

Tab 16

Performance Funding Review

Coordinating Board for Higher Education
December 11, 2019

DESCRIPTION

This item summarizes a periodic review of Missouri's performance funding framework, which is mandated by statute (§ 173.1006, RSMo).

STATUTORY REFERENCE

Section 173.1006, RSMo – Performance funding measures and evaluation required.

BACKGROUND

Missouri has collected performance funding measures continuously beginning in fall 2012 for the FY 2014 budget year. In 2014, legislation passed by the General Assembly and signed by the Governor mandated that the public universities and community and technical colleges continue to report the five measures in place at that time, subject to periodic review by the Coordinating Board for Higher Education, and add an additional metric “to measure student job placement in a field or position associated with the student's degree level and pursuit of a graduate degree.” After extensive consultation with the institutions, this additional graduate outcomes measure was first collected in fall 2016 for the FY 2018 budget year.

Since 2014, § 173.1006, RSMo also requires that “The department of higher education and workforce development (DHEWD) shall be responsible for evaluating the effectiveness of the performance funding measures, including their effect on statewide postsecondary, higher education, and workforce goals, and shall submit a report to the governor, the joint committee on education, the speaker of the house of representatives and president pro tempore of the senate by October 31, 2019, and every four years thereafter.” The review was completed and distributed as required, and is included with a cover memo as attachments.

The attached review brief examines impact on student graduation rates, as the performance funding framework has changed following major task forces in 2014 and 2017, but emphasis on student completion has been a constant in some form for all sectors since 2012, and similar studies have been conducted in other states, providing some national context. Graduation rates have generally increased at Missouri public colleges and universities from 2011-2017, but a direct causal link to performance funding is difficult to establish, given changes to the model, inconsistent funding, and the complex set of individual and institutional factors that drive student completion. Research elsewhere has also shown the difficulty of directly linking increases in completion and graduation rates specifically to performance funding.

CURRENT STATUS

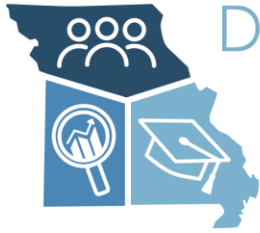
The attached review was distributed as required by statute on October 31, 2019. The DHEWD will continue to collect statutorily mandated data, and will continue to monitor the effectiveness of the model.

RECOMMENDED ACTION

This is an information item only.

ATTACHMENTS

- A. Cover Memo, Performance Funding Review
- B. Performance Funding Review



DEPARTMENT OF HIGHER EDUCATION & WORKFORCE DEVELOPMENT

MEMORANDUM

TO: Governor Mike Parson
Representative Elijah Haahr, Speaker of the House
Senator Dave Schatz, President Pro Tem
Members of the Joint Committee on Education

FROM: Zora Mulligan
Commissioner of Higher Education 

RE: Evaluation of Performance Funding Measures

DATE: October 31, 2019

Section 173.1006, RSMo, requires the Department of Higher Education and Workforce Development to evaluate the effectiveness of performance measures and to submit a report to the Governor, the Joint Committee on Education, the Speaker of the House of Representatives, and the President Pro Tempore of the Senate by October 31, 2019, and every four years thereafter. I am providing the attached in response to that requirement.

Please contact me if you have questions or if I can provide additional information.

*One team, one vision:
Every Missourian empowered with the skills and education needed for success.*

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The Impact of Performance Funding Measures on Completion Rates at Missouri Public Colleges and Universities, 2011-2017

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Introduction

Missouri has a long history with performance funding, having implemented *Funding for Results* (FFR) in the late 1990s. FFR was discontinued after a short period and Missouri did not resume the performance funding conversation until data collection for a new model began in 2012 for the FY 2014 budget year. Performance funding data have been collected continuously since 2012, although statewide task forces in 2014 and 2017 recommended changes to the model. The current model was written into statute in 2014 by legislation that also added a measure of graduate outcomes (employment or continuing education) ([§ 173.1006, RSMo](#)). Performance funding consisted of five measures for the public universities, community colleges, and State Technical College until the 2016 data collection for the FY 2018 budget year, when the graduate outcomes measure was also first collected.

Section 173.1006.2, RSMo, requires an evaluation of the effectiveness of performance funding measures in 2019 and every four years thereafter. It is important to note that this evaluation only addresses the effectiveness of having those measures in place, not of using them to distribute funding, as the model has only been used to deliver funds in FY 2014, 2015, and 2016. Disbursements were restricted in FY 2017, and were not appropriated for FY 2018, 2019, or 2020. Performance funding accounted for 2.8 percent of total core appropriations to the institutions in FY 2014, 4.8 percent in FY 2015, and 1.2 percent in FY 2016. \$67,696,964 (7.0 percent) of FY 2017 appropriations and \$23,742,404 (2.6 percent) of FY 2018 appropriations were restricted (\$91,439,368 total) due to state revenue issues. This impacted the state's ability to support core funding as well as limited its ability to invest in performance.

This brief examines impact on student graduation rates, as emphasis on student completion has been a constant in some form for all sectors since performance funding was re-established in FY 2014, and similar studies have been conducted in other states, providing some national context. Graduation rates have generally increased at Missouri public colleges and universities from 2011-2017, but a direct causal link to performance funding is difficult to establish, given changes to the model, inconsistent funding, and the complex set of individual and institutional factors that drive student completion. Research elsewhere has also shown the difficulty of directly linking increases in completion and graduation rates specifically to performance funding (Li 2019).

Research does suggest that performance funding may shift production away from degrees and into certificates (Hillman et al, 2018). Certificates are comparatively quick and cost-effective for

students and institutions, but also encourage students to more quickly enter the workforce. This may not be counter to state interests related to workforce needs, although long-term earnings are still generally higher for degree completers relative to certificate completers. In Missouri, public institutions granted 14.6 percent more associate's degrees and 12.2 percent more bachelor's degrees in 2016-17 than 2010-11, but 57.3 percent more sub-baccalaureate certificates.

Research in other states has also suggested that equity provisions, e.g. bonuses for enrolling, persisting, and graduating Pell recipients and/or under-represented minorities, can have a positive impact on outcomes for low-income students (Gandara and Rutherford 2018). There is also some evidence that multiple equity indicators can magnify the positive impact of any one indicator. Since the 2017 task force, Missouri universities have received a bonus to their completion measure for graduating Pell recipients; community colleges have discussed adopting a similar measure.

Evaluation and Results

As noted, student completion has been a consistent emphasis in the performance funding model, and has also been the subject of study in other states. The evaluation examined 150-percent-time cohort graduation rates of first-time full-time degree-seeking students as collected by the U.S. Department of Education from 2010-11 through 2016-17. Rates were collected and analyzed for public two- and four-year institutions in Missouri and four other states which were verified to not have implemented performance funding during the study period. Control states were Alabama, New Jersey, Vermont, and West Virginia.

Analysis at the state and sector levels was conducted via difference-in-differences, which examines differences in graduation rates at the beginning (2010-11) and end (2016-17) of the study period, and whether any differences were or were not statistically significant (i.e. unlikely to have been the result of random fluctuation). Graduation rates were also examined with and without transfer-outs, which are more widely reported to U.S.D.E. by two-year institutions. Missouri's performance funding model does include transfer-outs in cohort graduation rates for community colleges.

As stated above, difference-in-differences analysis illustrates that cohort graduation rates have generally increased in Missouri during the study period, but it is not possible to directly attribute that increase to performance funding. 150 percent completion rates at Missouri public two-year institutions increased from 23.1 percent (2011) to 29.0 percent (2017). Although the rates are higher, the rate of change was virtually identical to the increase in control states (19.6 to 25.5 percent). The difference-in-differences was not statistically significant, although the sample size in Missouri was much smaller (14 versus 55 institutions). Statistical significance is more difficult to establish with a smaller sample. When including transfers, rates at Missouri public two-year institutions increased from 44.0 percent (2011) to 46.8 percent (2017). This was a higher rate but lesser increase than in control states (39.1 to 42.7 percent). The difference-in-differences here was also not statistically significant.

At the universities, 150 percent completion rates in Missouri increased from 45.3 percent (2011) to 46.4 percent (2017). This was slightly less than the increase in control states (46.3 to 48.4 percent). The difference-in-differences was not statistically significant. When including transfers, rates at Missouri universities increased from 58.5 percent (2011) to 59.5 percent (2017). Control institutions increased more substantially (64.0 to 71.5 percent). The difference-in-differences was also not statistically significant. As stated previously, transfer-out is more commonly reported to the U.S. Department of Education by two-year institutions and other institutions with a transfer-preparatory mission. It is an optional reporting element and rates at universities may be greatly impacted by differences in mission and reporting.

Apart from any direct causal link to performance funding, eight Missouri public colleges and universities saw first-time full-time cohort graduation rates increase by at least five percentage points from 2010-11 to 2016-17 (Crowder College, Metropolitan Community College, North Central Missouri College, Southeast Missouri State University, State Fair Community College, Truman State University, the University of Missouri-Kansas City, and the University of Missouri-St. Louis). Two (Ozarks Technical Community College and State Technical College of Missouri) saw increases of at least 10 percentage points.

Study limitations include, most prominently, potential differences in institutional or student characteristics that are not accounted for here, given time and resource limitations for study. These include but are not limited to differences in students' academic preparation, family income, and/or institutions' financial support. The relative scope and magnitude of dual credit and dual enrollment in Missouri and control states, for example, could have a significant impact on students' collective completion and time-to-degree. Performance funding may also have a positive impact on other outcome variables, including production of STEM majors, that are not considered here.

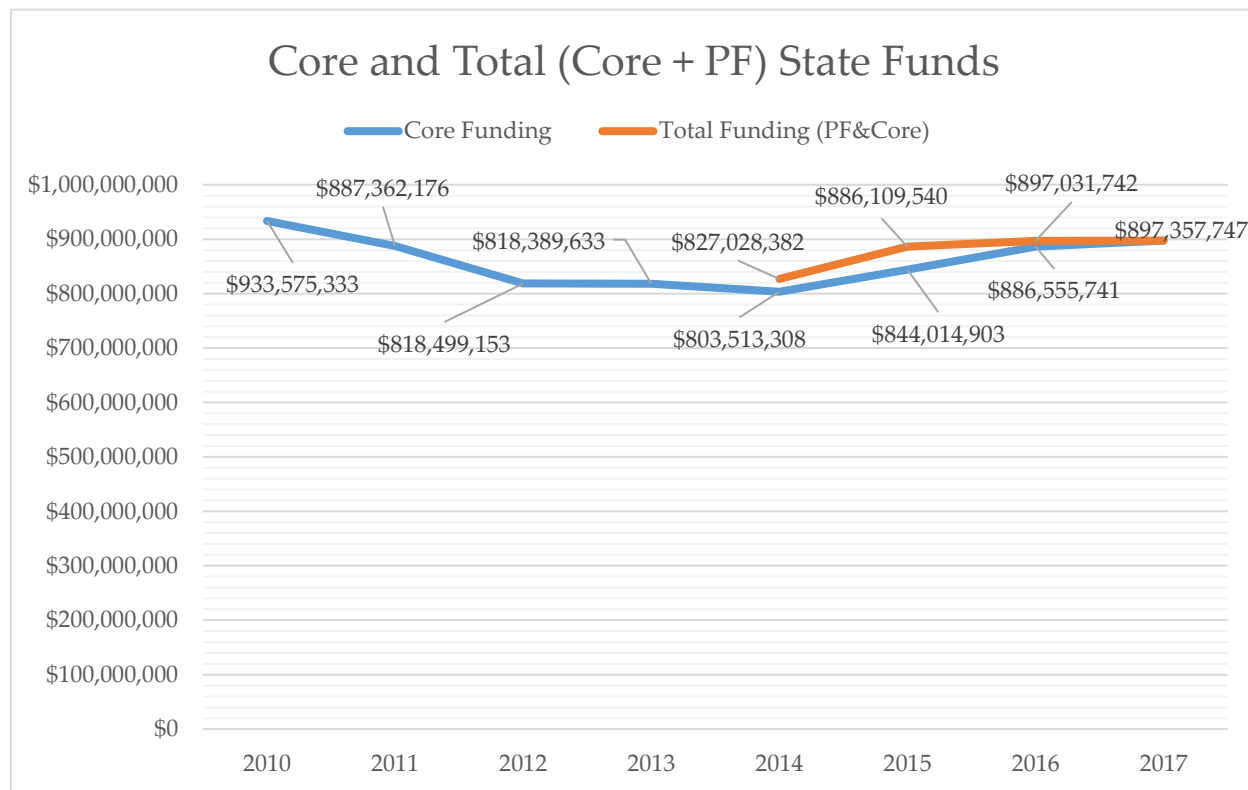
Discussion

Performance funding formulas have been criticized elsewhere for emphasizing measures of productivity while overlooking academic quality; Missouri does incorporate pass rates on licensure and certification for the community and technical colleges, and public universities may report general education assessment, major field assessment, or licensure and certification. Definitions are provided for institutions to include appropriate assessments, and pass rate success in some assessment measures is defined in a way that accounts for institutional selectivity (e.g. open admissions to highly selective), thus indirectly, at least, acknowledging differences in inputs.

Additional information might tell a more complete story about continuous improvement efforts at the institutions, although changes or additions to the reporting model could come at the cost of additional complexity and greater challenges in maintaining access to valid, reliable, and repeatable data. Some research suggests that institutions be given additional opportunities to describe changes to processes and systems aimed at improving performance on the measures, but this additional qualitative data can be difficult to apply specifically for funding purposes.

Finally, it would be remiss to evaluate performance funding without discussing funding. In Missouri, performance funding in 2015 was approximately 4.8 percent (\$42,094,637) of total base funding (\$844,014,903), but this amount decreased to approximately 1.2 percent in 2016 (\$10,476,001 out of \$886,555,741). (All totals for performance and core funding disbursed are referenced from the state audit of performance funding released in 2017.) Other states provide higher levels of performance funding to institutions: Indiana, for example, provides 5 percent and Tennessee offers 80 percent. Ohio provides 100 percent of its funding based on performance (Li 2019). However, the performance model in some of these states may include some enrollment measures as well as completion. Again, Missouri has not appropriated and disbursed performance funding since FY 2016.

It is also true that performance funding has been limited to “new money” for institutions in Missouri, but new money has often also been a recovery of prior core decreases in recent years, especially when withholdings are considered. Core and performance funding in 2016 (\$897,031,742) was only a 1.1 percent increase over core funding in FY 2011, and that was following several years of relative decreases. More predictable appropriation of performance funding, at minimum matching or exceeding the Consumer Price Index, would provide additional resources to support continuous improvement. It also bears mentioning that institutions are dealing with increasing fixed costs such as utilities and health and pension obligations, which can also impact efforts at controlling increases to tuition and fees.



Conclusion

The Department of Higher Education and Workforce Development (DHEWD) will continue to work collaboratively with the institutions and appropriators to evaluate performance funding, and to determine whether changes would more comprehensively illustrate institutional improvement and whether additional contextual information on institutional inputs and/or processes might be desirable. Additional contextual information might come in the context of performance funding, or in other publications or dashboards of use to the DHEWD, institutions, policymakers, and other stakeholders.

More predictable and consistent funding would serve as a greater incentive to the institutions, but would also provide additional resources for process improvements and activities geared toward improvement on the metrics, including those focused on student completion. The DHEWD will continue to collect statutorily mandated data, and will continue to monitor the effectiveness of the model.

References

- Gándara, D. & Rutherford, A. Res High Educ (2018) 59: 681. <https://doi.org/10.1007/s11162-017-9483-x>
- Hillman, N. W., Fryar, A. H., & Crespín-Trujillo, V. (2018). Evaluating the impact of performance funding in Ohio and Tennessee. *American Educational Research Journal*. 55(1) 144-170.
- Li, Amy Y. Lessons Learned: A Case Study of Performance Funding in Higher Education. *Third Way*. January 25, 2019. <https://www.thirdway.org/report/lessons-learned-a-case-study-of-performance-funding-in-higher-education>