

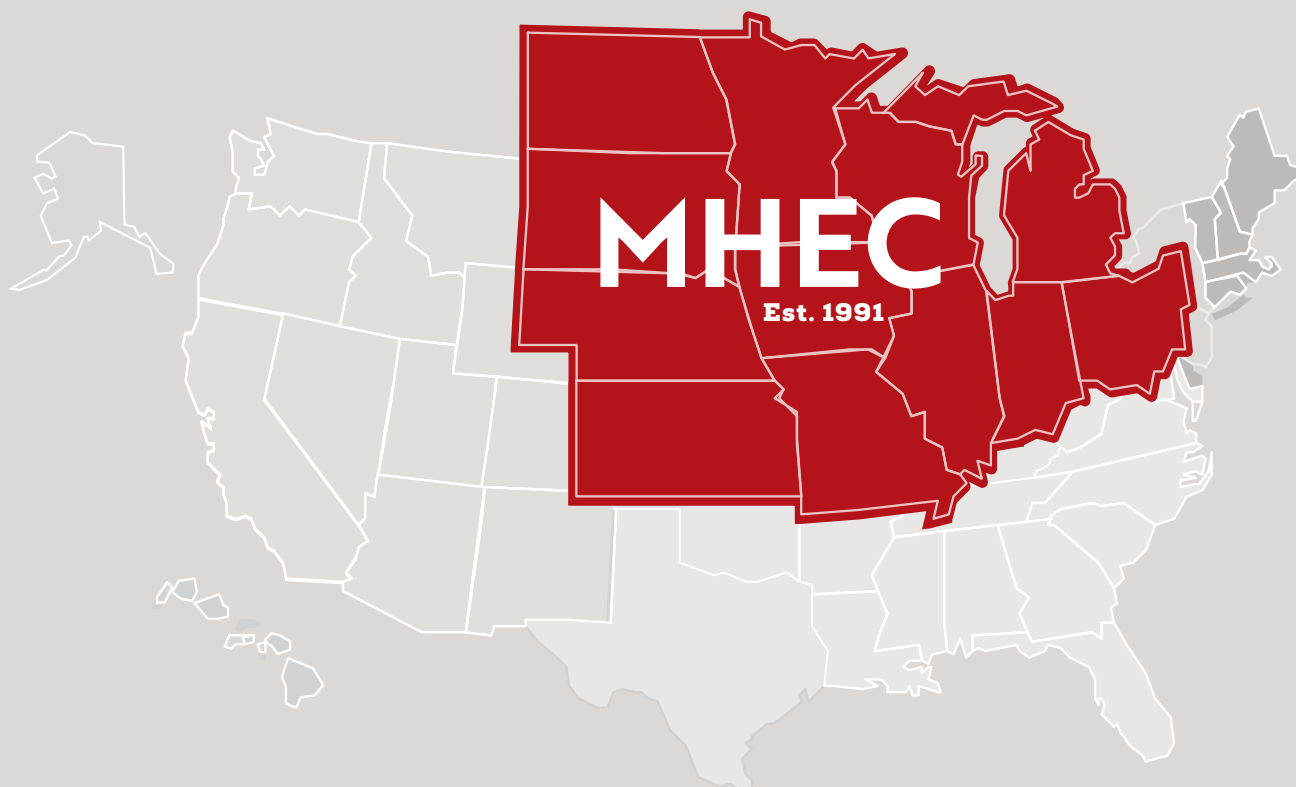


# 2018 State Performance Update

*Supplement to Higher Education in Focus 2017*



# MISSOURI



## ABOUT THE MIDWESTERN HIGHER EDUCATION COMPACT

The Midwestern Higher Education Compact is a nonprofit regional organization, established by compact statute, to assist Midwestern states in advancing higher education through interstate cooperation and resource sharing. Member states are Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. Collectively the Compact creates solutions that build higher education's capacity to better serve individuals, institutions, and states by leveraging the region's resources, expertise, ideas, and experiences through multi-state convening, programs, contracts, and research.

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Updates to this report may be found at: <http://www.mhec.org/research>.

# About this Report

This supplement to *Higher Education in Focus 2017* provides the latest data on a subset of indicators relevant to the goal of improving educational attainment in Missouri. Performance indicators are categorized within five areas: Preparation, Participation, Affordability, Completion, and Finance. Most indicators provide

the national and MHEC regional values as well as the median of the top five states in the nation as possible benchmarks.

See [MHEC.ORG/RESEARCH](http://MHEC.ORG/RESEARCH) for the full report.

## Selected Performance Indicators

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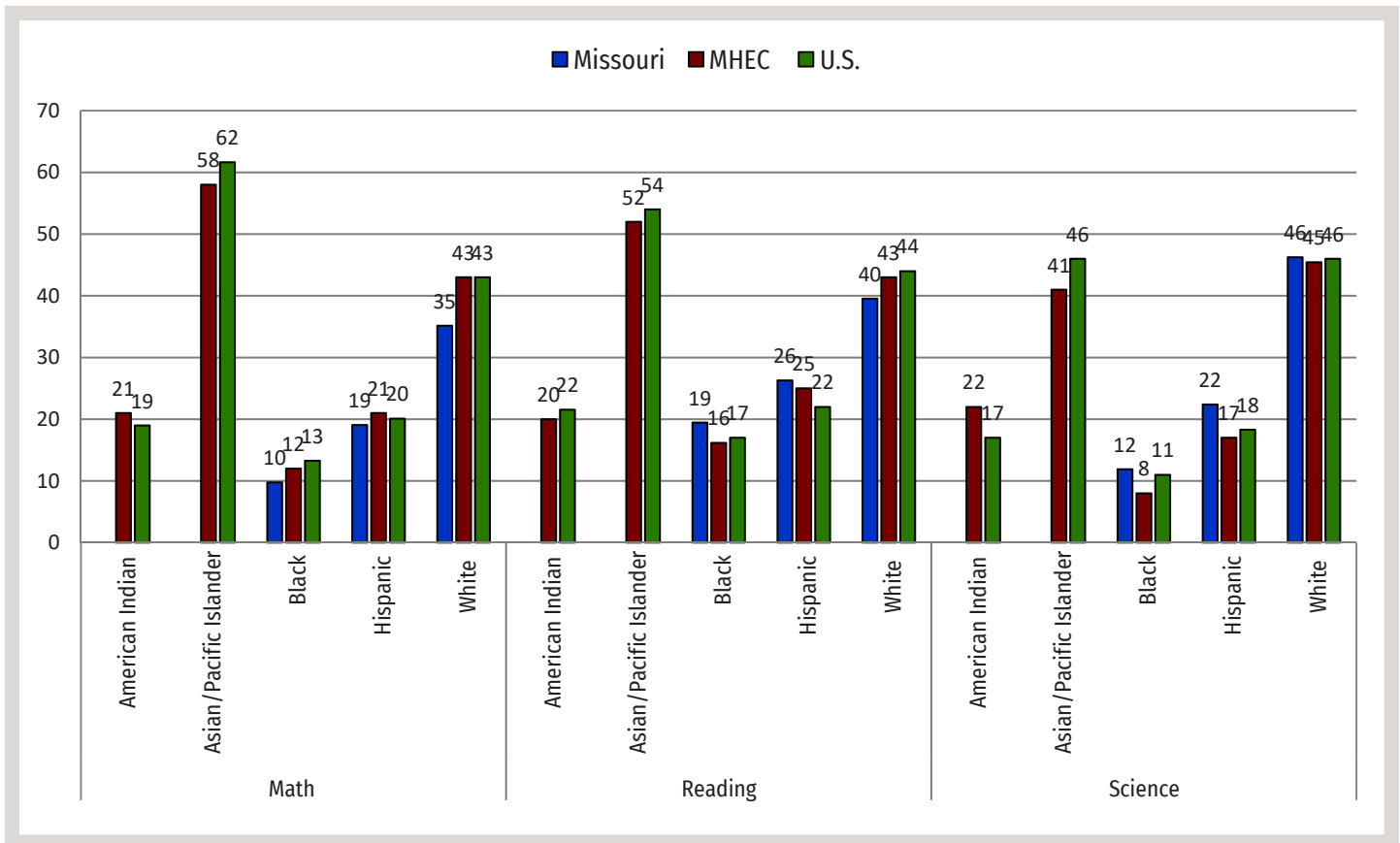
# Preparation

## Academic proficiency of 8<sup>th</sup> grade students by race and ethnicity.

Academic proficiency of 8<sup>th</sup> grade students by race and ethnicity. The percentage of students in grade 8 scoring at or above proficiency on the National Assessment of Educational Progress (NAEP) provides a measure of whether students enter high school with foundational skills and knowledge in such

areas as math, reading, and science. As indicated in Figure 1, less than half of 8<sup>th</sup> grade students in Missouri across all groups scored at or above the proficiency level in math, reading, or science. Proficiency in these subject areas was less common among Black and Hispanic students relative to White students.

**Figure 1: Percentage of Students in Grade 8 Scoring at or Above Proficiency on the National Assessment of Educational Progress in Math, Reading, and Science by Race and Ethnicity, 2017**



Source: National Center for Education Statistics. (2015, 2017). *National assessment of educational progress*. Estimates are unavailable for the American Indian and Asian/Pacific Islander groups in Missouri.

Note: Note: Estimates for math and reading proficiency were derived from the 2017 assessment; estimates for science proficiency were only available for 2015.



**Proficiency in math, reading, and science was more common among White students relative to Black and Hispanic students.**

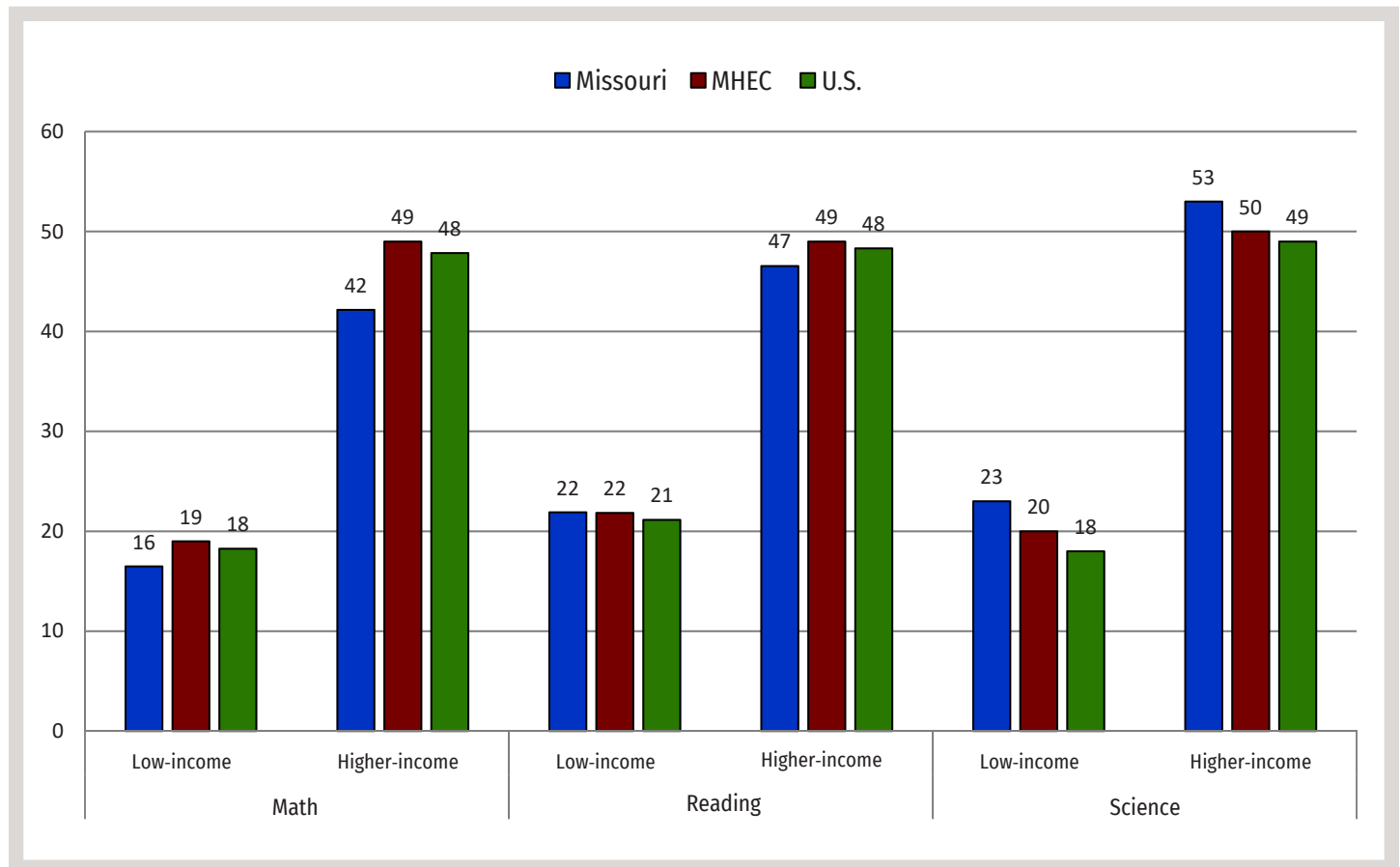
# Preparation

## Academic proficiency of 8<sup>th</sup> grade students by family income.

As indicated in Figure 2, proficiency rates in science were above the regional and national benchmarks for both income groups.

However, a much larger percentage of students from higher-income families were proficient in all subject areas than were students from low-income families.

Figure 2: Percentage of Students in Grade 8 Scoring at or Above Proficiency on the National Assessment of Educational Progress in Math, Reading, and Science by Income, 2017



Source: National Center for Education Statistics. (2015, 2017). *National assessment of educational progress*.

Note: Estimates for math and reading proficiency were derived from the 2017 assessment; estimates for science proficiency were only available for 2015.



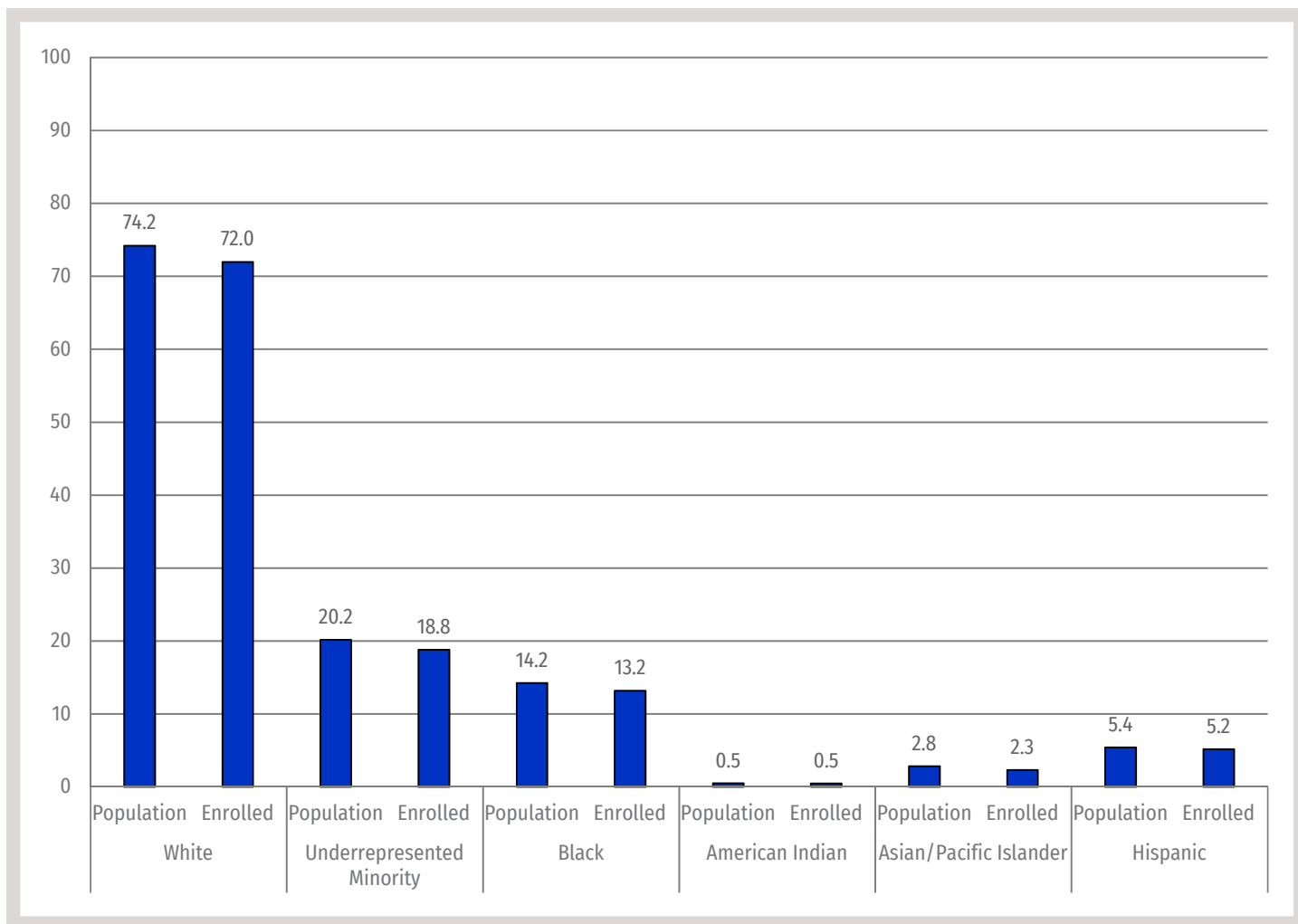
**Proficiency rates among students from higher-income families were well above those of students from lower-income families.**

# Participation

**College enrollment by race and ethnicity.** The postsecondary enrollment of traditionally under-represented students has been a priority in states committed to promoting equal opportunity and economic growth, particularly as state populations become more racially and ethnically diverse.

Figures 3 and 4 provide a comparison of the demographic composition of state populations aged 18-24 to current postsecondary enrollment in public two- and four-year institutions, respectively.

**Figure 3: Percentage of State Population Aged 18-24 and Percentage of First-Time, Full-Time, Degree-Seeking Students Enrolled in Missouri Public Two-Year Institutions by Race and Ethnicity, 2016**



Sources: U.S. Census Bureau. (2016). *American Community Survey One-Year Public Use Microdata Sample*. NCES, IPEDS. (2016) *Fall enrollment file*. The *Underrepresented Minority* category comprises Blacks, American Indians, and Hispanics.



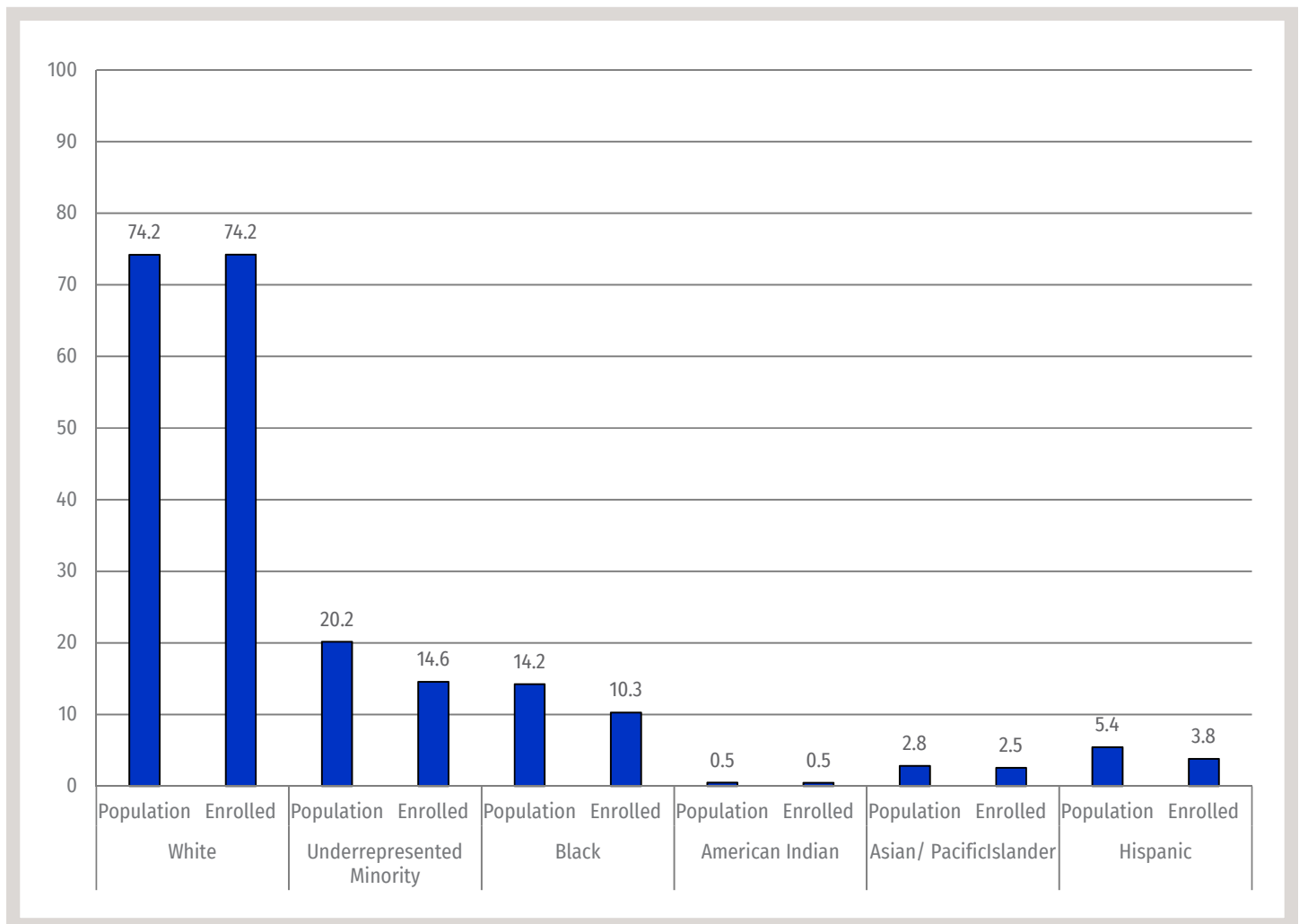
*Under-represented students tend to enroll at relatively higher rates at two-year institutions.*

# Participation

The figures demonstrate that students of under-represented ethnic and racial backgrounds tend to enroll at relatively higher rates at two-year institutions. For example, Figure 3 indicates that while residents aged 18-24 from under-represented racial and ethnic groups comprise 20 percent of the population in

Missouri, 19 percent of full-time undergraduate students (any age) at public two-year institutions are American Indian, Black, or Hispanic. At four-year institutions they constitute 15 percent of students.

**Figure 4: Percentage of State Population Aged 18-24 and Percentage of First-Time, Full-Time, Degree-Seeking Students Enrolled in Missouri Public Four-Year Institutions by Race and Ethnicity, 2016**



Sources. U.S. Census Bureau. (2016). *American Community Survey One-Year Public Use Microdata Sample*. NCES, IPEDS. (2016) *Fall enrollment file*. The Underrepresented Minority category comprises Blacks, American Indians, and Hispanics.



*Under-represented students tend to enroll at relatively lower rates at four-year institutions.*

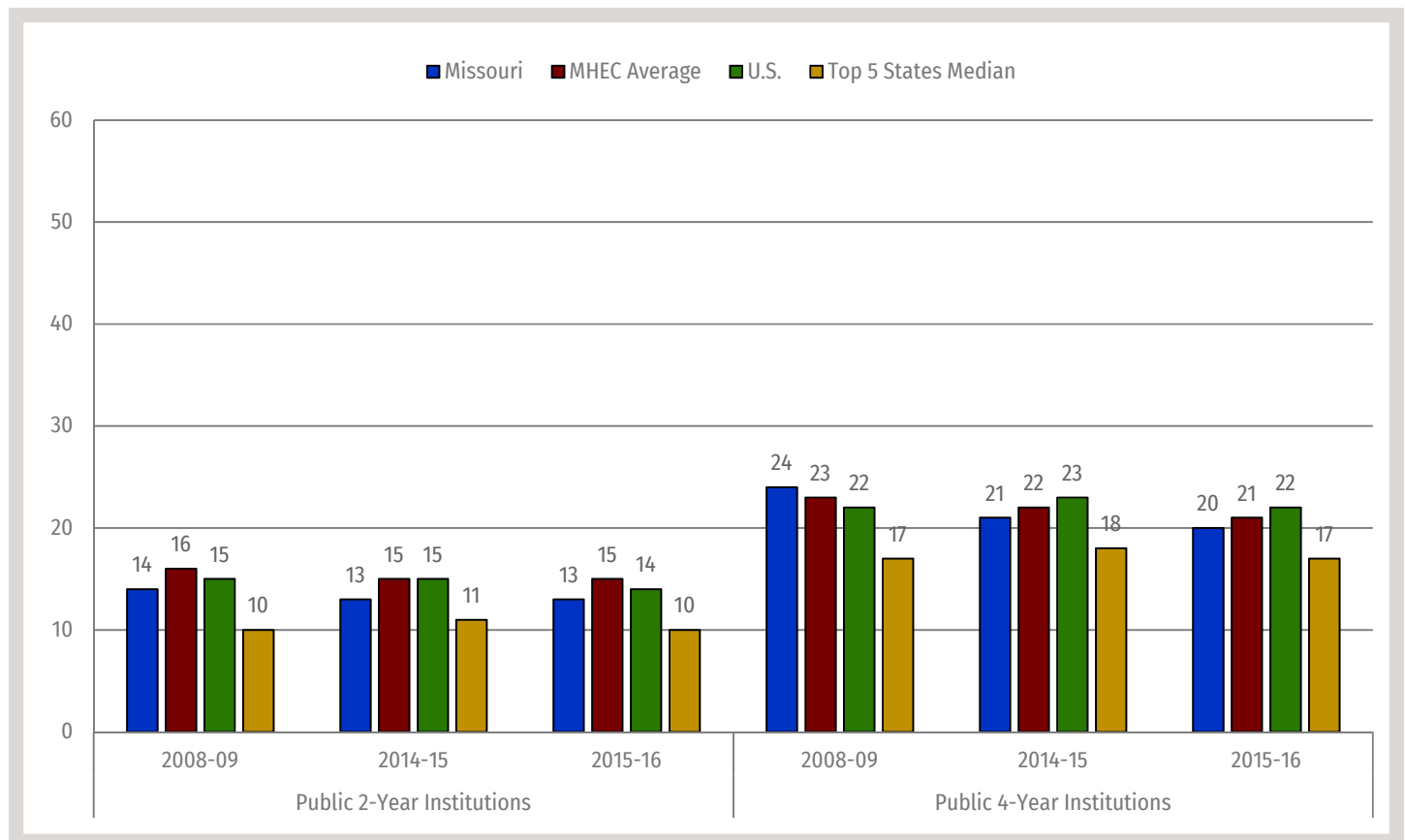
# Affordability

**Ability to pay.** College affordability is measured by the percentage of family income needed to pay the net price of full-time enrollment at public two- and four-year institutions. The average net price is calculated as the total cost of attendance (tuition and fees, books, supplies, and room and board) minus the average institutional, local, state, and federal grant aid. In order to assess the degree of affordability for students of different income levels, this indicator is presented for families with median income (\$63,862 for Missouri in 2016) and families in the

lowest income quintile (median of \$19,346 for Missouri in 2016). State policymakers can influence affordability through such means as financial aid and institutional appropriations.

Figure 5 shows that the net price of college as a percentage of median family income recently decreased for public four-year enrollment, and affordability for median-income families at two-year and four-year colleges is better than the regional and national benchmarks.

**Figure 5. Percentage of Family Income Needed to Pay for Full-Time Enrollment at Public Two- and Four-Year Institutions: Families with Median Incomes (\$63,862)**



Sources. NCES IPEDS. (2009, 2015, 2016). *Net price*. U.S. Census Bureau. (2009, 2015, 2016). *American Community Survey One-Year Public Use Microdata Sample*. Top 5 States Public 2-Year, 2015-16 (includes ties): CT, IL, MS, WY, CA, DE, GA, MD, MA, MI, NE, NJ, VA, HI, KY, MO, NM, NC, RI, TN, TX, UT, IA, KS, ME, NY, OR. Top 5 States Public 4-Year, 2015-16 (includes ties): WY, UT, ND, CA, AK, NE, HI, IA, IN, DE, MA, MO, ME, NY, WV, WI, MT, MI, NM, RI, KS, MN.



**College affordability in Missouri is better than the Midwest and national benchmarks for public two- and four-year enrollment.**

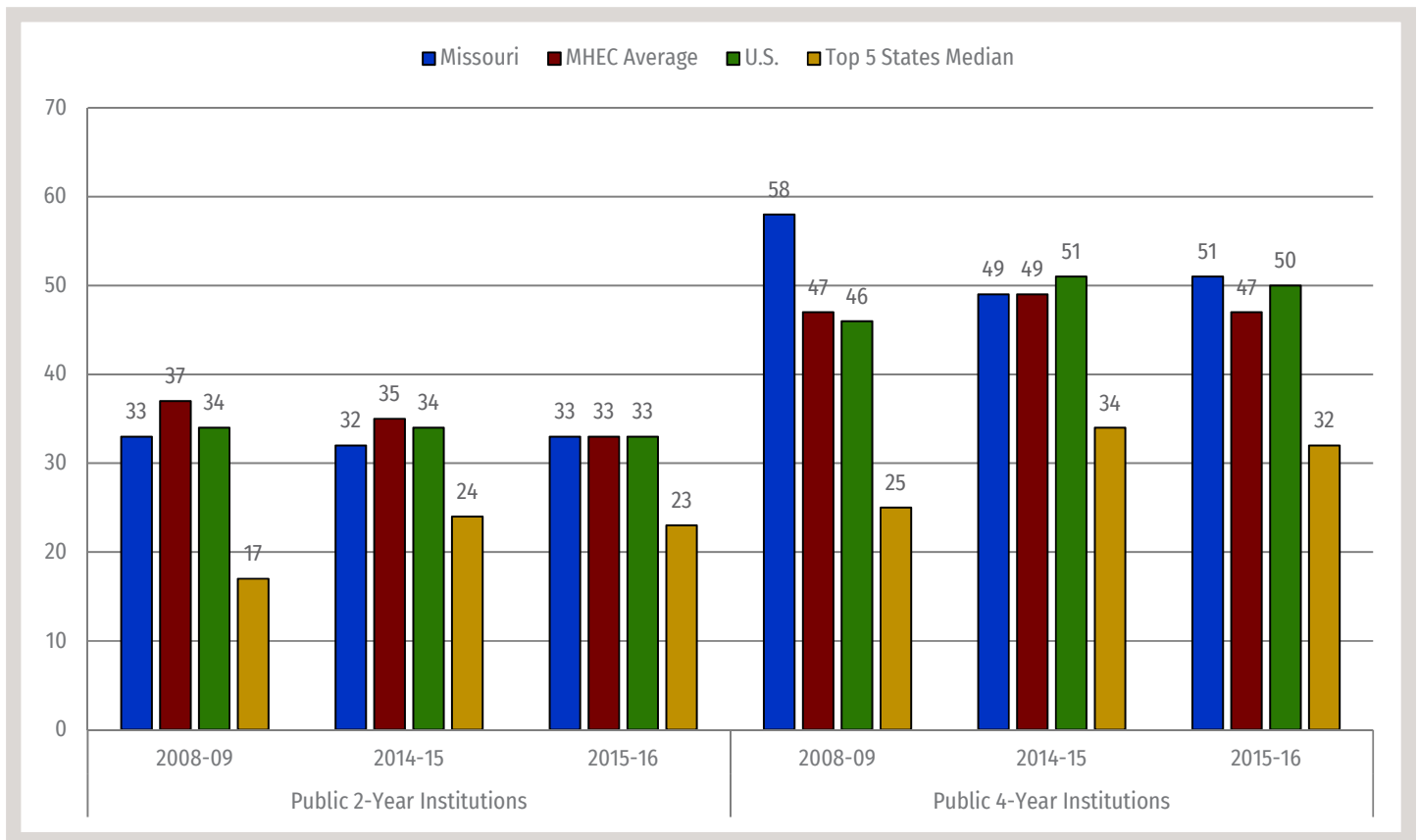


# Affordability

A comparison of Figures 5 and 6 indicates that college affordability in Missouri is highly contingent on family income. Families with median incomes in Missouri would need to allocate 20 percent of their incomes to pay for enrollment at a four-year college. In contrast, four-year

college attendance for low-income students requires 51 percent of family income.

**Figure 6. Percentage of Family Income Needed to Pay for Full-Time Enrollment at Public Two- and Four-Year Institutions: Families in the Lowest Income Quintile (\$19,346)**



Sources: NCES IPEDS. (2009, 2015, 2016). *Net price*. U.S. Census Bureau. (2009, 2015, 2016). *American Community Survey One-Year Public Use Microdata Sample*. Top 5 States Public 2-Year, 2015-16 (includes ties): WY, CT, HI, MI, MD, WA, NE, IL, VA. Top 5 States Public 4-Year, 2015-16: IN, AK, HI, WA, ND, MN, CA.



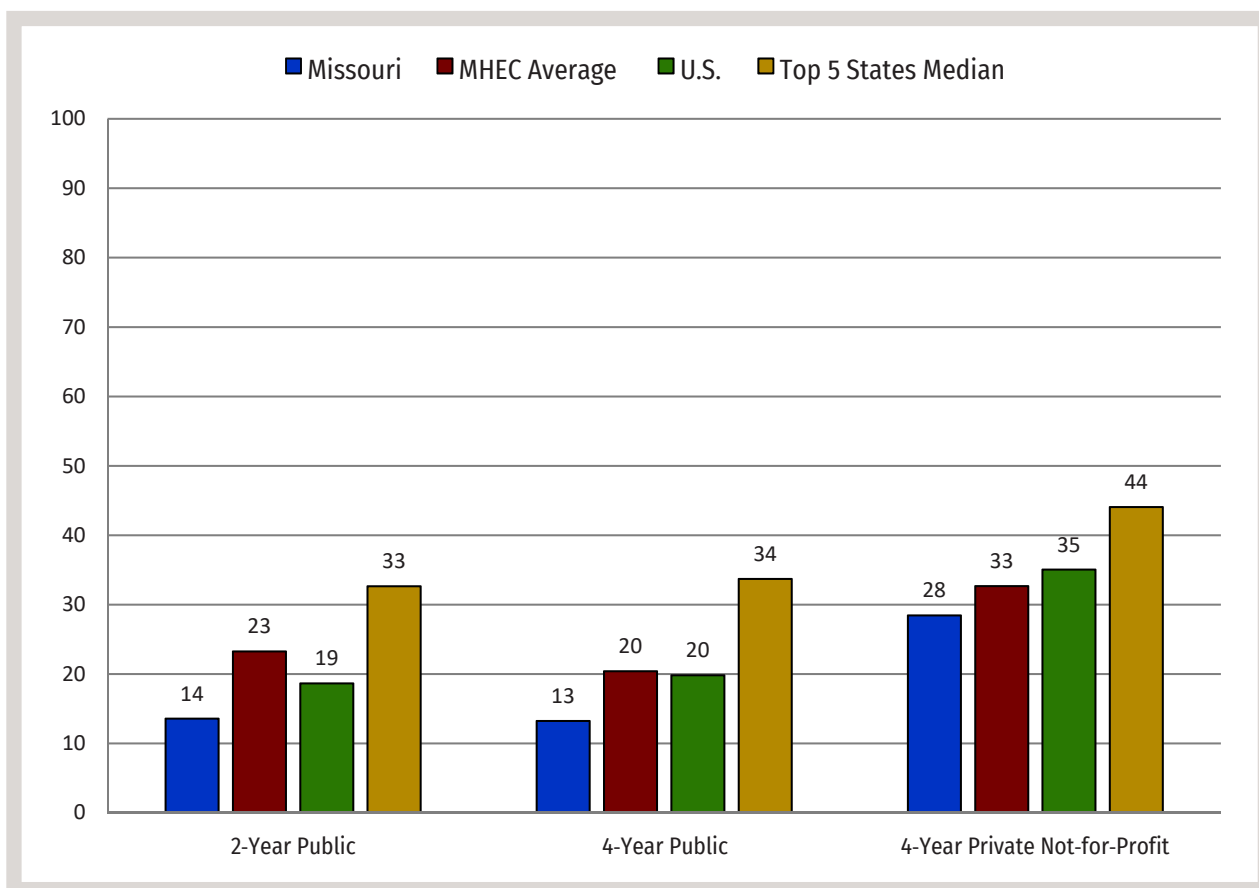
*The affordability of full-time enrollment in Missouri is highly contingent on family income.*

# Completion

**Transfer-adjusted completion.** Transfer-adjusted completion rates are defined by the proportion of first-time, certificate/degree-seeking students in the fall 2011 cohort who completed a certificate or degree within six years, while accounting for students who enroll part- or full-time and graduate from their first institution or elsewhere.

According to Figure 7, Missouri's completion rates for part-time students are below the regional and national benchmarks for all institution types. A comparison of Figures 7 and 8 demonstrates that completion rates are highest among students who enroll full-time.

**Figure 7. Part-Time Students: Transfer-Adjusted Percentage of First-Time, Certificate/Degree-Seeking Students in the Fall 2011 Cohort who Completed a Certificate or Degree within Six Years by Starting Institution**



Source: Shapiro, D., Dundar, A., Wakhungu, P., Yuan, X., Nathan, A & Hwang, Y., A. (2018). *Completing college: A state-level view of student attainment rates* (Signature Report No. 14a). Herndon, VA: National Student Clearinghouse Research Center. Top 5 States Public 2-Year, 2015-16 (includes ties): WI, MN, GA, NM, WA. Top 5 States Public 4-Year, 2015-16: NJ, NY, MI, NC, IL. Top 5 States Private Not-for-Profit 4-Year, 2015-16: MD, IL, MA, LA, NJ.

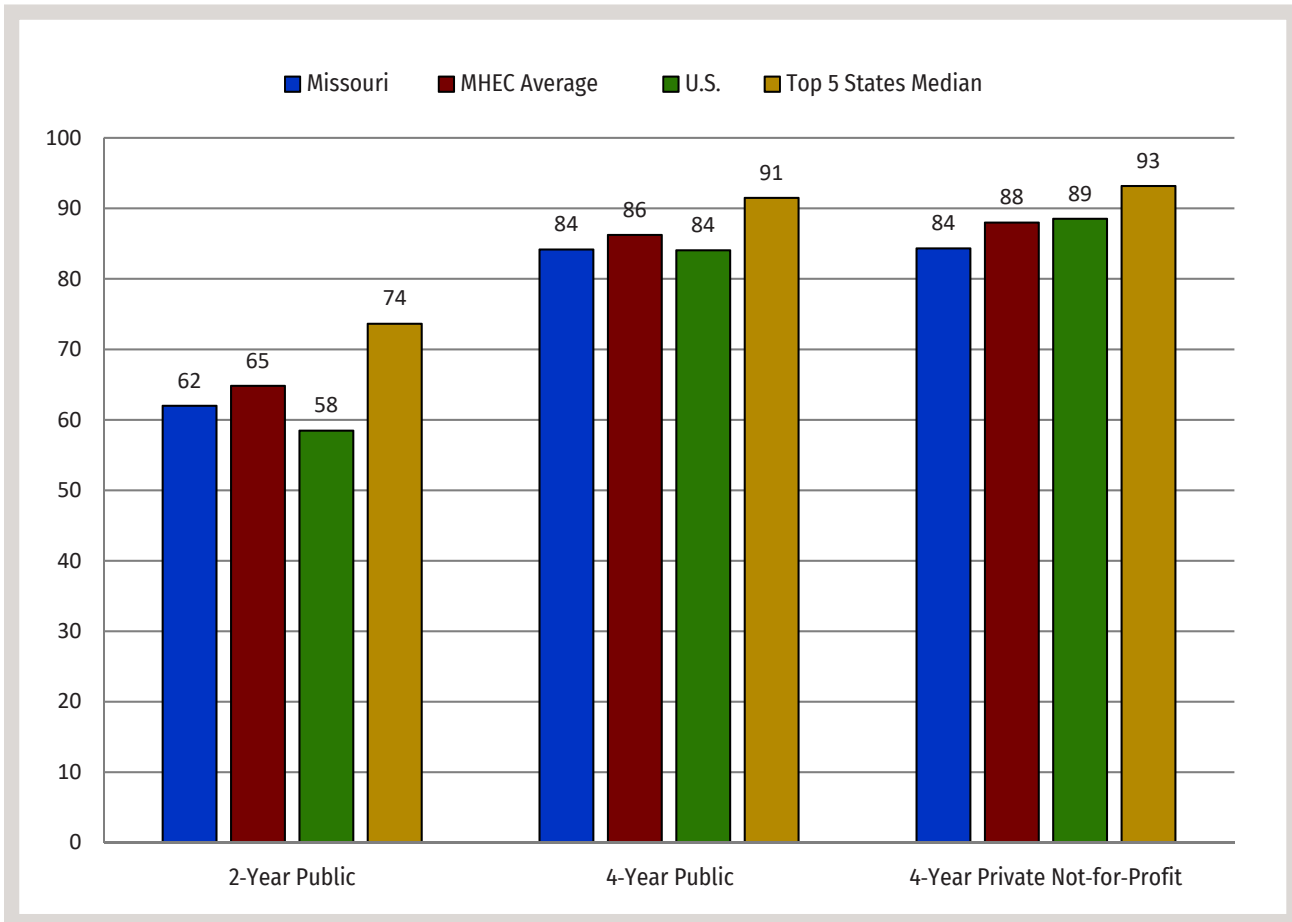
\* Estimate was not available due to low historical coverage rate for sector in National Student Clearinghouse data.



*Less than one third of part-time students complete within 6 years.*

# Completion

Figure 8. Full-Time Students: Transfer-Adjusted Percentage of First-Time, Certificate/Degree-Seeking Students in the Fall 2011 Cohort who Completed a Certificate or Degree within Six Years by Starting Institution



Source: Shapiro, D., Dundar, A., Wakhungu, P., Yuan, X., Nathan, A & Hwang, Y., A. (2018). *Completing college: A state-level view of student attainment rates* (Signature Report No. 14a). Herndon, VA: National Student Clearinghouse Research Center. Top 5 States Public 2-Year, 2015-16 (includes ties): MN, SD, ND, IL, CA. Top 5 States Public 4-Year, 2015-16: IA, NH, VA, MN, MD. Top 5 States Private Not-for-Profit 4-Year, 2015-16: RI, MD, WA, OR, MA.

\* Estimate was not available due to low historical coverage rate for sector in National Student Clearinghouse data.



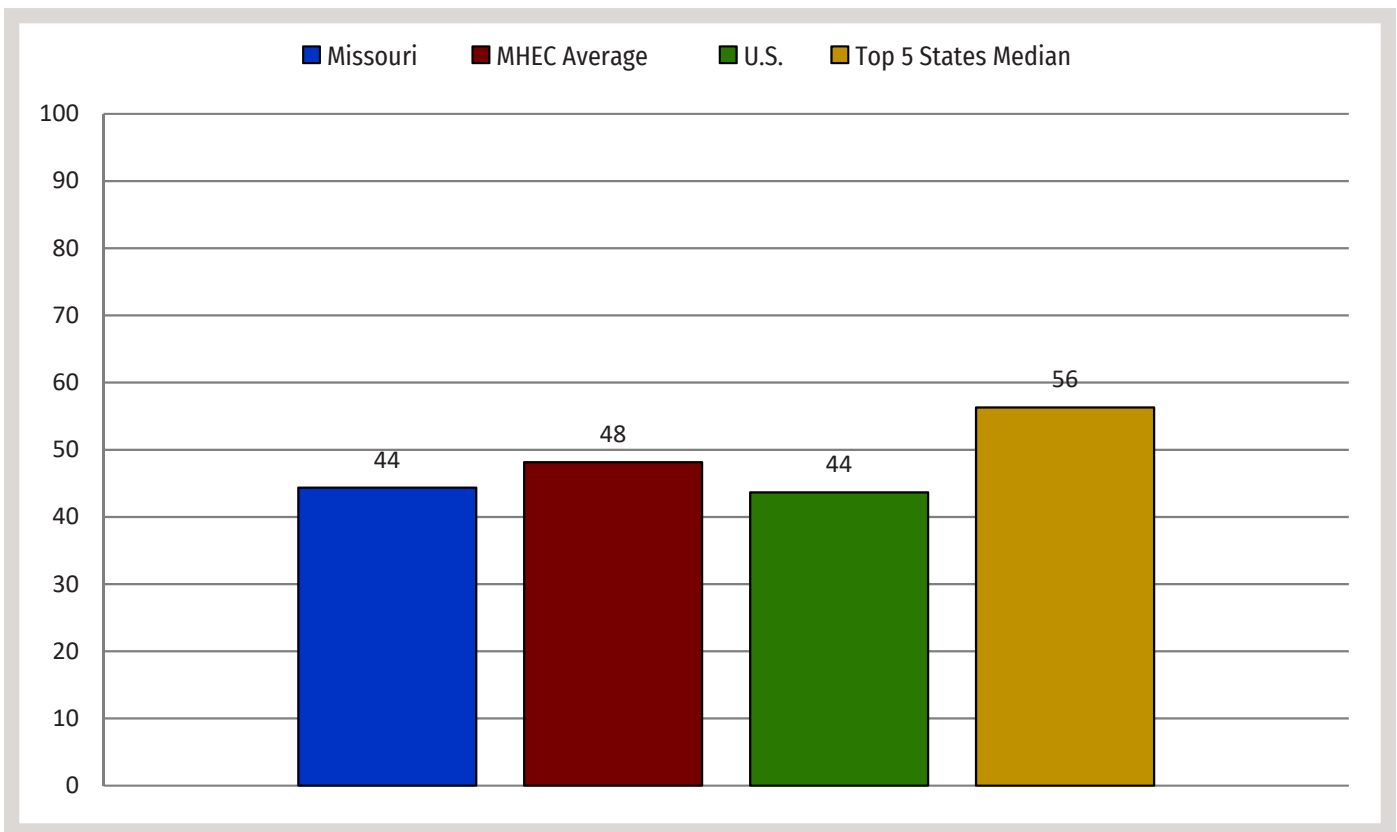
*Completion rates are highest among full-time students.*

# Completion

**Two-year college success rates.** Timely success at two-year colleges is defined by the proportion of first-time, full-time certificate/degree-seeking students in the fall 2014 cohort who transferred or completed an associate degree or certificate at a public two-year college within three years.

According to Figure 9, the success rate at public two-year colleges in Missouri is below the regional benchmark but equal to the national benchmark.

**Figure 9. Percentage of First-Time, Full-Time Certificate/Degree-Seeking Students in the Fall 2014 Cohort who Completed a Certificate/Degree or Transferred within Three Years at Public Two-Year Colleges**



Source: NCES IPEDS. (2017). *Graduation rate*. Top 5 States (includes ties), 2016-17: SD, WY, KS, UT, MN.



*Three-year success rates at public two-year colleges meet the national benchmark.*

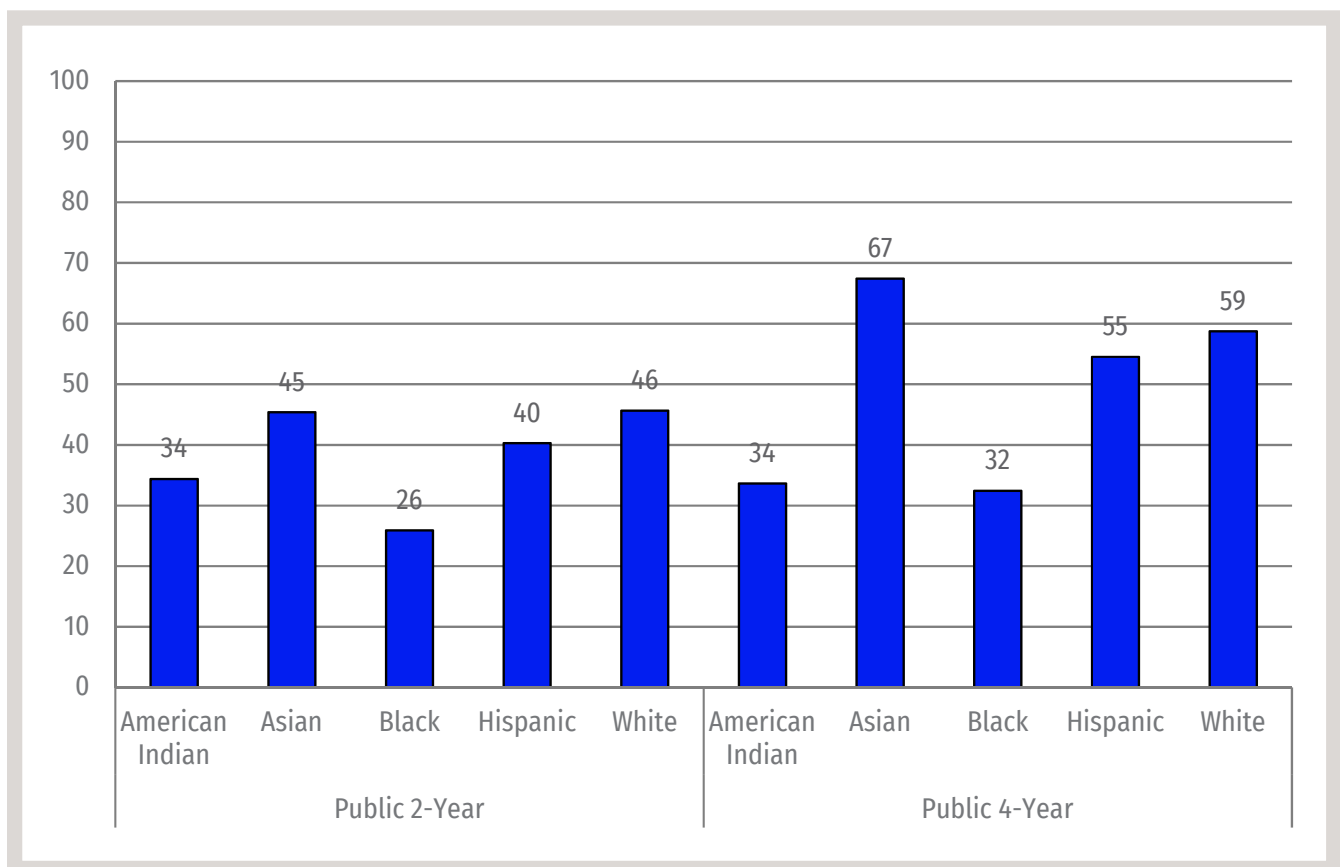
# Completion

**Graduation rates by race and ethnicity.** Graduation rates by race and ethnicity are defined by the proportion of first-time, full-time certificate/degree-seeking students in the fall 2010 cohort who transferred or completed an associate degree or certificate at a public two-year college within three years or completed a bachelor's degree at

a public four-year university within six years (without accounting for transfer to another institution).

According to Figure 10, graduation rates among under-represented students fall below the graduation rates of White and Asian students.

**Figure 10. Percentage of First-Time, Full-Time, Degree/Certificate-Seeking Students from Fall 2010 Cohort who Graduated within 150% Completion Time at Missouri Public Two-Year and Public Four-Year Institutions by Race and Ethnicity**



Source: NCES IPEDS. (2017). *Graduation rate*.



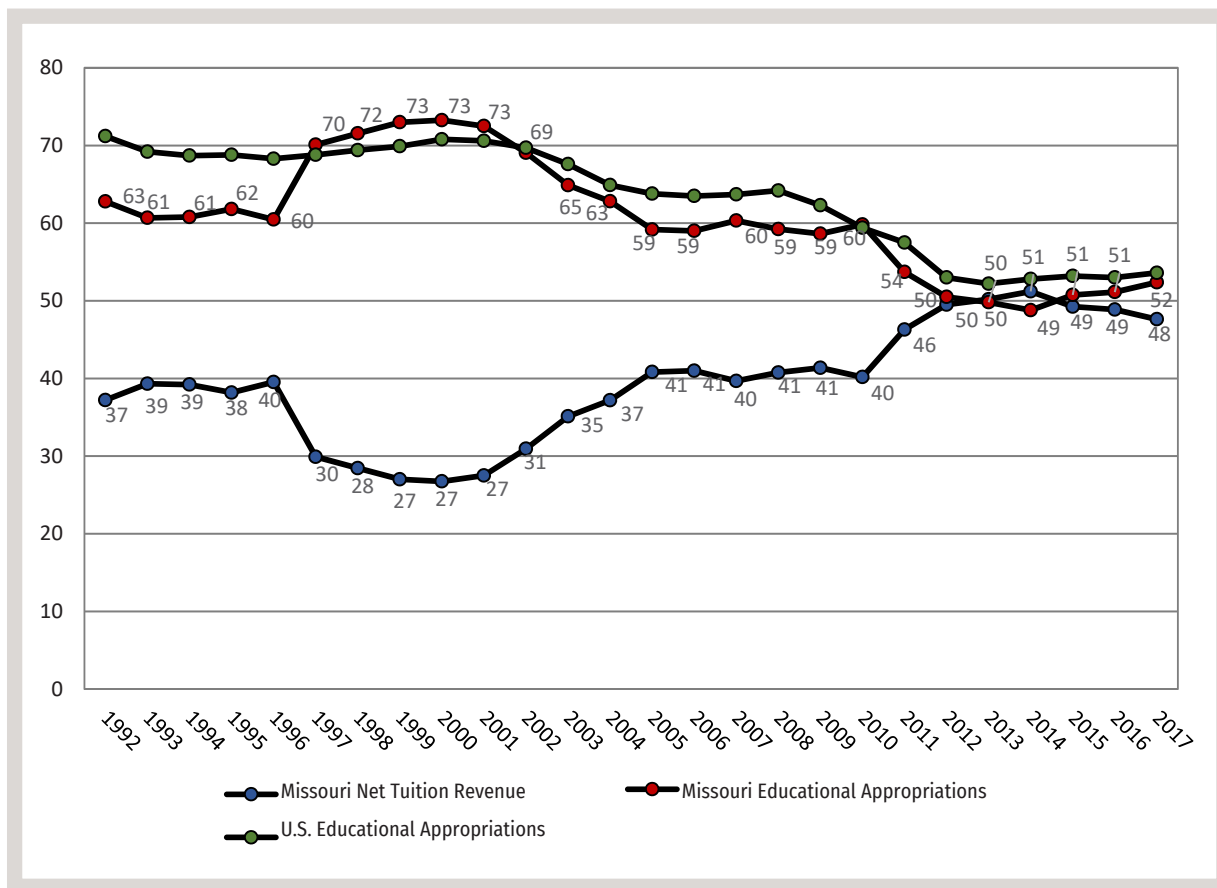
*Under-represented students graduate at lower rates than do White and Asian students.*

# Finance

**Funding commitment.** The relative share of the cost of higher education is represented by comparing educational appropriations and net tuition revenue as a percent of total educational revenue for public postsecondary institutions<sup>1</sup>, including four-year, two-year, and less-than

two-year institutions. The state assumes a larger share of the cost of enrollment compared to the student's share, as net tuition revenue constitutes a relatively smaller proportion of revenue among public colleges and universities (see Figure 11).

**Figure 11. State and Local Educational Appropriations and Net Tuition Revenue as a Percentage of Total Educational Revenue for Public Postsecondary Institutions in Missouri (per FTE Student)**



Source: SHEEO. (2018). *State higher education finance: FY 17*. Estimates have been adjusted for inflation (Consumer Price Index).



*The state's share of the cost of enrollment has decreased over time but is near the national benchmark.*

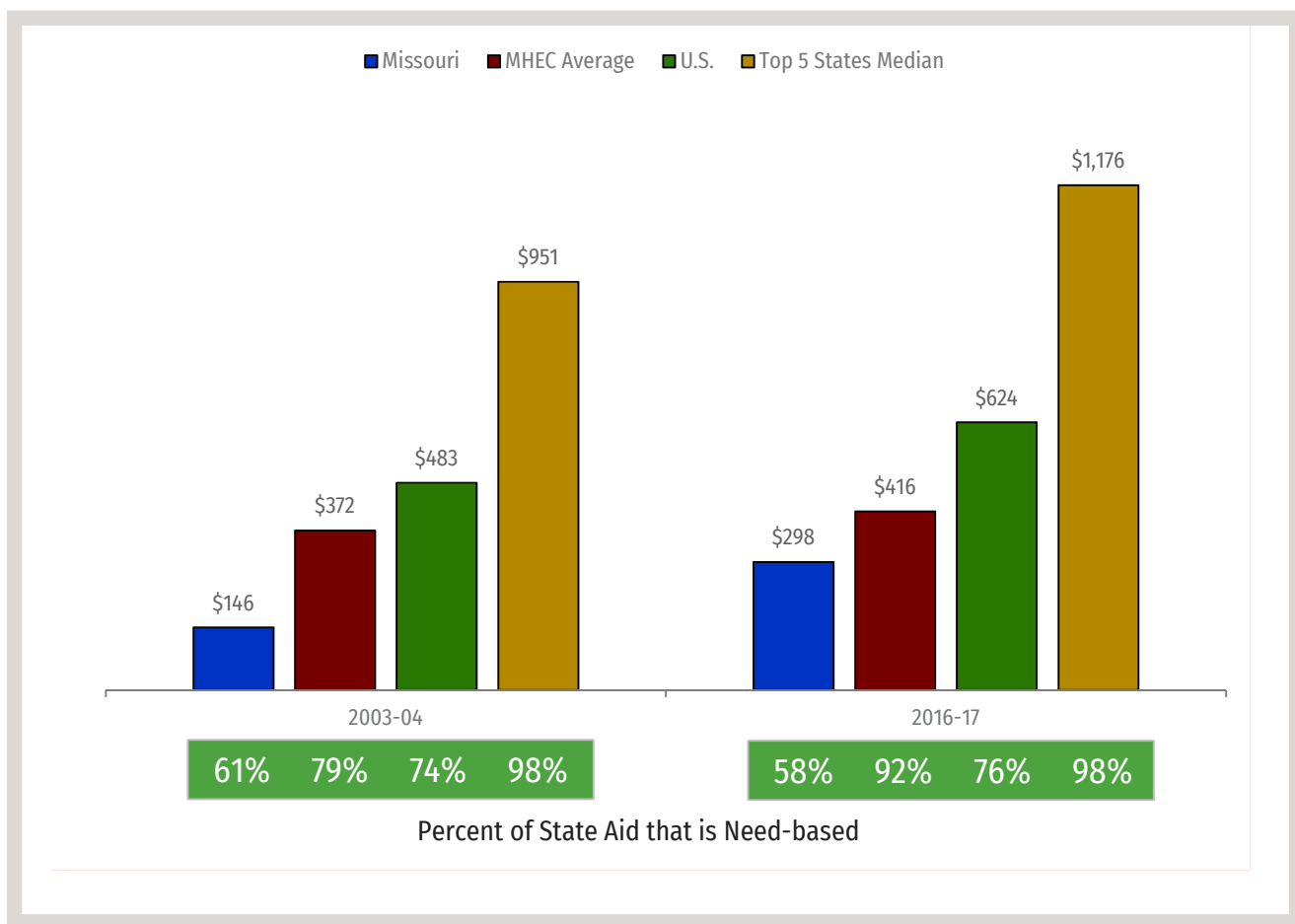
<sup>1</sup>State and local educational appropriations refer to “state and local support available for public higher education operating expenses, defined to exclude spending for research, agricultural extension, and medical education, as well as support for independent institutions or students attending them” (SHEEO, 2015, p. 11). State and local support refer to “state tax appropriations and local tax support plus additional nontax funds (e.g., lottery revenue) that support or benefit higher education, and funds appropriated to other state entities for specific higher education expenditures or benefit (e.g., employee fringe benefit disbursed by the state treasurer)” (SHEEO, p. 11).

# Finance

**Need-based aid.** State funding for grant aid based on financial need is measured by (a) the amount of need-based grant aid per FTE student and (b) need-based aid as a percent of total grant aid allocations. The receipt of grant aid has been linked with higher rates of college enrollment and degree completion

Figure 12 indicates that state need-based grant aid per FTE student in Missouri increased over the past decade but was below the regional and national benchmarks in 2016-17. Missouri allocates 58 percent of its grant aid based on financial need, which is below the regional and national levels.

**Figure 12. State Need-based Grant Aid per FTE Undergraduate Student and Percent of Aid Defined as Need-Based**



Source. National Association of State Student Grant and Aid Programs (2004). *35<sup>th</sup> annual survey report on state-sponsored student financial aid for 2003-04 academic year*. National Association of State Student Grant and Aid Programs (2018). *48<sup>th</sup> annual survey report on state-sponsored student financial aid for 2016-17 academic year*. The 2004 estimates have been adjusted for inflation (Consumer Price Index). Top 5 States, 2016-17: NJ, WA, CA, IN, NY.



*Need-based grant aid in Missouri is below the regional and national benchmarks.*

*Higher Education in Focus* is produced on a biennial basis. The 2018 supplement supports *Higher Education in Focus 2017*. As MHEC prepares *Higher Education in Focus 2019* feedback and ideas are welcomed on the content that will help support your state's work.



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