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## The Impact of Humboldt State University On the Economy of Humboldt County

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### Abstract

◆◆ This study estimates the overall economic impact of Humboldt State University on the economy of Humboldt County. First, total expenditures for FY 02-03 by Humboldt State University (HSU) total \$92 million. Total expenditures by auxiliary institutions related to HSU (the HSU University Center, HSU Foundation, and HSU Associated Students) are also reported. Annual direct expenditures by all HSU students are estimated to be \$68 million, including \$53 million from students coming from outside of Humboldt County. Annual construction costs are also estimated. Total direct spending by HSU and its auxiliary institutions was estimated to be \$177.5 million dollars. The multiplier effect is estimated to add an additional \$19 million to the Humboldt County economy. Consequently the sum of direct, indirect and induced economic impacts of HSU on the County economy is \$196.5 million. HSU employment is compared with the largest other employers in Humboldt County. HSU is the second largest employer in the County (the largest is the County of Humboldt).◆ If HSU were a company, it would be the largest company in the economic base of the County. Further research is suggested, including research on local expenditures by students whose geographic origin is outside of Humboldt County, on construction-related expenditures, on the impact of commencement exercises and sports events, and on a more complete IMPLAN analysis of impacts. As a final point, this economic impact analysis does not take into account the effects of budget cuts that have occurred since 2002-03.◆◆

### I. Introduction

◆ What is the impact of Humboldt State University (HSU) on the local economy? That question was addressed in a 1998 report prepared by Peter Kenyon of HSU School of Business and Economics. That study examined population, employment and expenditures by HSU, the HSU Foundation, the University Center and Lumberjack Enterprise operations, construction expenditures, and student spending, as well as impacts on tourism, the value of student volunteer services, and increases in earning potential of HSU students. That report, though, did not quantify HSU's total impact on the local economy.

Impacts of California State University, Sacramento [CSUS] on the Sacramento Region addressed this question for CSUS, and offers an instructive alternative example of how to approach the question. Specifically, the CSUS report focused on employment impacts. Total employment impacts were divided into three categories: ◆ direct, ◆ indirect, and ◆ induced.◆ Estimates of these were totaled to arrive at total economic impacts. Direct benefits consist of measurable economic activity derived exclusively from the university. Indirect benefits represent the creation of additional economic activity that results from linked businesses, suppliers of goods and services, and provision of operating inputs. Induced benefits measure the additional consumption expenditure of direct and indirect sector employees. Total employment impacts for CSUS used an employment multiplier of 1.29.

The present study uses expenditure information to estimate the economic impact of HSU, including auxiliary institutions such as the HSU Foundation, Center Activities, and Associated Student operations. This study includes direct expenditures as well as the indirect and induced effects of these expenditures. These direct, indirect and induced impacts are quantified in a spreadsheet. This report discusses the data contained in each cell of that spreadsheet, including the assumptions that were made (a technical appendix describes how data were obtained). The result is a very transparent and explicit, simple, yet comprehensive model for measuring HSU's impact on the local economy<sup>[1]</sup>. Finally, suggestions are made for further research to improve data and to refine parameters as well as for updating results.

### II. Impact Data and Analysis

#### A. Direct Impacts

##### 1. HSU and auxiliary institutions (University Center, HSU Foundation, and Associated Students)

Humboldt State University's total expenditures for FY02/03 were \$92,289,074. University Center expenditures were \$13,086,191. Since University Center expenditures come largely from student purchases of textbooks and supplies, which are reported separately later, to avoid double counting, University Center expenditures are not included in total direct impacts. HSU Foundation expenditures were \$11,943,239. Associated Students expenditures were \$1,298,313. After subtracting out HSU financial aid and other grants to students to avoid double counting, total direct expenditure for these entities is \$101,329,729

##### 2. Student expenditures

HSU's statistical profile states that the geographic origin of 24.8% of HSU's student body is Humboldt County. Research has not discovered what fraction of this 24.8% continues to live at home while attending Humboldt State. In the absence of any estimate of this fraction, this study arbitrarily assumes that half of those students whose geographic origin is Humboldt County continue to live at home, i.e. 12.4% live at home. Further research is needed regarding what fraction of HSU students whose geographic origin is Humboldt County live at home during the time they attend HSU.

◆ Assuming 12.4% of HSU students live at home implies that 87.6% do not live at home. In fall semester 2003 there were 7,092 full-time equivalent students enrolled at Humboldt State. HSU Financial Aid's webpage estimates costs for students who are living with their parents, and for on-campus and off-campus living. After subtracting out tuition and fees, expenditures by students living at home are \$6,919 per year. After subtracting out tuition and fees, expenditures by students not living at home is \$10,719 per year. The Financial Aid Office estimates that travel costs \$698 for on-campus students and \$984 for off campus students. We assume that the higher cost of off-campus travel is due to automobile transportation, and that these expenditures flow into the Humboldt County economy. Consequently we make the conservative assumption that the entire \$698 represents air travel expenditures paid for by parents outside of

Humboldt County, and subtract that from the \$10,719 figure to get a total of \$10,021 for annual student expenditures, excluding tuition, for students not living at home. [2] Clearly further research is needed in order to gain a more accurate picture of HSU student travel expenditures. Based on the data and assumptions described above, total annual direct student expenditures that flow into the Humboldt County economy are estimated to be \$68,341,008.

3. Construction

Determining what annual amount to use for construction is problematic: HSU construction projects often run for several years with costs spread out over that time, and cost estimates not readily available for individual academic years. Moreover, annual expenditures for construction projects fluctuate considerably more than the overall HSU budget.

In 2003/2004 two projects, the Energy Conservation Project and the Forbes Complex Renovations Phase 1, had a total construction cost of \$7,873,167. A rounded figure of \$7,800,000 is used for direct annual HSU construction expenditures.

4. Total direct expenditures

Total direct expenditures by HSU, HSU auxiliary institutions, HSU students, and for HSU construction is \$177,470,737.

B. Multiplier Effects

The multiplier effects estimated below use the California Trade and Commerce Agency job multiplier for Humboldt County's education sector. Additional research is needed to update these relatively crude multipliers using IMPLAN.

The California Trade and Commerce Agency suggests a job multiplier of 1.23 for the industrial classification education for Humboldt County. This means that for every new job in the education sector there is an addition 0.23 of a job created in the Humboldt County economy. HSU and its auxiliaries employ 1429 people. Applying the jobs multiplier to this figure implies an additional 329 jobs are created in Humboldt County. According to the U.S. Census Bureau, average income per job in Humboldt County was \$27,169 in 2000. Therefore, the additional 329 jobs created in Humboldt County due to employment at HSU and its auxiliaries are estimated to generate multiplied income of \$8,938,601 in the Humboldt County economy.

It is more challenging to apply the jobs multiplier to non-employment based expenditure data. A crude adjustment can be made to convert the jobs multiplier into an expenditure multiplier. Our analysis suggests a crude, but conservative, expenditure multiplier of 1.11. Applying this multiplier to total non-payroll expenditures by HSU, the HSU Foundation, the University Center, and Associated Students results in an additional \$2,106,777 in income flowing into the Humboldt County economy.

Estimating multiplier effects from construction is problematic. Data were not obtained on the percentage of construction costs that are labor and that are materials and operating expenses. Furthermore, labor may be local (from Humboldt County) or provided by crews from outside of the County. Non-local labor is likely to spend a lower percentage of their wages within Humboldt County. We make the crude assumption that half of the construction costs went for local labor and for materials and equipment purchased (or at least invoiced) locally. Applying the multiplier of 1.11 results in an additional \$429,000 flowing into the Humboldt County economy. Again, research is needed to determine the local content of HSU construction expenditures.

Our crude, conservative multiplier analysis indicates that total direct spending associated with HSU results in an additional \$19 million flowing into the Humboldt County economy. Thus total annual direct and multiplier effects associated with HSU sum to \$196.5 million.

III. Employment

Full-time equivalent employment (FTE) for 2002-2003 was

HSU	1,171
University Center	65
HSU Foundation	146
Associate Students	7
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Total	1,429

For comparison FTE for other major County employers are:

County of Humboldt	1,972
St Joseph Health System	947
Pacific Lumber	914*
Eureka City Schools	592
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Total	4,425

\*Not including 15 part-time and 50-60 seasonal.

In terms of numbers of employees the above indicates Humboldt State (not counting its related institutions) is the second largest employer in Humboldt County. Counting related institutions, HSU FTE employment is 72% of the largest employer, the County of Humboldt.

In terms of payroll (wages plus benefits):

HSU	\$75,981,055
University Center	4,246,134

HSU Foundation	5,994,287
Associated Students	100,494
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Total	\$86,321,970

For comparison payroll (wages plus benefits):

Humboldt County	\$91,978,677
St Joseph Health System	46,572,018
Pacific Lumber	62,000,000*
Eureka City Schools	36,948,121
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Total	\$237,498,816

\*Estimate

From the above, not counting related institutions, HSU is the second largest employer in the County in terms of payroll. HSU's payroll, including related institutions, is 94% of the largest employer the County of Humboldt.

The County of Humboldt provides services and the magnitude of those services is largely a function of the size of the County's population and economy. Similarly St. Joseph Health System and Eureka City Schools provide services and the magnitude of those services is also largely a function of the size of the County's population and economy. In contrast, Pacific Lumber and Humboldt County can be considered as part of the economic base of the County which brings revenue into the County.<sup>[4]</sup> The size of the economic base is an important determinant of size of the County's population and economy. If Humboldt State were a company, it would be the largest single company in the economic base of the County.

#### IV. Suggestions for Further Research

As pointed out earlier in this report, more research is needed on the percentage of HSU students who live at home. Also for those whose geographic origin is outside the County, research is needed on the percentage of their expenditures that are made within Humboldt County, particularly their expenditures on travel and clothing. Further research would also shed light on the economic impact of commencement exercises and HSU sports events.

Several questions needed to be addressed in terms of HSU construction costs. For example, we would like to know the percentage of construction costs are labor and non-labor expenses. Of the labor costs, we would like to know the percentage that is paid to non-local labor, and the percentage of total spending by non-local labor that occurs within Humboldt County. Of the non-labor construction costs, we would like to know how much is purchased locally. It would also be helpful to know the percentage of non-construction project costs that are spent in Humboldt County.

The multiplier analysis used in this study is very crude. Further research needs to be done that makes use of the IMPLAN economic impact model.

#### V. Sources Cited

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<sup>[1]</sup> Because of Humboldt County's isolation and size, the local economy can simply be defined as the economy of Humboldt County. Relatively few students, faculty, or staff live outside of Humboldt County, and most direct expenditures are made in the county.

<sup>[2]</sup> Note that students from Humboldt County are assumed not to incur the \$698 in travel cost.

<sup>[3]</sup> According to the California Trade and Commerce Agency, the industry spending jobs multiplier for education in Humboldt County is 1.11. The difference between the industry spending multiplier and the industry and consumer spending jobs multiplier of 1.23 can be viewed as the pure employee consumer spending job multiplier. In other words, spending by one employee, by herself, results in an additional 0.12 jobs in the overall county economy. If jobs are exactly proportional to the size of the economy, then the jobs spending multiplier approximates an expenditure multiplier. As a check, we can apply this multiplier to the \$86.22 million payroll of HSU and its auxiliaries. Assuming that the spending multiplier for HSU employees was 0.12 (each dollar spent by an employee ultimately added an additional 12 cents to the county's economy), then the \$86.22 million payroll expenditures would result in an addition of \$10.35 million to the local economy through the multiplier effect. This figure is close to the \$8.94 million from the jobs multiplier. Using a more conservative multiplier of 1.11 would yield \$9.48 million, which is a bit closer to the \$8.94 million figure from the jobs multiplier.

<sup>[4]</sup> Note that a large percentage of HSU students (approximately 75%) come from outside of Humboldt County. This is a much higher percentage than that of CSUS, which is more of a commuter campus. Consequently, a larger share of HSU-related employment and expenditures is associated with injecting income into the local economy than is the case for CSUS and the Sacramento Region's economy. In other words, HSU is more clearly a part of Humboldt County's base industry than is CSUS for the Sacramento Region's economy.