

# Economic Impact of Community Colleges in Ventura County

*Showing the contribution of community colleges in boosting the regional economy, enhancing the ability of their graduates to improve their lives, and serving the common good of the community in Ventura County and beyond*



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**Jamshid Damooei, Ph.D.**  
**Damooei Global Research**

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**Jamshid Damooei, Ph.D.**

**President of Damooei Global Research Inc.**

**Professor and Director of Economics Program**

**Executive Director of Center for Study of Economics of Social Issues (CESI)**

[damooei@callutheran.edu](mailto:damooei@callutheran.edu)

[jamshiddamooei@gmail.com](mailto:jamshiddamooei@gmail.com)

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## Executive Summary

Economic assessment is an important tool to measure the potential or effective costs and benefits of an organization or a program. It will only be meaningfully realized when we conduct it within an integrated framework where pertinent analyses capture and consider the full spectrum of explicit and implicit impacts.

While it is clear that Ventura County Community Colleges support the present and the future economic wellbeing of their employees and students within the region, the translation of these improvements into quantifiable and (possibly) monetary terms requires considerable economic analysis.

The District has a diverse student population that mirrors California's residents. It counts nearly 54% as Latinx, 30.23% as White, 6.5% as Asian, 1.63% as Black, 0.23% as Pacific Islander, 0.21% as Native American, 4.20% as two or more Races and 3.46% as Unreported.

This study includes a range of economic impacts. A significant portion consists of the economic impacts resulting from the expenditures of various economic agents, which are directly or indirectly involved with the day-to-day operation of the colleges and their administration. To identify and measure the expenditure segments of economic impacts that were selected for consideration in this study, we used IMPLAN (Impact Analyses for Planning) as a tool.

This economic analysis measures the cumulative effects of spending brought about by various economic activities of Ventura County Community Colleges within the county, state and nation. This analysis, like any other with similar research, aims to measure the following impacts:

- Direct effects: Budgetary, capital, and other related expenditures that create jobs and add to the production capacity of our region.
- Indirect effects: The economic activity generated among the region's businesses to meet the college's demand for various products and services used for its operations.
- Induced effects: The effects of expenditures made in the city, county, and state by college's employees and others who receive income because of their work in relation to the activities of the institution as a whole.

This study goes further and measures the impact of student expenditures in relation to their decision to study in a college. Related expenditures can be defined as students' own costs of living and purchases related to their study, plus spending by those who come to visit them. The latter expenses are more apparent when students reside on the campus or surrounding areas in order to be able to attend the college. The impact can be far greater if a larger group of students attend a college fulltime and students travel from other parts of the country or overseas to attend a college.

The study goes much further and measures the economic impact of the education that VCCCD offers to its graduates by enhancing their lifelong earnings through taking their education further towards a bachelor's degree, earning an associate's degree, or receiving certificates and securing

better paying jobs and the ability to enjoy a greater social mobility and even being inspired to continue their study towards higher educational attainments.

The study takes into account all the impacts within three geographic areas. It presents them within Ventura County, the State of California, and finally, within the United States. It is clear that the larger the area of catchment of the impact, the higher the economic impacts will be, and this is presented in the reported impact.

### **The Impacts of the Colleges' Regular Budgets**

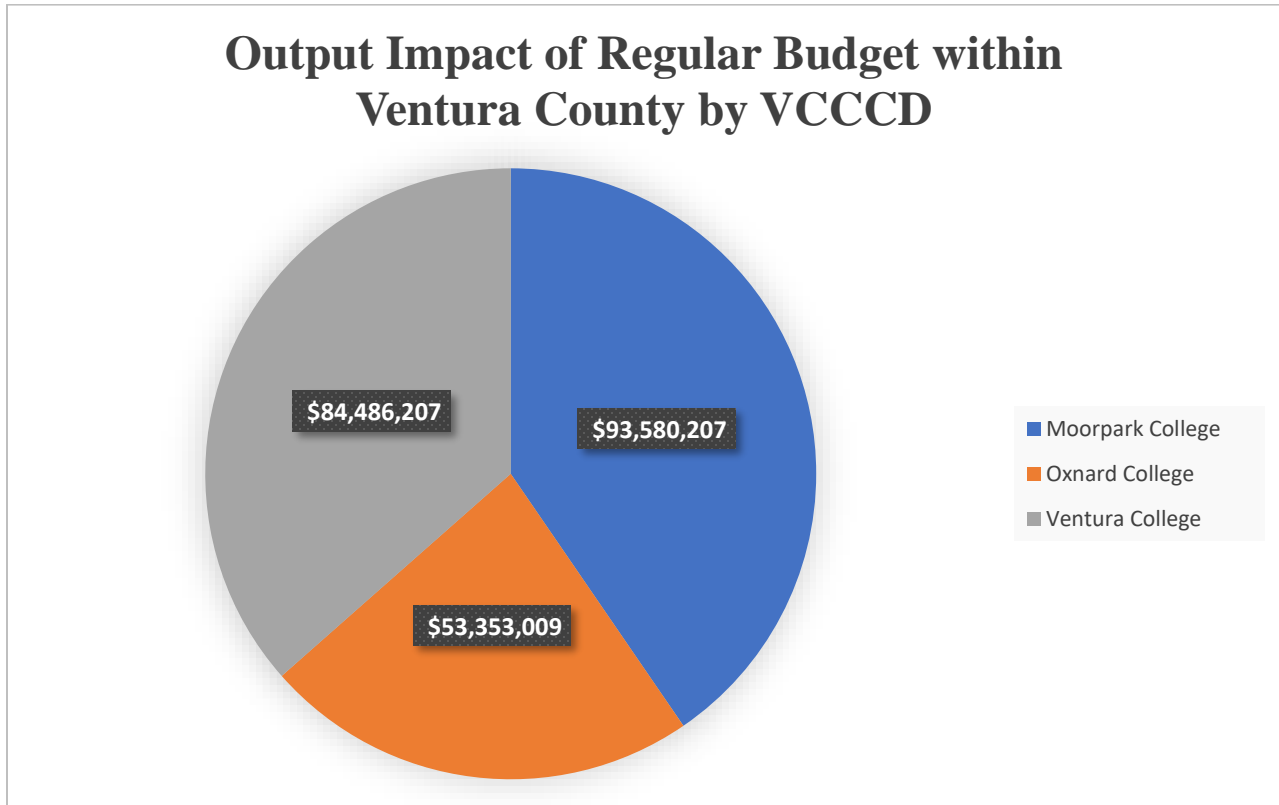


Figure 1: Output Impact of Regular Budget within Ventura County by VCCCD



## Employment Impact of Regular Budget within Ventura County by VCCCD

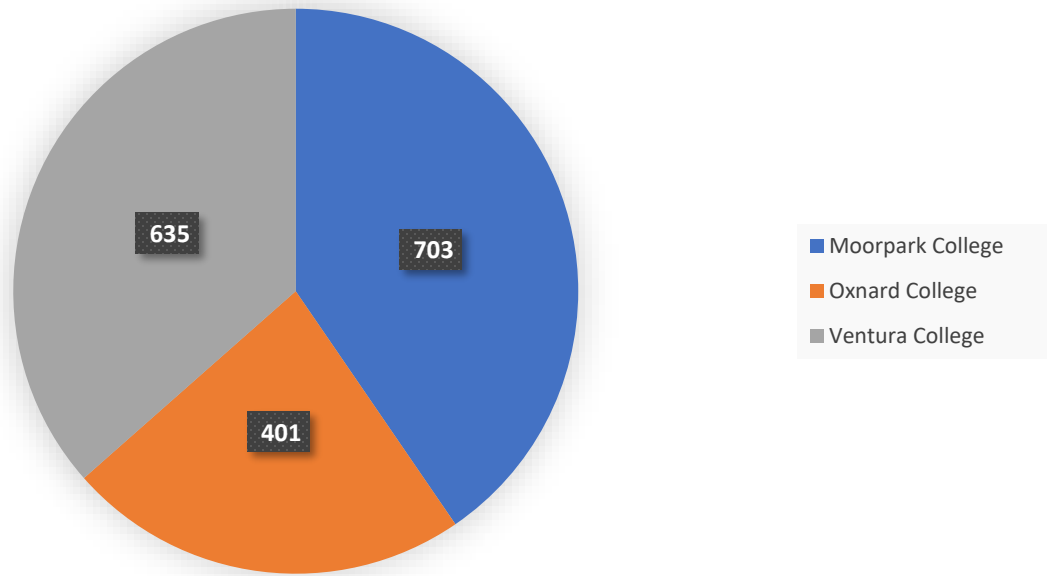


Figure 2: Employment Impact of Regular Budget within Ventura County by VCCCD

## Tax Impact of Regular Budget within Ventura County by VCCCD

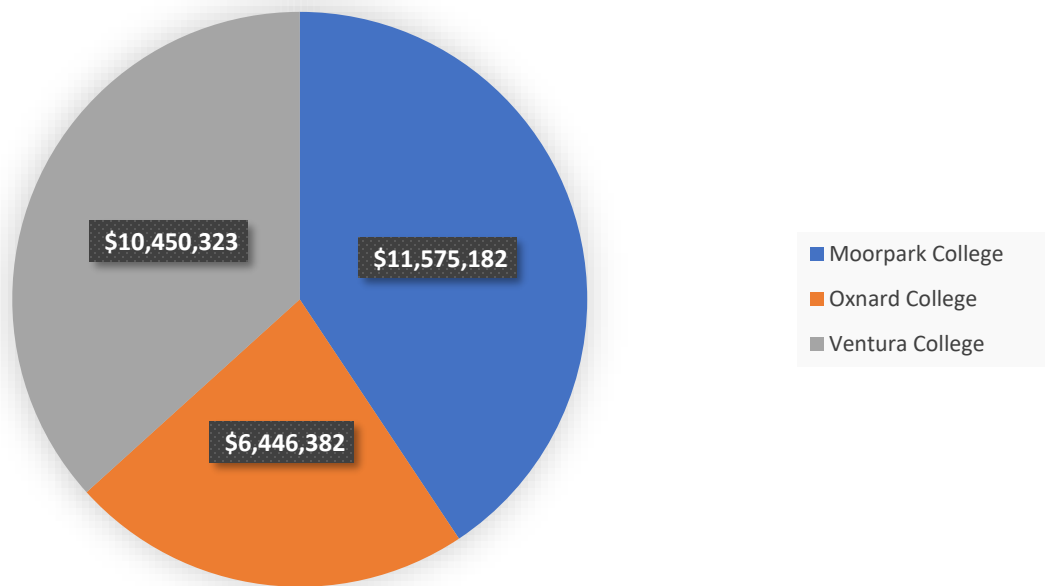


Figure 3: Tax Impact of Regular Budget within Ventura County by VCCCD

## The Impacts of Students' Expenditures on Various Campuses

### Output Impact of Students Expenditures within Ventura County by VCCCD

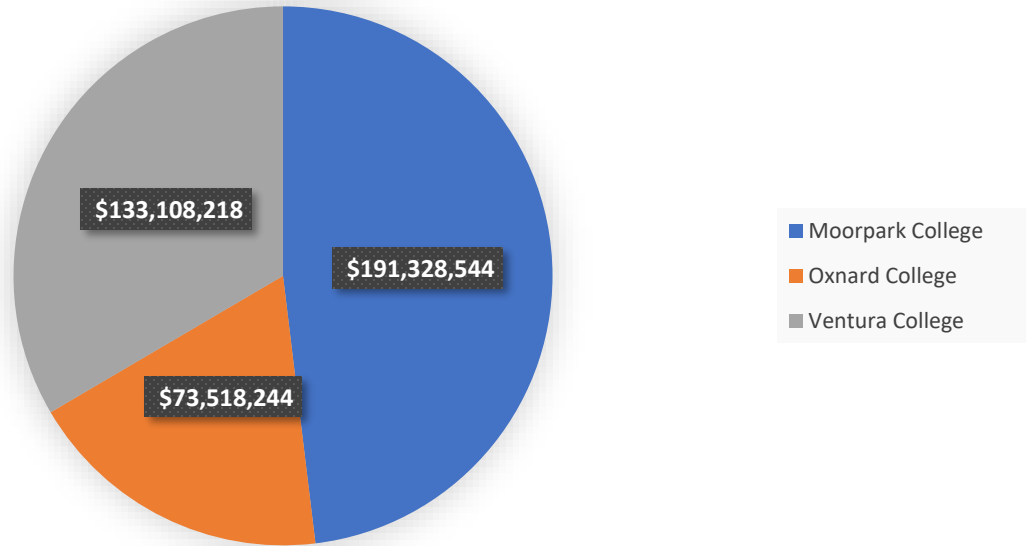


Figure 4: Output Impact of Students Expenditures within Ventura County by VCCCD

### Employment Impact of Students Expenditures within Ventura County by VCCCD

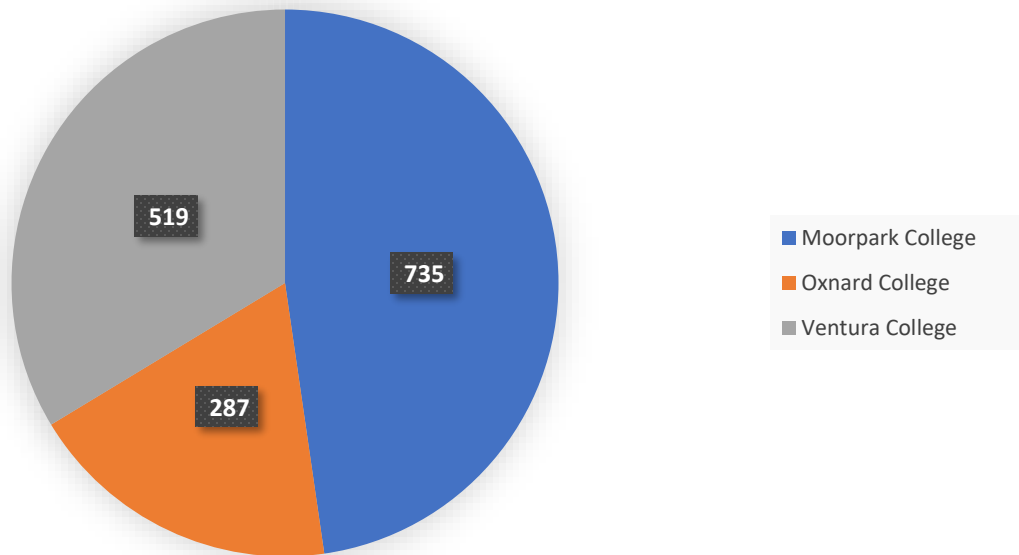


Figure 5: Employment Impact of Students Expenditures within Ventura County by VCCCD

## Tax Impact of Students Expenditures within Ventura County by VCCCD

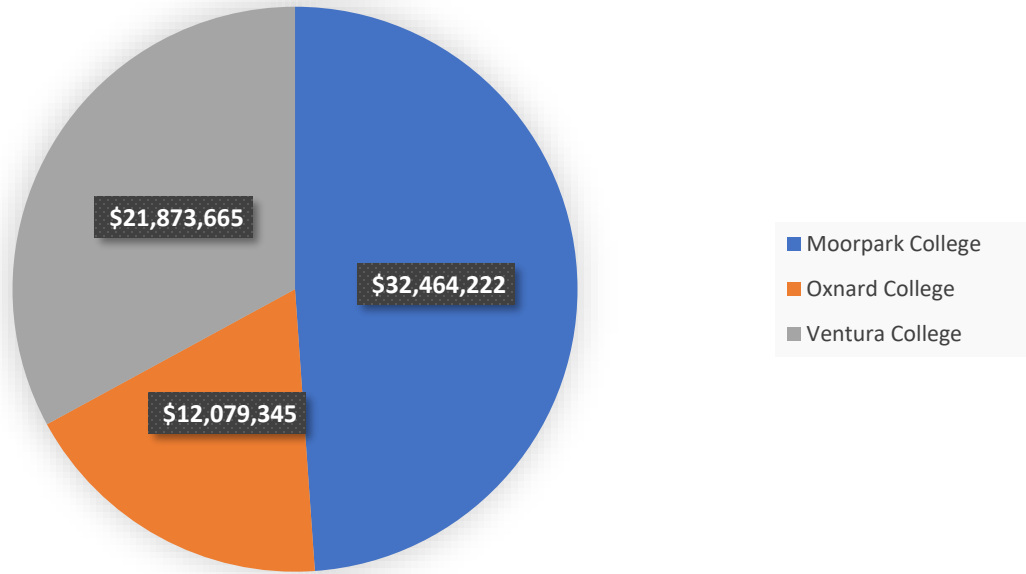


Figure 6: Tax Impact of Students Expenditures within Ventura County by VCCCD

## The Impact of All Expenditures (Budget, Capital Expenditures, and Students' Expenditures)

### Tax Impact of VCCCD Nationwide, Statewide and Countywide

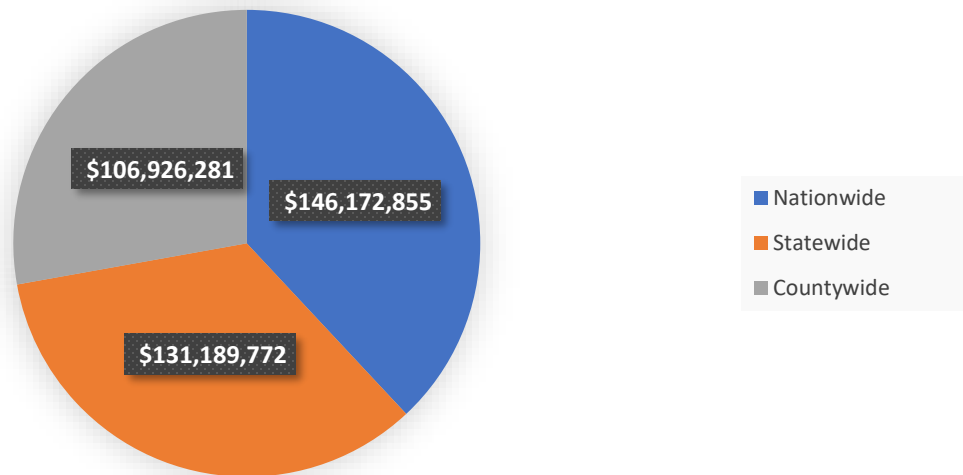


Figure 7: Tax Impact of VCCCD Nationwide, Statewide and Countywide

## Employment Impact of VCCCD Nationwide, Statewide and Countywide

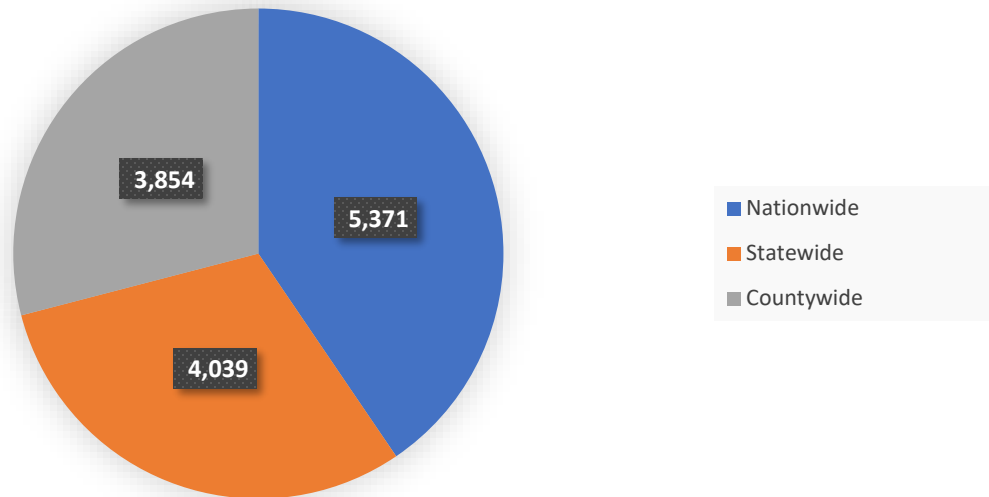


Figure 8: Employment Impact of VCCCD Nationwide, Statewide and Countywide

## Output Impact of VCCCD Nationwide, Statewide and Countywide

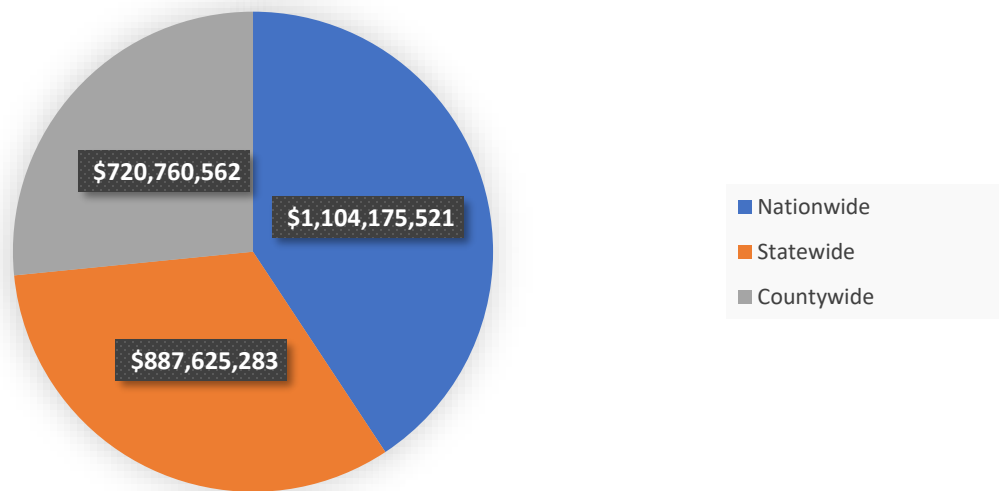


Figure 9: Output Impact of VCCCD Nationwide, Statewide and Countywide

- **Regional Impact \$720,760,562**
- **Statewide Impacts \$887,625,286**
- **Nationwide Impacts \$1,104,175,521**

## Impact of Increasing Lifetime Earnings of Graduates by Measuring their Overall Annual Present Value

### Additional Lifetime Earnings of Students Graduating from VCCCD

Description	Total Additional Earnings	Present Value
Students Transferring to a 4-Year College	\$1,198,200,000	\$367,316,407
Students Receiving Associate Degree	\$1,786,000,000	\$547,510,518
Students Receiving Certificates	\$1,454,400,000	\$445,856,269
<b>TOTAL</b>	<b>\$4,438,600,000</b>	<b>\$1,360,683,184</b>

*Table 1: Additional Lifetime Earning of Students Graduating from VCCCD*

Finally, this study documents that the economic impacts of VCCCD go far beyond what has been measured due to the lack of information needed to measure the following economic impacts:

- Economic Impacts Resulting from Independent Service Providers
- Economic Impact of Events and Conferences Held Within Campuses
- Economic Impact of Visitors and Guests of Students
- Economic Impact Value Added or Revenue Per Worker Generated Through Contribution of VCCCD Graduates
- Economic Impact Through Creation of Positive Externalities Within the Larger Community and Society as a Whole

## 1. Introduction:

Community colleges have a unique place within various parts of the state and create value in multiple ways. They provide a wide range of program offerings and play a key role in helping students to achieve their potential, develop the skills for prosperous careers, and acquire the knowledge and academic preparation to continue their studies towards receiving higher degrees in universities.

The contributions of community colleges go far beyond merely influencing the lives of their students. Their program offerings support a range of industry sectors in the U.S. and supply employers with the skilled workers they need to make their businesses more productive. The expenditures of the colleges and their national and international students further support the economy at county, state and national levels through the output and employment generated by businesses. Lastly, and just as importantly, the benefits of community colleges extend as far as their regions, and at the national level, they increase tax receipts and decrease public sector costs.

Economic assessment is an important tool to measure the potential or effective costs and benefits of an organization or a program. It will only be meaningfully realized when we conduct it within an integrated framework where pertinent analyses capture and consider the full spectrum of explicit and implicit impacts. While it is clear that the Ventura County Community College District supports the present and the future economic wellbeing of its employees and students within the region, translation of these improvements into quantifiable and (possibly) monetary terms requires considerable economic analysis. We need to use each variable indicating one or more aspects of the work of VCCCD for calculating the economic and social impact of the organization on a clear economic rationale. We used the following economic rationale for measuring some of the impacts:

- ✚ **Total employment and income impact of VCCCD annual budgetary and capital expenditures.** This helps to measure the economic impacts through the generation of regional output/income, employment/jobs, and tax revenues.
- ✚ **The economic impact of volunteering programs which enhances regional production and employment through direct, indirect, and induced economic impacts.** Volunteers allow the institution to continue functioning with lesser budgetary restraints that otherwise could make certain operations impossible. This will allow us to measure additional economic impacts through the creation of regional output, indirect, and induced employment/jobs, and tax revenues.
- ✚ **Increase in life expectancy of large groups of people who stand to benefit from various health-related positive developments.** Each activity and initiative will establish a particular line of creating positive impact. We had to estimate each and add them up.
- ✚ **Increased life-time earnings of graduates as a result of following one of the possible paths:**

- Obtaining an AA degree and adding to their ability for earning income and improved social mobility.
- Transferring to four-year colleges and obtaining a bachelor's or higher degree.
- Obtaining certification and earning more income and qualifying for higher paid employment.
- Other possible impacts include helping those who receive trainings and other positive interventions, and they can be traced towards improving the ability to receive economic benefits.

**✚ Other possible income generating or cost saving** (government cost) interventions based on other economic development activities of the organization.

While all such impacts are very important for the betterment of a society and any community that houses community colleges, the ability to measure the impacts in quantitative terms, and even more complicated, in monetary terms, is crucial. Let us not forget that for monetary quantification, we need to measure the impacts in either cost savings or income generation, and any of the two becomes very difficult if not impossible to conduct with the absence of a market for their evaluation. This reconfirms an important understanding that many positive and valuable developments in the lives of the community do not have a market and cannot be commodified.

The Ventura County Community College District (VCCCD) is the system of public community colleges in Ventura County, California. Member colleges are Ventura College in Ventura, Moorpark College in Moorpark, and Oxnard College in Oxnard, California. The start of establishing community colleges in Ventura County goes back to the opening of Ventura College in 1925 as part of Ventura Union High School. Today it serves more than 13,000 students with a satellite campus in Santa Paula. Moorpark College opened in 1967, which now serves more than 14,000 students. Oxnard College's first classes were held in Ramona School starting in 1969, while the current campus opened in 1975. It now serves nearly 8,000 students. The three colleges together serve more than 35,000 students in Ventura County.<sup>1</sup>

The District has a diverse student population that mirrors California's residents. It counts nearly 54% as Latinx, 30.23% as White, 6.5% as Asian, 1.63% as Black, 0.23% as Pacific Islander, 0.21% as Native American, 4.20% as two or more Races and 3.46% as Unreported.<sup>2</sup>

The ultimate purpose of this study is to show that Ventura County Community Colleges create a positive impact on society and generate an impressive return on investment for students, society, and taxpayers. The idea is to present such impacts within the county, the state of California, and ultimately at the national level.

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<sup>1</sup> According to Community College Review, as of the 2020-21 academic year, Moorpark College served 14,357, Oxnard College had 7,418 students and the total number of students at Ventura College was 13,312. In total, VCCCD served some 35,087 students as full and part-time students;

<https://www.communitycollegereview.com/california/ventura-county>

<sup>2</sup> For more information see VCCCD Board of Trustees Endorses DEI Resolution, <https://www.venturacollege.edu/news/vcccd-board-trustees-endorses-dei-resolution>

America's community colleges create value in many ways. With a wide range of program offerings, community colleges play a key role in helping students achieve their individual potential and develop the skills they need in order to have a fulfilling and prosperous career. Community colleges also provide an excellent environment for students to meet new people and make friends, while participation in college courses improves the students' self-confidence and promotes their mental health. These social and employment-related benefits have a positive influence on the health and well-being of individuals.

However, the contribution of America's community colleges consists of more than solely influencing the lives of students. The colleges' program offerings support a range of industry sectors in the U.S. and supply employers with the skilled workers they need to make their businesses more productive. The expenditures of the colleges and their international students further support the national economy through the output and employment generated by businesses. Lastly, and just as importantly, the benefits of community colleges extend as far as the national treasury in terms of increased tax receipts and decreased public sector costs.

## 2. Economic Impact of Ventura County Community Colleges' Regular Budget and Capital Expenditures

We used the regular budget for each college and set up the appropriate models for measuring the impact of the colleges within the county, state, and nation. Naturally, the economic impact of any economic entity is likely to be smaller within a smaller geographic extension. Some impacts are likely to bear on the national and state economies, and others are more limited in their reach. The extent of an impact to a great extent depends on the type of industry, product or service. For example, construction will impact the county's economy to a great extent compared with the purchase of gas from a pumping station.

In order to calculate the impact of capital expenditure, we took the annual spending for improvements to buildings and other renovation expenditures as a separate component of the regular budget of the college. Capital expenditures were taken from information available for the entire district rather than each college separately.

One of more important challenges of our economic assessment was the impact of COVID-19 on our lives on economic, social and societal levels. In some respects, staying solely focused on the last year for which the annual spending and investment were available (i.e. academic year 2020-21) seemed rigid, and in some respect, unrealistic. However, using the school year 2020-21 seemed appropriate for measuring the unfolding of a good number of activities. We have used relevant information and extensive endnotes to make sure that every diversion from our latest year to another year or period of the recent past is fully explained in the report.

The impacts are, as mentioned, assessed for each of the colleges and the district administration separately, and at the end, we added the numbers together to present the economic impacts of all three colleges and their district administration in Ventura County.



We used the information provided by the VCCCD for the budget of the three colleges and the district administration. We received clear instruction on what items to include and how to reach the correct deductions from the reported budget.<sup>3</sup>

This study includes a range of economic impacts. A significant portion of the impact consists of the economic impacts resulting from the expenditures of various economic agents, which are directly or indirectly involved with the day-to-day operation of colleges and their administration. To identify and measure the expenditure segments of economic impacts that were selected for consideration in this study, we used IMPLAN (Impact Analyses for Planning) as a tool.<sup>4</sup>

IMPLAN employs a regional social accounting system and can be used to generate a set of balanced economic and social accounts and multipliers. The social accounting system is an extension of an input-output analysis, expanded beyond market-based transaction accounting to include non-market financial flows in a Social Accounting Matrix (SAM) framework. The model describes the transfer of money between industries and institutions and contains market-based and non-market financial flows, such as inter-institutional transfers.

This economic analysis measures the cumulative effects of spending brought about by various economic activities of the Ventura County Community Colleges within the county, state and nation. This analysis, like any other with similar research, aims to measure the following impacts:

- Direct effects: Budgetary, capital, and other related expenditures that create jobs and add to the production capacity of our region.
- Indirect effects: The economic activity generated among the region's businesses to meet the college's demand for various products and services used for its operations.
- Induced effects: The effects of expenditures made in the city, county, and state by college's employees and others who receive income because of their work in relation to the activities of the institution as a whole.

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<sup>3</sup> We give our sincere appreciation to Mr. James Zavas for giving us time to review the effective budgets for academic year 2020-21 and to make sure that regular budgets and capital budgets are correctly used to conduct the relevant impact estimations.

<sup>4</sup> IMPLAN is a computer software package that consists of procedures for estimating local input-output models and associated databases. The initials stand for *Impact Analyses and Planning*. IMPLAN was originally developed by the U.S. Forest Service in cooperation with the Federal Emergency Management Agency and the U.S. Department of the Interior's Bureau of Land Management to assist in land and resource management planning. Since 1993, the IMPLAN system has been developed under exclusive rights by the Minnesota IMPLAN Group Inc., which licenses and distributes the software to users. Currently, there are hundreds of licensed users in the United States including universities, government agencies and private companies.

The following sections separate and present each of the colleges’ and the district administration’s economic impacts resulting from their expenditures with regard to their regular and capital budget.

## 2.1 Moorpark Community College: Regular Budget

Moorpark College is a part of the Ventura County Community College District. Based on the available information from academic year 2020-21, Moorpark College had a total enrollment of 14,361 (all undergraduate students). Out of this student body, there were 4,737 full-time (33%) and 9,624 part-time students.<sup>5</sup> Some 6,365 of the students were male and 7,996 were females. About 33% of students in academic year 2020-21 were Hispanic

Moorpark College also offers the distance learning opportunity (online degree program). In years 2020 a total of 7,548 students have enrolled in online programs exclusively in the same academic year.

We used the effective regular budget of Moorpark College for 2020-21 and made the necessary adjustment, and this led to a sum of \$57,112,677. We used this amount to estimate the economic impact of the college’s regular budget. The following tables present the impacts to the regional output of the county as well as the total number of jobs created for the federal, state and local governments.

Economic Impact of Regular Budget of Moorpark College Within Ventura County						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	57,112,677.0	21,531,192.1	14,936,337.8	93,580,206.9		
<b>Employment Impact</b>	535.9	84.6	82.7	703.2		
<b>Tax Impact</b>						
Tax Impact	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	TOTAL
<b>Federal Tax</b>	\$3,054,256	\$108,580	\$298,160	\$3,085,468	\$820,992	\$7,367,456
<b>State and Local Tax</b>	\$105,175		\$2,305,605	\$1,278,949	\$517,997	\$4,207,726

Table 2: Economic Impact of Regular Budget of Moorpark College Within Ventura County

The above chart shows that Moorpark College’s regular budget alone contributes nearly \$94 million to the regional output in Ventura County, creates some 703 jobs within the county as a result of its direct, indirect and induced job creating impact, and in total, provides more than \$11.5 million in tax revenue to all three levels of government, out of which more than \$4.2 million is provided for the state and local governments.

<sup>5</sup> For more information see UNIVSTATS, <https://www.univstats.com/colleges/moorpark-college/student-population/>

## 2.2 Oxnard Community College: Regular Budget

Oxnard College was founded on 118 acres in south Oxnard and it is open to any adult who is able to benefit from the education and opportunities for enrichment that it offers. People of any age, including high school juniors and seniors, may also attend Oxnard College concurrently, tuition free. Oxnard College offers 18 certificate programs, 17 associate degrees for transfer, and 37 associate degrees with classes in over 60 disciplines.

Oxnard College provides services to low income and educationally disadvantaged students. The College EOPS (Extended Opportunity Programs and Services) is designed to give students the opportunity and assistance necessary to successfully complete their academic transfer and/or vocational program. EOPS support services assist students in overcoming the many obstacles that a new environment, new school, or a new setting can present.

Oxnard College in academic year 2020-21 served 7,418 students.<sup>6</sup> Out of this number, some 2,225 were full-time students (30%). Minority enrollment was about 82% of the student body (majority Hispanic), which is more than the state average of 75%.

We used the effective regular budget of Oxnard College for 2020-21 and made the necessary adjustments, and this led us to a sum of \$31,561,272. We used this account to estimate the economic impact of the college's regular budget within the county in year 2020-21. The results are presented in the following table.

Economic Impact of Regular Budget of Oxnard College in Ventura County						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	32,561,727.0	12,275,607.4	8,515,674.3	53,353,008.7		
<b>Employment Impact</b>	305.5	48.2	47.2	400.9		
<b>Tax Impact</b>						
Tax Impact	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	TOTAL
<b>Federal Tax</b>	\$1,741,327	\$61,905	\$16,999	\$1,759,122	\$468,074	\$4,047,427
<b>State and Local Tax</b>	\$59,963		\$1,314,497	\$729,169	\$295,326	\$2,398,955

Table 3: Economic Impact of Regular Budget of Oxnard College in Ventura County

The above table shows that Oxnard College's regular budget by itself contributes more than \$53 million to the regional economy. Overall, it creates some 400 jobs in the county, and all together

<sup>6</sup> For more information see Community College Review <https://www.communitycollegereview.com/oxnard-college-profile>

provides more than \$6.4 million of tax revenue to all three levels of government, out of which around \$2.4 million is provided to the state and local governments.

### 2.3 Ventura Community College: Regular and Capital Budget

Ventura College is the oldest of the three community colleges in Ventura County and has been an important part of the educational facilities of the county since 1925. The school utilizes a semester-based academic year. The student-faculty ratio is 30-to-1. The highest degree offered at Ventura College is an associate’s degree. The school has an open admissions policy.

Students can earn degrees and certificates in 27 different fields. Popular programs include: Liberal Arts and Sciences, General Studies and Humanities, Multi/Interdisciplinary Studies, and Business, Management, Marketing, and Related Support Services.

Ventura College serves 13,312 students<sup>7</sup> (31% of students, or 4,127, were full-time). Minority enrollment is 73% of the student body (majority Hispanic), which is less than the state average of 75%.

We used the effective regular budget of Ventura College for academic year 2020-21 and made the necessary adjustments, and this led us to a sum of \$51,562,543. We used this amount to estimate the economic impact of the college’s regular budget within the county in year 2020-21. The results are presented in the following table.

Economic Impact of Regular Budget of Ventura College in Ventura County						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	51,562,543.0	19,438,819.5	13,484,844.4	84,486,206.9		
<b>Employment Impact</b>	483.8	76.4	74.7	634.8		
<b>Tax Impact</b>						
Tax Impact	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	TOTAL
<b>Federal Tax</b>	\$2,757,448	\$98,029	\$269,185	\$2,785,627	\$741,210	\$6,651,499
<b>State and Local Tax</b>	\$94,954		\$2,081,549	\$1,154,662	\$467,659	\$3,798,824

Table 4: Economic Impact of Regular Budget of Ventura College in Ventura County

Ventura College, through its regular budget alone, adds almost \$84.5 million to the regional output of Ventura County. It creates all together some 635 jobs. Through its regional economic

<sup>7</sup> For more information see Community Colleges Review <https://www.communitycollegereview.com/ventura-college-profile>

activities, some \$10.5 million in tax revenue is created for all three levels of government, out of which, some \$3.8 million goes to the state and local governments.

#### 2.4 Putting the Impacts of Colleges Together

The results from the impact of the colleges' regular budgets can be presented in the following exhibits.

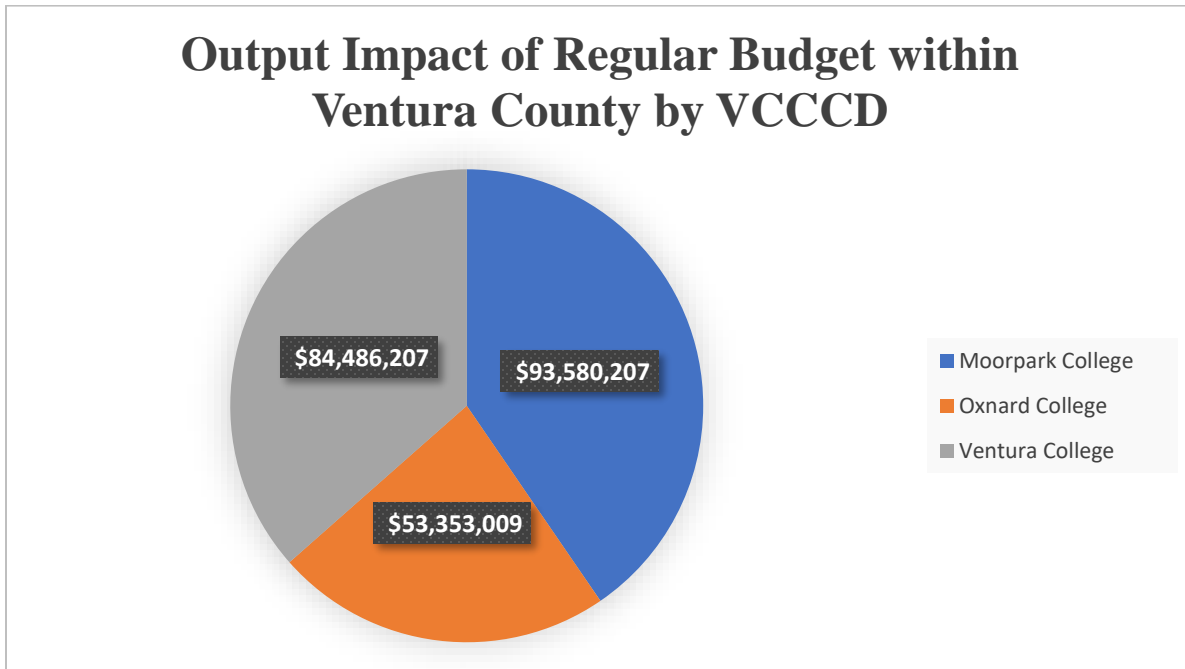


Figure 10: Output Impact of Regular Budget within Ventura County by VCCCD

### Employment Impact of Regular Budget within Ventura County by VCCCD

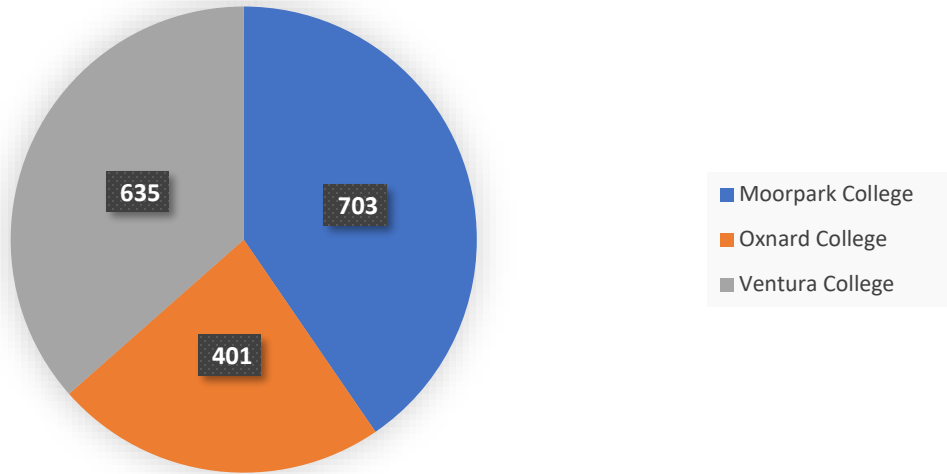


Figure 11: Employment Impact of Regular Budget within Ventura County by VCCCD

### Tax Impact of Regular Budget within Ventura County by VCCCD

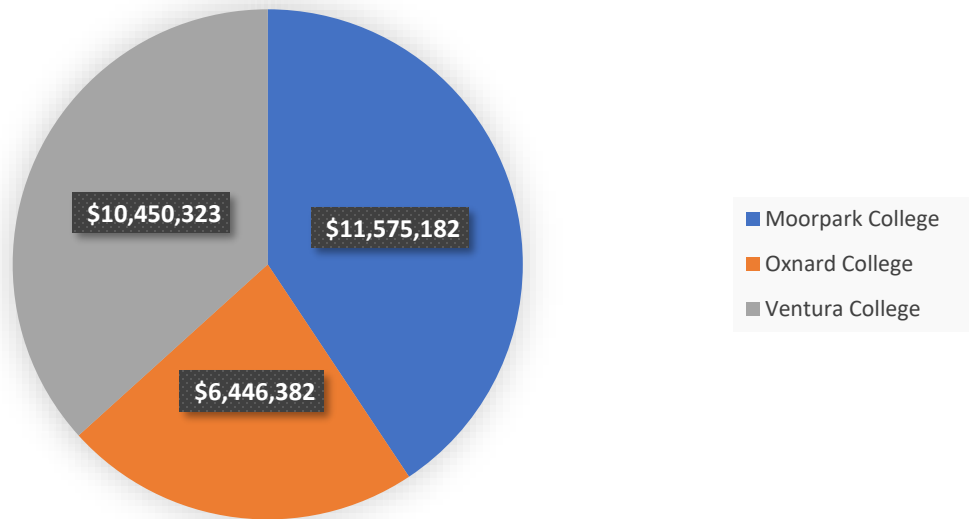


Figure 12: Tax Impact of Regular Budget within Ventura County by VCCCD

These are recurrent impacts of the expenditures that come from the regular budget of every college separately. We have added the budget that the district administration adds to the overall

impact. The report also adds the capital expenditures, which increases the overall impact of the annual expenditures of VCCCD.

### 3. Structure and Variety of Programs Offered Within Ventura County Community Colleges

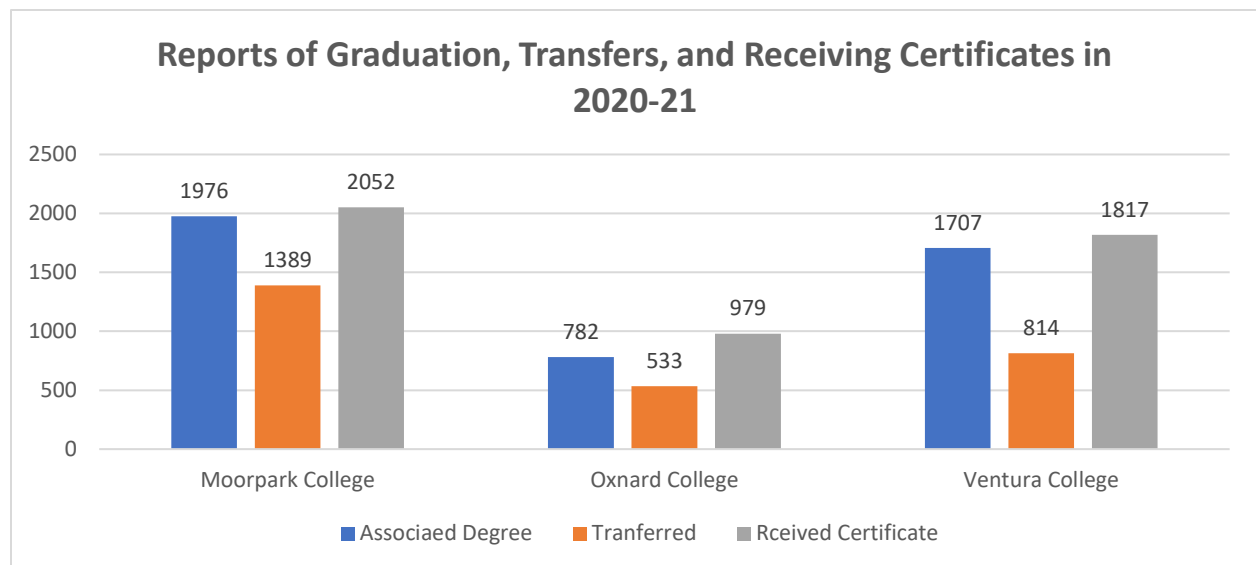
Students are free to choose their major and opt for an Associate Degree and enter the workforce, or continue their work and transfer to a four-year college to continue their studies towards a bachelor's degree. A good number of students at community colleges study for a number of certifications, which can enhance their opportunities for a number of existing or new positions. Courses designed to provide certification in various fields are extremely important and vital to provide the workforce with the skill sets needed at any point of time for a technologically changing economy.

It is hard to make a definitive determination of how the enrollment within a year can tell us what the end results will be. At the same time, a good proportion of students in a community college may be involved in certification programs. Certification programs are essential components of a community college system and its contribution in providing the skills needed by the workforce. These are all vital components of how a community supports higher education, helps students, and in particular the underserved community. They all benefit from affordable educational opportunities and help the workforce with their educational needs.

The following charts provide statistical information for each college and for the entire community college system in Ventura County.

#### 3.1 An Overall Picture of Various Tracks of Studies

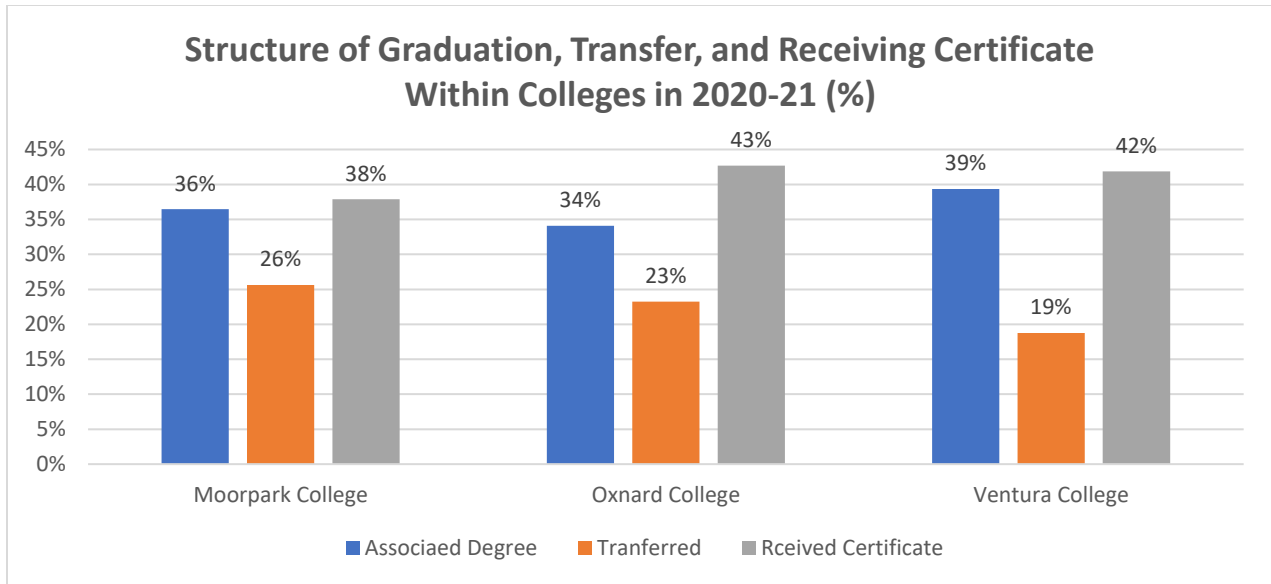
The following two charts provide the total numbers as well as percentages of students in different tracks upon graduation in year 2020-21.



**Source:** Data provided by VCCCD and processing of the authors

Figure 13: Reports of Graduation, Transfers, and Receiving Certificates in 2020-21





**Source:** Data provided by VCCCD and processing of the authors

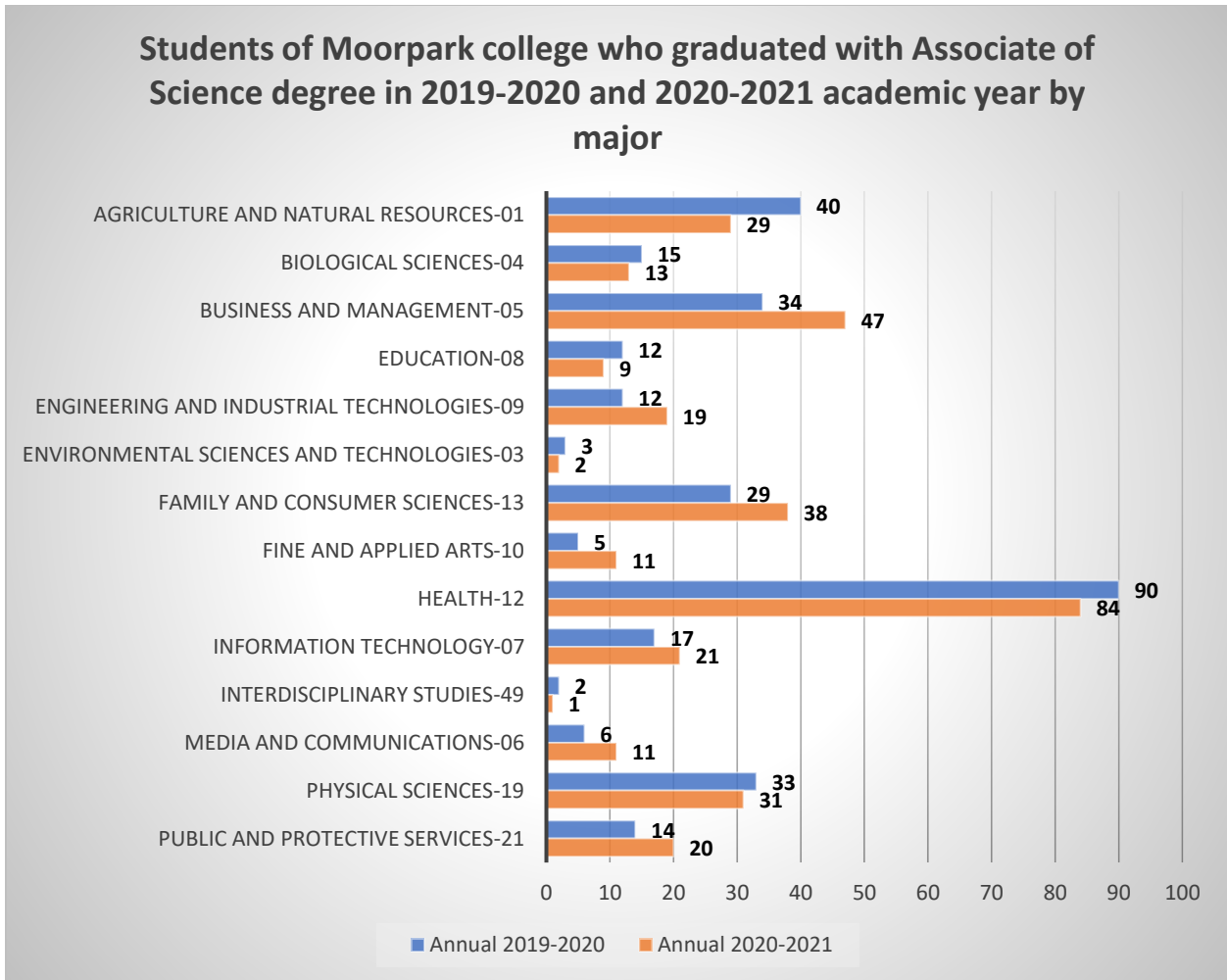
Figure 14: Structure of Graduation, Transfer, and Receiving Certificate Within Colleges in 2020-21 (%)

Setting aside the size of colleges, the structure of tracks pursued in different colleges are similar. However, the percentages of those who received certifications are higher in Oxnard and Ventura Colleges. The percentages of those who received associate’s degrees is the highest in Ventura College. Putting all this together, it is clear that a much smaller proportion of students in all three colleges opt for transferring to four-year colleges to continue their studies towards a bachelor’s degree at this time.

It is hard to reach a clear and definitive conclusion from the above observation. However, it can be said that the highest proportion of students coming to community colleges are ready to make use of their studies in the labor market. This has an important implication for both the potential of community colleges to take a greater share of students graduating with a bachelor’s degree, and at the same time, provide the needed skills and knowledge for the existing workforce within and outside the county.

### 3.2 Breakdown of Students Within Areas of Study in Moorpark College

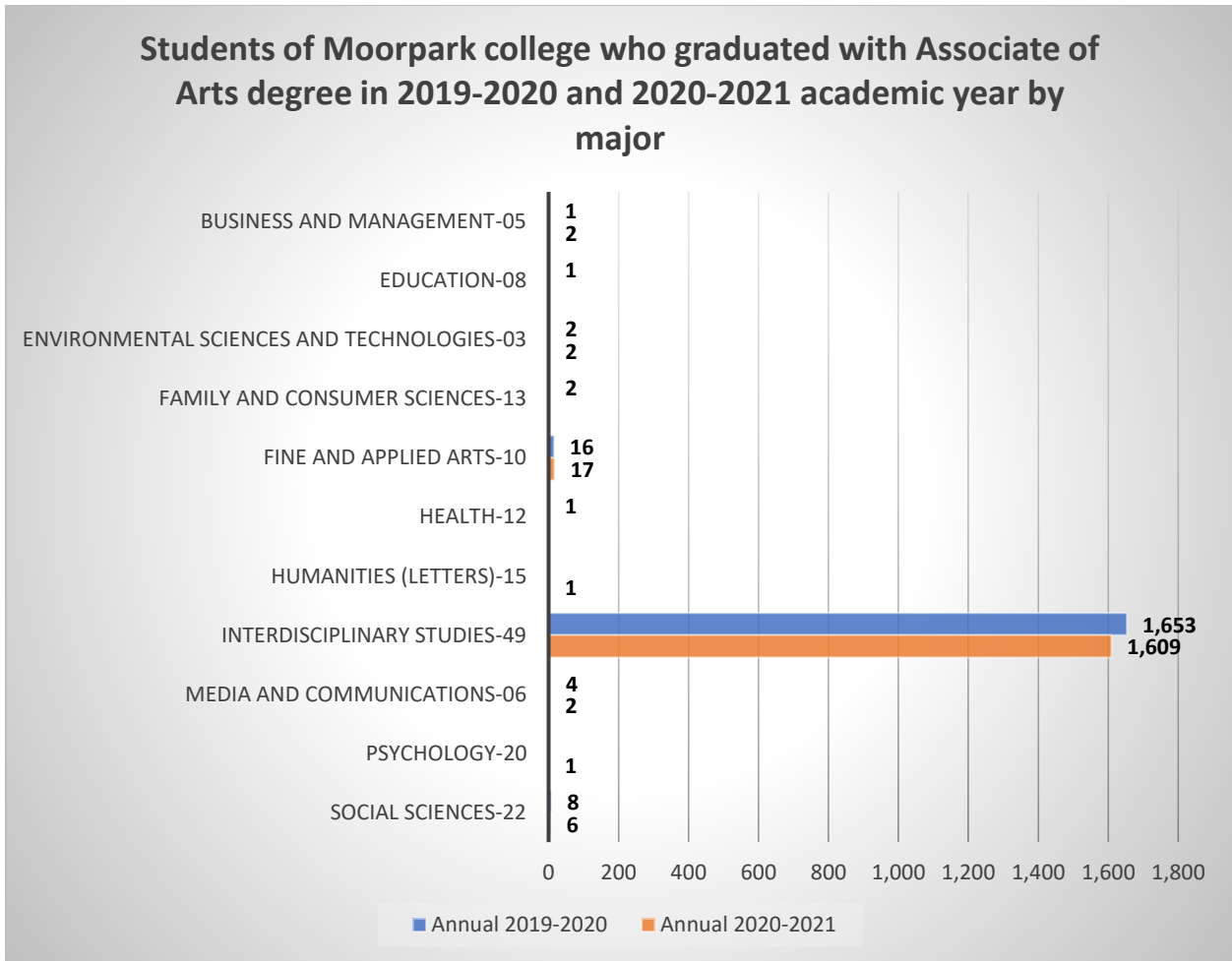
The following charts provide a breakdown of areas of study within Moorpark College. They present different groups of graduates with different areas of interest and expertise. An overview of such a structure can explain the contribution of Moorpark College in providing the needs of the employers within (and also outside) the region. It can also provide important information on how each of the community colleges contribute to the population of students in various areas of study within four-year colleges and universities inside and outside the region.



**Source:** Data provided by VCCCD and processing of the authors

Figure 15: Students of Moorpark college who graduated with Associate of Science degree in 2019-2020 and 2020-2021 academic year by major

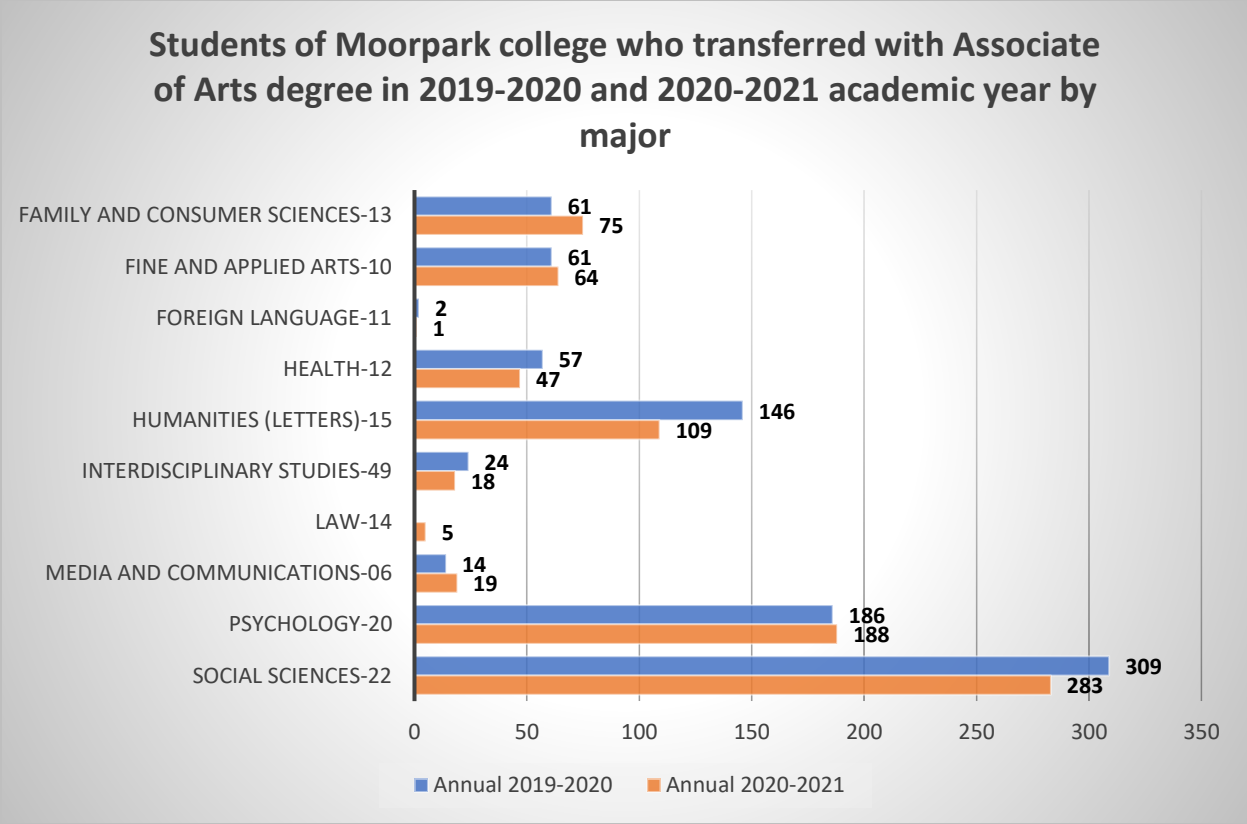
The above chart shows the contribution of Moorpark College to industries such as healthcare services in the region. The importance of the above chart is the contribution of the college to fields of science within the region.



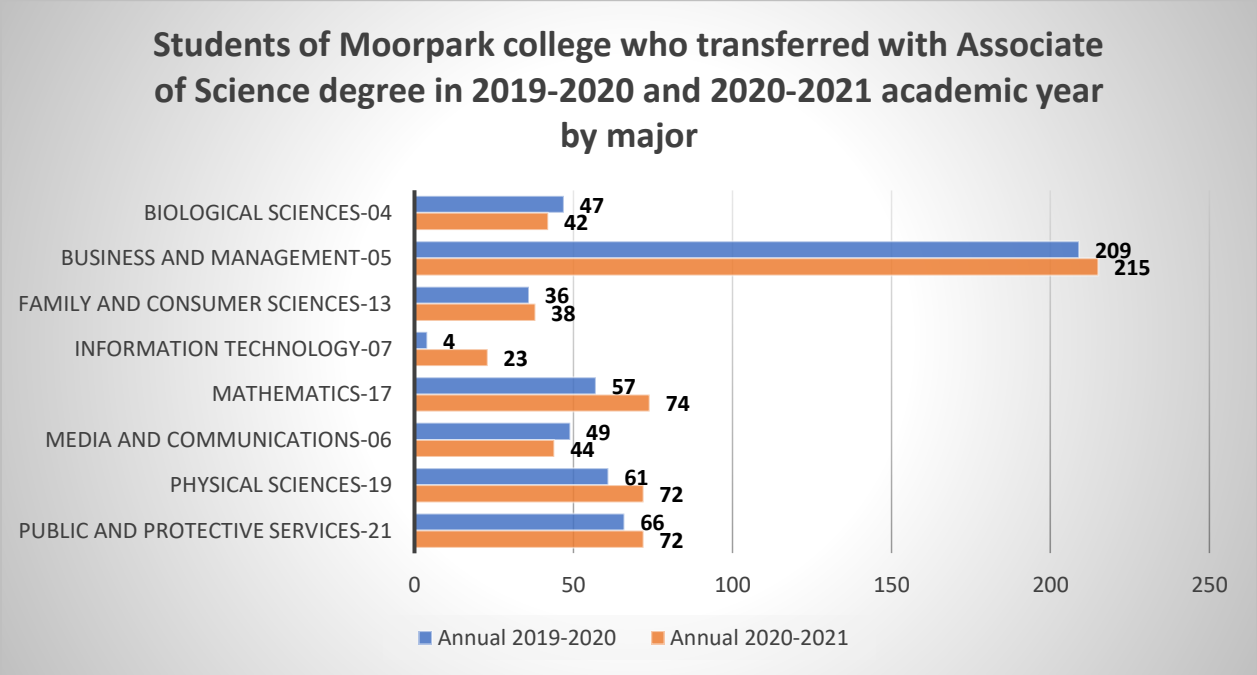
**Source:** Data provided by VCCCD and processing of the authors

Figure 16: Students of Moorpark college who graduated with Associate of Arts degree in 2019-2020 and 2020-2021 academic year by major

Without a doubt, interdisciplinary studies have the lion’s share of the students graduating with an associate’s degree. Interdisciplinary studies degrees prepare graduates in a variety of fields such as teaching, journalism, public relations, and many fields that require a basic college education. It also provides the graduate an opportunity to find the areas of their specialty and liking later on.



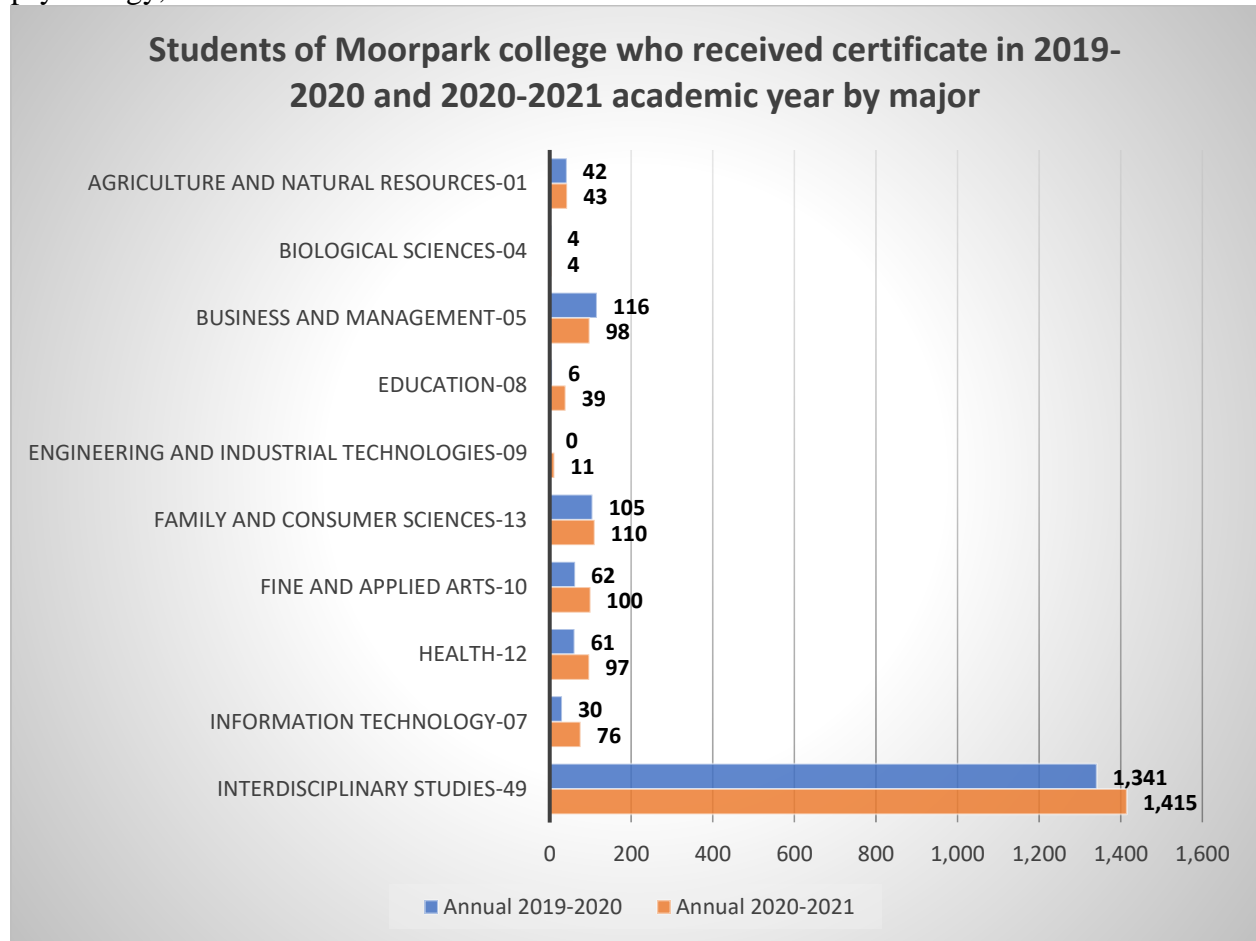
**Source:** Data provided by VCCCD and processing of the authors  
*Figure 17: Students of Moorpark college who transferred with Associate of Arts degree in 2019-2020 and 2020-2021 academic year by major*



**Source:** Data provided by VCCCD and processing of the authors

Figure 18: Students of Moorpark college who transferred with Associate of Science degree in 2019-2020 and 2020-2021 academic year by major

The above chart shows that a large number of students who transfer to four-year colleges are in the areas of business and management. The increase in academic year 20-2021 compared to the previous year is also evident. There is also a high level of emphases on social sciences and psychology, as well as other fields of the humanities.



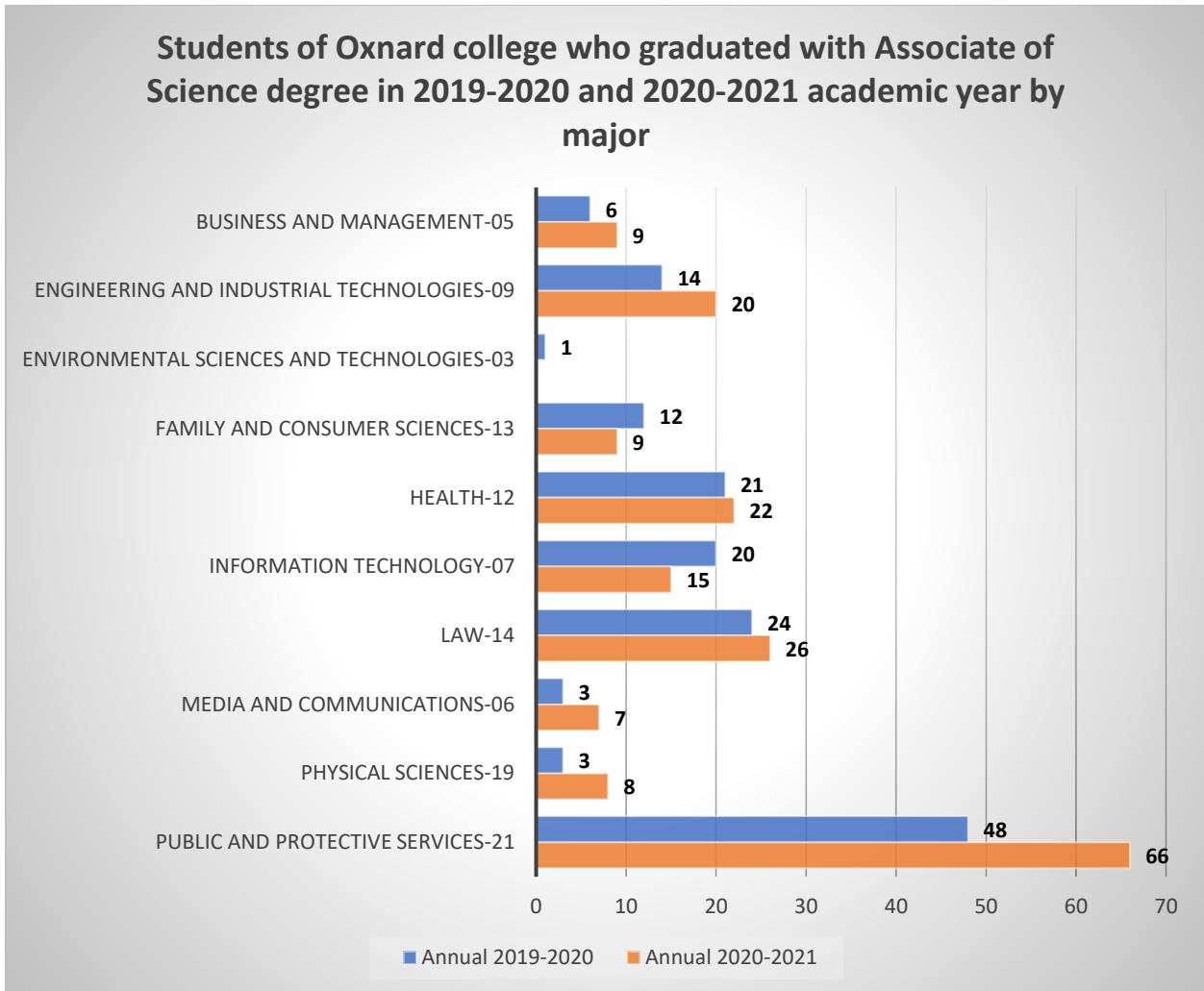
**Source:** Data provided by VCCCD and processing of the authors

Figure 19: Students of Moorpark college who received certificate in 2019-2020 and 2020-2021 academic year by major

The above chart brings attention to the importance of studying for a certificate, and it clearly shows that interdisciplinary studies forms the most desirable field of study of those who pursue a certificate education at Moorpark College.

### 3.3 Breakdown of Students Within Areas of Study in Oxnard College

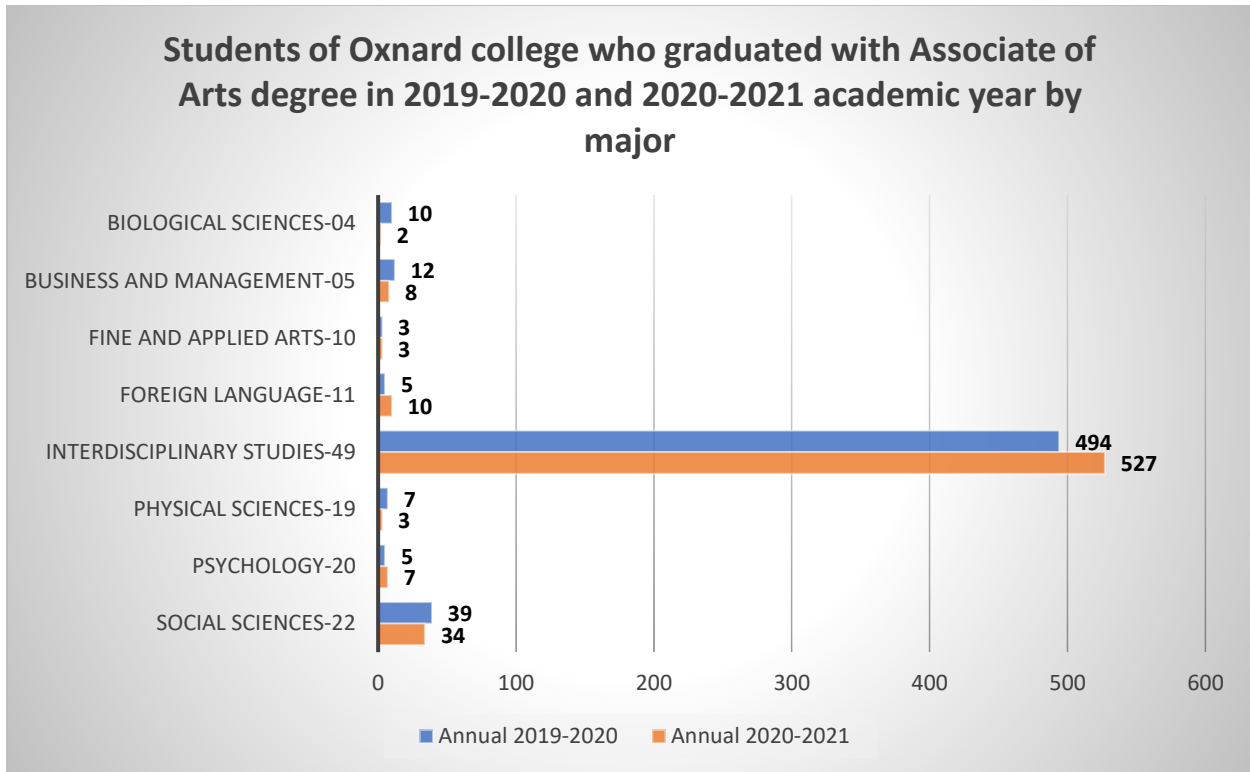
We now take a similar look at Oxnard College, and review the proportion of graduates and change of them from 2019-20 to 2020-21.



**Source:** Data provided by VCCCD and processing of the authors

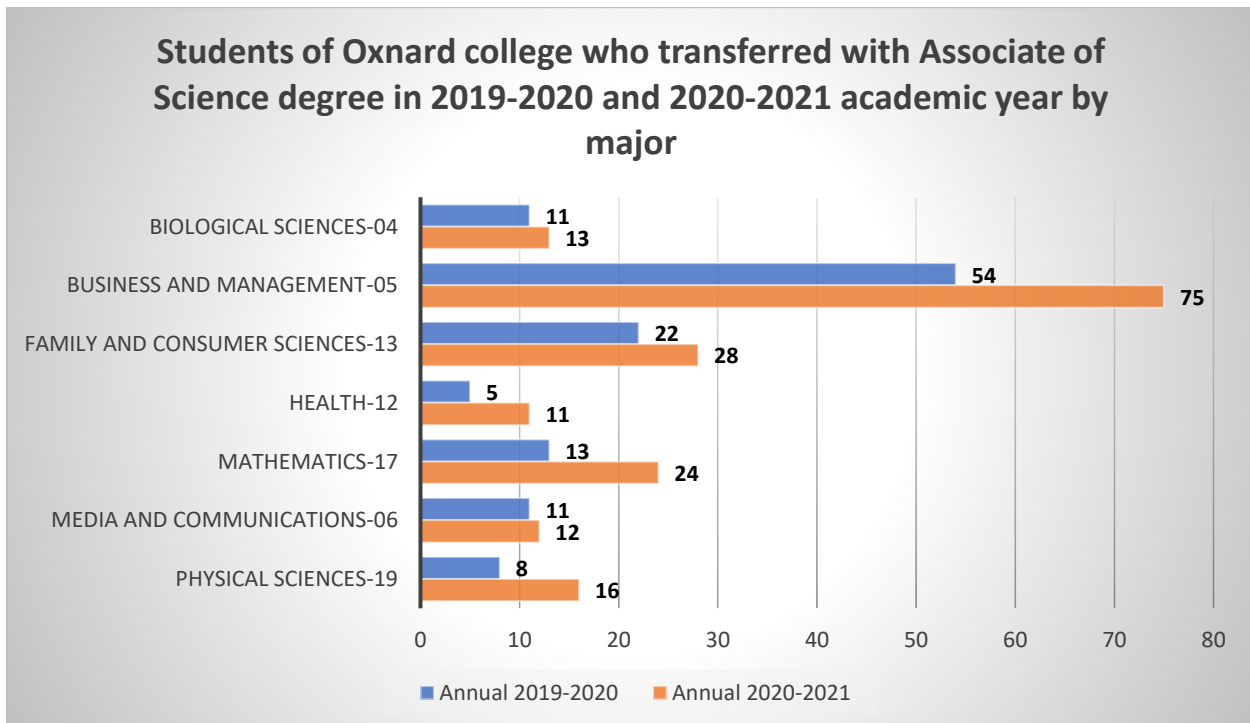
*Figure 20: Students of Oxnard college who graduated with Associate of Science degree in 2019-2020 and 2020-2021 academic year by major*

In Oxnard College, the number of graduates with an Associate’s of Science degree have selected public and protective services. Health has a much lower proportion.



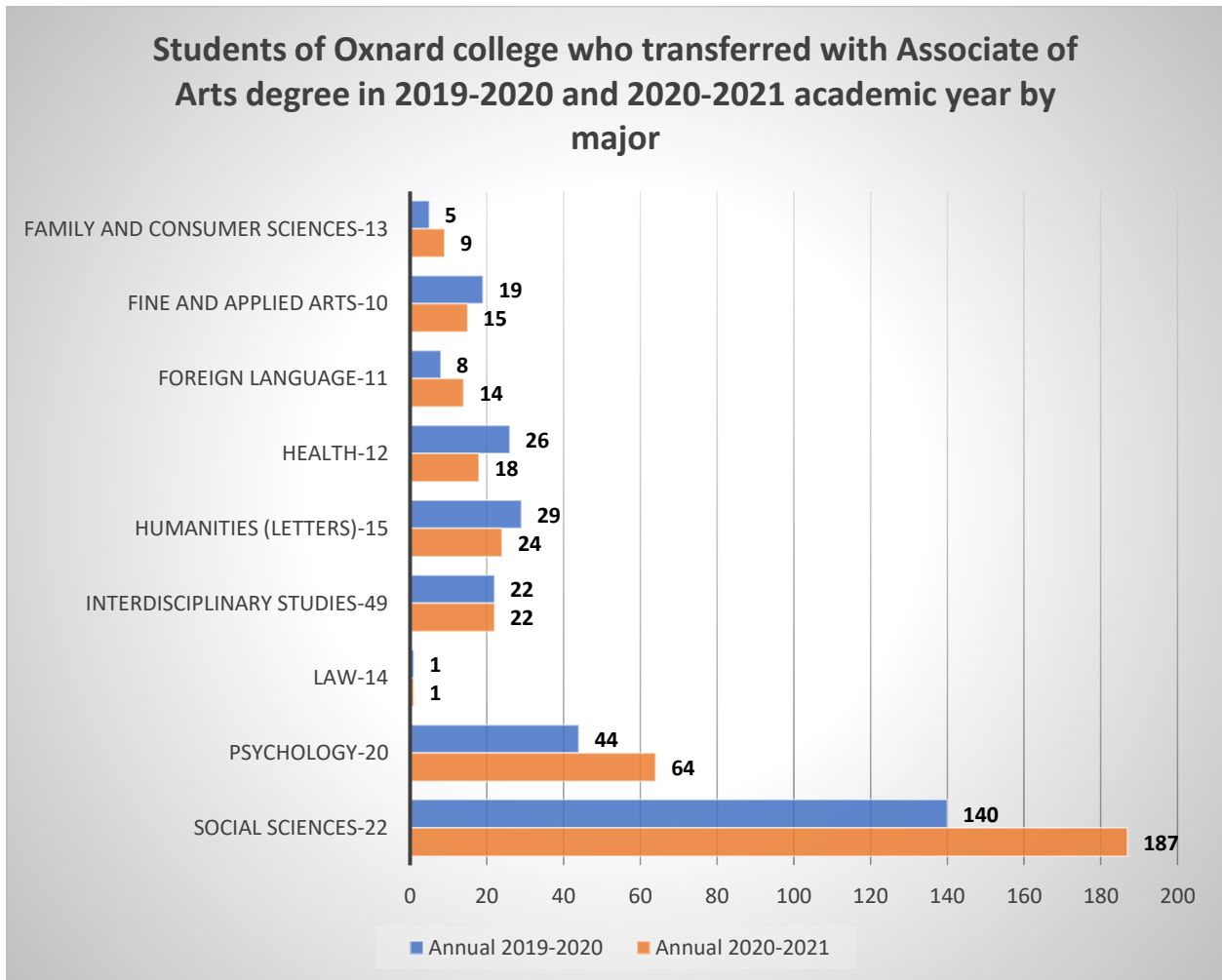
**Source:** Data provided by VCCCD and processing of the authors

Figure 21: Students of Oxnard college who graduated with Associate of Arts degree in 2019-2020 and 2020-2021 academic year by major



**Source:** Data provided by VCCCD and processing of the authors

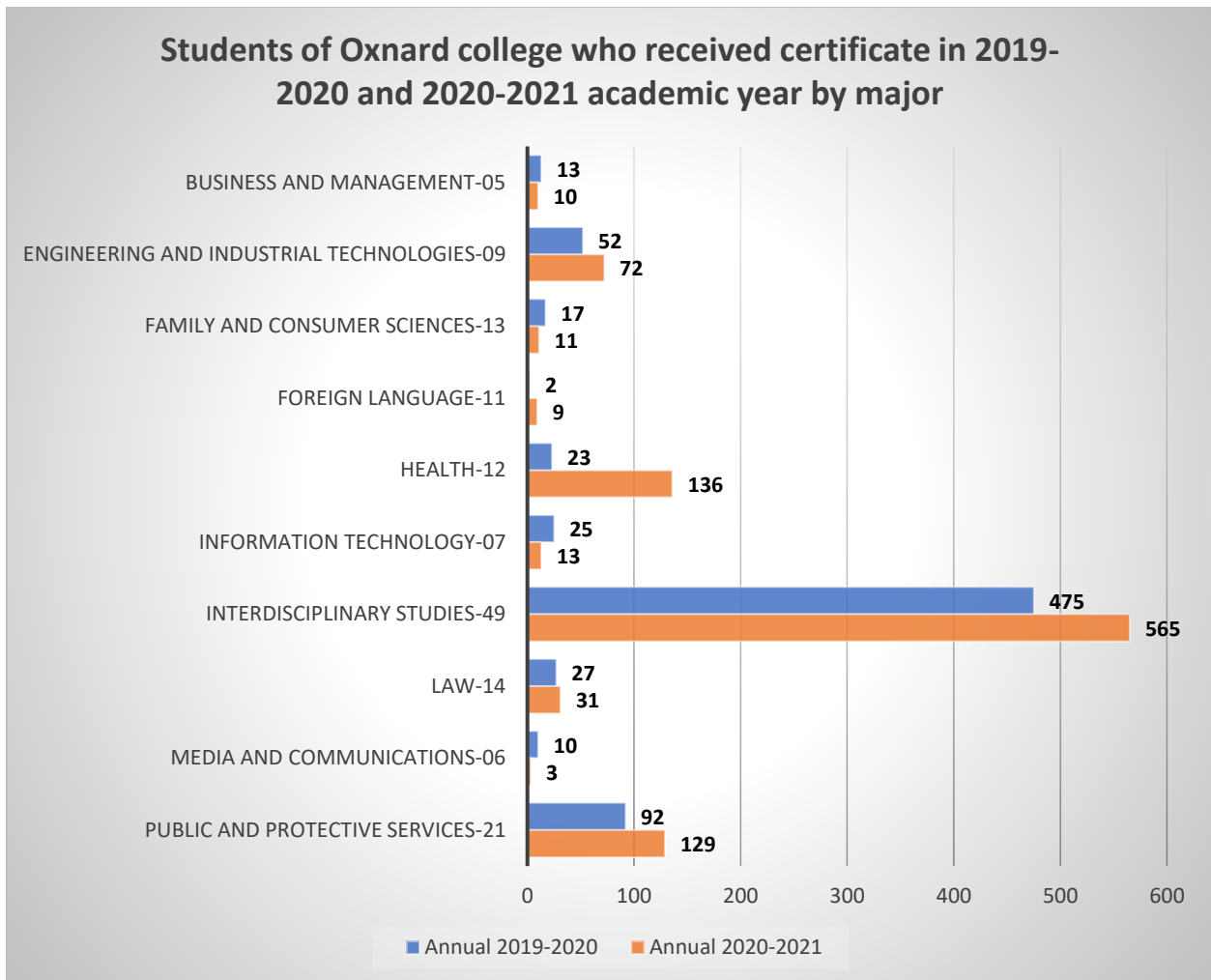
Figure 22: Students of Oxnard college who transferred with Associate of Science degree in 2019-2020 and 2020-2021 academic year by major



**Source:** Data provided by VCCCD and processing of the authors

Figure 23: Students of Oxnard college who transferred with Associate of Arts degree in 2019-2020 and 2020-2021 academic year by major



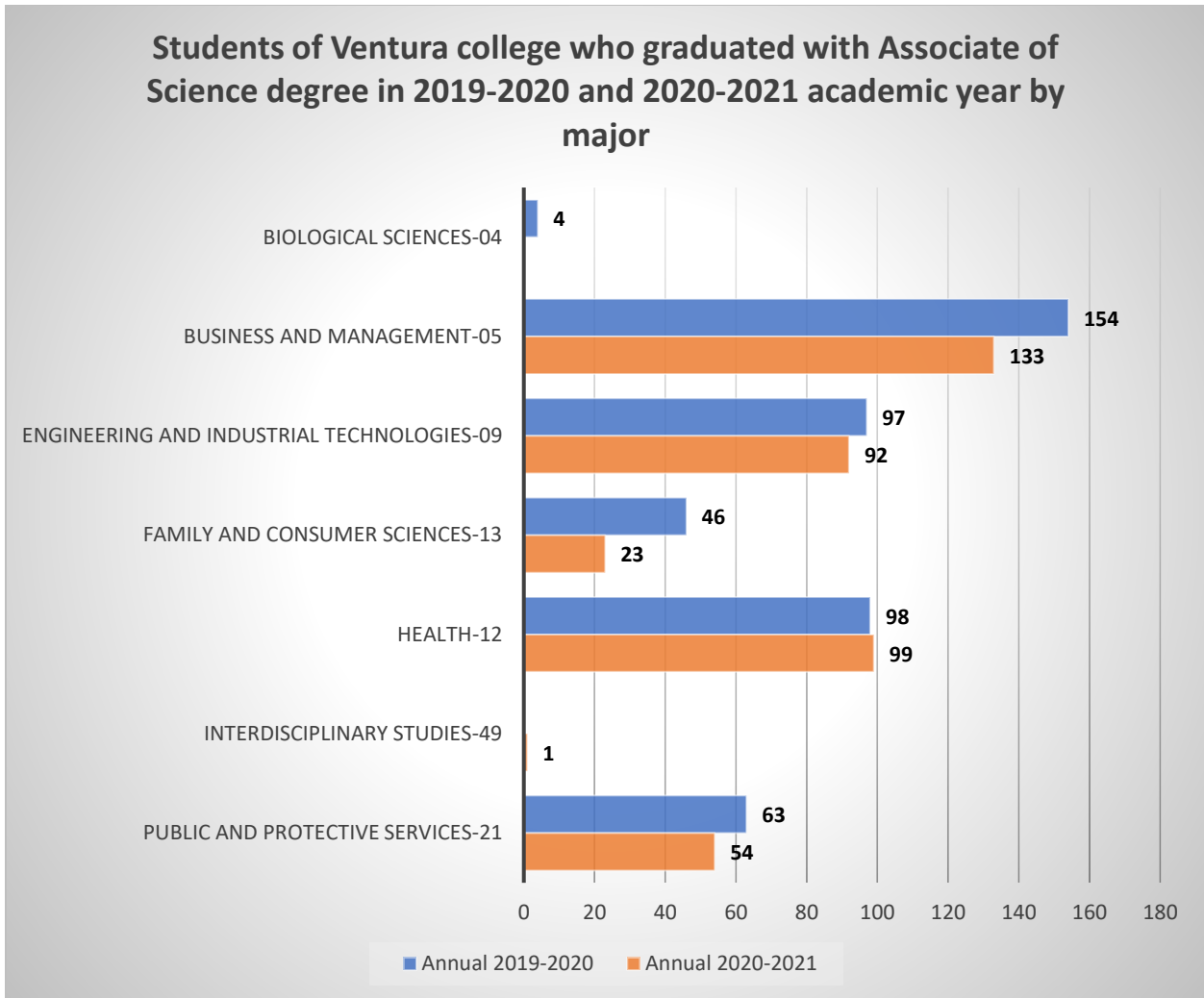


**Source:** Data provided by VCCCD and processing of the authors

Figure 24: Students of Oxnard college who received certificate in 2019-2020 and 2020-2021 academic year by major

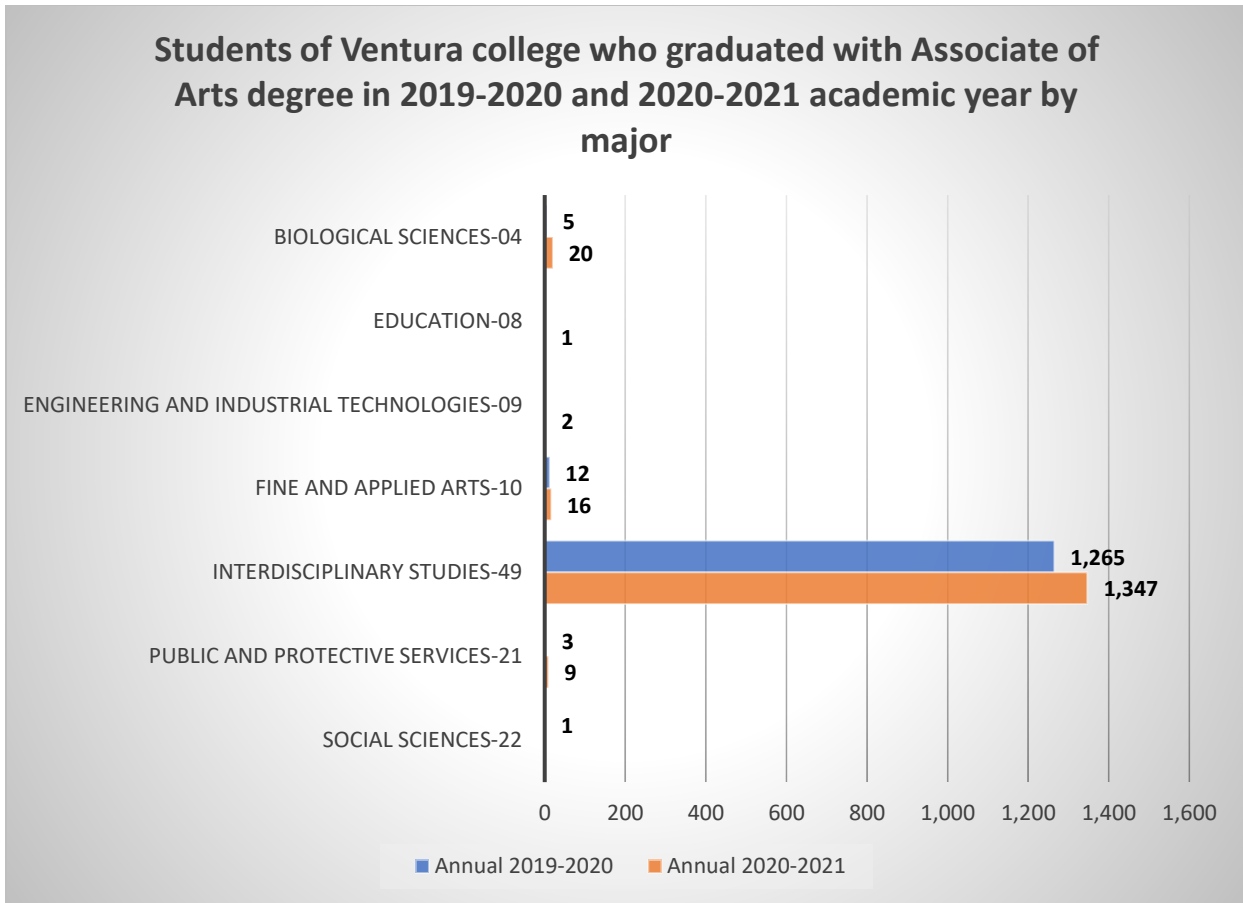
### 3.4 Breakdown of Students Within Areas of Study in Ventura College

We now follow the same line of inquiry for looking into Ventura College, and review the proportion of graduates and their change from academic year 2019-20 to 2020-21. Similarly, we look at the students graduating with either an Associate’s of Science or Associate’s of Arts degree, or those who embarked on transferring to four-year colleges, and those who have opted for receiving certificates in various fields of study and skill building.



**Source:** Data provided by VCCCD and processing of the authors

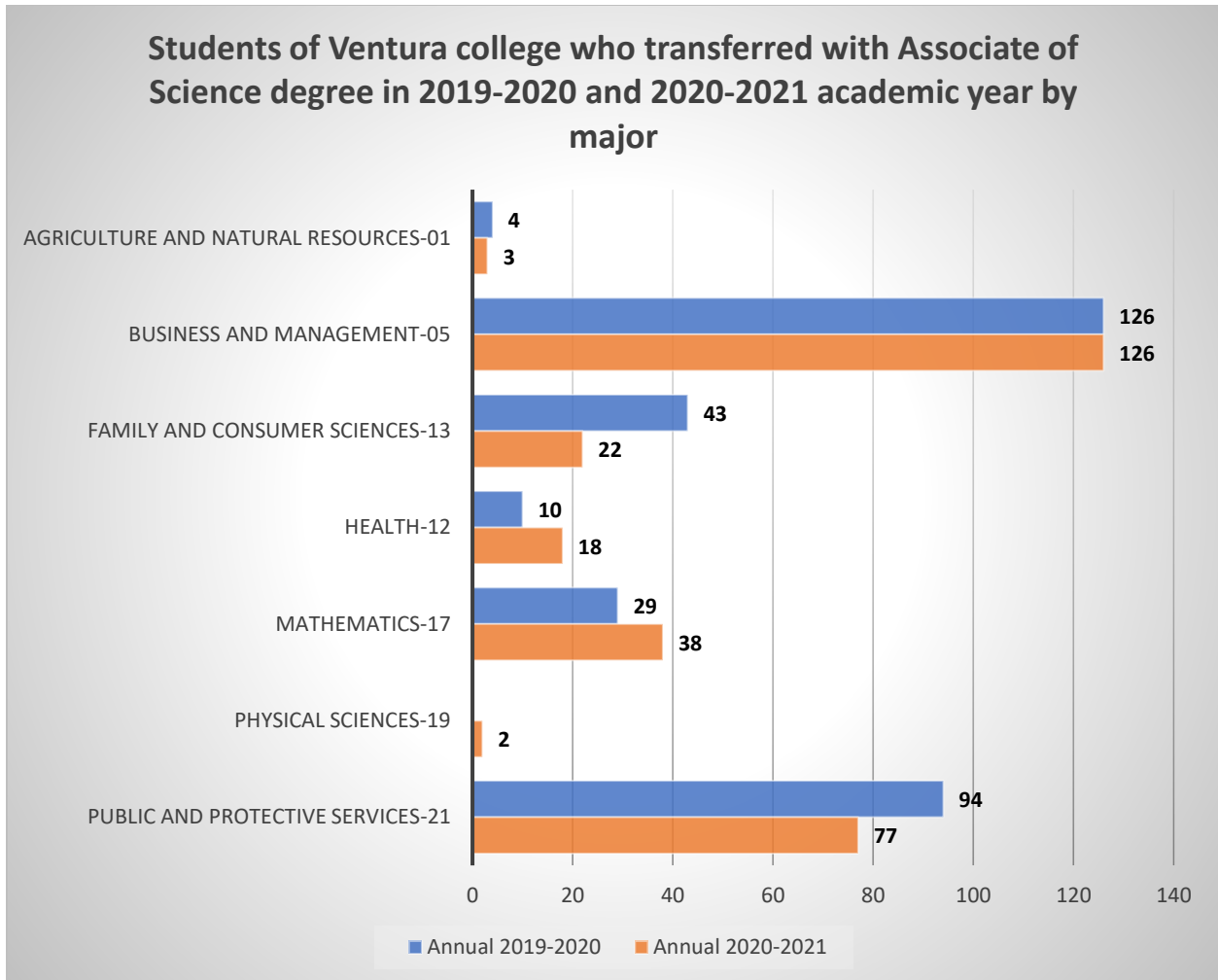
*Figure 25: Students of Ventura college who graduated with Associate of Science degree in 2019-2020 and 2020-2021 academic year by major*



**Source:** Data provided by VCCCD and processing of the authors

*Figure 26: Students of Ventura college who graduated with Associate of Arts degree in 2019-2020 and 2020-2021 academic year by major*

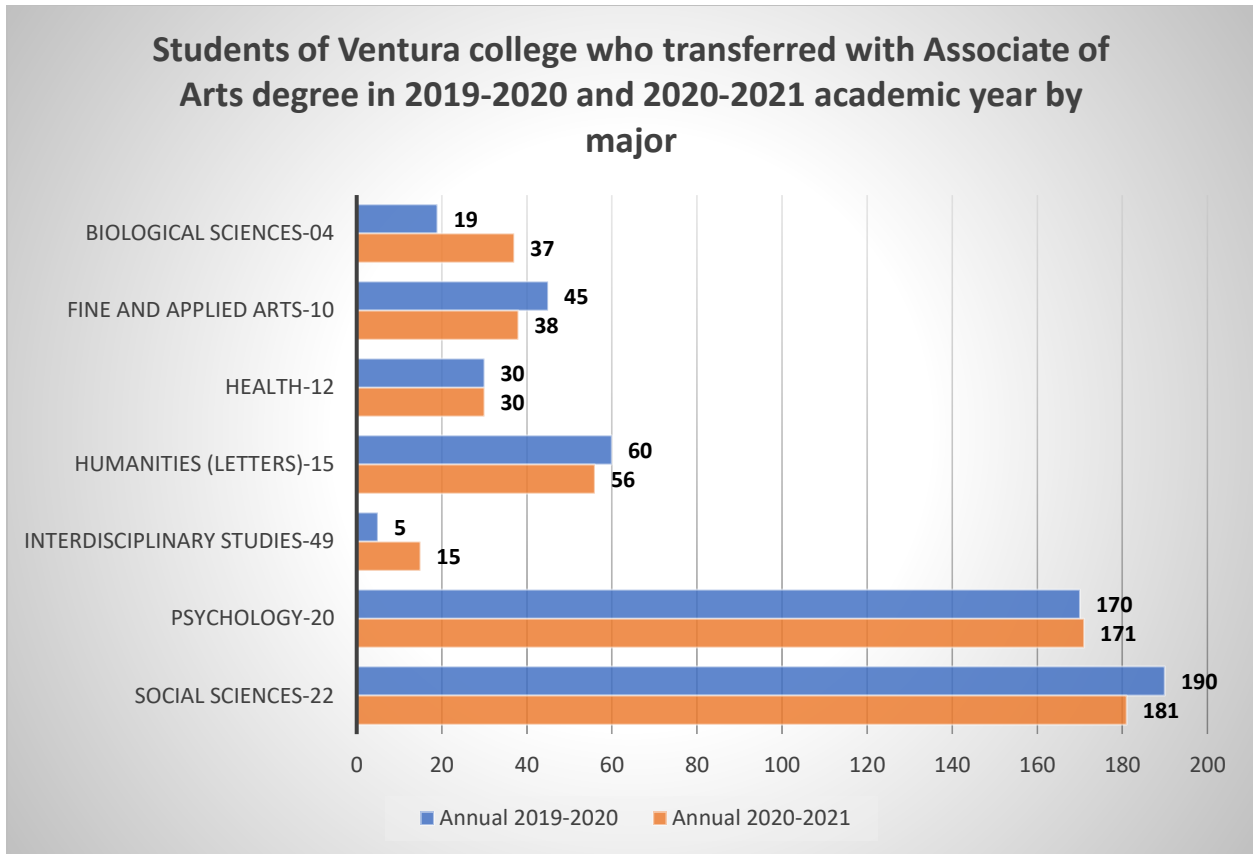
The largest proportion of those who received an associate’s degree and joined the labor force to market their skills and education for employment were in the field of interdisciplinary studies. Second place belongs to business and management. Health and public and protective services also had somewhat significant numbers.



**Source:** Data provided by VCCCD and processing of the authors

*Figure 27: Students of Ventura college who transferred with Associate of Science degree in 2019-2020 and 2020-2021 academic year by major*

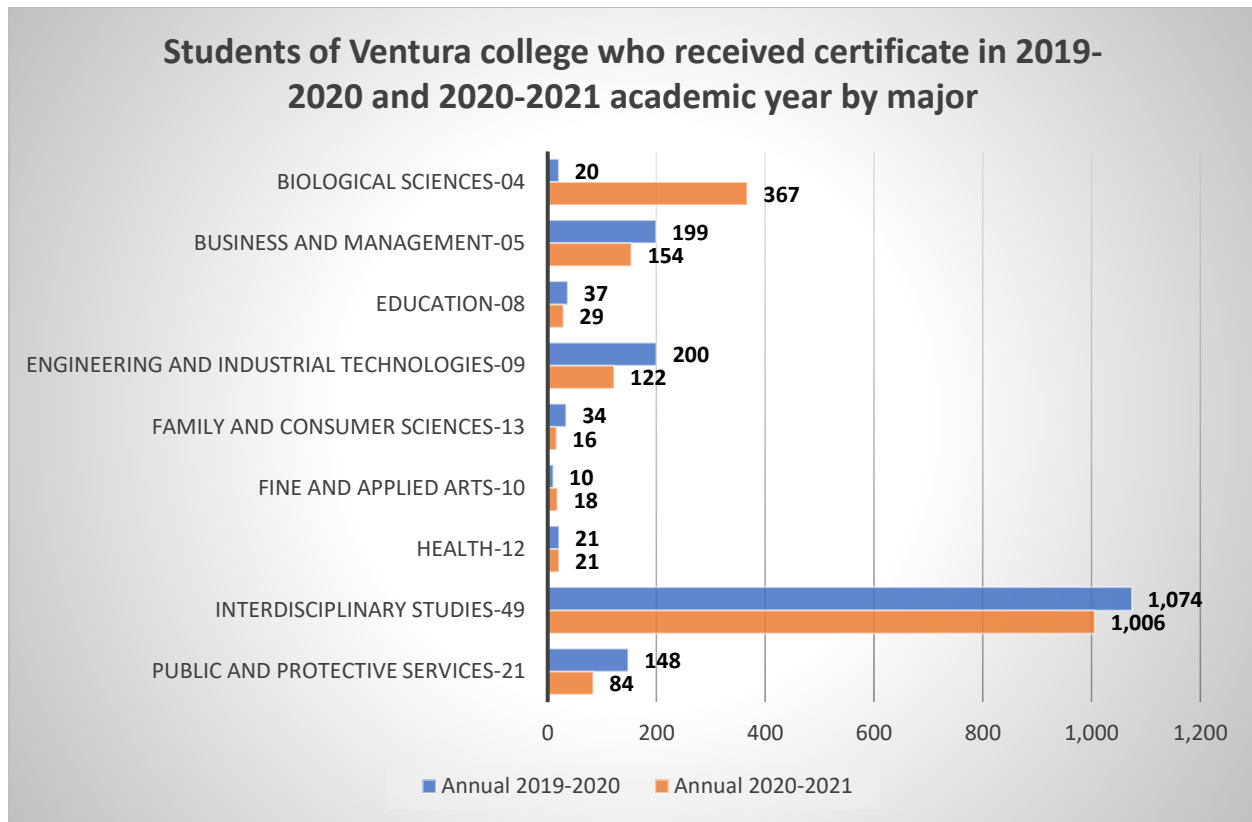
The above chart shows business and management formed the highest number of transferred students with an Associate’s of Science degree. Public and protective services were the second-highest rated group.



**Source:** Data provided by VCCCD and processing of the authors

*Figure 28: Students of Ventura college who transferred with Associate of Arts degree in 2019-2020 and 2020-2021 academic year by major*

The above chart shows that two subjects brought the highest number of students with an Associate of Arts degree to four-year colleges from Ventura College. Those fields were psychology and the social sciences. There is also a lesser, but significant number of students who transferred to four-year colleges with a degree in the humanities.



**Source:** Data provided by VCCCD and processing of the authors

Figure 29: Students of Ventura college who received certificate in 2019-2020 and 2020-2021 academic year by major

Finally, the above chart shows a very large number of students who graduated from Ventura College with a variety of certificates. The largest number by a large margin of difference is those who received certificates in interdisciplinary studies. An interesting and hopeful surge exists in the field of biological sciences. This surge may be due to arrival of COVID-19 and the urgent need for reactionaries in all areas of biological sciences.

It is important to bear in mind that students who earn a certificate are also more likely to continue their education through a degree program, one study found. Inside Higher Ed reports on the study, which found 20% of those who earn a certificate eventually move on to an associate’s degree, and another 13% complete a bachelor’s degree. This additional education can serve as an important milestone in working up the corporate ladder, gaining supervisory and management positions later on.<sup>8</sup>

Ideally, we should use such information and evaluate the increase in productivity of workers and increases in their lifetime earnings and other human resource development that such changes may bring about in an economic impact assessment.

<sup>8</sup> For more information see Grace Chen, (2020), The Benefits of Professional Certification from Your Local Community College, Community College Review; <https://www.communitycollegereview.com/blog/the-benefits-of-professional-certification-from-your-local-community-college>

## 4. Economic Impact of Students' Expenditures in Ventura County Community Colleges

Students have a significant economic impact on a region through their expenditures in relation to their decision to study at a college. Related expenditures can be defined as students' own cost of living and purchases related to their study, plus spending by those who come to visit them. The latter expenses are more apparent when students reside on the campus or in surrounding areas in order to be able to attend the college. The impact can be far greater if a larger group of students attend a college fulltime and students travel from other parts of the country or overseas to attend a college.

While none of the three community colleges have dormitories or other student housing within their own campus, they do have students who reside in the region for the reason of attending the college. We should mention that a significant number of students attending any of the three community colleges are part-time students. The colleges, however, help students who need housing to find suitable places. We did not have specific information about these groups of students. However, VCCCD provided some information from which a reliable pattern of students' expenditures could be deducted and used for assessing their economic impact.

Finally, some of the information provided could present certain cost items from more than one source. We made every effort to avoid any duplicate use of information. We have reported the available information for a number of relevant reasons, but did not use them in any way that would cause multiple calculations of one impact.

We received information from which we could make an estimation of travel mileage from students' residents to various colleges. This information is very useful but could not be used to establish the actual level of travel mileage during a typical day or any period of time, since there is no information to help us make such an estimation. We do, however, have information regarding travel expenses of students per annum, and we used those estimates to count students' travel expenses as a part of students' overall expenditures.

### 4.1 Moorpark College: Students' Expenditures

We used the latest available information to measure the economic impact of students' expenditures. They are available per semester (12 credits establish full-time attendance) and on a yearly basis (24 credits).<sup>9</sup> We also used cost items from other sources which provide estimates for California residents. As for the total number of students, we employed the latest number

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<sup>9</sup> For more information about Moorpark College student expenditures see <https://www.moorparkcollege.edu/departments/student-services/isp/admission/tuition-and-fees#:~:text=Tuition%20and%20Fees%20%20%20%20Tuition%20and,%20%20%248%2C040.00%20%2016%20more%20rows%20>

provided by VCCCD for the academic year 2020-21. Here is the relevant information which was used to estimate the economic impact of students' expenditures from Moorpark College:<sup>10</sup>

- Total number of students 14,361
- Percentage of Fulltime Students 33% (4,737 students)
- Part-time Students 9,624
- Percentage of Associate Degree 36%
- Transferring to Four-year College 26%
- Working on Certificates 38%

This study uses college expenditures to assess the economic impact of offering educational services. Therefore, as explained earlier, students' direct payments to any of the colleges creating an income for the college has already been considered within the methodology of estimating economic impact for this study.

Other expenses of students which are related to their decision to attend these colleges should be considered in this study, as their impacts are not brought forth by the college expenditures. In other words, the decision to study at college is the basis of any item of expense, which means the expense would not occur if the student did not decide to pursue studying at college. This criterion may at times cause a complex situation for assigning a particular cost of education in an accurate manner. We have, however, made every effort to stay on the cautious side, and avoid any overestimation. It is correct to say that we have deliberately chosen to be underestimating the economic impact of study-related expenses since the lines of separating expenses are unclear. These occasions will be brought up and pointed out in their own places.

Based on the preceding discussions, this study takes the following cost items as related to the cost of collegiate study not included in the regular or capital budget of a college:

- Books and educational supplies
- Cost of housing (living expenses)
- Transportation
- Major medical health insurance<sup>11</sup>
- Other expenses<sup>12</sup>

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<sup>10</sup> We need to bear in mind that percentages of students opting for an AA degree, those intending to transfer to four-year colleges, and working towards receiving certificates were calculated based on the graduation rates provided by the VCCCD upon conclusion of academic year 2020-21.

<sup>11</sup> Students pay a fixed fee towards their healthcare contribution (unless they are exempt on certain grounds). In addition to such costs which are paid to the colleges, students should have their own health insurance. This is estimated to be around \$1,800 per year for major medical insurance. We do not have such estimates for either Oxnard or Ventura Colleges. However, there is an estimate of \$3,276 as personal "miscellaneous," which may include all other costs, including medical insurance. We used the same estimate of \$1,800 per year for such expenses. It is important to bear in mind that the average cost of insurance per month in California is around \$537 per month, which is about \$6,444 per year (see <https://www.valuepenguin.com/average-cost-of-health-insurance> for more information).

<sup>12</sup> Other expenses are also important and for a full account of students, they should be included. However, it is hard to allocate them into specific items and also difficult to assign them clearly to expenses directly related to the



#### 4.1.1 Breakdown of Costs of Studies for Fulltime Students

This study examines the related cost for two semesters, which does not include additional optional summer studies. The expenses are therefore an underestimation of the actual and effective expenses. *It is therefore correct to add that the economic impact of students' expenses is, to a great extent, underestimated.*

With regard to fulltime students, we include all the nine-month based items of expenses. This led us to the following annual expenses for the total number of 4,737 students who have been undergoing their college studies fulltime. The remaining 9,624 were studying as part-time students.

- ✓ Books and educational supplies =  $\$1000 \times 4,737 = \$4,737,000$
- ✓ Cost of housing (living expenses) =  $\$13,500 \times 4,737 = \$63,949,500$
- ✓ Transportation<sup>13</sup> =  $\$999 \times 4,737 = \$4,732,263$
- ✓ Major medical health insurance =  $\$1800 \times 4,737 = \$8,526,600$

**Total = \$81,945,363**

The above total amount is an underestimation of expenses endured by only fulltime students. The total amount does not provide a clear and accurate picture of the economic impact of the students. Each item will be applied to a particular model which will be set up for measuring the direct, indirect, and induced impact on particular industries. This will occur after determining the direct impacts of students who have been studying part-time or who are obtaining certificates.

#### 4.1.2 Breakdown of Costs of Studies by Part-time Students

Part-time students in some respects have the same impacts as brought up when the economic impacts of fulltime students were discussed. There is however, a difference between the allocation of one's living expenses when their attention to studying is a component of their work and devotion of time.<sup>14</sup>

It is hard to have a clear picture of the distribution of students during a typical year who study part-time in the Ventura Community Colleges. We therefore decided to take only a third of the cost of living expenses towards the cost of study by part-time students, and with regard to other

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education of students without more information. We therefore decided to exclude them in our economic impact assessment of students' expenditures, and it is also correct to point out that such an omission results in an underestimation of the full impact of students' expenditures.

<sup>13</sup> For transportation, we used the estimates for parents without dependents as fulltime students. This appears more relevant than the estimates for "all others."

<sup>14</sup> It may be argued that in many respects, the life circumstances of those who study part-time or fulltime may not differ much. This is because in reality, a significant number of students who are studying for a degree also work in order to make ends meet and to be able to study and pay for their expenses. It is also true to state that the proportion of students who work while studying in community colleges is even higher. This is to assert that assuming being a fulltime student does not require one to avoid participating in labor market, and therefore, presuming that studying fulltime should be clear grounds for being exempt from labor market participation is often incorrect.

expenses, we used a relative value of 50%. With this structure in place, we arrived at the following breakdown of part-time students' expenditures at Moorpark College:

- ✓ Books and educational supplies =  $\$500 \times 9,624 = \mathbf{\$4,812,000}$
  - ✓ Cost of housing (living expenses) =  $\$13,350/3 \times 9,624 = \mathbf{\$42,826,800}$
  - ✓ Transportation =  $\$999/2 \times 9624 = \mathbf{\$4,807,188}$
  - ✓ Major medical health insurance =  $\$1800/2 \times 9,624 = \mathbf{\$8,661,600}$
- Total = \$61,107,588**

Division of students into fulltime and part-time status has the advantage of excluding any distinction based on the type of degree or certificate that students may be seeking, and therefore simplifies the estimation into a pragmatic criterion without the need of any arguments surrounding the nature of the program or its end products. It also has the advantage of being realistic about any possible changes that may occur in the life of a student, which would cause a change in their plan of study.

We have added the areas of expense for each of the four areas of impact estimations, and set up the pertinent input-output models for the combined estimation. This is to estimate the direct, indirect, and induced economic impacts for the creation of regional, statewide, and national impacts for the following aggregate expenditures of fulltime and part-time students:

- Books and educational supplies = **\$9,549,000**
  - Cost of housing and living expenses = **\$106,776,300**
  - Transportation = **\$9,539,451**
  - Major medical health insurance = **\$17,188,200**
- Total = \$143,052,951**

We used the above information within our regional input-output model and estimated the direct, indirect, and induced impact on regional output, the number of jobs created, and tax revenue for different levels of governments. The results are presented in the following table.

Economic Impact of Moorpark College Students Expenditures						
	Direct	Indirect	Induced	TOTAL		
Output Impacts	143,052,951.0	28,296,195.4	19,979,398.0	191,328,544.4		
Employment Impact	501.2	122.5	111.0	734.6		
Tax Impact	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	TOTAL
Federal Tax	\$3,205,285	\$390,075	\$1,625,632	\$4,150,040	\$5,329,411	\$14,700,443
State and Local Tax	\$110,376		\$12,570,642	\$1,720,221	\$3,362,540	\$17,763,779

Table 5: Economic Impact of Moorpark College Students Expenditures

The above chart shows that through students' expenditures at Moorpark College, some \$191.3 million are added to the regional output. Some 735 jobs are created, and all three levels of government received nearly \$32.5 million in tax revenue, out of which close to \$18 million goes to state and local governments.

## 4.2 Oxnard College: Students' Expenditures

We followed the same process and methodology for estimating the students' expenditures based on the breakdown of the total enrolled students in academic year 2020-21. Here is the relevant information which were used to estimate the economic impact of students' expenditures from Oxnard College:

- Total number of students 7,418 students
- Percentage of Fulltime Students 30% (2,225 students)
- Part-time Students 5,193
- Percentage of Associate Degree 34%
- Transferring to Four-year College 23%
- Working on Certificates 43%

We used the available information to estimate the overall cost of full and part-time students in the college.

### 4.2.1. Breakdown of Costs of Studies by Fulltime Students

According to the latest available information for academic year 2020-21, Oxnard College had some 7,418 students broken down as 2,225 fulltime and 5,193 as part-time students. With such a breakdown, we have come to the following estimation for direct expenditures of Oxnard College fulltime students:

- ✓ Books and educational supplies =  $\$1000 \times 2,225 = \mathbf{\$2,225,000}$
- ✓ Cost of housing (living expenses) =  $\$9,081^{15} \times 2,225 = \mathbf{\$20,205,225}$
- ✓ Transportation<sup>16</sup> =  $\$999 \times 2,225 = \mathbf{\$2,222,775}$
- ✓ Major medical health insurance =  $\$1800 \times 2,225 = \mathbf{\$4,005,000}$

<sup>15</sup> With regard to the cost of housing (living expenses), there were two widely different annual estimates. They were \$9,081 dollars for living with parents without dependents, and almost twice as much at the annual rate of \$17,253 dollars for others. We decided to stay on a very conservative basis and use the lowest amount of \$9,081 for both Oxnard and Ventura Colleges. It should therefore be mentioned that we have underestimated the true impact of students' expenses with regard to living expenses to a significant degree.

<sup>16</sup> For transportation, we used the estimates for parents without dependents as fulltime students. This appears more relevant than the estimates for "all others."

**Total = \$ 28,658,000**

#### 4.2.2. Breakdown of Costs of Studies by Part-time Students

We used the same logic and procedures followed in the case with Moorpark College, and used the same proportion for calculating various items of students' expenses as they pertain to part-time students. They are reported below for Oxnard College:

- ✓ Books and educational supplies =  $\$500 \times 5,193 = \mathbf{\$2,596,500}$
- ✓ Cost of housing (living expenses) =  $\$9,081/3 \times 5,193 = \mathbf{\$15,719,211}$
- ✓ Transportation =  $\$999/2 \times 5,193 = \mathbf{\$ 2,593,904}$
- ✓ Major medical health insurance =  $\$1800/2 \times 5,193 = \mathbf{\$4,673,700}$

**Total = \$25,583,315**

Similar to the previous section, we have added the areas of expenses for each of the four areas of impact estimations and set up the pertinent input-output models for the combined estimation. This is to estimate the direct, indirect, and induced economic impacts for the creation of regional, statewide, and national impacts for the following aggregate expenditures of fulltime and part-time students.

- Books and educational supplies = **\$4,821,500**
- Cost of housing and living expenses = **\$35,924,436**
- Transportation = **\$4,816,679**
- Major medical health insurance = **\$ 8,678,700**

**Total = \$ 54,241,315**

We used the above estimates of various items of students' expenses in our regional input-output model and estimated the economic impacts. The results are presented in the following table.

Economic Impact of Oxnard College Students Expenditures						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	54,241,315.0	11,131,962.5	8,144,966.6	73,518,244.1		
<b>Employment Impact</b>	193.0	48.3	45.2	286.5		
<b>Tax Impact</b>	<b>Employee Compensation</b>	<b>Proprietor Income</b>	<b>Tax on Production and Imports</b>	<b>Households</b>	<b>Corporations</b>	<b>TOTAL</b>
<b>Federal Tax</b>	\$1,375,748	\$139,812	\$580,067	\$1,690,045	\$1,876,362	\$5,662,034
<b>State and Local Tax</b>	\$47,375		\$4,485,528	\$700,536	\$1,183,872	\$6,417,311

Table 6: Economic Impact of Oxnard College Students Expenditures

The above chart shows that in total, some \$73.5 million were added to the regional output. These economic activities created some 286 jobs in the region. Overall, some \$12 million in tax revenue was created for the federal, state, and local governments. Some \$6.4 million in tax revenue went directly to state and local governments.

### 4.3 Ventura College: Students' Expenditures

We followed the same methodology, process, and bases of students' expenses from other two colleges for Ventura College. We employed the latest available information for academic year 2020-21 and used the ratios calculated for students who graduated with one of the three possible courses of study based on the latest available information.

- Total number of students 13,312
- Percentages of Fulltime Students 31% (4,127)
- Part-time Students 9,185
- Percentage of Associate Degree 39%
- Transferred to Four-year College 19%
- Working on Certificate 42%

We used the information and estimated the breakdown of various student expenses for the two different categories of students in Ventura College. The details of this estimation are presented below.

#### 4.3.1. Breakdown of Costs of Studies by Fulltime Students

In academic year 2020-21, Ventura College had 13,312 students, out of which some 4,127 were studying fulltime. Using the same cost per student employed for Oxnard and Moorpark Colleges, we arrived at the following breakdown of the different cost components. It should be remembered that our estimation, as it was explained in the two previous sections, is based on following a cautious method rooted in avoiding any overestimation.

- ✓ Books and educational supplies =  $\$1000 \times 4,127 = \$ 4,127,000$
- ✓ Cost of housing (living expenses) =  $\$ 9,081^{17} \times 4,127 = \$ 37,477,287$
- ✓ Transportation<sup>18</sup> =  $\$999 \times 4,127 = \$ 4,122,873$
- ✓ Major medical health insurance =  $\$1800 \times 4,127 = \$ 7,428,600$

**Total = \$ 53,155,760**

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<sup>17</sup> With regard to cost of housing (living expenses), there were two widely different annual estimates. They were \$9,081 dollars for living with parents without dependents, and almost twice as much at the annual rate of \$17,253 dollars for others. We decided to stay using a very conservative basis and used the lowest amount of \$9,081 for both Oxnard and Ventura Colleges. It should therefore be mentioned that we have underestimated the true impact of students' expenses with regard to living expenses to a significant degree.

<sup>18</sup> For transportation, we used the estimate for parents without dependents as full time students. This appears more relevant than the estimates for "all others."

#### 4.3.2. Breakdown of Costs of Studies by Part-time Students

Ventura College had 9,185 students who were studying part-time in 2020-21, according to the available information. Using the same cost structure and basis of calculation as presented and employed earlier, we arrived at the following cost estimates.

- ✓ Books and educational supplies =  $\$500 \times 9,185 = \mathbf{\$4,592,500}$
  - ✓ Cost of housing (living expenses) =  $\$9,081/3 \times 9,185 = \mathbf{\$ 27,802,995}$
  - ✓ Transportation =  $\$999/2 \times 9,185 = \mathbf{\$ 4,587,908}$
  - ✓ Major medical health insurance =  $\$1800/2 \times 9,185 = \mathbf{\$ 8,266,500}$
- Total = \$ 45,249,903**

Finally, we have added the areas of expenses for each of the four areas of impact estimations and set up the pertinent input-output models for the combined estimation. This is to estimate the direct, indirect, and induced economic impacts for the creation of regional, statewide, and national impacts for the following aggregate expenditures of fulltime and part-time students.

- Books and educational supplies = **\$8,719,500**
  - Cost of housing and living expenses = **\$65,280,282**
  - Transportation = **\$8,710,781**
  - Major medical health insurance = **\$15,695,100**
- Total = \$98,212,778**

Using the above itemized expenses, we estimated the economic impact of Ventura College students' expenditures on the regional economy. The results can be seen in the following table.

Economic Impact of Ventura College Students Expenditures						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	98,212,778.0	20,152,678.3	14,742,761.8	133,108,218.1		
<b>Employment Impact</b>	349.3	87.5	81.8	518.6		
<b>Tax Impact</b>	<b>Employee Compensation</b>	<b>Proprietor Income</b>	<b>Tax on Production and Imports</b>	<b>Households</b>	<b>Corporations</b>	<b>TOTAL</b>
<b>Federal Tax</b>	\$2,489,600	\$253,223	\$1,050,628	\$3,059,074	\$3,398,736	\$10,251,261
<b>State and Local Tax</b>	\$85,731		\$8,124,265	\$1,268,008	\$2,144,400	\$11,622,404

Table 7: Economic Impact of Ventura College Students Expenditures

The above table shows that Ventura College student expenditures create more than \$133 million additional regional output. The total employment resulting from students' expenditures reaches 519 jobs. The total tax paid to all levels of government results in nearly \$22 million, out of which the share of state and local taxes reaches \$11.7 million.

#### 4.4 Overall Expenses of Ventura County Students' Expenditures and Its Breakdown into Various Components

We can now put all the items together and come up with the following breakdown of students' expenses, which have been used to generate students' economic impacts divided into direct, indirect, and induced components.

##### **Books and Educational Supplies**

Moorpark College:	\$9,549,000
Oxnard College:	\$4,821,500
Ventura College:	\$8,719,500
<b>Total:</b>	<b>\$23,090,000</b>

##### **Cost of Housing & Living Expenses**

Moorpark College:	\$106,776,300
Oxnard College:	\$35,924,436
Ventura College:	\$65,087,399
<b>Total:</b>	<b>\$ 207,788,135</b>

##### **Transportation**

Moorpark College:	\$9,539,451
Oxnard College:	\$4,816,679
Ventura College:	\$8,710,781
<b>Total:</b>	<b>\$ 23,066,911</b>

##### **Major Medical Insurance**

Moorpark College:	\$17,188,200
Oxnard College:	\$8,678,700
Ventura College:	\$14,695,100
<b>Total:</b>	<b>\$ 40,562,000</b>

##### **Total Itemized Cost Per College and Overall**

Moorpark:	<b>\$143,052,951</b> (\$9,549,000 + \$106,776,300 + \$9,539,451 + \$17,188,200)
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Oxnard College: **\$54,241,315** (\$4,821,500 + \$35,924,436 + \$4,816,679 + \$8,678,700)  
 Ventura College: **\$ 98,212,778** (\$8,719,500 + \$65,087,399 + \$8,710,781 + \$15,695,100)  
**Total: \$294,507,046**

The following exhibits present the impact of students' expenditures from different colleges.

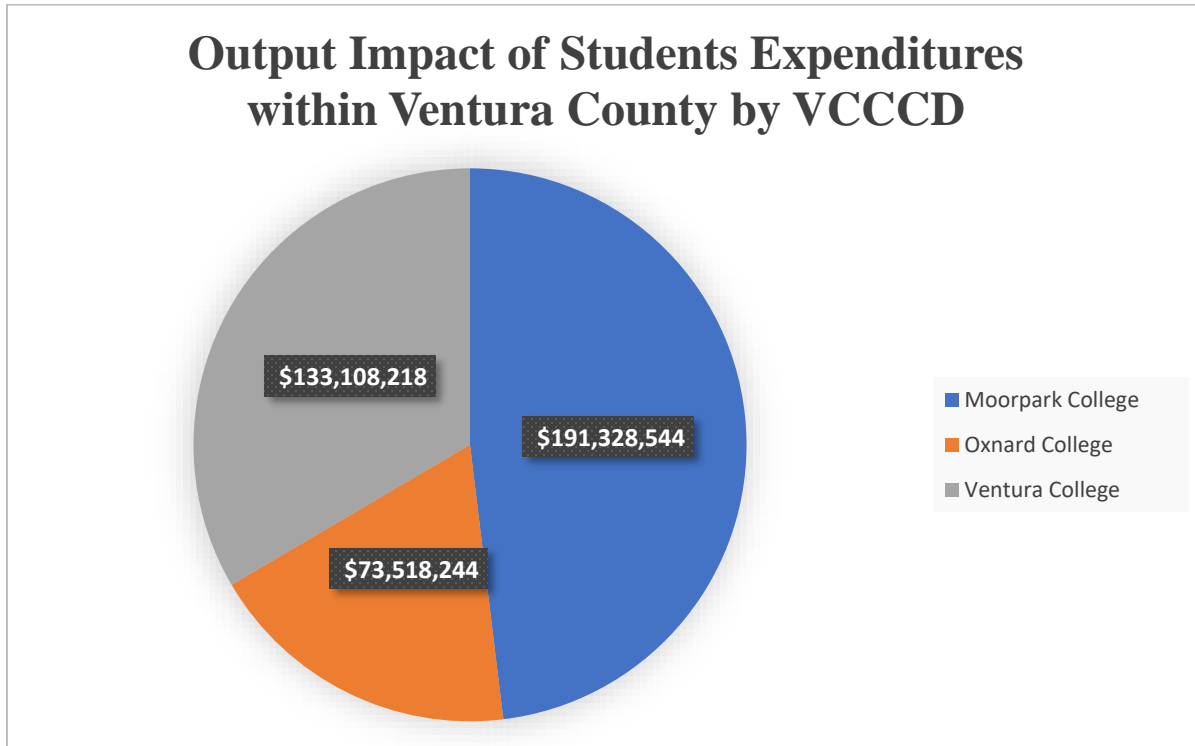


Figure 30: Output Impact of Students Expenditures within Ventura County by VCCCD



## Employment Impact of Students Expenditures within Ventura County by VCCCD

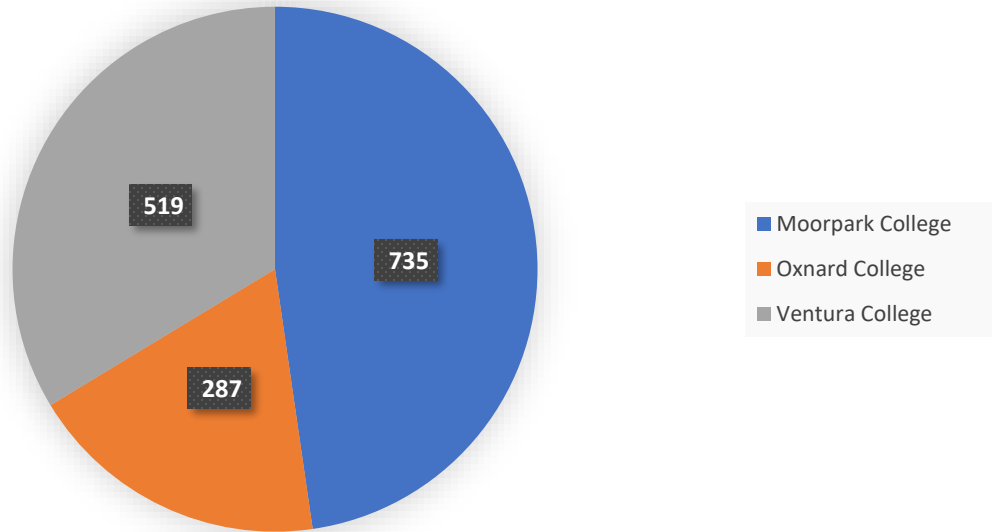


Figure 31: Employment Impact of Students Expenditures within Ventura County by VCCCD

## Tax Impact of Students Expenditures within Ventura County by VCCCD

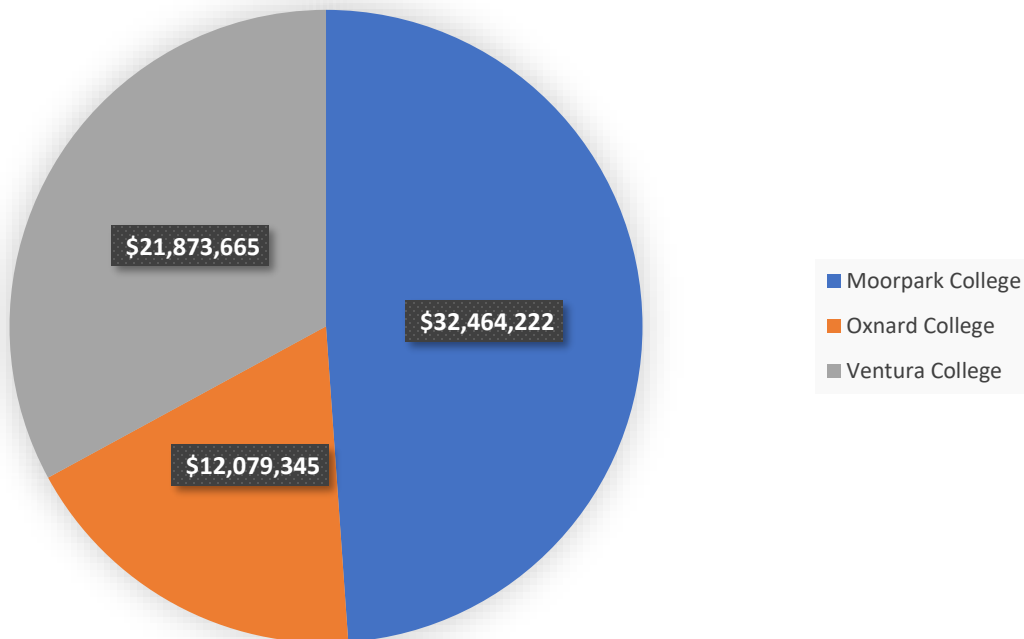


Figure 32: Tax Impact of Students Expenditures within Ventura County by VCCCD

## 5. Economic Impact of Graduates/Alumni of Community Colleges in Ventura County

Community colleges have a crucial role in the creation of human capital in the United States. Their importance has become even more visible and meaningful in recent times with rising of costs of education and clear evidence of problems caused by rising students debt and the inability of our political system to agree on how to move forward towards finding solutions and coming to an agreement on the importance of investing in higher education and recognizing the importance of the positive externality of education in general, and higher education in particular.<sup>19</sup> Think Impact (2021) provides important information about the workings of community colleges in the country.<sup>20</sup> During academic year 2018-2019, some 8.2 million college undergraduates were enrolled in a public two-year college. About 64.2% were part-time students. Over 1/3 of undergraduate students are made up of community college students. Around 66% of undergraduates have enrolled in a community college at some point after completing high school. The data given clearly presents the crucial role of community colleges in forming the centerpiece of higher education within the nation. According to the same study, 55% of community college students are female, and 45% are male. From 2018 to 2019, the ethnicity of community college students can be broken down into 45% White, 25% Hispanic, 13% Black, and 7% Asian. Roughly 80% of community college students work, and 39% of them work full-time. On average, a community college student who graduates with an associate's degree will earn \$5,400 more annually compared to a college dropout.

The average annual cost for community college tuition from 2016 to 2017 was \$9,674. In comparison, a public four-year college had tuition of around \$23,705. For private four-year colleges, the high average annual tuition was \$48,865. Community college students who decide to attend a two-year college instead of a four-year institution can save upwards of \$30,000 in potential student debt.

Students who graduated from a four-year university had a median outstanding debt upwards of \$25,000, according to 2016 data from the Pew Research Center. However, students with less than a bachelor's degree only had a median outstanding debt of \$10,000. Post-graduate degree students have a median debt upwards of \$45,000. 82% of students in for-profit institutions and 60% of students enrolled in public four-year colleges have taken out student loans.<sup>21</sup>

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<sup>19</sup> Externalities in economics refers to the production of goods and services that bring a positive impact on others in the society which are neither the providers nor the users of a service or good. For example, higher education is provided by colleges and universities and students receive the benefits of it in terms of the enhancement of their choice for a better life. There are, however, positive consequences from the creation of more educated people, which directly benefits the society within which these people live. Positive externalities are very important and they serve the common good of their immediate and larger communities.

<sup>20</sup> For more information see ThinkImpact.com (2021) Community College Statistics, <https://www.thinkimpact.com/community-college-statistics/>

<sup>21</sup> For more information see Pew Research Center (2016), The State of American Jobs, <https://www.pewresearch.org/social-trends/2016/10/06/the-state-of-american-jobs/>

On average, the age of community college students is higher than a typical undergraduate from a four-year institution. In academic year 2016-2017, , roughly 51% of community college students were 21 years old or younger. Nearly 40% of students are in the age range of 22 to 39. About 10% of students are 40 years and older. In 2016, the average age of a community college student was 27 years old.<sup>22</sup>

One of the distinct features of community colleges is that students can get in and out of them in a relatively short period. As a result, some students transfer before finishing their associate's degree, while others transfer to a four-year college once they've completed their associate's degree. In addition, some students may obtain their degree and elect not to further their education through a four-year institution. These existing features make coming up with a correct assessment of the contribution of community colleges in terms of the lifetime earnings of their graduates more complicated and in need of additional historic information from the institutions whose economic impact is being assessed. This complication, however, does not make such assessment impossible; it simply requires plausible assumptions based on existing information.

Some 80% of students entering community college indicate that they desire to obtain a bachelor's degree or higher. In reality, based on information gathered from the fall Semester of 2013, only 31% of students transfer to a four-year college after six years in 2019.<sup>23</sup>

Out of all institutions to which students of community colleges transferred, about 6% attended a for-profit institution, 19% moved to private nonprofit institutions, and 75% of them transferred to public institutions.

One of the unfortunate likely occurrences which comes out of the transfer of credits is that unfortunately, 43% of a community college student's credits are lost when transferring from one college to another. This averages out to about 13 credits lost per community college student. Even then, some credits that are accepted are applied as elective credit. 40% of all undergraduate students have transferred at least one time within six years of enrolling.<sup>24</sup>

The important question in this research is to find a clear answer for what proportion of community college students obtained their bachelor's degree within six years of starting community college. The same study provides the following information:

- Out of the 31% of community college students who have successfully transferred to a four-year college, **46% of them were able to earn a bachelor's degree within the six-year time frame.** This suggests that the net proportion of students who attend community colleges manage to receive their bachelor's degree after attending a community college is 14.3% ( $0.31 \times 0.46 = 0.143$ ).<sup>25</sup>

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<sup>22</sup> See ThinkImpact.com (2021) Community College Statistics, <https://www.thinkimpact.com/community-college-statistics/>.

<sup>23</sup> Ibid

<sup>24</sup> Ibid

<sup>25</sup> Teachers College at Columbia University offers more detailed information based on their ongoing research. According to their study: "Bachelor's completion varies by type of four-year institution. Of students who

- Furthermore, 44% of community college students that transferred to four-year public institutions completed their bachelor's degree within six years.
- Some 33% of community college students who transferred to nonprofit four-year colleges earned their bachelor's degree.
- Another 9% of the students who transferred to private for-profit four-year colleges got their bachelor's degree within six years.
- Choosing to enroll as a fulltime student makes a significant difference in transferring and receiving a bachelor's degree. Some 64% of transfer college students who chose to enroll for fulltime study obtained their bachelor's degree.
- In comparison, only 42% of college students who switched between fulltime and part-time status obtained their bachelor's degree.
- The contrast is rather enormous when it comes to the possibility of transferring and receiving a bachelor's degree from a community college, if the students choose to register only as a part-time student. Only about 5% of students that were exclusively enrolled part-time eventually obtained their bachelor's degree.
- Finally, there is a significant difference between the graduation rates from college between higher and lower income students. Some 53% of higher-income transfer students obtained their bachelor's degree, while 39% of low-income transfer students earned theirs.

The above information clearly indicates that the opportunity to study, having the option of being a fulltime student or part-time, the ability to dedicate a significant part of one's life to invest in one's higher education and succeeding in obtaining a bachelor's degree could, to a large extent, be a function of one's level of income and economic status. This observation makes a strong case for the support of community colleges as an effective means of bringing greater economic opportunities to a larger group of lower-income individuals and families.

We took the following steps to make our best effort in estimating the economic impact of community colleges in Ventura County with respect to the differences that their graduates (alumni) make in the labor market, the level of earnings by individuals, and the industries that make use of their work and productivity. We used the same methodology for each college separately and also altogether.

- We assumed that the latest information provided by the VCCCD is a good example of what is likely to occur within the organization. We took the total number of students and divided them into various categories, such as fulltime and part-time status.
- We calculated the number of fulltime and part-time students in each college and all together.

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transferred to four-year public institutions, 44% completed a bachelor's within six years of starting at a community college. Of students who transferred to private nonprofit four-year institutions, 33% completed a bachelor's within six years. Of students who transferred to private for-profit four-year institutions, 9% completed a bachelor's within six years. Additionally, among students who transferred to very selective four-year institutions, 53% completed a bachelor's degree within six years. Of transfers to moderately selective and nonselective four-year institutions, 43% and 27% completed bachelor's degrees within six years of starting at a community college." For more information see <https://ccrc.tc.columbia.edu/Community-College-FAQs.html>

- We separated the numbers of those who intend to transfer to a four-year university from those who are opting for an associate’s degree, and those who are studying for certificates.
- We made no particular assumption about the relevance of being fulltime or part-time in relation to studying for any of the above noted three paths of education.
- We applied what has been learned from the review of studies presented above.
- Using the above approach, we arrived at the following estimations for each college:
  - Out of all students who intend to transfer to four-year colleges, 46% manage to graduate from college with a bachelor’s degree. Potentially, we could further divide the numbers between those who are likely to earn a Bachelor of Arts or Science degree as their compensation may differ. However, we stayed away from such a decision due to a number of complications which may occur in the execution of during the period of study towards a degree.
  - We assumed that based on national research (mentioned and referred to in the above surveys) transfer students will lose one semester’s worth of their credits in the process of transferring to the college of their choice.
  - The existing information indicates that transferring students only need 60 credits to transfer, but on average, they typically take 86 credits even within the ADT (Associate Degree for Transfer) system, according to a report recently published by Edsource.<sup>26</sup>
  - Taking the above information into account, while we realize that the number of credits taken by students at community colleges may not all be counted towards receiving the a bachelor’s degree of their final educational selection, it can easily be considered as satisfying 50% of the requirements for receiving the degree in question.
  - We made no assumption about the economic status of students in their level of success in transferring to four-year colleges. This was primarily due to lack of information to make an accurate assessment. However, we acknowledge the importance of every effort made in any of the colleges to support low income students to succeed in their studies, and consider all such efforts as important investments with a great rate of return.
  - Although some students with an associate’s degree decide to pursue their bachelor degree’s later, and therefore their time at community college should be credited for their higher income later in their life, we have not made any conversion within a specific timeframe for their degree completion. This was primarily due to the lack of pertinent information. However, it should be acknowledged that the inability to make such adjustments presents an underestimation of the economic impact of community colleges.
  - We also know that the average age of students at community colleges is higher than those who start and complete their studies in four-year colleges. This therefore calls for a shorter average working period with a college degree, other

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<sup>26</sup> For more information, see Ashley A. Smith (2021), “California community college transfer students face roadblocks to bachelor’s degrees,” EdSource, <https://edsources.org/2021/california-community-college-transfer-students-face-roadblocks-to-a-bachelors-degree/656883>

than an associate's degree, within the economy. We have not, however, made any adjustment for the shorter period of work.

- We used the number students who receive an associate's degree and calculated their lifetime income difference from those with a high school diploma as an economic contribution. We also made an assessment regarding the income or production level of entities hiring them.
- We also used the number of students receiving a certificate and its contribution to increasing the lifetime earnings of those with such certificates. Similarly, we also estimated the economic impact of such employees towards the overall enhancement of the earnings of the institutions hiring them.

### **Methodology of Calculating the Shares of Higher Earning Due to Higher Education**

We used the information regarding graduation levels of each college for the academic year 2020-2021 to arrive at reasonable estimates for the additional median lifetime earnings of students out of community colleges in each of the three categories of graduation. This is summed up in below:

- The economic impacts in terms of enhanced earning ability is calculated both through the workers with more advanced degrees or skillsets and the economic institutions that hire them. This is to recognize that the enhanced ability of a worker is not limited to their own greater productivity, but the institutions hiring them also benefit from the additional productivity.<sup>27</sup>
- The period of time for receiving increased lifetime pay for those who transferred to four-year colleges starts as of four years from academic year 2020-21.<sup>28</sup> This is because we learned that on average, only a certain proportion of those who transferred to four-year colleges receives their degree.<sup>29</sup>
- The period of time for entering the labor market and starting to earn the pay differential for students with an associate's degree is roughly two years.
- The period of time for making differential pay for those with certificates is within a year.

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<sup>27</sup> There is a growing literature in economics which suggests the share of enhancement of workers' productivity is only partially given back to them, and a much larger share of it is absorbed by the employers. For more information, see Economic Policy Institute (2021), The Productivity-Pay Gap, <https://www.epi.org/productivity-pay-gap/>. On the other hand, some may argue that talented professionals make capital more productive too (e.g., buildings, production facilities, equipment). The argument finally will come down to if increased productivity can be born by capital or buildings or other components of factors of production. This argument, although very important, is not pursued in this study, as its relevance on our estimations will be argumentative, and therefore uncertain, and to an extent, subjective.

<sup>28</sup> Our survey of literature indicates that 46% of students who transfer to four-year college manage to earn their bachelor's degrees within six years. Taking two years from that as the time spent in community college, the expectation is that they will graduate in four years from the year of transferring.

<sup>29</sup> It is true that those who were in their latter part of their education (by almost one year) will take five years to graduate rather than six years. However, for the sake of simplicity and avoiding cumbersome adjustments, we treated all transfer students the same.

With use of the explained methodology, we tried to estimate the economic contribution of students completing their course of study or training in each college, and collectively.

## 5.1 Economic Impact of Graduates from Moorpark College

We use the latest enrollment information for the academic year 2020-21 to estimate the economic impact of Moorpark College in terms of comparing the contributions of its graduates (alumni) based on their lifetime earning differentials with those who only graduate from high school. This brought the following observations which played their role in the estimation.

We used the same observations in the estimation of the economic impact of graduates from Oxnard and Ventura Colleges. Using the methods explained in some detail enabled us to make the following estimates:

### 5.1.1 Additional Earnings of Students Transferring to Four-year College (Moorpark College)

This section sets the stage for a similar calculation for other two colleges. The aim here is to make a relevant and plausible estimate for the present value of the lifetime earnings of all students who set up to study and transfer their credits to a four-year college and earn their bachelor's degrees.

Our literature survey showed that not all such students manage to receive their degrees. However, even those who transfer but do not receive their degrees are still better off in terms of lifetime earnings, as they are considered as employees with some college education. The following information provides the details of our estimations.

- Total transferred to Four-year College 1389
- Expected to graduate in 4 years:  $1389 \times 0.46 = 639$
- Remainder considered as workers with some college education: 750
- Lifetime earning gap between bachelor's degree and HSD: \$1,200,000<sup>30</sup>
- Lifetime earning gap between some college and HSD: \$300,000
- Total additional earnings with college degree:  $639 \times \$600,000 = \$383,400,000$ <sup>31</sup>
- Total additional earning with some college education:  $750 \times 300,000 = \$225,000,000$

The above calculations show that the additional lifetime earnings of transfer students who ended up graduating with a bachelor's degree plus those who transferred and dropped. In the next stage

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<sup>30</sup> See Anthony P. Carnevale, Ban Cheah, and Emma Wenzinger (2021), "The College Payoff, Center on Education and the workforce, McCourt School of Public Policy," Georgetown University. Also check Forbs <https://www.forbes.com/sites/michaeltietzel/2021/10/11/new-study-college-degree-carries-big-earnings-premium-but-other-factors-matter-too/?sh=1643f43035cd>

<sup>31</sup> The difference between lifetime earnings of a college degree and HSD is \$1,200,000, and we took half of it and contributed it to the educational value generated at the community college level. This led us to using \$600,000 as the difference in lifetime earnings brought about in a collage graduate who transferred from a community college to four-year university.

of our estimation, we will also find their present value based on a reasonable rate of interest and length of time which establishes lifetime earnings.

### 5.1.2 Additional Earnings of Students Who Worked with an Associate's Degree (Moorpark College)

Based on the graduation statistics of Moorpark College, some 1,976 students graduated with an AA degree and entered the labor force. This will lead to the following calculations:

- Total number of students graduating with an associate's degree: 1976
- Lifetime earning gap between holders of an associate's degree and HSD: \$400,000
- Total lifetime earnings with an associate's degree: **1976 x \$400,000 = \$790,400,000**

### 5.1.3 Additional Earnings of Students Who Received a Certificate (Moorpark College)

Finally, we need to assess the changes in lifetime earnings of those who graduated with a certificate from a community college compared to their economic situation before earning the certificate. The U.S. Bureau of Labor Statistics (BLS) designates 99 occupations as typically requiring some postsecondary education less than a bachelor's degree. Most of these occupations require an associate's degree or a postsecondary nondegree award, such as a certificate. A few of them require some college courses, but not a degree.<sup>32</sup>

A recent study conducted at the Georgetown University Center on Education and the Workforce argues that associate's degrees and certificates may be more valuable than they were perceived or considered in the past. The report argues that certificate and associate's degree programs now enroll more students—about 50% of postsecondary students taking undergraduate coursework—than bachelor's degree programs, which account for about 47%.<sup>33</sup> According to the report, a worker with an associate's degree can earn more than a worker with a bachelor's degree, and shorter-term credentials like certificates and certifications can out-earn associate's degrees. This can be seen in how an associate's degree holder who studied engineering can have median annual earnings between \$50,001 and \$60,000, well above bachelor's degree holders who studied education, who have median annual earnings between \$30,001 and \$40,000.

It is, however, very hard to determine a definitive level of lifetime earning differential between HSD and earnings based on certification in all fields taken together. The CEW also found that certificate and associate's degree programs disproportionately enroll students of color, as well as low-income students and adult learners.<sup>34</sup>

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<sup>32</sup> For more information, see Bureau of Labor Statistics (BLS), "Employment outlook for occupations requiring an associate's degree, certificate, or some college," 2018,

<https://www.bls.gov/careeroutlook/2018/article/postsecondary-outlook.htm>

<sup>33</sup> For more information see, "The Overlooked Value of Associate's Degree and Certificate's Degrees,"

<https://1gyhoq479ufd3yna29x7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/CEW-SubBA.pdf>

<sup>34</sup> Researchers at CEW found that 56% of Black and 62% of Latinx students enrolled in college are concentrated in certificate and associate's degree programs, while 44% of Black and 38% of Latinx college students are pursuing



With all mentioned above, it is clear that even with the strong earning potential associated with certain certificates and associate’s degrees, the overall lifetime earnings of workers with bachelor’s degrees still outpaces those with certificates. Therefore, the policy of encouraging students to opt for certificates remains a problematic issue, particularly when it is pursued for persuading students of color and low-income students out of a path towards receiving a college degree.

The question remains as to what is the lifetime earning differential for those with only a high school diploma (HSD). The information we have from Moorpark College indicates that an overwhelming majority of students pursued a certificate in interdisciplinary studies. There are, however, other areas of study, but a much lower number of students enroll in them. We concluded that treating the lifetime earning difference between graduates with a certificate and some college studies makes the most sense, and that level of difference was used in the study and was applied to all students graduating with a certificate from any colleges within the Ventura County Community College District. This led us to the following set of estimations:

- Total number of students graduating with a certificate: 2,052
- Lifetime earning gap between community college certification and HSD: \$300,000
- Total additional earning with certificates: **2,052 x 300,000 = \$615,600,000**

#### 5.1.4 Putting Them All Together for Moorpark College

The next step is to calculate the present value of all the additional earnings that Moorpark College is likely to offer to its graduates every year. The estimates are presented in the following table.

#### **Additional Lifetime Earning of Students Graduating from Moorpark College**

<b>Description</b>	<b>Total Additional Earnings</b>	<b>Present Value</b>
Students Transferring to Four-Year College	\$608,400,000	\$186,509,182
Students Receiving Associate’s Degree	\$790,400,000	\$242,302,527
Students Receiving Certificates	\$615,600,000	\$188,716,391
<b>TOTAL</b>	<b>\$2,014,400,000</b>	<b>\$617,528,100</b>

*Table 8: Additional Lifetime Earning of Students Graduating from Moorpark College*

#### **Note:**

- Used a discount rate of 3%<sup>35</sup>

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bachelor’s degrees. Among white college students, 53% are in bachelor’s degree programs, while 47% are pursuing certificates or associate’s degrees

<sup>35</sup> The assumption of 3% is based on a non-inflationary future. This a presumption based on the past experience and may not hold for the future.

- Used a period of 40 years of work from the time that earning pay with additional education begins.<sup>36</sup>

## 5.2 Economic Impact of Graduates from Oxnard College

We used the information from academic year 2020-21 to estimate the annual economic impact of additional lifetime earnings of graduates from Oxnard College. Once again, the streams of additional earnings come to those who transferred to a four-year college, received an associate’s degree for a position in the labor market, or benefitted from a certificate.

### 5.2.1 Additional Earnings of Students Transferring to 4-year College (Oxnard College)

The latest information for Oxnard College shows that in academic year 2020-21, some 533 students transferred from their college to other four-year colleges. Knowing that not all those who transferred, based on existing literature, managed to complete their studies towards receiving a degree, we can present the following estimation for the additional lifetime earnings that can be made annually from these students.

- Total transferred to Four-year College: 533
- Expected to graduate in four years:  $533 \times 0.46 = 245$
- Remainder considered as workers with some college: 288
- Lifetime earning gap between Bachelor’s degree and HSD: \$1,200,0000
- Lifetime earning gap between some college and HSD: \$300,000
- Total additional earning with college degree:  $245 \times \$600,000 = \$147,000,000$
- Total additional earning with some college education 288:  $\times \$300,000 = \$86,400,000$

### 5.2.2 Additional Earnings of Students Who Worked with an Associate’s Degree (Oxnard College)

Based on graduation statistics of Oxnard College, some 782 students graduated with associate’s degree to be able to work or continue their work in the labor force. This will lead to the following calculation:

- Total number of students graduating with AA degree: 782
- Lifetime earning gap between holders of AA degree and HSD: \$400,000
- Total lifetime earnings with an AA degree:  $782 \times \$400,000 = \$312,800,000$

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<sup>36</sup> Length of time for lifelong earnings according to U.S. Social Security System starts from age 20 and ends at age 69. However, the life long earnings with a college degree starts later, and usually is assumed to be going on for 40 years.

### 5.2.3 Additional Earnings of Students Who Received a Certificate (Oxnard College)

The available information shows that in academic year 2020-21, some 979 students completed their study at Ventura College with a certificate. This led us to the following set of estimations:

- Total number of students graduating with a certificate: 979
- Lifetime earning gap between a certification and HSD: \$300,000
- Total additional earnings with Certificates: **979 x 300,000 = \$293,700,000**

### 5.2.4 Putting Them All Together for Oxnard College

The next step is to calculate the present value of all the additional earnings that Oxnard College is likely to offer its graduates every year. The estimates are presented in the following table.

#### Additional Lifetime Earning of Students Graduating from Oxnard College

Description	Total Additional Earnings	Present Value
Students Transferring to Four-Year College	\$233,400,000	\$71,550,367
Students Receiving Associate’s Degree	\$312,800,000	\$95,890,980
Students Receiving Certificates	\$293,700,000	\$90,035,744
<b>TOTAL</b>	<b>\$839,900,000</b>	<b>\$257,477,090</b>

Table 9: Additional Lifetime Earning of Students Graduating from Oxnard College

## 5.3 Economic Impact of Graduates from Ventura College

Once again, we used the latest graduation report from Ventura College for academic year 2020-21 to estimate the annual income impact of its graduates . We then used the available data and measured the additional income received by those who transferred to four-year colleges and completed their studies or dropped out, those who received their associate’s degree and entered or continued their work, and those who opted for a certificate and used it to work in various areas of activities. The results are presented in the following sections.

### 5.3.1 Additional Earnings of Students Transferring to Four-year College (Ventura College)

The latest information for Ventura College shows that in academic year 2020-21, some 814 students transferred from their college to other four-year colleges. Knowing that not all those who transferred, based on existing literature, managed to complete their studies towards receiving a degree, we can present the following estimation for the additional lifetime earnings that can be made annually from these students.

- Total transferred to Four-year College: 814
- Expected to graduate in Four years:  $814 \times 0.46 = 374$
- Remainder considered as workers with some college: 440

- Lifetime earning gap between bachelor’s degree and HSD: \$1,200,000
- Lifetime earning gap between some college and HSD: \$300,000
- Total additional earning with college degree: **374 x \$600,000 = \$224,400,000**
- Total additional earning with some college education: **440 x 300,000 = \$132,000,000**

### 5.3.2 Additional Earnings of Students Who Worked with an Associate’s Degree (Ventura College)

Based on graduation statistics from Ventura College, some 1,707 students graduated with associate’s degrees to work or continue their work in the labor force. This will lead to the following calculation:

- Total number of students graduating with AA degree: 1,707
- Lifetime earning gap between holders of AA degree and HSD: \$400,000
- Total lifetime earnings with an AA degree: **1707 x \$400,000 = \$682,800,000**

### 5.3.3 Additional Earnings of Students Who Received a Certificate (Ventura College)

The available information shows that in academic year 2020-21, some 1,817 students completed their studies at Ventura College with a certificate. This led us to the following set of estimations.

- Total number of students graduating with a certificate: 1,817
- Lifetime earning gap between a certification and HSD: \$300,000
- Total additional earnings with certificates: **1817 x 300,000 = \$545,100,000**

### 5.3.4 Putting Them All Together for Ventura College

The next step is to calculate the present value of all the additional earnings that Ventura College is likely to offer to its graduates every year. The estimates are presented in the following table.

#### Additional Lifetime Earning of Students Graduating from Ventura College

Description	Total Additional Earnings	Present Value
Students Transferring to Four-Year College	\$356,400,000	\$109,256,858
Students Receiving Associate’s Degree	\$682,800,000	\$209,317,011
Students Receiving Certificates	\$545,100,000	\$167,104,134
<b>TOTAL</b>	<b>\$1,584,300,000</b>	<b>\$485,678,003</b>

Table 10: Additional Lifetime Earning of Students Graduating from Ventura College

## 5.4 The Overall Annual Impact of Ventura County Community College District Through Creating Greater Lifetime Earnings of Its Graduates

In this segment of the study, we add all the impacts together for estimating the accumulated future and present values of additional lifetime earnings of all the graduates from VCCCD. We must add that this estimate is based on the most modest impact that can be employed.

### **Additional Lifetime Earnings of Students Graduating from Ventura County Community College System**

<b>Description</b>	<b>Total Additional Earnings</b>	<b>Present Value</b>
Students Transferring to Four-Year College	\$1,198,200,000	\$367,316,407
Students Receiving Associate's Degree	\$1,786,000,000	\$547,510,518
Students Receiving Certificates	\$1,454,400,000	\$445,856,269
<b>TOTAL</b>	<b>\$4,438,600,000</b>	<b>\$1,360,683,184</b>

*Table 11: Additional Lifetime Earning of Students Graduating from Ventura County Community College System*

The outcome is impressive. It shows that each year, \$1,360,683,184 is added as the total present value of additional lifetime earnings of those who graduate from VCCCD and find their way to the labor market, or continue their work with a greater earning ability.

## 6. Areas of Economic Impact Set Aside Due to Lack of Sufficient Information

Conducting an economic impact study should be based on good and reliable information. A good amount of such information may not exist. However, at times, an analysis may include reasonable information which provides estimates of the needed data, preferably on an acceptable ground. This was pursued in a number of areas in the preparation of this study.

The inability to come up with reliable information does not justify ignoring such positive or negative impacts, and they should be mentioned in every study which aims to provide a full account of the impact of an economic entity. The following potential areas of economic impact were set aside due to a lack of sufficient information.

### 6.1 Economic Impacts Resulting from Independent Service Providers

Colleges and universities often contract out a number of services to independent providers, such as: food services, book stores, other commodities, and service providers. Financial activities of these entities have a place in the regular budgets of colleges, but such a presence does not bring a full account of the economic impacts that such economic presence creates in terms of their contributions to employment, regional output, or tax payments. In this study, we did not have sufficient information on such contributions, and therefore, their impacts have been set aside.

### 6.1.1. Economic Impact of Events and Conferences Held Within Campuses

College and universities hold various events such as sports, musical performances, theater productions, celebrations of special events, and more. These events bring various people from outside and within their impact regions, and every event has its own economic impact through expenditures generated. This study does not take into account any of these external events.

### 6.1.2. Economic Impact of Visitors and Guests of Students

Students from outside regional areas, and in particular, international students, often bring visitors to the area in which their college is located. Their expenditures generate additional economic activities. We did not have any information on such areas, although there are a considerable number of students who live in Ventura County for the duration of their studies at the VCCCD, and along with them, we have the positive economic impacts of their visitors.

### 6.1.3. Economic Impact Value Added, or Revenue Per Worker Generated, Through Contribution of VCCCD Graduates

Every worker generates income and profit for their employers. There are various ways to look into such economic impacts. The common thread is to consider the value-added impact of workers. When this discussion becomes limited to revenue per worker, it can be argued that revenue generation does not reflect the cost, and therefore is insufficient. Likewise, when we discuss profit per worker, it may be argued that such a measure ignores the role of labor in nonprofits or government sectors. However, with some complexity, the argument based on the value-added approach brings all such arguments to the same place, which is how much workers with different levels of education, knowledge, and skills contribute to the productivity of the organizations they work for. Net contribution of workers may also be impacted by the level of available technology within their organization and the capital labor ratio, and their prevalence in an economy. The important issue is that every worker not only generates income for themselves; the worker also generates income for their employers. This means that the VCCCD, through enhancing the ability of its graduates to generate larger lifetime earnings, also contributes to higher regional output and tax revenue through their employers.

Profit per employee is calculated by dividing the last twelve months (LTM) of a company's net income by the company's number of full-time employees. A higher profit per employee ratio shows that a company is efficient in translating employee headcount and productivity into profitability, which makes profit per employee a good metric for measuring company success.<sup>37</sup>

## **Average Revenue Per Worker for The Top Sectors in the United States**

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<sup>37</sup> For more information, see <https://tipalti.com/profit-per-employee/>

Rank	Sector	Average Revenue Per Worker
1	Energy	\$1.79 million
2	Healthcare	\$0.89 million
3	Utilities	\$0.81 million
4	Consumer Staples	\$0.70 million
5	Financials	\$0.65 million
6	Telecommunications	\$0.61 million
7	Materials	\$0.60 million
8	Tech	\$0.48 million
9	Consumer Discretionary	\$0.42 million
10	Industrials	\$0.32 million

**Source:** Jeff Desjardins (2017), Which Companies Make the Most Revenue Per Employee? Visual Capitalist, <https://www.visualcapitalist.com/companies-revenue-per-employee/>

Table 12: Average Revenue Per Worker for The Top Sectors in the United States

**Note: this analysis excludes real estate companies**

What we can learn from this list is that companies which rely on natural resources and physical capital tend to do much better than those relying on human capital and resources. As a result, they are able to generate revenue with less reliance on employees than other companies.<sup>38</sup> The other side of this argument is that companies use natural resources without any cost accounting for the impact of such use on the environment, and therefore, they are in a better position to ignore the negative impact of their externalities.<sup>39</sup> The above table shows that on average for every worker, there is a possibility of generating an income or profit for the company or economic entities far greater than the salary they are paid.

## 6.2. Economic Impact Through Creation of Positive Externalities Within the Larger Community and Society as Whole

Higher education for workers brings a number of positive externalities to a society. Positive externalities are positive economic impacts which go beyond the recipient of a commodity or service. For example, becoming educated may enable the recipient of such a service follow scientific principles and follow a healthier lifestyle, and this may translate into lower cost of healthcare or longer a lifetime, and therefore more productivity in the workplace. The inability to have reliable data and the difficulty in using the existing secondary information did not allow us to explore this theoretically possible area of further positive economic impacts. However, the existing body of research on the positive impact of education allows us to list the following areas for further positive economic impacts:

- Reduction in cost of healthcare

<sup>38</sup> For more information, see <https://spendmenot.com/blog/revenue-per-employee/>

<sup>39</sup> Negative externalities mean producing a product that may have negative impacts on others which are outside the domain of production. One example is producing oil and polluting the environment without being forced to bear the consequences.

- Reduction in cost of criminal justice
- Creation of social recognition and the ability to relate and work better within a workplace and society
- Ability to have greater choices for a better life, and their impact on society as a whole

## 7. Overall Conclusion of the Study of Economic Impact of Ventura County Community Colleges

Putting together all that we discussed, we can report the following overall findings for the economic impacts of the community colleges in Ventura County.

### 7.1 Total Impact of Community Colleges Altogether in Various Geographic Locations

We put the impacts of regular budgets, capital expenditures, and students spending of all colleges together and ran the regional Input-Output models for three geographic locations all together. These locations are Ventura County, the State of California, and the United States. The outcomes are presented in below:

Overall Economic Impacts of VCCCD Altogether Within Ventura County						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	\$494,593,659.0	\$130,251,926.0	\$95,914,977.0	\$720,760,562.0		
<b>Employment Impact</b>	2,779.2	542.5	531.8	3,853.6		
<b>Tax Impact</b>	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	TOTAL
<b>Federal Tax</b>	\$17,674,427	\$1,236,529	\$4,288,881	\$19,863,814	\$13,400,476	\$56,464,127
<b>State and Local Tax</b>	\$608,628		\$33,164,932	\$8,233,694	\$8,454,900	\$50,462,154

Table 13: Overall Economic Impacts of VCCCD Altogether Within Ventura County

The above table shows that Ventura County community colleges altogether add some \$720,760,562 to the regional output of the county.

It also shows that the community college system creates some 3,837 jobs in various areas of need with Ventura County.

Finally, the results show that in total, the VCCCD generates some \$106,926,281 tax revenue for different levels of governments, out of which some \$50,462,154 is paid to local and state governments.



Overall Economic Impacts of VCCCD Altogether Within the State of California						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	\$494,592,659	\$186,761,435	\$206,271,189	\$887,625,283		
<b>Employment Impact</b>	2,408.1	681.1	949.4	4,038.6		
Tax Impact	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	TOTAL
<b>Federal Tax</b>	\$24,333,601	\$1,547,000	\$5,892,657	\$24,530,586	\$15,658,938	\$71,962,782
<b>State and Local Tax</b>	\$1,091,741		\$37,736,040	\$10,519,354	\$9,879,855	\$59,226,990

Table 14: Overall Economic Impacts of VCCCD Altogether Within the State of California

The above table shows that the economic impacts of the VCCCD for the State of California is higher than the county level.

The Ventura County community college system brings the following impact to the State of California:

- It generates some \$887,625,283 to the state's regional products
- It creates some 4,039 jobs within the State of California
- It generates some \$131,189,772 in various forms of tax revenues for all three levels of government, out of which, some \$59,226,990 is paid toward local and state governments.

Finally, the following table shows the impacts of the VCCCD within the nation.

Overall Economic Impacts of VCCCD Altogether Within the United States						
	Direct	Indirect	Induced	TOTAL		
<b>Output Impacts</b>	\$494,593,659	\$246,399,344	\$363,182,517	\$1,104,175,521		
<b>Employment Impact</b>	2,613.2	965.3	1,792.5	5,371.0		
Tax Impact	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	TOTAL
<b>Federal Tax</b>	\$29,382,745	\$2,038,699	\$6,283,350	\$26,711,771	\$18,456,589	\$82,873,154
<b>State and Local Tax</b>	\$769,058		\$45,566,169	\$8,913,077	\$8,051,397	\$63,299,701

Table 15: Overall Economic Impacts of VCCCD Altogether Within the United States

The above data presents various impacts of the VCCCD within the nation, and they can be summed up as:

- The system generates and adds some \$1,104,175,521 to the U.S. GDP.
- The system generates some 5,371 jobs in various sectors of the economy.
- Ventura County community colleges altogether create some \$146,172,855, out of which, some \$63,299,701 is generated as tax revenue for local and state governments.

The following pie charts show the realized proportions in all three areas of economic impact analyses, which are: contribution to regional output, job creation, and tax revenue.

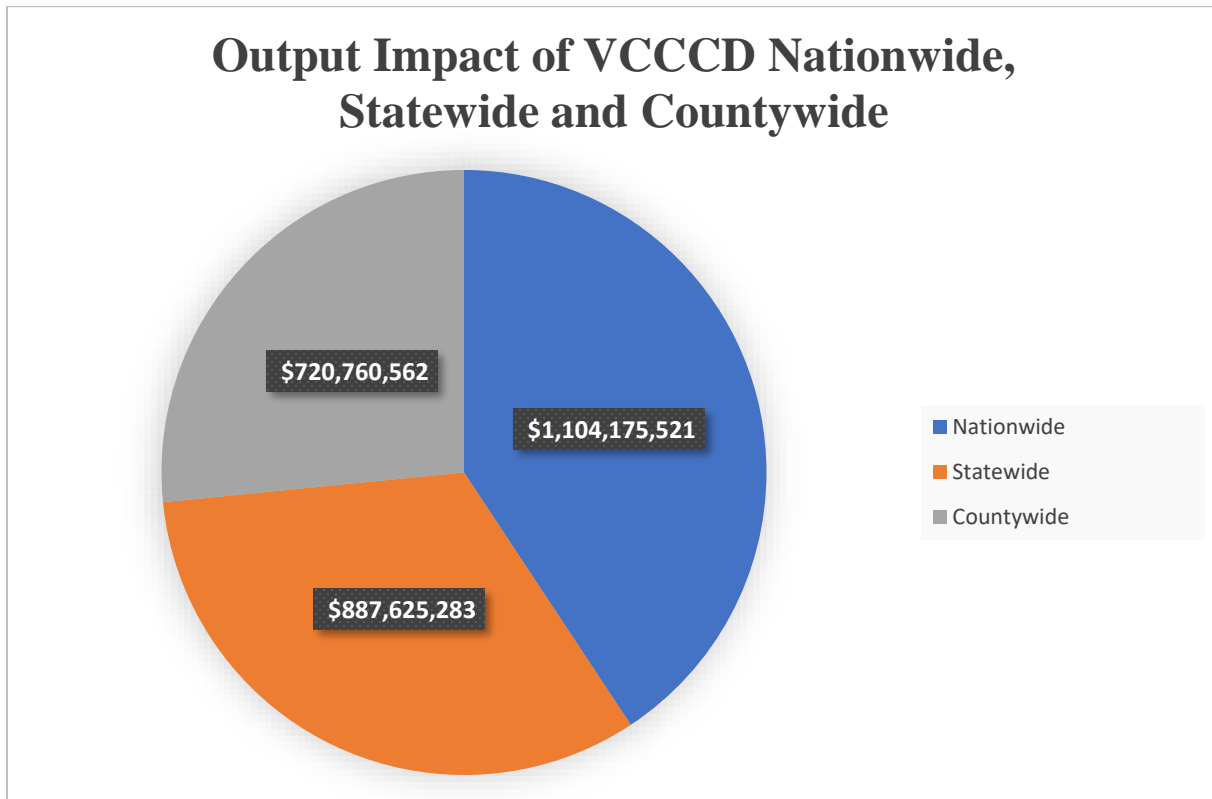


Figure 33: Output Impact of VCCCD Nationwide, Statewide and Countywide

## Tax Impact of VCCCD Nationwide, Statewide and Countywide

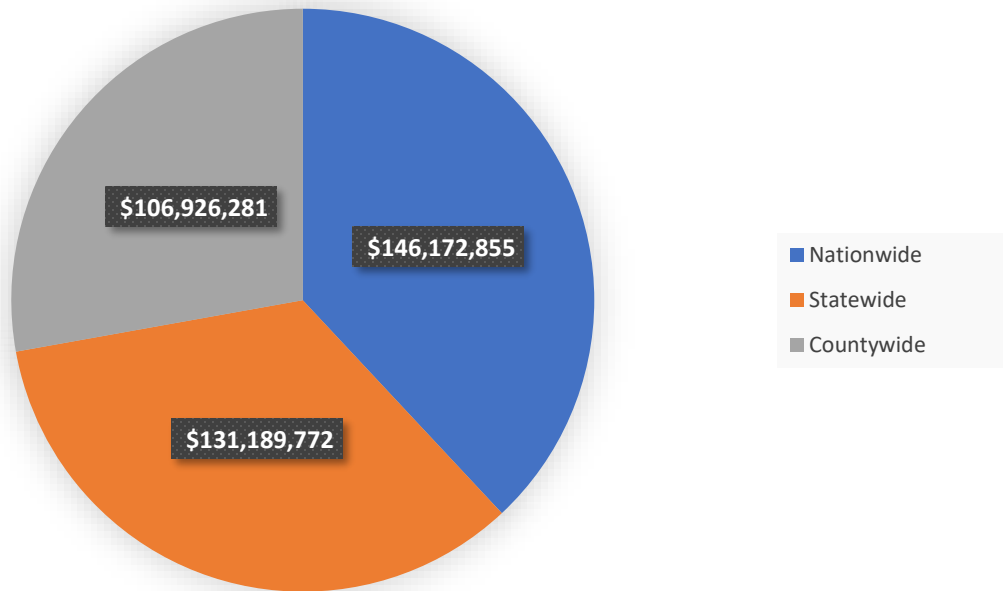


Figure 34: Tax Impact of VCCCD Nationwide, Statewide and Countywide

## Employment Impact of VCCCD Nationwide, Statewide and Countywide

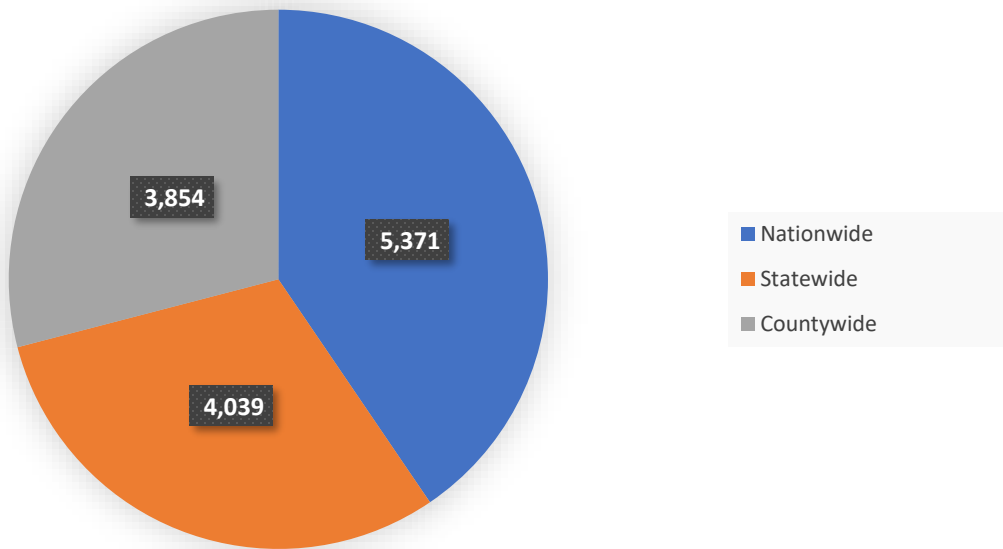


Figure 35: Employment Impact of VCCCD Nationwide, Statewide and Countywide

## 7.2 Contribution of Ventura County Community Colleges in Creating Additional Lifetime Earnings Within the Region

The Ventura County Community College District creates a tremendous impact every single year through enhancing the earning ability of its students as they receive their education and move into the labor market, or stay there with enhanced earning abilities, or move to their desired four-year college for further education and to eventually receive their bachelor’s degrees. This additional impact has been estimated within a modest, and in some respect, underestimation, of their real monetary values.

### Additional Lifetime Earning of Students Graduating from Ventura County Community College District

Description	Total Additional Earnings	Present Value
Students Transferring to Four-Year College	\$1,198,200,000	\$367,316,407
Students Receiving Associate’s Degree	\$1,786,000,000	\$547,510,518
Students Receiving Certificates	\$1,454,400,000	\$445,856,269
<b>TOTAL</b>	<b>\$4,438,600,000</b>	<b>\$1,360,683,184</b>

Table 16: Additional Lifetime Earning of Students Graduating from Ventura County Community College District

The outcome is impressive. It shows that each year, \$1,360,683,184 is added as the total present value of additional lifetime earnings of those who graduate from VCCCD and find their way into the labor market, or continue their work with a greater earning ability.

Finally, the study could not include a number of highly important additional positive economic impacts, which can be listed below:

- Economic impacts resulting from independent service providers
- Economic impact of events and conferences held within campuses
- Economic impact of visitors and guests of students
- Economic impact value added or revenue per worker generated through contribution of VCCCD graduates
- Economic impact through creation of positive externalities within the larger community and society as a whole