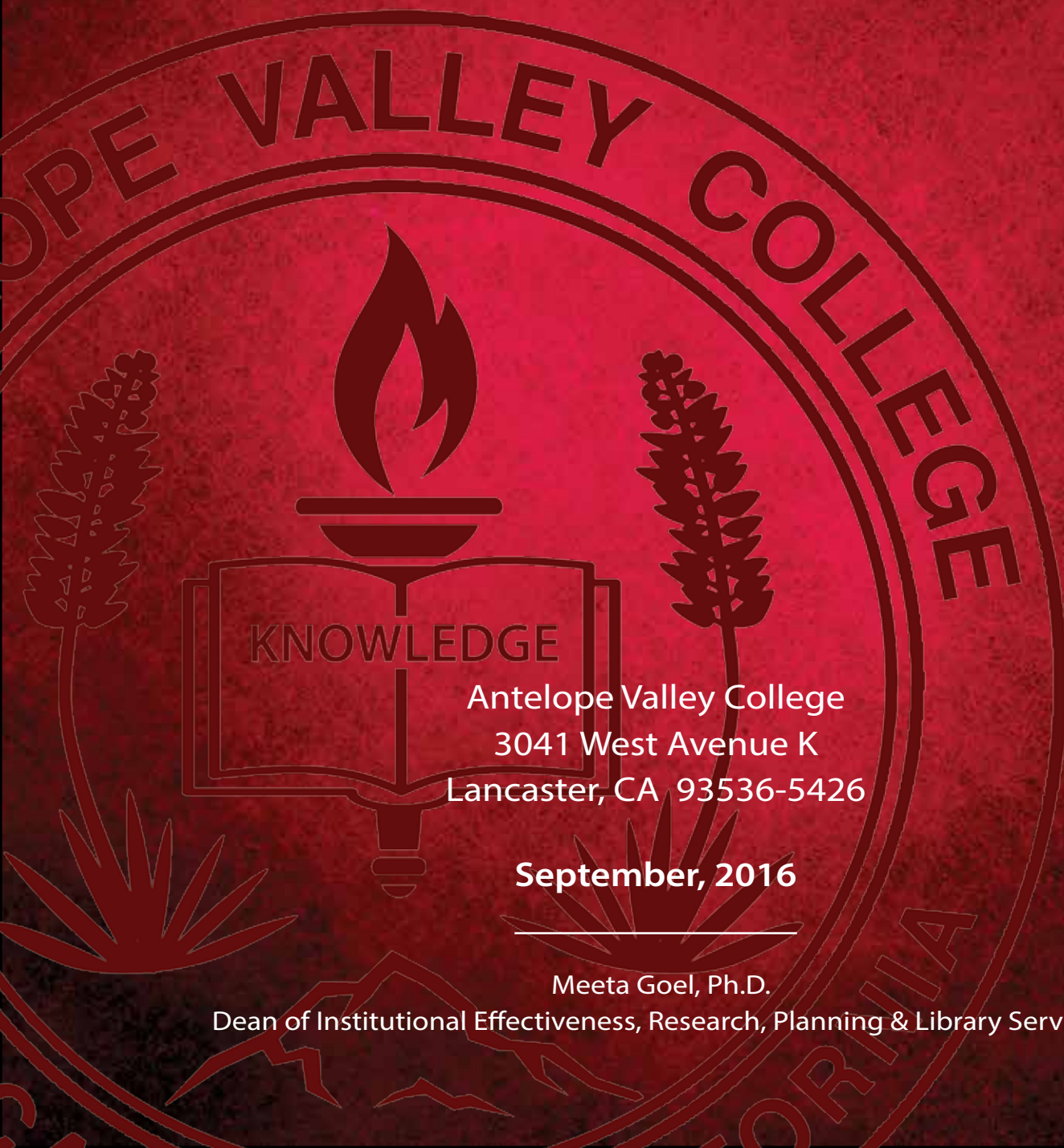


Meeting Community Needs:

What is the Economic Benefit of Antelope Valley College
within our Service District?



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EXECUTIVE SUMMARY

Since its inception in 1929, Antelope Valley College (AVC) has been committed to its mission of meeting the needs of the communities it serves. The college has been locally, state, and federally supported throughout those 87 years of its existence. This economic impact report focused on calculating the college's estimated total annual economic impact in an effort to determine whether the economic benefits exceed the costs and to provide supporting evidence of the college's success. With increasing accountability being demanded from local, regional, state, federal, and other entities, conducting this type of research has become especially critical.

The current study used the Ryan & Malgieri (1992) shortcut method developed specifically for community colleges to estimate their economic impact. This method focuses on using college, employee, and student expenditures within a college's District. There is a more conservative approach based on available District-level quantitative information that calculates the more immediate initial economic impact along with the eventual annual return using a multiplier of 2.0. During fiscal year 2015, the total estimated impact of AVC on its service area was **\$264 million**, with \$3.55 in income for every dollar of general fund revenues as a return on investment to its district.

This does not reflect the college's economic impact on greater Los Angeles County and beyond. The college and its key stakeholders do business outside the District e.g. for goods that are not readily available here, students who get jobs outside the service area, and employees who live out-of-district. In addition to its direct impact, AVC is responsible for numerous indirect positive human capital effects on its service area such as the creation of jobs, provision of training for business & industry for a skilled labor force for the global economy, promoting greater community involvement, better quality of life and helping to increase the earning potential of students. Therefore, AVC is a sound investment not only for the communities it serves, but numerous other outlying communities.

INTRODUCTION

Antelope Valley College (AVC) has been serving its communities since 1929 and is celebrating its 87th anniversary this year. Its service area spans 1,945 square miles and is composed of the following communities: Acton, California City, Edwards, Lake Hughes, Lancaster/Quartz Hill, Littlerock, Mojave, Palmdale/Lake Los Angeles, Rosamond, Tehachapi, Pearblossom, and the Santa Clarita area within the Antelope Valley and its neighboring communities. The college's physical presence is reflected by its two locations in Lancaster and Palmdale. In providing its communities with educational opportunities, AVC is driven by its vision, "To provide quality education that transforms lives" and our mission: "AVC, a public institution of higher education, provides a quality, comprehensive education to a diverse population of learners. We are committed to student success offering value and opportunity, in service to our community." AVC is a comprehensive community college that exists to meet the educational and training needs of the communities it serves.

During the fiscal year 2015, AVC served 18,854 full- and part-time students. Furthermore, AVC created job opportunities by employing 854 employees. AVC offers the following degree/certificate programs:

- 27 Associate in Arts degree programs
- 16 Associate in Arts for Transfer degree programs
- 46 Associate in Science programs
- 6 Associate in Science for Transfer programs
- 59 Certificate programs

The most popular programs are: Letters Arts & Sciences; Administration of Justice; Registered Nursing; Business Administration. The number of graduates has been increasing with 727 certificates and 1,475 degrees awarded during 2014-15 and 743 certificates and 1,748 degrees awarded during 2015-16.

The college's impact on its service area has been apparent in the positive informal and formal feedback it regularly receives from its students, employees and the broader community. As encouraging as such positive feedback is, with the increasing accountability in higher education, stakeholders such as accrediting and legislative bodies, boards, parents, and students are demanding "hard" and more meaningful evidence of a college's return on investment and its successes. Community colleges are especially feeling pressured to prepare students for success within the global economy.

AVC is largely state supported, with additional general fund dollars received from federal and local sources that allow for the fulfillment of the college mission. For fiscal year (FY) 2015, a total of \$74,306,286 was obtained from these revenue sources. However, government agencies and taxpayers generally agree to only fund colleges if the economic benefits exceed the costs. Economic impact data are useful for increasing stakeholder awareness and support of the role AVC has in its service region's economy. Thus, it was important to determine AVC's economic impact at this time.

METHODOLOGY

The total economic relationship between the college and community is generally not known and financial impact data are highly dependent on the methodology applied. Economic estimation models range from simple to complex, with the more complex models gathering more data, considering factors such as influence on the size and quality of a skilled labor force, professional development programs, income production by students, the tendency of graduates to remain in the area, and visitor spending (Caffrey & Issacs, 1971). The Caffrey & Issacs model, developed for the American Council for Education, has been commonly used, but it is less appropriate for community colleges, and it requires such information as faculty, staff, student, and consumer survey data. An adaptation of the Caffrey & Issacs model, the Ryan (1985) model was developed exclusively for community colleges and has been used and validated by Ryan and two-year schools nationwide.

In order to provide evidence to support how AVC adds value to its communities, the economic impact of AVC was calculated this summer using Ryan & Malgieri's (1992) economic impact model that has been used by community colleges for more than 20 years. More specifically, the Ryan & Malgieri (1992) shortcut method was utilized because the data necessary for a non-estimation model were currently unavailable. This method yields a more conservative estimate of economic impact, since it relies on existing college financial information, Integrated Postsecondary Education Data System (IPEDS) information, local sources of data, and includes only direct expenditures of the college, faculty/staff and students. It does not measure human capital effects such as the benefits of a more knowledgeable community and increased lifetime earnings of graduates. However, Ryan and colleagues have demonstrated that results tend to be comparable to those from studies using Caffrey & Issacs' model.

The most current complete year of data available (FY 2015) were used. A multiplier is typically included in economic impact calculations because it estimates the "ripple" or indirect effect a college's expenditures have on local businesses or the number of times dollars roll around and are reinvested within the community. There's much additional spending that takes place as a result of direct spending by the college, its employees and students. Initially, about 35 cents of a dollar spent locally by residents is returned to spenders as income for spending, reinvesting, etc. The remainder is spent by local businesses and thereafter recycled more in outside counties, states, etc. Metropolitan areas tend to have the dollars stick around longer. In more rural areas such as those served by AVC, the majority of dollars spent by students, employees and AVC leave the local area very quickly. Therefore, multipliers are larger in metropolitan areas where expenditures are easily absorbed. Eventually, about 66 cents is received by local residents as income which is approximately twice the initial 35 cents. Thus, as Ryan recommends, 2.0 is frequently used as a more conservative multiplier, with the range being from 1.0-3.0. The 2.0 multiplier is very frequently used in economic impact studies available in the research literature for economic impact among community colleges.

The input and output variables of the Ryan & Malgieri (1992) model used were:

INPUT VARIABLES

- Total # of college employees
- College employees who live in-district
- Total # of full-time students
- Total # of part-time students
- Multiplier Effect = 2.0

Non-tuition and fees student spending was estimated using IPEDS (Institutional Characteristics) information and unduplicated headcount for 2014-2015. Employee expenditures were estimated based on the number of employees reported to the Chancellor's Office in the 2015 AVC Fact Book. The Business Office and IPEDS provided numbers related to employee salaries and benefits.

OUTPUT VARIABLES

- Total college expenditures—excluding salaries & benefits
- Total student activities expenditures
- Total disposable income available to AVC employees
- Average annual college-related expenditures for full- & part-time students spent in-district on non-housing items
- Total student government expenditures
- College expenditures in-district
- % of expenditures by college in-district
- Disposable income of in-district employees spent in-district on non-housing items
- Expenditures of out-of-district employees
- Rental expenditures of employees in-district
- Total employee expenditures in-district
- Total student expenditures

The Business Office provided data on in-district spending through the vendor database. Student activities expenditures were also obtained from the Business Office. Cost of living information regarding average rent and non-housing expenditures was estimated based on information from city-data.com.

The resulting data for the calculation of AVC's estimated economic impact are presented below:

Item	2014-15 AVC Information	Source of Information	Amount value
3	Total college expenditures—excluding salaries & benefits	Business Services—Audited Financials	\$16,906,151.0
4	% of college expenditures in item 3 spent in-district	Business Services	13.4%
5	Total student activities expenditures—athletics	Business Services	\$3,455,163.0
6	Total number of college employees	IR/CCCCO	854
7	College employees who live in-district	HR/IR	636
8	Total disposable income available to college employees—salaries minus benefits	Business Services/IPEDS	\$46,121,796.0
9	Total number of full-time (ft) students	IR/CCCCO	5,656
10	Total number of part-time (pt) students	IR/CCCCO	13,198
11	Average non-tuition fees/college expenditures of ft students—estimate for a dependent student	IPEDS	\$6,327.0
12	Average non-tuition fees/college expenditures of pt students—estimate for a dependent student	Estimate based on IPEDS	\$4,855.0
13	Total student government expenditures spent in-district	Business Services	\$47,008.0
14	College expenditures spent in-district	Business Services	\$2,258,378.5
15	Total in-district expenditures by the college—including student government	Business Services	\$2,305,386.5
16	Disposable income of in-district employees spent in-district on non-housing items—salaries item 8 x %in-district employees x %non-housing expenditures	Ryan & Malgieri formula	\$25,770,553.5
18	Expenditures of out-of-district employees spent in-district on non-housing items: out-of-district employees x 1,000	Ryan & Malgieri formula	\$218,000.0
20	Rental expenditures by employees living in-district: within district employees x %renting x average annual rent	city-data.com/Ryan & Malgieri formula	\$3,765,628.8
21	Total employee expenditures in-district	Total in item 16 + total in item 18 + total in item 20	\$29,754,182.3
22	Total expenditures of full-time students	Total in item 9 + total in item 11	\$35,785,512.0
23	Total expenditures of part-time students	Total in item 10 + total in item 12	\$64,076,290.0
24	Total expenditures of students	Total in item 22 + total in item 23	\$99,861,802.0
27	Total in-district expenditures of the college—including student government	Total in item 15	\$2,305,386.5
28	Total college employees expenditures in-district	Total in item 21	\$29,754,182.0
29	Total student expenditures in-district	Total in item 24	\$99,861,802.0
31	Total initial economic impact of the college on the district	Total in item 27 + total in item 28 + total in item 29	\$131,921,371
32	Multiplier effect		2.0
33	Total estimated economic impact	Total in item 31 x item 32	\$263,842,742

KEY ECONOMIC IMPACT-RELATED FINDINGS

For fiscal year 2015, AVC contributed an estimated **\$132 million** of direct initial economic impact to the local economy in college, employee and student expenditures. Student expenditures clearly make up the largest portion of the pie. AVC's Direct Impact:

Total Expenditures: \$131,921,371

Total % In-District AVC Expenditures: 1.8%

Total % In-District Employee Expenditures: 22.6%

Total % Student Expenditures 75.7%

The data support how investment in AVC yields high returns: For every general fund revenue dollar AVC receives from local, state, and federal sources, **\$1.78** is the direct impact and is initially returned to our service district. This reflects the cash flow in and out of our communities and dollars being spent, re-spent or reinvested by local businesses and residents. Over the long-term, there's a ripple effect and multipliers to calculate this effect generally vary between 1.00 to 3.00, with lower multipliers indicating that dollars spent locally are being spent elsewhere more than locally. This is true of smaller, rural and resort type communities like those served by AVC. Using a multiplier of 2.00 from the Ryan & Malgieri (1992) model, AVC's total estimated economic impact for fiscal year 2015 was **\$264 million** with **\$3.55** eventually being returned to AVC's service district for every dollar of general fund revenue.

DISCUSSION

The estimated direct economic impact of AVC on the local economy was \$132 million for FY 2015. Since AVC's 2014-15 general fund revenues from federal, state, and local sources were \$74,306,286, there was a \$1.78 initial return. The data support how investment in AVC yields high returns for every general fund revenue dollar AVC receives from local, state, and federal sources, \$1.78 is the direct impact and is initially returned to the college's service district. This reflects the cash flow in and out of our communities and dollars being spent, re-spent or reinvested by local businesses and residents. Over the long-term, considering the ripple effect and using a multiplier of 2.00 from the Ryan & Malgieri (1992) model, AVC's total annual estimated economic impact on its service area for fiscal year 2015 was \$263,842,742. This includes income earned by college employees and goods and services purchased locally by employees, students, and the college. For every dollar invested in AVC from federal, state, and local general fund revenue, \$3.55 is returned to its service area (\$1.78 initial return and \$3.55 eventual return).

The Ryan & Malgieri method for calculating the economic impact of community colleges focuses on using college, employee, and student expenditures within a college's District. There is a more conservative approach based on available District-level quantitative information that calculates the more immediate initial economic impact along with the eventual annual return using a multiplier of 2.0, which is also conservative.

This direct or more tangible and conservative economic impact calculation does not take into account numerous intangible impacts such as: a) the college's impact outside its service area; b) how AVC creates job opportunities by employing 854 employees; c) the earning power of employed students; d) the correlation between level of education and increased lifetime earnings; e) the expenditures of visitors; and f) social benefits such as increased community participation. These are just some of the human capital benefits of AVC on its communities. Clearly, AVC is playing a pivotal role in helping to train a qualified and skilled workforce for the global economy and creating a more knowledgeable community with a higher quality of life.

Thus, this calculation does not reflect the college's economic impact on greater Los Angeles County and beyond, for the necessary information is not available at this time. The college and its key stakeholders also do business outside the District e.g. for goods that are not readily available here, students who get jobs outside the service area, employees who live out-of-district, etc. The District provides business and other support to numerous organizations within and beyond its service area. AVC contributes greatly to its service area communities by providing much needed

education and work force training for its students, as well as serving as a major employer for the District. Within the college's effective service area, of those 25 years of age and over, 19% have less than a high school education; 26% are high school graduates, 27% have some college but no degree; 9% have an associate's degree; 12% a bachelor's degree; and 7% possess graduate degrees (Source: Cambridge West Partnership, LLC-Environmental Systems Research Institute, Market & Demographic/Income Profiles 2015). The college contributes to a more educated populace both within and outside its service area. It has been well documented that earnings typically increase by educational attainment, while unemployment rates decline. During 2015, the median annual wage with a high school diploma was \$36,210 and unemployment at 5.4%; \$50,230 for those with an associate's degree with unemployment at 3.8%; and \$70,400 for those with a bachelor's degree with unemployment at 2.8% (Source: U.S. Bureau of Labor Statistics). With their education and skill sets, AVC students are able to be successful, obtain better paying jobs, and generally have a better future. Their higher earnings generate additional economic activity. Thus, AVC is a sound investment not only for the communities it serves, but numerous other outlying communities.

For the next economic impact analysis, in the interest of being more empirical, the data needed for a non-estimation model (e.g. surveys of employee, student and community spending) should be gathered, as well as a survey of service area businesses and industries. More detailed data on college expenditures (e.g. main local vendors) should also be generated. This would allow not only for a fuller calculation of economic impact, but also allow stakeholders to have a more personal and meaningful connection with the reported data. The next steps involve dissemination of the findings reported here, beginning with the sharing of this report with AVC's President, Board of Trustees, Marketing, Foundation, as well as other internal and external stakeholders.

SELECTED BIBLIOGRAPHY

Caffrey, J. & Issacs, H. (1971). *Estimating the Impact of a College or University on the Local Economy*. Washington, D.C.: American Council on Higher Education.

Economic Impact Report: Grossmont-Cuyamaca Community College District, 2012. Economic Modeling Specialists International.

New Study Pegs Adams State Economic Impact at \$70 Million. (2005). San Luis Valley Development Resources Group.

Ozarks Technical Community College Economic Impact Study, 2011. Economic Modeling Specialists International.

Ryan, J. (1985). A Shortcut to Estimating Economic Impact. *Community/Junior College Quarterly*, 9:197-214.

Ryan, J. & Malgieri, P. (1992). *Economic Impact Studies in Community Colleges: The Shortcut Method*, Paper No. 48.

The Economic Impact of Johnson County Community College of Johnson County, 1998-99. (2000). Office of Institutional Research.

The Economic Value of College of the Canyons, December 2015. Economic Modeling Specialists International.

The Virginia Community College System: What's it Really Worth to Virginia? The Virginia Community College System.

Wenatchee Valley College Economic Impact, 2011-2012. Economic Modeling Specialists International.

Where Value Meets Values: The Economic Impact of Community Colleges, February 2014. American Association of Community Colleges & Economic Modeling Specialists International.