



The Economic Value of UH Health on the Greater Houston Region

Executive Summary

UH Health is an enterprise at the University of Houston that offers affordable community health care for UH students, employees, and the surrounding communities through its Eye Institute, clinical services, and Student Health Center. UH Health also educates students entering health care-related fields through its wide variety of programs in areas such as psychology, medicine, nursing, optometry, and pharmacy. The enterprise plays a key role in helping students increase their employability and achieve their individual potential. It facilitates new research and company developments and also draws students to the region, generating new dollars and opportunities for the Greater Houston Region. UH Health provides students with the education, training, and skills they need to have fulfilling and prosperous careers in health care. Furthermore, UH Health is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

UH Health influences both the lives of its students and the regional economy. The enterprise supports a variety of industries in the Greater Houston Region,¹ serves regional businesses, and benefits society as a whole in Texas from an expanded economy and improved quality of life. The benefits created by UH Health even extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by UH Health on the business community and the benefits the enterprise generates in return for the investments made by its key stakeholder groups—students, taxpayers, and society. The following two analyses are presented:



Economic impact analysis



Investment analysis

All results reflect employee, student, and financial data, provided by UH, for fiscal year (FY) 2017-18. Impacts on the Greater Houston Region economy are reported under the economic impact analysis and are measured in terms of added income. The returns on investment to students, taxpayers, and society in Texas are reported under the investment analysis.

*The value of UH Health influences both the **lives of its students** and the **regional economy**.*

¹ For the purposes of this analysis, the Greater Houston Region is comprised of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties.



Economic impact analysis



UH Health promotes economic growth in the Greater Houston Region through its direct expenditures and the resulting expenditures of students and regional businesses. UH Health serves as an employer and buyer of goods and services for its day-to-day and research operations. Numerous start-up companies have formed as a result of programs and knowledge at UH Health. The enterprise's reputation and activities attract students from outside the Greater Houston Region, whose expenditures benefit regional vendors. In addition, UH Health is a primary source of higher education to the Greater Houston Region residents wanting to enter the health care field and a supplier of trained professionals to regional health care industries, enhancing overall productivity in the regional workforce.

Operations Spending Impact



UH Health adds economic value to the Greater Houston Region as an employer of regional residents and a large-scale buyer of goods and services. In FY 2017-18, the enterprise employed 581 full-time and part-time faculty and staff (not including research employees), 97% of whom lived in the Greater Houston Region. Total payroll at UH Health was \$61.3 million (excluding payroll from research employees), much of which was spent in the region for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the enterprise spent \$33.9 million on day-to-day expenses related to facilities, supplies, and professional services (excluding research expenditures).

UH Health's day-to-day operations spending added \$84.4 million in income to the region during the analysis year. This figure represents the enterprise's payroll, the multiplier effects generated by the in-region spending of the enterprise and its employees, and a downward adjustment to account for funding that the enterprise received from regional sources. The \$84.4 million in added income is equivalent to supporting 824 jobs in the region.

IMPACTS CREATED BY UH
IN FY 2017-18



\$84.4 million

Operations Spending Impact



\$38.5 million

Research Spending Impact



\$13.7 million

Construction Spending Impact



\$21.7 million

Start-up Company Impact



\$21.4 million

Student Spending Impact



\$759.3 million

Alumni Impact



\$939.1 million

TOTAL IMPACT

— OR —

12,991

JOBS SUPPORTED

Research Spending Impact



Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services. In FY 2017-18, UH Health spent \$15.1 million on payroll to support research activities. This, along with \$17.4 million in other research spending, created a net total of \$38.5 million in added income for the regional economy. This added income is equivalent to supporting 414 jobs.

Construction Spending Impact



UH Health commissioned contractors to build or renovate its facilities in FY 2017-18. The quick infusion of income and jobs that occurred in the regional economy as a result of this construction spending is considered short-term due to the one-time nature of such projects. Nonetheless, the enterprise's construction spending had a positive impact on the regional economy in FY 2017-18, equal to \$13.7 million in added income and equivalent to supporting 184 jobs.

Start-up Company Impact



UH Health creates an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of UH Health start-up companies created in the region. Start-up companies are created to license and commercialize UH Health technology or knowledge. In FY 2017-18, UH Health start-up companies added \$21.7 million in income to the Greater Houston Region economy, which is equivalent to supporting 47 jobs.

Student Spending impact



Around 21% of students attending UH Health originated from outside the region in FY 2017-18, and some of these students relocated to the Greater Houston Region to attend UH Health. These students may not have come to the region if UH Health did not exist. In addition, some in-region students, referred to as retained students, would have left the Greater Houston Region if not for the existence of UH Health. While attending UH Health, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$21.4 million in added income for the regional economy in FY 2017-18, which supported 494 jobs in the Greater Houston Region.

Alumni Impact



The education and training UH Health provides for regional residents has the greatest impact. Since its establishment, students have studied at UH Health and entered the regional workforce with greater knowledge and new skills. Today, thousands of former UH Health students are employed in the Greater Houston Region. As a result of their UH Health educations, the students receive higher earnings and increase the productivity of

the businesses that employ them. In FY 2017-18, UH Health alumni generated \$759.3 million in added income for the regional economy, which is equivalent to supporting 11,026 jobs.

Total Impact

UH Health added \$939.1 million in income to the Greater Houston Region economy during the analysis year, equal to the sum of the operations, research, construction, start-up company, student spending, and the alumni impacts.

UH Health’s total impact can also be expressed in terms of jobs supported. The \$939.1 million impact supported 12,991 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. In addition, the \$939.1 million, or 12,991 supported jobs, impacted regional industries in different ways. UH Health supported the most jobs in the Health Care & Social Assistance industry sector – supporting 8,081 jobs in FY 2017-18. These are impacts that would not have been generated without the enterprise’s presence in the Greater Houston Region.

TOP INDUSTRIES IMPACTED BY
UH HEALTH (JOBS SUPPORTED)





Investment Analysis

An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. If the benefits outweigh the costs, then the investment is financially worthwhile. The analysis presented here considers UH Health as an investment from the perspectives of students, taxpayers, and society in Texas.

Student perspective



In FY 2017-18, UH Health served 6,777 credit students. In order to attend UH Health, 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 UH Health's students in FY 2017-18 amounted to a present value of \$164.8 million, equal to \$60.8 million in out-of-pocket expenses (including future principal and interest on student loans) and \$104 million in forgone time and money.

In return for their investment, UH Health's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average UH Health bachelor's degree graduate from FY 2017-18 will see an increase in earnings of \$16,700 each year compared to a person with a high school diploma or equivalent working in Texas. During a working lifetime, the benefits of the bachelor's degree over a high school diploma will amount to an undiscounted value of \$734,800 in higher earnings per graduate. Altogether, UH Health's FY 2017-18 students will receive \$1.1 billion in higher future earnings during their working lives, as a result of their education and training at UH Health.

The students' benefit-cost ratio is 6.8. In other words, for every dollar students invest in UH Health, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$6.80 in higher future earnings. Annually, the students' investment in UH

STUDENTS SEE A HIGH
RATE OF RETURN FOR THEIR INVESTMENT
IN UH HEALTH.



20.2%

Average annual return for
UH Health students



10.1%

Stock market 30-year
average annual return

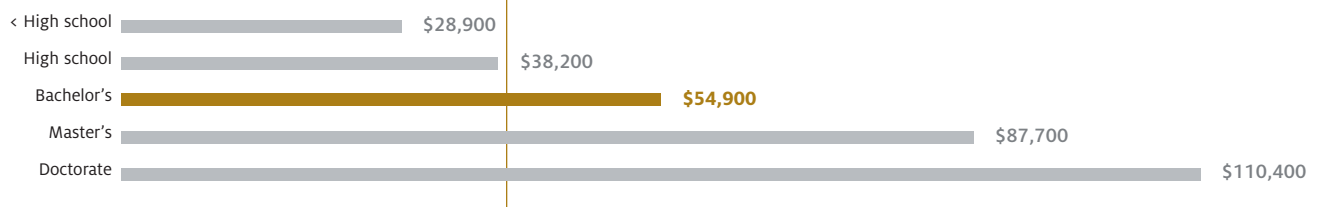


0.8%

Interest earned on savings account
(National Rate Cap)

Source: Forbes' S&P 500, 1987-2016. FDIC.gov, 7-2016.

The average bachelor's degree graduate from UH Health will see an increase in earnings of **\$16,700** each year compared to a person with a high school diploma or equivalent working in Texas.



Source: Emsi complete employment data.

Health has an average annual internal rate of return of 20.2%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.1%.

Taxpayer perspective



UH Health generates more in tax revenue than it takes. These benefits to

taxpayers consist primarily of taxes

that the state and local government will collect from the added revenue created in the state. As UH Health 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 2017-18 students' working lives, the state and local government will have collected a present value of \$272.2 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of UH Health students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. Students' UH Health educations will generate savings in three main categories: 1) health care, 2) crime, and 3) income assistance. Improved health will lower students' demand for national health care services. In addition, students will be less likely to interact with the criminal justice system, resulting in a reduced demand for law enforcement and victim costs. UH Health students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. Altogether, the present value of the benefits associated with a UH Health education will generate \$33.8 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$306 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$39.1 million, equal to the amount of state and local government funding UH Health received in FY 2017-18. These benefits and costs yield a benefit-cost ratio of 7.8. This means that for every dollar of public money invested in UH Health in FY 2017-18, taxpayers will receive a cumulative value of \$7.80 during the course of the students' working lives. The average annual internal rate of return for taxpayers is 16.3%, which compares favorably to other long-term investments in the public and private sectors.

Social perspective



Society as a whole in Texas benefits from the presence of UH Health in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to higher student earnings and increased business output, which raise economic prosperity in Texas.

*For every dollar of public money invested in UH Health, taxpayers will receive a cumulative value of **\$7.80** during the course of the students' working lives.*



STUDENT PERSPECTIVE

\$1.1 billion

Present value benefits

\$164.8 million

Present value costs

\$951.1 million

Net present value

Benefit-cost Ratio

Rate of Return

6.8

20.2%



TAXPAYER PERSPECTIVE

\$306 million

Present value benefits

\$39.1 million

Present value costs

\$266.9 million

Net present value

Benefit-cost Ratio

Rate of Return

7.8

16.3%



SOCIAL PERSPECTIVE

\$4.5 billion

Present value benefits

\$280.2 million

Present value costs

\$4.2 billion

Net present value

Benefit-cost Ratio

Rate of Return

16.1

n/a*

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

Benefits to society also consist of the savings generated by the improved lifestyles of UH Health 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, alcohol dependence, obesity, drug abuse, and depression. Savings related to crime include reduced security expenditures and insurance administration, lower victim costs, and reduced expenditures by the criminal justice system. Income assistance savings include reduced welfare and unemployment claims.

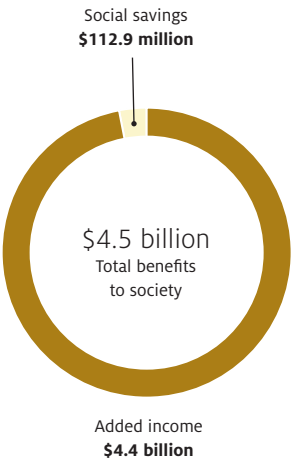
Altogether, the social benefits of UH Health equal a present value of \$4.5 billion. These benefits include \$4.4 billion in added income through students’ increased lifetime earnings and increased business output, as well as \$112.9 million in social savings related to health, crime, and income assistance in Texas. People in Texas invested a present value total of \$280.2 million in UH Health in FY 2017-18. The cost includes all the enterprise and student costs.

The benefit-cost ratio for society is 16.1, equal to the \$4.5 billion in benefits divided by the \$280.2 million in costs. In other words, for every dollar invested in UH Health, people in Texas will receive a cumulative value of \$16.10 in benefits. The benefits of this investment will occur for as long as UH Health’s FY 2017-18 students remain employed in the state workforce.

Summary of investment analysis results

The results of the analysis demonstrate that UH Health is a strong investment for all three major stakeholder groups—students, taxpayers, and society. As shown, students receive a great return for their investments in a UH Health education. At the same time, taxpayers’ investment in UH Health returns more to government budgets than it costs and creates a wide range of social benefits throughout Texas.

SOCIAL BENEFITS IN TEXAS
FROM UH HEALTH



Conclusion

The results of this study demonstrate that UH Health creates value from multiple perspectives. The enterprise benefits regional businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained professionals to the workforce. UH Health enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The enterprise benefits state and local taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, UH Health benefits society as a whole in Texas 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 2017-18 academic and financial reports from UH Health, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Emsi'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 written for the economic value of the entire university.

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

