

The Economic Impact of the University of Hawai'i System

APRIL 10, 2013





The Economic Impact of the University of Hawai'i System

APRIL 10, 2013


Prepared by:

University of Hawai'i Economic Research Organization
(UHERO)

UHERO Principal Investigators: Inna Cintina (Assistant Specialist), Kimberly Burnett (Associate Specialist), and Carl Bonham (UHERO Executive Director and Professor of Economics)

Research Assistance By: Christopher Wada (Post-Doctoral Researcher), James Jones (Economic Research Specialist), Atsushi Shibata (Graduate Research Assistant), Ben Trevino (Database Manager), and Natalie Schack (Graphic Design Support)

UNIVERSITY OF HAWAI'I ECONOMIC RESEARCH ORGANIZATION
2424 MAILE WAY, ROOM 542
HONOLULU, HAWAI'I 96822
UHERO@HAWAI'I.EDU



Executive Summary

The University of Hawai'i (UH) generates economic activity through its purchases from local businesses, its payment to its employees, and spending by students and visitors. This report estimates UH's total economic activity in the state of Hawai'i in fiscal year 2012. Following a standard approach, we define economic impact to be the direct, indirect, and induced economic activities generated by the university's spending in the state economy.

- Total UH related expenditures (including visitor spending) were \$2.32 billion in FY 2012, \$1.84 billion of which was spent locally.
- Together with additional indirect and induced benefits from these activities, UH had a total impact of \$3.61 billion on Hawaii's economy.
- Each educational dollar spent generates \$1.96 of total business sales, \$0.59 of employee earnings, and \$0.11 of state revenues in Hawaii in FY 2012; and each million dollars of spending generates 15 jobs in Hawaii.
- The \$2.32 billion of education-related expenditures attributable to UH generated \$3.61 billion in local business sales, \$1.10 billion in employee earnings, \$194 million in state tax revenues, and over 28,500 jobs in Hawaii in FY2012.
- For every dollar of state funds spent on UH, the university system was able to leverage an additional \$4.90 of spending in the state.

The Economic Impact of the University of Hawai'i System

University of Hawai'i System

The University of Hawai'i at Mānoa (UHM) was launched in 1907 as a college of agriculture and mechanical arts. In 1912, the first permanent building was erected in Mānoa valley in UHM's current location. With the establishment of the College of Arts and Sciences in 1920, the College of Hawai'i became a university. Statehood and the establishment of the University of Hawai'i as the "state university" marked the beginning of a period of accelerating enrollment that resulted in the formation of a large diverse system. In 1965, the State Legislature created a statewide system of community colleges and placed it within the University of Hawai'i, and in 1972, the flagship Mānoa campus became the University of Hawai'i at Mānoa.

Today, the University of Hawai'i system is comprised of 10 campuses—seven community colleges (four on Oahu and one each on Kauai, Maui, and Hawai'i), University of Hawai'i at Mānoa, University of Hawai'i at Hilo, and the University of Hawai'i at West Oahu. In Fall 2011, enrollment totaled 60,330, including 53,693 undergraduate (89%) and 6,637 graduate students (11%). Hawai'i residents comprised 85 percent of all enrolled students, nearly nine percent were from the U.S. mainland, and the remaining six percent of students were international students from over 100 different countries. The University of Hawai'i continues to be one of the nation's more ethnically diverse higher education systems with roughly 26% of the students identifying as Asian, 20% as Caucasian, and 26% as either Hawaiian or Pacific Islander. The UH system offers

over 637 academic programs, including bachelor's degrees in 139 fields of study, master's degrees in 91 fields of study, doctoral degrees in 53 fields of study, and associate degrees in 117 fields of study.

Hawai'i County

University of Hawai'i at Hilo

The University of Hawai'i at Hilo (UHH) was first launched in 1947 as an extension of UHM, and became a full-fledged university in 1970. In Fall 2012, enrollment at UHH totaled 4,157, including 3,533 undergraduate students (85%) and 589 graduate students (14%). Of those enrolled students, 2,900 were Hawai'i residents (70%), 794 were from the U.S. mainland (19%), and 172 were international students (4%). Hawaiian and Pacific Islanders comprise the largest proportion of enrolled students (31%), while 26% of the remaining UHH students identify themselves as Asian and 26% identify as Caucasian. UHH offers a variety of degrees – 37 undergraduate, 7 master's, and 2 doctorate – ranging from the only master's degree in an indigenous language in the nation to the only undergraduate degree in astronomy in the state. The faculty of UHH are highly qualified; 89% of full-time faculty hold doctoral or equivalent degrees in their respective disciplines. In fiscal year 2009, extramural funding amounted to \$20.1 million, demonstrating UHH's commitment to research and scholarship.

UHH's geographical location and community are ideal for the study and mastery of both Hawaiian culture and cutting edge science and technology. The Hawaiian Studies Program at

UHH offers two options for study: the continued development of Hawaiian culture within a Hawaiian language context and the monitoring of the direction of Hawaiian culture. Although Hawaiian Studies is a relatively new field, it is already playing an important role in the direction of life in Hawai'i, given the many efforts by schools and government departments to promote Hawaiian culture, language, and history and to integrate those aspects into important policy decisions. Within the same campus, the UHH astronomy program offers students training in observational astronomy, physics, mathematics, and computer science. The program allows hands-on-experience through research utilizing the astronomy infrastructure of Mauna Kea and the University Park of Science and Technology. The program has proven successful in both education and research. Over the period 2008-2010, UHH led the nation with 10 bachelor's degrees awarded per year among astronomy departments where the bachelor's was the highest degree offered.

Hawai'i Community College

Hawai'i Community College (Hawai'i CC) was founded in 1941 as the Hawai'i Vocational School and with the advancement of technology and expansion of educational opportunities into broader fields of technical training, was renamed the Hawai'i Technical School in 1956. In May 1970, the institution joined the University of Hawai'i as a comprehensive community college. Located less than a mile away from UHH, Hawai'i CC shares some facilities with the university, including the library and some classrooms. Hawai'i CC offers more than 50 associate degree, certificate and non-credit programs, including applied technical education, business

education and technology, hospitality, liberal arts, and nursing. In Fall 2012, enrollment at HCC totaled 3,663, including 3,515 Hawai'i residents (96%). Hawaiian and Pacific Islanders comprise the largest proportion of enrolled students (46%), while 18% of the remaining Hawai'i CC students identify themselves as Asian and 19% identify as Caucasian.

Kaua'i County

Kaua'i Community College

Kaua'i Community College (Kaua'i CC), located in Lihu'e, is the only college on the island. It offers 32 associate degree and certificate programs in the fields of business, technology, hospitality, health, early childhood education and liberal arts, and also administers the UH Center on Kaua'i, which provides students an opportunity to obtain baccalaureate and graduate degrees and certificates from other institutions within the UH system. In Fall 2012, enrollment at Kaua'i CC totaled 1,495, including 1,441 Hawai'i residents (96%). Hawaiian and Pacific Islanders comprise the largest proportion of enrolled students (33%), while 31% of the remaining students identify themselves as Asian and 22% identify as Caucasian.

Maui County

University of Hawai'i Maui College

University of Hawai'i Maui College (UHMC) offers three four-year baccalaureate degrees—applied science in applied business and information technology, engineering technology, and sustainable science management—and 49 programs in the fields of accounting, nursing, art, business, culinary arts, dentistry, electronic and computer engineering, hospitality and tourism, and lan-

guage. UHMC is an outgrowth of the Maui Vocational School established in 1931. In 1951, the name was changed to Maui Technical School, denoting an upgrade of vocational education to a technical level. On July 1, 1965, the school was incorporated into the statewide community college system. Once authorized to confer the Associate in Arts and the Associate in Science degrees in 1966, the name was again officially changed to Maui Community College. In 2010, the Western Association of Schools and Colleges Accreditation Board approved the name change from Maui Community College to UHMC, which more accurately reflects the college's growing baccalaureate program.

Although located in Kahului (Maui), UHMC serves the educational needs of residents of all three islands comprising Maui County: Maui, Molokai, and Lana'i. The first higher education cable television channel delivering instruction to the tri-isle area was established in 1983. With the completion of the Ka'a'ike Instructional Telecommunications Facility in 2001, UHMC is even better positioned to continue distance learning activities with seven interactive TV classrooms. Recently, the college also began a National Center of Excellence for High Performance Computing, which applies personal computer cluster solutions to problems requiring high speed processing. In 2003, UHMC opened its culinary arts facility and the Maui Oral Health Center.

UHMC boasts the highest enrollment of all neighbor island colleges. In Fall 2012, enrollment at UHMC totaled 4,382, including 4,078 Hawai'i residents (93%). Hawaiian and Pacific Islanders comprise the largest proportion of enrolled students (35%), while 26% of the remain-

ing students identify themselves as Asian and 25% identify as Caucasian.

Honolulu County Honolulu Community College

Honolulu Community College (Honolulu CC) was founded in 1920 as the Territorial Trade School in Palama. It became the Honolulu Technical School in 1955 before becoming part of the University of Hawai'i as Honolulu CC in 1966. The Main Campus, located on Dillingham Boulevard, offers a two-year Associate in Arts degree. The college also has facilities near Honolulu International Airport for the Aeronautics Maintenance and Commercial Aviation programs, automotive and heavy equipment shops on Kokea Street, and the Marine Education and Training Center at Sand Island. Those additional facilities provide hands-on training to students en route to Associate in Science, Associate in Applied Science, and Associate in Technical Studies degrees. In addition to two-year degrees, Honolulu CC offers certificate programs in more than twenty Career and Technical Education areas. In total, Honolulu CC offers 49 associate degree and certificate programs. In Fall 2012, enrollment at Honolulu CC totaled 4,582, including 4,359 Hawai'i residents (95%). Hawaiian and Pacific Islanders comprise 30% of enrolled students, while 44% of the remaining students identify themselves as Asian and 10% identify as Caucasian.

Kapi'olani Community College

Kapi'olani Community College (Kapi'olani CC) was established in 1946 as Kapi'olani Technical School. Its first program was food service. By statehood in 1959, three additional programs

were added: practical nursing, business education and dental assisting. In 1965, the school was renamed Kapi‘olani CC. Due to rapid growth in enrollment, the college relocated from its original Pensacola location to the current 52-acre campus on the slopes of Diamond Head. With the growth came new advances and achievements. In 1976, Radiologic Technology instructors Roland Clements and Harry Nakayama developed a new hip x-ray technique that earned national attention. In 1986, Kapi‘olani CC’s respiratory care program won a national award as an outstanding vocational education program. In 1990, Kapi‘olani CC and Honolulu CC food service students created a Guinness record-breaking two-ton 130 foot long cake. Currently, Kapi‘olani CC offers 47 degree and certificate programs, including nationally recognized programs in culinary studies, health sciences, emergency medical services and legal assistance.

In Fall 2012, enrollment at Kapi‘olani CC totaled 8,892, including 7,908 Hawai‘i residents (89%). Hawaiian and Pacific Islanders comprise 20% of enrolled students, while 49% of the remaining students identify themselves as Asian and 13% identify as Caucasian. In addition, 25,000 students enroll through the college’s extensive non-credit programs. Kapi‘olani CC has taken the lead in blending credit and non-credit programs in an effort to be more responsive to the needs of the community, more flexible in its offerings and more entrepreneurial in generating revenues that can be used for improving existing programs or creating new ones. Kapi‘olani CC has also been successful in expanding its reach to international arenas. New agreements with institutions in China and Sri Lanka offer opportunities for faculty, students and curriculum to move

beyond the boundaries of the state. To assist in these new international ventures, Kapi‘olani CC is planning to establish a Center for International Affairs. Kapi‘olani CC will also be moving forward with the development of the Culinary Institute of the Pacific, a world-class culinary training ground.

Leeward Community College

Leeward Community College (LCC) opened its doors in 1968 as the first college in the UH system to be developed without a connection to a pre-existing technical school. In 1969 LCC moved to its current location in Pearl City, where it now offers 26 degree and certificate programs, including a strong liberal arts program and technical programs that provide opportunities for employment or transfer. The Digital Media and Television Production programs in particular are viewed by some as the best in the state. In Fall 2012, enrollment at LCC totaled 7,960, including 7,761 Hawai‘i residents (98%). Hawaiian and Pacific Islanders comprise 29% of enrolled students, while 40% of the remaining students identify themselves as Asian and 11% identify as Caucasian.

Windward Community College

Windward Community College (WCC) was established in 1972 in Kaneohe and primarily serves the windward region of O‘ahu. WCC offers 6 associate degree and certificate programs in the fields of Hawaiian studies, natural sciences, fine arts, veterinary technology, and vocational training. In Fall 2012, enrollment at WCC totaled 2,741, including 2,623 Hawai‘i residents (96%). Hawaiian and Pacific Islanders comprise 45% of enrolled students, while 17% of the remaining

students identify themselves as Asian and 19% identify as Caucasian.

University of Hawai'i West O'ahu

University of Hawai'i West O'ahu (UHWO) was established in 1976 in an area adjacent to LCC. In 2012, a new campus opened in East Kapolei. Targeting the communities of west O'ahu and other underserved parts of the state, UHWO meets the educational needs of both recent high school graduates and non-traditional students, through its innovative alternative learning opportunities such as instruction via computer and telecommunications, certificate programs, and individualized degree programs. Courses are scheduled to accommodate student schedules, including day, evening, and weekend classes. UHWO offers 12 baccalaureate and certificate programs, including a Bachelor of Arts (B.A.) with 18 different areas of concentration, a Bachelor of Education (B.Ed.) in Elementary Education, and a Bachelor of Applied Science with three possible majors. Five B.A. degrees and three certificate programs are offered through UHWO's Distance Learning program.

In Fall 2012, enrollment at UHWO totaled 1,997, including 1,761 Hawai'i residents (97%). Hawaiian and Pacific Islanders comprise 26% of enrolled students, while 41% of the remaining students identify themselves as Asian and 14% identify as Caucasian. The new campus is expected to serve 7,500 students and 1,000 faculty and staff.

Creating Jobs and Generating Income

One can think of the University of Hawai'i as if it were one of many businesses or industries

in Hawai'i. It produces education and research services as its primary outputs. It produces entertainment and sports services, consulting services, health care, housing, and food services. Its customers include students, visitors, private businesses, governments, and the general public. It attracts customers worldwide, many of whom stay for four or more years, as well as serving the local community.

An important difference between the University of Hawai'i and a private business is that UH gets a substantial part of its funding from taxpayers. In FY 2012, the University of Hawai'i and the supporting RCUH (Research Corporation of the University of Hawai'i) spent a total of \$1.7 billion in support of its educational mission; the State General Fund paid \$376 million of the total. The difference between what the State General Fund paid for and the total amount spent by UH (\$1.7 billion - \$376 million = \$ 1.3 billion) was paid for by government research and training grants, revolving funds (e.g., bookstore revenues), special funds (e.g., tuition and fees), and federal matching grants (e.g., U.S. Department of Agriculture Hatch and Smith-Lever funds).

Adding money spent by the privately funded University of Hawai'i Foundation, spending by students on items other than tuition, fees, dorm fees, and books¹, out-of-town visitor spending related to UH sponsored professional meetings and conferences brings total UH-related expenditures to \$2.32 billion in FY 2012, \$1.84 billion of which was spent

¹ Money spent by students for tuition, fees, dorm fees, and books were received and spent by the University and show up in the UH expenditure data. They were excluded to avoid double counting.

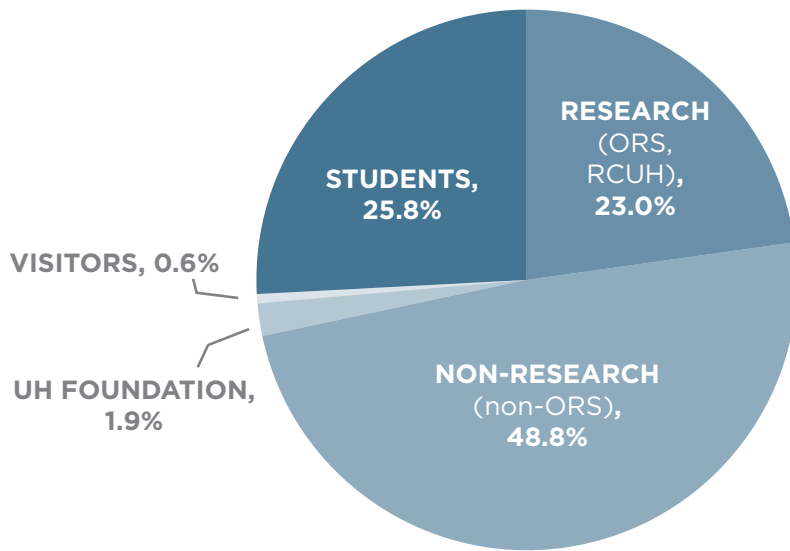


Figure 1 - Total UH Expenditures

locally. Figure 1, above, shows a breakdown of how that \$2.32 billion in direct total expenditures is divided among the different UH entities.

Non-research spending (mostly instructional expenditures) represents nearly half of all UH related spending (48.8%). Spending on research activities and student expenditures were at a close second 23.0% and 25.8%, respectively. All other categories combined comprised less than three percent of the total. Table 1 details these expenditures.

These numbers can also be used to illustrate the leverage effects of State General Fund higher education spending. In FY 2012, UH parlayed

\$376 million in State General Fund expenditures into \$1.47 (=1.84 billion – \$376 million) billion dollars of related research and educational expenditures.

The University of Hawai‘i generates economic activity in the community through its purchases from local businesses, its payment to its employees, and spending by its students and visitors. The total amount of economic activity generated in Hawai‘i can be estimated using the state’s 2007 input-output (I-O) model of Hawai‘i’s economy. The model is used to quantify the economic impacts of UH expenditures on the different industries in Hawai‘i. We first distributed the \$1.84 billion spent locally among the 20 sectors. Because a substantial portion of labor earnings are injected back into the economy in the form of household purchases of goods and services, we convert labor earnings into personal consumption expenditures (PCEs), and treat PCEs as an additional producing sector. The conversion ratio between labor earnings and PCEs, 85.4%, is calculated using the 2007 Condensed Input-Output Transaction Table for Hawaii, and indicates that about 85% of employee’s earnings are spent in the local economy. We then multiplied expenditures for each of the 20 sectors in the State I-O model by their respective type II “multipliers” to arrive at their total sales, employment, and earnings impacts. The type II multipliers capture the

Table 1. UH Expenditure Breakdown (000\$)

	Non research (non-ORS)	Research (ORS, RCUH)	UH Foundation	Students and Visitors	TOTAL UH
Total Local purchases of goods and services	\$711,312	\$361,338	\$31,336	\$611,911	\$1,715,896
Total Labor Income	\$302,903	\$114,258	\$7,140	-	\$424,302
Imports	\$120,051	\$58,897	\$5,228	-	\$184,176
Total expenditures	\$1,134,266	\$534,493	\$43,704	\$611,911	\$2,324,373

Table 2. Average Student Expenditures, by county

	Honolulu County	Hawaii County	Maui County	Kauai County	Total
Housing	\$7,898	\$4,632	\$8,298	\$6,275	\$7,697
Durables/start-up	\$2,490	\$1,856	\$1,404	\$1,969	\$2,435
Books and supplies	\$1,388	\$2,220	\$2,679	\$1,815	\$1,452
Utilities	\$2,402	\$3,444	\$4,025	\$6,043	\$2,486
Food	\$4,044	\$4,345	\$5,025	\$4,088	\$4,070
Local transportation	\$1,833	\$2,355	\$2,200	\$2,975	\$1,898
Recreation/entertainment	\$971	\$701	\$553	\$720	\$948
Personal care	\$4,004	\$3,559	\$3,696	\$5,045	\$4,012
Travel	\$602	\$706	\$387	\$502	\$599
Total	\$25,631	\$23,817	\$28,267	\$26,432	\$25,598

direct, indirect, and induced effects per dollar of spending in each of the 20 sectors of Hawai‘i’s economy.²

Student Spending: A Significant Contributor to Hawai‘i’s Economy

Student spending represented over 25% of total spending, with the average UH student

2 To illustrate the relationship between “direct,” “indirect,” and “induced” effects, consider the following example. I spend \$10 at a local grocery store; the “direct effect” of my expenditure on business sales in the economy is the \$10 received by the grocery store. In turn, the grocery store purchases \$5 worth of goods from its wholesaler. The additional sale in the economy by the wholesaler to the grocery store is an “indirect” effect of my grocery purchase. Both the grocery store and the wholesaler pay their employees, and with their pay the employees purchase goods and services in the economy. These are the “induced” effects. Similarly, the grocer and wholesaler pay rent, interest on loans, and take home profits; those incomes are eventually spent in the economy as well. Type II multipliers capture the “multiplier,” or sometimes referred to as the “ripple,” effects of any initial spending.

spending roughly \$25,600 on non-tuition expenditures.³ Total non-tuition expenditures were lowest for students in Hawaii county who spent slightly over \$23,800 per year and the highest in Maui county (over \$28,200). A summary of average student expenditures by county is provided in Table 2.

The largest percentage of non-tuition expenditures went towards housing (30%). Food and personal care (including insurance) were also significant spending categories (over 15% each). The differences in Table 2 confirm that spending also varies widely by county. In relative terms, outside of Oahu students tend to spend more on food, utilities, local transportation, books and supplies. Students on Oahu spend more on hous-

3 Not all expenditure categories listed in Table 2 were included in the impact analysis. For example, community college students’ expenditures on housing, utilities, food etc. might exist in the absence of the UH system. Therefore, we include only spending on books and supplies at the beginning of the semester in the UH-related total student spending.

Table 3. Multiplier effects per Dollar of UH related expenditures

	Business Sales per \$ of Spending	Earnings per \$ of Spending	State Taxes per \$ of Spending	Jobs per Million \$ of Spending
Total (Local) Expenditures	1.96	0.59	0.11	15.47
Research (ORS, RCUH)	2.11	0.76	0.12	19.76
Non-Research (non-ORS)	2.09	0.68	0.12	17.32
UH Foundation	2.10	0.76	0.12	20.40
Visitors	1.96	0.57	0.12	14.84
Students	1.78	0.41	0.08	11.18
PCEs	1.65	0.46	0.08	12.07

ing, recreation and entertainment and durable/ start-up goods.

UH Impact on Hawai'i's Economy

In FY 2012, student spending; state and federal government-funded UH spending for goods and services; out-of-state visitor spending; and UH related expenditures totaled \$2.32 billion, \$1.84 billion of which was spent locally. Together with additional indirect and induced benefits from these activities, UH had a total impact of \$3.61 billion on Hawai'i's economy.

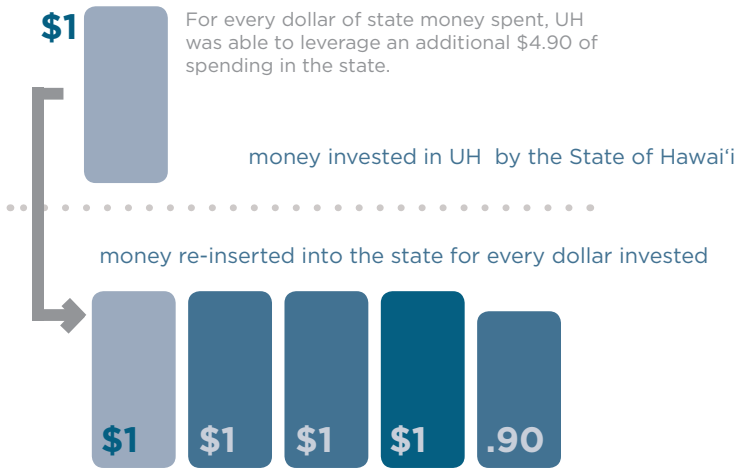
Table 3 shows that each dollar spent generates \$1.96 of total business sales, \$0.59 of employee earnings, and \$0.11 of state tax revenues in Hawai'i in FY 2012; and each million dollars of spending generates about 15 jobs in Hawai'i.

Table 4 shows the total impact of each source of expenditures as well as the impact per dollar of State General Funds spent. Each dollar of State General Fund spending on UH translates into \$9.61 of total business sales, \$2.91 of employee earnings, and 52 cents of state taxes in Hawai'i. Every \$1 million in general funds spent on UH generates 76 jobs. For every dollar of state money

Table 4. Economic Impacts of UH and Related Local Expenditures

	Direct Local Spending ('000\$)	Business Sales ('000\$)	Income ('000\$)	State Tax ('000\$)	Employment (jobs)
Total (Local) Expenditures	\$1,842,622	\$3,613,211	\$1,095,867	\$194,339	28,514
Research (ORS, RCUH)	\$361,338	\$762,794	\$274,603	\$44,953	7,140
Non-Research (non-ORS)	\$711,312	\$1,485,713	\$484,819	\$85,158	12,317
UH Foundation	\$31,336	\$65,773	\$23,769	\$3,916	639
Visitors	\$12,841	\$25,143	\$7,302	\$1,536	191
Students	\$599,069	\$1,064,691	\$247,080	\$48,257	6,697
PCEs	\$126,726	\$209,098	\$58,294	\$10,518	1,530
Impact per \$ of General Fund	4.90	9.61	2.91	0.52	75.83

Figure 2 - Leverage



spent on the UH System, UH was able to leverage an additional \$4.90 of spending in the state.

Overall, the \$1.84 billion of local education-related expenditures attributable to UH generated \$3.61 billion in local business sales, \$1.10 billion in employee earnings, \$194 million in state tax revenues, and nearly 30,000 jobs in Hawai'i in FY 2012. This represented approximately 4.8% of total (non-farm) jobs, 3.6% of worker earnings, and 3.2% of total state tax revenues in the economy of Hawai'i. Economic impacts by county are reported in Tables 5-8.

Table 5. Economic Impacts of UH and related local expenditures, Honolulu County

	Direct Local Spending ('000\$)	Business Sales ('000\$)	Income ('000\$)	State Tax ('000\$)	Employment (jobs)
Total (local) expenditures	\$1,548,915	\$3,038,265	\$920,416	\$163,676	23,955
Research (ORS, RCUH)	\$319,768	\$674,843	\$242,603	\$39,740	6,317
Non-Research (non-ORS)	\$601,004	\$1,253,554	\$406,564	\$71,692	10,287
UH Foundation	\$18,802	\$39,464	\$14,261	\$2,350	384
Visitors	\$12,717	\$24,899	\$7,231	\$1,521	189
Students	\$490,831	\$870,945	\$201,091	\$39,593	5,502
PCEs	\$105,794	\$174,560	\$48,665	\$8,781	1,277

Table 6. Economic Impacts of UH and related local expenditures, Hawaii County

	Direct Local Spending ('000\$)	Business Sales ('000\$)	Income ('000\$)	State Tax ('000\$)	Employment (jobs)
Total (local) expenditures	\$220,847	\$428,260	\$126,827	\$22,363	3,326
Research (ORS, RCUH)	\$21,510	\$45,595	\$16,650	\$2,709	430
Non-Research (non-ORS)	\$79,307	\$167,096	\$56,822	\$9,753	1,494
UH Foundation	\$6,267	\$13,155	\$4,754	\$783	128
Visitors	\$0	\$0	\$0	\$0	0
Students	\$103,086	\$184,798	\$43,691	\$8,232	1,146
PCEs	\$10,676	\$17,616	\$4,911	\$886	129

*Visitors data not available

Table 7. Economic Impacts of UH and related local expenditures, Maui County

	Direct Local Spending ('000\$)	Business Sales ('000\$)	Income ('000\$)	State Tax ('000\$)	Employment (jobs)
Total (local) expenditures	\$42,126	\$85,157	\$28,465	\$4,852	732
Research (ORS, RCUH)	\$10,165	\$21,508	\$7,832	\$1,277	202
Non-Research (non-ORS)	\$20,059	\$42,261	\$14,259	\$2,448	369
UH Foundation	\$3,134	\$6,577	\$2,377	\$392	64
Visitors	\$125	\$244	\$71	\$15	2
Students	\$3,513	\$6,101	\$1,567	\$295	33
PCEs	\$5,131	\$8,466	\$2,360	\$426	62

Table 8. Economic Impacts of UH and related local expenditures, Kauai County

	Direct Local Spending ('000\$)	Business Sales ('000\$)	Income ('000\$)	State Tax ('000\$)	Employment (jobs)
Total (local) expenditures	\$30,734	\$61,530	\$20,158	\$3,448	501
Research (ORS, RCUH)	\$9,895	\$20,848	\$7,519	\$1,228	192
Non-Research (non-ORS)	\$10,942	\$22,802	\$7,174	\$1,266	167
UH Foundation	\$3,134	\$6,577	\$2,377	\$392	64
Visitors	\$0	\$0	\$0	\$0	0
Students	\$1,639	\$2,847	\$731	\$138	16
PCEs	\$5,214	\$8,455	\$2,357	\$425	62

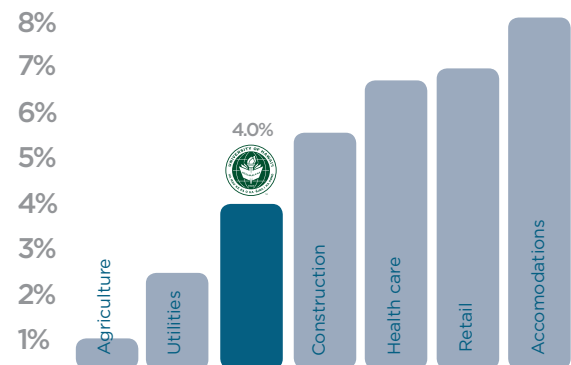
*Visitors data not available

UH: A Major Economic Sector in Hawai'i

Figure 3 shows the size of UH's contribution to Hawai'i's GDP compared with other sectors of the economy. UH represented about 4.0% of Hawai'i's GDP (estimated). By comparison, in 2011 retail trade's contribution to Hawai'i GDP was 6.9%; construction, 5.6%; the health care industry, 6.7%; hotels and other accommodations and food services, 8.1%; utilities, 2.3%; and agriculture, 0.7%. The University of Hawai'i system is a major economic sector in Hawai'i, and due to the significant proportion of spending on re-

search, is expected to play an even larger role as the Hawai'i Innovation Initiative gets underway.

Figure 3 - Breakdown of Hawai'i's Output



UHERO

THE ECONOMIC RESEARCH ORGANIZATION
AT THE UNIVERSITY OF HAWAII

UHERO THANKS THE FOLLOWING SPONSORS:

KAWEKI'U - THE TOPMOST SUMMIT

The Bank of Hawaii

KILOHANA - A LOOKOUT, HIGH POINT

Hawaii Electric Light Company, Inc.

Hawaiian Electric Company, Inc.

Maui Electric Company, Ltd.

Kamehameha Schools

Matson, Inc.

KUAHIWI - A HIGH HILL, MOUNTAIN

American Savings Bank

Central Pacific Bank

First Insurance Company of Hawaii, Ltd.

Hau'oli Mau Loa Foundation

Kaiser Permanente Hawaii

The Nature Conservancy, Hawaii Program

Natural Energy Laboratory of Hawaii Authority

The Pacific Resource Partnership

Servco Pacific Inc.

Kulia I Ka Nu'u (literally "Strive for the summit") is the value of achievement, those who pursue personal excellence. This was the motto of Hawaii's Queen Kapi'olani. Sponsors help UHERO to continually reach for excellence as the premier organization dedicated to economic research relevant to Hawaii and the Asia-Pacific region.

The UHERO Forecast Project is a community-sponsored research program of the University of Hawaii at Manoa. The Forecast Project provides the Hawaii community with analysis on economic, demographic, and business trends in the State and the Asia-Pacific region.

All sponsors receive the full schedule of UHERO reports, as well as other benefits that vary with the level of financial commitment.

For sponsorship information, browse to <http://www.uhero.hawaii.edu>.