



OCTOBER 2019



# Demonstrating the Value of the Cardiff & Vale College Group

ANALYSIS OF THE SOCIAL AND ECONOMIC IMPACT OF LEARNING

## EXECUTIVE SUMMARY



**C**ARDIFF and Vale College Group (CAVC Group) creates value in many ways. The Group plays a key role in helping learners increase their employability and achieve their individual potential. It provides learners with the skills they need to have fulfilling and prosperous careers. Further, it supplies an environment for learners to meet new people, increase their self-confidence, and promote their overall health and well-being.

The value of CAVC Group influences both the lives of learners and the regional economy. The Group serves a range of industries in the Cardiff Capital Region, supports local businesses, and benefits society as a whole in the UK from an expanded economy and improved quality of life. The benefits created by CAVC Group even extend as far as the Exchequer in terms of increased tax receipts and public sector cost savings.

This study investigates the benefits that the Group generates in return for the investments made by its key stakeholder groups—learners, society, and taxpayers- and the economic impacts created by CAVC Group on the business community. The region the Group serves is defined as the Cardiff Capital Region and consists of Cardiff, The Vale of Glamorgan, Blaenau Gwent, Bridgend, Caerphilly, Merthyr Tydfil, Monmouthshire, Newport, Rhondda Cynon Taf and Torfaen. The following two analyses are presented:



### Investment analysis



### Economic impact analysis

All results reflect learner and financial data for 2017-18. The return on investment to learners, society, and taxpayers are reported under the investment analysis. Impacts on the regional business community are reported under the economic impact analysis. Results are measured in terms of added income. Both analyses are described more fully in the following sections.

# Investment analysis



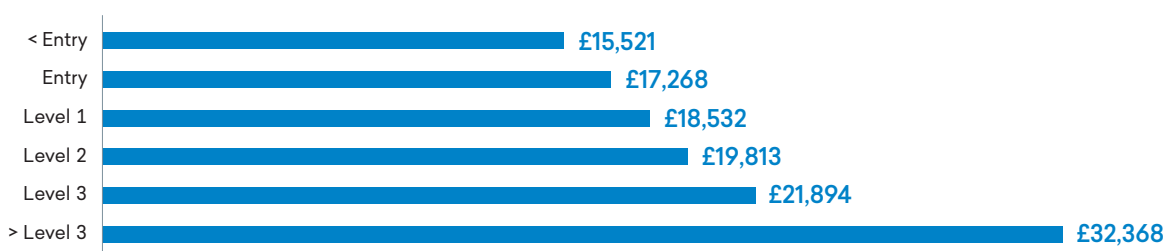
Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and is considered unprofitable. This study considers CAVC Group as an investment from the perspectives of learners, society, and taxpayers. The backdrop for the analysis is the entire UK economy.

## Learner perspective

In 2017-18, CAVC Group served 14,084 learners and 13,387 apprentices. In order to attend the Group, some learners paid for tuition, fees, books, and supplies. Additionally, learners gave up money that they would have otherwise earned had they been working instead of attending College. The total investment made by CAVC Group's learners for 2017-18 amounted to a present value of £117.6 million, equal to £6.2 million in out-of-pocket expenses plus £111.4 million in forgone time and money.

In return for their investment, CAVC Group's learners will receive a stream of higher future earnings that will continue to grow through their working lives. As shown in Figure 1, mean earnings levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. For example, the average Level 3 achiever in the Cardiff Capital Region will

FIGURE 1. AVERAGE EARNINGS BY EDUCATION LEVEL AT CAREER MIDPOINT IN THE REGION



Source: Emsi complete employment data.



see an increase in earnings of £6,373 each year compared to someone with no formal qualifications. This amounts to approximately £229 thousand in higher earnings (undiscounted) over a working lifetime.

The present value of the higher future earnings that CAVC Group's learners will receive over their working careers is £538.7 million. Dividing this value by the £117.6 million in present value learner costs yields a benefit-cost ratio of 4.6. In other words, for every £1 learners invest in CAVC Group in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of £4.60 in higher future earnings. The average annual rate of return for learners is 16.4%. This is an impressive return, especially when compared to the 30-year average 6.1% percent change in the UK stock market (Figure 2).

## Social perspective

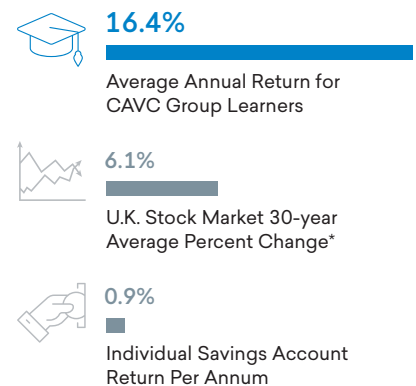
Society as a whole within the UK benefits from the presence of CAVC Group in two major ways. The first and largest benefit that society receives is an increased economic base. As discussed in the previous section, the higher learner earnings and increased business output occurs across the UK. This raises prosperity in the UK and expands the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of learners. Education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers, and are distinct from the costs avoided by taxpayers outlined below. Health savings include avoided medical costs associated with smoking, obesity, and mental health disorders. Crime savings consist of reduced security expenditure and insurance administration, lower victim costs, and reduced Criminal Justice System expenditures. Unemployment savings comprise the reduced demand for income assistance and Jobseeker's Allowance benefits. For a list of study references to these statistical benefits, please contact CAVC Group for a copy of the main report.

Figure 3 shows the present value of the higher earnings and social savings that will occur in the UK over the working lifetime of the 2017-18 learner population at CAVC Group. Higher earnings amount to a present value of £1.3 billion due to the increased lifetime earnings of learners and associated increases in business output. Social savings amount to £32.2 million, the sum of health, crime, and unemployment savings in the UK. Altogether, total benefits to society equal £1.4 billion (in present value terms).

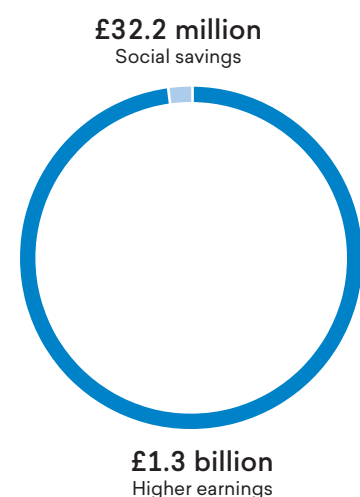
Society invested a present value of £334 million for 2017-18 CAVC Group educations. This includes all expenditures by CAVC Group, all learner expenditures, and all learner opportunity costs. For every £1 of this investment, society as a whole in the UK will receive a cumulative value of £4.10 in benefits, equal to the £1.4 billion in benefits divided by the £334 million in costs. These benefits will occur for as long as CAVC Group's

FIGURE 2. LEARNER RATE OF RETURN



\* FTSE 100, 1987-2016.

FIGURE 3. PRESENT VALUE OF HIGHER EARNINGS AND SOCIAL SAVINGS IN THE UK



2017-18 learners remain employed in the UK's workforce. The average annual rate of return for society is 15.2%.

## Taxpayer perspective

CAVC Group generates more in tax revenue than it takes. As learners earn more they make higher income tax payments and National Insurance contributions. The portion of higher earnings that learners spend also leads to higher value added tax (VAT) receipts. Further, as employers increase their output and make more purchases for supplies and services, they benefit the Exchequer through their higher corporation tax and VAT payments. By the end of the 2017-18 learners' working careers, the government will have collected a present value of £235.4 million in added taxes.

Benefits to taxpayers also consist of the savings generated by the improved lifestyles of learners and the proportionally reduced government expenditures. Education is statistically correlated with a variety of lifestyle changes that generate taxpayer savings across three main categories: 1) health, 2) crime, and 3) unemployment. Improved health habits lower the learners' demand for services from the National Health Service. Learners are also less likely to commit criminal offences, so the demand on the Criminal Justice System for law enforcement services is reduced (study references are available in the main report). Learners are also more employable, so the demand for Job Seekers' Allowance benefits reduces. For a list of study references to these statistical benefits, please contact CAVC Group for a copy of the main report. All of these benefits will generate a present value of £8.5 million in savings to taxpayers.

Total benefits to taxpayers equal £243.9 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of £72.7 million—equal to the funding that CAVC Group received from the government during the analysis year—yields a benefit-cost ratio of 3.4. This means that for every £1 of public money invested in CAVC Group, taxpayers receive a cumulative value of £3.40 over the course of the learners' working lives. The average annual rate of return is 13.0%, a solid investment that compares favorably with other long-term investments in both the private and public sectors.

## Summary of investment analysis results

Table 1 presents the results of the investment analysis for all three of CAVC Group's major stakeholder groups—learners, society, and taxpayers. As shown, learners receive great value for their educational investment. At the same time, the investment made by taxpayers to the Group creates a wide range of benefits to society and returns more to government budgets than it costs.

TABLE 1. SUMMARY OF INVESTMENT ANALYSIS RESULTS

 <h3>Learner Perspective</h3> <p><b>£538.7 million</b> Present value benefits</p> <p><b>£117.6 million</b> Present value costs</p> <p><b>£421.1 million</b> Net present value</p>	
<b>4.6</b>	<b>16.4%</b>
Benefit-cost ratio	Rate of return

 <h3>Social Perspective</h3> <p><b>£1.4 billion</b> Present value benefits</p> <p><b>£334 million</b> Present value costs</p> <p><b>£1 billion</b> Net present value</p>	
<b>4.1</b>	<b>15.2%</b>
Benefit-cost ratio	Rate of return

 <h3>Taxpayer Perspective</h3> <p><b>£243.9 million</b> Present value benefits</p> <p><b>£72.7 million</b> Present value costs</p> <p><b>£171.2 million</b> Net present value</p>	
<b>3.4</b>	<b>13.0%</b>
Benefit-cost ratio	Rate of return

# Economic impact analysis



CAVC Group promotes economic growth in the Cardiff Capital Region in a variety of ways. The Group is an employer and buyer of goods and services, and the living expenses of learners benefit local businesses. In addition, CAVC Group is a primary source of education to Cardiff Capital Region residents and a supplier of trained workers to regional industries.

## Staff and college expenditure impact

CAVC Group is an important employer in the Cardiff Capital Region. In 2017-18, the Group employed 1,161 full-time and part-time staff. Of these, 94% lived in the Cardiff Capital Region. Total payroll at CAVC Group was £42.4 million, much of which was spent in the region for groceries, rent, dining out, clothing, and other household expenses.

CAVC Group is itself a large-scale buyer of goods and services. In 2017-18, the Group spent £45.3 million to cover its expenses for facilities, professional services, and supplies.

CAVC Group added £70.3 million in income to the region during the analysis year as a result of its day-to-day operations. This figure represents the Group's payroll, the multiplier effects generated by the spending of the Group and its employees, and a downward adjustment to account for funding that the Group received from local sources. The £70.3 million in added income is equivalent to supporting 2,510 average wage jobs.

## Learner expenditure impact

Around 17% of learners attending CAVC Group originated from outside the region in 2017-18, and some of these learners relocated to the Cardiff Capital Region to attend CAVC Group. These learners would not have come to the region if the Group did not exist. While attending the Group, these relocated learners spent £19.6 million to purchase groceries, rent accommodation, pay for transportation, and so on. A significant portion of these expenditures occurred in the region, generating £10.7 million in added income in the regional economy during the analysis year, which is equivalent to supporting 479 average wage jobs.

TABLE 2. IMPACTS CREATED BY CAVC GROUP IN 2017-18



### Staff and College expenditure impact

**£70.3 million**  
Added income

**2,510**  
Average-wage jobs



### Learner expenditure impact

**£10.7 million**  
Added income

**479**  
Average-wage jobs



### Added workforce skills impact

**£364.8 million**  
Added income

**16,247**  
Average-wage jobs



### Total impact

**£445.9 million**  
Added income

**19,236**  
Average-wage jobs

## Added workforce skills impact

The education and training CAVC Group provides for regional residents results in the greatest impact. As shown in Figure 4, since the Group was established, learners have studied at CAVC Group and entered the regional workforce with new skills. Today, thousands of former learners are employed in the Cardiff Capital Region.

During the analysis year, past and present learners of CAVC Group generated £364.8 million in added income for the region. This figure represents the higher earnings that learners earned during the year, the increased output of the businesses that employed the learners, and the multiplier effects that occurred as learners and their employers spent money at other businesses. This £364.8 million in added income is equivalent to supporting 16,247 average wage jobs.

FIGURE 4. CAVC GROUP ALUMNI WORKING IN-REGION TODAY

● Retired, out-migrated since graduation  
● Still employed in-region today since graduation

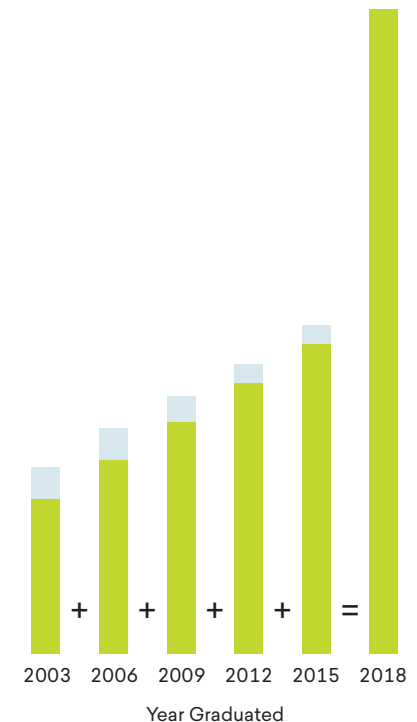


FIGURE 5. BREAKDOWN OF CAVC GROUP INSTRUCTIONAL ACTIVITY BY SECTOR



\*A large proportion of the 'Preparation for Life and Work' activity relates to the delivery of English for Speakers of Other Languages (ESOL).

## Total impact

The overall impact of CAVC Group on the local business community during the analysis year amounted to £445.9 million in added income, equal to the sum of the staff and Group spending impact, the learner expenditure impact, and the added workforce skills impact (Table 2). The £445.9 million in added income was equal to approximately 1.7% of the GRP of the Cardiff Capital Region. By comparison, this contribution that the Group provides on its own is nearly as large as the entire Arts, Entertainment, & Recreation industry in the region.

The total impact is also expressed in terms of the jobs supported by the added income; they are calculated using average wages from within the Cardiff Capital Region. Overall, the £445.9 million impact supports 19,236 average wage jobs.

# Conclusion

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

---

*The results of this study demonstrate that CAVC Group creates value from multiple perspectives.*

---

## About the study

Data and assumptions used in the study are based on several sources, including the 2017-18 academic and financial reports from CAVC Group, industry and employment data from Nomis official labour market statistics, demographic and earnings data from the Office for National Statistics (ONS), and Emsi's input-output model. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of investment effectiveness and economic impact. For a full description of the data and approach used in the study, please contact CAVC Group for a copy of the main report.



Emsi is a leading provider of economic impact studies and labor market data to educational institutions, workforce planners, and regional developers in the UK and internationally. Since 2000, Emsi has completed over 2,000 economic impact studies for educational institutions in four countries. Visit [www.economicmodelling.co.uk](http://www.economicmodelling.co.uk) for more information about Emsi's products and services.