Promoting High-Value Education

Beyond High School in Ohio

JANUARY 2024

BRIEF

ESG Education Strategy Group

SCALE STRATEGIC SOLUTIONS

Executive Summary

Increasingly, learners and their families are questioning the value of education and training beyond high school, with affordability and the economic return of their investment being primary concerns. Scale Strategic Solutions and Education Strategy Group produced this analysis to explore the value of education and training beyond high school, including affordability, post-school earnings, and income mobility.

Ohio's governor and General Assembly made significant investments in student aid in the most recent biennial budget, yet more efforts must be pursued to ensure high-value, affordable postsecondary pathways in Ohio that yield strong individual earnings after education and training are completed. Despite these investments, the cost of education and lack of aid for the total cost of attendance are still barriers in Ohio. Barriers vary among students at Ohio Technical Centers (OTCs), community colleges, and universities. Institutional and state policy interventions can be tailored to increase value, including affordability, at all institutions.

Despite the challenges in affordability, pursuing education and training beyond high school in Ohio is still worth it for the majority of learners. However, former students in the bottom 25th percentile of earnings after ten years of entering college have not yet seen a full return on the cost of going to college, which may be for a variety of reasons including not completing a degree or credential. The state also needs to consider how policies and institutions advance economic mobility for students who started college in the lowest family income brackets. Student selection of field of study and credential level within the field are also critical to the formula for getting an economic return out of the education journey. In order to improve access to high-value postsecondary education and training for people from low-income backgrounds, recommended efforts include:

Institutional Recommendations

- **Create a cross-institutional working group** to maximize approaches to packaging and communicating student aid that address the full cost of attendance and account for recent changes in federal policy.
- **Form a working group of OTCs' financial aid administrators and directors** to develop common and comparable approaches to calculate tuition and cost of attendance data.
- **Target Free Application for Federal Student Aid (FAFSA) completion** efforts to reach underrepresented populations at the institutional level.
- **Strengthen capacity** to adequately advise learners on borrowing.
- **Raise awareness of high-value programs** among learners and their families.
- **Evaluate academic support and career placement services** to increase earnings and other post-school outcomes.

Policy Recommendations

- **Expand need-based aid** which students at all public institutions can utilize.
- **Maintain caps on tuition and fees** and institutional efficiency requirements, coupled with increases to institutional operating support.
- **Create an additional targeted statewide effort** to increase FAFSA completion among underrepresented populations.
- **Incentivize progression of degrees and credentials** in high-demand fields.
- **Convene multi-stakeholder working group** to explore parity of pay in relation to education level in high demand, low wage fields.
- **Connect median earnings data** by institution to completion data.

Introduction

Over the last decade, people have reconsidered the value proposition for education and training beyond high school. Students and families are weighing the cost of college and student debt levels against the potential income from the job market. Policymakers and employers are assessing the talent needs of the workforce and want to make sure that they have a population with the education and skills needed to attract, retain, and grow jobs for the future.

Scale Strategic Solutions and Education Strategy Group produced this landscape analysis regarding the value and affordability of education and training beyond high school in Ohio. The analysis focuses on these framing questions:

- **What factors impact the affordability of education and training after high school?**
- **How do economic returns vary for pursuing education and training beyond high school?**
- **How and where can Ohio's public institutions improve economic upward mobility for all Ohioans?**
- **What policy and practice solutions are available for Ohio to ensure the affordability and value of postsecondary education and training?**

When making college-going decisions, students and their families often cite concerns about how much it will cost to attend a college or university.[1] While the long-term financial outcomes of someone with a postsecondary credential far exceed those of a high school graduate,[2] short-term costs to enroll in higher education and the sacrificed wages when a student is stopped-out of the workforce often feel prohibitive to those hoping to pursue a postsecondary credential. When considering the value proposition of continuing education beyond high school, learners want to know if they can afford the program and if their education will pay off in future wages.

Data from the Equitable Value Explorer tool, hosted by Postsecondary Value Commission, the Integrated Postsecondary Education Data System (IPEDS), and the Ohio's Top Jobs List database were the primary sources of data for the analysis. The Kentucky Coleridge Initiative Multistate Postsecondary Report and the Equality of Opportunity Project are also referenced. In addition, qualitative interviews throughout the process provided clarifications and insights for the landscape analysis. Links to detailed analyses by Ohio region are included in Appendix A.

[1] Inside Higher Ed. (2023). *Student Voice collections*. https://www.insidehighered.com/collections/student-voice/2023

[2] Federal Reserve Bank of New York. (2022). *Labor market for recent college graduates*. https://www.newyorkfed.org/research/college-labor-market/index.html#/wages

This report intends to provide common reference points for the policy considerations regarding the return on education beyond high school, the affordability of education, and the relationship of education to the economy. The brief concludes by addressing specific equity considerations across the state, to ensure postsecondary education is of high-value for Black, Brown, low-income, and rural Ohioans. Data for the brief focus only on public higher education institutions in Ohio and the experience of in-state undergraduates who enroll at public colleges and universities.

Tuition, Fees, and Cost of Attendance in Ohio

College tuition is perhaps the most used measure when considering higher education affordability. While this is a widely recognized and critically useful metric, it is incomplete. Cost of attendance is a much more robust measure of the actual costs to attend a higher education institution; these costs include room and board,[3] books and supplies, and transportation. In fact, these non-tuition costs make up 80% of a community college education and 61% of a public four-year education and represent a major barrier for students.[4]

Cost of attendance varies greatly across technical centers, community colleges, regional university campuses, and four-year colleges and universities in Ohio, ranging from $1,202 at the Career & Technology Education Centers of Licking County to $49,223 at Wayne County Schools Career Center, from $9,330 at Eastern Gateway Community College to $22,578 at Northwest State Community College, from $8,882 at Kent State East Liverpool to $24,750 at the University of Cincinnati Clermont College, and from $25,044 at Youngstown State University to $35,509 at Miami University–Oxford. It is important to note there is significant variance in reported tuition and total cost of attendance for Ohio Technical Centers (OTCs); this appears to be attributable to using different methodologies of converting clock-hour certificates to an annualized cost and warrants further investigation in collaboration with the OTCs. The extreme ranges of cost creates some comparative confusion but can be addressed with efforts to standardize across OTCs. Table 1 includes both tuition and fees and total cost of attendance amounts for in-state students attending Ohio institutions, with the highest cost of attendance according to IPEDS. The top five institutions from each institutional type are listed, with accompanying data.

TABLE 1: Highest Total Cost of Attendance at Ohio Public Institutions

Ohio Technical Centers*				
Institution	Region	In-State Tuition	On-Campus Room and Board	Total In-State Cost of Attendance
Tri-County Adult Career Center	Southeast	$7,200		$43,835
Hannah E. Mullins School of Practical Nursing	Northeast	$18,475		$44,493
Upper Valley Career Center	West	$15,391		$44,689
EHOVE Career Center	Northeast	$16,589		$45,191
Wayne County Schools Career Center	Northeast	$14,637		$49,223

[3] When available, this brief includes on-campus housing in its cost-of-attendance calculations. For institutions that do not have on-campus housing available to students, off-campus housing costs are included.

[4] Ma, Jennifer & Pender, M. (2021). *Trends in College Pricing and Student Aid 2021*, New York: College Board. https://research.collegeboard.org/media/pdf/trends-college-pricing-student-aid-2021.pdf

Community and Technical Colleges				
Institution	Region	In-State Tuition	On-Campus Room and Board	Total In-State Cost of Attendance
Southern State Community College	Southeast	$5,621		$18,948
Edison State Community College	West	$4,251		$19,381
Hocking College	Southeast	$5,300	$9,630	$19,610
Terra State Community College	Northwest	$5,588	$9,044	$21,522
Northwest State Community College	Northwest	$4,578		$22,578
Regional University Campuses				
Institution	Region	In-State Tuition	On-Campus Room and Board	Total In-State Cost of Attendance
The Ohio State University at Newark	Central	$8,944	$9,438	$23,862
The Ohio State University Agricultural Technical Institute	Northeast	$8,998	$9,438	$23,916
The University of Akron Wayne College	Northeast	$7,291		$24,571
Bowling Green State University–Firelands	Northeast	$6,036		$24,654
University of Cincinnati Clermont College	Southwest	$6,364		$24,750
University Main Campuses				
Institution	Region	In-State Tuition	On-Campus Room and Board	Total In-State Cost of Attendance
Bowling Green State University	Northwest	$13,639	$12,584	$30,393
Cleveland State University	Northeast	$12,254	$14,197	$30,821
Kent State University at Kent	Northeast	$12,464	$12,676	$30,854
The University of Toledo	Northwest	$12,020	$14,148	$31,502
Miami University–Oxford	Southwest	$15,555		$35,509

*There is significant variance in reported tuition and total cost of attendance for Ohio Technical Centers (OTCs); this appears to be attributable to using different methodologies for calculating cost of attendance and warrants further discussion with the OTCs.

It is important to note that institutions located in the northeast region of Ohio are overrepresented in the sample of institutions with the highest cost of attendance. Further, the methodologies that OTCs use to determine cost of attendance raise questions because there is such a significant difference. For example, Wayne County Schools Career Center's cost of attendance is significantly higher than the most expensive university, Miami University–Oxford, while Wayne County's tuition is less than Miami's. Conducting additional research will be important to ensuring comparable methodologies are being employed. However, considering there are not consistent reporting methodologies in the state across postsecondary sectors for calculating and reporting cost-of-attendance data, the net price to learners may significantly vary across institutions.

Beginning in 2007, the governor and General Assembly in Ohio implemented a variety of caps to minimize increases in tuition and fees in public higher education in Ohio and typically coupled with parallel increases in State Share of Instruction. While this has helped to constrain increases in tuition and fees, Ohio was a relatively expensive state for higher education when compared to other states. In addition to caps, universities are also required to create tuition guarantee programs for incoming cohorts of students, so they can adequately anticipate costs over the length of their degree programs. These caps were sustained in the most recent biennial budget. Additionally, Ohio public institutions are required to submit annual efficiency reports. In these, they are expected to streamline administrative costs and demonstrate how those savings are directed to support student achievement or reduce costs.[5] These efforts have also supported cost-containment measures that have been able to be applied to address affordability.

[5] Ohio Department of Higher Education. (n.d.). *Affordability & efficiency*. https://highered.ohio.gov/educators/budget-financial/affordability-efficiency/affordability-efficiency

Federal, State, and Institutional Financial Aid

Financial aid is imperative for many students to enroll in higher education, when it is designed to flexibly cover both tuition and non-tuition expenses, it can decrease the cost of attendance dramatically, especially for students from low-income backgrounds. As a preliminary manner, many students and their families, however, are often not aware of the grants and scholarships for which they are eligible and are often overwhelmed by the process to apply for financial aid — the Free Application for Federal Student Aid (FAFSA.)[6,7] The FAFSA is required to access federal aid (e.g., Pell Grants) and is often required — as is the case in Ohio — to access state grant aid programs (e.g., the Ohio College Opportunity Grant, or OCOG). The uptake of federal and state financial aid varies widely across the state of Ohio and by institution type. There are a variety of reasons for this variation, but it also suggests opportunities for new and different approaches to improving FAFSA completion. Ohio ranks 20th nationally for FAFSA completion, according to Form Your Future, but ranks 46th for year-over-year improvement, with a decline of .03% from 2022 to 2023. FAFSA is the first step to unlocking federal, state, and institutional aid for learners. Tables 2, 3, and 4 present an overview of institutions, divided by type, with the highest uptake rates of Federal Pell Grants, state aid, and institutionally awarded financial aid.[8,9]

Pell Grants

The Federal Pell Grant is the federal government's largest investment in postsecondary education, allowing eligible students from low-income backgrounds to use their award to offset tuition and fees. While the purchasing power of Pell has significantly decreased since its inception, and with the rise of college costs, it remains a critical tool for postsecondary access.[10] Table 2 outlines institutions serving the highest percentages of Pell Grant recipients. These data reveal that OTCs are far more likely to serve low-income students than degree-granting institutions. As in most states, learners from low-income households in Ohio are highly represented in technical training.

[6] Dynarski, S., & Scott-Clayton, J. (2013). *Financial aid policy: Lessons from research* [Working Paper #18710]. National Bureau of Economic Research.

[7] Scott-Clayton, J. (2012). *Information constraints and financial aid policy* [Working Paper #17811]. National Bureau of Economic Research.

[8] Data is limited to first-year enrollees, as this grant amount influences decision-making in ways that differ from upper class students deciding whether to return to higher education.

[9] Data for the 2021-2222 academic year provided by the National Center for Education Statistics and the Ohio Department of Higher Education.

[10] National College Attainment Network. (2021, May 3). *College affordability gap grows for students from low-income backgrounds*. https://www.ncan.org/news/563546/College-Affordability-Gap-Grows-for-Students-from-Low-Income-Backgrounds.htm

TABLE 2: Institutions with the Highest Percentage of Students Receiving Pell Grants

Ohio Technical Centers	
Institution	Pell Grant Recipient Percentage
Choffin Career & Technical Center	79%
Cuyahoga Valley Career Center	82%
Canton City School District Adult Career & Technical Education	88%
Adult and Community Education–Hudson	89%
Toledo Public Schools Adult and Continuing Education	100%
Community and Technical Colleges	
Institution	Pell Grant Recipient Percentage
Cincinnati State Technical and Community College	55%
Hocking College	56%
Washington State Community College	57%
Marion Technical College	58%
Southern State Community College	71%
Regional University Campuses	
Institution	Pell Grant Recipient Percentage
Kent State University at Salem	50%
Kent State University at Geauga	51%
Kent State University at Ashtabula	51%
Kent State University at East Liverpool	53%
Ohio University–Southern Campus	72%
University Main Campuses	**University Main Campuses**
Institution	Pell Grant Recipient Percentage
Wright State University (main campus)	40%
Youngstown State University	42%
Shawnee State University	47%
Cleveland State University	48%
Central State University	80%

State Aid

Ohio has made significant investments in state financial aid, with nearly $110 million in state resources awarded to students at public institutions across eight different programs.[11] Nearly $104 million of these resources was distributed to students in Ohio's public universities, and approximately $6 million was distributed to learners in Ohio's public community and technical colleges and OTCs. The largest of these programs is the OCOG, which makes up nearly 61% of state financial aid programs at public institutions. While this large state investment reaches a significant number of students, many learners at public institutions have limited access to state aid programs. This is due in large part to Ohio adopting a "Pell-first" approach to distributing the OCOG to cover tuition expenses at degree-granting institutions. As a result, there are often limitations in the state aid available to cover associated non-tuition costs at lower-cost institutions. The long-held belief of the Pell-first approach holds that full Pell will cover tuition and fees at community colleges. While there is truth to this, it does not cover the full cost of attendance, and many students at community colleges and OTCs take on annual student loan burdens equal — or greater — to students in universities. In the current biennial budget, Ohio significantly increased investment into the OCOG, while still holding the Pell-first methodology.

There were other increases in state-funded student scholarship programs in the current budget, creating merit scholarships for students in the top 5% of their high school graduating class, expanding the adult-focused Second Chance Grant and career-focused Work Ready Grant, and creating a new Talent Ready Grant. Despite these significant investments, Ohio lags other states in financial aid. According to the State Higher Education Executive Officer Association's annual State Higher Education Finance Report, Ohio provided $308 in aid per full-time equivalent (FTE) student. State aid was 4.9% of appropriations in FY2022, compared to $990 per FTE and 9.7% of appropriations nationally in the same year.[12]

[11] Ohio Department of Higher Education. (2023). *Summary of program expenditures by institution* [Data set]. https://highered.ohio.gov/static/sgs/expenditures/EXPEND2023.pdf

[12] State Higher Education Finance. (2022). *State profile*: Ohio. https://shef.sheeo.org/state-profile/ohio/

TABLE 3: Institutions with the Highest Percentage of Students Receiving State Aid

Ohio Technical Centers	
Institution	State Aid Uptake Percentage
The Washington County Career Center–Adult Technical Training	49%
Scioto County Career Technical Center	59%
Canton City School District Adult Career & Technical Education	59%
Choffin Career & Technical Center	75%
Sandusky Career Center	100%
Community and Technical Colleges	
Institution	State Aid Uptake Percentage
Cuyahoga Community College District	4%
Lorain County Community College	5%
Marion Technical College	8%
North Central State College	14%
Rhodes State College	18%
Regional University Campuses	
Institution	State Aid Uptake Percentage
Kent State University at Tuscarawas	33%
Kent State University at Geauga	40%
Kent State University at Ashtabula	41%
Kent State University at Salem	43%
Kent State University at East Liverpool	43%
University Main Campuses	
Institution	State Aid Uptake Percentage
Youngstown State University	30%
The University of Akron (main campus)	31%
Shawnee State University	31%
Wright State University (main campus)	33%
Cleveland State University	37%

Institutional Aid

Institutional aid can be packaged from a variety of sources. One of the largest institutional aid programs in the state is at The Ohio State University, where Federal Pell Grant–eligible students receive financial aid from the institution itself through the Buckeye Opportunity Program. This specific aid program covers students' tuition and mandatory fees, making higher education more affordable for those from underserved backgrounds. Each degree-granting institution offered at least some institutional aid, yet some OTCs were unable to offer any institutional aid to learners. Appendix B provides an overview of OTCs where learners received zero percent of institutional aid. In Table 4, the institutions with the highest percentage of students receiving institutional aid are listed.

TABLE 4: Institutions with the Highest Percentage of Students Receiving Institutional Aid

Ohio Technical Centers	
Institution	Institutional Aid Uptake Percentage
Canton City School District Adult Career & Technical Education	35%
The Washington County Career Center–Adult Technical Training	39%
Sinclair Community College	48%
Penta County Joint Vocational School	48%
Knox County Career Center Schools	80%
Community and Technical Colleges	
Institution	Institutional Aid Uptake Percentage
Lorain County Community College	46%
Terra State Community College	48%
Edison State Community College	65%
Northwest State Community College	69%
Eastern Gateway Community College[§]	93%
Regional University Campuses	
Institution	Institutional Aid Uptake Percentage
Kent State University at Stark	86%
Kent State University at Ashtabula	86%
The University of Akron Wayne College	90%
Kent State University at East Liverpool	90%
Kent State University at Tuscarawas	95%

University Main Campuses	
Institution	Institutional Aid Uptake Percentage
Miami University–Oxford	91%
Central State University	91%
The University of Toledo	91%
Ohio University (main campus)	92%
Kent State University at Kent	94%
The University of Akron (main campus)	94%

Note: Eastern Gateway Community College is being audited for financial aid practices, and these numbers may change.

Federal, state, and institutional financial aid collectively ensure that learners can afford education and training beyond high school. Grant aid specifically has a sizable impact on students' likelihood to enroll, persist, and complete postsecondary education.[13] For the state of Ohio to strengthen persistence and graduation rates, holistic and flexible grant aid packages at the federal, state, and institution level that cover both tuition and non-tuition expenses are a necessity to promote high-value postsecondary pathways that reduce the reliance on student loan debt.

Federal Student Loans and Debt Burden

Nationwide, there is great concern among policymakers and higher education researchers alike about the amount of loan debt accrued by students pursuing postsecondary education, when grant aid amounts are insufficient to cover the tuition and non-tuition expenses that comprise the overall cost of attendance. Student loan debt is often cited as a barrier to college graduates buying a home or saving for their futures, as they are required to repay their loans over long periods of time, in some cases, 25-30 years. Table 5 displays the institutions with the highest proportion of students taking on student loan debt.

[13] Nguyen, T. D., Kramer, J. W., & Evans, B. J. (2019). The effects of grant aid on student persistence and degree attainment: A systematic review and meta-analysis of the causal evidence. *Review of Educational Research*, 89(6), 831-874. https://doi.org/10.3102/0034654319877156

TABLE 5: Institutions with the Highest Percentage of Students with Debt

Ohio Technical Centers	
Institution	Percentage of Students with Debt
Penta County Joint Vocational School	85%
Northern Career Institute	86%
Adult and Community Education–Hudson	89%
Cuyahoga Valley Career Center	91%
Sandusky Career Center	100%
Community and Technical Colleges	
Institution	Percentage of Students with Debt
Washington State Community College	29%
Cincinnati State Technical and Community College	39%
Owens Community College	46%
Hocking College	63%
Terra State Community College	85%
Regional University Campuses	
Institution	Percentage of Students with Debt
Kent State University at Ashtabula	52%
Kent State University at East Liverpool	53%
The Ohio State University Agricultural Technical Institute	54%
Bowling Green State University–Firelands	56%
The Ohio State University at Mansfield	56%
University Main Campuses	
Institution	Percentage of Students with Debt
Wright State University (main campus)	52%
Ohio University (main campus)	60%
Kent State University at Kent	60%
Bowling Green State University (main campus)	62%
Central State University	88%

Learners attending OTCs obtain debt at a higher rate compared to those attending degree-granting institutions. For example, according to IPEDS, Sandusky Career Center's entire student population graduates with the burden of student loan debt. Additional research should be conducted to reveal the type of student debt learners hold and ways to mitigate high rates of borrowing. Recognizing learners who attend OTCs tend to be from low-income backgrounds, the state has a role in mitigating the burden of unaffordable debt.

Table 6 identifies institutions whose students have the highest average debt. For the 2021-2022 academic year, the average amount of borrowing at Ohio's public institutions varied widely. Learners attending OTCs averaged $4,655.22 in annual debt, while those attending community colleges averaged $4,569.11 in annual debt and students enrolled at four-year institutions averaged $5,566.44 per year in loans. It is important to note that these amounts are annualized and time to credential is critical to overall debt burden. While time to credential varies by student and program, the credentials at OTCs often require one-year or less, associate degrees at community colleges require two or more years, and bachelor's degrees require four or more years. It is important to note that these are annualized debt figures and not per credential. Since the majority of OTCs' programs are less than one year, it is safe to say that their overall loan debt is less than that of what an associate degree learner or bachelor's degree learner has. While taking on student loan debt to afford postsecondary education can be a worthwhile investment, institutional and state leaders should ensure that all programs lead learners to gainful employment and provide a positive return on investment.

TABLE 6: Institutions with Students with the Highest Debt Annual Load

Technical Centers	
Institution	Average Amount of Annual Debt, 2021-22
Northern Career Institute	$8,156
Upper Valley Career Center	$8,423
Cuyahoga Valley Career Center	$8,591
Canton City School District Adult Career & Technical Education	$8,643
Trumbull Career & Technical Center	$10,154
Community and Technical Colleges	
Institution	Average Amount of Annual Debt, 2021-22
Marion Technical College	$5,168
Hocking College	$5,370
Washington State Community College	$5,666
Rhodes State College	$5,913
Cincinnati State Technical and Community College	$6,069
Regional University Campuses	
Institution	Average Amount of Annual Debt, 2021-22
The Ohio State University at Newark	$5,347
The Ohio State University at Marion	$5,347
Bowling Green State University–Firelands	$5,358
Kent State University at Geauga	$5,494
Kent State University at Ashtabula	$7,119

University Main Campuses	
Institution	Average Amount of Annual Debt, 2021-22
Central State University	$5,888
Wright State University (main campus)	$5,975
Bowling Green State University (main campus)	$6,353
Shawnee State University	$6,720
The Ohio State University (main campus)	$7,842

Return on Education beyond High School

Since postsecondary education is a multifaceted investment by individuals, families, state funds, and federal aid, it is important to consider the return on this investment. Students pursue postsecondary education, in part, to have higher earnings and better employment opportunities in the future over what they would earn with only a high school diploma.

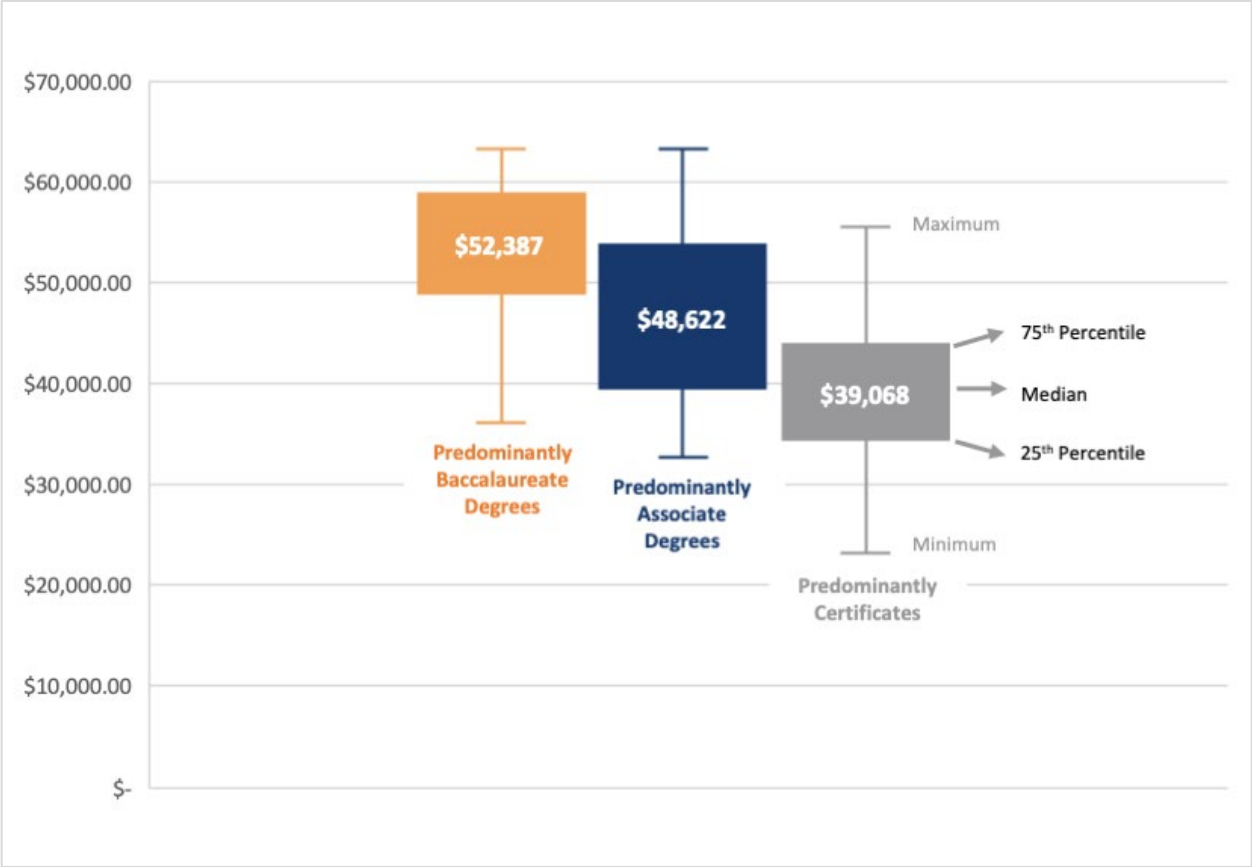
Post-School 10-Year Median Earnings

Data show that median earnings for cohorts of former students do generally increase with education level for Ohio postsecondary public institutions.[14] Overall median earnings data were available for 16 Ohio public institutions predominantly awarding bachelor's degrees (e.g., main and regional university campuses), 38 Ohio institutions predominantly awarding associate degrees (e.g., community colleges and regional university campuses), and 50 Ohio public institutions awarding predominantly certificates (e.g., community colleges, regional university campuses, and OTCs).

The box plot in Figure 1 shows the minimum, 25th percentile, median, 75th percentile, and maximum median earnings for former students 10 years after enrollment by postsecondary institution level. The median of the overall institutional median earnings by level are as follows: $39,068 for institutions that predominantly award certificates (e.g., OTCs and some two-year colleges), $48,622 for colleges that predominantly award associate's (e.g., two-year institutions), and $52,387 for predominantly baccalaureate awarding institutions. Note that the median earnings are only available aggregately for main and regional campuses of a public university; therefore, a predominantly associate-granting regional campus is reflecting earnings of its baccalaureate-awarding main campus.

[14] The measures of overall earnings used in the Equitable Value Explorer tool were obtained from the College Scorecard and are based on median earnings measured 10 years after students enter an institution. The earnings values are for both completers and noncompleters. These earnings data were collected most recently in calendar years 2019 and 2020 for students who first enrolled between 2008 and 2009 and 2009 and 2010. All variables reported in dollars are adjusted to real 2022 dollars using the Consumer Price Index for All Urban Consumers.

FIGURE 1. Overall Median Earnings by Ohio Public Institution Level

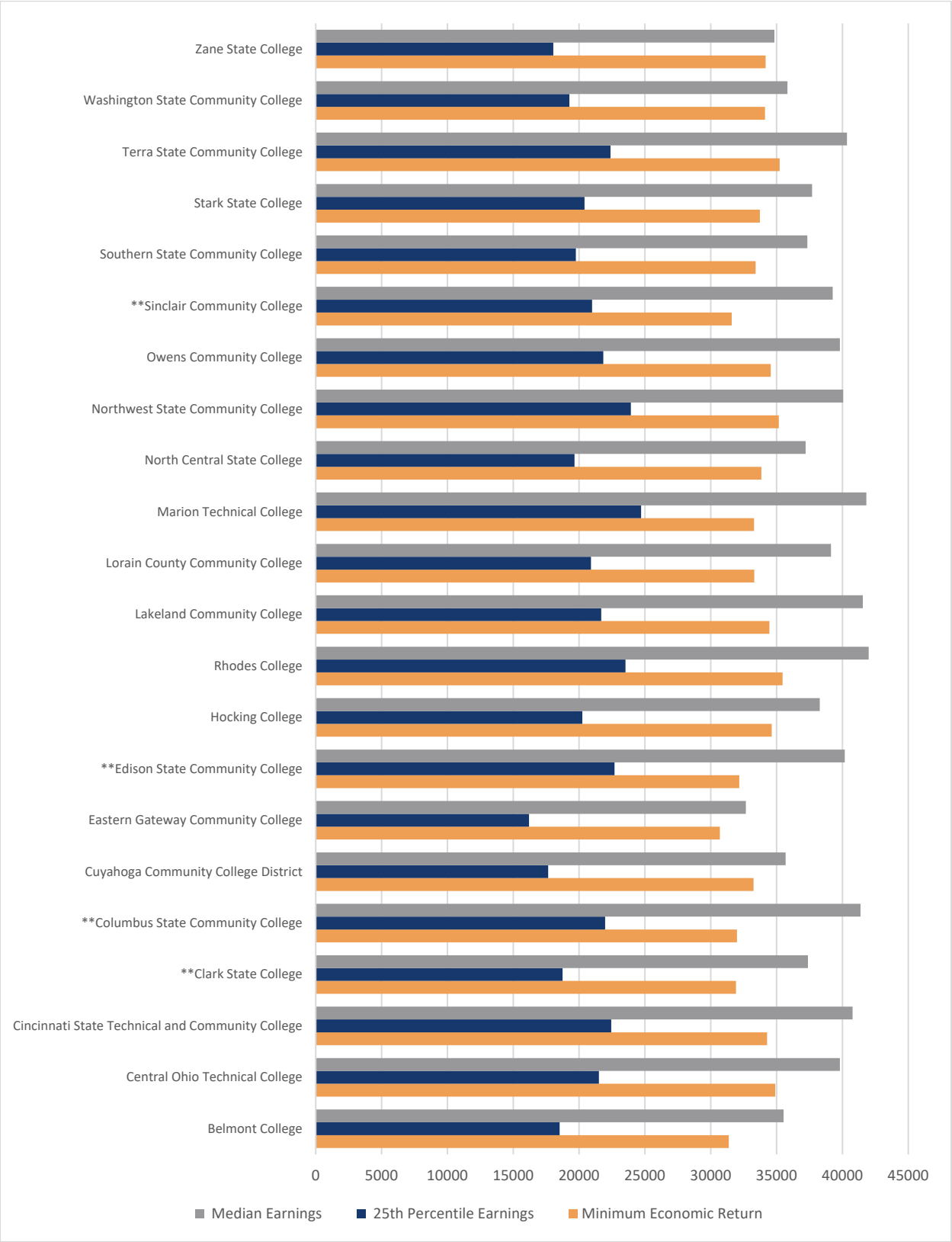


Median earnings of students from Ohio's public institutions typically generate more than the minimum economic return[15] on the investment in their education. It should be noted, however, that students who earn in the lower 25th percentile of earnings among fellow graduates from the same institution typically do not break even on their investments, except at Northern Career Institute and The Ohio State University.[16] Northern Career Institute was one of only two OTCs for which minimum economic return data were available. Minimum economic return is shown in relation to the 25th percentile and median earnings values for Ohio public higher education institutions in Figure 2, Figure 3, and Figure 4 below. Those in the lowest quartile may include former students who are not completers, who work in lower-wage fields, or who are impacted by wage disparities in the workforce.

[15] The Postsecondary Value Commission defines *minimum economic return* as the equivalent of the Ohio median earnings for those who only have a high school diploma plus the total net price of the education institution amortized over 10 years.

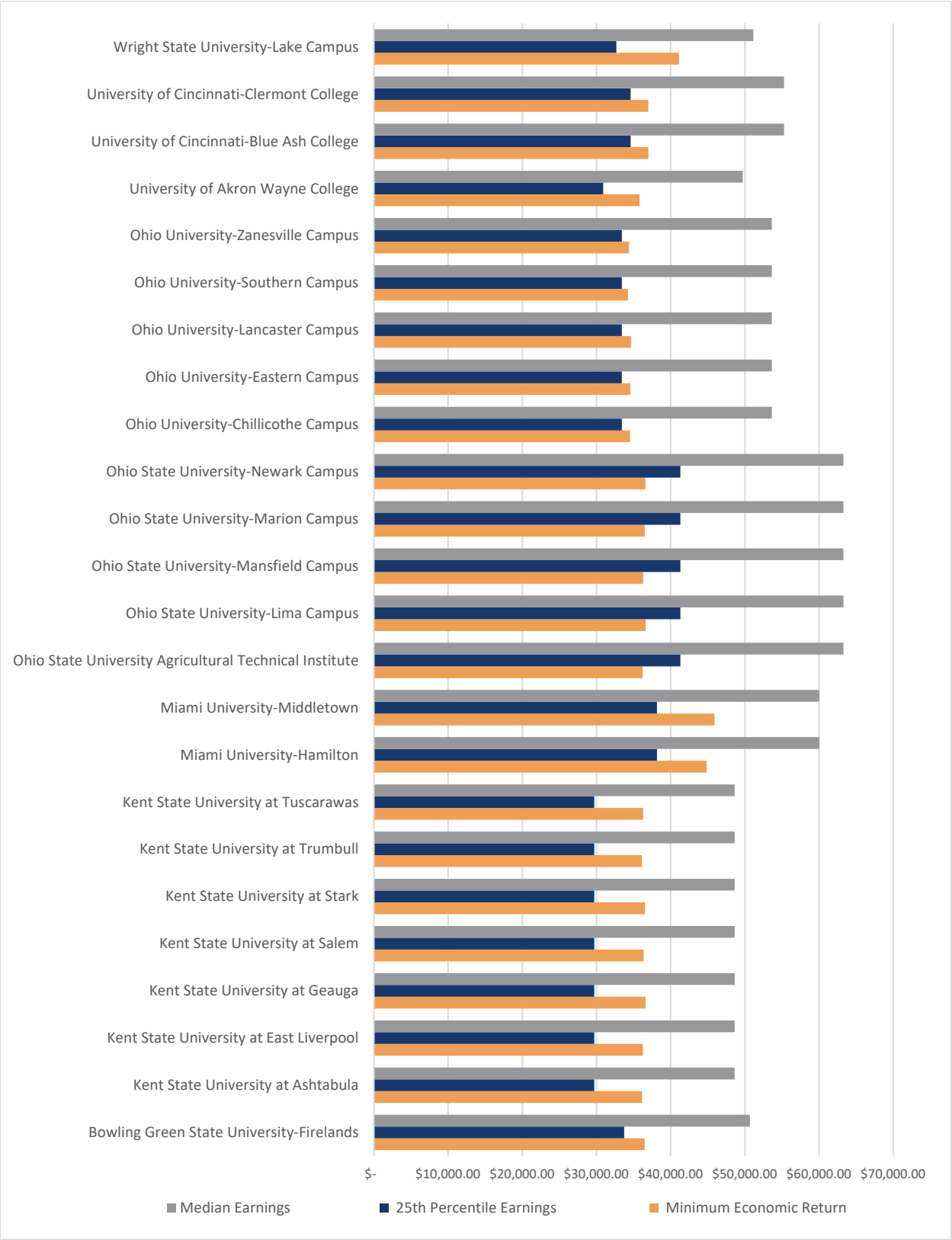
[16] Data limitations include that the earnings data was reported aggregately for all regional and main campuses of a university. Minimum economic return data were not available for many OTCs.

FIGURE 2. Earnings and Minimum Economic Return for Ohio Community Colleges



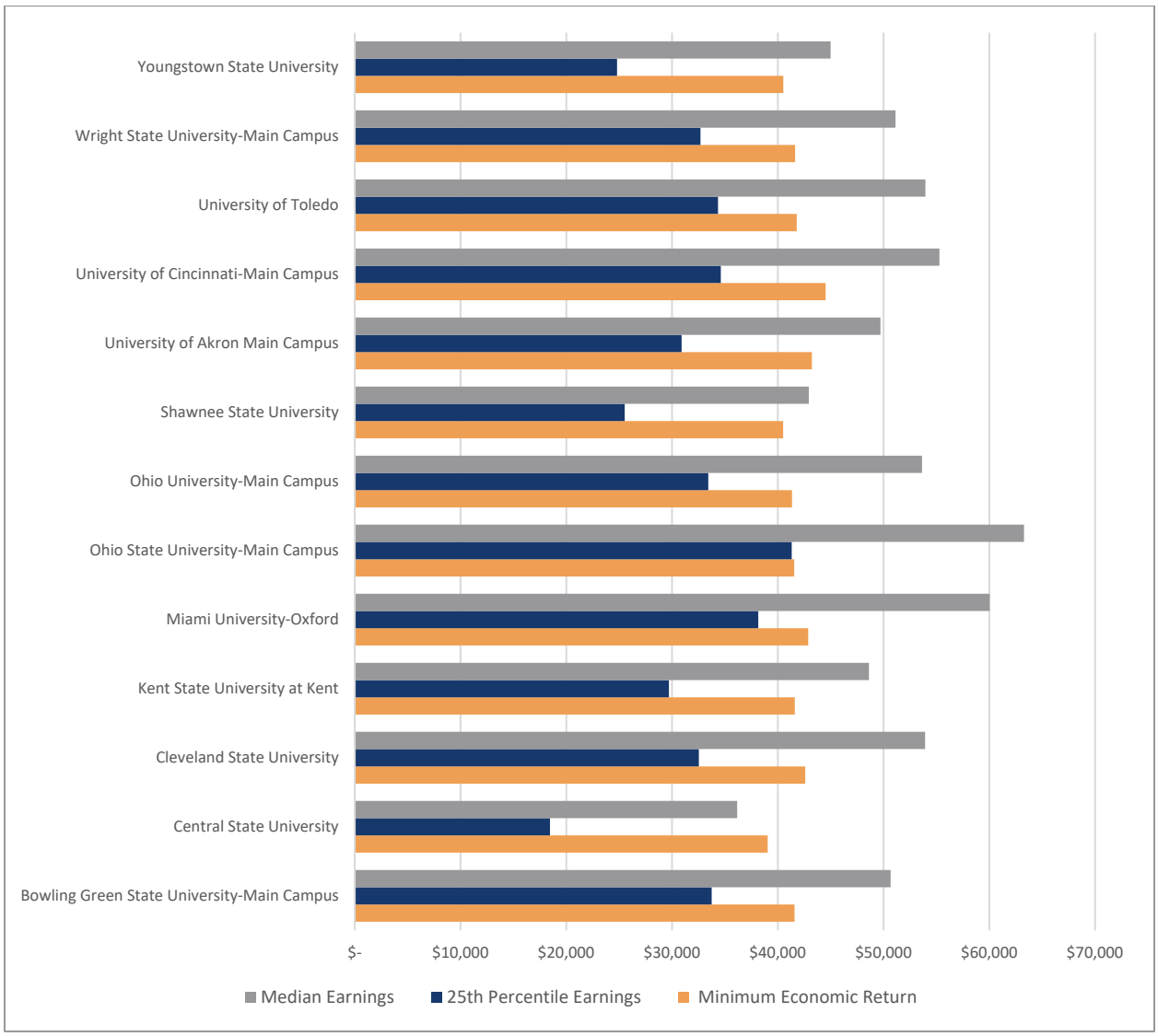
**Indicates an institution that was classified by the Equitable Value Explorer tool as a predominantly certificates-granting institution

FIGURE 3. Earnings and Minimum Economic Return for Public Ohio Regional Universities***



***Earnings for regional universities are aggregated with the earnings of main campus students. However, the regional cost of attendance is factored into the minimum economic return threshold.

FIGURE 4. Earnings and Minimum Economic Return for Ohio Public Main Campus Universities**



***Earnings for regional universities are aggregated with the earnings of main campus students. However, the main campus cost of attendance is factored into the minimum economic return threshold.

It can be seen above that the only institution whose median earnings is not above the minimum economic threshold is Central State University. Central State University is the state's only public historically Black college/university. It is considered open access in that it does not have selective admission criteria and provides a lower tuition cost. Central State University had the highest percent of Pell Grant recipients (80%) and the highest percentage of students of color (96%) among the Ohio four-year public institutions, as well as the lowest completion rate (25%). Factors that could be contributing to this school's low levels of earnings values, yet high levels of economic mobility (as indicated below), should be examined more closely, particularly examining the postsecondary value outcomes for students who complete a credential and those who do not.

Income Mobility

Promoting economic mobility as measured by moving upward from starting income quartile is an important metric for considering value. A point of promise is a dataset from Opportunity Insights that shows that Central State University is third in the state on its overall mobility index for students moving up two or more income quintiles.[17] This dataset looks at tax and tuition records for students born between 1980 and 1982, which is roughly the college classes of 2002-2004.

The top five public institutions in Ohio for overall mobility index, calculated by the study to factor in access and outcomes, included Central State University, Belmont College, Shawnee State University, Zane State College, and Cleveland State University. Data were not available or incomplete for Edison State Community College, Lorain County Community College, and The Ohio State University, and data for multiple campuses within a university were not disaggregated. OTCs were not in the dataset. Table 7 shows what income bracket students were in when they entered college and when they were age 34.

TABLE 7: Ohio Colleges and Universities with the Greatest Economic Mobility for Students

Institution	Percentage of Students Who Entered College with a Family Income in the Top 20%	Percentage of Students Who Were in Top 20% of Individual Income by Age 34	Percentage of Students Who Entered College with a Family Income in the Bottom 20%	Percentage of Students Who End up in Bottom 20% of Individual Income by Age 34	Percentage of Students Who Moved up Two or More Income Quintiles between College and Age 34
Central State University	3.3%	9.4%	27%	14%	23%
Belmont College	7.4%	18%	17%	15%	22%
Shawnee State University	10%	19%	17%	16%	21%
Zane State College	4.4%	15%	21%	14%	21%
Cleveland State University	20%	24%	12%	11%	21%

[17] Economic diversity and student outcomes at Central State. (2017). *The New York Times*. https://www.nytimes.com/interactive/projects/college-mobility/central-state-university; Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Yagan, D. (n.d.). *Mobility report cards: The role of colleges in intergenerational mobility*. The Equality of Opportunity Project. https://opportunityinsights.org/wp-content/uploads/2018/03/coll_mrc_summary.pdf; and Leonhardt, D. (2017, January 18). America's Great Working-Class Colleges. The New York Times. https://www.nytimes.com/2017/01/18/opinion/sunday/americas-great-working-class-colleges.html

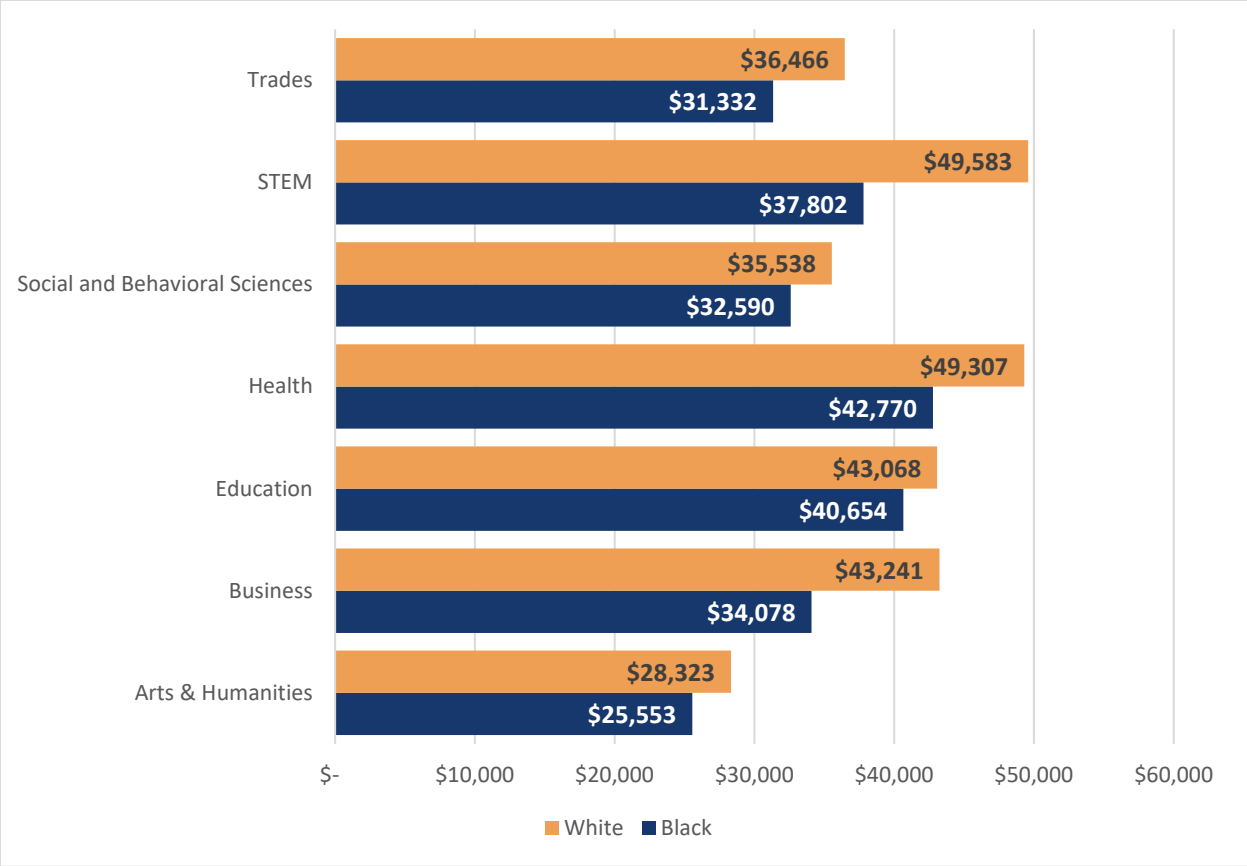
Earnings and Field of Study

Earnings and mobility can also be attributed to dynamics regarding field of study, the workforce, and the economy. The Kentucky Coleridge Initiative Multistate Postsecondary Report[18] provides data about wages that are disaggregated by field and race for Ohio, as the commonwealth's neighbor to the north. The earnings data presented here are for three years post-completion. They include Ohio postsecondary completers across the 2007-2017 academic years to post-completion.

The dataset provides detailed information for Black and White racial categories. Wage data were not present for Asian/ Asian Americans and American Indian/Alaskan Natives. Data on Hispanic completers was incomplete for several majors.

White completers had higher in-state median wages than their Black peers in all fields of study. The fields of study generating the highest earnings for White completers were science, technology, engineering, and mathematics (STEM) and health. The fields generating the highest earnings for Black completers were health and education. Arts and humanities completers had the lowest wages for both races. See Figure 5.

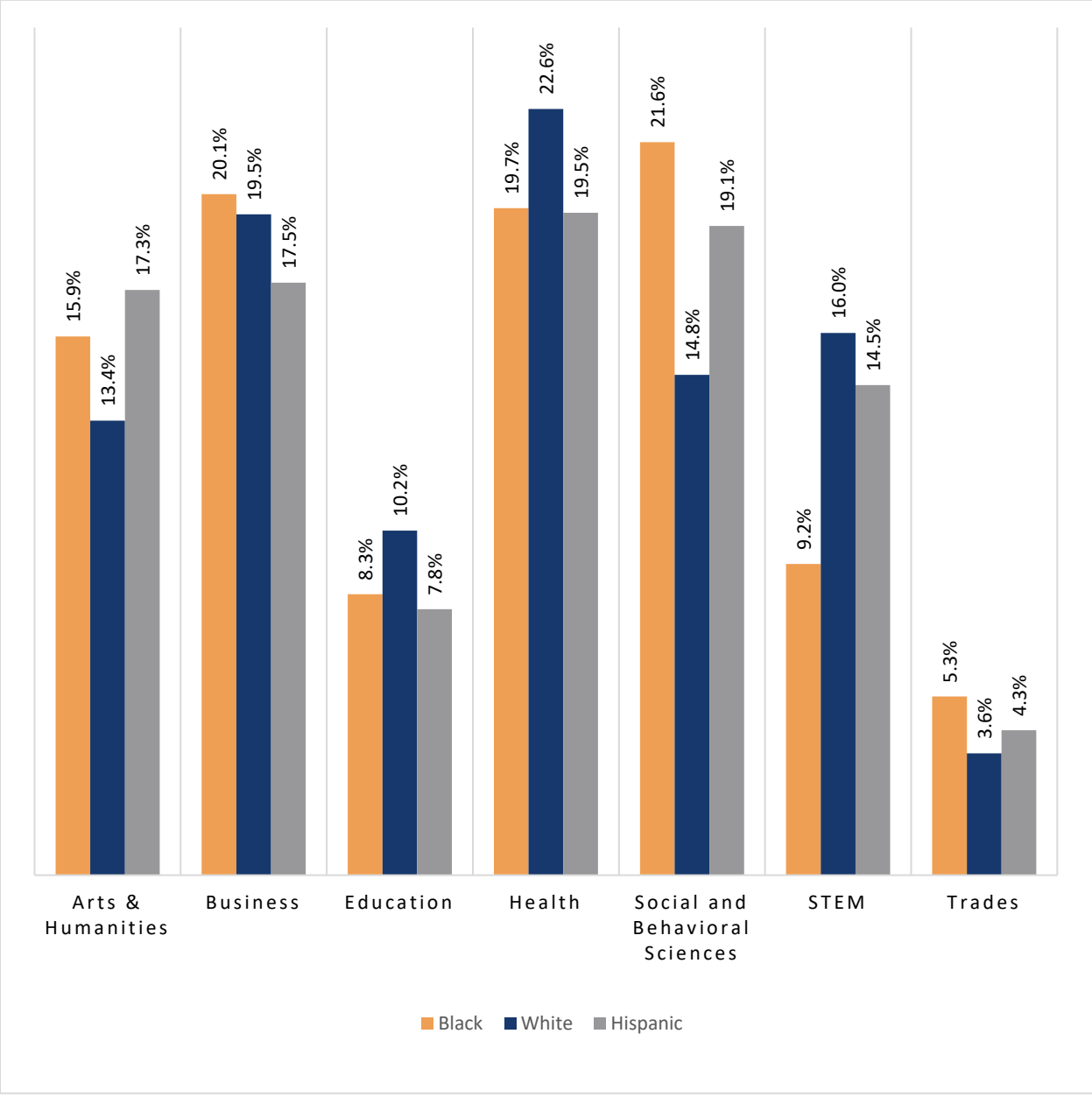
FIGURE 5: Median Wage of Black and White Ohioans by Field of Study



[18] Coleridge Initiative. (n.d.). *Multi-State Postsecondary Report*. https://kystats.ky.gov/Reports/Tableau/2023_MSPSR

Kentucky also produces an analysis of completion by field of study. A greater percentage of White completers were enrolled in health and STEM majors compared to their Black and Hispanic peers. Figure 6 should be interpreted as 15.9% of Black completers were enrolled in arts and humanities, 13.4% of White completers were enrolled in arts and humanities, and 17.3% of Hispanic completers were enrolled in arts and humanities.

FIGURE 6: Ohio Completers' Field of Study by Race, 2007-2017

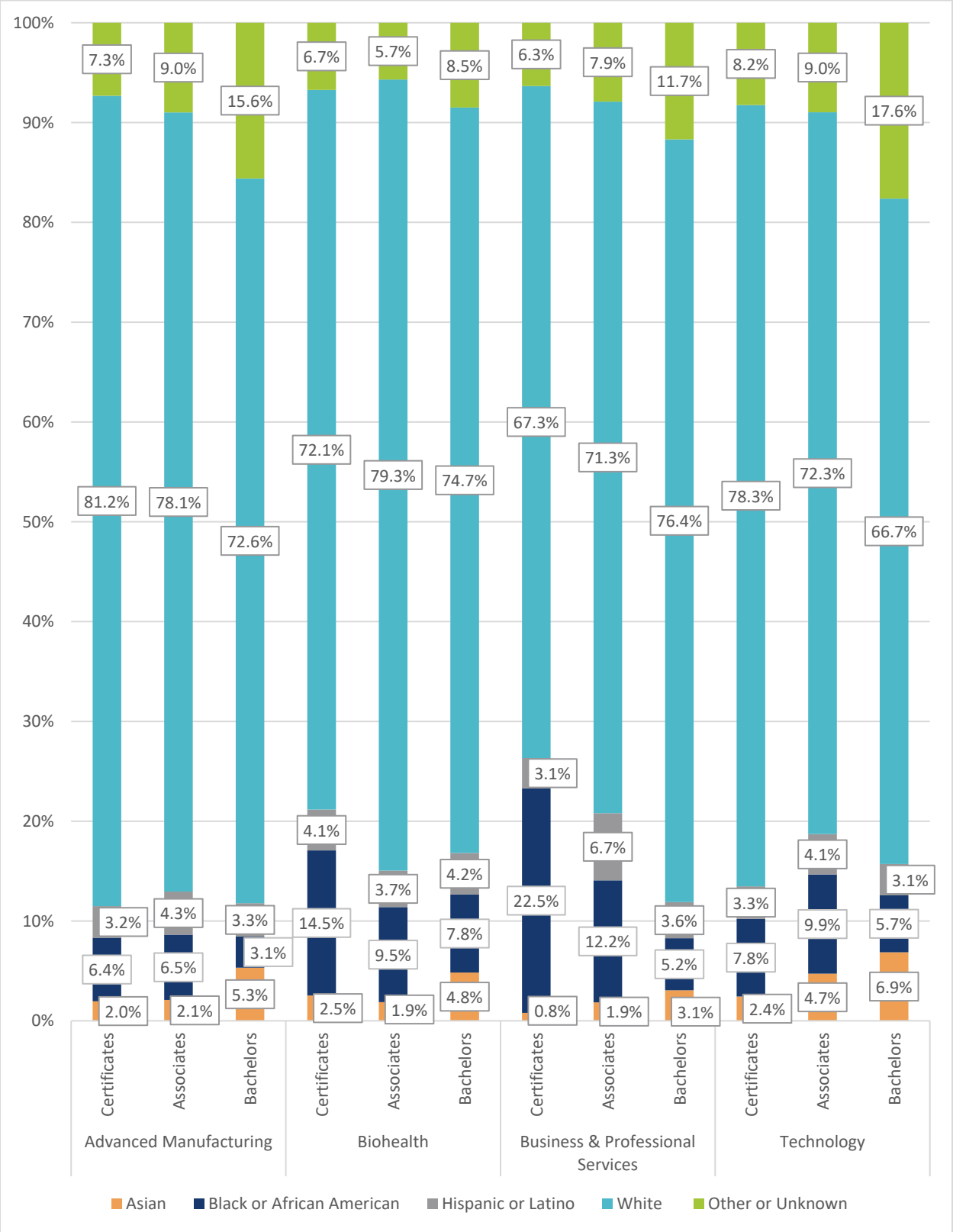


Top majors for Black completers included social and behavioral sciences (21.6%), health (19.7%), and business (20.1%). Top majors for White students included health (2%2.6), business (19.5%), and STEM (16%). Top majors for Hispanic completers included health (19.5%), social and behavioral sciences (19.1%), business (17.5%). Trades and education had the least students for any race.

Differences in outcomes of earnings within fields of study may also relate to the education level received. Figure 7 shows the proportion of degrees conferred by race[19] for statewide core industries in 2021, which were defined by matching Classification of instructional Programs (CIP) codes. (See Appendix C.) Jobs Ohio identifies several core industries for growth, with four areas noted as consistent across regions: advanced manufacturing, technology, business, and professional services, and biohealth.

[19] Data from National Center for Education Statistics, IPEDS. Certificates only includes certificates below the baccalaureate level.

FIGURE 7. Proportion of Degrees Conferred by Race for Priority Core Industries and Award Levels, Ohio Public Institutions 2021



Looking at IPEDS, awards among African American/Black students were lower than their proportional representation in the Ohio general population (13% of Ohioans), except for biohealth and business and professional services certificate awards, which were above proportional representation. Hispanic/Latino representation is close to the proportion of their general population representation (4.5% of Ohioans), except the number of associate degree awards in business and professional services is greater. Asian students, who make up 2.7% of Ohioans, were highly represented in bachelor's degrees in technology but underrepresented in certificates and associate degrees in the business and professional services areas.

Industry Alignment

As Ohioans look at what credentials and experiences generate earnings, stakeholders can also reference industry demand. The state of Ohio Governor's Office of Workforce Transformation, in partnership with the InnovateOhio Platform's Data Analytics team, has created a Top Jobs List of occupations that pay sustainable wages and have a promising future based on the projected number of openings and growth.[20] The top jobs for the state of Ohio and their median salaries are shown in Table 8 by expected growth rate. Top jobs are color coded if they match one of the four statewide core industries. The greatest job demand is in the biohealth industry. Please note that some jobs outside of the statewide core industries may have a designation as a regional priority.

Jobs are displayed by typical education required. At the top of each column, the median earnings in Ohio for the education credential level (known as threshold 1 in the Equitable Value Explorer tool) is listed. The top jobs meet or exceed the median earnings threshold for the credential level, except for nursing assistant and preschool teacher jobs.

[20] Ohio Governor's Office of Workforce Transformation. (n.d.). *Ohio's Top Jobs List*. https://topjobs.ohio.gov/top-jobs-list

TABLE 8: Top Jobs in Ohio and Median Salary by Typical Education Required, Ranked by Projected Annual Growth

Postsecondary Nondegree Award Threshold 1 = $31,070	Associate Degree Threshold 1 = $34,911	Bachelor's Degree Threshold 1 = $46,380
Heavy & Tractor Trailer Truck Drivers ($46K)	Physical Therapist Assistants ($61K)	Registered Nurses ($68K)
Medical Assistants ($34K)	Respiratory Therapists ($59K)	Software Developers, Applications ($91K)
Licensed Practical/Vocational Nurses ($46K)	Occupational Therapy Assistants ($61K)	Market Research Analysts & Marketing Specialists ($61K)
Nursing Assistants ($28K)	Preschool Teachers ($28K)	Management Analysts ($83K)
Heating, Air Conditioning, & Refrigeration Mechanics & Installers ($49K)	Veterinary Techs ($36K)	Financial Managers ($124K)
Medical Records & Health Information Techs ($40K)	Radiologic Technologists ($59K)	General & Operations Managers ($100K)
Phlebotomists ($35K)	Diagnostic Medical Sonographers ($67K)	Medical & Health Services Managers ($94K)
Massage Therapists ($48K)	Computer Network Support Specialists ($60K)	Managers, All Other ($101K)
Health Techs ($43K)	Paralegals & Legal Assistants ($46K)	Computer Systems Analysts ($86K)
Computer Numerically Controlled Tool Programmers ($53K)	Web Developers ($62K)	Business Operations Specialists ($74K)
Dental Assistants ($40K)	Dental Hygienists ($69K)	Substance Abuse, Behavioral Disorder, & Mental Health Counselors ($47K)
Aircraft Mechanics and Service Techs ($62K)	Environmental Science & Protection Techs ($46K)	Industrial Engineers ($83K)
Ophthalmic Medical Techs ($38K)	Mechanical Engineering Techs ($53K)	Construction Managers ($93K)
Surgical Techs ($48K)	Chemical Techs ($51K)	Accountants and Auditors ($68K)
Psychiatric Techs ($33K)	Medical Equipment Repairers ($51K)	Information Security Analysts ($93K)

KEY

BIOHEALTH	ADVANCED MANUFACTURING	TECHNOLOGY
BUSINESS & PROFESSIONAL SERVICES	MULTIPLE CORE INDUSTRIES	NOT IN A STATEWIDE CORE INDUSTRY

Conclusion and Recommendations

Data from the National Center for Education Statistics reveal opportunities to strengthen access to high-value postsecondary education pathways in the state of Ohio. Further, findings from this report underscored disparities in affordability across specific institutional types — OTCs, community colleges, and four-year institutions. Data revealed that the cost of attendance and debt burden varied across institutions yet tend to be higher at OTCs. This provides cause for additional investigation and research to understand technical center graduates' trajectory to and through completion and into the labor market. Students at community colleges tend to be vulnerable to the lack of state aid available. Universities have the greatest diversity of aid resources to address affordability, which helps fill critical needs for a four-year education investment.

Despite the challenges in affordability, pursuing education and training beyond high school is still worth it for most people. However, Ohio needs to narrow the range of earnings between the bottom 25th percentile and the median earnings. The fields of study and the credential level within fields of study factor meaningfully into the return on investment. There are disparities in field of study and credentials by race that should be considered in advancing opportunity and value for all. Education beyond high school is critical for the state's economy and for individuals, families, and businesses. Data on Ohio's Top Jobs List particularly highlights this need in the biohealth industry statewide.

Many opportunities lie ahead for leaders and policymakers in Ohio to strengthen high-value postsecondary pathways for traditional-age, adult, and underserved students. Even with the governor and General Assembly's sizable investments in student aid in the most recent biennial budget, more efforts must be pursued to ensure postsecondary affordability for the full cost of attendance - covering both tuition and non-tuition expenses -in Ohio and ensure colleges have the resources needed to support strong individual earnings after postsecondary education and training. Effectively addressing these challenges requires collaborative action from institutional leaders, policymakers, and engagement with the community at large. Interventions can and should be addressed both by state and institutional actions. Consequently, this brief separates institutional and state policy approaches in Ohio; these recommendations intertwine, of course, but the imperative is that addressing affordability and maximizing the economic return on education and training beyond high school require actions on all fronts.

Recommendations for Institutions

While postsecondary affordability is a complex challenge, and a critical component of achieving postsecondary value, different institutions address this issue in various manners. There are opportunities to create transparency, leverage best practices, and enhance the uptake of financial aid to improve affordability. Strategies beyond financial aid are also important, to better support students in extracting the value they seek from their programs. Recommendations include:

Institutional Recommendation 1:

Create a cross institutional working group to maximize approaches to packaging and communicating student aid that address the full cost of attendance and account for recent changes in federal policy. Institution leaders and financial aid experts should consider the best, most effective ways to package financial aid from different sources, such that students can maximize the dollars available to them to cover tuition and nontuition expenses. While every institution has different resources available to package financial aid, creating opportunities for financial aid officers to share different approaches to maximizing affordability among Ohio's public postsecondary institutions is key. This could be done by leveraging efforts of the Ohio Association of Student Financial Aid Administrators or engaging a voluntary group through the Ohio Department of Higher Education (ODHE). Additionally, Ohio could be a national leader by proactively developing a common award letter template so that Ohio public postsecondary institutions could improve learners' ability to understand and compare aid packages, especially in light of new federal regulations requiring colleges to clearly communicate cost of attendance figures to students.

Institutional Recommendation 2:

Form a working group of OTCs' financial aid administrators and directors to develop common and comparable approaches to calculate data on tuition and cost of attendance. There is tremendous variance in the ways in which OTCs report their program, tuition, and cost-of-attendance data to IPEDS. The reasons behind this vary, from differing methodologies of calculating cost of attendance to differing program offerings and lengths. These accredited postsecondary institutions offer a range of programming, from short-term to long-term credentials, but all in a clock-hour format. Consequently, the ODHE should collaborate with OTCs and the Ohio Association of Career-Technical Superintendents to establish a working group of OTCs' superintendents, directors, and financial aid administrators to develop a voluntary standard by which they will all report costs to IPEDS. Moreover, this standard should be developed so that cost-of-attendance calculations use similar approaches, for comparability to public colleges and universities.

Institutional Recommendation 3:

Target FAFSA completion efforts to reach underrepresented populations at the institutional level. While Ohio has had several long-standing statewide efforts to improve FAFSA completion, there are gaps in reaching important populations. Colleges should first analyze their FAFSA data to better understand who is not applying for federal and state financial aid. It may be students from particular high schools; demographic groups, such as adult learners; or other populations. Once underserved populations are identified, college and university financial aid officers can design programming to engage those underserved populations. These efforts can be done in partnership with other organizations to reduce students' anxiety about applying for financial aid. Done effectively, these efforts can increase the uptake of financial aid and reduce misinformation about the costs of college and the aid available to students.

Institutional Recommendation 4:

Strengthen capacity to adequately advise learners on borrowing. As many students and their families are confused about the actual costs of higher education, those who take out student loans (specifically federal loans) often take on more debt than is necessary. Higher education institutions should consider extensive communication, outreach, and advising to make students aware of how much debt should be taken on relative to their total cost of attendance, rather than encouraging students (explicitly or tacitly) to accept the entirety of the federal loan amounts offered to them. Well-informed students will be better positioned to understand different types of debt and the responsibilities associated with those loans.

Institutional Recommendation 5:

Raise awareness of high-value programs among learners and their families. For many students, workforce readiness is a top priority when enrolling in higher education. Students should be able to pursue academic passions but also have a complete understanding of potential and likely labor market outcomes in their field of study. Consequently, informing students on an annual basis about higher-wage and higher-demand career fields in the state and the corresponding earnings is imperative when advising students about which academic disciplines to pursue. Disaggregating this information to the academic program level and making it available to students and community members annually (via communication campaigns, online dashboards, etc.) will allow students and their families to make the best-informed decisions about where to attend college and what to study. These efforts could be strengthened by dissemination of promising communication and advising practices by ODHE and/or relevant associations.

Institutional Recommendation 6:

Evaluate academic support and career placement services to increase earnings and other post-school outcomes. As institutions review data by academic program, further study into the range of outcomes of students in the same academic program against available quantitative or qualitative data about academic performance and career placement services can help pinpoint opportunities to help students complete and get better-paying jobs. Academic programs within an institution's dataset related to Ohio's core industries that may have a large range of earnings can be prioritized for further internal study and intervention planning. Data disaggregation by race, gender, and Pell Grant eligibility can also be key to understanding earning disparities.

Recommendations for Policymakers

Ohio saw some significant investments in higher education in the most recent biennial budget. The recent passage of House Bill 33 and the state's main operating budget will allow for expansion of state aid. These efforts provide a positive step toward offsetting costs to the learner and ensuring a stronger workforce pipeline. Short of significant additional investments in State Share of Instruction and need-based scholarship funds, Ohio will need to explore creative public policy opportunities to prioritize higher education affordability for Ohio's neediest students. Policymakers can also look across state agencies for opportunities to leverage data and insights to help Ohioans get higher-wage jobs and help businesses thrive. These opportunities include:

Policy Recommendation 1:

Expand need-based aid which students at all public institutions can utilize. In the past biennium, Ohio significantly increased its investment in OCOG and launched the new Work Ready program. However, over the next biennium, Ohio should examine need-based aid to enhance reach to underserved populations and maximize affordability. This examination could include benchmarking against need-based aid policies in other states, reviewing implications of moving away from Pell first methodology, and considering the potential to leverage public benefits. The policy strategy may be coupled with targets for enrollment in majors leading to in-demand careers. The current structures of state need-based aid undermine low-cost and 2+2 pathways from community colleges to universities as affordable options if state policy choices result in pushing community college students to take on similar levels of debt as university students.

Policy Recommendation 2:

Maintain caps on tuition and fees and institutional efficiency requirements. Caps on tuition and fees and mandated institutional efficiency reports have helped to keep students' and families' costs under control. These caps — combined with tuition guarantee policies — support students in keeping the cost of higher education predictable for learners. These caps should be continued through the next biennium. As caps are continued by the General Assembly, they should be coupled with increases to State Share of Instruction that, at a minimum, match projected increases to the consumer price index to ensure institutions do not lose needed resources to educate and advise their students to complete high-value pathways.

Recommendation 3:

Create an additional targeted statewide effort to increase FAFSA completion among underrepresented populations. Ohio's 3 To Get Ready, 4 To Go campaign built a strong foundation to increase FAFSA completion but has plateaued in recent years. House Bill 33 created the FAFSA support team system, to be administered by ODHE, and requires a comprehensive plan and team to support implementation. As ODHE looks to implement these efforts, they would be well served not just to envision what effective support would look like, but also to strategically address student subpopulation needs in increasing FAFSA completion. This would require analyzing FAFSA completion data to identify population gaps that need to be addressed, such as FAFSA filing rates among adult learners. These groups would likely require different communication and support strategies to increase their FAFSA filing rates.

Policy Recommendation 4:

Incentivize the progression of earning additional degrees and credentials in high-demand fields. Ohio should consider scholarships or other incentives for those with only a high school diploma or certificate to pursue additional degrees and certificates in their chosen career field, particularly workers in healthcare fields and other core industries. The state can expand and complement current programs such as the Second Chance Grant for students to re-enroll in college to finish a degree and the Tech Cred program to help employees earn industry credentials. Strategic initiatives in partnership with employers will also help enhance workforce supply, economic mobility, and equity. This should consider debt forgiveness policies for students who subsequently complete after reenrollment. The state should also leverage opportunities to enhance representation by race at all levels of credentials within a field.

Policy Recommendations 5:

Convene multi-stakeholder working group to explore parity of pay in relation to education level in high demand, low wage fields. The only two in-demand jobs in the top fifteen that do not pay comparable to the median wage for the typical education level required for employment are nursing assistants and preschool teachers. A working group can review the complex market for professionals performing these services for opportunities to increase and subsidize wages. The Office of Workforce Transformation may be the most fitting convener of the working group. Understanding the impact of the wage and demand mismatch for these fields, which have high representations of women and people of color, will be valuable to leveling the economic playing field.

Policy Recommendation 6:

Connect median earnings data by institution to completion data. This recommendation complements institutional recommendation 5. Having these data will help determine the contributing factors for former students who are in the lower 25th percentile of earnings. The dataset can include data on field of study, completion, and subsequent earnings. The data could then inform institutional completion plans and education policymaking. Publicly available data on earnings and completion can also help students and families make decisions. Advancing data connection writ large for the state can also enhance policymaking that bolsters educational and economic outcomes.

Continuing the Conversation

The intention of this report is to be a practical resource as Ohio stakeholders consider ways to ensure that education and training beyond high school is a worthwhile and practical investment for individuals, industries, and the state. An online toolkit will be available at https://www.scalestrategicsolutions.com/resources for leaders, policymakers, and advocates to take a deeper look at the data and retrieve updated information from the original data sources as time passes.

Appendix A: Regional Profiles

Regional analyses were produced in 2023 for the five Ohio regions: Central Ohio, Northeast Ohio, Northwest Ohio, Southeast Ohio, Southwest Ohio, and West Ohio.

Visit https://www.scalestrategicsolutions.com/resources to view the regional reports.

Appendix B: Ohio Technical Centers without Institutional Aid Offering

Adult and Community Education–Hudson
Apollo Career Center
Ashland County-West Holmes Career Center
Ashtabula County Technical & Career Campus
Choffin Career & Technical Center
Collins Career Technical Center
Cuyahoga Valley Career Center
Eastland-Fairfield Career & Technical Schools
EHOVE Career Center
Great Oaks Career Campuses
Hannah E. Mullins School of Practical Nursing
Lorain County Joint Vocational School District
Mahoning County Career and Technical Center
Medina County Career Center
Miami Valley Career Technology Center
Northern Career Institute
Pickaway Ross Joint Vocational School District
Sandusky Career Center
Toledo Public Schools Adult and Continuing Education
Tri-County Adult Career Center
Tri-Rivers Career Center
Trumbull Career & Technical Center
Upper Valley Career Center
Vanguard-Sentinel Career & Technology Centers

Appendix C: Classification of Instructional Program Codes and Industry Designations

Scale Strategic Solutions connected industry priorities and designations from Jobs Ohio with fields of study based on Classification of Instructional Program CIP code families that best fit the industry. Please note that some occupations may have a variety of fields of study from which they may hire.

TABLE 9: Crosswalk of Regional Core Industries, Job Categories, and CIP Codes of Field of Study

Core Industries	Job Categories from Ohio's Top Jobs	CIP Codes
Biohealth	Healthcare Practitioners and Technical, Healthcare Support, select Life and Physical Science and Social Sciences, select Management	26-Biological and Biomedical Sciences 42-Psychology 51-Health Professions
Advanced Manufacturing	Installation, Maintenance, and Repair; Production; select Management	14-Engineering 15-Engineering Tech 47-Mechanic, Repair, and Installations 48-Precision Production
Technology	Computer and Mathematical, select Management	11-Computer and Information Sciences
Business and Professional Services	Business and Financial Operations, select Management	52-Business, Management, and Marketing