

The Economic Value of Lehigh University



Moving the Lehigh Valley forward, together

Lehigh University history is deeply connected to the Lehigh Valley. Founder Asa Packer, recognizing the region's need for advanced education, provided 56 acres in South Bethlehem to establish Lehigh as an institution dedicated to educating individuals who would contribute to the area's burgeoning economy.

One hundred and sixty years later, Lehigh University continues to play an important role in the region and its economy. Partnering with Lightcast, we conducted an analysis of one specific fiscal year, FY24 (July 1, 2023 – June 30, 2024), as a measure of university economic impact, and as the results in these pages show, found that the comprehensive economic impact of Lehigh for that period totaled \$1.4 billion.

Equally important are the ways described in this report in which Lehigh partners with community organizations, industry, local governments and nonprofits to be a contributing member of the community and address a broad range of challenges and needs.

From sustainability to healthcare, energy to technology, the innovative research emerging from Lehigh's labs and classrooms has a tangible, positive impact on communities both here and around the world. Additionally, research activities drive the economy through the employment of people and the purchase of equipment and other supplies and services.

Earlier this year, Lehigh attained R1 status, the highest level of research activity in the Carnegie Classification system, recognizing the significant research conducted at the university. Lehigh is the only university in the Lehigh Valley to have the designation and one of only seven in the Commonwealth. The classification will continue to attract and retain top faculty and the brightest students to Lehigh, further strengthening a highly-skilled workforce that will benefit the community for years to come.

Through volunteerism, internships, start-ups, and experiential learning, Lehigh actively drives economic growth while preparing students for careers that will make a local and global impact.

Beyond research and academics, Lehigh enriches the region through the arts, athletics and community service. Lehigh programming and events welcomed tens of thousands of visitors from outside the region to the Lehigh Valley, and students and employees volunteered many hours within the community. We are proud to support initiatives that strengthen the social fabric of the Lehigh Valley, ensuring our influence is felt not just in the economy but in the cultural and community life of the region.

Lehigh's success is intrinsically tied to the success of our community. By collaborating with others, we will continue to tackle the challenges we face and build a brighter future. Bethlehem, and the Lehigh Valley, is where we live, work, and make an enduring impact, and together, we will continue building a thriving community and a better tomorrow for all.



Joseph J. Helble '82

President of Lehigh University





LEHIGH UNIVERSITY (Lehigh) creates value in many ways. The university plays a key role in helping students find their career passion, achieve their individual potential, and make a lasting impact. The university facilitates new research to solve real-world problems, advances industry developments and provides practical support that equips entrepreneurs to launch and scale companies. It also draws visitors and students to the region, generating new revenues and opportunities for the Lehigh Valley.¹ Lehigh provides students with the education, training, experiences, and skills they need to have fulfilling and prosperous careers. Its student and employee volunteers support the regional economy by filling resource gaps and contributing to the output of regional businesses and organizations, while driving social change and strengthening communities. Further, Lehigh is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

Lehigh influences both the lives of its students and the regional economy. The university supports a variety of industries in the Lehigh Valley, serves regional businesses, and benefits society as a whole in Pennsylvania from an expanded economy and improved quality of life. Additionally, the benefits created by Lehigh extend to the local and state government through increased tax revenues and public sector savings.

This study measures the economic impacts created by Lehigh on the business community and evaluates the return on investment to the university's primary stakeholders—students and the Pennsylvania society—as well as the benefits received by state taxpayers from Lehigh. The following two analyses are presented:

Economic impact analysis

Investment analysis

All results reflect employee, student, and financial data, provided by the university, for fiscal year (FY) 2023–24. Impacts on the Lehigh Valley economy are reported under the economic impact analysis and are measured in terms of added income. The returns on investment to students and society in Pennsylvania, along with the benefits to state taxpayers, are reported under the investment analysis.



The Lehigh Valley, Pennsylvania

Lehigh influences both the **lives of its students** and the **regional economy**.

¹ For the purposes of this analysis, the Lehigh Valley is comprised of Northampton and Lehigh Counties.



Economic impact analysis

Lehigh promotes economic growth in the Lehigh Valley through its direct expenditures and the resulting expenditures of visitors, students, and regional businesses. The university serves as an employer and buyer of goods and services for its day-to-day operations and research activities. Numerous start-up and spin-off companies have formed as a result of programs and knowledge at Lehigh. The university's reputation and activities attract visitors and students from outside the Lehigh Valley, whose expenditures benefit regional vendors. Lehigh encourages its students and employees to volunteer in the community, helping businesses and organizations grow. In addition, Lehigh is a primary source of higher education to the Lehigh Valley residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations spending impact



Lehigh adds economic value to the Lehigh Valley as an employer of regional residents and a large-scale buyer of goods and services. In FY 2023-24, payroll at Lehigh was \$265.3 million, much of which was spent in the region for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the university spent \$177.2 million on expenses related to facilities, supplies, and professional services.²

Lehigh's operations spending added \$376.7 million in income to the region during the analysis year. This figure represents the university's payroll, the multiplier effects generated by the in-region spending of the university and its employees, and a downward adjustment to account for funding that the university received from regional sources. The \$376.7 million in added income is equivalent to supporting 6,235 jobs in the region.

Research spending impact



Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services. Over the last four years, Lehigh received 87 invention disclosures, filed 105 new patent applications, and produced 14 licenses.

² Research employees and their payroll, as well as non-pay research expenditures, are excluded from this impact as they are measured in the following impact.

Impacts created by Lehigh in FY 2023-24



Operations spending impact
\$376.7 million

+



Research spending impact
\$48.1 million

+



Start-up and spin-off
company impact
\$796.9 million

+



Visitor spending impact
\$12.3 million

+



Student spending impact
\$28.3 million

+



Volunteerism impact
\$1.6 million

+



Alumni impact
\$122.5 million



Total economic impact
\$1.4 billion

OR



Jobs supported
14,374



Lehigh research developments

Fiscal year	Inventions	Patents	Licenses
2020-21	16	24	2
2021-22	22	25	3
2022-23	19	21	8
2023-24	30	35	1
Total	87	105	14

Source: Lehigh

In FY 2023-24, Lehigh spent \$24.4 million on payroll to support research activities. This, along with \$23.7 million in other research spending,³ created a net total of \$48.1 million in added income for the regional economy. This added income is equivalent to supporting 687 jobs.

Start-up and spin-off company impact



Lehigh creates an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of Lehigh start-up and spin-off companies created in the region. Start-up companies, created specifically to license and commercialize Lehigh technology or knowledge, have a strong and clearly defined link to Lehigh. Spin-off companies, created and fostered through university programs or faculty and alumni, have a clear but weaker link to Lehigh.

In FY 2023-24, Lehigh start-up and spin-off companies added \$796.9 million in income to the Lehigh Valley economy, which is equivalent to supporting 5,467 jobs. Of this added income, \$152.6 million was due to the start-up companies, with the remainder due to spin-off companies.

Visitor spending impact



Tens of thousands of visitors from outside the region were attracted to Lehigh during the analysis year to attend commencement, sports events, and other activities sponsored by the university. While in the region, visitors spent money for lodging, food, transportation, and other personal expenses. The off-campus expenditures of the university's out-of-region visitors generated a net impact of \$12.3 million in added income for the regional economy in FY 2023-24. This \$12.3 million in added income is equivalent to supporting 241 jobs.

Student spending impact




Around 88% of students attending Lehigh originated from outside the region in FY 2023-24, and some of these students relocated to the Lehigh Valley to attend Lehigh. These students may not have come to the region if the university did not exist. In addition, some in-region students, referred to as retained students, would

³ Excludes indirect costs because indirect costs are not necessarily spent during the analysis year.




have left the Lehigh Valley if not for the existence of Lehigh. While attending the university, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$28.3 million in added income for the regional economy in FY 2023-24, which supported 499 jobs in the Lehigh Valley.

Volunteerism impact

 Lehigh encourages its students and employees to volunteer in the Lehigh Valley, where they can work with businesses and organizations to help meet their goals. The work of these student and employee volunteers allows businesses and organizations to grow, increasing their output and impacting the economy at large. The work of Lehigh student and employee volunteers is equivalent to \$2.0 million in earnings. In terms of actual impact to the Lehigh Valley economy, Lehigh student and employee volunteers generated an impact of \$1.6 million in added income for the region in FY 2023-24, equivalent to supporting 26 jobs.

Alumni impact

 The education and training Lehigh provides for regional residents represents the economic impact unique to higher education. Since the establishment of the university, students have studied at Lehigh and entered the regional workforce with greater knowledge and new skills. Today, thousands of former Lehigh students are employed in the Lehigh Valley. As a result of their education from Lehigh, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2023-24, Lehigh alumni generated \$122.5 million in added income for the regional economy, which is equivalent to supporting 1,218 jobs.

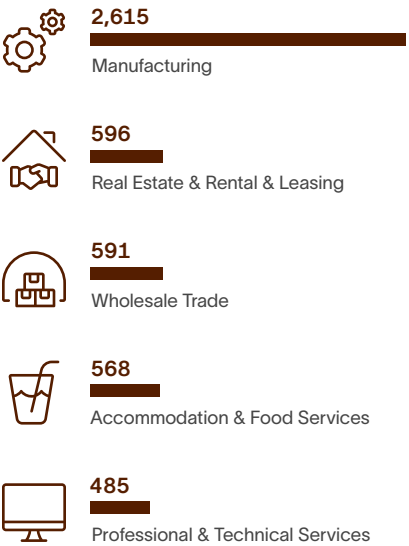
Total impact

Lehigh added \$1.4 billion in income to the Lehigh Valley economy during the analysis year, equal to the sum of the operations and research spending impacts; the start-up and spin-off company impact; the visitor and student spending impacts; the volunteerism impact; and the alumni impact. For context, the \$1.4 billion impact was equal to approximately 3.1% of the total gross regional product (GRP) of the Lehigh Valley. This contribution that the university provided on its own is larger than the entire Utilities industry in the region.

Lehigh's total impact can also be expressed in terms of jobs supported. The \$1.4 billion impact supported 14,374 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 31 jobs in the Lehigh Valley is supported by the activities of Lehigh and its students. In addition, the \$1.4 billion, or 14,374 supported jobs, stemmed from different industry sectors. For instance, among non-education industry sectors, the activities of Lehigh and its alumni in the Manufacturing industry sector supported 2,615 jobs in FY 2023-24. If the university did not exist, these impacts would not have been generated in the Lehigh Valley.



Lehigh impacts by industry (jobs supported)



One out of every 31 jobs in the Lehigh Valley is supported by the activities of Lehigh and its students.



Investment analysis

An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. The analysis presented here evaluates Lehigh as an investment from the perspectives of students and society in Pennsylvania. In addition, the benefits received by state taxpayers are measured. As with the economic impact analysis, this analysis considers only FY 2023-24 activities.

Student perspective



In FY 2023-24, Lehigh served 7,862 degree-seeking and 205 non-degree-seeking students. In order to attend the university, the students paid for tuition, fees, books, and supplies. They also took out loans and will incur interest on those loans. Additionally, students gave up money they would have otherwise earned had they been working instead of attending college. The total investment made by Lehigh's students in FY 2023-24 amounted to a present value of \$328.8 million, equal to \$253.4 million in out-of-pocket expenses (including future principal and interest on student loans) and \$75.5 million in forgone time and money.

In return for their investment, Lehigh's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average Lehigh bachelor's degree graduate from FY 2023-24 will see annual earnings that are \$30,800 higher than a person with a high school diploma or equivalent working in Pennsylvania. Over a working lifetime, the benefits of the bachelor's degree over a high school diploma will amount to an undiscounted value of \$1.3 million in higher earnings per graduate. The present value of the cumulative higher future earnings that Lehigh's FY 2023-24 students will receive over their working careers is \$766.7 million.

The students' benefit-cost ratio is 2.3. In other words, for every dollar students invest in Lehigh in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$2.30 in higher future earnings. Annually, the students' investment in Lehigh has an average annual internal rate of return of 10.6%, which is comparable to the U.S. stock market's 30-year average rate of return of 10.1%. Further, the acquired knowledge and hands-on experience, along with marketable skills, improve former students' quality of life beyond their increased earnings.

Students see a comparable rate of return for their investment in Lehigh



Average annual return
for Lehigh students
10.6%



Stock market 30-year
average annual return
10.1%



Interest earned on savings account
(national deposit rate)
0.5%

Source: Forbes' S&P 500, 1994-2023;
FDIC.gov, March 2023



Taxpayer perspective



Lehigh is a private university and receives limited state government funding, yet Pennsylvania taxpayers still receive a substantial amount of benefits from the university. These benefits to taxpayers consist primarily of taxes that the state government will collect from the added revenue created in the state. As Lehigh students will earn more, they will make higher tax payments throughout their working lives. Students' employers will also make higher tax payments as they increase their output and purchases of goods and services. By the end of the FY 2023-24 students' working lives, the state government will have collected a present value of \$99.8 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of Lehigh students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that Lehigh students receive will generate savings in three main categories: 1) health care, 2) justice system, and 3) income assistance. Improved health will lower students' demand for national health care services. In addition, costs related to the justice system will decrease. Lehigh students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. For a list of study references, contact the university for a copy of the main report. Altogether, the present value of the benefits associated with an education from Lehigh will generate \$24.4 million in savings to state taxpayers.

Total taxpayer benefits amount to \$124.3 million, the present value sum of the added tax revenue and public sector savings.

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Social perspective

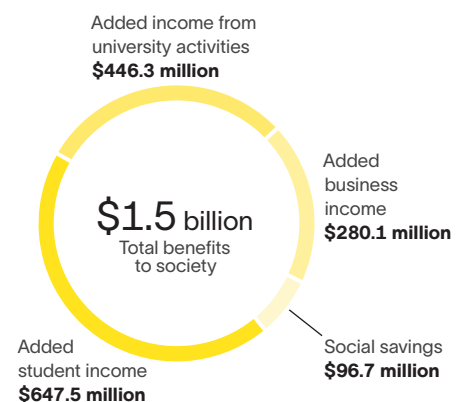


Society as a whole in Pennsylvania benefits from the presence of Lehigh in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to the added income from students' increased lifetime earnings (added student income) and increased business output (added business income), which raise economic prosperity in Pennsylvania.

Benefits to society also consist of the savings generated by the improved lifestyles of Lehigh students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are distinct from the costs avoided by the taxpayers outlined above. Health care savings include avoided medical costs associated with smoking, obesity, substance abuse, and depression. Justice system savings include avoided costs to the government and society due to less judicial activity. Income assistance savings include reduced welfare and unemployment claims. For a list of study references, contact the university for a copy of the main report.

Altogether, the social benefits of Lehigh equal a present value of \$1.5 billion. These benefits include \$647.5 million in added student income, \$280.1 million in added

Social benefits in Pennsylvania from Lehigh



Source: Lightcast impact model

business income, \$446.3 million in added income from university activities, as well as \$96.7 million in social savings related to health, the justice system, and income assistance in Pennsylvania. People in Pennsylvania invested a present value total of \$581.2 million in Lehigh in FY 2023-24. The cost includes all the university expenditures, student expenses, and student opportunity costs which together represent social costs.


The benefit-cost ratio for society is 2.5, equal to the \$1.5 billion in benefits divided by the \$581.2 million in costs. In other words, for every dollar invested in Lehigh, people in Pennsylvania will receive a cumulative value of \$2.50 in benefits. The benefits of this investment will occur for as long as Lehigh’s FY 2023-24 students remain employed in the state workforce.



Summary of investment analysis results

The results of the analysis demonstrate that Lehigh is a strong investment for students and society and generate substantial benefits for taxpayers. As shown, students receive a great return for their investments in an education from Lehigh. At the same time, society’s investment in Lehigh returns more to Pennsylvania than it costs and creates a wide range of social benefits throughout the state.

Summary of investment analysis results



Student perspective

Present value benefits

\$766.7 million

Present value costs

\$328.8 million

Net present value

\$437.8 million

Benefit-cost ratio	Rate of return
2.3	10.6%



Taxpayer perspective

Present value benefits

\$124.3 million



Social perspective

Present value benefits

\$1.5 billion

Present value costs

\$581.2 million

Net present value

\$889.4 million

Benefit-cost ratio	Rate of return
2.5	n/a*

* The rate of return is not reported for the social perspective because the beneficiaries are not necessarily the same as the original investors.

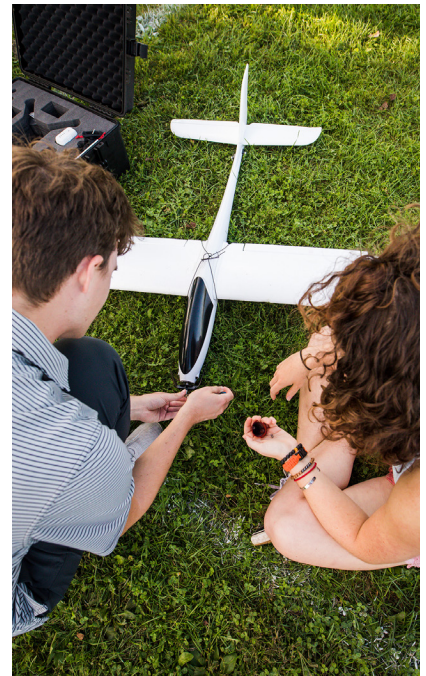
Conclusion

*The results of this study demonstrate that Lehigh creates value from **multiple perspectives**.*

The university benefits regional businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained workers to the workforce. Lehigh enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential and make a lasting impact. The university benefits state taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, Lehigh benefits society as a whole in Pennsylvania by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students.

About the study

Data and assumptions used in the study are based on several sources, including the FY 2023-24 academic and financial reports from Lehigh, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Lightcast's Multi-Regional Social Accounting Matrix model, and a variety of studies and surveys relating education to social behavior. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of economic impact and investment effectiveness. For a full description of the data and approach used in the study, please contact the university for a copy of the main report.



Lightcast provides colleges and universities with labor market data that help create better outcomes for students, businesses, and communities. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Hundreds of institutions use Lightcast to align programs with regional needs, drive enrollment, connect students with in-demand careers, track their alumni's employment outcomes, and demonstrate their institution's economic impact on their region. Visit lightcast.io/solutions/education to learn more or connect with us.