

# **Colorado State University-Pueblo's Impact on the Local and State Economies.**

Submitted to:

Governing Board,

Colorado State University

By

Kevin Duncan, Ph.D.

Professor of Economics

Colorado State University-Pueblo

Pueblo, Colorado 81001

Ph: 719.549.2228

Email: [kevin.duncan@colostate-pueblo.edu](mailto:kevin.duncan@colostate-pueblo.edu)

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## Executive Summary

This report provides the CSU-Pueblo version of the 2008 CSU report, “*Created to Serve: Colorado State University’s Impact on the State’s Economy*” by professors Shields and Cutler. The CSU report measured the direct impact of the university on the local and state economies as well as impacts associated with university alumni, innovation, and productivity. Due to the different missions of the two universities, this report focuses on the direct and alumni impacts. While there are methodological differences between the two studies, both provide overlapping information on local and state impacts. Specifically, this study measures the impact of CSU-Pueblo on the Pueblo County economy. This impact is based on the budgetary spending of the university and the spending of students who reside in, or commute to Pueblo to attend the university. The contributions, occupations, and incomes of CSU-Pueblo graduates are also discussed. The study concludes with a presentation of the employment and payroll contributions of higher education institutions in southeastern Colorado. The major findings of the report are described below:

**Impact on Pueblo County:** The total economic impact of CSU-Pueblo on Pueblo County is approximately \$128 million annually. This impact represents 3.1 percent of the county’s GDP. This increased economic activity is associated with the generation of \$3.2 million in local tax revenue (about \$1 million in sales taxes collected by the city, \$140,000 in county sales taxes, and \$2.0 million in local property taxes). This represents approximately 3.9 percent of total sales and property taxes collected by the city and county governments each year. The university has approximately 1,000 employees with about 770 residing in Pueblo County. The local economic activity associated with the university creates an additional 140 local jobs. Students who commute to, or reside in Pueblo specifically to attend the university spend approximately \$47 million each year in Pueblo. This spending creates another 460 local jobs. The total number of Pueblo County jobs associated with the university’s impact is 1,370. This represents 2.0 percent of Pueblo County employment. These benefits to the local economy would not occur if CSU-Pueblo was located elsewhere, or did not exist. The impact results are summarized in Table E-1 below.

Table E-1.  
Economic Impact of Adjusted CSU-Pueblo Budget and Student Spending.

Impact Category (2010 dollars)	Direct Effect	Multiplier	Total Economic Impact
Adjusted Budget and Student Spending Total	\$112,110,000	1.142	\$128,039,000
Employment	1,173*	1.165	1,367 local jobs
City Sales Taxes	–	–	\$942,000
County Sales Taxes	–	–	\$141,000
Property Taxes	–	–	\$2,080,000
Total Local Tax Impact			\$3,163,000

Source: IMPLAN. \* Pueblo County resident CSU-Pueblo employees (766), plus employment due to direct student spending (407 jobs). Spending total adjusted for net flow into Pueblo County.

The impact is spread across many sectors of the local economy with businesses not directly linked to CSU-Pueblo experiencing substantial revenue and employment gains. For example, annual revenue in the local real estate industry is higher by about \$17.5 million because of the presence of CSU-Pueblo. Similarly, the local motor vehicle industry (sales, parts, and repair) enjoys an additional \$6.7 million in revenue and 86

more jobs. The local utility industry (telecommunications, natural gas and electric) receives additional revenue of approximately \$6.6 million and 12 more jobs because of the local economic activity associated with the university. Employment in the restaurant and broadly defined retail sector is greater by 257 employees. The imputed rent of owner-occupied dwellings (a measure of residential property value) is higher by about \$2.7 million. The distribution of the impact across the top 20 most-affected local industries is reported in Table E-2 below. The point of this presentation is that citizens of Pueblo County do not need to be directly involved with the university in order to benefit from its presence in the county. Also, local businesses in those industries that benefit the most from the presence (and growth) of the university should be informed of this impact and may be appropriate sources of fund raising.

Table E-2  
Economic Impact of Adjusted CSU-Pueblo and Student Spending on Pueblo County Industry-Level Revenue and Employment

Pueblo County Industry	Revenue Increase by Industry	Employment Increase by Industry
Total	\$128,039,375	1,367
Colleges, universities, and professional schools	\$64,832,876	766*
Real estate establishments	\$17,497,596	111
Retail Stores - Motor vehicle and parts	\$5,525,900	71
Electric power generation, transmission, and distribution	\$5,373,629	10
Food services and drinking places	\$5,231,290	107
Other amusement and recreation industries	\$3,362,041	13
Other state and local government enterprises	\$3,291,810	34
Imputed rental activity for owner-occupied dwellings	\$2,668,021	0
Retail Stores - Food and beverage	\$2,259,992	29
Retail Stores - Clothing and clothing accessories	\$1,424,353	25
Offices of physicians, dentists, and other health practitioners	\$1,189,962	10
Automotive repair and maintenance, except car washes	\$1,169,916	15
Home health care services	\$1,070,597	29
Private hospitals	\$967,911	9
Wholesale trade businesses	\$940,357	6
Natural gas distribution	\$725,235	1
Retail Stores - Miscellaneous	\$722,419	18
Retail Stores - Gasoline stations	\$632,462	7
Monetary authorities and depository credit intermediation activities	\$595,896	4
Telecommunications	\$544,045	1

Source: IMPLAN. \* Pueblo County resident employees.

**Alumni Impact:** The typical CSU-Pueblo graduate who works and lives in Pueblo earns about \$17,500 more than the typical resident with a high school degree. Since there are approximately 5,600 alumni living and working in the county, the aggregate value-added of a CSU-Pueblo degree to income in the county is nearly \$100 million (5,600 x \$17,500). This value-added to local income induces an additional \$28 million in local income. Therefore, the total valued-added income impact of CSU-Pueblo graduates living in Pueblo County is approximately \$127 million. This represents 3.1 percent of Pueblo County GDP. The value-added impact can be combined with the university impact (\$128 million) for an estimate of the overall impact of the university equal to \$255 million. The combined impact is 6.2 percent of Pueblo County GDP. Or about \$.06 of every dollar in local economic activity can be attributed to CSU-Pueblo. The combined impacts of the university's budget, the spending of students who reside in Pueblo to attend the university, and the value-added to the incomes of students who remain in the county after graduation all point to the key role CSU-Pueblo plays in the ongoing development of the local economy.

CSU-Pueblo graduates contribute to the vibrancy of Colorado's economy. Alumni reside in every county in Colorado (the exception is Jackson County) and have careers ranging from healthcare, to education, to business, to service in the military, to serving as volunteers. The occupational distribution of CSU-Pueblo graduates is presented in Table E-3 below. The income and employment of current CSU-Pueblo employees and working graduates totals nearly \$550 million and 12,500 jobs in Colorado. These individuals contribute approximately \$17.5 million in state income tax and \$6.7 million in state sales taxes annually.

Table E-3  
Distribution of CSU-Pueblo Graduates by Occupation.

Professional Field	Percent of Graduates in Field
Education	24.6
Professional and Business	23.4
Health Services	16.4
Government	9.7
Finance/Insurance/Real Estate	5.7
High Tech	3.9
Transportation/Travel	3.1
Sales	3.1
Utilities/Communication	2.2
Sports/Leisure/Arts	2.1
Construction	1.6
Administration	1.6
Military	1.3
Agriculture	0.7
Other Services	0.5
Volunteer/Fundraising/Non-Profit	0.2

Source: Data from CSU-Pueblo Foundation. Sample of 7,016 alumni.

### **Higher Education's Contributions to Employment and Payroll in Southeastern**

**Colorado:** In addition to CSU-Pueblo, there are five other public higher education institutions in southeastern Colorado (Adams State College, Lamar Community College, Otero Junior College, Pueblo Community College, and Trinidad State Junior College).

Higher education is responsible for 4,774 jobs in southeastern Colorado. This represents 4.5 percent of total employment in the region. Additionally, these institutions bring over \$98 million in payroll to the region. Payroll for CSU-Pueblo represents about 1 percent of household income in Pueblo County. Employment and payroll information for each of these institutions is listed in Table E-4.

Table E-4  
Employment and Payroll for Southeastern Colorado Colleges

Institution	Employment	Payroll
CSU-Pueblo <sup>†</sup>	997	\$31 million
Adams State College <sup>††</sup>	481	\$16.7 million
Lamar Community College	300	\$4.2 million
Otero Junior College	660	\$11.9 million
Pueblo Community College	1,498	\$24.1 million
Trinidad State Junior College	838	\$10.2 million
Totals	4,774	\$98.1 million

Sources: CSU-Pueblo 2009 Fact Book, Human Resource Office, Adams State College, Office of Finance and Administration, Colorado Community College System. <sup>†</sup> CSU-Pueblo employment is based on the number of contracts issued. <sup>††</sup> Adams State College employment is based on full and part-time employment, 2009-2010. Community college employment is based on the number of W2 forms for full, part-time employees, student workers, and hourly employees in calendar year 2009.

## **Introduction:**

This report provides the CSU-Pueblo version of the 2008 CSU report, “*Created to Serve: Colorado State University’s Impact on the State’s Economy*” by professors Shields and Cutler. The CSU report measured the direct impact of the university as well as impacts associated with university alumni, innovation, and productivity. Due to the different missions of the two universities, this report focuses on the direct and alumni impacts. While there are methodological differences between the two studies, both provide overlapping information. The analysis of the direct impact includes a comprehensive economic impact analysis of CSU-Pueblo on the Pueblo County economy. The impact is measured in terms of overall economic activity, local job creation, and local tax revenue. This analysis also includes the industry-level impact for 20 local industries that are most affected by the presence of the university. The alumni impact includes a measure of the value-added to the earnings of CSU-Pueblo graduates who live and work in Pueblo. This alumni impact can be added to the impact described above to provide a more complete measure of the importance of the university to the local economy. The contributions of CSU-Pueblo alumni at the state level are also presented.

Colorado State University - Pueblo (CSU - Pueblo) is a major employer in southeastern Colorado, with nearly 1,000 employees, enrollment exceeding 5,000 students, and annual revenue over \$94 million. The overall economic impact of the university is substantial, due, in part, to the economic activity associated with students who live in Pueblo specifically to attend the University and to the value added to local income by graduates who remain and work in Pueblo. In these ways, CSU-Pueblo plays a fundamental role in the ongoing development of the local economy.

The economic impact of CSU - Pueblo is estimated by asking what would happen to the flow of funds into the county, if the university did not exist, or were moved to another location.

Certainly the most obvious is that the university's budget would be diverted from Pueblo. Federal and state grant funds, financial aid, and other sources of revenue would also leave with the university. Faculty and staff would no longer spend their incomes locally. Many local students would still like to attend a university, but would have to leave the area to do so. Finally, the value added to the income of students who remain in Pueblo after graduation would fade away.

Measures of the CSU-Pueblo budget, student spending, and the value added to the income of local graduates are the basis of this impact analysis. The economic impact is reported in terms of economic activity, employment, and local tax revenue. The study also includes additional information and analysis of CSU-Pueblo graduates. The residential and occupational distribution of alumni is presented along with measures of alumni contributions to the state-level income and tax revenue. This information reveals CSU-Pueblo's contribution to the vibrancy of the Colorado economy.

### **Understanding Economic Impact Analysis**

An activity has an economic impact if it draws, or attracts “new dollars” into a region. When these funds are spent within the region, additional economic activity takes place. For example, when state funds are used to finance higher education in Pueblo, economic activity is directly affected by the employment of staff. Local economic activity is also indirectly influenced as educational supplies and resources are purchased. Additional economic activity is induced as university employees spend a portion of their income in the local retail and service industries. This process is often referred to as a “ripple” effect where the initial stimulus to a local economy (the direct effect of the university budget in this case) is multiplied as additional local rounds of spending, income, and job creation take place. Because of the ripple effect, the total impact of



higher education funding on the local economy will be larger than the initial budgetary allocation to the university.

The identification of the “new dollars” that flow into the local economy is the key to an economic impact study. State funding of higher education in Pueblo is clearly an example of the kind of flow of new dollars that is associated with a ripple effect.

Similarly, some students reside in Pueblo for the specific reason of attending the university. The spending of these students also represents a flow of new dollars into the region. Additionally, a college degree creates value added with respect to income. Many CSU-Pueblo graduates reside and work in Pueblo. The income differential attributed to their college degrees is also associated with more local spending and economic activity.

### **IMPLAN Input-Output Software**

This economic impact study uses the IMPLAN software and data for Pueblo County to estimate the ripple, or multiplier, effect of the university on the local economy. Specifically, these data and software are used to estimate the impact on the level of economic activity, employment, and local sales taxes in Pueblo County. IMPLAN (IMpact analysis for PLANning) was originally developed by the U.S. Department of Agriculture to assist the Forest Service with land and resource management planning. The Minnesota IMPLAN Group (MIG) started work on the model and data in the mid-1980s at the University of Minnesota. The software was privatized in 1993 and made available for public use. The software contains an input-output model with data available at the zip-code, county, state, and national levels.

Input-output analysis measures the inter-industry relationships within an economy. Specifically, input-output analysis is a means of measuring the monetary, or market, transactions between businesses and between businesses and consumers. This framework

allows for the examination of a change in one sector on the entire economy. In this way, input-output analysis is able to measure the multiplier, or ripple, effect as an initial change in one industry stimulates further changes in transactions between other businesses and households. In addition to capturing market transactions within an economy, IMPLAN also measures social accounting, or non-market flows, such as tax payments by individuals and businesses, government transfers, and transfers between individuals. The benefit of these social accounts is the estimation of federal, state, and local taxes associated with an economic impact. Specifically, IMPLAN provides estimates of total state and local taxes from employee compensation, indirect business taxes (sales, property, etc.), households (income, property, motor vehicle, etc.) and corporations (dividends and profits). The IMPLAN tax estimates are combined with information and data from the Colorado Department of Revenue to provide estimates of changes in city and county-level sales taxes. IMPLAN deflators are used to adjust for changes in prices over time. The results are reported in 2010 dollars.<sup>1</sup>

### **Direct Spending by CSU-Pueblo**

The university receives revenue from a variety of sources that are summarized in Table 1. This information was obtained from the Office of Finance and Administration, CSU-Pueblo. The university receives funds from the State (Fee for Service, COF, a portion of the financial aid under Grants and Contracts, and State Capital Funds for the library renewal project). Federal stimulus funds (ARRA funds) contribute significantly, and temporarily, to the budget. Other funds are, in part, derived from students (Tuition & Fees, and Auxiliary Operations). The Other Sources category consists of many sub-categories (transcript fees, library fines, bad check fees, interest on settled bad debts, etc.).

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<sup>1</sup> The January-to-January CPI for 2008, 2009, 2010 is used to adjust for inflation.

The input-output features of the IMPLAN software take into account the natural spending leakages that occur. For example, not all of the university's spending that is derived from revenue will take place in Pueblo. However, IMPLAN is not able to adjust for the fact that some CSU-Pueblo employees reside outside of Pueblo County. Data from a sample of 836 employees indicates that 76.8 percent reside in Pueblo County with the remaining 23.2 percent living outside of the county. Therefore, the portion of payroll associated with out-of-county residents (\$7,290,000) is subtracted from revenue so that the spending of these employees will not be inappropriately included in local spending.<sup>2</sup> This adjustment provides for a more realistic measure of the net inflow of dollars into the county and also yields a more conservative estimate of the total economic impact. The sources of revenue that are derived from students have been adjusted for net in-flows into Pueblo County.<sup>3</sup> CSU-Pueblo revenues as of June 30, 2010 were \$94,820,000 before these adjustments and \$64,830,000 after the adjustments.

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<sup>2</sup> This is based on payroll data reported in the 2009 Fact Book, adjusted for inflation and for 23.2 percent out-of-county employees.

<sup>3</sup> For example, a survey of students, to be discussed in further detail below, indicates that a significant portion of students would no longer reside in Pueblo if they could not attend the University. If these student 'movers' could not attend the university, their local spending would leave with them. On the other hand, students who would remain in Pueblo, even if they could not attend CSU-Pueblo, would likely spend their education dollars on some other local activity. Consequently, any spending associated with tuition, student fees, etc. is adjusted for these student 'movers.'

Table 1  
Preliminary Income Statement for All Funds on a Cash Basis,  
June 30, 2010

Revenue Source	Category Total
Tuition (Student Share) & Fees	\$19,877,000*
COF	\$4,868,314
Fee for Service	\$3,739,583
ARRA Funds	\$ 8,831,552
Grant & Contracts	\$15,820,000*
Auxiliary Operations	\$8,049,000*
Gifts	\$ 513,697
Interest Earnings	\$625,008
State Capital Funds	\$ 8,883,823
Other Sources	\$912,752*
Payroll for Out-of-County Employees	(-\$7,290,000)
<b>Total Revenue</b>	<b>\$64,830,729</b>

Source: Office of Finance and Administration, CSU-Pueblo. \* Adjusted to net flow into Pueblo County.

### Direct Student Spending

Given the time line for this project, it is not possible to conduct a current survey of student spending and residence preferences. Consequently, the results of a previous survey are used and adjusted for inflation. In 2004, professors Duncan and Goodman conducted a survey of CSU-Pueblo students that was used in a previous impact study of the university.<sup>4</sup> The purpose of the survey was to identify those students who commute from outside of Pueblo County, those who would move from Pueblo if they could not attend the university, and those who would remain even if they could not attend CSU-Pueblo. It is inappropriate to include the spending of all students in an economic impact study of the university because some of this spending would occur in Pueblo even if the university was not present. But, it is appropriate to include the spending of those students

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<sup>4</sup> See Duncan and Goodman, 2004, "Economic Impact of Colorado State University-Pueblo on Pueblo's Economy."

who commute to, or reside in Pueblo specifically to attend CSU-Pueblo because the spending by these individuals would not take place if the university was not present. It is the local spending by these students that can be considered as a flow of new dollars into Pueblo County.

Data from the 2004 survey are presented in Table 2 and indicate that; 1) 17 percent of those surveyed reside outside of Pueblo County and 83 percent reside within the County; 2) 66.3 percent county residents indicated that they would move from Pueblo County if they could not attend CSU-Pueblo. These individuals are labeled as “Movers” because they would leave the county, and take their spending with them, if they could not attend the university. About 17 percent of county residents indicated that they would remain in Pueblo County if they could not attend CSU-Pueblo.

Table 2  
2004 Survey of Student Residence, Inside and Outside of Pueblo County  
(Break Down of Inside County Students into Movers and Stayers).

Outside of Pueblo County	17.1 Percent of Total Surveyed
Inside of Pueblo County	82.9 Percent of Total Surveyed
Total Students Surveyed	100Percent of Total Surveyed
Break Down of Inside Pueblo County Residents:	-
Movers	66.3 Percent of Total Surveyed
Stayers	16.6 Percent of Total Surveyed

Source: “Economic Impact of Colorado State University-Pueblo on Pueblo’s Economy” by Duncan and Goodman, 2004.

The 2004 survey also measured student spending on local goods and services. The data in Table 3 report the spending totals and percentages by item, total expenditures, average annual expenditures per ‘mover’ student, and the estimate of the current number of ‘mover’ students. The results of the survey indicate that students allocate most of their spending to housing (31 percent) and groceries (14 percent). In dollar terms, these students spend approximately \$14 million on housing and \$6.5 million on groceries

annually. On average, each ‘mover’ student spends about \$13,800 in Pueblo. The 2009 Fact Book indicates enrollment of 5,051 students. If 66.3 percent are movers, the number of movers is 3,349. Total local expenditures by these students are approximately \$46.2 million annually (3,349 students x \$13,800 per student).

Table 3  
Annual Expenditures in Pueblo County by CSU-Pueblo “Mover” Students  
(By Category with Annual Average and Percent Distribution).\*

Spending Category	Average Expenditure, Per Item	Percent of Total Expenditure, Per Item
Groceries	\$6,470,000	14%
Housing (includes rent or mortgage)	\$14,325,000	31%
Eating and Drinking Establishments	\$4,160,000	9%
Apparel	\$2,774,000	6%
Gas	\$3,235,000	7%
Car Payments	\$5,085,000	11%
Car Repairs	\$924,000	2%
Medical Care	\$924,000	2%
Entertainment and Recreation	\$3,235,000	7%
Utilities	\$3,235,000	7%
Child Care	\$462,000	1%
Other Retail Spending	\$1,387,000	3%
Annual Total*	\$46,216,000	100%
Average annual Spending Per “Mover” Student	\$13,800	–
Estimated Number of ‘Mover’ Students	3,349 (66.3%)	–

Source: “Economic Impact of CSU-Pueblo on Pueblo’s Economy,” Duncan and Goodman, 2004. Reported in 2010 dollars. \* Adjusted for seasonal residents.

Local expenditures by students residing outside of the county are reported in Table 4. These students spend about \$150 per month in Pueblo. Adjusting for the academic year, these students spend approximately \$1,200 in Pueblo annually on purchases related to their commute to campus. It is estimated that there are approximately 864 out-of-county students spend a total of \$1,063,000 in Pueblo annually.

Table 4  
 2004 Survey of Student Monthly Expenditures in Pueblo County by Students Residing Outside of Pueblo County\*  
 (By Category with Annual Average).

Eating and Drinking Establishments	\$59.00
Gas	\$86.00
Child Care	\$8.75
Monthly Total	\$153.75
Annual Total for Out-of-County Students	\$1,063,000
Annual Average Per Out-of-County Student	\$1,230
Estimate of Out-of-County Students	864 (17.1%)

Source: "Economic Impact of CSU-Pueblo on Pueblo's Economy," Duncan and Goodman, 2004. \* Adjusted for academic year.

Total spending by students who would move from Pueblo if they could not attend the university and by those who reside outside of the county is reported in Table 5. These students spend approximately \$47.3 million in Pueblo annually.

Table 5  
 Total Local Spending by Student Movers and Out-of-County Student Residents\*

Annual Spending by Student Movers	\$46,216,000
Annual Spending by Non-County Student Residents	\$1,063,000
Total Local Spending by Students Attributed to CSU-P	\$47,279,000

\* Adjusted for season residents and for academic year (2010 dollars).

### **Total CSU-Pueblo and Student Direct Spending**

Total direct spending by CSU-Pueblo and students is reported in Table 6. These data indicate that the total annual spending that can be attributed to the University is approximately \$112 million.

Table 6

Direct Spending Total: CSU Budget and Student Spending, Adjusted

Category	Spending Total
Student spending	\$47,279,000
CSU Budget	\$64,831,000
Direct Spending Total	\$112,110,000

### **Economic Impact Results: CSU-Pueblo and Student Spending**

Economic impact results are reported in Table 7. The output multiplier for this application is 1.142 indicating that another dollar in direct spending attributed to the university is associated with a total increase in local economic activity of \$1.14. Or, if direct spending is \$112 million, the total increase in local economic activity due to the presence of the university in Pueblo is \$128 million. This impact represents 3.1 percent of Pueblo County GDP.<sup>5</sup> The employment multiplier of 1.165 indicates that 10 more jobs ascribed to the university are associated with the creation of about 12 total jobs in Pueblo. Or, the economic activity associated with the university creates a total of 1,367 total jobs in Pueblo. The total of 1,367 jobs consists of 766 county-resident university employees, plus 463 jobs in the local retail and service sectors that are created by student spending, and 138 additional local jobs that are due to the university's ripple effect. This economic activity results in an increase in sales taxes collected by the City of Pueblo of about \$940,000. The tax revenue impact for the county government is about \$140,000. Property tax receipts are approximately \$2 million. The combined tax revenue impact is approximately \$3.2 million. It is important to keep in mind that these are annual impacts. That is, the \$3.2 million in local tax revenue is generated each year. This represents

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<sup>5</sup> According to the Bureau of Economic Analysis, GDP for Pueblo County is \$4.089 billion (2010 dollars).



approximately 3.9 percent of total sales and property taxes collected by the city and county governments.<sup>6</sup>

Table 7

Economic Impact of CSU-Pueblo Budget and Student Spending. Adjusted for Net Flow Into Pueblo County.

Impact Category (2010 dollars)	Direct Effect	Multiplier	Total Economic Impact
Adjusted Budget and Student Spending Total	\$112,110,000	1.142	\$128,039,000
Employment	1,173*	1.165	1,367 local jobs
City Sales Taxes	–	–	\$942,000
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Total Local Tax Impact			\$3,163,000

Source: IMPLAN. \* Pueblo County resident CSU-Pueblo employees (766), plus employment due to direct student spending (407 jobs).

The IMPLAN output provides detailed information on the specific industries in Pueblo County that are affected by the impact of the university. Table 8 reports the revenue and employment gains for the top 20 local industries. While the impact is spread over a wide range of the local economy, local retail and services enjoy a disproportionate impact. For example, job creation in the restaurant and broadly defined retail sector is about 260 employees. The data reveal that businesses that are not directly related to CSU-Pueblo benefit from the presence of the campus. For example, sales revenue in the local real estate industry is higher by about \$17 million annually because of CSU-Pueblo. The economic activity associated with the university creates an additional 111 jobs in the real estate sector. Similarly, the local motor vehicle industry (sales, parts, and repair) enjoys an additional \$6.7 million in revenue and 86 jobs. Utility providers (telecommunications, natural gas, and electric) receive a combined revenue increase of approximately \$6.6

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<sup>6</sup> According to combined data from the Pueblo County 2010 Adopted Budget and from the Annual Budget 2010, City of Pueblo, total sales and property tax revenue is approximately \$83 million.

million and 12 more jobs because of the presence of CSU-Pueblo. The information for imputed rental activity for owner-occupied dwellings indicates that, if owners wished to rent their dwellings, the imputed value of that rent would be \$2.7 million. This suggests that the economic activity associated with the university increases residential property values. All of these findings reveal the broad reach of the benefit of the university to the citizens of Pueblo County, even for those who are not directly involved with the school.

Table 8

## Economic Impact of CSU-Pueblo and Adjusted Student Spending on Pueblo County Industry-Level Revenue and Employment

Pueblo County Industry	Revenue Increase by Industry	Employment Increase by Industry
Total	\$128,039,375	1,367
Colleges, universities, and professional schools	\$64,832,876	766*
Real estate establishments	\$17,497,596	111
Retail Stores - Motor vehicle and parts	\$5,525,900	71
Electric power generation, transmission, and distribution	\$5,373,629	10
Food services and drinking places	\$5,231,290	107
Other amusement and recreation industries	\$3,362,041	13
Other state and local government enterprises	\$3,291,810	34
Imputed rental activity for owner-occupied dwellings	\$2,668,021	0
Retail Stores - Food and beverage	\$2,259,992	29
Retail Stores - Clothing and clothing accessories	\$1,424,353	25
Offices of physicians, dentists, and other health practitioners	\$1,189,962	10
Automotive repair and maintenance, except car washes	\$1,169,916	15
Home health care services	\$1,070,597	29
Private hospitals	\$967,911	9
Wholesale trade businesses	\$940,357	6
Natural gas distribution	\$725,235	1
Retail Stores - Miscellaneous	\$722,419	18
Retail Stores - Gasoline stations	\$632,462	7
Monetary authorities and depository credit intermediation activities	\$595,896	4
Telecommunications	\$544,045	1

Source: IMPLAN. \* Pueblo County resident employees.

## CSU-Pueblo Alumni Impact on Local and State Income

Over the past nine decades the institution (with four different names and missions) has graduated more than 30,000 students.<sup>7</sup> Data from the CSU-Pueblo Foundation indicate that there are 28,424 living graduates with known addresses (28,159 live in the US and 20,080 reside in Colorado). The CSU report estimates (conservatively) that 57.5 percent of Fort Collins graduates are employed. Using this figure, it is estimated that of the 20,080 CSU-Pueblo graduates residing in Colorado, approximately 11,500 are employed (the remainder work in the home, are unemployed, or are retired). Additional data provided by the Foundation indicate that 48.8 percent of alumni reside in Pueblo County, or 5,612 alumni are employed and live in the county. Data from the American Community Survey of the U.S. Census indicate that the median income of Pueblo County residents with a BA degree is \$39,670 (2010 dollars).<sup>8</sup> The corresponding median income for those with a graduate degree is \$54,350 (2010 dollars). Applying this income data for CSU-Pueblo graduates indicates a weighted average median income of \$40,665 (2010 dollars).<sup>9</sup> Therefore, aggregate income for graduates who reside in Pueblo County is approximately \$228,211,000 in 2010 dollars (or 5,612 graduates x \$40,665 weighted median income).<sup>10</sup> The 2009 CSU-Pueblo Fact Book indicates the university has 997 employees and a payroll of \$31 million (\$31,424,000 in 2010 dollars). Approximately

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<sup>7</sup> Consistent figures on the number of graduates are difficult to obtain. For example, the 2009 Fact Book reports that there are 37,000 known graduates. AIS reports 33,167 degrees for 30,950 students (living and deceased).

<sup>8</sup> See

[http://factfinder.census.gov/servlet/ACSSAFFPeople?\\_event=&geo\\_id=01000US&\\_geoContext=01000US&\\_street=&\\_county=&\\_cityTown=&\\_state=&\\_zip=&\\_lang=en&\\_sse=on&ActiveGeoDiv=&\\_useEV=&pctxt=fph&pgsl=010&\\_submenuId=people\\_7&ds\\_name=null&\\_ci\\_nbr=null&qr\\_name=null&reg=null%3Anull&\\_keyword=&\\_industry=](http://factfinder.census.gov/servlet/ACSSAFFPeople?_event=&geo_id=01000US&_geoContext=01000US&_street=&_county=&_cityTown=&_state=&_zip=&_lang=en&_sse=on&ActiveGeoDiv=&_useEV=&pctxt=fph&pgsl=010&_submenuId=people_7&ds_name=null&_ci_nbr=null&qr_name=null&reg=null%3Anull&_keyword=&_industry=)

<sup>9</sup> This median income calculation is weighted for the average of graduate and undergraduate income. Data from 1991 to 2009 indicate that graduate degrees represented about 6.8 percent of all degrees granted by the university.

<sup>10</sup> Average income for college graduates is not reported by the U.S. Census and is only available from microdata.

76.8 percent of CSU-Pueblo employees reside in Pueblo County. The adjusted payroll for Pueblo County resident employees is \$24,134,000. Therefore, the combined income of CSU-Pueblo alumni and current employees is approximately \$252,345,000 (2010 dollars). This represents 7.7 percent of Pueblo county household income.<sup>11</sup> The total employment in Pueblo County that is related to the university is approximately 6,378 jobs (5,612 alumni plus 766 CSU-Pueblo employees). This represents 9.4 percent of total employment in the county (67,520 in May 2010).<sup>12</sup>

There are approximately 5,888 working CSU-Pueblo alumni who reside in other parts of the state. Data from the U.S. Census indicate that Colorado graduates with a BA earn a median income of \$47,890 and those with a graduate degree earn \$61,520 (2010 dollars).<sup>13</sup> The weighted average median income for these graduates is \$48,820 and total income is \$287,452,000 in 2010 dollars (or \$48,820 x 5,888). Adding the combined data for all CSU-Pueblo graduates, and all CSU-Pueblo payroll, provides an income total of \$547,088,000.<sup>14</sup> This is 0.03 percent of Colorado household income.<sup>15</sup> The corresponding level of CSU-Pueblo related state-wide employment is 12,497. This represents approximately 0.5 percent of Colorado employment.<sup>16</sup> Data from the CSU impact study indicate that state income tax is 3.19 percent of the income related to the university. The corresponding state sales tax rate is 1.22 percent.<sup>17</sup> For consistency between the reports, these tax rates are used to estimate the state-level tax contributions of

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<sup>11</sup> (According to the American Community Survey 2006-2008, house hold income in Pueblo County is \$3,275,666,000 in 2010 dollars.

<sup>12</sup> The most recent employment data from Pueblo county were obtained from Colorado Employment and Demographic System (CEDIS); [https://www.dola.state.co.us/demog\\_webapps/jsn\\_parameters.jsf;jsessionid=ab3acd213219939487d06dbca535](https://www.dola.state.co.us/demog_webapps/jsn_parameters.jsf;jsessionid=ab3acd213219939487d06dbca535)

<sup>13</sup> See American Community Survey 2006-2008.

<sup>14</sup> The total of Pueblo county resident graduates and employees is \$252,345,000, plus payroll for out-of-county employees, \$7,290,000, plus out-of-county graduates, \$287,452,000, equals \$547,087,000.

<sup>15</sup> According to the U.S. Census Colorado household income is \$145 billion (2010 dollars).

<sup>16</sup> State employment is 2,441,019 in May, 2010. See Colorado Department of Labor and Employment.

<sup>17</sup> See Created to Serve: Colorado State University's Impact on the State's Economy, page 3.

CSU-Pueblo employees and alumni. These individuals contribute approximately \$17.5 million to state income taxes ( $\$547,088,000 \times 3.19\%$ ) and approximately \$6.7 million in state sales taxes ( $\$547,088,000 \times 1.22\%$ ).

### **Local Value-Added Income Impact of a CSU-Pueblo Degree**

A college education is associated with increased earnings for the graduate and higher productivity for the community. This section of the report measures the increase in area income that can be attributed to the CSU-Pueblo graduates that reside and work in the county. Table 8 reports the median income from the American Community Survey 2006-2008 for Pueblo County residents 25 years of age and older by level of educational attainment.<sup>18</sup> The income data have been adjusted for 2010 dollars. County residents with a high school degree earn a median income of \$23,000. The median income for those with a college degree is \$39,670. This implies that a college degree adds approximately \$17,000 to the median income of an otherwise local high school graduate. The differential for a graduate degree is over \$31,000.

Table 9  
Median Income by Education Level. Pueblo County Residents, 25 Years and Older.

Education Degree	Median Income	Income Differential over High School Degree
High School Degree	\$23,000	–
Bachelors Degree	\$39,670	\$16,670
Graduate Degree	\$54,350	\$31,350

Source: American Community Survey, U.S. Census (2010 dollars).

The data reported in Table 9 can be used to measure the additional local income, or the value added, associated with a degree from CSU-Pueblo. This information is reported in Table 10. The weighted income differential for a typical CSU-Pueblo graduate who resides in Pueblo County is approximately \$17,500. Since there are about 5,612 graduates residing and working in the county, the addition to income, or valued

<sup>18</sup> The median is the level of earnings at which half of workers make more and half earn less.

added from a CSU-Pueblo degree is about \$99 million (5612 X \$17,665). This value added to local income induces additional income creation in Pueblo. The IMPLAN estimate of this impact is approximately \$28 million. Therefore, the total valued added income impact of CSU-Pueblo degrees is approximately \$127.3 million. This represents 3.1 percent of Pueblo County GDP. The value added impact can be combined with the university impact (\$135.7 million) for a combined total of \$263 million. The combined impact is 6.4 percent of Pueblo County GDP.

Table 10  
Impact of Higher Education Value Added to Pueblo County Income.

Number of Working Graduates in Pueblo County	5,612
Weighted Average Income Differential*	\$17,665
Additional Income Added to Pueblo County	\$99,136,000
Economic Impact of Added Income	\$28,156,000
Total Added Income	\$127,292,000

Sources: American Community Survey, U.S. Census, CSU-Pueblo Foundation, and IMPLAN.

### **Occupational and Geographic Distributions of CSU-Pueblo Graduates**

After leaving CSU-Pueblo, graduates enter into a wide- range of occupations. A sample of 7,016 graduates provided by the CSU-Pueblo Foundation reveals that education is the leading career choice, followed by careers in the professions and business (accounting, management, etc.). Table 11 reports information on the range of occupations held be graduates.

Table 11  
 Distribution of CSU-Pueblo Graduates by Occupation.

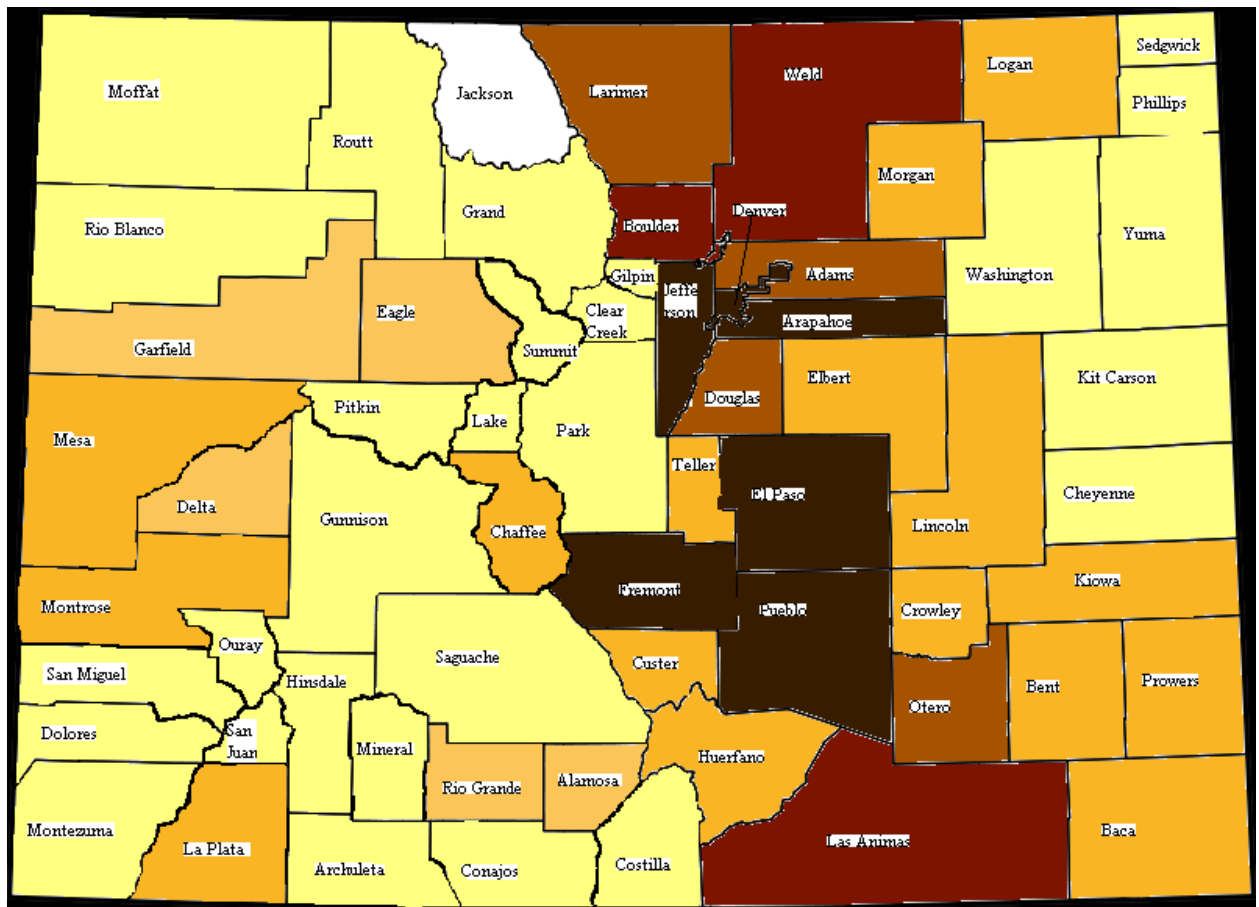
Professional Field	Percent of Graduates in Field
Education	24.6
Professional and Business	23.4
Health Services	16.4
Government	9.7
Finance/Insurance/Real Estate	5.7
High Tech	3.9
Transportation/Travel	3.1
Sales	3.1
Utilities/Communication	2.2
Sports/Leisure/Arts	2.1
Construction	1.6
Administration	1.6
Military	1.3
Agriculture	0.7
Other Services	0.5
Volunteer/Fundraising/Non-Profit	0.2

Source: Data from CSU-Pueblo Foundation. Sample of 7,016 alumni.

Map 1 shows that the 20,000 CSU-Pueblo graduates reside in every county in Colorado (the exception is Jackson County). These graduates contribute to the economic vibrancy of both rural and urban places in Colorado.



**Map 1. CSU-Pueblo Graduates who reside in Colorado are spread throughout the state**



**Key: Number of Graduates in County**

	1-25
	26-50
	51-150
	151-300
	301-500
	Over 500

## Higher Education’s Contributions to Employment and Payroll in Southeastern Colorado

In addition to CSU-Pueblo, there are five other public higher education institutions in southeastern Colorado (Adams State College, Lamar Community College, Otero Junior College, Pueblo Community College, and Trinidad State Junior College). Employment and payroll information for each of these institutions is listed in Table 12.

Table 1  
Employment and Payroll for Southeastern Colorado Colleges

Institution	Employment	Payroll
CSU-Pueblo <sup>†</sup>	997	\$31 million
Adams State College <sup>††</sup>	481	\$16.7 million
Lamar Community College	300	\$4.2 million
Otero Junior College	660	\$11.9 million
Pueblo Community College	1,498	\$24.1 million
Trinidad State Junior College	838	\$10.2 million
Totals	4,774	\$98.1 million

Sources: CSU-Pueblo 2009 Fact Book, Human Resource Office, Adams State College, Office of Finance and Administration, Colorado Community College System. <sup>†</sup> CSU-Pueblo employment is based on the number of contracts issued. <sup>††</sup> Adams State College employment is based on full and part-time employment, 2009-2010. Community college employment is based on the number of W2 forms for full, part-time employees, student workers, and hourly employees in calendar year 2009.

Higher education is responsible for 4,774 jobs in southeastern Colorado. This represents 4.5 percent of total employment in the region.<sup>19</sup> Additionally, these institutions bring over \$98 million in payroll to the region. Payroll for CSU-Pueblo represents about 1 percent of household income in Pueblo County.<sup>20</sup>

<sup>19</sup> This region includes the following counties: Pueblo, Otero, Bent, Prowers, Baca, Las Animas, Costilla, Huerfano, and Alamosa. Total employment in these counties is 105,833 as of May 2010. See Colorado Department of Labor and Employment.

<sup>20</sup> According to the US Census, aggregate household income in Pueblo County is \$3.2 billion (2008 dollars).