Utah's Research Universities: Definition, Benefits, and Reach

Utah features two prominent research universities: the University of Utah, the state's flagship university, and Utah State University, the state's land-grant university. Research universities provide academic programs at the undergraduate, graduate, and professional levels, emphasizing teaching, research, and outreach. Selective admissions and significant research activity distinguish these institutions from other higher education institutions. Presidents of both universities prioritize research and innovation on their campuses. Both universities have R1 (Research 1) designations and together receive over 95% of Utah's $1 billion in research funding (2022).¹

What is an R1 University?
The Carnegie Classification of Institutions of Higher Education is a well-recognized three-tiered (R1, R2, and R3) classification system used to evaluate research activities at U.S. universities. R1 institutions are defined as doctoral universities engaged in the highest level of research activity. This is measured by significant research expenditures, large research staff, and a substantial number of doctoral degrees awarded across various fields. These institutions lead innovation, employ faculty at the top of their field, and provide students access to state-of-the-art equipment and hands on research experience.

What are the benefits of an R1 University?
The University of Utah’s (the U) and Utah State University’s (USU) R1 status provides significant benefits to their students and Utah’s economy.

Positive economic impacts – Collectively, Utah’s research universities (the U and USU) contribute an estimated $9.3 billion to the state’s economy, or 82.6% of the total economic contribution produced by Utah System of Higher Education (USHE) institutions (Table 1).

Increasing research funding – Research funding at Utah’s research institutions, which tallied $1.2 billion in FY 2023, increased 30% between 2019 and 2023 (Figures 1-3), bringing new dollars into the state and leading to new discoveries, companies, and medical advancements. The U ranked 47th and USU ranked 83rd out of 890 universities in the nation for total research and development (R&D) expenditures in 2022 (Figure 4).²

Enhanced academic experience – The U and USU provide students access to world-class faculty, advanced equipment, and diverse research opportunities as R1 institutions. The research institutions conferred more than 15,000 degrees in the 2022-23 school year comprising 8% of the state's associate degrees, 51% of bachelor's degrees, 68% of master's degrees, and 97% of doctoral degrees statewide (Figure 5). The U is one of only 18 public institutions in the U.S. that hosts both a comprehensive research university and an academic medical center. USU is home to the Space Dynamics Laboratory, one of 15 university affiliated research centers for the U.S. Department of Defense.

Statewide impact – The U spent research-related funds in 27 of Utah’s 29 counties. Total spending in Utah reached $28 million, contributing to positive economic growth throughout the state (Figure 6). USU provides students across the state with access to an R1 institution through 30 statewide campuses and robust online offerings (Figure 7). Both institutions serve students from all 29 counties.

Figure 1: Research Funds Awarded to Utah’s Research Institutions, FY2019 – FY2023
(Millions of Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2019</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>FY 2022</th>
<th>FY 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Utah</td>
<td>$390</td>
<td>$336</td>
<td>$409</td>
<td>$435</td>
<td>$450</td>
</tr>
<tr>
<td>Utah State University</td>
<td>$547</td>
<td>$603</td>
<td>$641</td>
<td>$686</td>
<td>$768</td>
</tr>
</tbody>
</table>

Note: Annual research funds awarded are in nominal dollars.
Figure 2: University of Utah Research Funding by Source, FY2023

Federal Funding Breakdown

- 7% Universities
- 7% Foundations
- 7% State Government and Other
- 15% Industry
- 64% University
- 36% Other

Note: DOE = Department of Energy; NSF = National Science Foundation; DOD = Department of Defense; DOE = Department of Education; DHHS = Department of Health and Human Services; Other = all other federal agencies awarding research funding. Source: University of Utah 2023 Annual Financial Report, University of Utah Office of Sponsored Projects

Figure 3: Utah State University Research Funding by Source, FY2023

Federal Funding Breakdown

- 15% Other
- 7% Foundations
- 7% State and Local Government
- 2% Universities
- 74% University
- 26% Other

Note: Excludes $44.4 million of “other” funding where the source is unknown. USDA = United States Department of Agriculture; DOE = Department of Energy; DHHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; DOD = Department of Defense; Other = all other federal agencies awarding research funding. Source: Utah State University Office of Research

Figure 4: Utah’s Research Universities National Science Foundation Research and Development Expenditures, 2022 (Thousands of Dollars)

- $3,435,651 to $3,900,000
- $27,200 to $22,700,000
- $106,000 to $22,700,000
- $361,000 to $361,000 to $22,700,000
- $1,218 to $1,218

Note: 2022 rankings by institution include expenditures from 2017-2022. Source: National Science Foundation

Figure 5: Utah System of Higher Education Share of Degrees by Institution Type, 2022-23

- Doctoral Degrees
- Master’s Degrees
- Bachelor’s Degrees
- Associate Degrees

Source: Utah System of Higher Education

Table 1: Public Higher Education Institutions’ Estimated Economic Contributions to Utah’s Economy, 2023

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Direct Value Added (GDP)</th>
<th>Total Value Added (GDP)</th>
<th>% Total Value Added (GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>~$4.3 billion</td>
<td>~$9.3 billion</td>
<td>82.6%</td>
</tr>
<tr>
<td>Regional</td>
<td>~$0.7 billion</td>
<td>~$1.4 billion</td>
<td>12.0%</td>
</tr>
<tr>
<td>Community College</td>
<td>~$0.2 billion</td>
<td>~$0.4 billion</td>
<td>3.5%</td>
</tr>
<tr>
<td>Technical College</td>
<td>~$0.1 billion</td>
<td>~$0.2 billion</td>
<td>1.9%</td>
</tr>
<tr>
<td>USHE total</td>
<td>~$5.3 billion</td>
<td>~$11.3 billion</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Conservative estimates based on operating expenses. Estimates include all USHE institutions. Source: Kem C. Gardner Policy Institute using IMPLAN
Utah Board of Higher Education Guidelines for a Research University

A research university’s primary role is to advance knowledge, drive innovation, discover, create, and impart knowledge through research, teaching, and service. Additionally, a research university shall:

- Provide academic programs at the undergraduate, graduate, and professional levels with a strong emphasis on research;
- Provide continuing professional education and community education;
- Contribute to Utah’s, the nation’s, and the world’s quality of life and social, cultural, and economic development; and
- Foster interdisciplinary collaborations and partnerships with other research universities, USHE institutions, industries, government agencies, and other national and international organizations to address complex challenges and societal problems.

Utah State University and the University of Utah, the only two research universities designated by statute, serve as research universities for the entire state. The University of Utah and Utah State University’s Logan campus exercise selective admissions.

Endnotes
1. National Center for Science and Engineering Statistics, Higher Education Research and Development Survey (FY2022). Higher education institutions reporting research funding include University of Utah, Utah State University, Utah Valley University, Southern Utah University, Weber State University, and Brigham Young University. Funding includes federal government, state and local government, institutional funds, business, nonprofit organizations, and all other sources of funding.
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