

THE REGIONAL ECONOMIC IMPACT OF THE UNIVERSITY OF IOWA:
AN UPDATE

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I. Overview

The University of Iowa brings a myriad of social, intellectual, health and economic benefits to the state of Iowa. Iowans gather in Iowa City to enjoy world-class performances at Hancher auditorium, to cheer nationally ranked athletic teams, and to expand their artistic horizons at the University Museum of Art. The citizens of Iowa have access to a premier educational institution at which to pursue their intellectual goals. The University of Iowa Hospitals and Clinics provide superior care to Iowa's residents. All of these programs (and the many others supported by the University of Iowa) enrich the lives of our citizens and students.

The University of Iowa also serves as an engine of economic activity in the state of Iowa. The University provides jobs, directly and indirectly, for over 44,000 Iowans, creates over \$2.1 billion in economic activity, and, consequently, generates \$137 million dollars in state tax revenue. In this report, we focus on the economic benefits that the University of Iowa brings to the State of Iowa.

II. University Revenue

Revenues of the University of Iowa totaled over \$1.37 billion in fiscal year 1999 (**Figure 1**). State appropriations supply approximately 22% of University revenue (\$308 million), compared to 23% of revenue in 1993. Sales and services by the Health Care Units accounted for 31% of revenue (\$424 million), while academic unit and auxiliary sales account for another 9% of revenue (\$128 million). The next largest sources of revenue for the University are Tuition and Fees and contributions from the Federal government, both of which contribute 9% of University revenue.

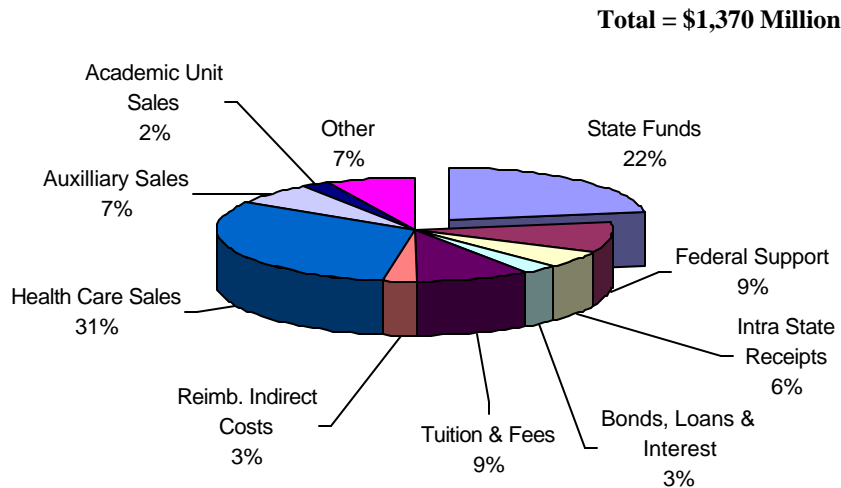


Figure 1. University of Iowa Revenue by Source.¹

A substantial fraction of the revenue received by the University of Iowa originates outside of the state. Of the \$259.5 million received for gifts, grants and contracts, 64% came from federal government sources (\$167 million), 15% from businesses and corporations (\$39.7 million), 9% from the State and Local government (\$22 million) and 9% from Foundations and Associations (**Figure 2**).

¹ Source: Iowa Board of Regents Monthly Financial Report, 12/31/99, and the University of Iowa Financial Report for the Fiscal Year July 1, 1998 to June 30, 1999. Does not sum to 100% due to rounding error.

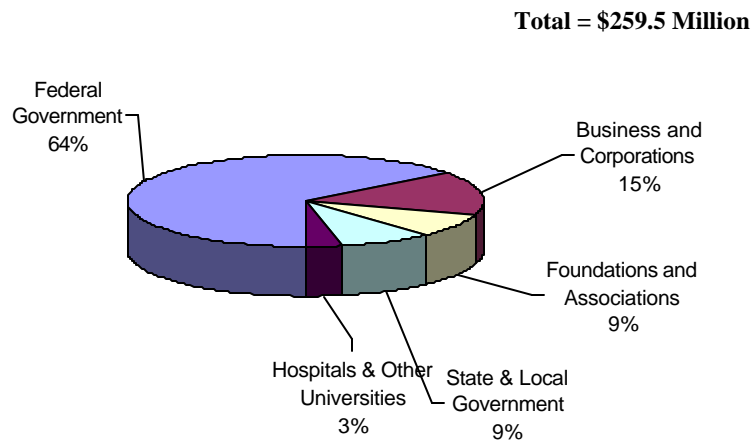


Figure 2. Gifts, Grants and Contracts by Source.²

Real growth in University revenue (corrected for the effect of inflation) has averaged 1.5% annually since fiscal year 1993. Real annual growth in State Funds has amounted to approximately 1% (**Figure 3**), while there has been no real growth in Federal Support. Reimbursement for indirect costs has grown most quickly (3.6% real annual growth), but this revenue category comprises only 2.8% of total revenue. Tuition and Fees have grown at an annual real rate of 2.4%, and now comprise 9.3% of revenue, compared to 8.9% in 1993.

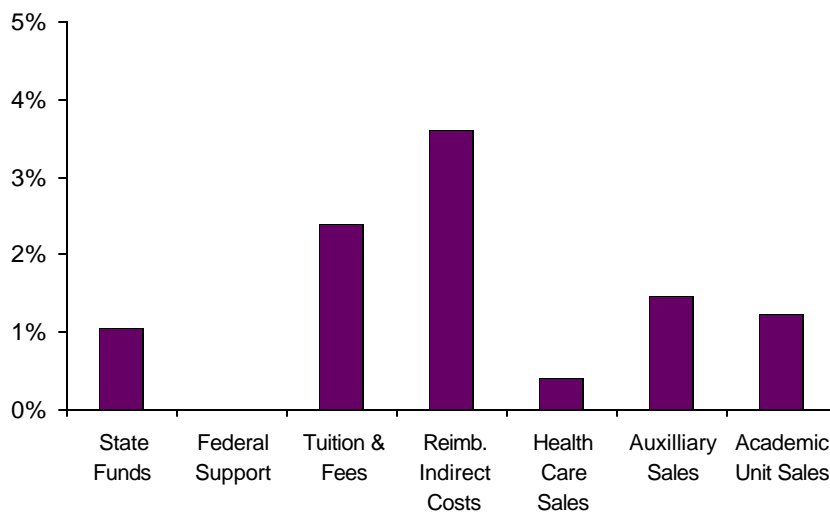


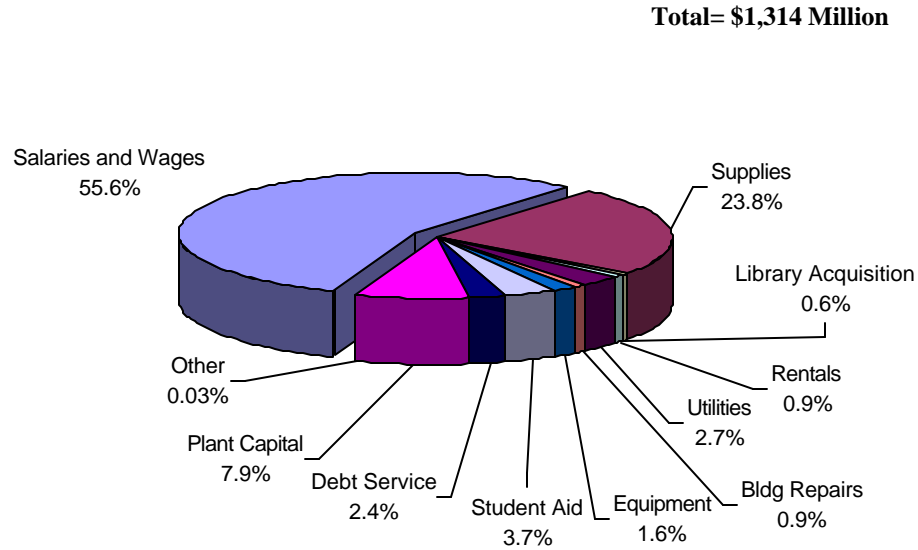
Figure 3. Growth in University of Iowa Real Revenue by Source.³

² Source: The University of Iowa Report of Gifts, Grants and Contracts, July 1, 1998 – June 30, 1999. Prepared 7/8/99 by the Division of Sponsored Programs.

III. University Expenditures

University expenditures in fiscal year 1999 totaled \$1,314 million. Salaries and Wages are the biggest component of expenditures (56% or \$730 million), followed by Supplies (24%), Plant Capital (8%) and Student Aid (4%) (**Figure 4**).

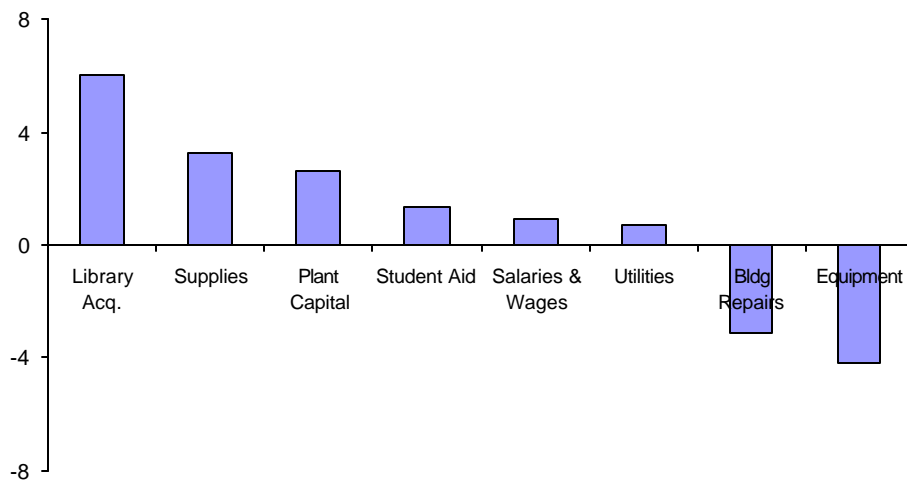
Figure 4. University Expenditures by Use.⁴



³ Growth rate is measured as the percentage change in revenue from 1993 to 1999, adjusted for effect of inflation using the Higher Education Price Index (HEPI). Over the six-year period, this index rose 21%, or about 3.5% per year.

University expenditures have grown by an annual average real rate (again, controlling for the effect of inflation) of 1.0% per year. Real wages and salaries have grown by 0.9% annually; this translates into a 2.0% per year real growth rate in per-employee expenditures on wages and salaries.⁵ This contrasts with an average annual rate of growth in real Iowa personal income of 3.5%.⁶ Expenditures on Supplies have grown by 3.2%, on Plant Capital by 2.7% and on Student Aid by 1.4%. Expenditures on Building Repairs and Equipment have fallen in real terms since 1993 (**Figure 5**).

University expenditures extend across the state of Iowa; this dispersion is illustrated on Map 1 (page 19). In fourteen of Iowa counties, University expenditures exceed \$79,000. In roughly half of Iowa's counties, University expenditures exceed \$9,000. Capital expenditures are much more geographically concentrated; however, sixteen of Iowa's counties benefited from at least \$3,656 in capital



expenditures from the University of Iowa (Map 2, page 20).

Figure 5. Real Growth Rate of University Expenditures by Category.⁷

University purchases of goods and services in Iowa amounted to \$276 million; these purchases generate additional indirect economic activity, which amounted to approximately \$266 million in 1999. University employees, students and visitors generate a substantial amount of economic activity. Total direct purchases by these groups amounted to \$812 million in 1999; these direct purchases have an additional impact on the economy, generating another \$776 million dollars in economic activity. Hence, directly and indirectly, the University generates approximately \$2,130 million in economic activity. In the following sections, we delineate the separate effects of the University, its employees, students and visitors on economic activity in the state.

⁴ Source: The University of Iowa Business Office.

⁵ The growth rate in per-employee spending is higher because the number of employees has fallen.

⁶ Source: Iowa Economic Forecast, March 2000.

⁷ Cf. 3.

Category	Direct (\$ million)	Indirect (\$ million)
University Purchases	276	266
Employee Purchases	550	530
Student Purchases	219	204
Visitor Purchases	43	42
TOTAL	1,088	1,042

Table 1. Direct and Indirect Effect of University Expenditures.⁸

A. University Purchases

Direct University purchases (excluding expenditures on employees and students) amounted to \$721 million in 1999; purchases worth \$276 million were from businesses located in Iowa (see Table 2). Using the appropriate expenditure multipliers for these purchases, we estimate that the University generated an additional \$266 million in indirect expenditures in the state of Iowa (Table 1).

Category	Total	Capital	Equipment	Goods & Services	Utilities	Travel
Johnson County	54,055	8,266	1,311	37,463	5,439	1,576
Iowa	222,112	66,902	25,786	113,346	13,871	2,207
USA	442,770	81,314	149,961	192,901	13,873	4,722
Foreign	1,614	61	611	917	0	25

Table 2. University Purchases by Region (thousands of dollars).⁹

B. Employee Purchases

In April of 2000, the University of Iowa employed 12,700 people in permanent positions and 3,600 in temporary positions.¹⁰ This represents a 2.9% decline in permanent positions and a 17% decline in temporary positions since May of 1993. The majority of these employees earn between \$20,000 and \$50,000 annually. A small fraction, 8%, earns over \$70,000 annually. **Figure 6** illustrates the composition of employment at the University.

⁸ See Appendices 2, 3, 4 and 5.

⁹ Source: Business Office.

¹⁰ Source: Payroll Office, April 2000. These counts will vary by month, and do not represent the total number of people employed over the course of the fiscal year.

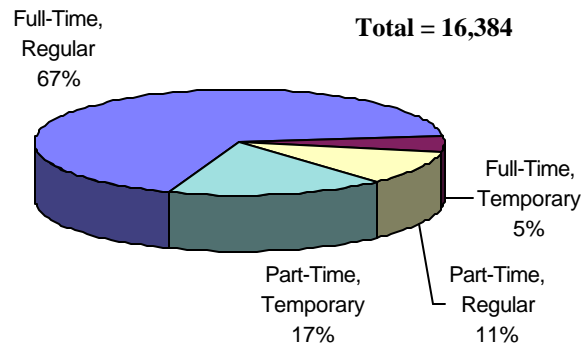


Figure 6. Composition of Employment at the University of Iowa, April 2000.

Much of this income earned by University employees is used to purchase goods and services. Combining information about the distribution of employee earnings and the Consumer Expenditure Survey, we can estimate the impact of employee expenditures on the economy. We estimate that University permanent employees pump an extra \$550 million dollars directly into the economy (\$43,300 per permanent employee) on a yearly basis.¹¹ As these expenditures filtered through the economy, an additional \$530 million in economic activity was generated (Table 1).¹² This activity is not limited solely to Johnson county; as bank deposit records indicate, a substantial fraction of employees' earnings are deposited in banks outside of Johnson county (Map 3, page 21).

C. Student Expenditures

Over 28,000 students attended the University of Iowa, of which 18,600 (66%) were residents of Iowa and 9,500 were non-residents (34%).¹³ In fiscal year 1999, direct expenditures by students at the University of Iowa were \$219 million, of which \$74 million can be attributed to out-of-state students. These direct student purchases produce an additional economic impact equal to approximately \$203.6 million.¹⁴

D. Visitor Expenditures

Direct expenditures by visitors to the University academic units, Hancher Auditorium, athletic events, the University of Iowa Hospitals and Clinics, etc., amounted to \$43 million in 1999.¹⁵ The indirect impact of this spending is approximately \$42.9 million.¹⁶

¹¹ In 1993, this estimate was \$377 million in direct spending, or \$29,000 per permanent employee. Adjusted for inflation, this amounts to \$436 million in direct spending in 1993, or \$33,600 per permanent employee. Inflation adjustments are made using the Consumer Price Index (CPI) with a base year of 1999.

¹² See Appendix 3.

¹³ See Appendix 1.

¹⁴ See Appendix 2.

¹⁵ The equivalent figure in 1993 (adjusted for inflation using the CPI) was \$23.3 million.

¹⁶ See Appendix 4.

IV. Employment

The University directly employs 12,740 people in permanent jobs and 3,643 in temporary jobs. In addition, by purchasing goods and services, the University of Iowa indirectly supports the employment of another 8,409 people. The employees of the University of Iowa also purchase goods and services, indirectly providing employment for 12,870 people. Likewise, student and visitor spending create jobs (approximately 5,000 and 1,600 respectively).

Altogether, the University provides direct employment to 16,383 people, and indirectly supports the employment of another 27,900 people (**Figure 7**). In total, the University sustains the employment of 44,306 people.¹⁷ This represents about 2.9% of non-farm employment in Iowa.

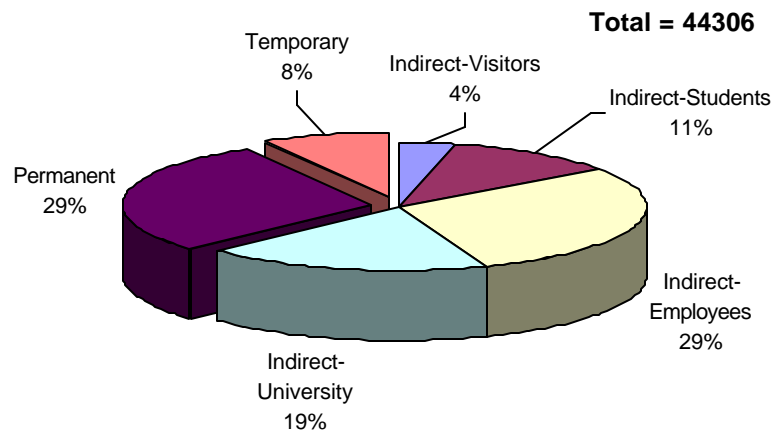


Figure 7. Direct and Indirect Employment Effects of University.¹⁸

V. Taxes

University employees paid \$27.6 million in state income tax in 1999. This represents 1.2% of the total personal income tax paid to the state in fiscal year 1999.¹⁹ Employees paid an addition \$15.8 million in sales taxes and \$12.7 million in property taxes. Visitors and students also generate sales tax revenue as they make expenditures. We estimate that students add \$9.4 million to sales tax collections, while visitors add \$3.2 million. Overall, the University of Iowa generates \$68.6 million in direct tax revenue for the state of Iowa (**Figure 8**). Accounting for indirect effects, this would approximately double to \$137 million.²⁰

¹⁷ The equivalent number in 1993 was 41,630 people.

¹⁸ See Appendices 2, 3, 4 and 5.

¹⁹ Iowa Department of Management figures, monthly general fund receipt spreadsheet.

²⁰ In 1993, this number was \$128 million. Adjusted for inflation, taxes generated in 1993 were \$147 million.

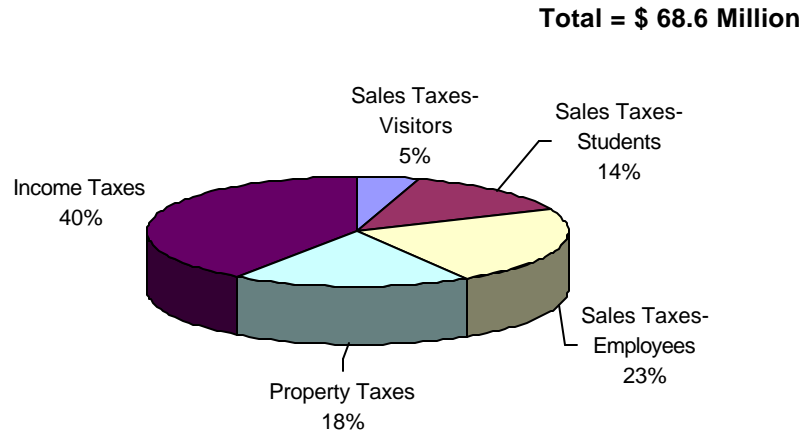


Figure 8. Direct Tax Revenue Effect of University.²¹

VI. Conclusion

The University of Iowa is a valuable asset to the State of Iowa, providing a first-rate education to residents and non-residents, academic expertise in areas ranging from gifted education to economic forecasting, and the opportunity to enjoy the arts and athletics. In addition, the University generates a substantial amount of economic activity. Directly and indirectly, the University provides jobs for 44,000 Iowans, generates \$2,130 million in income for Iowans, and increases state tax revenue by \$137 million each year.

²¹ See Appendices 6 and 7.

Appendices

Sources of data and the method of analysis of this data are the same as those used in “The Regional Impact of The University of Iowa,” Kara Backhaus and Charles Whiteman, 1994. Any differences between this update and that report are noted below.

Appendix I. Resident and Nonresident Tuition

The Office of the Registrar supplied student count data, while the Cashier’s Office supplied records of tuition payments by resident and non-resident students for spring semester, 1999. The following table provides a breakdown by college of the number of resident and nonresident students, and the amount of tuition paid by each. Some nonresident students – those who have research or teaching assistantships – pay resident-rate tuition.

Tuition for University of Iowa schools by residency classification, 1999 - 2000							
College	Total # of Students	Resident Count	Resident Amount	Non-Resident Count	Non-Resident Amount	Reduced Count⁴	Reduced Tuition Amount
Liberal Arts	16,515	11,533	15,682,580	4,982	24,219,001		
Engineering	1,103	754	1,161,647	349	1,775,936		
Business Administration	1,422	1,004	1,563,685	418	2,173,999		
Law	692	432	1,527,668	260	1,461,028	131	450,970
Medical¹	795	625	2,752,020	170	1,710,149	22	109,329
Dentistry	305	222	814,533	83	788,101		
Pharmacy	515	434	1,173,274	81	590,634	3	8,322
MBA²	712	551	905,901	161	530,478	82	180,584
Graduate³	5,689	2,747	1,633,125	2,942	5,394,794	2,656	3,389,362
Nursing	413	326	434,242	87	376,940		
Total	28,161	18,628	27,648,674	9,533	39,021,059	2,894	4,138,567

¹ Does not include residents and fellows

² Includes only MBA students. All others are in graduate college

³ Includes 190 post-doctoral students who are considered residents for counts

⁴ This amount may include students with qualifying appointments that are residents of Iowa.

Summary	Number of students	Percent of total	Dollar amount
Resident total	18628	66%	\$27,648,674
Non-Resident total	9533	34%	\$39,021,059
TOTAL	28161	100%	\$66,669,733

Appendix 2: Student Expenditures

The Office of the Registrar supplied student count data; 19.5% of students live on campus and 80.5% live off campus. Student expenditure estimates are derived from figures supplied by the Office of Financial Aid. Expenditures are assumed to pertain to a nine-month period. Residents accounted for \$44,872,367 in direct expenditures; non-residents accounted for \$74,139,375 in direct expenditures. RIMS II multipliers are used to derive indirect expenditure estimates.

Item	Expense (\$)
Books	840
Room & Board	5027
Personal	2370
Transport	940

Expenditures for Nine Months

Item	Expense (\$)
Gas	13
Electric	19
Phone	10
Rent	280
Food	237
Total	559

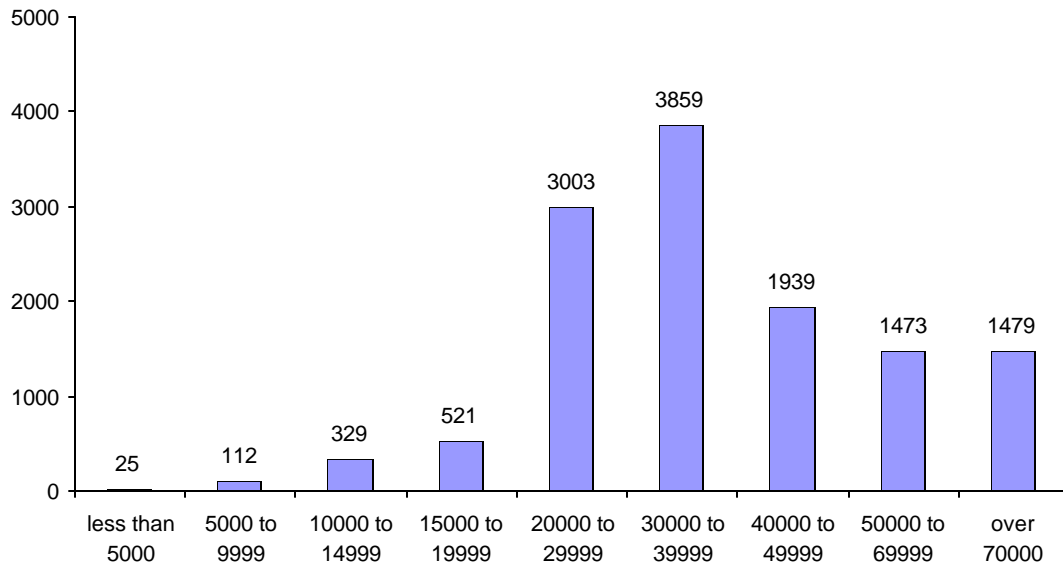
Room and Board Detail

Item	Direct Sales	Taxes	Subtotal Expenditures	Output Multiplier	Additional Output	Jobs Multiplier	Additional Jobs
Books ^a	\$11,827,620	\$563,220		1.87	\$10,230,891	20.1	206
Gas & Electric ^b	\$8,489,540	\$404,264	\$6,449,276	1.61	\$3,913,421	9.8	38
Phone ^c			\$2,040,264	1.74	\$1,501,023	14.9	22
Personal ^d	\$66,741,570	\$3,178,170		1.98	\$65,277,260	39.06	2550
Gasoline	\$26,471,340	\$5,294,268		1.84	\$22,249,161	13.50	300
Room & Board ^e	\$105,481,672	\$0	\$57,127,405	1.28	\$15,887,131	5.6	89
			\$48,354,267	2.75	\$84,576,449	21.2	1793
Total	\$219,011,742	\$9,439,922			\$203,635,336		4998

Direct and Indirect Spending Detail and Taxes Generated.

RIMS II Multipliers:

- ^a Printing & publishing,
- ^b Electric/gas,
- ^c Communication,
- ^d Avg. apparel, retail, amusements, eating/drinking, personal,
- ^e Real estate rental.



Appendix 3: Direct and Indirect Impact of Employee Expenditures

Table A3 - DIRECT EMPLOYEE EXPENDITURES AND ADDITIONAL OUTPUT AND JOBS GENERATED, 1999

Number at the University of Iowa	25	112	329	521	3003	3859	1939	1473	1479	12740	total expend	output multiplier	additional output	employment multiplier	addtl jobs
	Less than \$5,000	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$19,999	\$20,000 to \$29,999	\$30,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$69,999	\$70,000 and over						
Average annual expenditures.....															
Food.....															
Food at home.....															
Cereals and bakery products.....	247	275	313	339	395	428	485	538	652	5851605	2.7491	10235042.31	21.1607	124	
Meats, poultry, fish, and eggs.....	440	463	499	626	647	741	809	955	1,024	9845495	2.3189	12985223.36	22.6433	223	
Dairy products.....	194	197	231	251	273	305	338	408	452	4155372	2.7491	7268161.165	21.1607	88	
Fruits and vegetables.....															
Fresh fruits.....	100	82	113	121	145	156	152	184	239	2068582	2.3189	2728252.8	22.6433	47	
Fresh vegetables.....	95	88	105	123	132	159	144	179	236	2012763	2.3189	2654633.121	22.6433	46	
Processed fruits.....	63	59	70	81	88	100	120	123	169	1387388	2.7491	2426680.351	21.1607	29	
Processed vegetables.....	36	49	55	64	78	78	80	101	109	1058167	2.7491	1850839.9	21.1607	22	
Other food at home.....	518	534	587	661	769	894	1,016	1,163	1,362	12067036	2.7491	21106452.67	21.1607	255	
Nonalcoholic beverages.....	153	155	173	184	205	247	271	304	347	3229228	2.7491	5648242.695	21.1607	68	
Food away from home.....	1198	874	934	1,253	1,547	1,979	2,401	2,834	4,328	28601672	2.1631	33266604.7	46.1508	1320	
Alcoholic beverages.....	274	128	159	205	261	301	361	416	673	4433758	2.7491	7755086.118	21.1607	94	
Housing.....															
Shelter.....															
Owned dwellings.....	1,367	1,020	1,735	1,870	2,425	3,464	4,170	6,013	10,474	54777176	1.2781	15233532.65	5.5686	305	
Rented dwellings.....	2,111	1,919	2,245	2,428	2,428	2,432	2,132	1,654	1,208	27304590	1.2781	7593408.479	5.5686	152	
Other lodging.....	262	109	233	217	220	261	358	526	1,324	5303487	1.9486	5038877.668	40.6515	216	
Utilities, fuels, and public services.....															
Natural gas.....	139	193	205	241	266	254	292	324	415	3654306	1.6068	2217432.881	9.7956	36	
Electricity.....	535	622	711	773	852	916	981	1,043	1,243	12089986	1.6068	7336203.505	9.7956	118	
Fuel oil and other fuels.....	48	56	70	84	87	87	95	106	119	1187604	1.6068	720638.1072	9.7956	12	
Telephone services.....	525	513	584	649	744	830	902	992	1,231	11068891	1.7357	8143383.109	14.9218	165	
Water and other public services.....	119	153	182	223	250	275	295	361	471	3808514	1.6068	2311006.295	9.7956	37	
Household operations.....	164	260	282	269	348	393	522	684	1,453	6996455	1.2728	1908632.924	18.1188	127	
Housekeeping supplies.....	180	216	330	324	372	469	551	688	862	6589764	1.894	5891249.016	36.8633	243	
Household furnishings and equipment.....															
Household textiles.....	98	52	59	72	85	71	87	160	259	1381875	1.6286	868646.625	17.7154	24	
Furniture.....	118	87	166	202	311	338	351	426	957	5134315	1.9519	4887354.449	20.7704	107	
Floor coverings.....		159	66	32	172	91	89	95	451	1903414	1.6286	1196486.04	17.7154	34	
Major appliances.....	89	72	146	121	136	195	144	246	268	2320223	1.8824	2047364.775	16.3604	38	
Small appliances, miscellaneous housewares.....	29	35	37	45	68	75	91	139	171	1167997	1.9519	1111816.344	20.7704	24	
Miscellaneous household equipment.....	274	314	295	388	527	671	908	1,072	1,662	10310957	1.9519	9814999.968	20.7704	214	
Apparel and services.....	1118	701	814	910	1,334	1,754	2,045	2,140	3,458	23854923	1.825	19680311.48	23.0057	549	
Transportation.....															
Vehicle purchases (net outlay).....	1,193	829	1,724	1,876	2,411	2,588	3,274	4,664	5,732	40590576	2.1942	48473265.86	18.8949	767	
Gasoline and motor oil.....	560	424	602	738	893	1,056	1,239	1,399	1,625	14267350	1.8405	11991707.68	13.5128	193	
Other vehicle expenses.....	912	614	1,050	1,355	1,744	2,268	2,585	3,330	4,375	31520447	2.0829	34133492.06	39.2415	1237	
Public transportation.....	210	168	198	224	284	326	391	446	1,087	5339578	1.9999	5339044.042	24.7737	132	
Health care.....	860	1,165	1,652	2,140	1,849	1,834	2,074	2,165	2,874	25901558	2.0237	26515424.92	31.6094	819	
Entertainment.....															
Fees and admissions.....	243	127	161	190	262	343	450	631	1,216	5883158	1.9486	5580763.679	40.6515	239	
Television, radios, sound equipment.....	322	254	344	372	473	571	607	797	973	7757415	1.8824	6845142.996	16.3604	127	
Pets, toys, and playground equipment.....	131	114	148	216	274	300	396	506	708	4718107	2.085	5119146.095	21.9306	103	
Other entertainment supplies, equipment, and services.....	208	64	245	108	192	240	502	703	1,067	5238967	2.0829	5673277.364	39.2415	206	
Personal care products and services.....	375	224	317	255	320	404	457	569	770	5654697	2.0593	5990020.532	48.462	274	
Reading.....	90	64	94	104	132	154	168	219	340	2236409	1.894	1999349.646	36.8633	82	
Education.....	657	353	197	314	367	398	472	687	1,342	6834328	2.0829	7400893.791	39.2415	268	
Tobacco products and smoking supplies.....	221	208	236	260	283	322	326	334	273	3862235	2.7491	6755435.239	21.1607	82	
Miscellaneous.....	475	422	566	544	805	899	1,036	1,209	1,574	12533040	2.0829	13572029.02	39.2415	492	
Cash contributions.....	204	263	606	545	865	1,078	1,347	1,641	2,911	16609867	1.7889	13103524.08	19.7986	371	
Personal insurance and pensions.....	469	312	590	997	1,830	3,120	4,689	6,505	11,649	54198493	2.4985	8126441.76	30.8275	1671	
Life and other personal insurance.....	212	105	161	222	269	302	514	516	936	5299974	2.4985	7942011.039	30.8275	163	
Pensions and Social Security.....	258	207	429	775	1,561	2,818	4,175	5,989	10,713	48898544	1.7889	38576061.36	19.7986	968	

Appendix 4. Visitor Expenditures

Estimates of visitor expenditures are based on estimates of the number of people who visited the University of Iowa in fiscal year 1999 and estimates of expenditures by each of these visitors. The Alumni Association, the athletic ticket office, the Admissions Office, the Office of the Registrar, the Office of Conferences and Institutes, the Iowa Center for the Arts, Student Services, and the University of Iowa Hospitals and Clinics (UIHC) provided information on the number of visitors.

The estimates of expenditures by visitors on gasoline, hotels, and food (listed below) are consistent with other studies' estimates, yet conservative compared to the Chamber of Commerce estimates. The UIHC visitor expenditures were excluded from this process since their administrative office provided a detailed report on visitor spending.

Our assumptions about whether or not specific visitors stayed overnight in Iowa City were based on the visitor statistics, and were conservative to ensure that these results were not inflated. Aggregate gasoline, hotel, and food expenditures were computed for each event and then summed across events to compute total expenditures by University visitors.

To give an example of spending by visitors, consider Alumni functions. In 1999, 800 people attended alumni functions in Johnson County. The 70% who stayed overnight one night spent \$28,000 on hotels, \$8400 on gasoline, and \$14,000 on food, while the other 30% spent \$2400 on gasoline and \$4800 on food. Both of these gasoline expenditures are part of the \$7.09 million spent directly on gasoline by University visitors. The RIMS II output multiplier for gasoline is 1.6068, and thus the additional output created is \$4.3 million. Food and hotel expenditures are processed the same way using the following RIMS II multipliers: hotels, 1.9486, and eating/drinking, 2.1631.

Visitor spending creates more income and output. Additional jobs can be estimated by dividing the direct expenditures by one million and multiplying by the RIMS II employment multiplier. Therefore, \$7.09 million in gas expenditures support 70 jobs in various sectors of the Iowa economy.

Taxes generated from direct spending were calculated using the same method as in Appendix 2. The condensed visitor expenditures by event are listed below:

Alumni = .70 x total visitors x (hotel+gas+food) + .30 x total visitors x (gas+food)

Alumni data are for alumni functions in Johnson County only.

Basketball = .05 x non-students x (hotel+gas+food) + .95 x non-students x (gas+food) + students x (food)

Football = .20 x non-students x (hotel+gas+food) + .80 x non-students x (gas+food) + students x (food)

Campus visits = .25 x total visitors x (hotel+gas+food) + .75 x total visitors x (gas+food)

Commencement = .25 x total visitors x (hotel+gas+food) + .75 x total visitors x (gas+food)

Confs & Insts = .50 x total visitors x (hotel+gas+food) x 3 + .50 x total visitors x (gas+food)

Conferences & Institutes data are for functions in Johnson County only.

Arts = total visitors x (gas+food)

Iowa Center for the Arts includes all events by Hancher, Music, Theatre, and Dance Dept.

Orientation = .33 x non-students x (hotel+gas+food) + .66 x non-students x (gas+food) + students x (food)

Residence halls = total visitors x (gas+food)

Hospital figures are from UIHC report.

Visitor Statistics	Total Visitors	Non-Johnson County	Non- Iowa	Student	Non- Student	Individual Expenditures					
						Overnight			One day		Student
						Hotel	Gas	Food	Gas	Food	Food
Alumni	800	744	560			50	15	25	10	20	
Men's Basketball (11 games)	165000	99000	8250	33000	132000	50	15	25	10	20	5
Men's Football (4 games)	240000	156000	48000	26400	213600	50	15	25	10	20	5
Campus Visits	14089	11130	7467			50	15	25	10	20	
Commencement (including 2000 summer)	14000					50	15	30	10	30	
Conferences and Institutes	8423					50	15	25	10	25	
Iowa Center for the Arts	109126	64602	3710			0	0	0	5	20	
Orientation	11667			6220	5447	50	15	25	10	20	5
Residence Halls (excl orient, conf and inst)	6479					0	0	0	5	10	

UIHC

Number of Visitors and Individual Expenditures on Hotel, Gas and Food.

	Direct Spending	Output Multiplier	Indirect Output	Job Multiplier	Indirect Jobs
Gas	7099349	1.6068	4307885	9.7956	70
Hotel	15077300	1.9486	14302327	40.6515	613
Food	20889691	2.1631	24296800	46.1508	964
Total	43066340		42907012		1647

Estimates of Direct Spending by Visitors and Indirect Effect on Output and Employment.

Appendix 5. University Spending

The Business Office supplied expenditure information by category. Figures pertain to purchases made in Iowa by the University of Iowa.

Item	Expenditures	Employment Multiplier	Indirect Jobs	Output Multiplier	Indirect Output
Capital	75,168,500	27.40	2060	2.16	86,992,505
Equipment	27,097,108	17.30	469	2.06	28,625,385
Goods & Services	150,808,984	36.90	5565	1.89	134,823,232
Utilities	19,310,538	9.80	189	1.61	11,717,634
Travel	3,782,540	33.47	127	1.98	3,722,272

Appendix 6. Sales Tax

In Appendix 3, employee purchases were estimated using the Consumer Expenditure Survey. Not every category of goods and services are taxable, so the purpose of this appendix is to identify the expenditures which are taxable, and then estimate the sales taxes paid by University employees.

All categories in the following table are subject to Iowa's 5% sales tax rate except for those goods and services that face different tax rates. According to the Iowa Department of Revenue and Finance, 36 cents from each pack of cigarettes goes to the state government. Assuming the price is around \$2.50 per pack, the tax rate is 14.4%. Similarly, 20 cents from each gallon of gas purchased is collected by the state, which is a tax rate of 20% since the average price of gasoline was \$1.00 per gallon in 1999. Additionally, hotel/motel rooms are taxed at a rate of 7% in the State of Iowa.

Looking at the table below, one observes that permanent employees spent roughly \$14.267 million on gasoline, an estimate which includes state taxes. We calculate the total expenditures on gasoline excluding state taxes using the tax rate of 20% given above (by dividing by 1.20). We compute the state tax revenue from alcohol purchases by subtracting expenditures excluding state taxes from expenditures including state taxes.

The resulting total sales tax revenue collected from all employee expenditures was \$15.757 million.

Number at the University of Iowa	25	112	329	521	3003	3859	1939	1473	1479				
	Less than \$5,000	\$5,000 to \$10,000	\$10,000 to \$15,000	\$15,000 to \$20,000	\$20,000 to \$30,000	\$30,000 to \$40,000	\$40,000 to \$50,000	\$50,000 to \$70,000	\$70,000 and over	total expenditures including taxes	tax rate	total expenditure excluding state taxes	state tax revenues
Products that get taxed:	\$5,000	\$9,999	\$14,999	\$19,999	\$29,999	\$39,999	\$49,999	\$69,999	over				
Nonalcoholic beverages.....	153	155	173	184	205	247	271	304	347	3229228	0.05	3075455	153773
Food away from home.....	1198	874	934	1,253	1,547	1,979	2,401	2,834	4,328	28601672	0.05	27239688	1361984
Alcoholic beverages.....	274	128	159	205	261	301	361	416	673	4433758	0.05	4222627	211131
Utilities, fuels, and public services.....	1,367	1,537	1,752	1,971	2,199	2,362	2,565	2,827	3,479	31811320	0.05	30296495	1514825
Other lodging.....	262	109	233	217	220	261	358	526	1,324	5303487	0.07	4956530	346957
Household operations.....	164	260	282	269	348	393	522	684	1,453	6996455	0.05	6663290	333165
Housekeeping supplies.....	180	216	330	324	372	469	551	688	862	6589764	0.05	6275966	313798
Household furnishings and equipment.....	640	719	768	859	1,299	1,439	1,670	2,138	3,768	22211013	0.05	21153346	1057667
Apparel and services.....	1118	701	814	910	1,334	1,754	2,045	2,140	3,458	23854923	0.05	22718974	1135949
Transportation.....	2,875	2,035	3,575	4,192	5,331	6,237	7,489	9,840	12,819	91712370	0.05	87345114	4367256
Gasoline and motor oil.....	560	424	602	738	893	1,056	1,239	1,399	1,625	14267350	0.20	11889458	2377892
Entertainment.....	904	559	898	886	1,201	1,453	1,956	2,637	3,963	23594248	0.05	22470712	1123536
Personal care products and services	375	224	317	255	320	404	457	569	770	5654697	0.05	5385426	269271
Reading.....	90	64	94	104	132	154	168	219	340	2236409	0.05	2129913	106496
Tobacco products and smoking supplies	221	208	236	260	283	322	326	334	273	3862235	0.14	3376080	486155
Miscellaneous.....	475	422	566	544	805	899	1,036	1,209	1,574	12533040	0.05	11936229	596811
										286891969		271135303	15756666
										286.892		271.135	15.757

Source: Table 2, Income before taxes: Average Annual Expenditures, Consumer Expenditure 1998

Appendix 7. Property Taxes

Many University employees are homeowners and hence pay property taxes. This appendix approximates the revenue generated by local governments in the form of property taxes.

The Consumer Expenditure Survey details what percent of people in each income group are homeowners, and provides estimates of the market value of these owned dwellings. Property tax in 1999 was calculated using the following formula obtained by the Iowa City City Assessor's Office:

$$\text{Property tax} = \text{assessed value} \times (0.548525) \times (32.11264/1000).$$

To compute property taxes paid by employees in each income group, multiply the estimated property tax by the number of employees in each group by the percent who are homeowners. Compute the total amount of property tax paid by all individuals by summing across income groups. Then, multiply this number by the relative cost of living index for Iowa City based on national averages to obtain a location-specific estimate of property taxes paid by permanent University employees.

Total property taxes paid by permanent University employees are estimated to be \$12.65 million.

	Less than \$5,000	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$19,999	\$20,000 to \$29,999	\$30,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$69,999	\$70,000 and over
Number at the University of Iowa	25	112	329	521	3003	3859	1939	1473	1479
Percent Homeowner	26	40	50	55	59	64	71	80	89
Estimated market value of home	28,912	35,482	45,163	48,303	55,702	63,302	74,707	95,407	176,279
Estimated property tax	509.27	625.00	795.53	850.84	981.17	1115.04	1315.93	1680.55	3105.08
Total property tax	3310	28000	130864	243807	1738403	2753878	1811632	1980366	4087250
Subtotal		12777510							
cost of living index		0.993							
Total Property Tax paid by UI employees		12688067.72							
		12.65 M							

Source for relative cost of living index: Iowa Department of Economic Development
Source for Property Tax Equation: Iowa City City Assessor's Office

Appendix 8. University Activity by County.

County	Goods & Services	Rank	Capital	Rank	Deposits	Rank	Patients	Rank
Adair	496	75	0	75	0	86	317	85
Adams	1757	59	0	60	0	79	112	98
Allamakee	1617	61	0	62	4578	47	748	56
Appanoose	1683	60	0	61	0	80	1865	37
Audubon	0	91	0	91	0	94	309	87
Benton	5987	48	0	50	67574	14	4974	19
Black Hawk	813353	5	188225	6	107613	9	17007	6
Boone	60486	18	0	30	3819	52	1368	45
Bremer	26868	31	0	38	16783	24	2668	32
Buchanan	37319	24	0	33	6842	37	3754	25
Buena Vista	2874	53	0	54	4926	42	868	54
Butler	2157	55	0	56	3676	54	1749	39
Calhoun	687	71	0	71	0	83	698	57
Carrroll	33646	27	0	35	31729	18	688	58
Cass	0	92	0	92	0	95	494	77
Cedar	108697	11	0	24	118385	7	9002	15
Cerro Gordo	449027	7	0	22	10471	28	2425	35
Cherokee	916	68	0	69	4601	46	315	86
Chickasaw	1469	62	0	63	9204	31	1078	50
Clarke	419	76	0	76	0	87	445	79
Clay	0	93	0	93	200	71	884	53
Clayton	79274	14	0	26	18329	22	2479	34
Clinton	9963	38	0	42	18042	23	11733	10
Crawford	147	81	0	81	0	88	318	84
Dallas	48174	20	18520	15	10081	29	1686	40
Davis	68	86	0	86	0	92	1240	46
Decatur	6038	47	0	49	2800	60	617	65
Delaware	1373	65	0	66	13034	26	2715	31
Des Moines	33670	26	0	34	15338	25	15155	7
Dickinson	5378	50	0	52	0	77	484	78
Dubuque	92333	12	56322	10	6235	39	10834	12
Emmet	327	77	0	77	1682	63	591	67
Fayette	175383	9	739	21	8991	32	3096	29
Floyd	1424	63	0	64	4799	43	1442	44
Franklin	575	74	0	74	0	85	542	70
Fremont	0	94	0	94	0	96	112	99
Greene	0	95	0	95	0	97	550	69
Grundy	220	79	0	79	7724	33	1668	41
Guthrie	10	90	0	90	3929	50	667	61
Hamilton	6118	46	0	48	3889	51	1209	48
Hancock	20	88	0	88	768	68	668	60
Hardin	9053	41	0	45	7498	34	1843	38
Harrison	62	87	0	87	0	93	521	73
Henry	12872	36	106599	8	73994	13	9258	14
Howard	11	89	0	89	240	70	362	82
Humboldt	0	96	0	96	2939	58	595	66
Ida	327	78	0	78	3515	56	264	89
Iowa	47240	21	3656	18	118036	8	10883	11
Jackson	32176	29	21010	14	19851	21	3549	26
Jasper	81834	13	0	25	1311	67	3281	27
Jefferson	37268	25	27539	13	41404	17	5926	18
Johnson	99386035	1	77693097	1	56473407	1	186717	1
Jones	42855	23	1950	19	76866	12	4039	23
Keokuk	25345	32	34366	12	169302	6	7860	16
Kossuth	16638	35	0	40	4096	49	917	51
Lee	8929	42	0	46	20607	20	12438	9
Linn	4941234	2	5875843	2	818400	4	39139	2
Louisa	33128	28	0	36	52921	15	5981	17
Lucas	1885	58	0	59	108	72	652	62
Lyon	161	80	0	80	52	73	142	96
Madison	66799	16	0	28	5633	40	431	80
Mahaska	21485	33	91930	9	81584	11	4410	21
Marion	7205	43	17248	17	7226	35	2407	36
Marshall	3461	52	18500	16	4355	48	4399	22
Mills	101	83	0	83	0	90	231	93
Mitchell	100	84	0	84	0	91	494	76
Monona	0	97	0	97	2069	61	164	95
Monroe	605	72	0	72	0	84	1109	49
Montgomery	2458	54	0	55	0	78	261	91
Muscatine	147079	10	1736598	4	258031	5	19842	3
O'Brien	60660	17	0	29	1560	65	359	83
Osceola	0	98	0	98	0	98	116	97
Page	4085	51	0	53	1722	62	507	74

Appendix 9. RIMS II Multipliers

RIMS II multipliers (1997)	output	employment
Farm products and agricultural, forestry, and fishing services	2.3189	22.6433
Forestry and fishing products	1.9969	29.0235
Coal mining	1	0
Oil and gas extraction	1.5508	9.418
Metal mining and nonmetallic minerals, except fuels	1.8986	20.1074
Construction	2.1573	27.425
Food and kindred products and tobacco products	2.7491	21.1607
Textile mill products	1.6286	17.7154
Apparel and other textile products	1.825	23.0057
Paper and allied products	1.7592	14.4304
Printing and publishing	1.865	20.0636
Chemicals and allied products and petroleum and coal products	1.8405	13.5128
Rubber and misc. plastic products and leather and leather products	1.8731	16.6191
Lumber and wood products and furniture and fixtures	1.9519	20.7704
Stone, clay, and glass products	2.0554	19.6814
Primary metal industries	1.9565	13.3334
Fabricated metal products	2.0207	19.6075
Industrial machinery and equipment	2.0564	17.2703
Electronic and other electric equipment	1.8824	16.3604
Motor vehicles and equipment	2.1942	18.8949
Other transportation equipment	1.9503	15.36
Instruments and related products	1.8307	18.6386
Miscellaneous manufacturing industries	2.085	21.9306
Transportation	1.9999	24.7737
Communications	1.7357	14.9218
Electric, gas, and sanitary services	1.6068	9.7956
Wholesale trade	1.8174	21.0506
Retail trade	1.894	36.8633
Depository and nondepository institutions and security and commodity brokers	1.7889	19.7986
Insurance	2.4985	30.8275
Real estate	1.2781	5.5686
Hotels and other lodging places, amusement and recreation services, and motion pictures	1.9486	40.6515
Personal services	2.0593	48.462
Business services	1.8966	34.5056
Eating and drinking places	2.1631	46.1508
Health services	2.0237	31.6094
Miscellaneous services	2.0829	39.2415
Households	1.2728	18.1188

Source: Bureau of Economic Analysis, U.S. Department of Commerce

