

**Missouri State University Faculty Senate  
Committee on University Budget & Priorities  
Personnel Hiring Trends Report Spring 2022**

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**Charge:** Every fifth year a comprehensive report of personnel hiring trends across the Missouri State University system will be presented before the Faculty Senate during the April meeting. This comprehensive report will follow the format of the 2017-18 ad hoc Committee on Personnel Hiring Trends including data analysis which identifies and describes the absolute and relative growth/decline in personnel categories, the current and historic proportions of the personnel categories within the entire personnel of the university, and the trends in student-personnel ratios for the personnel categories used in the database.

The committee shall every year report on student credit hour (SCH) production and ranked and unranked faculty utilization, as reflected in review the Faculty Descriptors and Productivity Comparison Summary. The committee’s report should summarize recent and long-run trends.

**Introduction**

The Faculty Senate Committee on University Budget & Priorities is pleased to present our report on personnel hiring trends and faculty utilization. The personnel hiring trends report covers the period following the data presented in the previous report. The faculty utilization report covers FY 2016 to FY 2021. We organize our report into the following sections: Sources of funds, uses of funds, analysis, and recommendations.

**Sources of funds**

Missouri State University depends on two primary sources of income: state appropriations and tuition/fee payments from students. Table 1 presents state appropriations over the period of 2016-2021 fiscal years. ‘Nominal Dollars’ figures are the actual number of dollars received, unadjusted for inflation. ‘2021 Dollars’ figures adjust the nominal dollars to account for inflation, giving the purchasing power of state appropriations for each year in terms of 2021 dollars. We observe a monotonic downward trend in the purchasing power of state appropriations over the examination period, with overall purchasing power of state appropriations dropping by 13.7% over the period.

**Table 1. MSU System state appropriations by year**

	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Nominal Dollars</b>	\$ 85,192,135	\$ 83,148,188	\$ 80,899,028	\$ 81,488,737	\$ 79,298,664	\$ 83,000,925
<b>2021 Dollars</b>	\$ 96,182,665	\$ 91,916,875	\$ 87,298,282	\$ 86,369,640	\$ 83,024,133	\$ 83,000,925

Sources: MSU Chief Financial Officer, <https://www.usinflationcalculator.com/>

The second major source of income for Missouri State University is tuition and required fees. Table 2 presents a comparison of Missouri State University in-state undergraduate tuition and required fees with other four-year Missouri state institutions. Missouri State is an education bargain over the 2017-2022 period compared to the state average. Examining tuition and fee data for 2022 alone, we observe that Missouri State University offers lower tuition than both the University of Central Missouri and Northwest Missouri State University. The data presented in Table 2 suggests Missouri State can raise tuition within statutory limits and remain an educational bargain for Missourians.

**Table 2. In-State Tuition and Required Fees for Full-Time In-state Undergraduate Students Attending Missouri 4-Yr Public Universities**

University	2017	2018	2019	2020	2021	2022
Missouri 4-Yr Schools Average Tuition	\$7,859	\$8,117	\$8,259	\$8,648	\$8,880	\$9,310
<b>Missouri State University</b>	<b>\$7,060</b>	<b>\$7,306</b>	<b>\$7,376</b>	<b>\$7,588</b>	<b>\$7,938</b>	<b>\$8,808</b>
<b>Percent Difference</b>	<b>-10.2%</b>	<b>-10.0%</b>	<b>-10.7%</b>	<b>-12.3%</b>	<b>-10.6%</b>	<b>-5.4%</b>
University	Total Tuition and required fees, per year					
University of Missouri- St. Louis	\$ 11,370					
University of Missouri-Kansas City	\$ 11,109					
University of Missouri-Columbia	\$ 11,097					
Northwest Missouri State University	\$ 11,066					
Missouri University of Science and Technology	\$ 11,035					
University of Central Missouri	\$ 9,078					
<b>Missouri State University</b>	<b>\$ 8,808</b>					
Southeast Missouri State University	\$ 8,715					
Truman State University	\$ 8,365					
Lincoln University	\$ 8,083					
Missouri Western State University	\$ 7,930					
Missouri Southern State University	\$ 7,762					
Harris-Stowe State University	\$ 6,618					

Source: Higher Education FactBook retrieved from DHEWD.MO.Gov March 30, 2022

Tuition and fee revenue depend not only on tuition and fee rates, but also on student enrollment. Table 3 presents the trend in student enrollment over the period 2018-2021. Like state appropriations, we observe a monotonic decrease in enrollment (full-time equivalent) over the examination period. Demographic trends ([The Looming Higher Ed Enrollment Cliff | CUPA-HR \(cupahr.org\)](#)) will make increasing enrollment going forward difficult, if not impossible.

Taken together, the data presented in Tables 1 through 3 point to a future of declining revenue from both the State of Missouri and from our student body.

**Table 3: Student enrollment**

Year	Full Time	Part Time	FTE
<b>F2018</b>	16,509	7,188	18,905
<b>F2019</b>	15,657	7,796	18,256
<b>F2020</b>	14,830	8,674	17,721
<b>F2021</b>	13,790	9,136	16,835

Source: Student Full-time Equivalent (FTE) 2018 to 2021, Retrieve 2/8/2022 from <https://app.powerbi.com/view?r=eyJrIjoiaMjMwOGRmNTAtZjZjZS00OGVmLTlmlmZDI0NTdiYjZjMDkzN2ViIiwidCI6ImNhZDgzMGU0LTU>

## Uses of funds

As mentioned by President Smart on many prior occasions, the single largest cost at the University is personnel. Table 4 presents historical FTE headcounts by EEO category. Administrator headcount as a percentage of all employees has remained flat over the period from 1993-2001, though experiencing large swings during this period. Ranked faculty headcount is down approximately 5% over the period, while unranked faculty headcount has more than doubled. Professional headcount has nearly tripled, while technical, clerical, and maintenance headcount has grown at a faster rate than the overall headcount at the University.

**Table 4. Full-time Equivalent (FTE) by EEO Categories**

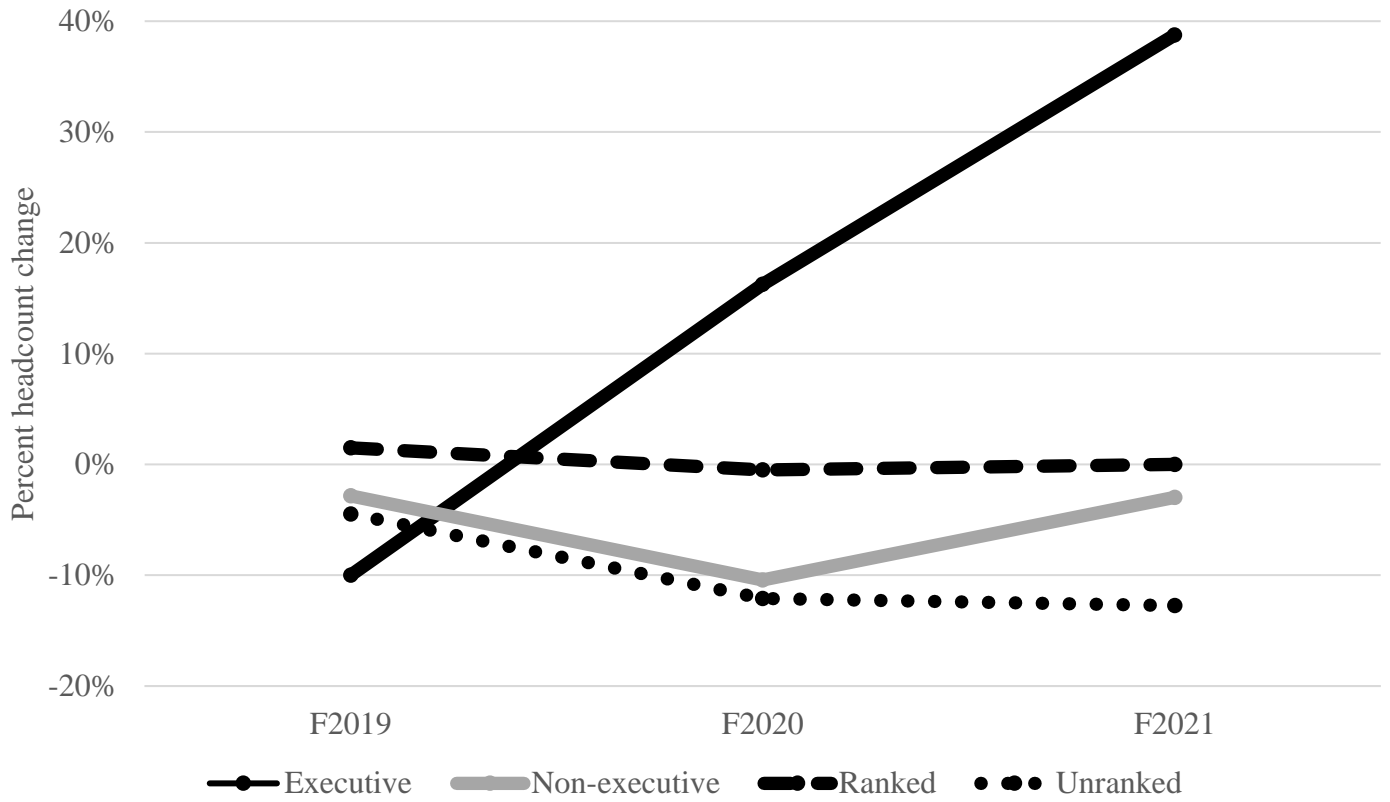
<b>Job Category</b>	<b>1993</b>	<b>2004</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2021</b>	<b>% Change 1993-2021</b>
Administration	111.5	135.3	146.1	147.7	93	111	<b>-0.45%</b>
Ranked Faculty	580.5	618.3	583.2	556.7	557	554	<b>-4.57%</b>
Unranked Faculty	77.5	107.1	211.4	195.8	185	189	<b>143.87%</b>
Professional	201.1	380.4	575.3	662.4	540	597	<b>196.87%</b>
Tech, Clerical, Maintenance	473.2	684.4	694.3	746	723	771	<b>62.93%</b>
<b>Total</b>	<b>1443.8</b>	<b>1925.5</b>	<b>2210.3</b>	<b>2308.6</b>	<b>2098</b>	<b>2222</b>	<b>53.90%</b>

Source: retrieved Jan 24, 2022 from

<https://www.missouristate.edu/OIR/provost-dashboards.htm>; Faculty/Staff Interactive Dashboard

<b>Job Category</b>	<b>Typical words included in titles</b>
Administration	President, Provost, Vice President, Chief Officer, Director, Counsel
Ranked Faculty	Professor, Department Head, Associate/Assistant Dean
Unranked Faculty	Instructor
Professional	Advisor, Specialist, Assistant Director, Developer, Coordinator, Consultant, Manager, Trainer, Coach, Analyst, Clinician, Accountant, Supervisor, Pharmacist, Physician, Scientist
Tech, Clerical, Maintenance	Nurse, Technician, Technologist, Operator, Administrative Assistant, Associate, Host/hostess, Receptionist, Electrician, Mechanic, Custodian, Groundskeeper

Figure 1. FTE Headcount Change from F2018



Year	Executive	Non-executive	Ranked	Unranked	$\Delta$ Executive	$\Delta$ Non-executive	$\Delta$ Ranked	$\Delta$ Unranked
<b>F2018</b>	80	1410	601	157				
<b>F2019</b>	72	1370	610	150	-8	-40	9	-7
<b>F2020</b>	93	1263	598	138	13	-147	-3	-19
<b>F2021</b>	111	1368	601	137	31	-42	0	-20

Source: MSU Office of Institutional Research, Faculty/Staff Dashboard; Retrieved 02.01.2022

Figure 1 breaks Missouri State University employees into four groups and displays the percent change in each category compared to FY 2018 headcounts. ‘Executive’ consists of ‘Administration’ from Table 4, while ‘Non-executive’ is the sum of ‘Professional’ and ‘Tech, Clerical, Maintenance’ from the same table. The data for this chart is presented beneath the figure. Ranked faculty headcount remains relatively steady over the examination period, while unranked faculty headcount drops over ten percent. Non-executive headcount has remained relatively steady, while the Executive headcount has grown by nearly 40 percent.

As a student-centered educational institution, an examination of student-to-employee ratios is important. Table 5 presents data on these ratios over the period from 2018-2021 for different employment categories at the University. These ratios are informative, as they capture both the growth/decline of enrollment and the decline/growth of headcount over time. Starting with faculty, we observe that the number of students per faculty member, both ranked and unranked, have remained relatively steady over this period. Similarly stable are the ratios for clerical and staff subgroups. The skilled subgroup, which contains people such as plumbers, electricians, and heating/air technicians, has experienced an increase in the number of students each employee supports. This subgroup is responsible for maintaining the physical plant upon which we all depend. The increased workload for the remaining employees in this group portend delayed maintenance and future outages of critical services at the University. The trend for executives is in the opposite direction. As executive headcount has increased and enrollments have decreased, the student-to-executive ratio has plunged by one-third. Figure 2 provides a graphical representation of this data.

**Table 5. Student-to-Employee Ratios**

	Executive	Clerical	Staff	Other Prof.	Service	Skilled	Technical & Paraprof.	Ranked	Unranked	All Faculty
<b>F2018</b>	230	60	12	30	87	222	100	31	120	25
<b>F2019</b>	246	58	12	30	84	222	97	30	122	24
<b>F2020</b>	185	61	12	32	88	242	98	30	128	24
<b>F2021</b>	147	58	12	27	75	259	79	28	123	23

**Note:** Each value shown is the number of enrolled students divided by the number of employees in the category. 'All Faculty' headcount is the sum of 'Ranked' and 'Unranked'. Ranked includes tenured faculty and untenured Assistant Professors. Unranked contains all other instructional personnel.

Source: MSU Office of Institutional Research, Faculty/Staff Dashboard; Retrieved 02.01.2022

Figure 2. Student-to-employee Ratios for Positions at MSU

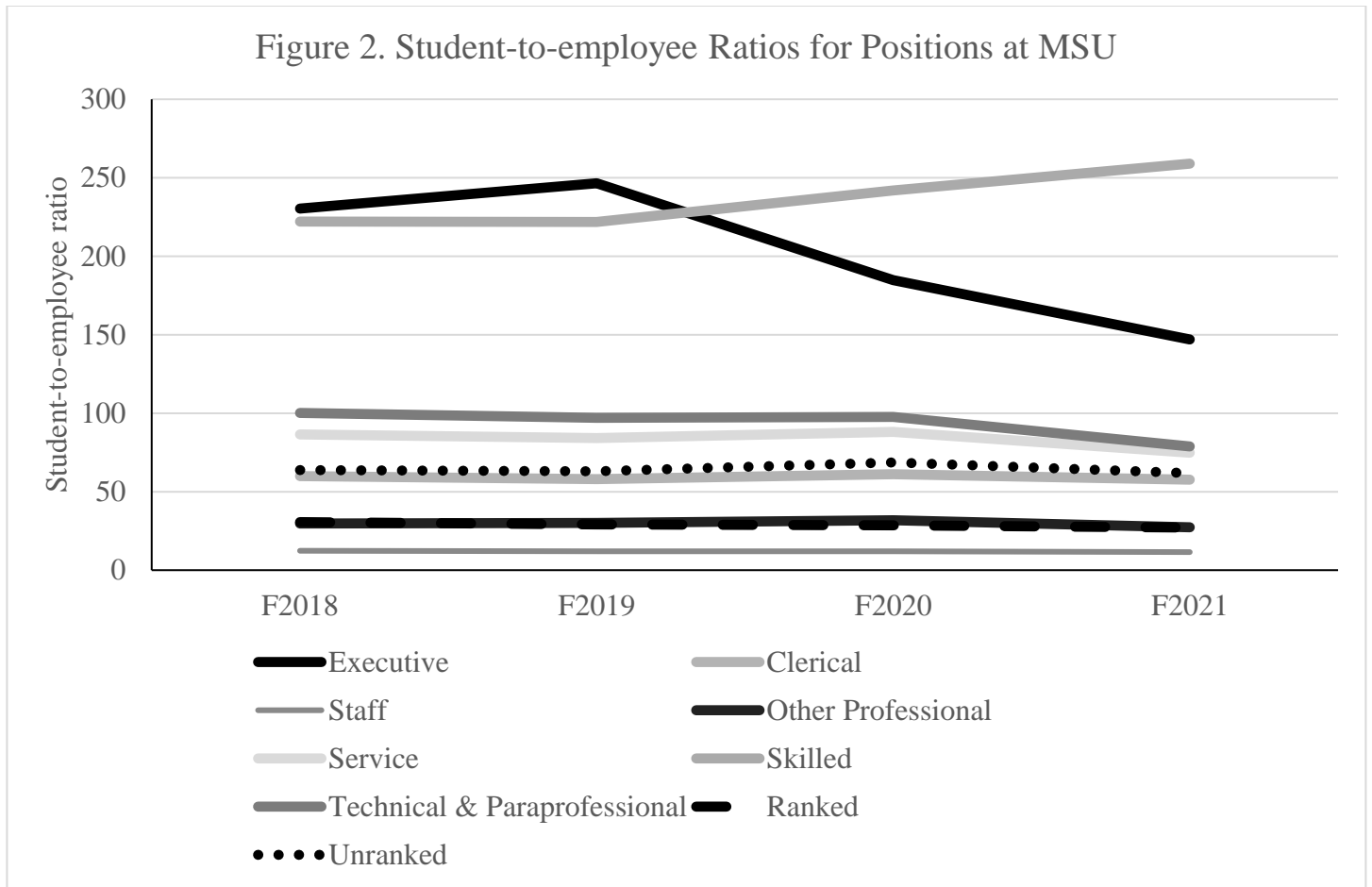


Table 6 presents data on faculty utilization based on production of student credit hours. Total SCH production correlates closely with the enrollment trend present in Table 3. Given the relatively steady headcounts in the faculty population, these trends have resulted in a reduction in SCH production per faculty member starting in FY 2018.

**Table 6. Faculty Utilization: Student Credit Hours**

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>Tenured Faculty SCH total</b>	263,357	270,356	273,803	265,961	265,391	253,369
<b>Non-tenured Faculty SCH total</b>	128,293	133,856	141,170	145,160	131,038	115,577
<b>Per Course SCH total</b>	73,560	81,837	81,676	77,057	71,709	71,116
<b>GA and Staff SCH total</b>	64,063	64,869	57,069	56,445	56,855	68,401
<b>Total SCH Production</b>	<b>529,273</b>	<b>550,918</b>	<b>553,718</b>	<b>544,623</b>	<b>524,993</b>	<b>508,463</b>
<b>Tenured FTE</b>	386	372	366	378	380	394
<b>Non-tenured FTE</b>	188	214	235	232	218	207
<b>SCH per Tenured FTE</b>	<b>682.27</b>	<b>726.76</b>	<b>748.10</b>	<b>703.60</b>	<b>698.40</b>	<b>643.07</b>
<b>SCH per Non-tenured FTE</b>	<b>682.41</b>	<b>625.50</b>	<b>600.72</b>	<b>625.69</b>	<b>601.09</b>	<b>558.34</b>

Source: MSU Office of Institutional Research

## Analysis

In our examination, we considered both state appropriations and student tuition/fees as sources of funding for the university. The trend in both sources is decidedly downward. Taken in combination with demographic-induced enrollment reductions, we foresee a future of reduced and declining revenues at Missouri State University for years to come.

Personnel costs (salary and benefits) represent most of the spending at Missouri State University. Without a reduction in headcount, such costs will not decrease. Even without further growth in headcount, personnel costs will increase as a result of promotions, increased healthcare costs, and increased pension plan contributions (<https://www.missouristate.edu/BudgetProcess/Files/Executive-Budget-Committee-Minutes-02-07-22.pdf>).

Without substantial changes, Missouri State University could find itself in dire financial straits within the next few years.

## Recommendations

The accounting system at Missouri State University carefully tabulates all expenses by unit but lumps all tuition/fee revenue into one budget line-item for the entire university. Doing so violates the spirit of the matching principle of the Generally Accepted Accounting Principles (GAAP) at the college and department level and creates unnecessary opacity regarding the sources of funds at the University. Without a proper matching of revenues and expenses, opportunities for efficiency improvement go unnoticed and resources are not efficiently allocated based on the demand for the services we provide.

Table 7 uses student credit hour production as a proxy for tuition/fee revenue to demonstrate how a system that matches revenues and expenses could be used to identify potential areas for productivity improvement. For each college, we divide the total budgeted expense amount for FY 2022 by the student credit hour production for the same period. Our results point to a wide disparity in efficiency between colleges, which is obscured by our present method of accounting. **The committee recommends the adoption of a GAAP-compliant accounting system at the College and Departmental levels to better identify opportunities for improvement.**

**Table 7. Cost per student credit hour by college**

	<b>College FY 22 Expenses</b>	<b>SCH Production</b>	<b>Cost/SCH</b>
<b>Agriculture</b>	\$ 3,989,853.92	12,194	<b>\$ 327.20</b>
<b>CNAS</b>	\$ 17,171,025.32	67,385	<b>\$ 254.82</b>
<b>COAL</b>	\$ 19,876,314.54	79,107	<b>\$ 251.26</b>
<b>COE</b>	\$ 9,056,253.42	42,650	<b>\$ 212.34</b>
<b>CHHS</b>	\$ 18,148,238.84	87,824	<b>\$ 206.64</b>
<b>COB</b>	\$ 18,677,876.72	95,452	<b>\$ 195.68</b>
<b>CHPA</b>	\$ 11,135,325.25	63,003	<b>\$ 176.74</b>
<b>Total</b>	<b>\$ 98,054,888.01</b>	<b>447,615</b>	

Sources: MSU FY22 Budget, MSU Chief Financial Officer

Our usual techniques of handling budget cuts will be inadequate for the upcoming budget crisis. In the past, we eliminated positions through attrition. If more people retire in busy parts of the university and less people retire in less busy parts, we get over-coverage in areas of lesser demand and under-coverage in areas of greater demand. Example: A large contingent of faculty members hired by the College of Business to attain initial AACSB accreditation are now of an age to retire. Following our traditional playbook of simply not replacing retirees will result in the College of Business being dangerously understaffed. The same phenomenon impacts both faculty and staff. **The committee recommends making retirement replacement decisions based on the needs of the Colleges.**

Good principles of organizational design call for an organization to identify its mission, identify the activities necessary to accomplish that mission, and identify the resources necessary to perform these activities. Over time, the missions of organizations can change along with the activities necessary to accomplish the mission, necessitating a process of 're-organization' to redesign the organization to succeed as missions and activities evolve. In private enterprise, the profit motive drives a periodic recognition of the need to make such changes. Universities are not known for this particular brand of introspection, depending instead on growing enrollments and tuition rates to compensate for inefficient bureaucracies. Example: In recent years, we have abandoned some technologies and outsourced others (e.g. ITV, Mediasite, and Blackboard). We appear not to take full advantage of the labor savings from these evolutions. **The committee recommends Missouri State University undertake a meaningful evaluation of our mission, the activities necessary to accomplish that mission, and the people and resources necessary to perform these activities, increasing headcount where necessary and decreasing headcount in redundant/superfluous areas of activity. Further, we recommend examining the costs and benefits of the recently added executive and professional positions when contemplating the future reduction of faculty lines.** The desired result is an efficient organization sized and structured to accomplish our mission in a fiscally sustainable manner going forward.