

A COMPARATIVE ANALYSIS OF STUDYING ECONOMICS AT THE UNIVERSITY OF MISSOURI – COLUMBIA ON EMPLOYMENT & EARNINGS

PURPOSE

This report analyzes employment outcomes of Mizzou graduates, in both the field of Economics and in general from 2001 to 2018. In brief, the purpose of this paper is to present evidence to suggest studying economics at Mizzou has favorable employment outcomes.

Mizzou is compared to other institutions in Missouri and nationwide. When comparing Mizzou employment outcomes to other institutions across the country, the comparable institutions will be R1 research institutions. The R1 designation means that a university has the highest level of research activity as determined by the Carnegie Classification of Institution of Higher Education (Carnegie, n.d.). This criteria is used to ensure that only similar institutions are being compared to Mizzou. In addition to comparing Mizzou to other institutions, economics as a field of study will be compared to other instructional programs to analyze differences in employment outcomes between majors.

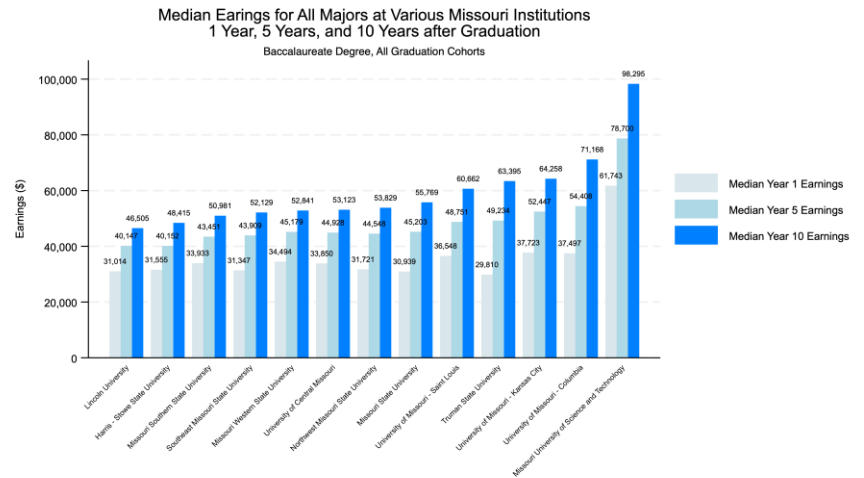
HOW OUTCOMES WILL BE EVALUATED

This report evaluates the average median earnings of graduates of bachelors degrees one year, five years, and ten years after graduation. However, ten-year earnings outcomes will be given the most weight as there are other factors that influence one- and five-year earnings.

The employment rate will also be evaluated, although it is not the focus of this paper. However, it is useful to explain why earnings may vary across institutions and by the length of the follow-up period. For example, a university's median one-year earnings may be lower than another institution's graduates' earnings if the first institution's graduates pursue graduate school at a higher rate than the latter. However, if a graduate is earning less than the annual equivalent of working full time at the federal minimum wage, their earnings are not included so that the comparisons being made are among those likely working full-time.

The data used in this report comes from the US Census Post Secondary Employment Outcomes (PSEO) dataset that is publicly available online.

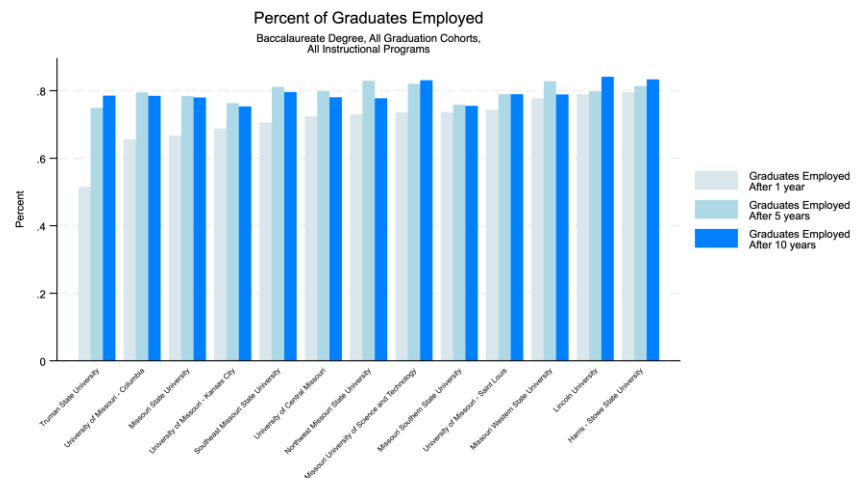
HOW DOES MIZZOU COMPARE TO OTHER UNIVERSITIES IN TERMS OF ALL MAJORS?



Source: U.S. Census Bureau Post Secondary Employment Outcomes

Mizzou compares well with other universities in Missouri. According to US Census data, Mizzou graduates make \$71,168 when using median of earnings 10 years after graduation, which is the second highest among Missouri universities in the dataset. This statistic utilizes data from all undergraduate instructional programs at Mizzou. Missouri S&T is the only public Missouri institution in the data that has higher year-10 earnings, but it is likely that the reason for this is the types of degrees students earn at S&T; the institution is known for its engineering programs.

In the graph below, Mizzou's percentage of graduates employed one year after graduation is lower than other schools. However, Mizzou is competitive with other schools in the 10-year statistic. These trends could be explained by the high rate of graduate school enrollment/advanced degrees among Mizzou alumni (~22%), which would cause employment and earnings to be surpassed in the 1- and potentially 5-year averages but not in the 10-year average (University of Missouri, 2023).

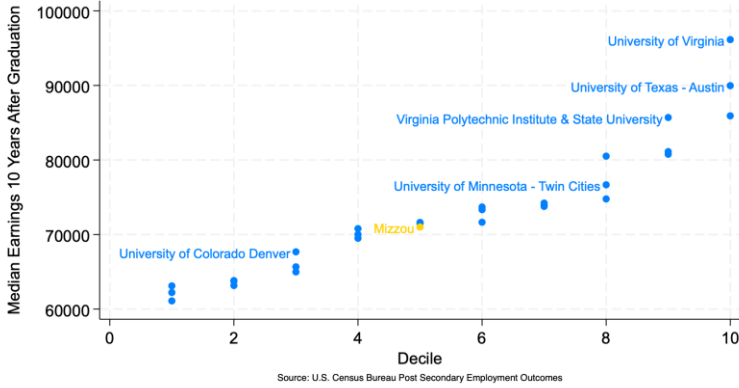


Source: U.S. Census Bureau Post Secondary Employment Outcomes

When ranking the thirty R1 institutions in the data by decile in terms of 10-year earnings, Mizzou is at the median (5th decile). See Appendix Table 1 for a list of R1 institutions in the data. Notably, this analysis does not factor in the substantial differences in cost of living across states, which may factor into job locations and earnings of graduates.

Median 10 Year Earnings from Different R1 Institutions

Baccalaureate Degree, All Graduation Cohorts (2001-2018), all instructional fields

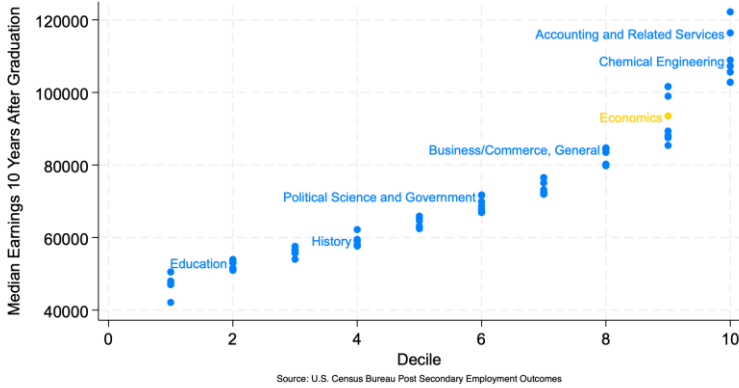


HOW DOES MIZZOU ECONOMICS COMPARE TO OTHER MAJORS AT MIZZOU?

Economics is a high performing major at Mizzou in terms of earnings 10 years after graduation. Across all the fields of instruction included in the PSEO data, economics at Mizzou ranks in the 9th decile. This means that economics at Mizzou performs better than more than 90% of other majors at Mizzou. For a complete list of majors by decile, see Appendix Table 2.

Median 10 Year Earnings of Mizzou Grads of Different Majors

Baccalaureate Degree, All Graduation Cohorts (2001-2018)



HOW DOES MIZZOU ECONOMICS COMPARE TO ECONOMICS PROGRAMS AT OTHER MISSOURI INSTITUTIONS?

While comparing earnings from Mizzou graduates of all majors is important, the ultimate purpose of this report is to analyze how Mizzou economics majors perform compared to economics majors at other institutions.

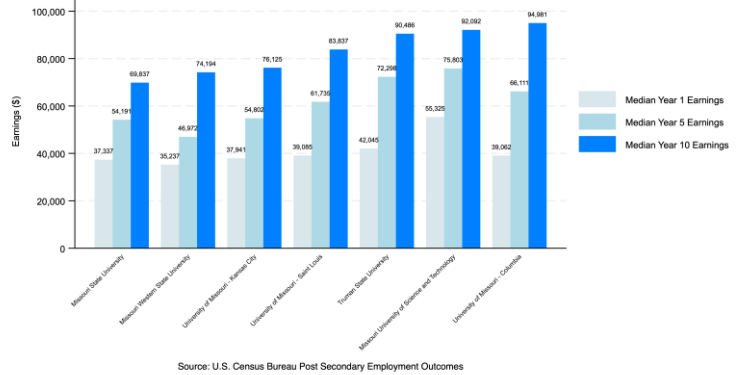
Out of the Missouri institutions in the dataset, Mizzou’s economics graduates perform better than economics graduates from any other institution 10 years post-graduation. Mizzou’s year-1 earnings for economics graduates are lower, but this is possibly due to many Mizzou economics graduates pursuing higher degrees. According to Mizzou’s website, 34% of graduates from the College of Arts and Sciences pursued a graduate degree in 2022 (University of Missouri, 2023). These graduate degrees could contribute to Mizzou surpassing other institutions later in median earnings.

For Missouri residents who want to study economics, the data suggests that of the institutions in the dataset, Mizzou offers the best employment outcomes. While Missouri S&T graduates out-earned Mizzou graduates when including all instructional programs likely due to a compositional difference of student majors, Mizzou graduates perform better when looking at only economics programs.

Median Earnings for Economics Majors at Various Missouri Institutions

1 Year, 5 Years, and 10 Years after Graduation

Baccalaureate Degree, All Graduation Cohorts

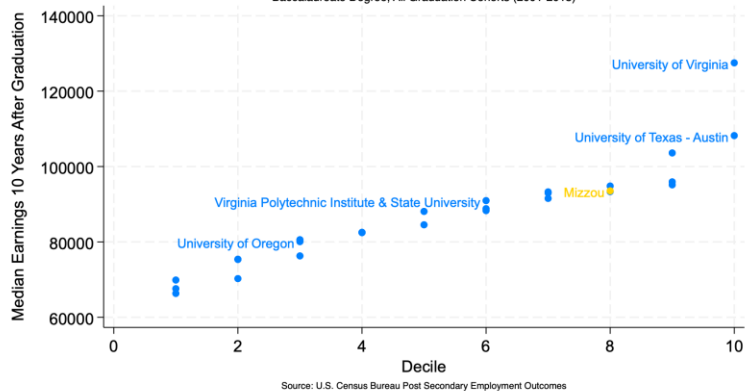


HOW DOES MIZZOU ECONOMICS COMPARE TO ECONOMICS AT OTHER R1 INSTITUTIONS?

While Mizzou is in the 5th decile when comparing median 10-year earnings of graduates from all instructional programs to other R1 institutions, MU’s economics graduates rank in the 8th decile when comparing to economics graduates at other R1 institutions. This is consistent with the data showing that economics is high performing compared to other majors at Mizzou. Again, this analysis does not account for the cost of living where students are after college even though there is substantial heterogeneity across states. For example, Virginia is ranked the 16th highest cost of living state, while Missouri is ranked the 41st highest cost of living state (Forbes 2024).

Median 10 Year Earnings of Econ Majors from Different R1 Institutions

Baccalaureate Degree, All Graduation Cohorts (2001-2018)



SHORTCOMINGS OF THE DATA AND THIS ANALYSIS

It is important to note that this report is not able to distinguish between correlation and causation when it comes to the choice of a school or a major and subsequent earnings. This paper looks at a correlation between students choosing economics as a major at the University of Missouri – Columbia and their earnings after graduation. However, this paper does not statistically prove a causation between the variables. One could hypothesize that other factors, such as intrinsic drive for higher achievement, could be the true cause of higher earnings, and it just happens that these individuals tend to choose economics as their field of study.

While this could be true, the analysis of the correlation presented in this paper is still useful for prospective students and the university; on one hand, a student could see the correlation between studying economics and higher earnings and choose to pursue that degree knowing that there is a correlation between the two. On the other hand, the university could invest in the economics department to attract more students to the degree, with the hopes that those students become high-earning graduates. Regardless of whether studying economics at Mizzou truly *causes* higher earnings, it is true that economics majors from Mizzou are high-earning graduates, and this relationship is an important consideration.

It would be irresponsible to present this summary of data without recognizing the shortcomings of the dataset analyzed. First, it is important to note that the dataset is not representative of every graduate from every school in every state; some states are left out due to low coverage, and some schools are completely left out for various reasons. An example of this omission would be Washington University in St. Louis, a private R1 institution and the only other school in Missouri belonging to the Association of American Universities besides Mizzou. It is also important to recognize that only states with at least 50% graduate coverage in the PSEO dataset are included. This leaves out states such as Arizona, Alabama, Kansas, and more. Out of the 50 U.S. states, 17 are included in the dataset used in this paper, provided by the U.S. Census Bureau. As the dataset expands, future work could incorporate the broader set of states and universities as they become available.

CONCLUSION

The analysis of the data presented in this paper suggests that studying economics at Mizzou has favorable labor market outcomes. For students deciding on a major, exploring economics is a decision that could lead to increased earning potential. Economics teaches important skills such as analytical thinking, data interpretation, and research skills. These applicable skills could be the reason that economics majors perform well in terms of earnings after graduation.

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ABOUT THE AUTHOR

Peter Schaefer is a student at the University of Missouri – Columbia studying Economics. Peter will graduate in May of 2024 with a Bachelors of Science in Economics, along with minors in Spanish and business.

This work was supervised by Dr. Brittany Street, an Assistant Professor of Economics at the University of Missouri.



APPENDIX

Table 1: R1 Institutions included in the dataset, ordered by year 10 economics graduates' earnings:

R1 Institution	Year 10 Median Earnings of Econ Grads	Decile
University of Hawaii at Manoa	\$ 66,327.67	1
University of Cincinnati	\$ 67,590.00	1
Oregon State University	\$ 69,889.00	1
University of Colorado Denver	\$ 70,269.00	2
Montana State University Bozeman	\$ 75,342.33	2
Colorado State University	\$ 75,417.50	2
University of South Carolina - Columbia	\$ 76,292.00	3
University of Oregon	\$ 80,075.50	3
University of Texas at Arlington	\$ 80,590.25	3
University of Iowa	\$ 82,459.25	4
Ohio State University	\$ 82,518.25	4
University of North Texas	\$ 82,548.50	4

University of Houston	\$	84,539.25	5
Texas Tech University	\$	88,092.75	5
Louisiana State University & Agricultural & Mechanical College	\$	88,304.67	6
Clemson University	\$	88,816.75	6
Virginia Polytechnic Institute & State University	\$	90,956.50	6
University of Colorado Boulder	\$	91,546.00	7
University of Texas at Dallas	\$	92,980.50	7
Iowa State University of Science & Technology	\$	93,276.25	7
George Mason University	\$	93,342.33	8
University of Missouri - Columbia	\$	93,536.50	8
University of Minnesota - Twin Cities	\$	94,825.00	8
Purdue University	\$	95,141.75	9
Texas A&M University	\$	95,937.50	9
Indiana University - Bloomington	\$	103,608.75	9
University of Texas - Austin	\$	108,209.00	10
University of Virginia	\$	127,506.00	10

Table 2: Majors included in the dataset, along with their decile ranking in terms of earnings 10 years after graduation from Mizzou

Major	Year 10 Avg. Median Earnings of Mizzou Grads	Decile
Human Development, Family Studies, and Related Services	\$ 42,111.00	1
Public Administration and Social Service Professions	\$ 47,022.00	1
Social Work	\$ 47,022.00	1
Natural Resources Conservation and Research	\$ 47,038.67	1
Archeology	\$ 47,428.50	1
Fine and Studio Arts	\$ 47,981.67	1
Natural Resources and Conservation	\$ 47,985.00	1
Forestry	\$ 50,508.50	1
Visual and Performing Arts	\$ 50,959.00	2
Geography and Cartography	\$ 51,413.00	2
Parks, Recreation, and Leisure Studies	\$ 51,530.67	2
Parks, Recreation, Leisure, Fitness, and Kinesiology	\$ 51,530.67	2
Teacher Education and Professional Development, Specific Levels and Methods	\$ 52,983.00	2
Sociology	\$ 53,080.00	2
Education	\$ 53,310.33	2
Special Education and Teaching	\$ 53,964.00	2
Music	\$ 54,006.50	3
Psychology	\$ 55,666.67	3
Psychology, General	\$ 55,666.67	3
Teacher Education and Professional Development, Specific Subject Areas	\$ 56,277.50	3
English Language and Literature, General	\$ 56,532.00	3
English Language and Literature/Letters	\$ 56,532.00	3
Anthropology	\$ 56,616.67	3
Animal Sciences	\$ 57,586.33	3
Classics and Classical Languages, Literatures, and Linguistics	\$ 57,658.00	4
Liberal Arts and Sciences, General Studies and Humanities	\$ 57,941.00	4
Communication Disorders Sciences and Services	\$ 58,202.50	4
Philosophy and Religious Studies	\$ 59,148.50	4

Multi/Interdisciplinary Studies, Other	\$	59,180.67	4
Multi/Interdisciplinary Studies	\$	59,180.67	4
History	\$	59,485.67	4
Plant Sciences	\$	62,192.00	4
Hospitality Administration/Management	\$	62,441.67	5
Family and Consumer Sciences/Human Sciences	\$	62,770.00	5
Apparel and Textiles	\$	62,972.00	5
Social Sciences	\$	63,136.00	5
Rehabilitation and Therapeutic Professions	\$	64,605.00	5
Food Science and Technology	\$	65,302.00	5
Foods, Nutrition, and Related Services	\$	65,364.33	5
Agricultural/Animal/Plant/Veterinary Science and Related Fields	\$	65,899.67	5
Housing and Human Environments	\$	66,895.67	6
Agriculture, General	\$	66,921.50	6
Foreign Languages, Literatures, and Linguistics	\$	66,976.67	6
Allied Health Diagnostic, Intervention, and Treatment Professions	\$	67,641.00	6
Atmospheric Sciences and Meteorology	\$	68,676.50	6
Health Professions and Related Clinical Sciences, Other	\$	69,890.50	6
Political Science and Government	\$	71,624.67	6
Health Professions and Related Programs	\$	71,731.67	6
Communication, Journalism, and Related Programs	\$	71,945.00	7
Communication and Media Studies	\$	71,945.00	7
Area, Ethnic, Cultural, Gender, and Group Studies	\$	72,361.33	7
Area Studies	\$	72,361.33	7
Philosophy	\$	73,202.50	7
Agricultural Business and Management	\$	75,078.33	7
Agricultural Mechanization	\$	76,488.00	7
Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing	\$	76,537.33	7
Romance Languages, Literatures, and Linguistics	\$	79,778.50	8
Family and Consumer Economics and Related Studies	\$	79,923.00	8
Physical Sciences	\$	80,229.67	8
Biology, General	\$	83,464.33	8
Biological and Biomedical Sciences	\$	84,255.33	8
Mathematics and Statistics	\$	84,524.50	8
Business/Commerce, General	\$	84,588.67	8
Mathematics	\$	84,731.00	8
Business, Management, Marketing, and Related Support Services	\$	85,391.33	9
Biochemistry, Biophysics and Molecular Biology	\$	87,494.33	9
Chemistry	\$	87,971.00	9
Physics	\$	88,078.00	9
Civil Engineering	\$	89,329.67	9
Economics	\$	93,536.50	9
Agricultural Engineering	\$	98,960.50	9
Computer and Information Sciences and Support Services	\$	101,608.67	9
Computer and Information Sciences, General	\$	101,608.67	9
Engineering	\$	102,804.33	10
Mechanical Engineering	\$	102,805.67	10
Electrical, Electronics, and Communications Engineering	\$	105,621.00	10
Industrial Engineering	\$	107,257.00	10
Chemical Engineering	\$	108,909.00	10
Accounting and Related Services	\$	116,407.00	10
Computer Engineering	\$	122,192.33	10