

2014 ECONOMIC AND COMMUNITY IMPACT REPORT OF THE UNIVERSITY OF WASHINGTON

December 2014



UNIVERSITY *of*
WASHINGTON

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University of Washington Annual Impact on the State Economy

\$12.5 billion in total economic impact generated by the UW in the state of Washington.

\$565.7 million in tax revenue to state and local governments, including sales, property, and business tax payments.

More than 15,000 degrees conferred in 2013-2014.
74% of alumni stay in the state of Washington.

Through donations and volunteerism combined, UW employees and students contributed more than **\$149 million** to local charitable organizations in 2013-2014.

In 2013-2014, UW Medicine provided more than **\$276 million** in charitable care to residents in the state of Washington.

The UW is the
third-largest
nonfederal employer
in the state of
Washington.
The UW supports
79,331 jobs across
the state including
45,330 jobs related
to UW Medicine.

EXECUTIVE REPORT

INTRODUCTION

The University of Washington (UW) is a multi-campus university in Seattle, Tacoma, and Bothell, as well as a world-class academic medical center. The UW has 16 colleges and schools and offers 1,800 undergraduate courses each quarter. The UW confers more than 15,000 bachelors, masters, doctoral, and professional degrees annually. Though its primary missions are education, research, and community service, an institution as vast as the UW is central to the fiscal health and well-being of the state of Washington.

The results presented in this economic impact study are generated on an annual basis. The economic impact in future years can either be higher or lower, based on the number of students, capital expansion, increases in external research, and the level of state appropriations. **The operations of the University of Washington, the regional campuses, and UW Medicine generate \$12.5 billion in economic impact and sustain 79,331 jobs throughout the state.**

PROJECT OVERVIEW

In May 2014, Tripp Umbach was retained by the UW to update its 2010 analysis of the economic, employment, and government revenue impacts of operations and research of all of its campuses. The overall economic and fiscal impact that the University of Washington has on the vitality of the region and state includes the following elements:

- Business volume impacts (analysis includes collection of information regarding capital expenditures, operational expenditures, salary data, and state and regional business volumes).
- The direct and indirect employment impacts of the University.
- The government revenue impact of the UW at the local and state levels.
- Additional impacts to the statewide economy including: commercialization, charitable giving, volunteerism, philanthropy, alumni, and athletics.

UW ECONOMIC IMPACT STUDY OVERVIEW

STUDY PERIOD:
Fiscal Year 2013 - 2014
(FY 14)

THIS STUDY INCLUDES:
UW Seattle, UW Bothell,
and UW Tacoma

STUDY GEOGRAPHY:
State of Washington,
Puget Sound Region,
including Seattle, Bothell,
and Tacoma

METHODOLOGY:
IMPLAN

METHODOLOGY EMPLOYED IN THE ECONOMIC IMPACT STUDY

This economic impact analysis measures the effect of direct and indirect/induced business volume and government revenue impacts for all of the UW's operations throughout Washington. The methodology employed in the calculation of these impacts is IMPLAN.¹ Primary data utilized to conduct the analysis was collected from the University of Washington. Data included: capital expenditures, operational expenditures, jobs, payroll and benefits, and taxes. The approach taken on this study was decidedly conservative. However, the impact findings compare favorably to other top research universities in the country.

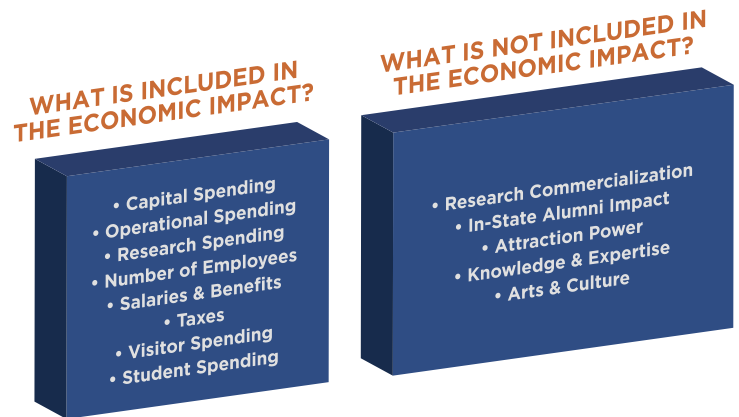
Economic impact begins when an organization spends money. Studies measuring economic impact capture the direct economic impact of an organization's spending, plus additional indirect and induced spending in the economy as a result of direct spending. Economic impact has little to do with dollars collected by institutions.

Total economic impact measures the dollars that are generated within Washington due to the presence of the UW. This includes not only spending on goods and services from a variety of vendors within the state and the spending of its faculty, staff, students, and visitors, but also the business volume generated by businesses within Washington that benefit from the UW's spending. It is important to remember that not all dollars spent by a university remain in its home state. Dollars that "leak" out of the state in the form of purchases from out-of-state vendors are not included in the UW's economic impact on the state. The multipliers utilized in this study are derived from the IMPLAN software.

Key economic impact findings presented within the summary include the total current (FY14)² impact of the UW's operations on employment in Washington, as well as the revenue impact on state and local governments. Three types of economic impact are calculated in the study, including: direct, indirect, and induced.

For more information on the methodology used to complete this study, see Appendix B.

COMPONENTS OF ECONOMIC IMPACT



DIRECT vs. INDIRECT vs. INDUCED IMPACT



1. Minnesota IMPLAN Group, Inc. (MIG) is the corporation that is responsible for the production of IMPLAN (IMpact analysis for PLANning) data and software. IMPLAN is a micro-computer-based, input-output modeling system. With IMPLAN, one can estimate Input-Output models of up to 528 sectors for any region consisting of one or more counties. IMPLAN includes procedures for generating multipliers and estimating impacts by applying final demand changes to the model.

2. Fiscal Year 2014 represents the period of time from July 1, 2013 to June 30, 2014 (FY14).

UW IS INTEGRAL TO THE STATE'S ECONOMIC SUCCESS

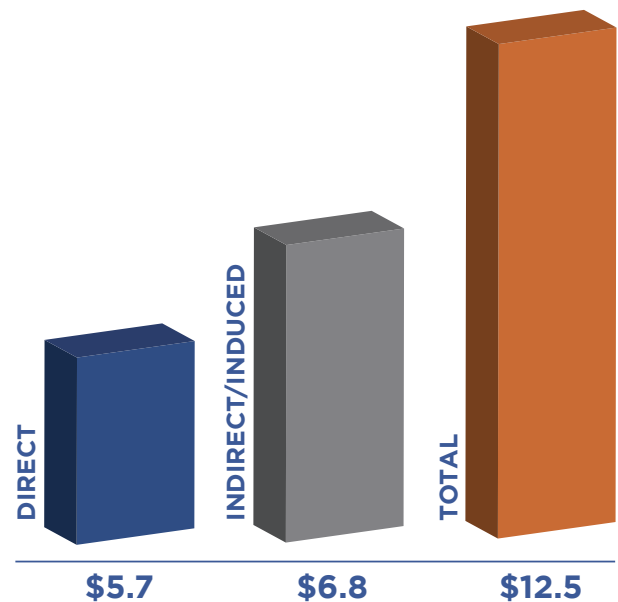
Operations of the UW directly or indirectly impact residents throughout Washington, generating **\$12.5 billion annually** in overall economic impact. The University of Washington affects business volume in Washington in three ways:

1. Direct expenditures for goods and services, capital, and pay & benefits by the UW.
2. Indirect expenditures by suppliers within the state of Washington to support the operations of the UW.
3. Induced spending within the state of Washington by UW employees, visitors, students, and employees at UW's suppliers. The businesses and individuals that receive direct payments re-spend this money within the state, thus creating the need for even more jobs.

As a result of expenditures on goods and services by the UW, its faculty, staff, students, and visitors, the overall economic impact of University of Washington operations on the state of Washington in FY14 was \$12.5 billion (\$5.7 billion direct impact and \$6.8 billion indirect/induced). Included within this impact, UW Medicine has an overall economic impact of **\$7.8 billion** (\$3.8 direct and \$4.0 indirect). For every \$31 in the state's economy, \$1 is connected to the UW.³

The table below shows the top 10 industries in terms of economic output impacted as a result of UW's operations in the statewide economy.

OVERALL ECONOMIC IMPACT OF UW (IN BILLIONS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

TOP 10 SECTORS IN THE WASHINGTON ECONOMY IMPACTED BY UW OPERATIONS (BY ECONOMIC OUTPUT)

Sector Description	Total Economic Output
<i>Colleges, universities, and professional schools</i>	<i>\$3,720,285,077</i>
<i>Private hospitals</i>	<i>\$2,229,484,267</i>
<i>Real estate establishments</i>	<i>\$884,546,314</i>
<i>Imputed rental activity for owner-occupied dwellings</i>	<i>\$482,426,974</i>
<i>Food services and drinking places</i>	<i>\$339,871,409</i>
<i>Wholesale trade businesses</i>	<i>\$306,191,198</i>
<i>Offices of physicians, dentists, and other health practitioners</i>	<i>\$219,118,690</i>
<i>Telecommunications</i>	<i>\$204,328,878</i>
<i>Monetary authorities and depository credit intermediation activities</i>	<i>\$185,411,560</i>
<i>Other state and local government enterprises</i>	<i>\$159,447,611</i>

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

In FY14, the UW received \$253,896,000 in direct operating appropriations from the state of Washington. As a result of the University's expenditures and operations throughout Washington, the state realizes a significant return on its investment. Given the UW's ability to effectively leverage this state appropriation beyond its fundamental education and research missions through strategic partnerships and relationships, the return on the state's investment is much greater.

3. Total state of Washington gross domestic product is \$387,184,969,040.

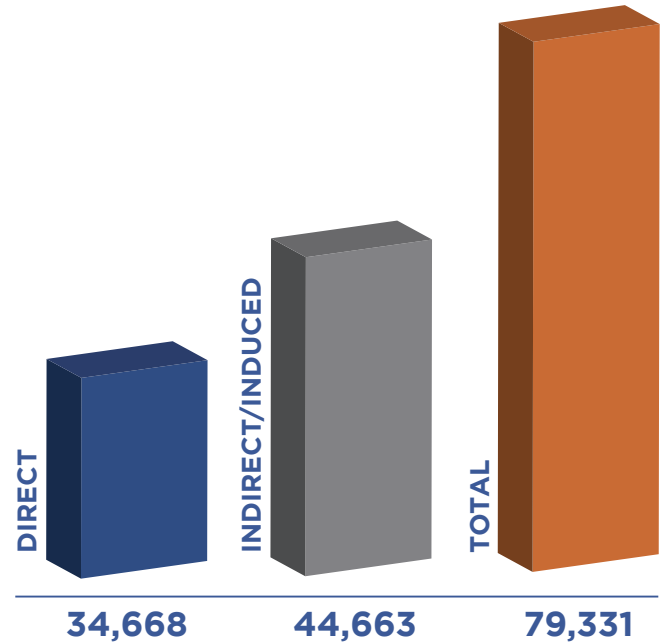
UW SUPPORTS JOBS

The University of Washington supports **79,331 jobs** in the state of Washington (45,330 jobs are UW Medicine-related). **One out of every 48 jobs in the state is attributable to UW.**⁴

These jobs (both full-time and part-time) include not only direct employment by the University, but also indirect and induced jobs created by supply and equipment vendors, contractors, and laborers for the construction and renovation of University facilities, and jobs created in the community at hotels, restaurants, and retail stores in support of the University's workforce and its visitors.

The University of Washington directly employed 34,668 people during FY14 (19,862 jobs are UW Medicine-related). To put this in perspective, the University of Washington is the **third-largest nonfederal employer** in the state of Washington.⁵ The University of Washington supports thousands of jobs statewide in virtually every sector of the Washington economy in areas such as construction, business and professional services, restaurants and hotels, information technology, security, and temporary employment companies. These indirect/induced jobs (44,663 jobs) support the more than 34,668 jobs held by Washington residents directly employed by the University.

OVERALL EMPLOYMENT IMPACT OF UW (IN JOBS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

ONE OUT OF 48 JOBS IN THE STATE OF WASHINGTON IS ATTRIBUTABLE TO THE UW



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

4. IMPLAN Data for total civilian employment in the state of Washington was 3,833,798.

5. Washington Top 50 Employers, 2nd Quarter 2013. Center for Workforce Information & Analysis. 01/22/2014

The table below shows the top 10 industries impacted by the operations of the University of Washington, in terms of employment. This represents the number of jobs generated in a multitude of sectors throughout the Washington economy.

**TOP 10 SECTORS IN THE WASHINGTON ECONOMY
IMPACTED BY UW OPERATIONS (BY EMPLOYMENT OUTPUT)**

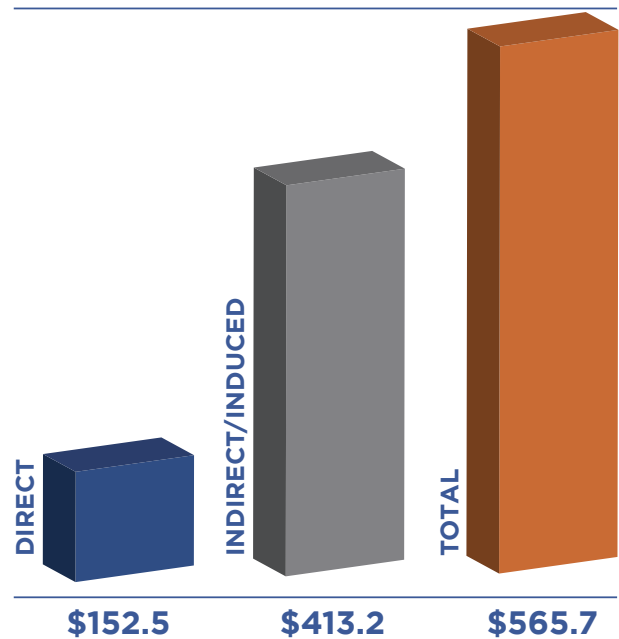
Sector Description	Total Employment
<i>Colleges, universities, and professional schools</i>	<i>21,177</i>
<i>Private hospitals</i>	<i>14,924</i>
<i>Food services and drinking places</i>	<i>4,953</i>
<i>Real estate establishments</i>	<i>4,858</i>
<i>Offices of physicians, dentists, and other health practitioners</i>	<i>1,694</i>
<i>Wholesale trade businesses</i>	<i>1,342</i>
<i>Services to buildings and dwellings</i>	<i>1,037</i>
<i>Other private educational services</i>	<i>1,015</i>
<i>Nursing and residential care facilities</i>	<i>967</i>
<i>Employment services</i>	<i>934</i>

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW STRENGTHENS STATE AND LOCAL GOVERNMENTS

It is a common misperception that public universities do not generate tax revenue. State and local government revenues attributable to the presence of the University of Washington totaled **\$565.7 million (\$152.5 million direct)** in FY14. Through its local spending, as well as direct and indirect support of jobs, the presence of the University stabilizes and strengthens the local and statewide tax base. The UW is an integral part of the state's economy – generating revenue, jobs, and spending. Specific taxes, generated at the state and local level, are presented in the table below.

TOTAL STATE AND LOCAL TAX REVENUE GENERATED (IN MILLIONS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

STATE AND LOCAL TAXES GENERATED BY UW OPERATIONS

Description	Employee Compensation	Tax on Production and Imports	Households	Corporations
<i>Dividends</i>				\$653,390
<i>Social Ins Tax- Employee Contribution</i>	\$3,469,700			
<i>Social Ins Tax- Employer Contribution</i>	\$6,821,784			
<i>Tax on Production and Imports: Sales Tax</i>		\$333,403,461		
<i>Tax on Production and Imports: Property Tax</i>		\$160,104,323		
<i>Tax on Production and Imports: Motor Vehicle Lic</i>		\$4,039,334		
<i>Tax on Production and Imports: Severance Tax</i>		\$695,139		
<i>Tax on Production and Imports: Other Taxes</i>		\$26,453,556		
<i>Tax on Production and Imports: S/L NonTaxes</i>		\$4,558,849		
<i>Corporate Profits Tax</i>				
<i>Personal Tax: Income Tax</i>				
<i>Personal Tax: NonTaxes (Fines- Fees)</i>			\$14,182,385	
<i>Personal Tax: Motor Vehicle License</i>			\$6,258,513	
<i>Personal Tax: Property Taxes</i>			\$2,316,670	
<i>Personal Tax: Other Tax (Fish/Hunt)</i>			\$2,715,321	
TOTAL STATE AND LOCAL TAX	\$10,291,484	\$529,254,662	\$25,472,889	\$653,390

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW RESEARCH GENERATES A FAR REACHING IMPACT

Research is foundational to the UW's mission. The University's track record of receiving competitive federal research funding has been critical for its ability to invest in targeted initiatives and research to stay globally competitive. The UW has tripled its research funding over the last 20 years, and in FY14, received an astonishing \$1.385 billion in sponsored research funds. From 1974-2009, UW received more federal research funding than any other U.S. public university, and since 2009, has been in the top two nationally.

This impressive research funding has a direct and lasting impact on the educational mission. In FY14, it is estimated that approximately \$250 million from research funding supported experiential learning for the UW students. Thousands of students each year gain hands-on experience in research projects, enriching their education and making them even more attractive to employers.

There are over 285 specialized research centers at UW and over 20 National Institutes of Health Research Cores and Centers of Excellence, including the Institute for Translational Health Sciences, one of 60 NIH-funded national Clinical and Translational Sciences Awards (CTSA).

AWARDS BY UNIT FISCAL YEAR 2014

Unit	2014
<i>School of Medicine</i>	<i>\$750,941,985</i>
<i>College of the Environment</i>	<i>\$115,329,001</i>
<i>College of Engineering</i>	<i>\$113,301,093</i>
<i>School of Public Health</i>	<i>\$95,119,582</i>
<i>College of Arts and Sciences</i>	<i>\$81,365,728</i>
<i>Office of Research</i>	<i>\$62,958,192</i>
<i>Health Sciences Administration</i>	<i>\$42,826,858</i>
<i>College of Education</i>	<i>\$24,029,769</i>
<i>School of Pharmacy</i>	<i>\$18,071,022</i>
<i>School of Social Work</i>	<i>\$14,379,375</i>
<i>School of Nursing</i>	<i>\$14,294,769</i>
<i>Dean of Libraries</i>	<i>\$8,692,211</i>
<i>Office of Minority Affairs & Diversity</i>	<i>\$7,449,317</i>
<i>Graduate School</i>	<i>\$6,673,210</i>
<i>UW Bothell</i>	<i>\$6,641,423</i>
<i>UW Finance and Facilities</i>	<i>\$4,000,760</i>
<i>School of Dentistry</i>	<i>\$3,960,006</i>
<i>The Information School</i>	<i>\$3,405,506</i>
<i>Evans School of Public Affairs</i>	<i>\$2,762,217</i>
<i>UW Tacoma</i>	<i>\$2,762,066</i>
<i>School of Law</i>	<i>\$1,604,092</i>
<i>College of Built Environments</i>	<i>\$1,491,983</i>
<i>Foster Business School</i>	<i>\$1,451,363</i>
<i>UW Information Technology</i>	<i>\$1,000,000</i>
<i>Medical Centers</i>	<i>\$496,769</i>
<i>Undergraduate Academic Affairs</i>	<i>\$280,609</i>
<i>Center for Commercialization</i>	<i>\$100,000</i>
<i>UW Student Life</i>	<i>\$65,969</i>
<i>Vice President for Development</i>	<i>\$25,000</i>
GRAND TOTAL	\$1,385,479,884

Source: University of Washington

Leading centers include:

- Institute for Protein Design
- Center for Integrative Neuroscience
- West Coast Poverty Center
- Center for Advanced Materials in Transport Aircraft Structures (AMTAS)
- Molecular Engineering and Sciences Institute
- Center for Sensimotor Neural Engineering
- Center for Enabling New Technologies Through Catalysis
- Learning in Informal and Formal Environments Center
- Polar Science Center
- Center for Information Assurance & Cybersecurity
- Center for Law in Science and Global Health
- Center for AIDS Research (CFAR)
- Institute for Stem Cell and Regenerative Medicine (ISCRM)
- Center for Intracellular Delivery of Biologics (CIDB)
- Institute for Health Metrics and Evaluation (IHME)
- Indigenous Wellness Research Institute
- Comparative Law and Societies Studies Center
- Pacific Northwest Center for Construction Research and Education
- Cleary Community for 21st Century Youth Literacy
- Center for Emerging and Re-emerging Infectious Diseases
- Pacific Northwest Udall Parkinson's Disease Center (PANUC)
- Centers for Comparative and Health Systems Effectiveness
- Pharmacogenomics Research Network (PGRN)
- UW Global Center for Integrated Health of Women, Adolescents, and Children
- Institute for Learning and Brain Sciences
- Resuscitation Outcomes Consortium (ROC)
- Institute for Nuclear Theory (INT)
- Center for Experimental Nuclear Physics and Astrophysics (CENPA)
- Pacific Northwest Cooperative Ecosystems Study Center
- Harborview Injury Prevention and Research Center
- Diabetes and Obesity Center of Excellence

Research at UW Medicine occurs across 30 academic departments and throughout numerous centers and institutes. The UW Medicine research community has access to comprehensive instrumentation, facilities, and services throughout the School's research sites and across the academic campus. The UW School of Medicine also provides advanced scientific training toward Ph.D. degrees in biomedical research in an outstanding resource-rich, collaborative environment dedicated to basic and translational research. UW Medicine, together with all of its affiliates, received more than \$557.7 million in NIH research funds.

These sponsored research dollars enter the Washington economy from a wide variety of agencies and organizations, including the National Institutes of Health and the National Science Foundation. This research funding is generated by a wide variety of departments and colleges throughout the University system.

The UW's competitive strength is due in part to its support of technology that enables research collaboration within the UW community and its partners around the world. UW's goals are to provide students with the tools they need for academic success and faculty with the collaborative tools and networks necessary to support research and sophisticated teaching methods.

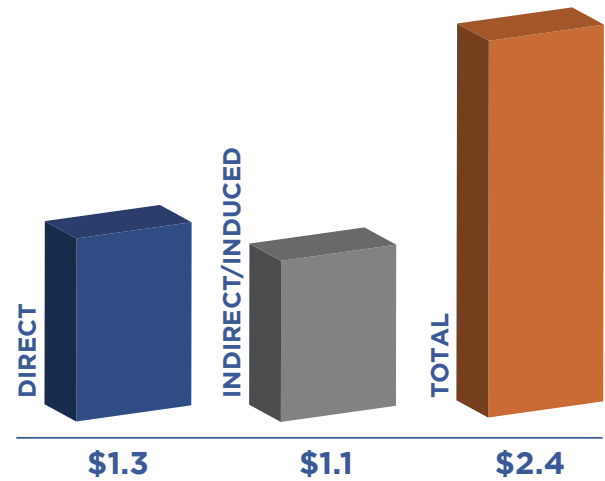
The UW's research expenditures totaled \$1.27 billion during FY14 resulting in an overall economic impact of \$2.4 billion utilizing IMPLAN to calculate the total impact of research expenditures.

The University's research operations make tangible and quantifiable economic contributions. Along with creating jobs for research staff and support personnel, UW scientists are contributing to new product development and technology commercialization. Knowledge and technology transfers have helped to start commercial ventures that promote entrepreneurship, economic development, and job creation.

In FY14, the University of Washington received \$556.2 million in National Institutes of Health (NIH) funding. If all UW Medicine affiliates are included, the total amount of NIH funding for that year grows to \$719.9 million.⁶ The University is the second largest of all U.S. university recipients (first among public universities) of federal science and engineering research and development obligations, according to the National Science Foundation's latest published information (2014 figures).

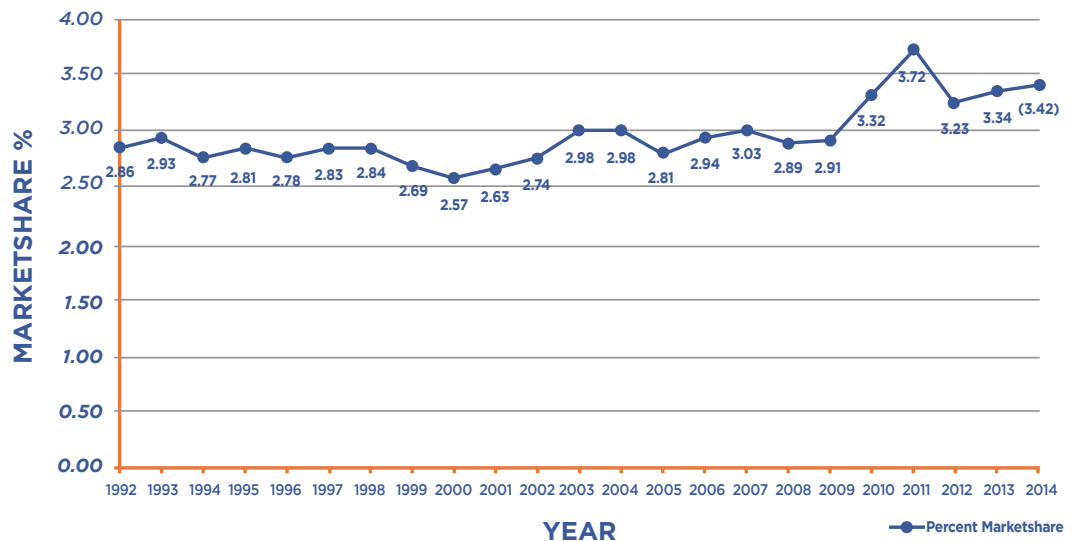
The figures to the right illustrate the UW's continued ability to secure sponsored funding for research. As competition for research dollars grows and the funding decreases, the UW is able to maintain a level of research dollar attraction that is the aspiration of universities throughout the world. In a dwindling pool of federal research dollars, the UW is able to maintain a 3.42% market share of all federal research dollars awarded.

OVERALL ECONOMIC IMPACT OF THE UW RESEARCH (IN BILLIONS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW MARKETSHARE OF FEDERAL RESEARCH FUNDING



Originating sponsor funds
Adjusted to exclude financial aid awards to institution

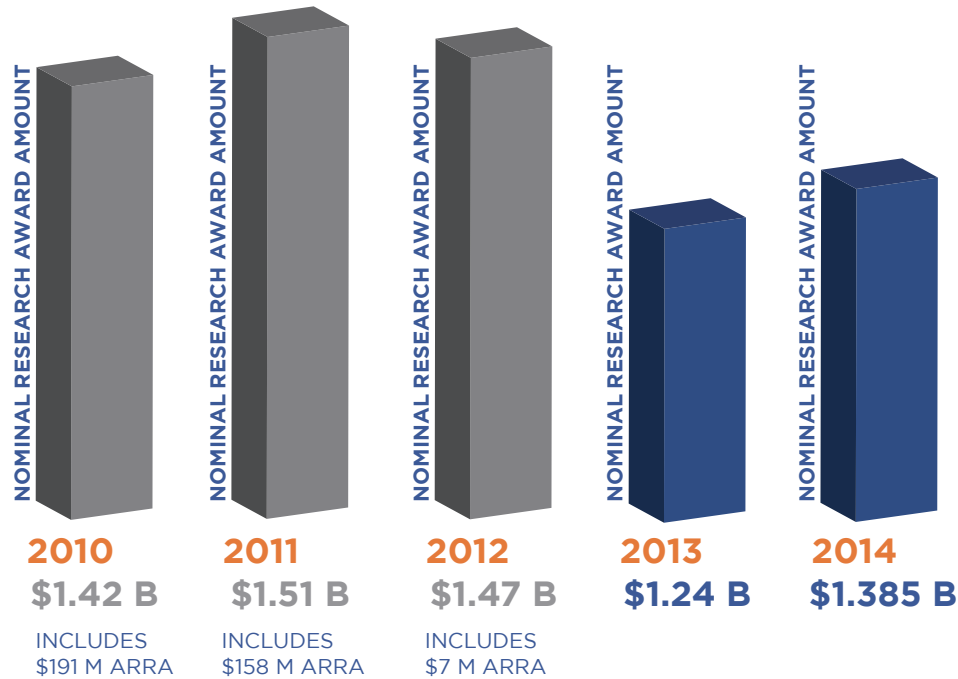
Source: University of Washington

Based on National Science Foundation, National Center for Science and Engineering Statistics: Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions: FY 2009. Detailed Statistical Tables NSF 13-303. <http://www.nsf.gov/statistics/nsf13303/> and Federal Funds for Research and Development: Fiscal Years 2011-13, Detailed Statistical Tables. 16-18. 2014 estimate based on AAAS funding trends report.

6. Source: University of Washington

Since 2010, research funding at UW has been over \$1.2 billion. The graphic below shows the nominal research amount awarded to the UW by state fiscal year.

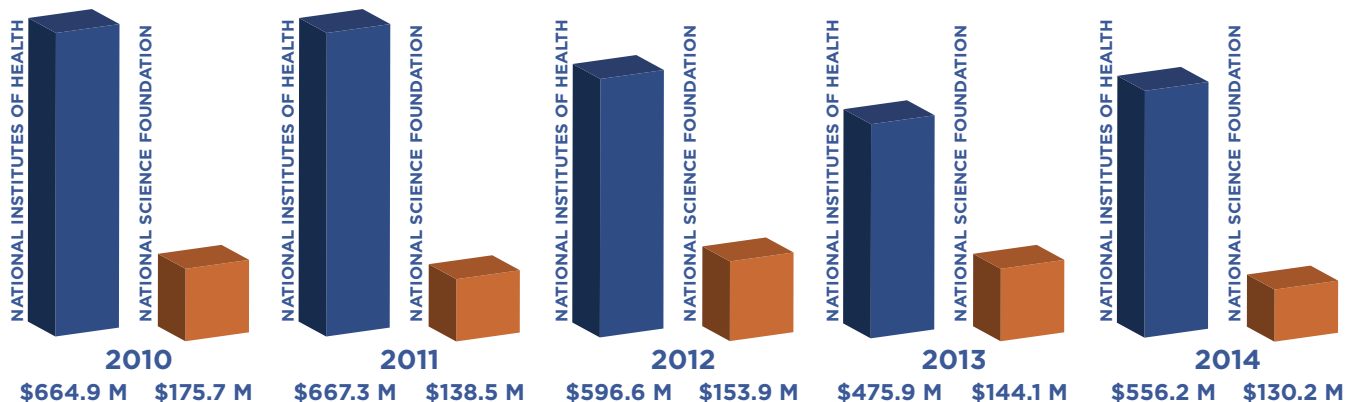
AWARDS FISCAL YEARS 2010-2014 (STATE FISCAL YEAR)



Source: University of Washington

UW continues to be a leader in receiving sponsored research dollars from the NSF and NIH securing \$556.2 million from the NIH and \$130.2 million from the NSF in 2014.

NIH AND NSF FUNDING FISCAL YEARS 2010-2014 (ORIGINATING)



Source: University of Washington

UW RESEARCH CREATES AND SUSTAINS HIGH-QUALITY JOBS

In FY14, the UW's operational and capital expenditures for sponsored research and other sponsored programs supported 14,427 jobs.

These research employment numbers represent 18.2% of the UW's total employment impact of 79,331 jobs.

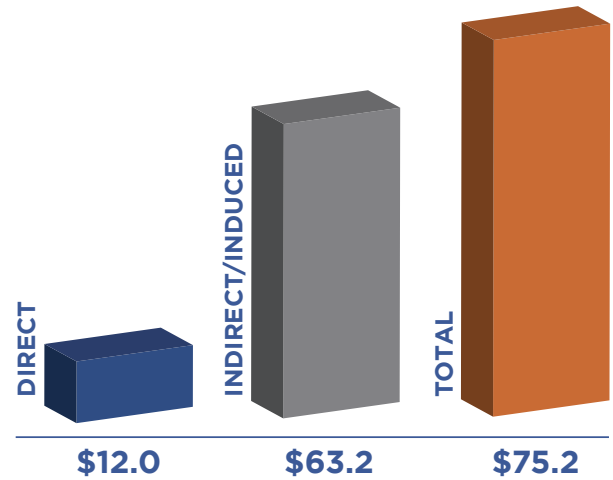
These jobs include not only UW direct employment of research professionals, but also indirect jobs created by supply and equipment vendors, contractors, and laborers for the construction and renovation of laboratory facilities, administrators and managers who support the research infrastructure, and jobs created in the community by the disposable income of the scientific workforce.

By maintaining and growing its strong faculty base, the UW will continue to attract, and consequently spend, increasingly higher levels of research dollars, and the number of jobs supported will see similar growth. With continued high levels of research funding and consequent expenditures, the UW will remain a source of support for thousands of local jobs based on its research funding alone.

UW RESEARCH GENERATES STATE AND LOCAL TAX REVENUE

UW Research generates significant state and local tax revenue. In FY14, UW Research generated \$75.2 million in total government revenue (\$12.0 million direct).

TOTAL STATE AND LOCAL TAX REVENUE GENERATED BY UW RESEARCH
(IN MILLIONS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

C4C INCREASES TECHNOLOGY-DRIVEN PROSPERITY

As the U.S.'s number one federally funded public research university, the UW is producing innovations that have the power to change the world — from biofuel alternatives, to more effective treatments for Alzheimer's disease and brain cancer, to purification technology for drinking water in the developing world. The University of Washington's Center for Commercialization (C4C) is committed to getting these research outcomes into products, services, therapies, diagnostics, and cures to where they can impact millions of people.

C4C is one of the top five university technology transfer offices in the nation. C4C is committed to developing and commercializing innovations that emerge from the UW's diverse research endeavors. Such commercialization activities not only create a more "academically entrepreneurial" culture on campus, they also contribute much to the state's economy and its probability for increased technology-driven prosperity.

Key indicators of the UW's success in technology commercialization are tabulated below. The UW reports annually to the Association of University Technology Managers (AUTM), which summarizes the data for 161 universities and research institutions. This data is published with approximately a one-year delay; the FY13 AUTM data was received in Sept 2014. For the national rankings, the UW excludes the University of California and the University of Texas, which report their data as systems of multiple large campuses. The UW reports to AUTM jointly with the Washington Research Foundation.

Since 2008, through C4C, the UW has developed an extensive ecosystem for technology entrepreneurship. Entrepreneurial UW researchers now have access to highly integrated resources that include:

- gap funding for developing early customers and product prototypes;
- entrepreneurs-in-residence who work as integral parts of the commercialization teams;
- volunteer boards from the private sector, advising on team formation and on preparing for investment;
- startup incubation facilities;
- angel investors through forums like WINGS medical technology angels, the Alliance of Angels, Element 8, and the W Fund; and
- non-dilutive funding through federal SBIR and STTR grants and other grant programs.

	UW/WRF FY13	FY13 ranking per AUTM	UW FY14
<i>Total licenses and options executed</i>	260	#1	264
<i>Total active licenses</i>	1,272	#3	1,243
<i>Number of technologies included in active licenses</i>	681	#1	603
<i>Technology startups</i>	17	#3	18

Source: University of Washington

C4C Dashboard FY 14 (Q1-Q4: July-June)

C4C 2014 Start-ups



FY14 data – through fourth quarter

Total SBIR / STTR Awards

SBIR/STTR awards (5-yr totals)	FY09-13	FY10-14
5-year Total	\$15M	\$21.0M
Pending		\$6.1M

	Amount Awarded (FY10-14)	# Awards
Phase I	\$9.4M	50
Phase II	\$11.6M	16

Disclosures and patent applications

	FY13	FY14
Innovation Disclosures	411	421
Patent Applications - Total	478	467
US Patent Applications	338	328
PCT	56	73
Provisional	284	266
Issued US Patents	91	81

Licensing

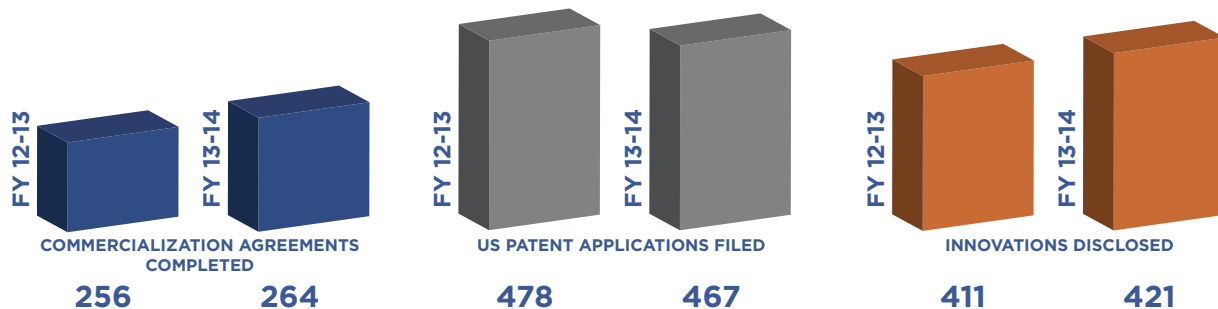
	FY13	FY14
AUTM Agreements	256	264
# Technologies Licensed	674	603
Total Active Licenses	1298	1243



The UW is among the top three universities in the nation for technology startups, for all licenses and options executed, and for the number (and variety) of technologies made available in licenses. The 260 license and option agreements for FY13 include the 17 startups, along with exclusive licenses to existing companies and broad nonexclusive licensing programs.

Innovation is important; commercially relevant innovation is vital. Through C4C's relationships with industry, they strive to position UW researchers to work on important problems building an innovation pipeline with impact.

UW COMMERCIALIZATION ACTIVITIES (FY 12-13 AND FY 13-14)



Source: University of Washington

UW IS A MAJOR CONTRIBUTOR TO WASHINGTON'S INNOVATION ECONOMY

The UW's faculty, students, and research play a unique role in sustaining Washington's technology and health science sectors. These sectors evolve rapidly, and existing companies and startups alike must continually innovate in order to grow. The UW is the Northwest's primary source for world-class talent, expertise, and inventions in technology and health science.

INDICATORS OF UW CONTRIBUTION TO TECHNOLOGY AND HEALTH SCIENCE SECTORS

<i>Technology startups per year (FY14)</i>	18 (Top 5 in the U.S.)
<i>Technology companies in operation</i>	100
<i>Companies acquired (1993-2014)</i>	27
<i>SBIR/STTR grants (2010-2014)</i>	\$27,000,000

Source: University of Washington

UW BENEFITS THE STATE BEYOND OPERATIONS

The UW's total impact on the state of Washington goes beyond its annual operational expenditures. Economic impact studies often capture only the impact that can be assigned a quantitative number, but the qualitative value and impact of the University goes far beyond its annual multi-billion dollar economic impact. Through its academic programs, the UW is helping to grow the state by educating the highly skilled workforce that will be needed to compete in a global economy, providing the next generation of innovators with a firm foundation upon which to grow their own ideas, and helping to build the next generation of scholars. Moreover, the UW provides the larger community with access to faculty experts and adds richness and diversity to the region's cultural offerings.

UW EDUCATES THE FUTURE WORKFORCE OF WASHINGTON

The UW educates the workforce that Washington needs to successfully compete in the 21st Century global economy. Graduates from the University of Washington are essential to meeting the state's human capital and workforce needs. In 2013-2014, the UW conferred more than 15,000 degrees. About 74% of graduates will stay in Washington and contribute to the state economy.

The contributions of UW graduates are critically important to the economic vitality of the state. The University's alumni number more than 454,000. While UW grads tend to have an affinity for the Northwest, Huskies can be found across the United States and around the world. The UW is a global talent magnet, attracting top students in a wide range of disciplines—the majority of whom stay in Washington upon graduation. UW Alumni (undergraduate, graduate, and professional) remaining in Washington contribute an additional \$1.5 billion annually to the state's economy based upon their additional earning power as graduates of the UW (\$8,253 more each year when compared to graduates from other universities).

7. <http://www.peacecorps.gov/media/forpress/press/2327/>

8. Primary data collection via survey research where faculty, staff, and students provide estimates on spending patterns, including information on the number of volunteer hours and charitable donations in which they provide. A conservative assumption of \$22.14 per hour was used to calculate the value of volunteer services. This amount was calculated independently by the Points of Light Foundation.

UW PROVIDES SUPPORT TO THE COMMUNITY

UW students have a zeal for community service and activism. In 2012-13, more than 7,000 students engaged in academic service-learning, volunteering a staggering 465,000 hours with organizations such as Girls on the Run and the National Alliance on Mental Illness. This is the equivalent of 53 years of service. In addition, UW is consistently one of the top volunteer producing universities for the Peace Corps, ranking second in 2013.⁷

It is estimated that UW employees and students generate more than **\$425 million** annually in charitable donations and volunteer services.⁸ These benefits are in addition to the **\$12.5 billion** annual impact and include the following:

- Through donations and volunteerism combined, UW employees and students contributed more than \$149 million to local charitable organizations in 2013-2014.
- In 2013-2014, UW Medicine provided more than \$276 million in charitable care to residents of the state of Washington.

PHILANTHROPY CONTRIBUTES TO THE STRENGTH OF UW

The impact of philanthropic giving to the UW as a result of the dollars expended within the state of Washington to support faculty, staff, students, programs, and facilities is significant. Private support makes the difference between a university being good and being excellent. Gifts to the UW enrich student educational opportunities, support ground-breaking research, and strengthen programs that benefit the community and world at large. Last year, the UW expended \$576 million as a result of its philanthropy — \$482 million received from donors, and \$93 million in endowment distributions. This impressive amount of support allows the University to further advance its mission and support the broader community.

UW PROFESSIONAL AND CONTINUING EDUCATION HELPS ADULT LEARNERS ADVANCE AND PROSPER

With hundreds of programs designed for adult learners, UW Professional and Continuing Education (UW PCE) provides a multitude of opportunities for residents of the state of Washington to advance programs, courses, conferences, and executive-level seminars to many audiences in Seattle and throughout the state. Providing programs in easy-to-access evening, weekend, and online formats, UW PCE serves professionals in all industry sectors, people who want to enter emerging careers, non-English speakers, adults over 50, and those who need new skills to take advantage of rapidly shifting economic opportunities. More than 48,000 people took advantage of the 9,696 courses offered by UW Professional and Continuing Education in 2013-2014.

The annual economic impact of UW PCE on the state of Washington was \$179.6 million (\$84.6 million direct). The total employment impact of this program is 2,365 jobs (1,778 direct jobs). The state and local government revenue impact was \$8.3 million (\$2.8 million direct).

UW ATHLETICS GENERATES IMPACT

Sponsoring 22 sports programs, the University of Washington department of intercollegiate athletics provides competition opportunities for over 650 student-athletes. The Huskies are known for a commitment to success both in the classroom and on the field of play, and have boasted student-athlete Graduation Success Rates among the highest in the Pac-12. UW Athletics completed a privately financed \$281 million renovation of Husky Stadium, known throughout the country as “the Greatest Setting in College Football,” which sits on Lake Washington and attracts thousands of visitors annually.

UW Athletics generates a significant impact for the state of Washington. In FY14, the total economic impact of UW Athletics operations and visitors was \$225.9 million (\$86.8 million direct and \$139.1 million indirect/induced). This impact is supported by the direct, in-state spending on operations by UW Athletics (\$86.8 million) and out-of-state direct visitor spending (\$27.6 million direct with a total impact of visitor spending of \$46.2 million). UW Athletics and out-of-state visitors to the game support 1,384 jobs in the state.

GENERATING IMPACT THROUGHOUT THE STATE

The University of Washington and its regional campuses have a significant economic impact across Washington. Economic impact analysis was completed for the University of Washington overall as well as for UW Bothell, UW Tacoma, and UW Medicine.

UW ECONOMIC IMPACT ON THE STATE OF WASHINGTON

	Direct	Indirect/Induced	Total
<i>UW Seattle</i>	<i>\$5.6 billion</i>	<i>\$6.5 billion</i>	<i>\$12.1 billion</i>
<i>UW Medicine</i>	<i>\$3.8 billion</i>	<i>\$4.0 billion</i>	<i>\$7.8 billion</i>
<i>UW Bothell</i>	<i>\$82.7 million</i>	<i>\$148.9 million</i>	<i>\$231.6 million</i>
<i>UW Tacoma</i>	<i>\$70.2 million</i>	<i>\$141.5 million</i>	<i>\$211.7 million</i>
TOTAL	\$5.7 billion	\$6.8 billion	\$12.5 billion

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW EMPLOYMENT IMPACT ON THE STATE OF WASHINGTON (IN JOBS)

	Direct	Indirect/Induced	Total
<i>UW Seattle</i>	<i>33,528</i>	<i>42,498</i>	<i>76,026</i>
<i>UW Medicine</i>	<i>19,862</i>	<i>25,468</i>	<i>45,330</i>
<i>UW Bothell</i>	<i>599</i>	<i>1,098</i>	<i>1,697</i>
<i>UW Tacoma</i>	<i>541</i>	<i>1,067</i>	<i>1,608</i>
TOTAL	34,668	44,663	79,331

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW STATE AND LOCAL GOVERNMENT IMPACT ON THE STATE OF WASHINGTON

	Direct	Indirect/Induced	Total
<i>UW Seattle</i>	<i>\$147.5 million</i>	<i>\$394.2 million</i>	<i>\$541.7 million</i>
<i>UW Medicine</i>	<i>\$88.0 million</i>	<i>\$238.1 million</i>	<i>\$326.1 million</i>
<i>UW Bothell</i>	<i>\$2.7 million</i>	<i>\$9.6 million</i>	<i>\$12.3 million</i>
<i>UW Tacoma</i>	<i>\$2.3 million</i>	<i>\$9.3 million</i>	<i>\$11.6 million</i>
TOTAL	\$152.5 million	\$413.2 million	\$565.7 million

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW MEDICINE

INTRODUCTION

Founded in 1946, the University of Washington School of Medicine (UWSOM) is recognized for excellence in training primary-care physicians and for advancing medical knowledge through scientific research. UWSOM is nationally recognized for a commitment to community service through volunteer activities of students, staff, faculty, and alumni. UWSOM is a regional medical school serving the states of Washington, Wyoming, Alaska, Montana, and Idaho – the WWAMI program. UWSOM’s mission is to improve the health of the public by advancing medical knowledge, providing outstanding primary and specialty care to the people of the region, and preparing tomorrow’s physicians, scientists, and other health professionals.

UWSOM owns or operates Harborview Medical Center, Northwest Hospital & Medical Center, Valley Medical Center, University of Washington Medical Center, a network of nine UW Neighborhood Clinics that provide primary care and secondary care, the physician practice UW Physicians, the UW School of Medicine, and Airlift Northwest. In addition, UWSOM shares the ownership and governance of Children’s University Medical Group and Seattle Cancer Care Alliance, a partnership among UW Medicine, Fred Hutchison Cancer Research Center, and Seattle Children’s. UWSOM faculty includes three living Nobel Prize winners (five in UW Medicine history), 35 Institute of Medicine members, 32 National Academy of Sciences members, and 13 Howard Hughes Medical Institute investigators. UWSOM has been ranked as one of the top primary-care medical schools in the country since 1994, and is second only to Harvard in the amount of NIH-funded research conducted by its faculty. In addition, UWSOM programs are ranked among the best in the country in the 2013 rankings by *U.S. News & World Report*.

- Family medicine (No. 1 for 22 consecutive years)
- Rural medicine (No. 1 for 22 consecutive years)
- AIDS
- Geriatrics
- Pediatrics
- Bioengineering
- Internal medicine

UWSOM faculty members are leaders in research related to the biomolecular structure of proteins. Understanding protein complexes may lead to treatment and prevention of devastating diseases. UW scientists are studying dystrophin, a protein necessary for muscle health, in the search for muscular dystrophy treatments. Other scientists are studying the structural genomics of protozoa that are pathogens for such diseases as sleeping sickness, leishmaniasis, and malaria, which result in many deaths worldwide.

UW MEDICINE SUPPORTS THE STATE ECONOMY

OVERALL ECONOMIC IMPACT OF UW MEDICINE ACROSS THE STATE WAS \$7.8 BILLION.



UW MEDICINE DIRECTLY OR INDIRECTLY SUPPORTED 45,330 JOBS THROUGHOUT THE STATE OF WASHINGTON.



UW MEDICINE GENERATED APPROXIMATELY \$326.1 MILLION IN STATE AND LOCAL GOVERNMENT REVENUES FOR THE STATE OF WASHINGTON.

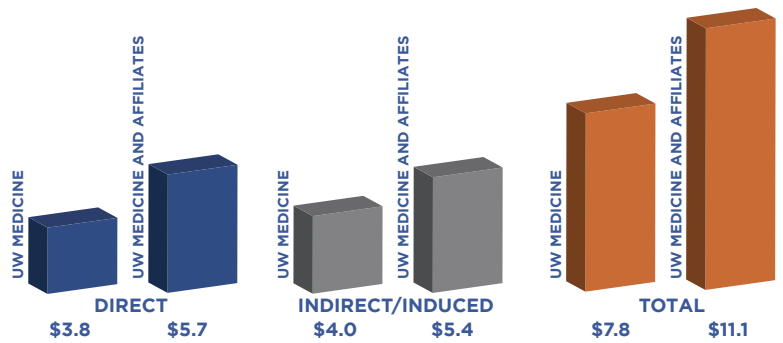


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

ECONOMIC IMPACT

In FY14, UW Medicine had an economic impact on the state of Washington of **\$7.8 billion** (\$3.8 billion direct and \$4.0 billion indirect and induced). When all the major affiliates are included, the economic impact reaches \$11.1 billion (\$5.7 billion direct and \$5.4 billion indirect and induced).

OVERALL ECONOMIC IMPACT OF UW MEDICINE (IN BILLIONS)

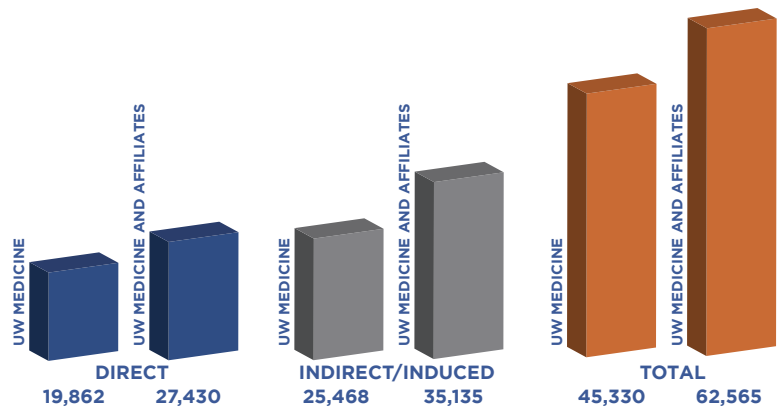


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

EMPLOYMENT IMPACT

The total employment impact of UW Medicine in FY14 was **45,330 jobs** (19,862 jobs direct and 25,468 indirect/induced jobs). The total employment impact of UW Medicine and all affiliates was 62,565 jobs (27,430 jobs direct and 35,135 indirect and induced).

UW MEDICINE OVERALL EMPLOYMENT IMPACT (IN JOBS)

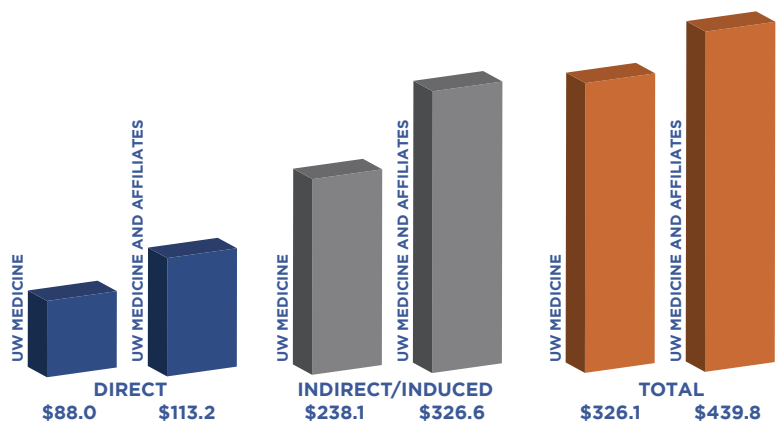


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

GOVERNMENT REVENUE IMPACT

UW Medicine operations generate **\$326.1 million** (\$88.0 million direct) per year in state and local tax revenue. UW Medicine and affiliates generate \$439.8 million (\$113.2 million direct per year in state and local tax revenue).

UW MEDICINE OVERALL GOVERNMENT REVENUE IMPACT (IN MILLIONS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW BOTHELL

INTRODUCTION

The University of Washington Bothell opens the door to an internationally and nationally ranked university experience that provides access to excellence for promising students from all backgrounds. The faculty cultivate big ideas in small settings that encourage new discoveries, interaction and critical thinking. The campus is located in the greater Seattle area, home to some of the world's most iconic and entrepreneurial corporations, foundations and arts organizations.

Founded in 1990, UW Bothell is located on a 128-acre campus with nearly 5,000 students enrolled in 45 undergraduate and graduate degrees. UW Bothell emphasizes high-impact learning across subject matters. Upon graduation, students are prepared to succeed in dynamic and ever-changing workplaces and communities.

The university takes advantage of the Puget Sound regions' capacity for innovation and discovery by connecting students to career-building and life-long learning experiences. Nine out of 10 UW Bothell graduates live and work in the state of Washington. They become regional leaders in high demand fields such as health care, technology, education, engineering, business and more.

UW Bothell is the fastest-growing public institution in the state of Washington and the sixth fastest in the nation. It is also the largest of the state's branch campuses. UW Bothell serves the needs of the state of Washington, delivering educational excellence, access, and affordability: Ninety percent of the student body is from the state of Washington, and 51 percent of first-year students are first-generation college attendees. More than four out of 10 students are people of color and from diverse backgrounds.

UW BOTHELL SUPPORTS THE STATE ECONOMY

OVERALL ECONOMIC IMPACT OF UW BOTHELL ACROSS THE STATE WAS \$231.6 MILLION.



UW BOTHELL DIRECTLY OR INDIRECTLY SUPPORTED 1,697 JOBS THROUGHOUT THE STATE OF WASHINGTON.



UW BOTHELL GENERATED APPROXIMATELY \$12.3 MILLION IN STATE AND LOCAL GOVERNMENT REVENUES FOR THE STATE OF WASHINGTON.

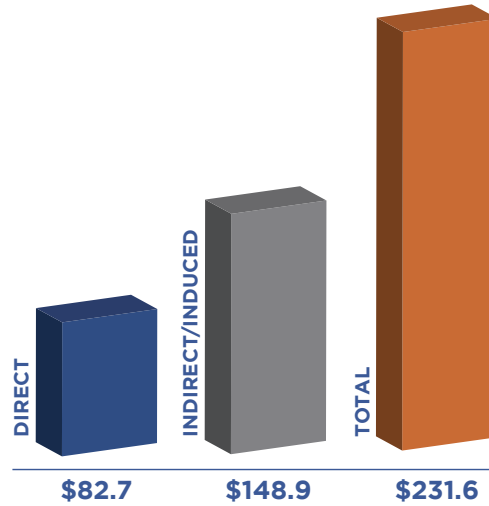


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

ECONOMIC IMPACT

The overall economic impact of UW Bothell operations on Washington in FY14 was **\$231.6** (\$82.7 million direct impact and \$148.9 million indirect and induced impact).

OVERALL ECONOMIC IMPACT OF UW BOTHELL (IN MILLIONS)

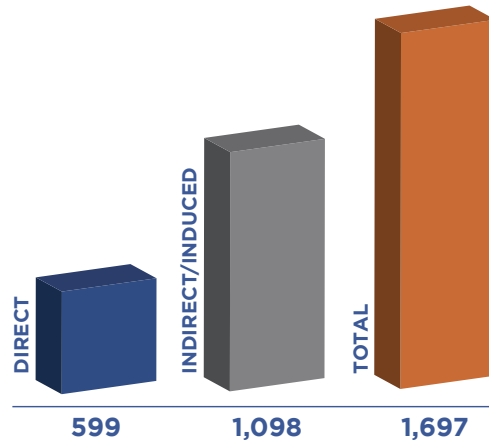


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

EMPLOYMENT IMPACT

The total employment impact of UW Bothell on the state was **1,697 jobs (599 direct jobs)**.

OVERALL EMPLOYMENT IMPACT OF UW BOTHELL (IN JOBS)

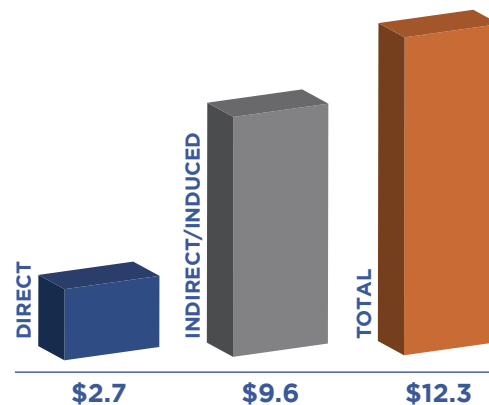


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

GOVERNMENT REVENUE IMPACT

UW Bothell operations generate **\$12.3 million** (\$2.7 direct) per year in state and local tax revenue.

TOTAL STATE AND LOCAL TAX REVENUE GENERATED BY UW BOTHELL (IN MILLIONS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW TACOMA

INTRODUCTION

Founded in 1990, UW Tacoma is an urban-serving university providing access to students in a way that transforms families and communities. UW Tacoma strives to impact and inform economic development through community-engaged students and faculty. UW Tacoma is closely linked with Tacoma and the South Puget Sound and is a member of the Coalition of Urban Serving Universities, a network of public, urban, research universities committed to creating an educated workforce, building strong communities, and improving the health of diverse populations.

With more than 4,300 students enrolled in 30 undergraduate programs and 16 post-baccalaureate and graduate areas, UW Tacoma provides area students with the highest levels of education. UW Tacoma's diverse student body includes a broad range of ethnic and family backgrounds, ages, interests, and experience. More than 80% of students transfer to UW Tacoma from one of the many community colleges in the area or from other universities. Freshmen from high schools all over the Puget Sound and beyond make up a growing portion of students. Added to the mix are students who are returning to school after years away, military personnel and their families, and professionals working on new career goals.

At UW Tacoma, students learn in small classes, getting to know their faculty while participating in research and service projects. First-year students complete an innovative core curriculum, which blends different fields of study into interdisciplinary classes. Courses might mix art and ecology, or business and social science. The result is a rich learning environment where students are encouraged to challenge themselves.

UW Tacoma is a partner in the community and encourages its students and faculty to participate in the community through research and economic development activities.

UW TACOMA SUPPORTS THE STATE ECONOMY

OVERALL ECONOMIC IMPACT OF UW TACOMA ACROSS THE STATE WAS \$211.7 MILLION.



UW TACOMA DIRECTLY OR INDIRECTLY SUPPORTED 1,608 JOBS THROUGHOUT THE STATE OF WASHINGTON.



UW TACOMA GENERATED APPROXIMATELY \$11.6 MILLION IN STATE AND LOCAL GOVERNMENT REVENUES FOR THE STATE OF WASHINGTON.

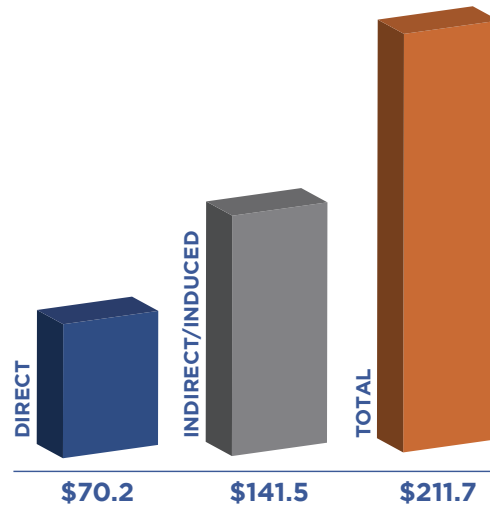


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

ECONOMIC IMPACT

The overall economic impact of UW Tacoma operations on the state in FY14 was **211.7 million** (\$70.2 million direct impact and \$141.5 million indirect and induced).

OVERALL ECONOMIC IMPACT OF UW TACOMA (IN MILLIONS)

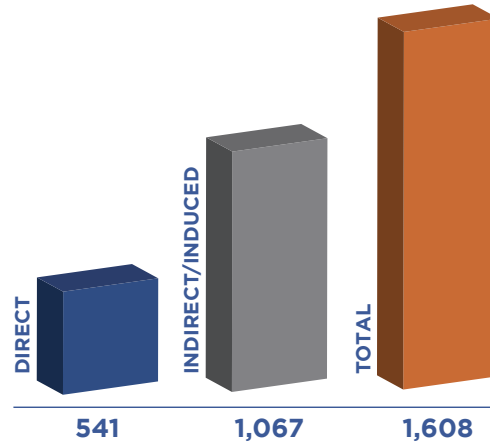


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

EMPLOYMENT IMPACT

The total employment impact of UW Tacoma operations in Washington is **1,608 jobs** (541 direct jobs and 1,067 indirect and induced jobs).

OVERALL EMPLOYMENT IMPACT OF UW TACOMA (IN JOBS)

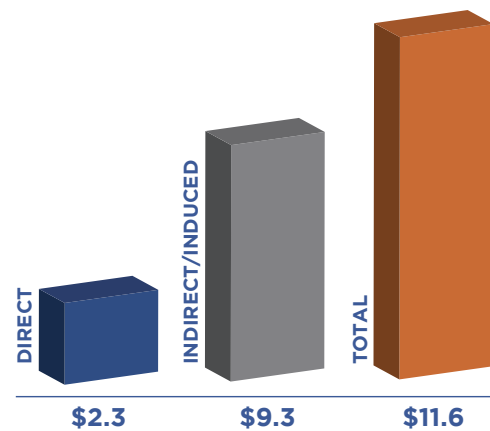


Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

GOVERNMENT REVENUE IMPACT

UW Tacoma operations generate **\$11.6 million** (\$2.3 million direct) per year in state and local tax revenue.

TOTAL STATE AND LOCAL TAX REVENUE GENERATED BY UW TACOMA (IN MILLIONS)



Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

APPENDIX A: DEFINITION OF TERMS

STUDY YEAR	Fiscal Year 2013-2014 (FY 13-14) July 1, 2013 – June 30, 2014
TOTAL ECONOMIC IMPACT	The total economic impact of an institution includes both the direct impact and the indirect impact generated in the economy as a result of the institution.
DIRECT ECONOMIC IMPACT	Direct impact includes items such as institutional spending, employee spending and spending by visitors to the institution.
INDIRECT AND INDUCED ECONOMIC IMPACT	Indirect impact, also known as the multiplier effect, includes the respending of dollars within the local economy by vendors/suppliers and households.
MULTIPLIER EFFECT	The multiplier effect is the additional economic impact created as a result of the institution's direct economic impact. Local companies that provide goods and services to an institution increase their purchasing by creating a multiplier.
DIRECT TAX PAYMENTS	Direct tax payments made by an institution to a unit of government.
INDIRECT AND INDUCED TAX PAYMENTS	Government revenue that is collected by governmental units in addition to those paid directly by an institution, including taxes paid directly by employees of the institution, visitors to the institution and vendors who sell products to the institution.
DIRECT EMPLOYMENT	Total employees based on total jobs.
INDIRECT AND INDUCED EMPLOYMENT	Indirect employment is the additional jobs created as a result of the institution's economic impact. Local companies that provide goods and services to an institution increase their number of employees as purchasing increases, thus creating an employment multiplier.

APPENDIX B: METHODOLOGY

IMPACT ON STATE BUSINESS VOLUME AND GOVERNMENT REVENUE

The University of Washington, its regional campuses, and UW Medicine (hereinafter referred to collectively as “UW”) are major employers in the state and, as such, major generators of personal income for state residents. Businesses operating within Washington in the wholesale, retail, service, and manufacturing sectors benefit from the direct expenditures of the institutions and their faculty, staff, students, and visitors on goods and services. Additionally, many of these “direct” expenditures are re-circulated in the economy as recipients of the first-round of income re-spend a portion of this income with other businesses and individuals within Washington.

METHODOLOGY AND DATA UTILIZED FOR THE ESTIMATION OF THE ECONOMIC IMPACT OF UNIVERSITY OF WASHINGTON

The economic impact of UW was estimated using IMPLAN (IMpact Analysis for PLANing), an econometric modeling system developed by applied economists at the University of Minnesota and the U.S. Forest Service. The IMPLAN modeling system has been in use since 1979 and is currently used by over 500 private consulting firms, university research centers, and government agencies. The IMPLAN modeling system combines the U.S. Bureau of Economic Analysis’ Input-Output Benchmarks with other data to construct quantitative models of trade flow relationships between businesses and between businesses and final consumers. From this data, one can examine the effects of a change in one or several economic activities to predict its effect on a specific state, regional, or local economy (impact analysis). The IMPLAN input-output accounts capture all monetary market transactions for consumption in a given time period. The IMPLAN input-output accounts are based on industry survey data collected periodically by the U.S. BEA and follow a balanced account format recommended by the United Nations.

IMPLAN’s Regional Economic Accounts and the Social Accounting Matrices were used to construct state-level multipliers, which describe the response of the state economy to a change in demand or production as a result of the activities and expenditures of the UW. Each industry that produces goods or services generates demand for other goods and services; and this demand is multiplied through a particular economy until it dissipates through “leakage” to economies outside the specified area. IMPLAN models discern and calculate leakage from local, regional, and state economic areas based on workforce configuration, the inputs required by specific types of businesses, and the availability of both inputs in the economic area. Consequently, economic impacts that accrue to other regions or states as a consequence of a change in demand are not counted as impacts within the economic area.

The model accounts for substitution and displacement effects by deflating industry-specific multipliers to levels well below those recommended by the U.S. Bureau of Economic Analysis. In addition, multipliers are applied only to personal disposable income to obtain a more realistic estimate of the multiplier effects from increased demand. Importantly, IMPLAN’s Regional Economic Accounts exclude imports to an economic area, so the calculation of economic impacts identifies only those impacts specific to the economic impact area; in this case, the state of Washington. IMPLAN calculates this distinction by applying Regional Purchase Coefficients (RPC) to predict regional purchases based on an economic area’s particular characteristics. The RPC represents the proportion of goods and services that will be purchased regionally under normal circumstances, based on the area’s economic characteristics described in terms of actual trade flows within the area.

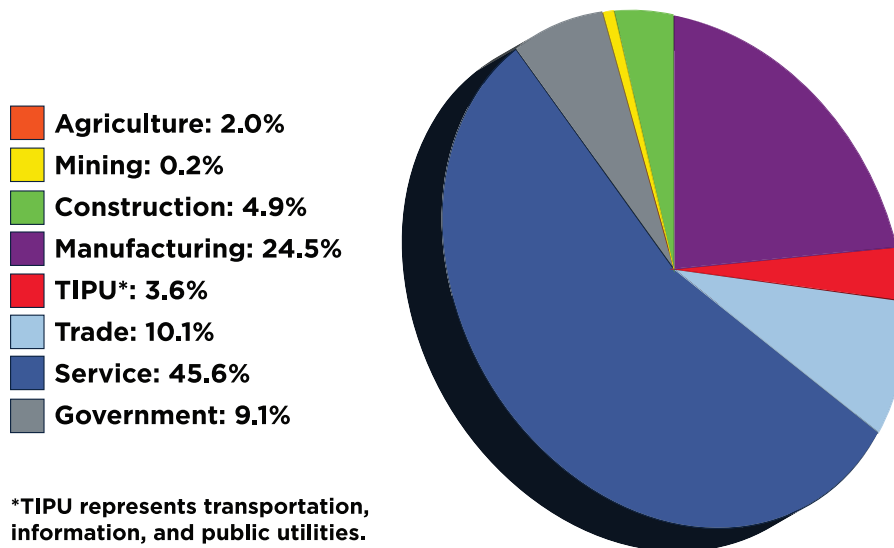
MODEL INPUTS AND DATA SOURCES

Model inputs included actual FY14 expenditures provided by UW and UW Medicine.

APPENDIX C: PROFILE OF STATE OF WASHINGTON ECONOMY

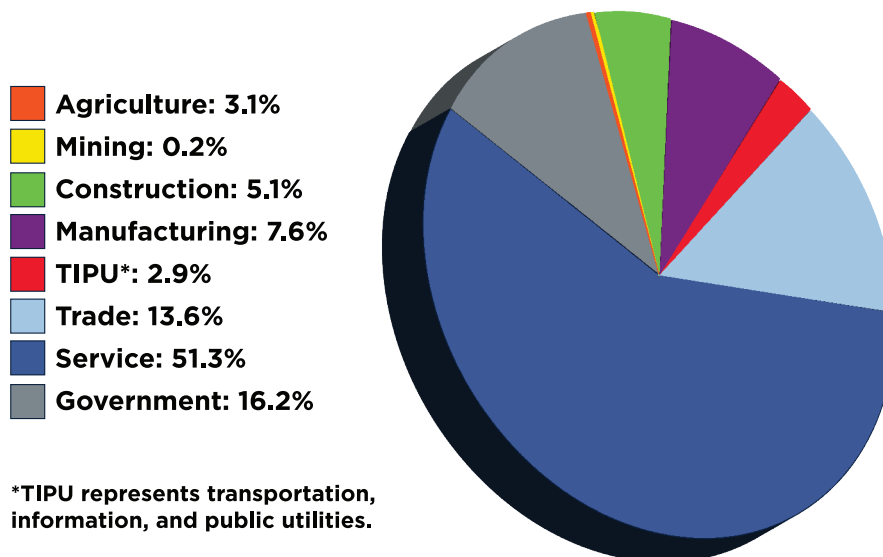
The gross state product of Washington in 2013 was \$387.2 billion. The largest sectors in the statewide economy were service (45.6%), manufacturing (24.5%), and trade (10.1%).

WASHINGTON ECONOMY BY ECONOMIC OUTPUT



The total civilian employment in the state of Washington for 2013 was 3,833,798. The largest employment sectors statewide include: service 51.3%, government (16.2%), and trade (13.6%).

WASHINGTON ECONOMY BY EMPLOYMENT OUTPUT



APPENDIX D: ECONOMIC IMPACT BY GEOGRAPHY

UW ECONOMIC IMPACT ON PUGET SOUND

	Direct	Indirect/Induced	Total
<i>UW Seattle</i>	\$4.8 billion	\$5.5 billion	10.3 billion
<i>UW Medicine</i>	\$3.3 billion	\$3.3 billion	\$6.6 billion
<i>UW Bothell</i>	\$71.4 million	\$133.2 million	\$204.6 million
<i>UW Tacoma</i>	\$60.9 million	\$127.9 million	\$188.8 million
TOTAL	\$5.0 billion	\$5.7 billion	\$10.7 billion

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW EMPLOYMENT IMPACT ON PUGET SOUND (IN JOBS)

	Direct	Indirect/Induced	Total
<i>UW Seattle</i>	30,175	36,492	66,667
<i>UW Medicine</i>	17,876	21,499	39,375
<i>UW Bothell</i>	539	1,016	1,555
<i>UW Tacoma</i>	487	998	1,485
TOTAL	31,201	38,505	69,706

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW GOVERNMENT REVENUE IMPACT ON PUGET SOUND

	Direct	Indirect/Induced	Total
<i>UW Seattle</i>	\$110.4 million	\$303.0 million	\$413.4 million
<i>UW Medicine</i>	\$63.5 million	\$179.1 million	\$242.6 million
<i>UW Bothell</i>	\$2.1 million	\$8.1 million	\$10.2 million
<i>UW Tacoma</i>	\$1.8 million	\$8.0 million	\$9.8 million
TOTAL	\$114.3 million	\$319.2 million	\$433.5 million

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW SEATTLE IMPACT ON CITY OF SEATTLE

	Direct	Indirect/Induced	Total
<i>Economic Impact</i> <i>UW Medicine</i>	\$2.8 billion \$1.9 billion	\$3.2 billion \$2.1 billion	\$6.0 billion \$3.8 billion
<i>Employment Impact</i> <i>UW Medicine</i>	16,865 jobs 9,991 jobs	21,376 jobs 12,810 jobs	38,241 jobs 22,801 jobs
<i>Govt. Revenue Impact (state and local)</i> <i>UW Medicine</i>	\$74.2 million \$44.3 million	\$198.3 million \$119.8 million	\$272.5 million \$164.1 million

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW BOTHELL IMPACT ON CITY OF BOTHELL

	Direct	Indirect/Induced	Total
<i>Economic Impact</i>	\$44.8 million	\$80.7 million	\$125.5 million
<i>Employment Impact</i>	324 jobs	595 jobs	919 jobs
<i>Government Revenue Impact (state and local)</i>	\$1.5 million	\$5.2 million	\$6.7 million

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

UW TACOMA IMPACT ON CITY OF TACOMA

	Direct	Indirect/Induced	Total
<i>Economic Impact</i>	\$37.3 million	\$75.2 million	\$112.5 million
<i>Employment Impact</i>	288 jobs	567 jobs	855 jobs
<i>Government Revenue Impact (state and local)</i>	\$1.2 million	\$4.9 million	\$6.1 million

Source: Tripp Umbach using IMPLAN results from data obtained through the UW.

APPENDIX E: FAQ'S REGARDING ECONOMIC IMPACT ASSESSMENT

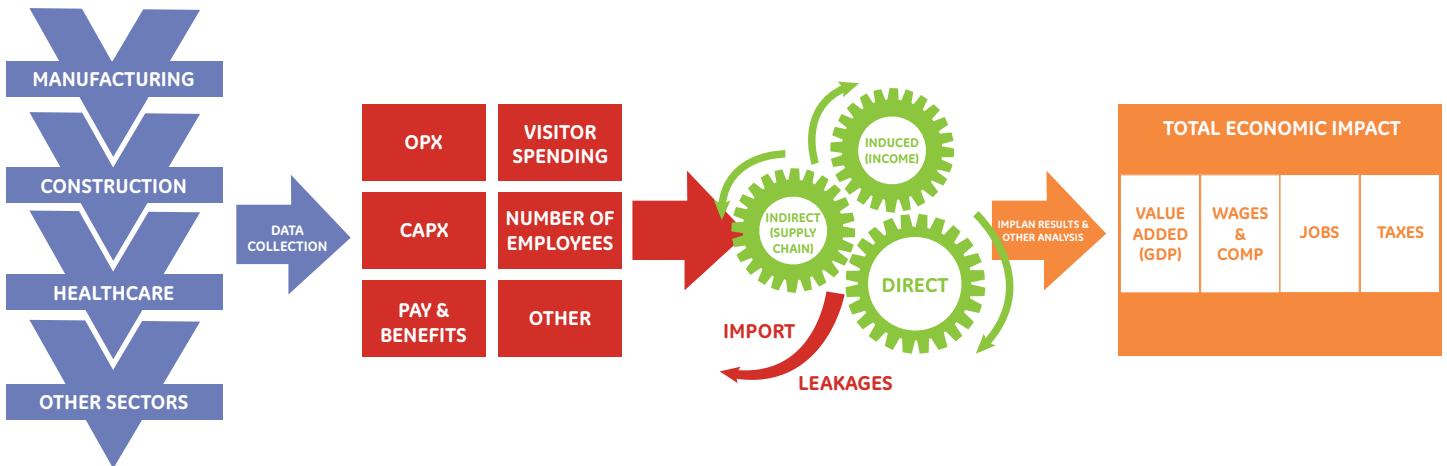
WHAT IS ECONOMIC IMPACT?

Economic impact begins when an organization spends money. Economic impact studies measure the direct economic impact of an organization's spending, plus additional indirect spending in the economy as a result of direct spending. Economic impact has nothing to do with dollars collected by institutions, their profitability, or even their sustainability, since all operating organizations have a positive economic impact when they spend money and attract spending from outside sources.

Direct economic impact measures the dollars that are generated within Washington due to the presence of the UW. This includes not only spending on goods and services with a variety of vendors within the state, and the spending of its employees and visitors, but also the business volume generated by businesses within Washington that benefit from spending by UW. It is important to remember that not all dollars spent by the UW stay in Washington. Dollars that "leak" out of the state in the form of purchases from out-of-state vendors are not included in the economic impact that the UW has on the state of Washington.

The total economic impact includes the "multiplier" of spending from companies that do business with the UW. Support businesses may include lodging establishments, restaurants, construction firms, vendors, temporary agencies, etc. Spending multipliers attempt to estimate the ripple effect in the state economy where the spending occurs. For example: Spending by the UW with local vendors provides these vendors with additional dollars that they re-spend in the local economy, causing a "multiplier effect."

WHAT IS THE MULTIPLIER EFFECT?



Multipliers are a numeric way of describing the secondary impacts stemming from the operations of an organization. For example, an employment multiplier of 1.8 would suggest that for every 10 employees hired in the given industry, eight additional jobs would be created in other industries, such that 18 total jobs would be added to the given economic region. The multipliers used in this study range from 1.8 to 2.0.

The multiplier model is derived mathematically using the input-output model and Social Accounting formats. The Social Accounting System provides the framework for the predictive Multiplier Model used in economic impact studies. Purchases for final use drive the model. Industries that produce goods and services for consumer consumption must purchase products, raw materials and services from other companies to create their product. These vendors must also procure goods and services. This cycle continues until all the money is leaked from the region's economy. There are three types of effects measured with a multiplier: the direct, the indirect and the induced effects. The direct effect is the known or predicted change in the local economy that is to be studied. The indirect effect is the business-to-business transactions required to satisfy the direct effect. Finally, the induced effect is derived from local spending on goods and services by people working to satisfy the direct and indirect effects.

- Direct effects take place only in the industry immediately being studied.
- Indirect effects concern inter-industry transactions: because the the UW is in business, it has a demand for locally produced materials needed to operate.
- Induced effects measure the effects of the changes in household income: employees of the UW and suppliers purchase from local retailers and restaurants.
- Total Economic Impacts are the total changes to the original economy as the result of the operations of the UW. i.e., Direct effects + Indirect effects + Induced effects = Total economic impacts.

WHAT METHODOLOGY WAS USED IN THIS STUDY?

IMPLAN (IMpact analysis for PLANning) data and software. Using classic input-output analysis in combination with regional specific Social Accounting Matrices and Multiplier Models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains county, state, zip code, and federal economic statistics which are specialized by region, not estimated from national averages and can be used to measure the effect on a regional or local economy of a given change or event in the economy's activity.

This methodology is a change from the last economic impact study completed by Tripp Umbach for the UW. There have been shifts in impact as a result of the methodology change.

WHAT IS EMPLOYMENT IMPACT?

Employment impact measures the direct employment (employees, staff, faculty, administration) plus additional employment created in the economy as a result of the operations of the UW.

Indirect and Induced employment impact refers to other employees throughout the region that exist because of the University's economic impact. In other words, jobs related to the population – city services (police, fire, EMS, etc.), employees at local hotels and restaurants, clerks at local retail establishments, residents employed by vendors used by the UW.

WHAT IS THE DIFFERENCE BETWEEN DIRECT AND INDIRECT TAXES?

Direct tax dollars include sales taxes and net corporate income taxes paid directly by the institution to the state, while indirect taxes include taxes paid to the state by vendors that do business with the UW and individuals.

IS THIS A ONE-TIME IMPACT OR DOES THE IMPACT REPEAT EACH YEAR?

The results presented in the University of Washington economic impact study are generated on an annual basis. The economic impact in future years can either be higher or lower based on number of employees, students, capital expansion, increases in external research, and state appropriations.

WHAT ARE TRIPP UMBACH'S QUALIFICATIONS TO PERFORM AN ECONOMIC IMPACT STUDY FOR THE UNIVERSITY OF WASHINGTON?

Tripp Umbach is the national leader in providing economic impact analysis to leading healthcare organizations, universities and academic medical centers. We have completed more than 150 economic impact studies over the past 20 years for clients such as: the University of Minnesota, The Ohio State University, the University of Pittsburgh, the University of Washington, The University of Alabama at Birmingham (UAB), the Cleveland Clinic, the University of Florida Health Shands Hospital, the University of North Carolina Hospitals, the University of Pittsburgh Health System, and The Ohio State University Medical Center.