepareRI was created to enhance career readiness among Rhode Island youth. It leverages several tools, such as career and technical education and the PrepareRI Internship Program, to create career pathways that are individualized for students. PrepareRI has been extremely successful in encouraging college enrollment and employment. "81 percent (7,783/9,621) of the class of 2016 were

enrolled in college or employed in a priority sector within 12 months of graduation” (Prepare Rhode Island, 2018).

Workforce Training Efforts

The Real Jobs program was created in 2015 to help connect Rhode Islanders with job and skills training they need to compete for the jobs that are available in today’s economy. It places employees into job openings, provides training to advance workers’ skills, and creates a talent pipeline for the future.

Recent performance reports on the Real Jobs program have provided important data on the effectiveness of this initiative. To date, 2,913 new hires have been placed and 2,485 incumbent workers and entrepreneurs have been served. In total, 5,398 workers have been trained or placed through the Real Jobs RI program. 793 employers have successfully hired a new worker, secured an intern, or trained a current worker through Real Jobs. (Real Jobs Rhode Island, 2019). In 2018, Governor Raimondo made an ongoing commitment to the program when she signed a FY 2019 budget that created a permanent funding source for Real Jobs RI (Rhode Island Office of the Governor, 2018).

The Rhode Island Apprenticeship Council undertook a review of policies related to apprenticeship in order to identify ways that the system could be streamlined. Registration fees were determined to be a barrier for individuals and new employers and were not being collected to directly support program administration. As a result, Governor Raimondo signed a FY 2018 state budget that included removal of apprenticeship fees (Governor’s Workforce Board Apprenticeship Report, 2017).

Higher Education

Not only has PrepareRI had positive impacts on Rhode Island’s students while in high school, it has also helped to prepare them for future college education through concurrent enrollment. Rhode Island’s PrepareRI Dual Enrollment Fund increases higher education access by providing high school students with access to college-level coursework. “Since the fund began in 2015, there has been a 150 percent increase in college credits earned” (Prepare Rhode Island, 2018).

Prepare RI is recognized across the United States as a public education investment that will pay dividends for years to come. In 2017, the Rhode Island Promise Scholarship enabled recent Rhode Island high school graduates to attend the Community College of Rhode Island tuition-free for two years. Access to college education is an important determinant for an individual’s future workforce participation. Not only does this investment benefit those who participate, growth in the share of college graduates in a labor force such as Rhode Island’s can also

lead to considerable increases in productivity and wages for all workers (Hill, Hoffman and Rex, 2005).

Perhaps the most well-known education investment from the Raimondo Administration has been the Rhode Island Promise Scholarship. Introduced by the governor in 2017, Rhode Island Promise enabled Rhode Island high school graduates to attend the Community College of Rhode Island tuition-free. It is considered a last-dollar scholarship and “fills the gap’ between a student’s financial aid package and the actual costs of college” (Rhode Island Office of the Postsecondary Commissioner, 2019).

Recently, the Community College of Rhode Island issued a report on the outcomes of Rhode Island Promise after one year of the program. The report noted several important statistics that point to early success with the program. First, the fall to fall retention of Rhode Island Promise students was 62 percent, above the retention rate for the similar Tennessee Promise program. The report also found that 22 percent of Rhode Island Promise students earned 30 college credits in their first year, a strong indicator that those students were on track to graduate. This was much higher than the national average of 12 percent. Finally, there was a 62 percent increase in first-time, full-time student enrollment straight from high school of students of color. While the program is still very new, these early outcomes are extremely positive and show that this program is having a real impact on those it was created to serve (Community College of Rhode Island, 2019).

RHODE ISLAND’S PLAN FOR EDUCATION AND JOB TRAINING

Career Connectivity and Workforce Training

Governor Raimondo’s proposed FY 2020 budget also includes funding for career connectivity and workforce training programs. Included in the proposed budget is \$49,450,814 for workforce development services (State of Rhode Island General Assembly, 2019, H 5151). There is also a modest proposal for funding to expand the P-TECH program.

Rhode Island Promise Extension

A study of American community colleges also estimated a return of \$6.80 for every taxpayer dollar invested in higher education institutions, equaling an average annual internal rate of return of 14.3 percent (Economic Modeling Specialists Intl., 2014). For taxpayers, this means that spending on higher education is more than worth the investment (Executive Office of Commerce, 2017). This year, the Rhode Island General Assembly is considering a significant investment in higher education.

In 2019, Governor Raimondo's FY2020 proposed budget would expand Rhode Island Promise, the free community college program, to include Juniors and Seniors attending Rhode Island College (Borg, 2019). The proposed budget includes \$5.3 million for expansion – roughly \$2M for CCRI and \$3.3 for RIC (State of Rhode Island General Assembly, 2019, H 5151).

CONCLUSION

Rhode Island has made significant investments in job training, career connectivity, and higher education. Recent changes have expanded job training for the state's workforce, prepared public education students for careers in advanced industries, and increased access to higher education opportunities. These state efforts are targeted at building a more resilient workforce that is better prepared for full participation in today's advanced economy. As the state looks to make future investments in these areas, a focus on preparing Rhode Islanders for future job opportunities will continue to be important.

CONCLUSION

The Rhode Island economy continues to improve and to grow stronger. More Rhode Islanders are back to work thanks in part to state economic and workforce development tools and private sector job creation. In 2018, Rhode Island experienced a thirty-year low in the unemployment rate. Per capita personal income also grew in 2018. More Rhode Islanders are seeing economic opportunity and bright futures. Businesses are growing, relocating, and hiring people in Rhode Island and the state is making important investments in its workforce.

As the nation continues to grow economically and to move past the after effects of the Great Recession, there is much interest among policymakers and economists alike in how best to prepare the workforce in the United States to be resilient to future downturns. One of the ways that this can be done is through increasing the skills in the labor force and boosting access to education, especially higher education. Several studies have indicated that higher educational attainment increases an individual's economic resiliency. As the state looks to make future investments, increasing the skills and education of Rhode Island's workforce have the potential to mitigate the effects of future fluctuations in the economy.

The Raimondo Administration has developed economic policies that are creating opportunity for all Rhode Islanders. From creating career pathways for public school students to increasing job training access for working Rhode Islanders, the state is investing in programs that will benefit individuals and lead to positive long-term economic growth. Rhode Island's future is promising in 2019 as the state builds on its recent progress to create a Rhode Island economy built to last with opportunity for all.

NOTES

The figures and estimates provided in the 2019 Overview of the Rhode Island Economy are principally based on state and federal sources accessed in March and April 2019 and EOC calculations from these data. Generally, labor market data and statistics are from the Rhode Island Department of Labor and Training and the U.S. Bureau of Labor Statistics (BLS). GDP data and statistics are from the U.S. Bureau of Economic Analysis. Housing market data and statistics are from the U.S. Census Bureau (BOC) surveys, IHS Markit, Zillow, and the Rhode Island Association of Realtors. Small business data and statistics are from the U.S. Small Business Administration and BLS. Revenue data and statistics are from the Rhode Island Departments of Administration and Revenue. International trade data and statistics are from BOC and the International Trade Administration.

Unless otherwise noted, all dollar figures are in current dollars and all employment data and statistics are based on seasonally adjusted values.

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