Lifting Up Students and Communities, Strengthening the State Economy

The Important Contributions of Member Institutions of the New Jersey Association of State Colleges and Universities
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About Econsult Solutions, Inc.

This report was produced by a that provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the university level, wide experience at the highest levels of the public policy process and extensive consulting experience.
1. Background and Introduction

1.1. Purpose of Report

The purpose of this report is to express the impact of the seven member institutions of the New Jersey Association of State Colleges and Universities (NJASCU) on the New Jersey state economy. Together, these member institutions are responsible for a significant amount of economic output, supporting thousands of jobs in the state and generating millions of dollars each year in state tax revenues. They also collectively fulfill a critical role in making the state economy more competitive, enhancing the vibrancy of local communities throughout the state, and creating pathways to middle-class jobs for state residents. They therefore produce a compelling return on investment of state dollars and are an important part of the state’s future vitality.

1.2. About NJASCU and Its Member Institutions

NJASCU represents the state colleges and universities in New Jersey by advocating for higher education as a public good and communicating the collective value of its member institutions to the state. Its seven member institutions serve the entirety of the state and are committed to providing quality, affordable educational opportunities to state residents.

<table>
<thead>
<tr>
<th>The College of New Jersey</th>
<th>Kean University</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location:</strong> Ewing Township</td>
<td><strong>Location:</strong> Union Township</td>
</tr>
<tr>
<td><strong>President:</strong> Kathryn A. Foster, Ph.D.</td>
<td><strong>President:</strong> Lamont Repollet, Ed.D.</td>
</tr>
<tr>
<td><strong>Enrollment:</strong> 7,100</td>
<td><strong>Enrollment:</strong> 14,100</td>
</tr>
<tr>
<td><strong>Operating Budget:</strong> $201 M</td>
<td><strong>Operating Budget:</strong> $189 M</td>
</tr>
</tbody>
</table>
New Jersey City University (NJCU)
Location: Jersey City
President: Sue Henderson, Ph.D.
Enrollment: 7,600
Operating Budget: $159 M

Ramapo College
Location: Mahwah Township
President: Cindy R. Jebb, Ph.D.
Enrollment: 6,100
Operating Budget: $144 M

William Paterson University
Location: Wayne Township
President: Richard Helldobler, Ph.D.
Enrollment: 9,600
Operating Budget: $229 M

Stockton University
Location: Galloway Township
President: Harvey Kesselman, Ed.D.
Enrollment: 9,900
Operating Budget: $220 M

Thomas Edison State University
Location: Trenton City
President: Merodie Hancock, Ph.D.
Enrollment: 13,700
Operating Budget: $68 M
Figure 1.1 – Location of NJASCU Member Institutions

Source: Econsult Solutions (2021)
1.3. Member Institutions Are Engines for the State Economy

Institutions of higher education are not always immediately or primarily thought of as economic engines, but they are. Member institutions are among the largest employers, procurers of goods and services, and initiators of capital projects within their respective communities, all of which directly and indirectly supports households and businesses throughout those regions. Member institutions also attract spending into the state or retain it in the state, in the form of students’ living costs and the spending power of a wide range of visitors to campus (e.g., prospective students, visitors of students, event attendees). Lastly, member institutions’ educating and credentialing function translates into higher earning potential among alumni, which for those graduates who live and work in the state, means more household income spent back into the state economy. In all of these cases, member institutions are enriching the state economy, supporting employment within the state, and growing the state’s tax base. The aim of this report is to identify and quantify all of these impacts and thus demonstrate the compelling return the member institutions produce from the investments of state dollars they receive.

The analysis in this report shows NJASCU member institutions, in aggregate, result in a total economic impact of $6.1 billion, contributing $2 billion in employee compensation, $219 million in state tax revenues, and supporting approximately 36,000 jobs. In addition, all NJASCU member institutions have a high positive return on investment—about a million dollars per graduate over the course of their entire career. This is simultaneously more money in the pockets of alumni and more value contributed to the state economy. What’s more, NJASCU institutions multiply the effect of state dollars; every $1 million invested in member institutions generates $16 million in state economic activity.

1.4. Member Institutions Produce Broader Community and Statewide Impacts

The impact that member institutions produce for the state economy from operations, capital investments, student and visitor spending, and alumni wage premium is an important part of member institutions’ contribution to the state. But it falls well short of representing the full impact of their work. To begin with, each member institution not only produces economic impact at the state level but generates economic opportunity within their respective communities. In many cases, they serve as an essential hub of economic activity in those communities.

Each member institution is also playing a critical role in the development of their students, preparing them for full participation in the state workforce and laying the foundation for their lifelong pursuit of a successful career and a meaningful vocational contribution. And, together, member institutions are enhancing the state’s global competitiveness and economic resilience by contributing to the number of qualified graduates in the workforce, particularly in strategically important sectors. Hence, this report speaks to the broader community, regional, and statewide impacts achieved by member institutions.
1.5. Organization of Report

The ensuing four sections cover the four impact categories typical of university economic impact studies, but also use those impact categories to connect the presence and work of each NJASCU member institution to the broader impacts they produce (see Figure 1.2 and Figure 1.3 below).

Figure 1.2 – Organization of Report

<table>
<thead>
<tr>
<th>Section</th>
<th>Economic Impact Category/Description</th>
<th>Broader Community/Statewide Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Annual Operations – salaries and wages, goods and services</td>
<td>Producing the state’s workforce in areas of strategic importance</td>
</tr>
<tr>
<td></td>
<td>Capital Investments – new construction, major renovations, large-scale maintenance projects</td>
<td>Investing in the physical spaces where education and research can occur</td>
</tr>
<tr>
<td>3</td>
<td>Ancillary Spending – student living expenses, visitor spending</td>
<td>Enhancing communities through commercial activity and community service</td>
</tr>
<tr>
<td></td>
<td>Alumni Wage Premium – graduates’ additional earning power spent back into the local economy</td>
<td>Affordable and accessible pathways to middle-class jobs</td>
</tr>
</tbody>
</table>

Figure 1.3 – Economic Impact Categories

The report concludes with a summation of economic impacts across these four categories, as well as a synthesis of what that aggregate impact means from a “return on investment” standpoint. The clear conclusion from this report is that the member institutions collectively play a critical role in growing the state economy today and in putting the state economy on a course to continue to thrive in the future.

1.6. Overview of Report Scope and Methodology

This report benefitted from financial, operational, and programmatic information provided by NJASCU and its member institutions. It relied on industry standard economic impact modeling techniques and multipliers to translate direct economic footprints into the commensurate amount of economic output, employment, labor income, and tax revenues produced by them. Please see Appendix A.1 for additional detail on economic impact methodology.
Care was taken in backing out any institution-related spending that did not directly involve the expenditure of funds to employees (in the form of salaries and wages) or to vendors (in the form of procurement of various goods and services). For example, institution financial statements include expenditures like depreciation and amortization which do not represent actual spending and which were therefore excluded.

Care was also taken to not double-count any spending so as to enable an accurate aggregation of impacts across institutions and categories. For example, student spending on residential facilities operated by institutions were excluded from the student spending calculations, because those dollars were already accounted for in institutions’ operating budgets.

This report was primarily concerned with impacts on the state economy as a whole and with impacts on state government tax revenue levels. It is noted throughout that the impacts produced by member institutions also enrich local economies and boost the tax revenues of various local jurisdictions.

This report’s numeric results are intended to represent the aggregate economic impact of all member institutions across all categories on an annualized basis as of today. As such, calculations were based on a wide range of data sources, each representing the most appropriate year or years for which data were available, with appropriateness being determined by a combination of recency and comprehensiveness.

In some cases, multiple years of data were used. For example, capital investments are often lumpy in nature, so multiple years of expenditures were summed and averaged to obtain a more balanced level.

A review of multiple years of data also enabled adjustments to offset the one-time distortive effect of COVID-19. Hence, and building from a point made earlier, the report is concerned with what is the annual impact of member institutions as of now, independent of COVID-19 effects, rather than with what was the annual impact of member institutions during a particular past point in time.
2. Impact from Annual Operations

2.1. Section Highlights

NJASCU member institutions together employ over 10,040 people and have an aggregate annual operating budget of about $1.21 billion. That represents salaries and wages that go home to New Jersey residential locations and that then are spent in a wide range of household expenditures like housing, food, transportation, and entertainment. That also represents goods and services procured from a variety of New Jersey vendors, helping support those businesses and their employees.

The overall impact of all of that circulation of spending in member institution annual operating budgets is an estimated $2.15 billion in statewide economic output, supporting almost 13,700 jobs and generating about $60 million per year in state tax revenues.

But more important than that immediate and direct economic impact is the fulfillment of the core function of member institutions, which is to educate and credential students. Crucially, the member institutions’ collective areas of academic strength synch up with occupations and industries of critical importance to the state economy. Hence, the greater economic contribution of member institutions is not as themselves being employers and procurers of goods, as meaningful as that impact is, but as producers of human capital in industry sectors essential to the state’s future success.
Nursing at Ramapo College

Source: Ramapo College

Nursing students at Ramapo College have access to state-of-the-art training facilities located in the 36,000-square-foot Adler Center for Nursing Excellence.

Kean University’s COVID-19 Testing Site

Source: Kean University

Students at Kean University were able to gain real-world experience through job and internship opportunities at the COVID-19 testing center operated in partnership with Union County.
2.2. $1.21 Billion in Aggregate Annual Direct Operating Footprint

NJASCU institutions are major economic generators through their ongoing operations and employment. According to financial statements and operating data for the current academic year, the seven NJASCU member institutions have an aggregate annual budget of about $1.21 billion and collectively employ over 10,040 people (see Figure 2.1)

Figure 2.1 - NJASCU Member Institution Operating Budgets, FY 2021

<table>
<thead>
<tr>
<th>Institution</th>
<th>Operating Expenses, FY 2021 ($M)</th>
<th>Total Employment¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kean University</td>
<td>$188</td>
<td>1,900</td>
</tr>
<tr>
<td>New Jersey City University</td>
<td>$158</td>
<td>1,320</td>
</tr>
<tr>
<td>Ramapo College of New Jersey</td>
<td>$144</td>
<td>1,010</td>
</tr>
<tr>
<td>Stockton University</td>
<td>$220</td>
<td>1,720</td>
</tr>
<tr>
<td>The College of New Jersey</td>
<td>$201</td>
<td>1,760</td>
</tr>
<tr>
<td>Thomas Edison State University</td>
<td>$67</td>
<td>420</td>
</tr>
<tr>
<td>William Paterson University</td>
<td>$229</td>
<td>1,910</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,207</strong></td>
<td><strong>10,040</strong></td>
</tr>
</tbody>
</table>

*Source: NJASCU Member Institutions (2021)*

Operating expenditures consist of two parts:

1. Salaries and wages, the majority of which go to New Jersey residents, and a portion of which are spent back into the state economy, creating a multiplier effect as they enrich businesses in typical household spending categories like housing, food, transportation, and entertainment.

2. Procurement of goods and services, some of which are procured from New Jersey vendors and thus represent economic activity and employment opportunity within the state.

The ensuing sub-section translates the flow of this spending on operating activities, in the form of salaries, wages, and procurement of goods and services, into their overall effect on the state economy.

¹ Employees are defined as full-time and part-time faculty and staff at each institution. These figures do not include students such as research assistants and teaching assistants.
2.3. $2.15 Billion in Statewide Economic Impact from Aggregate Annual Operations

Member institutions’ operating footprint has a multiplier effect through the state economy, as salaries and wages are spent back into the state economy and as procured goods and services represent business opportunities for in-state businesses. It is estimated that the annual impact of member institutions’ operating budgets is $2.15 billion in economic output within the state economy, supporting over 13,700 jobs and about $860 million in labor income (see Figure 2.3).
Figure 2.3 - Estimated Aggregate Annual Economic Impact from Operating Expenditures Across All NJASCU Member Institutions

<table>
<thead>
<tr>
<th>Economic Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Output ($M)</td>
<td>$1,217</td>
</tr>
<tr>
<td>Indirect and Induced Output ($M)</td>
<td>$928</td>
</tr>
<tr>
<td>Total Impact ($M)</td>
<td>$2,145</td>
</tr>
<tr>
<td>Employment Supported (FTE)</td>
<td>13,700</td>
</tr>
<tr>
<td>Earnings ($M)</td>
<td>$866</td>
</tr>
</tbody>
</table>

2.4. Annual Operations Support Jobs in a Wide Range of Industries Beyond Higher Education

The majority of the economic impact from member institutions’ annual operations takes place in the education sector itself. But, as institutions procure a wide range of goods and services, and as employees spend a portion of their wages and salaries back into the state economy, that multiplier effect supports jobs in numerous other industries throughout the state economy, such as health care, real estate, and administrative services (see Figure 2.4).

Figure 2.4 - Estimated Industry Distribution of Statewide Employment Impact from NJASCU Member Institution Operations

Research is an important subset of member institution operations and therefore of the economic impact generated by those operations. Member institutions are not among the state’s largest research institutions, but some do have meaningful research budgets, which means they are securing competitive funding that might otherwise go elsewhere, resulting in more economic activity and a higher tax base within the state. These efforts also strengthen the state’s economic competitiveness by adding to the depth and breadth of research activity happening throughout the state.
2.5. Impact from Aggregate Annual Operations Generates $60 Million per Year in State Tax Revenues

The economic impact from member institutions’ annual operations in turn grows various state tax bases, yielding ongoing tax revenues to state government. This is important to note, because while the member institutions are themselves tax-exempt, they are still tax-generating for the state government because of the economic activity they directly and indirectly represent.

It is estimated that current member institution operating levels yield almost $60 million a year in state tax revenues (see Figure 2.5). In addition, economic activity directly and indirectly associated with member institution operations produces tax revenues to various local jurisdictions. Furthermore, most employees at member institutions are New Jersey residents, who owe their livelihood to their job, and who pay property taxes to their local jurisdictions (or, if they rent, are indirectly responsible for their part of the property tax base). Hence, NJASCU member institutions are producing tax revenues for state government and also for municipalities throughout the state.

Figure 2.5 - Estimated Aggregate Annual Tax Revenue Impact from Operating Expenditures Across All NJASCU Member Institutions (in $M)

<table>
<thead>
<tr>
<th>Tax Revenue Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Income Taxes</td>
<td>$23</td>
</tr>
<tr>
<td>Sales Taxes</td>
<td>$26</td>
</tr>
<tr>
<td>Business Taxes</td>
<td>$11</td>
</tr>
<tr>
<td><strong>Total Tax</strong></td>
<td><strong>$59</strong></td>
</tr>
</tbody>
</table>

*Source: IMPLAN (2015), Econsult Solutions (2021)*

2.6. Member Institutions Produce Human Capital in Strategically Important Industries

There are few groups in the state that can collectively boast a $2.15 billion impact on the state economy, support almost 18,000 jobs, and generate about $60 million in state tax revenues, an impressive return on state investment. But the primary gain the state accrues from NJASCU member institution operations is not from the spending and circulation of the dollars represented by those operations. Rather, it is from the core function of the member institutions educating and credentialing students, the vast majority of whom hail from New Jersey and the vast majority of whom will stay in New Jersey upon graduation.

*NJASCU member institutions have a $2.15 billion impact on the state economy, supporting almost 18,000 jobs, and generate about $60 million in state tax revenues, an impressive return on state investment.*
Member institutions boast academic strengths in sectors of strategic importance to statewide economic competitiveness.

Nursing at Kean University

Source: Kean University

STEM Education at The College of New Jersey

Source: The College of New Jersey
Historically, New Jersey has experienced student brain drain and has long been a net exporter of young talent. According to the New Jersey Education to Earnings Data System, New Jersey has had net out-migration of high school seniors going to college (i.e. more in-state high school seniors leave the state for college than out-of-state high school seniors coming into the state for college) dating back to 1958. As of 2018 (the most recent year for which data were available), the state ranked last in net out-migration (with almost 28,000 more in-state high school seniors leaving the state for college than out-of-state high school seniors coming to the state for college), and not coincidentally neighboring Pennsylvania ranked first (with almost 11,000 more out-of-state high school seniors coming to the state for college than in-state high school seniors leaving the state for college).\(^2\) While some New Jersey high school seniors who leave the state for college will come back to the state after college, the likelihood that they will stay out of state after college rises considerably when they leave the state for college. This represents a critical loss of human capital for the state, especially in light of the fact that the state and local municipalities will have invested over a quarter of a million dollars in each student educated within the New Jersey public school system, which means over $7 billion of public school student investment is leaving the state each year for college with the heightened prospect that many of the students that the state has invested in will not return after college.\(^3\)

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\(^2\) "Where Students Go: Postsecondary Student Migration In and Out of New Jersey," New Jersey Education to Earnings Data System (2018).

\(^3\) According to the Census Bureau’s Annual Survey of School System Finances (2018), the state spends about $20,000 per year per public school students, which times 13 years of education (K-12) equals $260,000 per public school student, or $7.28 billion per year across the net out-migration of almost 28,000 students.
In light of this perennial net loss in human capital, NJASCU member institutions represent sorely needed post-secondary seats in the competition to retain, train, and benefit from local talent. They also have expertise in and specialized programmatic initiatives for areas of particular strategic interest for the state (see Figure 2.6). These offerings represent a form of human capital retention and investment that is crucial to the future vitality and resiliency of the state economy. The vignettes below are illustrative of the work all member institutions do to contribute in this way.

Nursing at Thomas Edison State University

Source: Thomas Edison State University
Figure 2.6 - NJASCU Member Institution Possess Curricular Strengths in Occupational Sectors Critical to the New Jersey State Economy (Projected Statewide Job Growth from 2018 to 2028)

- **Genetic Counseling**: KEAN - +26%
- **English Language**: NJCU - +13%
- **Business Operations**: Stockton University - +7%
- **Social Work**: Ramapo College of New Jersey - +10%
- **Nursing**: Thomas Edison State University - +6%
- **Clinical Psychology**: William Paterson University - +12%
- **Education Admin.**: TCNJ - +12%

*Source: Bureau of Labor Statistics (2021)*
Kean University boasts selective advanced degree programs in high-growth, high-paying health care occupations. In addition to the graduate program in genetic counseling which began in 2020, Kean offers a Doctor of Physical Therapy, Doctor of Occupational Therapy, and Speech-Language Pathology Doctorate. These occupational fields are projected to grow annually by 1.8%, 1.6%, and 2.1%, respectively, over the next eight years.

Ramapo College’s social work bachelor’s degree program, which began in the 1970s, has been recognized nationally for its success in preparing students for careers in the field. To meet increasing demands of the profession, Ramapo also added a Master of Social Work program. Students in these programs earn hundreds of hours of field experience by serving at a range of non-profit and community-based organizations.

Ramapo College was also among the first institutions in the country to develop a Bachelor of Science in Bioinformatics program and most recently celebrated the achievements of four of the program’s alumni who were recognized for helping in the development of the Pfizer COVID-19 vaccine. A 2020 study published by Investopedia identified life sciences, inclusive of biotechnology research and development, as among New Jersey’s leading growth industries.

In recent years, Ramapo has taken actions to launch and reengineer other programs to help address the state’s designated growth industries, including financial services and technology.

Thomas Edison State University’s accredited nursing academic programs include three types of bachelor’s degrees, a master’s degree, as well as a Doctor of Nursing Practice degree. The Accelerated 2nd Degree Bachelor of Science in Nursing, a one-year program, is specifically geared toward adults who have a non-nursing bachelor’s degree, which fits TESU’s unique mission of catering to adult learners. Graduates of this program achieved a 99.2% pass rate on the licensure exam between 2017-2019. Like all of TESU’s programs, students enrolled in the nursing school enjoy flexible scheduling and can study at their own pace. The University has dozens of partnerships with healthcare agencies and hospitals to ensure student access to clinical experience.

Beyond nursing, TESU offers more than 100 different areas of study and has over 100 partnership agreements with private employers in order to continuously calibrate academic offerings and related supports to workforce needs. Among these partners are JetBlue Airlines, Public Service Electric & Gas, and United Parcel Service.

4 50 best social work degree programs source link: https://www.collegechoice.net/counseling/social-work/best-bachelors-degrees/
Ranked as one of the best public schools in New Jersey for ethnic diversity by U.S. News & World Report, NJCU lives and breathes that description, situated in one of the most diverse cities in the U.S.—Jersey City—and actively working to attract and retain a diverse teacher workforce as a participant in the New Jersey Department of Education Minority Teacher Development Grant Program. Identifying, training, and supporting teachers of color is critically important to securing equitable educational outcomes for schoolchildren throughout the state. The University’s College of Education offers programs for students interested in bilingual education and teaching English as a second language, as well as a Master of Arts in Urban Education, preparing future teachers for increasingly multicultural classrooms.

NJCU has also recently added programs in important industries such as financial technology, business analytics and data science, cyber security, and school nursing.

The teacher education program at TCNJ was the first teacher-training school in New Jersey, established over 150 years ago. Widely viewed as a top producer of talented teachers, counselors, and education administrators throughout the region, the School of Education provides a robust talent pipeline and has a rich history of serving the community. Most recently, the school partnered with the New Jersey Pandemic Relief Fund and the Overdeck Family Foundation on a summer tutoring program for students in kindergarten through fifth grade who experienced learning loss during the COVID-19 pandemic.

TCNJ consistently ranks as one of the preeminent liberal arts colleges in the region. It is ranked in the top five best colleges for master’s degrees in addiction counseling and in the top ten for best early childhood education schools. It also placed third for its undergraduate teaching program and first among public colleges overall in the U.S. News and World Report’s Regional Universities – North category.

Other key areas of study at TCNJ include business, health professions, and psychology.

5 Rankings for top best colleges for master’s degrees in addiction counseling source link: https://addiction-counselor.org/degrees/masters/
6 Rankings for top best early childhood education schools source link: https://study.com/resources/early-childhood-education-degree-requirements

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The School of Business at Stockton University offers a range of degrees including business studies; hospitality, tourism, and event management; computer science; computer information systems; and an MBA program. The hospitality program was recently ranked seventh in the nation for bachelor’s degrees in hospitality management. Given the main campus’ proximity to Atlantic City, and with the additional satellite campus located directly in the City, Stockton has unique access to the local tourism industry for guest speakers, site visits, and internships.

The University has also expanded its programming in the health sciences, offering advanced degrees in occupational therapy, nursing, communication disorders, and doctorates in nursing practice and physical therapy.

In addition to a bachelor’s degree in psychology, William Paterson University offers a master’s in clinical and counseling psychology as well as a doctorate in clinical psychology, a full-time, five-year, practitioner-scholar training program accredited by the American Psychological Association. These programs—all of which feature modern theoretical approaches and hands-on research opportunities—train students for in-demand roles in business, government, schools, hospitals, universities, and other health professions.

William Paterson continues to move forward with innovative academic offerings designed to support a variety of student populations in the evolving higher education marketplace. New initiatives developed in response to state and regional needs include new programs in applied business analytics, materials chemistry, and actuarial science, as well as a redesigned MBA program. The University launched a new platform, WP Online, in July 2020 which currently offers more than two dozen fully online degree programs in nursing, education, and business. These online options are designed to serve working professionals and provide students with additional educational opportunities beyond the University’s campus-based programs. Enrollment in WP Online for graduate programs in the 2020-21 academic exceeded all goals and the program is expanding to include select undergraduate programs for the adult learner, to launch in late fall 2021.

7 Stockton’s hospitality program ranking for their bachelor’s degrees in hospitality management source link: https://study.com/degrees/bachelors-degrees-in-hospitality-management.html
2.7. Contributing to a More Resilient State Economy

Collectively, member institutions, through their core operating activity of educating and credentialing students, are providing a critical function for the state economy, which is building up human capital, particularly in strategic important fields and ever with an eye to employer needs. Together, they represent a portfolio of fields of study in which they are destinations of choice for aspiring students, and in turn which are going to help meet the need for the state’s future workforce in critically important occupations. The member institutions, each with their own distinct curricular strengths, together provide a diverse menu of academic offerings to state residents and in turn produce a diverse mix of graduates into the state economy. This, more than the economic impact of their spending on employees and procurements, is the larger and more lasting gain from their operations. A great example of this is Stockton University’s Cannabis Studies initiatives launched in 2018. Both an academic program and a continuing education initiative exploring cultivation, law, medical and adult-use cannabis, and business fundamentals, Stockton’s program was one of the nation’s first Cannabis Studies credentialing initiatives. Stockton has also hosted conferences and workshops in collaboration with the New Jersey CannaBusiness Association (NJCBA) and Atlantic City Chamber of Commerce—work that expanded in 2020 with the establishment of the Cannabis and Hemp Research Initiative at Stockton (CHRIS), housed in the School of Natural Sciences and Mathematics and dedicated to collecting and disseminating research findings and supporting curriculum development in this rapidly expanding field.
3. Impact from Capital Investments

3.1. Section Highlights

In addition to the economic impact NJASCU member institutions produce through their annual operations, they also stimulate the state economy through their expenditures on various capital investments. It is estimated that member institutions make about $117 million a year in capital investments, and that those investments create an annual statewide impact of about $211 million, supporting about 1,100 jobs and generating about $5 million per year in state tax revenues. These capital outlays also represent investments in the physical spaces in which the core function of educating and credentialing students takes place, and hence are what will make possible that important work for many years to come.

$211 M in statewide impact
1,100 jobs supported
$5 M in one-time tax revenues

3.2. $110 Million in Aggregate Annual Direct Capital Investments

New buildings, major renovations, and large-scale maintenance projects undertaken by the member institutions represent business opportunities for the construction industry and related sectors. Using multiple years’ worth of capital investment data to smooth out annual ups and downs in spending, it is estimated that member institutions spend an aggregate $117 million in capital investments per year (see Figure 3.1). Note that amounts were annualized and expressed in 2021 terms by adjusting individual annual outlays for inflation, dividing by number of years, and summing across member institutions.
Figure 3.1 - Aggregate Annual Capital Investments Across All NJASCU Member Institutions (in $M)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Actual Spend ($M) FY 2017 to FY 2020</th>
<th>Inflation Adjusted to 2021 $ and Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kean University</td>
<td>$98</td>
<td>$25</td>
</tr>
<tr>
<td>New Jersey City University</td>
<td>$48</td>
<td>$13</td>
</tr>
<tr>
<td>Ramapo College of New Jersey</td>
<td>$58</td>
<td>$15</td>
</tr>
<tr>
<td>Stockton University</td>
<td>$50</td>
<td>$13</td>
</tr>
<tr>
<td>The College of New Jersey</td>
<td>$121</td>
<td>$32</td>
</tr>
<tr>
<td>Thomas Edison State University</td>
<td>$2</td>
<td>$0.4</td>
</tr>
<tr>
<td>William Paterson University</td>
<td>$82</td>
<td>$19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$403</strong></td>
<td><strong>$117</strong></td>
</tr>
</tbody>
</table>

*Source: NJASCU (2021)*

These figures only include direct outlays by member institutions on capital projects. But member institutions also generate construction activity through various public-private partnerships (PPPs), which are made possible by both the demand generated in an area proximate to a member institution and the direct involvement of a member institution in the real estate transaction itself. These PPPs are good examples of how member institutions produce additional economic opportunity for the construction sector and related industries, to the end of producing more commercially vibrant and economically competitive communities throughout the state (see Figure 3.2).
Figure 3.2– Illustrative Examples of Public-Private Partnerships Made Possible by NJASCU Member Institution Participation

The College of New Jersey’s Campus Town

Source: The College of New Jersey

Stockton University’s Atlantic City Campus

Source: Stockton University

See Appendix A.2 for additional information on NJASCU’s partnership projects
3.3. $200 Million in Aggregate Annual Economic Impact from Capital Investments

Member institutions’ capital investments have a multiplier effect through the state economy, originating with the construction industry and related sectors, and emanating out through a whole supply chain of industries touched by the spending of salaries and wages on the construction site and the procurement of goods and services needed at the construction site. It is estimated that the annual impact of member institutions’ capital spending is about $211 million in economic output within the state economy, supporting 1,100 jobs and about $70 million in labor income (see Figure 3.3).
Figure 3.3 - Estimated Aggregate Annual Economic Impact from Capital Investments Across All NJASCU Member Institutions

<table>
<thead>
<tr>
<th>Economic Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Output ($M)</td>
<td>$117</td>
</tr>
<tr>
<td>Indirect and Induced Output ($M)</td>
<td>$94</td>
</tr>
<tr>
<td>Total Impact ($M)</td>
<td>$211</td>
</tr>
<tr>
<td>Employment Supported (FTE)</td>
<td>1,100</td>
</tr>
<tr>
<td>Earnings ($M)</td>
<td>$70</td>
</tr>
</tbody>
</table>

*Source: IMPLAN (2015), Econsult Solutions (2021)*

3.4. Capital Investments Support Jobs in a Wide Range of Industries Beyond Construction

While the construction industry is the main beneficiary of this economic activity, other sectors gain too, since capital investments represent a wide range of goods and services that need to be procured and since construction workers spend a portion of their earnings back into the state economy. Hence, 43% of the employment impact from member institutions’ capital investments occurs in industries besides construction (see Figure 3.4). Notably, while the construction sector is heavily exposed to business cycles, the higher education sector’s capital investment levels tend to be more steady, which is a welcome break against the ebbs and flows of the economy in general and the boom and bust of building trades in particular.

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9 Please note: These numbers do not include partnerships.
3.5. Capital Investments Generate $5 Million Each Year in State Tax Revenues

These economic impacts lead to increases in various state tax bases, yielding additional revenues to the state. It is estimated that current member institution capital investments generate almost $5 million a year in state tax revenues (see Figure 3.4). They also lead to revenues for local jurisdictions, in the form of various taxes and fees associated with construction.

Figure 3.5 - Estimated Aggregate Annual Tax Revenue Impact from Capital Investments Across All NJASCU Member Institutions (in SM)

<table>
<thead>
<tr>
<th>Tax Revenue Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Income Taxes</td>
<td>$2</td>
</tr>
<tr>
<td>Sales Taxes</td>
<td>$2</td>
</tr>
<tr>
<td>Business Taxes</td>
<td>$1</td>
</tr>
<tr>
<td><strong>Total Tax</strong></td>
<td><strong>$5</strong></td>
</tr>
</tbody>
</table>

*Source: IMPLAN (2015), Econsult Solutions (2021)*
3.6. Capital Investments Secure the Space for Member Institutions’ Important Work to Happen

As important as it is that member institutions’ capital spending enriches the construction sector and boosts the overall state economy, that is not the purpose of construction projects. Rather, it is to make the necessary physical investments to attract people to campus and to do the core work of education, scholarship, and research on campus. So, while it is useful to enumerate the consequence of member institution capital investments on the state economy, the state’s labor markets, and state tax revenue levels, it is more important to underscore the broader return secured by such investments, which is securing the physical spaces where member institutions can do the important work of investing in students, training up the state’s future workforce, and strengthening the state’s economic competitiveness.

In today’s knowledge-based economy, there is a direct correlation between intensity and quality of post-secondary institutions and economic vitality, because of the critical importance of training, retaining, and supporting human capital. Backed by a new and growing field of economic study, researchers have identified a “positive, statistically significant relationship between GDP per capita and innovative capacity of human capital and qualification of employees (secondary education)”.\(^\text{10}\) Making the campus more attractive to students helps keep institutions competitive and can help the tendency for out-migration flows.

Member institutions’ capital investments are an immediate boost to the state construction industry and help ensure long-term economic competitiveness.

Construction at New Jersey City University’s Ft. Monmouth Campus

Source: New Jersey City University

Groundbreaking Ceremony at Stockton University’s Atlantic City Campus

Source: Stockton University
Capital investments by member institutions help make possible the sustained work that happens on those campuses, which secures their contribution to the state’s economic competitiveness. Human capital is an almost universally understood component to economic competitiveness, so New Jersey benefits tremendously from the productivity of its institutions of higher education, including the portfolio of curricular strengths represented by NJASCU member institutions, in order to thrive going forward. This, more than the multiplier effect of the dollars spent on the capital investments themselves, is the greater and more lasting effect of that work.

The Guarini Performing Arts Center will serve as the cornerstone for New Jersey City University’s University Place, a $400 million public-private partnership redevelopment project that will revitalize and develop 22 acres on Jersey City’s West Side.
4. Impact from Ancillary Spending

4.1. Section Highlights

Beyond their own spending on annual operations and capital investments, NJASCU member institutions draw additional spending into the state or retain it in the state, in the form of the living costs of their students and the discretionary spending of various visitors to campus. Counting just the student spending (and backing out any spending to the institutions themselves, which is already accounted for in Section 2 of this report), it is estimated that this represents about $601 million of spending in the state. This benefits merchants and vendors throughout the state, particularly in the communities where member institutions are located. It is estimated that the annual statewide economic impact of that student spending is $840 million, supporting about 5,690 jobs and generating $19 million in state tax revenues.

4.2. Students Spend an Aggregate $600 Million within the State Economy Each Year

Member institution student spending can be considered attracted into the state (i.e. an out-of-state student moves into New Jersey and attends an NJASCU school) or retained in the state (i.e. an in-state student stays in New Jersey to attend an NJASCU school rather than leaving the state to attend another school). This spending is of great benefit to the state economy, as it supports businesses in a wide range of spending categories, mainly housing, food, transportation, and entertainment.

Spending patterns will vary depending on whether a student lives on-campus (in which case housing and food are paid to the member institution and are therefore excluded from this analysis because that spending is already accounted for in Section 2 of the report) or off-campus (i.e. paying rent to a private landlord), or is a commuter (i.e. living at home). Spending profiles were developed based on industry data and matched up with the aggregate number of on-campus, off-campus, and commuter students at the member institutions.

Based on this approach, it is estimated that member institution student spending represents an additional $646 million of spending, of which $601 million takes place within New Jersey (the remainder taking place out of state or on-line) (see Figure 4.1).
4.3. Visitor Spending Also Enriches the State Economy

Beyond student spending, member institutions are responsible for additional spending by various visitors to campus. This includes prospective students, visitors of students (including move-in, move-out, commencement, and family weekend), and event attendees (alumni events, athletics, cultural performances). Most of these visitors are local, whose spending levels are lower and are not new to the area. But some visitors will be day-trippers whose per-visit spending may be more material, especially if it entails one or more meals, some shopping, or considerable transportation outlays. And, some visitors
will represent overnight stays, which may entail outlays for hotel rooms and still more spending on food, entertainment, and transportation.

These amounts, in the aggregate, are far smaller than the amounts for student spending, especially given that the member institutions do not draw a large proportion of their students and event attendees from very far away. Therefore, to be conservative, these amounts were not calculated, even though they do exist and do add to the aggregate impact member institutions produce for the state economy.

4.4. $840 Million in Aggregate Annual Statewide Economic Impact from Student Spending

As noted above, member institution students spend about $600 million a year within the state economy. Some of that is in retail categories for which a material proportion of the spending does not enrich the state economy because it goes directly to the original manufacturer, and hence only the retail margin (the amount that goes to the retailer) actually circulates in the state economy. Therefore, the non-margin portion of estimated retail spending must be backed out of that aggregate spending number, yielding an adjusted in-state spending amount of $540 million. That amount of spending activity in the state economy is estimated to generate about $843 million in economic activity within the state, supporting about 5,690 jobs and about $183 million in labor income (see Figure 4.3).

The dollars spent by students and visitors in New Jersey circulates through the state economy, generating indirect and induced economic impacts as local vendors gain business opportunities and local residents’ jobs are supported by those business opportunities. **Indirect** impacts represent economic activity supported by the procurement of goods and services by NJASCU students, visitors, and alumni while **induced** impacts represent economic activity supported by the spending from employees who earn salaries and wages from NJASCU schools.

Figure 4.3 – Estimated Aggregate Annual Economic Impact from Student Spending Across All NJASCU Member Institutions

<table>
<thead>
<tr>
<th>Economic Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Output ($M)</td>
<td>$540</td>
</tr>
<tr>
<td>Indirect and Induced Output ($M)</td>
<td>$303</td>
</tr>
<tr>
<td><strong>Total Impact</strong> ($M)</td>
<td><strong>$843</strong></td>
</tr>
<tr>
<td>Employment Supported (FTE)</td>
<td>5,690</td>
</tr>
<tr>
<td>Earnings ($M)</td>
<td>$183</td>
</tr>
</tbody>
</table>

*Source: IMPLAN (2015), Econsult Solutions (2021)*
4.5. Broad Geographic and Industry Distribution of Impact from Ancillary Spending

The economic impact from ancillary spending is spread throughout the state, and is particularly concentrated in the communities where member institutions are located, since that is where the spending tends to go (e.g. to local landlords, restaurants, and gas stations). The economic impact is also spread throughout many sectors within the state economy, befitting the many categories students spend money on and the resulting effect that spending has on various statewide supply chains (see Figure 4.4).

Figure 4.4 – Estimated Industry Distribution of Statewide Employment Impact from NJASCU Member Institution Student Spending

Student spending supports 5,700 jobs throughout the state economy.

Source: IMPLAN (2015), & Solutions (2021)

NOTE: All other industries include Real Estate, Accommodation and Food Services, Retail Trade, Construction, & Wholesale Trade
4.6. Student Spending Generates $19 Million Each Year in State Tax Revenues

This amount of in-state ancillary spending, and the multiplier effect that spending has on adjacent industries, in turn leads to increases in various state tax bases and produces increases in state tax revenues. It is estimated that member institution student spending alone generates about $19 million in state tax revenues (see Figure 4.5). This does not include impacts from visitor spending, nor does it include tax revenue gains to various local jurisdictions.

Figure 4.5 – Estimated Aggregate Annual Tax Revenue Impact from Student Spending Across All NJASCU Member Institutions (in $M)

<table>
<thead>
<tr>
<th>Tax Revenue Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Income Taxes</td>
<td>$5</td>
</tr>
<tr>
<td>Sales Taxes</td>
<td>$10</td>
</tr>
<tr>
<td>Business Taxes</td>
<td>$4</td>
</tr>
<tr>
<td>Total Tax</td>
<td>$19</td>
</tr>
</tbody>
</table>


4.7. Student Spending Yields More Vibrant Communities Throughout the State

Expenditures by member institution students for rent, food, and gas circulate through the state economy, supporting jobs and generating tax revenues. Visitors add additional spending into the state economy.

Beyond the economic impacts described above, this steady base of spending power also makes for more vibrant communities. Many merchants in the spending categories common to student living costs are in retail categories that are both critically important to community quality of life and yet low-margin in nature: restaurants, grocery stores, personal care. The base of spending power represented by students can mean the difference between survival and insolvency, and that difference in turn is of great consequence to communities throughout the state, who either benefit from a vibrant mix of stores or suffer through the eyesore of store closures. Member institutions’ presence in their respective host communities is therefore a positive in this regard, insofar as the spending power represented by students makes for a more commercially vibrant place.

In some cases, member institutions are even more directly involved in enhancing the retail environment in their communities. For example, in August of 2015, TCNJ worked with a local developer to create and open its Campus Town, a $120 million complex employing 400 full and part-time employees, and home to restaurants, shops, and an urgent care facility that all serve the surrounding community.
4.8. Member Institutions Also Enrich Their Local Communities Through Volunteer Service and Civic Engagement

Member institutions’ commitment to their immediate surroundings extends beyond the proximity of their students’ consumer needs and a community’s merchants. Member institutions also take seriously their identity as “anchor institutions” that are rooted in a place, and that therefore are committed to investing in, engaging with, and serving that place. Importantly, these efforts are not just something the institutions do but are a manifestation of who they are and how they serve their students. This integration of institutional mission, academic enrichment, and neighborhood engagement produces tremendous benefits to communities throughout the state. The examples below illustrate this commitment across all member institutions.
Lifting Up Students and Communities, Strengthening the State Economy: The Important Contributions of Member Institutions of the New Jersey Association of State Colleges and Universities

October 7, 2021/Final Draft

Kean University’s students, through the Center of Student Leadership and Service, give back through community service, volunteering across the region including at County of Union emergency food distribution events on the Union campus. In the 2019-2020 academic year, nearly 8,000 students volunteered more than 54,000 hours at food banks, park cleanups, with pre-school children and more.

Beginning in 2012, Kean partnered with JumpStart, an AmeriCorps program, to place Kean students in Elizabeth, New Jersey, classrooms to support early education and literacy programs. The University has since been recognized as an AmeriSchools for the number of hours Kean students commit to the program.

The College of New Jersey’s Center for Community Engagement is where educational experiences are integrated with civic participation and student development, one illustrative effort being its participation in the Capital City Youth Violence Coalition to address the issue of youth violence in Trenton.

TCNJ has also created public-private partnerships that have brought retail into the neighborhood where previously it did not exist. As mentioned in section 4.7., TCNJ worked with a developer to create Campus Town, a $120 million building complex that houses students and is home to 25 restaurants, shops, services and an urgent care facility.

Stockton University was designated an Anchor Institution for Atlantic City in 2016 in recognition of its sustained and ongoing contributions to the city. This includes an extensive service-learning program, which marries classroom education with neighborhood engagement. Cumulatively, Stockton’s Office of Service-Learning has grown from 30 courses offered just five years ago, to more than 100 courses involving more than 2,100 students and 70 faculty members. Put in other terms, one in eight students participates in service-learning at Stockton; this equates to 50,000 hours of cumulative service and a $1.5 million investment into work and community efforts. Stockton also supports a range of initiatives hosted by the Stockton Center for Community Engagement and Service Learning, including homework completion programs, naturalization classes, food insecurity efforts and work with the elderly. As a result of this work, Stockton was awarded the American Association of State Colleges and Universities (AASCU) inaugural Excellence and Innovation Award for Civic Learning and Community Engagement in 2017, has twice been designated a Carnegie Engaged institution, most recently in January 2020, and most recently received AASCU’s Excellence and Innovation Award for Regional Economic Development in 2021.
The Academic Community Impact Program at Thomas Edison State University was developed to create real-world solutions to the challenges faced by non-profit organizations by pairing students with such organizations to execute community-based projects addressing the needs of the stakeholders and constituents. Over 20 local non-profit organizations have signed up to work with Thomas Edison State University students, who are guided by university mentors to address the concerns identified by the organization. The projects cover a wide variety of areas, from designing a website to evaluating a community-based program.

Students benefit from addressing real-world needs and create a portfolio of their experiences with tangible outcomes and reflections. These portfolios showcase their work for their final presentations as well as support their resumes for employment opportunities. In addition, the community partners benefit by getting solutions to challenges they have identified. The Academic Community Impact Program is creating systematic pipelines for students to meet the needs of their communities.

Ramapo College has been recognized by the John Templeton Foundation for leadership in the field of student character development. Ramapo is one of only 100 select colleges and universities named to the Templeton Honor Roll for its record of commitment to inspiring students to lead ethical and civic-minded lives. The Bergen County-based college has also served as an essential resource to its neighboring communities having fulfilled roles as an emergency shelter, a voter registration site, as well as host to a range of legislative town halls and community-based forums.
The Center for Community Engagement at New Jersey City University fosters a lifelong commitment and passion for community service by encouraging the campus community to pursue projects that have a positive impact not only in the local community, but also across the state, country, and globe. The center hosts over a dozen annual projects, including a coat drive, a city cleanup day, the Hudson County Special Olympics, World Aids Day, Hunger and Homelessness Awareness Week, the Oxfam Hunger Banquet, and more. The University also offers Community Engaged Learning, which infuses service- and project-based learning components into coursework.

These experiences can be transformational for both the communities served and those who volunteer. Leadership skills, a sense of civic responsibility, and increased cultural awareness are all added benefits for students who participate.

William Paterson University was the first public university in the state to institute a course in civic engagement as a graduation requirement, thus conveying to students the irrevocable connection between career preparation and community service. Along with curriculum-based service-learning opportunities, the University offers numerous extracurricular and co-curricular civic engagement activities each year. During the 2019-20 academic year, more than 1,200 students participated in at least one civic engagement activity.

In addition, William Paterson is a founding member of and active leader in New Jersey Campus Compact, the statewide affiliate of the national Campus Compact that promotes public and community service to develop students’ citizenship skills. Through New Jersey Campus Contact, the University hired an AmeriCorps participant to supervise the Changebuilders program, designed to encourage students to contribute 40-plus hours each of service. Sixty-six students participated in the Changebuilders initiative during the 2019-20 academic year.
Civic Engagement at Thomas Edison State University

Source: Thomas Edison State University

Civic Engagement at William Paterson University

Source: William Paterson University
NJASCU member institutions have also contributed widely to the COVID-19 pandemic-related relief efforts in their local communities, from testing to vaccination sites, further highlighting NJASCU’s commitment to their communities. The following pages offer a look at what NJASCU members are doing for their communities to help fight the COVID-19 pandemic.

Kean University:

- **COVID-19 Vaccination Center:** Kean University has stood as a key center for COVID-19 testing. Expanding upon its status as an integral part in maintaining the virus’s spread, Kean served as one of Union County’s vaccination centers.¹¹

- **COVID-19 Testing Site:** Kean University and Union County entered a unique partnership to open and operate a free COVID-19 testing site hosted at the University to provide testing for the campus community as well as opportunities for research and student employment. The County expanded the partnership to provide a valuable public service for Union County residents and first responders from across the state while enhancing academic coursework, internships, and employment for Kean students. This partnership shows Kean’s commitment to innovation and demonstrates its strength in applied research and public service.¹²

- **COVID-19 Testing Lab:** In January 2021, Kean and Union County opened a federally certified campus testing lab to process COVID-19 test results at the University, expanding the state’s testing capacity during a critical time. This built upon an already unprecedented partnership with the County in diagnostic testing and public health research during the pandemic. This milestone supports Kean’s long-term goal of achieving the formal designation as a research institution as it is one of the first universities without a medical or veterinary school to host a federally certified lab to process COVID-19 tests.¹³

Kean University's COVID-19 Vaccination Center

Source: Kean University

Kean University's COVID-19 Testing Lab

Source: Kean University
New Jersey City University (NJCU): In February 2021, NJCU began offering COVID-19 testing on NJCU’s Kennedy Boulevard campus on alternate weekends made possible via a partnership between the state’s Health and Clinical Staffing Solutions. The testing site accepts all forms of insurance, lack of insurance, and is open to all individuals to be tested on a first come, first serve basis.14

The College of New Jersey (TCNJ): In January of 2021, TCNJ’s School of Nursing, Health and Exercise Science and Ewing’s Public Health Department partnered to open a vaccination site in a joint effort to help protect community health amid the COVID-19 pandemic. TCNJ President Kathryn Foster and Ewing Mayor Bert Steinmann also went door-to-door to talk to locals about the roles they play in keeping the community safe. In addition to remote classroom adaptations, TCNJ enacted several safety measures to protect TCNJ members and the Ewing community including mandatory weekly COVID testing for students, robust contact tracing protocols, mandatory social distancing, mask wearing, and daily self-health checks.15

Thomas Edison State University (TESU): TESU’s School of Nursing partnered with the New Jersey Department of Health to administer vaccinations to the community, part of a larger-scale effort to shepherd hundreds of community members through the process of receiving the first of two Moderna COVID-19 vaccines. TESU’s nursing students who were enrolled in the full-time hybrid Accelerated Bachelor of Science in Nursing (BSN) program administered the vaccines. It is notable that these enrolled students have earned a reputation of high nursing exam pass rates and remain focused on their courses and clinical experiences during the 12-month accelerated coursework, according to school officials.16

Ramapo College: In December 2020, four Ramapo College alumni who work for Pfizer, Inc., were credited for their contributions to the Pfizer vaccine meeting the FDA’s emergency-use approval standards, an extraordinary achievement, and a major milestone in the campaign to combat the COVID-19 virus. The four alumni recognized are:

- Amanda Gryzmolowicz ’10 (B.S. in Biology, minor in chemistry)
- Jake Stass ’10 (B.S. in Biology)
- Mingzhao Liu ’16 (B.S. in Bioinformatics, B.S. in Computer Science)
- Patrick DeMarinis ’19 (B.S. in Bioinformatics)

The alumni gave credit to Ramapo College’s Bachelor of Science in Bioinformatics program, which made the college among the first four-year colleges in the U.S. to develop such a program. Ramapo Professor Paramjeet Bagga, a co-founder of the program and teacher, had high praise for his former students.17

Stockton University: Stockton University and AtlantiCare partnered to bring COVID-19 vaccines to local Atlantic City residents at the Atlantic City Convention Center. Students in the University’s accelerated

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14 https://www.nj.com/hudson/2021/02/covid-19-testing-offered-on-weekends-at-njcu.html
15 https://alumni.tcnj.edu/2021/01/12/tcnj-and-ewing-work-together-to-promote-public-health-this-spring/
16 https://www.roi-nj.com/2021/02/09/healthcare/thomas-edison-nursing-students-staff-help-trenton-in-
Bachelor of Nursing (BSN) program administered vaccinations with the help of AtlantiCare staff. This was the first hands-on clinical experience for these students due to pandemic restrictions. Stockton was also the first NJASCU member to announce a vaccine mandate for students in May 2021, followed by a mandate for managers, faculty, and academic professional staff in July. To assist with compliance, Stockton partnered with AtlantiCare to offer both testing and vaccination clinics at the Galloway and Atlantic City campuses. The University and AtlantiCare also hosted several online forums for employees, students, and families to answer vaccination questions and help dispel myths, and convened a group of faculty, students, and staff to research, analyze, prepare and recommend a set of operating principles to help guide the University during the COVID-19 pandemic – in compliance with all necessary local, state and federal health, safety and education guidelines.

COVID-19 Testing Site Administered by Passaic County on the William Paterson University Campus

William Paterson University: William Paterson University was designated by Passaic County officials as a “drive-through” testing location for COVID-19 for Passaic County residents. The testing took place in Parking Lot 6 adjacent to the Sports and Recreation Center, and University police officers were stationed at several locations to facilitate traffic and provide access to the campus for faculty, staff, and students. Members of the University’s nursing faculty, as well as students and alumni, participated in the all-volunteer initiative. The testing center was operational from March 25 through June 20, 2020; during that time, more than 15,000 residents were tested.
In addition, Atlantic Health partnered with William Paterson University to assist employees and students in gaining access to the COVID-19 vaccine, depending on availability. More than 400 faculty and staff took advantage of the partnership, which accounts for more than one in every five of the institution’s employees.

4.9. Community Enrichment Through Commercial Activity and Civic Engagement

In communities throughout the state, member institutions are enriching their surrounding communities through the economic footprint of spending by students at merchants throughout those communities, and by putting forth institutional resources and curricular programming to blend student development with civic engagement. The result is an enhanced learning experience for students and more vibrant communities throughout the state. This is an important aspect of how the member institutions benefit their immediate surroundings.

Member institutions are committed to engaging with and enriching the communities around them.

Established 40 years ago, the Stockton Coastal Research Center (CRC) works with Federal, State, and municipal governments to monitor and assess New Jersey’s coastal zone resources.
5. Impact from Alumni Wage Premium

5.1. Section Highlights

The final economic impact category befits the NJASCU member institutions’ core function as educational institutions. In today’s knowledge-based economy, education and credentialing at the post-secondary level is directly correlated to higher earning power. Since member institution students largely stay in state upon graduation, that added earning power benefits the state economy.

It is estimated that there are almost 227,000 member institution alumni living and working in the state now, and that they enjoy an aggregate $2.55 billion increase in their annual household income because of the education and credential they received from a member institution. A portion of this wage premium is spent back into the state economy, generating a $2.9 billion annual statewide impact and supporting almost 15,500 jobs throughout the state. And, between all of that added economic activity as well as the added personal income taxes paid by member institution alumni, that translates into $132 million each year in state tax revenues.

Hence, the work of member institutions in educating and credentialing students yields significant impact to the state economy and to state government tax revenue levels. But it also produces significant impact to the students themselves, who are the main and direct beneficiaries of the wage premium generated by the education and credential. This speaks to a critical function played by member institutions in the state, which is of creating pathways to middle-class jobs for state residents. In fact, member institutions are regularly recognized as national leaders in social mobility according to U.S. News & World Report and Social Mobility Index rankings. These rankings take into account an institutions’ ability to enroll and graduate economically disadvantaged students, who are often less likely to finish college. NJASCU members are helping those students persist through to graduation, creating pathways to good-paying jobs through graduate school or directly to employment.

The entire higher education sector, however, is under great scrutiny from students and families who wonder if increasing tuition levels and student debt burdens are worth it. In response, member institutions are fulfilling a crucial role within the state, generating significant return to students by minding accessibility on the front end and employability on the back end.

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5.2. Member Institution Alumni Represent an Additional $2.55 Billion in Aggregate Household Earnings Within the State

Aggregate wage premium for the member institutions is calculated by multiplying the number of member institution alumni living and working in the state by the average wage premium enjoyed by each alumnus based on the degree they attained at their alma mater.

The number of member institution alumni living and working in the state was estimated by obtaining alumni lists from member institutions (sorted by geography of residence) and making assumptions based on industry data about percentage of alumni in the workforce (i.e. excluding those who are unemployed, retired, or otherwise out of the workforce).

Wage premium is defined as the difference in earning potential between a degree attainment level and the next educational attainment level below it. Hence, the wage premium of a bachelor’s degree holder is their earnings level minus the earnings level of an associate degree holder.
**Member institutions fulfill the crucial role of providing a quality, affordable education to create pathways to middle-class jobs for state residents.**

Students at Ramapo can choose from over 40 academic degree programs. Newly added areas of study include data science, creative music technology, and a Doctor of Nursing Practice degree.

In all cases, member institutions produce a positive wage premium for their students, in that the average earnings level of member institution alumni of a certain educational attainment level exceeds the average earnings level of state residents of the next educational attainment level below it.

In the aggregate, it is estimated that the roughly 227,000 NJASCU member institution alumni living and working in the state represent an aggregate $2.55 billion more in household earnings because of the wage premium they enjoy from the education and credential they received from their alma mater (see Figure 5.1). To clarify and emphasize, that $2.55 billion in aggregate household income is not the sum of the household earnings of member institution alumni, it is the sum of the increase in household earnings that can be associated with the education and credential alumni received from a member institution.
Lifting Up Students and Communities, Strengthening the State Economy: The Important Contributions of Member Institutions of the New Jersey Association of State Colleges and Universities
October 7, 2021/Final Draft

Figure 5.1 – Estimated Aggregate Annual Wage Premium Associated with NJASCU Member Institution Alumni Living and Working in New Jersey

<table>
<thead>
<tr>
<th>Educational Attainment Level</th>
<th>Alumni in Workforce</th>
<th>Annual Premium per Alum</th>
<th>Aggregate Annual Wage Premium ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Degree</td>
<td>1,501</td>
<td>$7,644</td>
<td>$11</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>189,810</td>
<td>$12,399</td>
<td>$2,354</td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>35,377</td>
<td>$5,291</td>
<td>$187</td>
</tr>
<tr>
<td>Total</td>
<td>226,688</td>
<td>$11,259</td>
<td>$2,552</td>
</tr>
</tbody>
</table>


5.3. $2.89 Billion Annual Statewide Economic Impact from Alumni Wage Premium

Because of the educating and credentialing function rendered by NJASCU member institutions, an aggregate $2.55 billion more in household earnings resides in the state. While some of that added household earnings is saved or is spent outside the state economy, some is spent back into the state economy, which in turn enriches industries throughout the state, supports jobs within the state, and generates state tax revenues. Presently, it is estimated that that annual statewide economic impact is about $2.89 billion, supporting almost 15,500 jobs and $886 million in labor income (see Figure 5.2).

Figure 5.2 – Estimated Aggregate Annual Economic Impact from Alumni Wage Premium Across All NJASCU Member Institutions

<table>
<thead>
<tr>
<th>Economic Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Wage Premium ($M)</td>
<td>$2,552</td>
</tr>
<tr>
<td>Total Impact ($M)</td>
<td>$2,891</td>
</tr>
<tr>
<td>Employment Supported (FTE)</td>
<td>15,500</td>
</tr>
<tr>
<td>Earnings ($M)</td>
<td>$886</td>
</tr>
</tbody>
</table>


5.4. Broad Geographic and Industry Distribution of Impact from Alumni Wage Premium

The economic impact from member institution alumni wage premium is spread throughout the state, as member institution alumni live and work in communities around the state. That economic impact also touches sectors throughout the state economy, befitting the various categories alumni spend their disposable income on (see Figure 5.3).
Figure 5.3 – Estimated Industry Distribution of Statewide Employment Impact from NJASCU Member Institution Alumni Wage Premium


NOTE: All other industries include Finance and Insurance, Admin Support and Waste Management Services, Real Estate, Professional, Scientific and Technical Services, and Wholesale Trade.

5.5. Economic Impact from Alumni Wage Premium Generates $136 Million Each Year in State Tax Revenues

The aggregate wage premium produced by NJASCU member institutions generates state tax revenues in two ways. One is that the increased household income grows the state’s personal income tax base, directly yielding state personal income taxes paid by member institution alumni. The other is that a portion of the increased household income is spent back into the state economy, creating economic activity that also generates state tax revenues. Based on the calculations described above, it is estimated that the aggregate wage premium produced by NJASCU member institutions yields $136 million a year in state tax revenues (see Figure 5.4).
Figure 5.4 – Estimated Aggregate Annual Tax Revenue Impact from Alumni Wage Premium Across All NJASCU Member Institutions (in $M)

<table>
<thead>
<tr>
<th>Tax Revenue Impact</th>
<th>State of New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Income Taxes (paid by alumni)</td>
<td>$67</td>
</tr>
<tr>
<td>Personal Income taxes (from alumni spending)</td>
<td>$23</td>
</tr>
<tr>
<td>Sales Taxes</td>
<td>$32</td>
</tr>
<tr>
<td>Business Taxes</td>
<td>$13</td>
</tr>
<tr>
<td><strong>Total Tax</strong></td>
<td><strong>$136</strong></td>
</tr>
</tbody>
</table>

*Source: IMPLAN (2015), Econsult Solutions (2021)*

Similarly, increased household income and increased household spending increases various local tax bases and thus generates increased local tax revenues. Furthermore, member institution alumni who live in the state pay property taxes to their local jurisdictions, whereas if they had left the state for post-secondary education and not returned, their property tax payments would be going to local jurisdictions in other states.

5.6. **Member Institutions Create Inclusive Pathways to Middle-Class Jobs for State Residents**

As important as this economic activity and attendant tax revenue gain is from the aggregate wage premium produced by member institutions, it is arguably more important that the wage premium member institutions produce for alumni enriches the alumni themselves. After all, this is a core function of the member institutions, is to educate and credential students so as to put them on a pathway to a middle-class job, an enriching career, and an enhanced earning potential.

The increased scrutiny higher education institutions face around tuition levels and student debt is part of a broader discussion around the vibrancy and equity of today’s economic structure. Where once higher education seemed more attainable and job paths more certain, many young people consider college out of reach financially, or at the cost of bearing high levels of debt against the backdrop of uncertain job and advancement prospects.

This is not only bad news for individual students and households, but for the economy as a whole. For exclusion from participation in higher education due to ability to pay or lack of supports is devastating insofar as success in today’s knowledge economy requires full and diverse participation. Said another way, campuses, communities, and regions alike thrive when all are included and activated, and in turn underachieve when some are excluded or impaired.

Which makes the intentional efforts of the member institutions to make a college education affordable and accessible so important, not only for individual students, but for the state as a whole. That is why
many member institutions have implemented college promise, dual enrollment, and accelerated learning programs. Each institution is fully committed to fulfilling this role, and the examples below are an illustration of this.

*Source: William Paterson University*

*William Paterson University has one of the most diverse student bodies of New Jersey colleges and universities, with 60% of its population being students of color. In addition, approximately 30% of students are among the first in their family to attend college.*
Kean University, which consistently scores high in national rankings on diversity and accessibility, has a dual admissions partnership called Pathway to Kean with county community colleges to create more inclusive pathways to a four-year degree, representing an increasingly appealing path to an affordable education.

In 2021, the University launched a Tuition Promise program that covers up to full tuition and fees for eligible students. This aligns with the institution’s mission to close equity gaps in degree attainment.

Ramapo College has 3+1 program paths with Passaic County Community College (PCCC) which thoughtfully expand access to a Ramapo degree in multiple academic disciplines. Further, Ramapo has launched a Ramapo and PCCC 2+2 degree program to allow PCCC students to seamlessly transfer academic credits from a completed community college associate of arts or associate of science degree program to a bachelor’s degree program at Ramapo.

Since founding its dual credit program in 2013, Stockton has enrolled nearly 4,000 high school students from 35 different high schools in New Jersey and Pennsylvania. Students can take courses in over a dozen fields including Africana Studies, Media Production, Holocaust & Genocide Studies, Math & Science Studies, Health Sciences, and Civic Engagement, and nearly 500 of these students have matriculated as first-time or transfer students into Stockton University. Stockton has also built strong relationships with the state’s county colleges through its Transfer Pathways program, which launched in 2017 in partnership with Atlantic Cape Community College and offers conditional acceptance to Stockton while students work on their associate degree. In the last four years, the program has grown to eleven partner community colleges throughout New Jersey.

In addition, Stockton launched the Stockton Promise grant program in 2021. The program covers the gap between federal, state, and institutional financial aid and the cost of tuition and fees for eligible students.

TCNJ ranks fourth nationwide among highly residential public colleges and universities for its four-year graduation rate, according to the U.S. Department of Education. Robust student success programming benefits those from educationally and economically disadvantaged backgrounds, helping them graduate at the same high rate. Time to degree is a significant factor in the overall cost of college, and TCNJ’s ability to keep students on track not only reduces the cost of a quality education, but also helps students launch their careers — and contribute to the state’s economy — more quickly.

TCNJ’s early college programs with high schools in Trenton, Ewing, and Willingboro as well as partnerships with community colleges throughout the state offer multiple opportunities for New Jersey students to access a high-quality public education.
In 2020, TESU awarded over 67,000 college credits to students for study conducted in their workplace and apprenticeship settings through its Professional Learning Review pathway. The average per-student credit award for workplace training was 35 credits, or more than half of an associate degree with an average cost savings of $14,000. TESU also awarded over 155,000 credits to students in the military. On average, TESU awards about 300,000 credits annually for prior learning. Studies show that this type of prior learning assessment can help improve degree completion rates and close equity gaps among adult students. TESU has also implemented a 3+1 Pathways Program, which offers affordable and accelerated degree completion pathways from New Jersey community colleges.

New Jersey City University has stayed true to its mission of access to quality education for a diverse population for more than 90 years. Home to the Debt-Free Promise, NJCU covers the cost of tuition for students who meet certain household income requirements. NJCU has also been recognized as one of the top public colleges improving students’ upward economic mobility and has a strong return on investment. Ten years after graduation, students earn 22% more than the national average income.

William Paterson University is a U.S. Department of Education-designated Hispanic-Serving Institution, with 30% of students claiming Hispanic heritage, as well as a Minority-Serving Institution, with 60% students of color. It is also among the national leaders in social mobility. The University ranks in the top 5% of institutions nationally in the 2020 Social Mobility Index created by CollegeNET to measure the extent to which a college or university educates more economically disadvantaged students at lower tuition and graduates them into good-paying jobs. In U.S. News & World Report’s 2021 edition of Best Colleges, it was ranked 38 out of 176 regional universities in the northern U.S. in terms of social mobility—that is, how well schools graduate students with exceptional financial need. William Paterson’s model Pledge 4 Success program, launched in 2019, provides grants to incoming first-year students that make up the difference between what a student receives in state and federal need-based aid and what they owe in tuition and fees. Recent diversity and inclusion initiatives include a Center for Diversity and Inclusion and a Black Cultural Center, established in 2019, which provide education programs and student support; a Latindad Center to open in fall 2021, a Council for Equity and Justice, a Pre-Doctoral Fellowship Program to advance underrepresented faculty, and an annual President’s Diversity Lecture. The University ranked number 8 of 176 northern regional universities in U.S. News & World Report’s 2021 edition of Best Colleges in the category of campus ethnic diversity, which identifies colleges where “students are most likely to encounter undergraduates from racial or ethnic groups different from their own.”
5.7. Member Institutions Produce Significant Return on Investment to Their Graduates

“Return on investment” is increasingly a lens through which students and their families determine whether and where to go to college: how much is tuition, what support is available to make it to degree completion, and what are job prospects upon graduation. This makes the member institutions’ work in affordability and accessibility so important for state residents.

Member institutions are playing a key role in the state in expanding access to education, providing strong outcomes at a significantly lower cost to incoming students. An important solution to the affordability issue that is addressed by member institutions is time to degree. Taking five or six years from a less expensive school can, oftentimes, be costlier than graduating from a four-year school. In addition, 48% of member institution students are eligible for Pell Grants, a standard proxy for income level, which is higher than the 32% eligibility of the comparison group of schools. On average, NJASCU member institution’s tuition is about $13,400 lower than the average tuition of comparison schools (see Figure 5.5).  

Figure 5.5 – Member Institution Comparison Metrics

<table>
<thead>
<tr>
<th>PELL GRANT ELIGIBLE STUDENTS</th>
<th>AVERAGE ANNUAL TUITION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NJASCU Institutions</strong></td>
<td><strong>Comparison Groups</strong></td>
</tr>
<tr>
<td>48%</td>
<td>32%</td>
</tr>
<tr>
<td>Member Institutions Educate a Higher Proportion of Students from Low-Income Households</td>
<td>Member Institutions Have Lower Tuition Levels Than Other New Jersey Schools</td>
</tr>
</tbody>
</table>

Source: College Scorecard (2021)

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20 The comparison group included Montclair State University, New Jersey Institute of Technology, Princeton University, Rowan University, Rutgers University (New Brunswick), and Seton Hall University. Refer to Appendix A.3 where additional detail is provided on these figures.

21 See: Appendix Figures A.9 and A.10 for details on Pell Grant Eligibility and average tuitions of NJASCU members and comparison institutions.
The interplay between return on investment to student and return on investment to state is critical to understand. By making higher education more affordable and accessible, and campus life more diverse and inclusive, member institutions are ensuring better participation in the important preparatory work that takes place at a post-secondary institution, which strengthens the state economy by creating a larger and more robust pool of qualified labor, particularly in strategically important industries.

And that is precisely what the wage premium is. It is simultaneously a higher impact on the state economy in the form of the greater professional contribution graduates make through their occupation, and a higher impact on the pocketbooks of the graduates themselves in the form of higher take-home pay.

And this is what is being produced by the member institutions. According to a recent analysis by the Georgetown University Center on Education and the Workforce, all NJASCU member institutions have a high positive return on investment, when measured by career-long earning gains relative to tuition costs (see Figure 5.6). This premium – about a million dollars per graduate over the course of their entire career – is simultaneously more money in the pockets of alumni and more value contributed to the state economy.

Figure 5.6 - 40-Year Net Present Value from Attending NJASCU Member Institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>40-Year NPV ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The College of New Jersey</td>
<td>$1.2</td>
</tr>
<tr>
<td>Kean University</td>
<td>$1.0</td>
</tr>
<tr>
<td>New Jersey City University</td>
<td>$0.9</td>
</tr>
<tr>
<td>Ramapo College of New Jersey</td>
<td>$1.1</td>
</tr>
<tr>
<td>Stockton University</td>
<td>$1.0</td>
</tr>
<tr>
<td>William Paterson University</td>
<td>$1.0</td>
</tr>
</tbody>
</table>

Source: Georgetown University, 2021. Ranking ROI of 4,500 US Colleges & Universities

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Georgetown University, 2021. Ranking ROI Of 4,500 US Colleges & Universities. URL: https://cew.georgetown.edu/cew-reports/collegeroi/. Georgetown University’s calculation of rankings: ROI of institutions are calculated using data on the average net price and salary/earnings from the US Department of Education’s College Scorecard. The Georgetown analysis focused exclusively on first-time full-time students, so it did not include Thomas Edison State University in its analysis.
These and other efforts reflect a deep awareness of the role member institutions play in ensuring that as many New Jersey residents as possible have access to a college degree. By creating pathways to middle-class jobs for thousands of state residents, member institutions are fulfilling their utility to those students and to the state as a whole.
6. Conclusion

6.1. Aggregate $6 Billion Statewide Annual Economic Impact Across All Member Institutions and Impact Categories

This report has endeavored to estimate the impact of NJASCU member institutions on the state economy in four categories:

![ANNUAL OPERATIONS](image1) ![CAPITAL INVESTMENTS](image2) ![ANCILLARY SPENDING](image3) ![WAGE PREMIUM](image4)

As care has been taken in expressing all impacts in annualized terms and in ensuring no overlaps across these impact categories, these impact estimates can be summed to determine the aggregate statewide economic impact of the member institutions (see Figure 6.1).

Figure 6.1 – Estimated Aggregate Annual Economic and Tax Revenue Impact Across All NJASCU Member Institutions

<table>
<thead>
<tr>
<th></th>
<th>Annual Operations</th>
<th>Capital Investment</th>
<th>Ancillary Spending</th>
<th>Alumni Wage Premium</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide Economic Impact (SM)</td>
<td>$2,145</td>
<td>$211</td>
<td>$843</td>
<td>$2,891</td>
<td>$6,091</td>
</tr>
<tr>
<td>Statewide Employment Impact</td>
<td>13,700</td>
<td>1,100</td>
<td>5,690</td>
<td>15,500</td>
<td>35,990</td>
</tr>
<tr>
<td>Statewide Labor Income Impact (SM)</td>
<td>$866</td>
<td>$70</td>
<td>$183</td>
<td>$886</td>
<td>$2,005</td>
</tr>
<tr>
<td>State Tax Revenues (SM)</td>
<td>$59</td>
<td>$5</td>
<td>$19</td>
<td>$136</td>
<td>$219</td>
</tr>
</tbody>
</table>

*Source: IMPLAN (2015), Econsult Solutions (2021)*

Currently, the seven member institutions annually contribute an aggregate $6.09 billion in economic output to the state economy, supporting a total of nearly 36,000 jobs and $2.00 billion in labor income in the state. They also generate an aggregate of $220 million a year in tax revenues to state government, in addition to property tax revenues and other tax revenues to various local jurisdictions, particularly the ones in which the member institutions are located.
6.2. The Broader Functions and Impacts of Member Institutions are of Critical Importance to the State Economy

More important than the aggregate economic impacts of the member institutions, impressive as they are, is the critical role member institutions play in the state, in communities throughout the state, and in the lives of the students they serve.

It is a time of heightened scrutiny upon the higher education sector as to whether it pays to go to college and whether institutions are alleviating or exacerbating growing economic inequalities. In response, member institutions are ensuring affordability and accessibility in admissions, diversity and inclusion on campus, and employability upon graduation.

The educating and credentialing function member institutions perform creates pathways to middle-class jobs for New Jersey residents, and a stronger workforce for employers throughout the state, particularly in strategically important occupations. This builds up the competitiveness and resilience of the state economy.

Finally, the economic footprint represented by the member institutions strengthens sectors throughout the state economy and enlivens communities across the state. This reflects the fact that these institutions are among the largest employers and procurers of goods and services in their communities, and that they are committed to being civically engaged in and beneficial to those communities.

The member institutions are therefore performing critically important functions in the state economy and for communities and residents throughout the state. Their aggregate impact goes well beyond this report’s accounting of how operating expenditures, capital investments, ancillary spending, and alumni wage premium support jobs throughout the state and generate state tax revenues. Their broader impact is a confirmation of the fulfillment of their role as a sector and the return they produce from the investment of state funds, to educate state residents and strengthen regional economies throughout the state.

6.3. Return on Investment of State Funds

It is instructive to consider all of these impacts in comparison to what the state of New Jersey spends each year to support the member institutions. In FY 2021, the seven member institutions received an aggregate $381 million in state funds for operating aid and fringe support (see Figure 6.2).
These dollars help leverage other funding sources (e.g. tuition, philanthropy) and thus make possible a network of higher education institutions that has an aggregate $1.21 billion annual operating budget. As discussed above, these member institutions are responsible for an over $6 billion impact on the state economy and support 36,000 jobs throughout the state, when accounting for their annual operating footprint, their capital investments, additional spending by students, and the aggregate wage premium enjoyed by alumni living and working in the state. One way to think about state funding of the member institutions is as an investment in a set of institutions that collectively produces an economic return for the state in terms of output and jobs. Based on the findings in this report, that return is significant (see Figure 6.3). The member institutions have a 16:1 multiplier effect on state funds invested, with each $1 million in state dollars producing $16 million in state economic activity. And, each $1 million in state dollars invested supports almost 100 jobs throughout the state economy.

“Although NJASCU member institutions generate a direct economic impact through creating jobs and purchasing goods and services, their primary function is offering accessible, affordable, and high-quality education to our State’s residents. They provide students with proven pathways to high-skilled jobs and opportunities for upward social mobility. In doing so, our institutions are helping the State retain the tremendous talent we have here in New Jersey. In fact, there are about 227,000 member-institution alumni living and working in the state right now; collectively, they see a $2.6 billion increase in their annual household income because of the degree they received from a NJASCU institution. For students looking to study in New Jersey, the opportunities for personal and professional advancement are endless.

-Eugene Lepore
Executive Director of the New Jersey Association of State Colleges and Universities
Yet despite these impressive returns, this sells short the full impact of the member institutions in translating state investment into gains for the state economy. For the role of the member institutions in the state economy extends well beyond their existence as an employer and procurer of goods and services, an initiator of capital projects, an attractor of student and visitor spending, and a producer of increased graduate earnings that then gets spent back into the state economy. Critical to the resiliency of the state economy, the member institutions collectively represent a set of curricular strengths that create pathways to middle-class jobs for state residents and that produce highly demanded skilled labor for industries strategic to state economic success. And the physical presence, academic work, and stakeholder engagement work of the member institutions makes the state more globally competitive and communities more vibrant.

In short, the member institutions generate an outsized return on state investment in the short run in the form of economic output and jobs supported. And, member institutions also produce a compelling long-term return to the state, to the host communities they are located in, and to the students they serve (see Figure 6.4).
Figure 6.4 – Return on Investment in NJASCU Member Institutions in Terms of Statewide Economic Output and Jobs Supported

Source: Econsult Solutions, Inc. (2021)
A. Technical Appendix

The appendix seeks to document the methodology in a comprehensive fashion, and accordingly may repeat descriptions or figures that also appear within the report.

The Technical Appendix is organized as follows:

A.1 Report Scope and Methodology
A.2 NJASCU Partnership Details
A.3 Ancillary Spending Detail
A.4 Wage Premium Detail
A.1 Report Scope and Methodology

The purpose of this appendix is to highlight the scope and methodology of this report and of the quantitative analysis tools used in it, so that its findings can be properly understood and interpreted. Additional detail on the methodology and data sources used to calculate the direct economic impact in each component category and the economic and fiscal modeling undertaken can be found in the appendices that follow.

Economic and fiscal impacts are calculated in four categories of activity: NJASCU member institutions’ expenditures on operations, NJASCU member institutions’ expenditures on capital investments, ancillary spending (students and their visitors, patients and their visitors, athletics), and wage premium. Impacts are calculated on an annual basis, and are undertaken in non-overlapping fashion, meaning that they can be summed to represent aggregate impact. The goal of this analysis is to quantify the current annual level of economic activity associated with NJASCU member institutions. Data inputs on institutional activity are largely provided by NJASCU member institutions, and are verified and supplemented with other public data sources. In addition, assumptions are at times required to estimate the level of activity where direct data are not available. These assumptions are anchored in research and available information and are detailed transparently throughout the report and appendices.

For each input, the most recent and appropriate available dataset is utilized. In the case of institution data, this information often but not always covers FY 2021 (the most recently completed fiscal year). Therefore, the analysis should be understood to represent the current annualized level of activity, rather than representing the impact for any specific fiscal year.

The geographies of interest for this study is the state of New Jersey. Economic impacts are calculated for each of these geographies, while tax revenue impacts are calculated for New Jersey.

Economic impact analyses can estimate the magnitude of either the net or gross impact of its subject. A net impact analysis, which sometimes takes the form of a cost-benefit analysis, develops a “counterfactual” that overall impact amounts are netted against impact levels that might have occurred anyway in place of the subject’s existence and operations. This form of analyses, while appealing in its economic logic, is often highly speculative. In this case, such an analysis would require modeling an alternative development path for the local and regional economy over decades absent NJASCU member institutions. This report takes a gross, rather than net, approach to measuring NJASCU member institutions’ economic impact. With this approach, the direct, indirect, and induced activity associated with NJASCU member institutions is estimated without accounting for potential offsetting increases in activity in other institutions or sectors absent NJASCU member institutions. Therefore, economic impact figures implicitly represent a comparison of current activity levels to a scenario in which the institution does not exist, and all other activity within the economy is held constant.

It should also be noted that impacts are only estimated in four categories that are common to economic impact studies, and for which data sources and calculation frameworks are well-defined. However, these categories do not represent the only potential economic impacts of NJASCU member institutions, which contributes to knowledge activity in ways that defy straightforward quantification. Thus, while
aggregate results in this analysis are gross rather than net, they are conservative as to the categories of impact that can be reliably measured.
A.2 NJASCU Partnerships Details

NJASCU member institutions have made investments in key geographic areas to anchor the State’s strategic redevelopment efforts - investment efforts which involve NJASCU’s partnerships with other organizations and businesses. This subsection highlights NJASCU members’ private public partnerships and state redevelopment partnerships as these two aspects are empirically important drivers of job creation and economic activity in the state.

A public-private partnership (PPP, or P3) is an agreement between a public entity or nonprofit organization and a private sector partner (such a business) that provides a mechanism for funding almost any project. The private sector partner is charged with the design, construction, financing, often long-term operations and maintenance of infrastructure assets over the project’s term and absorbs risks that are typically retained by the public owner, allowing the public sector to harness the knowledge and experience of the private sector’s innovative approaches.

PPPs are becoming increasingly more popular amongst higher education institutions because PPPs offer more flexibility to their traditional financial and political limitations at a time when higher education institutions are confronted by a constant need to improve or enhance their campus facilities, which is a financial challenge a PPP agreement could alleviate.23 Generally, higher education institutions realize several benefits from a PPP including: lower construction costs, shorter timelines, higher efficiency, redevelopment expertise, and transfer of operational risk all while leaving their debt capacity and available capital funds intact. Simply, PPPs provide institutions greater flexibility and efficiency when building, financing, and managing infrastructure and facilities.24

This subsection highlights two examples of PPPs as well as two state partnership redevelopment examples amongst NJASCU members: TCNJ’s Campus Town and NJCU’s Performing Arts Center PPPs as well as Stockton’s Atlantic City Campus, and NJCU’s Fort Monmouth Campus state partnership projects.

23 https://www.hourigan.group/blog/public-private-partnerships-a-winning-combination-for-higher-education/
NJASCU & PPP Redevelopment Examples:

The College of New Jersey’s Campus Town

In Fall of 2015, The College of New Jersey (TCNJ) officially opened their "Campus Town," a newly developed community full of student housing, shops, and restaurants. TCNJ brought in the PRC Group of Monmouth County to develop a housing and retail complex on 12 acres leased from the college, located right next to the main campus entrance. Stores and restaurants occupy the first floors of the eight main Campus Town buildings, with 446 students housed in apartments on the floors above, the college fitness center, and features a campus bookstore, Barnes & Noble, to anchor the project.

Prior to Campus Town, about half of TCNJ’s student body lived off campus. Yet, the 446 beds that make up the furnished, student housing apartments in Campus Town have brought students onto campus, with restaurants and stores to ensure they want to stay there.

TCNJ’s Campus Town was made into reality after 2009 when New Jersey passed a state law to encourage PPPs, which TCNJ jumped on with the PRC group. TCNJ will lease land to the PRC Group for 50 years while PRC agreed to a nearly $400,000 voluntary annual payment to the township. This
PPP arrangement allows TCNJ to help shape the project while absolving them of financing or management responsibilities.\(^{25}\)

**New Jersey City University’s Performing Arts Center**

A PPP agreement has allowed NJCU to develop and construct a $400 million, mixed-use University Place project – a 25,437-square-foot complex, featuring The Guarini Performing Arts Center, anchored by a 492-seat theater and a 100-seat recital hall.

The Guarini Performing Arts Center plan has led to a partnership between NJCU and the world-renowned Joffrey Ballet School, which will move its operations from New York City to NJCU and, in partnership with the university, will offer a Bachelor of Fine Arts in dance and a Joffrey certificate. Upon completion, the Guarini Performing Arts Center will also include an orchestra pit and fly stage, two large dance studios for both rehearsal and performances with exterior glass walls looking out to a large public plaza, performers’ dressing rooms, scenery fabrication shop and storage, grand lobby and special event space.\(^{26}\)

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\(^{25}\) [https://www.inquirer.com/philly/education/20140901_TCNJ_adding__Campus_Town___with_shops_and_more_housing.html](https://www.inquirer.com/philly/education/20140901_TCNJ_adding__Campus_Town___with_shops_and_more_housing.html)

\(^{26}\) [https://re-nj.com/prc-groups-kaye-gifts-1-million-to-njcu-performing-arts-project/](https://re-nj.com/prc-groups-kaye-gifts-1-million-to-njcu-performing-arts-project/)
NJASCU and State Partnership Redevelopment Examples:

Stockton University’s Atlantic City Campus

The Atlantic City Gateway project is a public-private partnership between the Atlantic City Development Corporation and Stockton University to construct new headquarters for South Jersey Gas, plus a new residential campus for the University that includes an academic building, housing for more than 500 students and a parking garage. The Atlantic City Gateway project spans 675,000-square-feet of land, totaling $220 million.

The Gateway project generated nearly 1,000 new construction jobs and approximately 300 permanent jobs in Atlantic City – in addition to the now present 500 Stockton University students to the Atlantic City economy.27

New Jersey City University serves as an academic anchor in the redevelopment of the former U.S. Army base, Fort Monmouth, which closed down in 2011. The University renovated the former Squier Hall administrative building, located in Oceanport, New Jersey, to make room for the new campus. This satellite campus will be home to degree programs in nursing, fire science, business, and cybersecurity, and is slated to open in the fall of 2021.

NJCU’s efforts fit nicely into the mission of the Fort Monmouth Reuse and Redevelopment Plan forwarded by the dissolved planning authority. This highly collaborative blueprint for action aims to promote, develop, encourage and maintain employment, commerce, economic development, and the public welfare; conserve natural resources; and advance the general prosperity and economic welfare of the people in the affected communities and throughout the state.²⁸

A.3 Ancillary Spending Detail

Ancillary student spending represents dollars that are captured by merchants with the state economy, rather than by the NJASCU institutions themselves. This spending is referred to throughout this report as “ancillary.” Estimating the magnitude and composition of this ancillary spending is undertaken in a three-step approach:

1. First, we estimate the volume and composition of NJASCU students by their residential type (i.e., on-campus, off-campus, and commuter).

2. Next, we estimate per student spending for each student type, accounting for only the portion of that spending that is ancillary (i.e., not captured).

3. Finally, we combined these two calculations, multiplying the volume of students of each type by the spending profile to yield an estimate of total spending by category. An adjustment is then made for the portion of spending estimated to take place outside of the state to yield the aggregate ancillary spending by these students within New Jersey.

Student Distribution

Aggregated information from NJASCU institutions was utilized to define the distribution of students between on-campus, off-campus and commuters. Collectively, about 10% of students live on-campus, 45% off-campus and another 45% of students are commuters (see Figure A.1).

Figure A.1 – Student Distribution by Residential Location

<table>
<thead>
<tr>
<th>Student Type</th>
<th>Total</th>
<th>On Campus</th>
<th>Off-Campus</th>
<th>Commuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students</td>
<td>68,280</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution by Type (%)</td>
<td></td>
<td>10%</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>Students by Type</td>
<td>68,280</td>
<td>6,790</td>
<td>30,610</td>
<td>30,870</td>
</tr>
</tbody>
</table>


Ancillary Spending by Student Type

Next, student spending profiles are estimated and adjusted by student type to capture ancillary student spending attributable to NJASCU institutions. Data from The College Board on student budgets for school year 2019-2020 drawn from institutional surveys form the basis of the student spending profile.29 Averages from private non-profit four-year campuses are utilized, with 2/3 of room and board spending assigned to rent and 1/3 to food (see Figure A.2). Tuition and fees are excluded entirely, since they accrue fully to the institutions and thus do not represent ancillary spending.30

Next, estimates are made of the portion of remaining spending categories that represent ancillary spending for each student type: For on campus students, all spending on room and board is assumed to be captured by the institution, and is thus excluded from the ancillary spending calculation. For off

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29 See The College Board, Trends in Higher Education, Average Estimated Undergraduate Budgets, 2020
30 As noted above, student spending that accrues to the institution is reflected in the ongoing operating budgets of the institutions, and therefore must be excluded from this category to avoid double counting impacts.
campus students, all spending is assumed to accrue off campus, and is therefore included in ancillary spending.\textsuperscript{31}

Commuter students represent a more complex group, since they vary in their living circumstances and in the extent to which educational opportunities determine their residential location. This approach conservatively considers only 50\% of spending by commuters to be ancillary and attributable to NJASCU institutions.

Matching the student spending profiles with the ancillary spending proportions by category and student type yields an average ancillary spending for students of each type. Annual ancillary spending is estimated at $4,110 for on campus students, $17,320 for off-campus students, and $2,938 for commuters (see Figure A.2).

Figure A.2 – Ancillary per Student Spending by Student Type

<table>
<thead>
<tr>
<th>Category</th>
<th>Per Student Budget (The College Board)</th>
<th>% Ancillary\textsuperscript{32}</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On Campus</td>
<td>Off Campus</td>
</tr>
<tr>
<td>Rent</td>
<td>$8,660</td>
<td>0%</td>
</tr>
<tr>
<td>Food</td>
<td>$4,460</td>
<td>0%</td>
</tr>
<tr>
<td>Transportation</td>
<td>$1,060</td>
<td>100%</td>
</tr>
<tr>
<td>Retail/Other</td>
<td>$3,050</td>
<td>100%</td>
</tr>
<tr>
<td>Total per Student</td>
<td>$17,230</td>
<td>-</td>
</tr>
<tr>
<td>Ancillary Spend per Student</td>
<td>-</td>
<td>$4,110</td>
</tr>
</tbody>
</table>


Aggregate Ancillary Spending Within New Jersey

The ancillary spending profiles per student from Table A.2 are then combined with the volume by student type from Table A.1 to yield an estimate of aggregate spending by category. Aggregate ancillary spending is estimated at $28 million for on-campus students, $527 million for off-campus students, and $91 million for commuters (see Figure A.3).

Figure A.3 - NJASCU Annual Ancillary Student Spending

<table>
<thead>
<tr>
<th>Student Type</th>
<th># of Students</th>
<th>Per Student Ancillary Spending</th>
<th>Aggregate Ancillary Spending ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-campus</td>
<td>6,790</td>
<td>$4,110</td>
<td>$28</td>
</tr>
</tbody>
</table>

\textsuperscript{31} Note that in practice, some small portion of spending by off-campus students may be captured by the institution (such as purchases in the bookstore or on-campus dining halls) while some small portion of food spending by on-campus students may take place off-campus. These two factors are likely to be roughly offsetting, and the net impact is likely minimal.

\textsuperscript{32} Percent of spending that is captured by vendors besides the member institutions themselves.
An adjustment to this aggregate figure is necessary to account for the proportion of this student spending that may be taking place outside of the State of New Jersey. All rent and food spending is assumed to be taking place within the state. However, some portion of transportation spending may arise from out of state students traveling to and from campus, and some portion of retail, supplies and entertainment purchases may take place outside of the state (most notably, those purchases that take place online through out-of-state retailers). Eighty-five percent of transportation spending and 75% of retail/other spending are assumed to be maintained within the state, leaving an aggregate ancillary student spend within New Jersey of $601 million per year (see Figure A.4).

Impact modeling is undertaken with the expenditure categories shown above, yielding the economic and fiscal impact results shown in Section 4. In the case of retail spending, an additional adjustment is made to reflect the fact that many retail goods are not produced within the state, but rather purchased directly from out-of-state wholesalers. For those items, only the “margin” captured by the retailer represents additive economic activity to the state economy. Therefore, the direct impact of ancillary student spending is somewhat smaller ($540 million) than the $601 million in ancillary spending shown above.

### A.4 Wage Premium Detail

The link between educational attainment and earnings power is well-established, and a “wage premium” associated with additional education is often conceptualized and calculated from the perspective of the student, who can compare the costs associated with various educational (or non-educational) options within the expected return. This analysis utilizes this framework to estimate the
gain not to the student, but rather to the state economy. Additional earnings by alumni in the New Jersey workforce attributable to NJASCU institutions are estimated and translated into additional household spending, which in turn supports further employment and earnings.

The modeling approach undertaken in this calculation conforms to the gross impact approach utilized throughout the report. Since a gross analysis does not include a counterfactual in which impacts are replaced through market forces in the absence of the institution, the increases in education are additive to statewide earnings, reflecting a market based valuation of enhanced productivity.

However, the state’s population and level of employment is treated as fixed within this framework independent of the presence of NJASCU institutions. Therefore, the gain to the economy is not the full salary of the NJASCU alumni in the workforce, but rather the incremental wages associated with their educational attainment and skills/knowledge premium from their NJASCU degree. A portion of these additional earnings (after accounting for taxes, savings, etc.) results in additional household spending which circulates through the economy, generating indirect and induced impact and supporting employment and earnings.

Modeling is undertaken in a three-step approach in the sections that follow:

1. First, we estimate the volume of NJASCU alumni in the New Jersey workforce, by educational attainment level.
2. Next, we estimate the annual wage premium associated with NJASCU institutions for each of those attainment levels.
3. Finally, we combine these two calculations, multiplying the volume of alumni at each attainment level by the wage premium for that level to yield an estimate of the aggregate annual wage premium associated with NJASCU institutions.

This calculation relies primarily on data submitted by NJASCU institutions as part of the data collection process, as well as government data where appropriate.

Alumni within the Workforce by Geography

We utilized a four-step process to estimate the volume of NJASCU alumni within the state’s workforce by degree type:

1. Total active alumni are aggregated from institutional data collection responses. Collectively, there are over 422,000 active alumni of NJASCU institutions in New Jersey.
2. Next, a deduction is made for alumni living outside of New Jersey. Based on institutional responses, 22% of alumni live outside of the state, meaning that 78% of the total active alumni group is currently living within the state.
3. Next, we estimate the proportion of alumni that are actively employed (and therefore generate an annual wage premium). National data from the Bureau of Labor Statistics indicates that the
national employment to population ratio for degree holders ages 25 and older is 69% as of February 2021.\textsuperscript{33} Combining these two steps, approximately 227,000 NJASCU alumni are estimated to be within the New Jersey workforce.

4. Finally, degree levels for alumni are expected to be within the New Jersey workforce are then apportioned based on the survey responses. The majority of alumni are bachelor’s degree holders, with 16% holding advanced degrees and 1% associate degrees.

Figure A.5 - Estimated NJASCU Alumni within the New Jersey Workforce

<table>
<thead>
<tr>
<th>Input</th>
<th>Value</th>
<th>Associate/Other Degree</th>
<th>Bachelor's Degree</th>
<th>Advanced Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active NJASCU Alumni</td>
<td>422,227</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Proportion Living in New Jersey</td>
<td>78%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Employment Rate</td>
<td>69%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Proportion by Highest Degree</td>
<td>226,688</td>
<td>1%</td>
<td>84%</td>
<td>16%</td>
</tr>
<tr>
<td>Estimated Alumni in NJ Workforce</td>
<td>226,688</td>
<td>1,501</td>
<td>189,810</td>
<td>35,377</td>
</tr>
</tbody>
</table>


Impact of NJASCU Institutions on Alumni Earnings

Next, it is necessary to estimate the impact of this educational attainment on annual earnings for the NJASCU alumni estimated to be within the workforce. Academic research and government data indicate a clear return to educational attainment in the form of advanced earnings potential. Census Bureau data documents a linear relationship between median wages and educational attainment in New Jersey, with median earnings progressing from around $25,000 per year for a high school graduate to nearly $91,000 per year for advanced degree holders (see Figure A.6).

Returns on education are also impacted by the specific university that a student attends, due to variation in both institutional quality and fields of study offered.\textsuperscript{34} Institutions of higher education vary widely in selectivity, curricular rigor, and reputation. These qualitative factors are also reflected in the earnings potential of graduates above and beyond the level of degree attained. Academic research has

\textsuperscript{33} This proportion is itself comprised of a labor force participation rate of approximately 69%. Thus, the vast majority of non-working alumni are anticipated to be out of the labor force, rather than actively seeking employment but unable to find it.

\textsuperscript{34} For a detailed overview of earnings by degree type, see Webber, D (2014). “The Lifetime Earnings Premia of Different Majors: Correcting for Selection Based on Cognitive, non-Cognitive, and Unobserved Factors.” Labour Economics, Volume 28, June 2014, 14-23.
demonstrated a clear correlation between the selectivity of higher education institutions and the earnings of its graduates, which again reflects a market-based valuation of enhanced productivity.\textsuperscript{35}

Next, it is necessary to estimate the impact of this educational attainment on annual earnings for the NJASCU alumni estimated to be within the workforce.

Median earnings by educational level can be derived from the Census Bureau, which illustrates the progression in median income by highest level of educational attainment. However, the calculation must account for potential differences in earnings between NJASCU degree holders and the average degree holder. To do so, longitudinal data from the federal Department of Education for NJASCU is compared to all four-year institutions. This data source, part of “College Scorecard” released publicly by the Department of Education, reports earnings by institution based on the unique tracking of tax filings of students who applied for student loans ten years after they enter school. Median ten-year earnings for NJASCU institutions ranges from $42,700 to $58,500, compared to the national median earnings for a bachelor’s degree holder of $56,640. Within this analysis, median earnings for NJASCU graduates are conservatively scaled to its share of median statewide earnings for that degree level (see Figure A.6).

**Figure A.6 – Estimated Earnings by Educational Attainment Level**

<table>
<thead>
<tr>
<th>Highest Education Level</th>
<th>High School</th>
<th>Associate Degree/Some College</th>
<th>Bachelor’s Degree</th>
<th>Advanced Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Median</td>
<td>$34,520</td>
<td>$43,290</td>
<td>$66,240</td>
<td>$91,370</td>
</tr>
<tr>
<td>Kean University Est. (75.4%)</td>
<td>-</td>
<td>-</td>
<td>$49,940</td>
<td>$68,880</td>
</tr>
<tr>
<td>New Jersey City University Est. (81.4 %)</td>
<td>-</td>
<td>-</td>
<td>$53,910</td>
<td>$74,370</td>
</tr>
<tr>
<td>Ramapo College Est. (93.9%)</td>
<td>-</td>
<td>-</td>
<td>$62,220</td>
<td>$85,820</td>
</tr>
<tr>
<td>Stockton University Est. (83.9%)</td>
<td>-</td>
<td>-</td>
<td>$55,550</td>
<td>$76,630</td>
</tr>
<tr>
<td>The College of New Jersey Est. (87.6%)</td>
<td>-</td>
<td>-</td>
<td>$58,010</td>
<td>$80,020</td>
</tr>
<tr>
<td>Thomas Edison State University Est. (103.3%)</td>
<td>-</td>
<td>$44,720</td>
<td>$68,420</td>
<td>$94,370</td>
</tr>
<tr>
<td>William Paterson University Est. (82.3%)</td>
<td>-</td>
<td>-</td>
<td>$54,500</td>
<td>$75,180</td>
</tr>
</tbody>
</table>


As described above, this analysis assumes that the state’s population and employment level would remain fixed absent NJASCU institutions, and that the supply of graduates from alternative four-year higher education institutions remains fixed as well. In this scenario, the absence of NJASCU institutions would result in a substantial loss in the educational attainment level, and accordingly the productivity.

of the New Jersey workforce. In order to absorb this loss (while maintaining a fixed employment level) jobs held by NJASCU alumni are assumed to “filter down” to workers with a lower educational level. Specifically, jobs held by NJASCU alumni with associate degrees are assumed to be absorbed by workers with a high school education, jobs held by alumni with bachelor’s degrees are assumed to be absorbed by workers with associate degrees, and jobs held by alumni with advanced degrees are assumed to be absorbed by workers with bachelor’s degrees.  

Combining estimated earnings by education level and the assumptions described above about the absorption of employment opportunities absent NJASCU results in an estimated annual wage premium by degree level attributable to NJASCU institutions. This premium is calculated as the net difference between estimated earnings levels for NJASCU graduates of a given degree level, and median statewide earnings for one lesser level of attainment. This calculation results in an annual wage premium of $7,640 for NJASCU associate degree holders (relative to high school graduates), $12,400 for NJASCU bachelor’s degree holders (relative to associate degree holders) and $5,290 for NJASCU advanced degree holders (relative to bachelor’s degree holders) (see Figure A.7).
Figure A.7 – Annual Wage Premium from Increased Educational Attainment Associated with NJASCU

<table>
<thead>
<tr>
<th>Alumni Degree Level</th>
<th>Without NJASCU</th>
<th>NJASCU</th>
<th>Annual Wage Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High School</td>
<td>Associate</td>
<td></td>
</tr>
<tr>
<td>Associate Degree</td>
<td>$34,520</td>
<td>$42,150</td>
<td>$7,640</td>
</tr>
<tr>
<td></td>
<td>Associate</td>
<td>Bachelor's</td>
<td></td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>$43,290</td>
<td>$55,340</td>
<td>$12,400</td>
</tr>
<tr>
<td></td>
<td>Bachelor's</td>
<td>Advanced</td>
<td></td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>$66,240</td>
<td>$71,530</td>
<td>$5,290</td>
</tr>
</tbody>
</table>

*Source: Econsult Solutions (2021)*

Aggregate Earnings Impact from NJASCU Wage Premium

Finally, the aggregate annual earnings impact from this wage premium can be derived by multiplying the number of alumni in the workforce at each degree level by the annual wage premium associated with that degree level. In aggregate, the educational attainment increase for more than 226,000 alumni in the New Jersey workforce results in an aggregate annual wage premium of $2.5 billion statewide each year (see Figure A.8).

Figure A.8 – Aggregate Annual Wage Premium Associated with NJASCU

<table>
<thead>
<tr>
<th>Alumni Attainment Level</th>
<th>Est. NJASCU Alumni in Workforce</th>
<th>Est. Annual Premium per Alum</th>
<th>Aggregate Annual Wage Premium ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Degree</td>
<td>1,500</td>
<td>$7,640</td>
<td>$11</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>189,810</td>
<td>$12,400</td>
<td>$2,354</td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>35,380</td>
<td>$5,290</td>
<td>$187</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>226,690</strong></td>
<td><strong>$11,260</strong></td>
<td><strong>$2,552</strong></td>
</tr>
</tbody>
</table>

*Source: Econsult Solutions (2021)*

The increase in household earnings is then translated into household spending in order to model its impact on the national economy. As described in Section 5, this process deducts a portion of earnings that do not result in additional spending (such as taxes, savings, etc.) and then estimates the total impacts of the remaining incremental household spending on economic output, employment, and wages.
NJASCU Institutions’ Commitment to Affordability and Accessibility

NJASCU institutions are uniformly devoted to providing a quality education to all state residents and doing so in an accessible and affordable manner. Two key metrics that help demonstrate a higher education institution’s commitment to affordability and accessibility are the proportion of enrolled students eligible for federal Pell Grants and tuition levels. In these two metrics, member institutions compare favorably to other universities in the state (see Figure A.9 and Figure A.10).

Figure A.9 – Pell Grant Eligibility for NJASCU Members and Comparison Cohort

<table>
<thead>
<tr>
<th>NJASCU Members</th>
<th>Comparison Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey City University - 61%</td>
<td>Montclair State University - 45%</td>
</tr>
<tr>
<td>William Paterson University - 51%</td>
<td>New Jersey Institute of Technology - 36%</td>
</tr>
<tr>
<td>Kean University - 40%</td>
<td>Rowan University - 33%</td>
</tr>
<tr>
<td>Stockton University - 40%</td>
<td>Rutgers University (New Brunswick) - 31%</td>
</tr>
<tr>
<td>Ramapo College of New Jersey - 26%</td>
<td>Seton Hall University - 28%</td>
</tr>
<tr>
<td>The College of New Jersey - 18%</td>
<td>Princeton University - 19%</td>
</tr>
<tr>
<td>Thomas Edison State University - 16%</td>
<td></td>
</tr>
</tbody>
</table>

Source: College Scorecard (2021)

Figure A.10 – Tuition and Mandatory Fees for NJASCU Members and Comparison Cohort

<table>
<thead>
<tr>
<th>NJASCU Members</th>
<th>Comparison Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The College of New Jersey - $16,600</td>
<td>Princeton University - $52,900</td>
</tr>
<tr>
<td>Ramapo College - $14,400</td>
<td>Seton Hall University - $43,800</td>
</tr>
<tr>
<td>Stockton University - $13,700</td>
<td>New Jersey Institute of Technology - $17,800</td>
</tr>
<tr>
<td>William Paterson University - $13,100</td>
<td>Rutgers University (New Brunswick) - $15,400</td>
</tr>
<tr>
<td>Kean University - $12,300</td>
<td>Rowan University - $14,000</td>
</tr>
<tr>
<td>New Jersey City University - $12,100</td>
<td>Montclair State University - $13,100</td>
</tr>
<tr>
<td>Thomas Edison State University - $7,500</td>
<td></td>
</tr>
</tbody>
</table>

Source: College Scorecard (2021)