



The Economic Value of the  
Maricopa County Community College District

# EXECUTIVE SUMMARY



**T**HE Maricopa County Community College District (MCCCD) creates value in many ways. The colleges play a key role in helping students increase their employability and achieve their individual potential. They also draw students to the county, generating new dollars and opportunities for Maricopa County. The colleges provide students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, the colleges are places for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

MCCCD influences both the lives of students and the county economy. The colleges support a variety of industries in Maricopa County, serve county businesses, and benefit society as a whole in Arizona from an expanded economy and improved quality of life. The benefits created by MCCCD even extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by MCCCD on the business community and the benefits the colleges generate in return for the investments made by their key stakeholder groups—students, taxpayers, and society. The following two analyses are presented:



### Economic impact analysis



### Investment analysis

All results reflect employee, student, and financial data, provided by MCCCD, for fiscal year (FY) 2016-17. Impacts on the Maricopa County economy are reported under the economic impact analysis and are measured in terms of added income. The returns on investment to students, taxpayers, and society in Arizona are reported under the investment analysis.

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*The value of MCCCD influences both the **lives of its students** and the **county economy**.*

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# Economic impact analysis

MCCCD promotes economic growth in Maricopa County through its direct expenditures and the resulting expenditures of students and county businesses. The colleges serve as employers and buyers of goods and services for their day-to-day operations. The colleges' activities attract students from outside Maricopa County, whose expenditures benefit county vendors. In addition, the colleges are primary sources of higher education to Maricopa County residents and suppliers of trained workers to county industries, enhancing overall productivity in the county workforce.

## Operations Spending Impact



MCCCD adds economic value to Maricopa County as an employer of county residents and a large-scale buyer of goods and services. In FY 2016-17, the district employed 10,826 full-time and part-time faculty and staff, 95% of whom lived in Maricopa County. Total MCCCD payroll was \$499.4 million, much of which was spent in the county for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the colleges spent \$251.8 million on day-to-day expenses related to facilities, supplies, and professional services.

MCCCD's day-to-day operations spending added \$570.5 million in income to the county during the analysis year. This figure represents the colleges' payroll, the multiplier effects generated by the in-county spending of the colleges and their employees, and a downward adjustment to account for funding that the district received from county sources. The \$570.5 million in added income is equivalent to supporting 12,186 jobs in the county.

## Student Spending Impact



Around 94% of MCCCD's students are from Maricopa County. Some of these students would have left Maricopa County if not for MCCCD. Additionally, some students attending MCCCD originated from outside Maricopa County in FY 2016-17 and relocated to the county to attend the colleges. These students may not have come to the county if the colleges did not exist. While attending the colleges, these students, referred to as retained and relocated students, spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$332 million in added income for the county economy in FY 2016-17, which supported 4,172 jobs in Maricopa County.

IMPACTS CREATED BY MCCCD  
IN FY 2016-17



**\$570.5 million**  
Operations Spending Impact



**\$332 million**  
Student Spending Impact



**\$6.3 billion**  
Alumni Impact



**\$7.2 billion**  
TOTAL IMPACT

- OR -

**96,209**  
JOBS SUPPORTED

## Alumni Impact



The education and training the colleges provide for county residents has the greatest impact. Since the colleges were established, students have studied at the colleges and entered the county workforce with greater knowledge and new skills. Once finishing their time at the colleges, 88% of students remain in Maricopa County. Today, hundreds of thousands of former MCCCDC students are employed in Maricopa County. As a result of their MCCCDC educations, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2016-17, MCCCDC alumni generated \$6.3 billion in added income for the county economy, which is equivalent to supporting 79,851 jobs.

## Total Impact

MCCCDC added \$7.2 billion in income to the Maricopa County economy during the analysis year, equal to the sum of the operations spending impact, the student spending impact, and the alumni impact. For context, the \$7.2 billion impact was equal to approximately 3.0% of the total gross regional product (GRP) of Maricopa County. This contribution that the district provided is larger than the entire Utilities industry in the county.

MCCCDC's total impact can also be expressed in terms of jobs supported. The \$7.2 billion impact supported 96,209 county jobs, using the jobs-to-sales ratios specific to each industry in the county. This means that one out of every 27 jobs in Maricopa County is supported by the activities of the colleges and their students. In addition, the \$7.2 billion, or 96,209 supported jobs, impacted county industries in different ways. Among non-education industry sectors, MCCCDC supported the most jobs in the Retail Trade industry sector – supporting 18,339 jobs in FY 2016-17. These are impacts that would not have been generated without the colleges' presence in Maricopa County.

### TOP INDUSTRIES IMPACTED BY MCCCDC (JOBS SUPPORTED)



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**One out of every 27 jobs in Maricopa County is supported by the activities of the colleges and their students.**

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# Investment analysis

An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. If the benefits outweigh the costs, then the investment is financially worthwhile. The analysis presented here considers MCCCDC as an investment from the perspectives of students, taxpayers, and society in Arizona.

## Student Perspective



In FY 2016-17, MCCCDC served 191,073 credit and 24,497 non-credit students. In order to attend the colleges, the students paid for tuition, fees, books, and supplies. They also took out loans and will incur interest on those loans. Additionally, students invested their time, giving up money they would have otherwise earned had they been working instead of attending college. The total investment made by MCCCDC students in FY 2016-17 amounted to a present value of \$849.7 million, equal to \$235.8 million in out-of-pocket expenses (including future principal and interest on student loans) and \$613.9 million in forgone time and money.

In return for their investment, MCCCDC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average MCCCDC associate degree graduate from FY 2016-17 will see an increase in earnings of \$9,700 each year compared to a person with a high school diploma or equivalent working in Arizona. Over a working lifetime, the benefits of the associate degree over a high school diploma will amount to an undiscounted value of \$397.7 thousand in higher earnings per graduate. Altogether, the colleges' FY 2016-17 students will receive \$3.4 billion in higher future earnings over their working lives, as a result of their education and training at MCCCDC.

STUDENTS SEE A HIGH RATE OF RETURN FOR THEIR INVESTMENT IN MCCCDC



15.5%

Average annual return for MCCCDC students



10.1%

Stock market 30-year average annual return

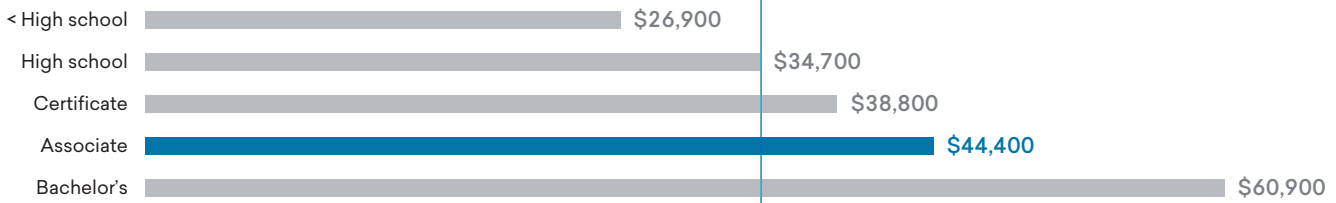


0.8%

Interest earned on savings account (National Rate Cap)

Source: Forbes' S&P 500, 1987-2016. FDIC.gov, 7-2016.

The average associate degree graduate from a MCCCDC college will see an increase in earnings of **\$9,700** each year compared to a person with a high school diploma or equivalent working in Arizona.



Source: Emsi complete employment data.

The students' benefit-cost ratio is 4.0. In other words, for every dollar students invest in an education at MCCCDC, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$4.00 in higher future earnings. Annually, the students' investment in MCCCDC has an average annual internal rate of return of 15.5%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.1%.

## Taxpayer Perspective



MCCCDC generates more in tax revenue than it takes. These benefits to taxpayers consist primarily of taxes that the state and local government will collect from the added revenue created in the state. As MCCCDC students will earn more, they will make higher tax payments throughout their working lives. Students' employers will also make higher tax payments as they increase their output and purchases of goods and services. By the end of the FY 2016-17 students' working lives, the state and local government will have collected a present value of \$2.3 billion in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of MCCCDC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. Students' MCCCDC educations will generate savings in three main categories: 1) healthcare, 2) crime, and 3) income assistance. Improved health will lower students' demand for health care services. In addition, students will be less likely to interact with the criminal justice system, resulting in a reduced demand for law enforcement and victim costs. MCCCDC students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. For a list of study references, contact MCCCDC for a copy of the main report. Altogether, the present value of the benefits associated with an MCCCDC education will generate \$82.3 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$2.4 billion, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$554.9 million, equal to the amount of state and local government funding MCCCDC received in FY 2016-17. These benefits and costs yield a benefit-cost ratio of 4.3. This means that for every dollar of public money invested in

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*For every dollar of public money invested in MCCCDC, taxpayers will receive a cumulative value of **\$4.30** over the course of the students' working lives.*

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### STUDENT PERSPECTIVE

**\$3.4 billion**  
Present value benefits

**\$849.7 million**  
Present value costs

**\$2.5 billion**  
Net present value

Benefit-cost Ratio	Rate of Return
4.0	15.5%



### TAXPAYER PERSPECTIVE

**\$2.4 billion**  
Present value benefits

**\$554.9 million**  
Present value costs

**\$1.8 billion**  
Net present value

Benefit-cost Ratio	Rate of Return
4.3	12.0%



### SOCIAL PERSPECTIVE

**\$31.3 billion**  
Present value benefits

**\$1.5 billion**  
Present value costs

**\$29.8 billion**  
Net present value

Benefit-cost Ratio	Rate of Return
20.5	n/a*

\* The rate of return is not reported for the social perspective because the beneficiaries of the investment are not necessarily the same as the original investors.

MCCCD in FY 2016-17, taxpayers will receive a cumulative value of \$4.30 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 12.0%, which compares favorably to other long-term investments in the public and private sectors.

### Social Perspective



Society as a whole in Arizona benefits from the presence of MCCCD in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to higher student earnings and increased business output, which raise economic prosperity in Arizona.

Benefits to society also consist of the savings generated by the improved lifestyles of MCCCD students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are distinct from the costs avoided by the taxpayers outlined above. Healthcare savings include avoided medical costs associated with smoking, alcohol dependence, obesity, drug abuse, and depression. Savings related to crime include reduced security expenditures and insurance administration, lower victim costs, and reduced expenditures by the criminal justice system. Income assistance savings include reduced welfare and unemployment claims. For a list of study references, contact MCCCD for a copy of the main report.

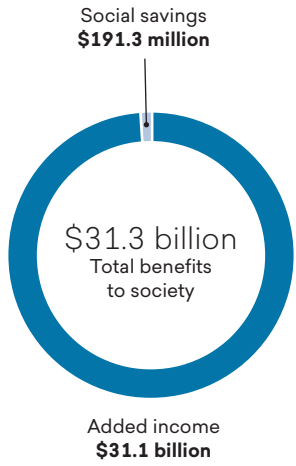
Altogether, the social benefits of MCCCD equal a present value of \$31.3 billion. These benefits include \$31.1 billion in added income through students' increased lifetime earnings and increased business output, as well as \$191.3 million in social savings related to health, crime, and income assistance in Arizona. People in Arizona invested a present value total of \$1.5 billion in MCCCD in FY 2016-17. The cost includes all MCCCD expenditures and student costs.

The benefit-cost ratio for society is 20.5, equal to the \$31.3 billion in benefits divided by the \$1.5 billion in costs. In other words, for every dollar invested in MCCCD, people in Arizona will receive a cumulative value of \$20.50 in benefits. The benefits of this investment will occur for as long as MCCCD's FY 2016-17 students remain employed in the state workforce.

### Summary of Investment Analysis Results

The results of the analysis demonstrate that MCCCD is a strong investment for all three major stakeholder groups—students, taxpayers, and society. As shown, students receive a great return for their investments in an MCCCD education. At the same time, taxpayers' investment in MCCCD returns more to government budgets than it costs and creates a wide range of social benefits throughout Arizona.

SOCIAL BENEFITS IN ARIZONA FROM MCCCD



# Conclusion

The results of this study demonstrate that MCCCDC creates value from multiple perspectives. The colleges benefit county businesses by increasing consumer spending in the county and supplying a steady flow of qualified, trained workers to the workforce. MCCCDC enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The colleges benefit state and local taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, MCCCDC benefits society as a whole in Arizona by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students.

## About the Study

Data and assumptions used in the study are based on several sources, including the FY 2016-17 academic and financial reports from MCCCDC, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Emsi's Multi-Regional Social Accounting Matrix model, and a variety of studies and surveys relating education to social behavior. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of economic impact and investment effectiveness. For a full description of the data and approach used in the study, please contact the district for a copy of the main report.

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**multiple perspectives.**

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