



LEWIS-CLARK STATE
— COLLEGE —

The Economic Impacts of Lewis-Clark State College



Executive Summary

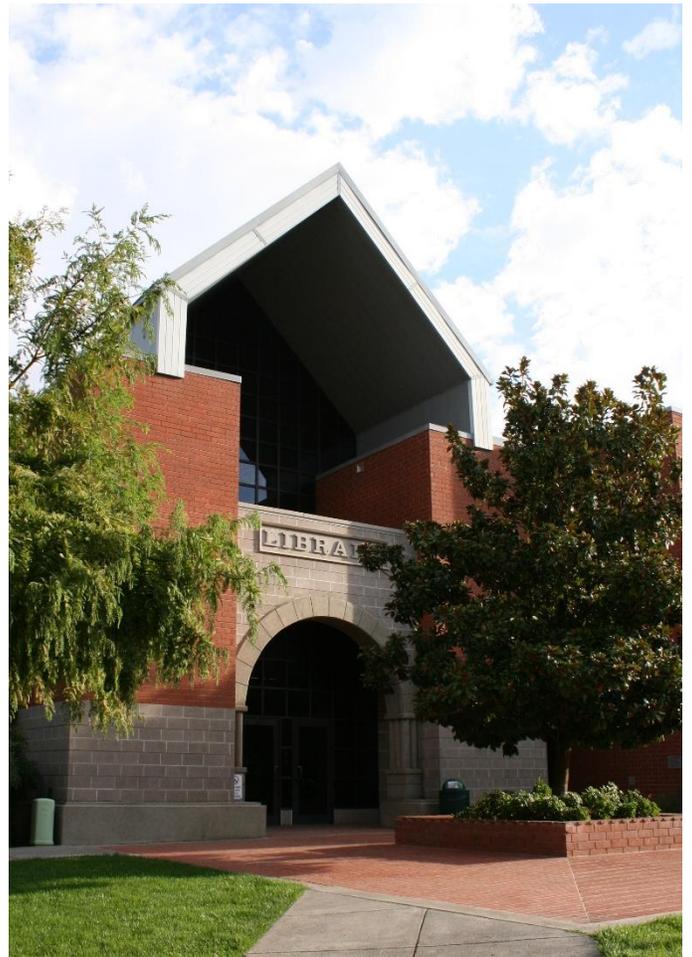
2019

Executive Summary

Lewis-Clark State College represents one of the primary economic pillars of the Lewis-Clark Valley, providing workforce training and advanced human capital for all industries in the region and enhancing the quality of life of every resident.

Lewis-Clark State College is a critical asset for the region in its ability to help recruit and retain key industries in the LC Valley. Not only does the college have over a 90% placement rate for all graduates but it helps ensure employment opportunities exist for their graduates in the local economy. Schweitzer Engineering Laboratories has recently expanded its manufacturing basis in the LC Valley and has contributed to the Schweitzer Career & Technical Education Center. This investment in the LC Valley would have been unlikely, if not infeasible, if it were not for the presence of LC State and the labor force skills it generates through its student body.

This study investigates the depth of the economic impacts that LC State has on the LC Valley by measuring increased productivity of the workforce and additional monies brought to the LC Valley through student recruitment, athletic events, and the attraction of state and federal funds.



Decisive Impacts of LCSC

Lewis-Clark State College is responsible for generating over **\$118.4 million** in added gross regional product to the LC Valley, as well as directly and indirectly supporting over **1,800 jobs** annually with average annual salaries and benefits of \$49,000. Over **23,000 individuals** in the current workforce have received some form of educational training at Lewis-Clark State College.



LC State Operations Impacts

In fiscal year 2018, Lewis-Clark State College spent a total of \$51 million. These monies supported 548 full and part-time faculty and staff. In total, the impacts stemming from these expenditures generated just under \$61.1 million in gross regional product. This captures the net increased economic activity of regional vendors and employee spending as part of the college's supply chain.

LC State Student Expenditure Impacts

LC State attracts students from over 32 countries and 28 states. These students bring new money into the region and spend it on housing, books and supplies, retail goods, and services. In addition to this, many students and their money are retained in the region. Total student expenditures generate \$7.4 million in additional gross regional product for the economy beyond the college's spending. This supports another 101 jobs locally.

LC State Visitor Expenditure Impacts

LC State has a vibrant athletics program and holds additional events such as commencement and parents' weekends. These events attract 123,328 visitors to campus of which roughly 37,000 are from outside the local economy. These 37,000 visitors bring new dollars into the economy and spend them on lodging, food and beverage services, and retail trade. The total additional gross regional output from these visitors is \$5.8 million and supports 159 jobs annually.

LC State Human Capital Impacts

Lewis-Clark State College's primary impact is on increasing the stock of knowledge and productivity embodied in the LC Valley's workforce. Its students integrate themselves into every type of firm from munitions manufacturing, boat manufacturing, all the way to high-tech management and nursing occupations. The added skills and productivity in the workforce increase gross state product by \$44.1 million annually. These gains support an additional 689 jobs with wages and benefits of over \$49,000

IMPACTS BY SOURCE

LC State's economic impacts on the Nez Perce-Asotin County economy can be quantified and understood most appropriately through the increases in gross regional product (GRP) and sustained employment locally.

LC State Expenditure Impacts
\$61.1 million in GRP
884 Jobs

LC State Student Impacts
\$7.4 million in GRP
101 Jobs

LC State Visitor Impacts
\$5.8 million in GRP
159 Jobs

LC State Human Capital Impacts
\$44.1 million in GRP
689 Jobs

LC STATE'S TOTAL IMPACTS
\$118.4 million in GRP
1,833 Jobs

Fiscal Contributions

In total, LC State increases the tax base of the local economy and protects the residents from higher tax rates than they would otherwise have to pay. The total collections from state and local government sum to over \$5.3 million annually.



Fiscal Tax Contributions

Property	\$1,517,213
Sales & Excise	\$2,471,183
Income	\$1,358,979
Total	\$5,347,375

Athletic Impacts

Overall, the LC State athletic program creates 171 direct jobs, increasing to 239 jobs including the multiplier effects. The program adds approximately \$12.4 million to the economy in gross regional product, which includes \$9.0 million in additional wages and salaries in the region. These impacts are included in the total college-wide impacts reported above.

Summary of Athletics Impacts by Category

	GRP	Employment
Athletic Department	\$4,276,119	63
Athlete Spending	\$1,845,112	25
Visitors	\$4,560,800	124
Productivity	\$1,725,044	27
Total	\$12,407,075	239



Additional Highlights

- The Schweitzer Career & Technical Education Center is a 75,000 square-foot, \$24.5 million new facility near the new Lewiston High School that will open in the fall 2020 semester. Construction of the center will create one-time *additional* construction impacts in \$17.1 million in gross regional product and 200 jobs, and contribute \$817,475 in state and local taxes.
- LC State serves an important unique niche in Idaho’s higher educational landscape. It is a destination campus for the northern Idaho counties.
- Manufacturing jobs increased by about 33% from 2001 to 2018 in the regional economy. In contrast, Idaho manufacturing jobs increased by 5%, Washington declined by 6%, and US manufacturing declined by 21%. The skilled labor force enhanced by LC State’s educational programs have played a key role in manufacturing success in the regional economy.
- LC State has the look and feel of a small private elite college. The student-teacher ratio is 13:1 for academic programs and 8:1 for career-technical programs. LC State delivers instructional programs at its Coeur d’Alene Center and has outreach centers in Grangeville and Orofino.
- The average LC State student receives \$7.10 for every dollar they invest in their education. This amounts to a 17.5% average annual return over their working lives. Taxpayers also benefit from the college. The higher productivity and earnings of the businesses and students broaden the tax base and increase state and local tax receipts. Each dollar of public investments in LC returns \$1.90 over the students’ working lives and amounts to an average annual return to the public of 6.3%.

Education Level	LCSC Working Alumni	Percentage
Some College	12,270	53%
Associates	4,385	19%
Bachelors	6,310	27%
Total	22,965	100%

About the Author

Steve Peterson* is a regional economist who has conducted over 100 economic impact assessments in his career on nearly every major industry in Idaho’s economy. Steve was born and raised in the Lewis-Clark Valley and is a graduate of both Lewiston High School and Lewis-Clark State College. He is currently employed at the University of Idaho as a Clinical Associate Professor of Economics.

* This study represents the conclusions of the author and does not represent any other individuals or organizations.



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Technical Report

2019

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Extended Abstract

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LC State is a critical asset for the region in its ability to help recruit and retain key industries in the LC Valley. Not only does the college have over a 90% placement rate for all graduates but it helps ensure employment opportunities exist for their graduates in the local economy. Schweitzer Engineering Laboratories has recently expanded its manufacturing basis in the LC Valley as well as contributing to the Schweitzer Career & Technical Education Center. These investments in the LC Valley would have been unlikely, if not infeasible, if it were not for the presence of LC State and the labor force skills it generates through its student body.

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Table 1: Total LC State Impact Summary

	Sales	Value Added	Income	Jobs
College Expenditures	\$59,355,975	\$61,088,896	\$48,400,662	884
Student Expenditures	\$13,427,409	\$7,370,818	\$3,005,272	101
Visitor Expenditures	\$10,620,830	\$5,838,946	\$4,729,045	159
Productivity	\$78,545,853	\$44,101,506	\$33,918,741	689
Total	\$161,950,067	\$118,400,166	\$90,053,720	1,833

Fiscal Impacts

In total, LC State increases the tax base of the local economy and protects the residents from higher tax rates than they would otherwise have to pay. The total collections from state and local governments sum to over \$5.3 million annually.

Table 2: Fiscal Tax Impacts

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LC State has the look and feel of a small private elite college. The student-teacher ratio is 13:1 for academic programs and 8:1 for career-technical programs. LC State delivers instructional programs at the LC State-Coeur d'Alene Center and has outreach centers in Grangeville and Orofino.

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Chapter 1: State and Regional Overview

Idaho: A Contrast of Urban Versus Rural

Idaho is a state with two economies: one urban and one rural. The rural economy is based on agriculture and other natural resource industries, while the urban economy is based on rapidly growing high-technology manufacturing and service companies. These two separate economies reflect Idaho's past, present, and future. The two economies complement each other and compete with each other for resources. The Lewiston region is situated in the rural part of the state and reflective of its rural traditions. It is also located in a larger region highly dependent on natural resource-based industries, such as agriculture, forestry, and wood products.

The population and economic growth of the urban portions of the state have been rapid and robust (particularly those regions with high-technology industries and related services), while the growth of the rural regions and natural resource-based economies has been modest or negative. The most impoverished regions of the state tend to be the most rural.

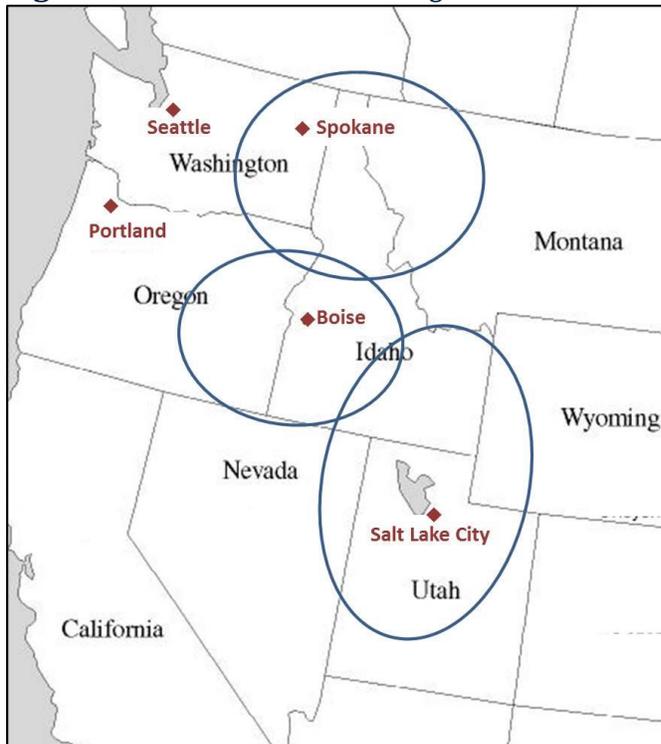
Lewiston is situated in the epicenter between urban and rural economies and between traditional natural resource economies and the newly emerging high technology, services, and tourism industries. Lewis-Clark State College is providing an important roadmap for supplying human capital resources and guiding the economy into the future.

Economic Boundaries of the State Sub-Regions

In terms of political boundaries, Idaho is a single state. In terms of economic boundaries, Idaho has three distinct economies.

The U.S. Bureau of Economic Analysis divides the state of Idaho into 1) the Boise economy, which includes eastern Oregon, southwest Idaho, and central Idaho; 2) the Spokane economy, comprised of eastern Washington, northern Idaho, the southwestern region of Canada, and part of western Montana; and 3) the Salt Lake City economy, which includes most of Utah, a portion of northwestern Nevada, and southeast Idaho. Political boundaries rarely coincide with the integrated economic regions focused on these market centers. The Lewis-Clark Valley (LC Valley) and Lewis-Clark State College are situated in the Spokane economic region (Figure 1.1).

Figure 1.1: *Idaho's economic regions*



Lewiston Regional Trade and Commodity Flow Patterns

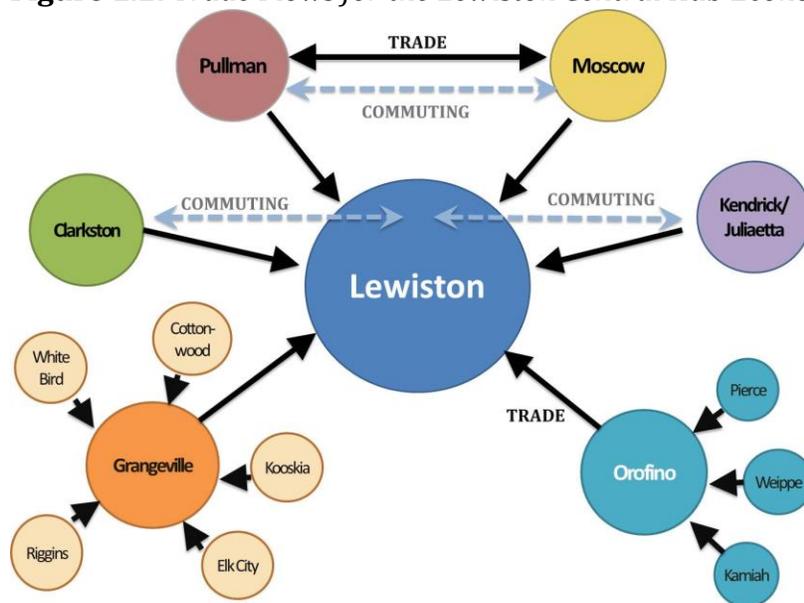
Trade flows (wholesale and retail trade patterns) for the region have both east-west and north-south elements (Figure 1.2). The dominant geographical location in the trade hierarchy is Spokane, Washington, which is the economic hub for eastern Washington, northern Idaho, western Montana, and southwestern Canada. Spokane provides the widest range of goods and services for local businesses and households and the most competition within each of the markets for goods and services. At the next level in the system of trade centers forming the trade hierarchy is the local trade “hub” of Lewiston, Idaho. The number of goods and services and the degree of competition in markets is measurably smaller for Lewiston than for Spokane. At the third level of the trade center hierarchy, the towns of Moscow, Pullman, Grangeville, and Orofino appear as local trade hubs. For example, Grangeville serves as the hub for the towns of Whitebird, Riggins, Elk City, Kooskia, and Cottonwood, providing a smaller range of opportunities for residents’ market expenditures.

While the trade hierarchy primarily runs north-south, the commuting flows run east-west. Broadly speaking, the Spokane regional economy has closer ties with the Seattle-Portland region than the Boise region (i.e., the Treasure and LC Valleys).

Lewiston is the central place or hub of the seven-county regional economy. It is the center for manufacturing, retail trade, wholesale trade, medical services, and professional services. The Lewiston economy (Nez Perce County) reaches north to the City of Pullman (Whitman County) and the City of Moscow (Latah County); south to the City of Grangeville

(Idaho County), east to the City of Orofino (Clearwater County) and City of Nezperce (Lewis County), and west to the City of Clarkston (Asotin County).

Figure 1.2: Trade Flows for the Lewiston Central Hub Economy



Population Change

State Trends

Idaho was the fastest-growing state in the nation with a 2.2% increase in population between 2016 and 2017, followed by Nevada (2.0%), Utah (1.9%), and Washington (1.7%). In contrast, the United States grew 0.7% over the same time. Idaho's population has grown quickly since 1990. The state had an overall population increase of 29% between 1990 and 2000, compared to 13% for the nation. Only Nevada (66%), Arizona (40%), Colorado (31%), and Utah (30%) grew faster. Between 2000 and 2010, Idaho grew 21%, ranking 4th in the nation. From 2012 to 2017 (post-recession) Idaho's population grew 7.6% and reached 1,716,943 in 2017. New data released in December 2018 show that from 2017 to 2018 Idaho and Nevada were virtually tied as the fastest-growing states at a 2.1% increase. Idaho's 2018 population was 1,754,208 and Nevada's was 3,034,392.

Idaho's spectacular growth has been unevenly distributed: most of the growth occurred in the urban regions, while most rural regions grew slowly or lost population. However, some rural counties experienced rapid growth. From 2016 to 2017, Adams County population grew by 5.0%, followed by Kootenai County (2.9%), Bonner County (2.9%), Boise County (2.9%), and Ada County (2.8%).

From 2010 to 2017, the Ada County population grew by 14.7%, followed by Canyon County (13.9%), and Kootenai County (12.7%)—all of which are urban counties. In contrast, several rural counties experienced population declines between 2010 and 2017, including

Butte County (-16.3%) and Clark County (-13.3%). From 2000 to 2010, the population in several counties grew by more than 25% including Teton County (66.6%), Canyon County (42.3%), Jefferson County (36.6%), Madison County (36.6%), and Ada County (29.7%).

Regional Trends

The Lewiston regional economy experienced low *but stable* population growth rates when compared to Idaho and Washington’s state-wide rates. From 2016 to 2017, the Idaho counties of Clearwater, Idaho, Latah, Lewis, and Nez Perce grew cumulatively 0.9%.

The population of Nez Perce County was 15,253 in 1920 and rose slowly but steadily to 40,385 by 2017, an increase of 164.8%. Asotin County’s population was 3,366 in 1900 and grew steadily to 22,535 in 2017, an increase of 569.5%. The population of Lewis County decreased from a peak of 5,851 in 1920 to a low of 3,516 in 1990, a decrease of 39.9%.

Lewis County population grew slightly to 3,887 in 2017, an increase of 9.5%. The population of Clearwater County peaked in 1970 at 10,909 and declined to 8,546 by 2017, a decrease of 21.7%. Idaho County’s population rose modestly and irregularly from 11,749 in 1920 to 16,369 in 2017, an overall increase of 39.3%. Whitman County grew slowly between 1900 (25,360) and 2017 (49,046), an increase of 93.4%. Population growth stagnated from the 1970s to the 1990s and has increased in the last 20 years largely from the growth of Schweitzer Engineering Laboratories and Washington State University student enrollment. Latah County grew from 13,451 in 1900 to 39,333 in 2017, an increase of 192.4% (Table 1.1).

Table 1.1. *Seven County Regional Economy 1910 -2017, by county*

Year	Asotin	Clearwater	Idaho	Latah	Lewis	Nez Perce	Whitman	Total
1900	3,366	-	9,121	13,451	-	13,748	25,360	65,046
1910	5,831	-	12,384	18,818	-	24,860	33,280	95,173
1920	6,539	4,993	11,749	18,092	5,851	15,253	31,323	93,800
1930	8,136	6,599	10,107	17,798	5,238	17,591	28,014	93,483
1940	8,365	8,243	12,691	18,804	4,666	18,873	27,221	98,863
1950	10,878	8,217	11,423	20,971	4,208	22,658	32,469	110,824
1960	12,909	8,548	13,542	21,170	4,423	27,066	31,263	118,921
1970	13,799	10,871	12,891	24,891	3,867	30,376	37,900	134,595
1980	16,823	10,390	14,769	28,749	4,118	33,220	40,103	148,172
1990	17,605	8,505	13,783	30,617	3,516	33,754	38,775	146,555
2000	20,551	8,928	15,506	34,935	3,744	37,410	40,740	161,814
2010	21,623	8,761	16,267	37,244	3,821	39,265	44,776	171,757
2012	21,888	8,577	16,438	38,184	3,819	39,531	46,606	175,043
2017	22,535	8,546	16,369	39,333	3,887	40,385	49,046	180,101

Source: U.S. Census

Collectively, the counties above would have ranked 36 out of 44 among individual Idaho county growth rates (2016-2017). Whitman and Asotin counties had a combined growth rate of 1.1%, which would have ranked 37 out of 39 Washington counties. The uneven population changes and employment opportunities present challenges for decision-makers in fostering economic growth policies. Historic population change in the region's cities mirror county population trends. The largest city, Lewiston (Nez Perce County), experienced modest growth between 1970 (26,068) and 2016 (32,872), an increase of 26.1% (Table 1.2). Pierce City (Clearwater County) population declined sharply primarily due to the closure of the Jaype Sawmill a few years ago, decreasing 151.1% between 1970 (1,218) and 2016 (485). The next largest cities in the narrow region are Orofino (population 3,038) in Clearwater County; Grangeville (3,139) in Idaho County; Lapwai (1,148) in Nez Perce County; and Kamiah (1,292) in Lewis County.

Table 1.2: Idaho City Population Change 1990-2016

	1990	2000	2012	2016	% Change 2012-2016
<i>Nez Perce County</i>	33,754	37,410	39,531	40,369	2.1%
Culdesac	280	378	379	376	-0.8%
Lapwai	932	1,134	1,140	1,148	0.7%
Lewiston	28,082	30,904	32,051	32,872	2.6%
Peck	160	186	199	198	-0.5%

Source: U.S. Census, Idaho State

Regional Industry and Occupation Employment

Table 1.3 illustrates the direct full-time and part-time employment sampling of the 15 largest employers in 2017, with a focus on Lewiston but also includes firms from the broader region. The firms represent a mix of manufacturing, service, and governmental entities. The region's largest employers are WSU (Pullman) with 6,130 employees, followed by UI (Moscow) with 4,843 employees, and Schweitzer Engineering Laboratories (Pullman) with 2,280 employees, which may reach 3,000 employees by 2020. Schweitzer has expanded to Lewiston and employs about 350 employees and may expand to 1,000 in the future.

The ammunition industry cluster employed a total of 1,914 jobs in 2017, with Vista Outdoor ammunition manufacturing (Lewiston) being the largest ammunition manufacturing employer with 1,450 employees. The industry has seen a decline in sales in the last two years due to national trends and employment in the cluster was reduced to about 1,450 jobs in 2019.

The wood and paper products employment cluster in Nez Perce County totaled 1,684 jobs, with 2,782 jobs in the broader regional economy in 2017. Clearwater Paper (Lewiston) employed 1,300 employees (2017), which has declined somewhat to about 1,150 employees. The Nez Perce Tribe was the third-largest employer at 1,246, followed by the

Lewiston School District with 1,200 employees, and St. Joseph Regional Medical Center with 950 jobs.

Table 1.3: 2017 Sampling of Top Regional Employers

Rank	Employer (Full-Time and Part-Time)	Estimated Employees
1	Washington State University (Pullman, WA)	6130
2	University of Idaho (Moscow, ID)	4843
3	Schweitzer Engineering Laboratories (Pullman, WA)	2280
4	Vista Outdoor (Lewiston, ID)	1450
5	Nez Perce Tribe (Lewiston, Lapwai)	1246
6	Clearwater Paper (Lewiston, ID)	1300
7	Lewiston School District (Lewiston, ID)	1200
8	St. Joseph Regional Medical Center (Lewiston, ID)	950
9	Gritman Medical Center (Moscow, ID)	587
10	Lewis-Clark State College (Lewiston, ID)	548
11	Tri-State Memorial Hospital (Clarkston, WA)	500
12	Regence BlueShield of Idaho (Lewiston, ID)	486
13	Schweitzer Engineering Laboratories (Lewiston, ID)	475
14	U.S. Forest Service, Clearwater & Idaho Counties (Orofino, ID)	454
15	Swift Transportation (Lewiston, ID)	400

Source: LC Valley Vision and author's calculations

Employment and Industry

The seven-county economy has four primary economic sectors: 1) manufacturing and natural resources; 2) retail trade center for the regional economy; 3) services, particularly health care; and 4) government and education. In 2018, approximately 25.6% of jobs (25,570) in the seven-county regional economy were in the government sector, mostly education; 10.6% (10,606 jobs) were in health care and social assistance; 10.5% (10,462 jobs) in retail trade; 9.4% (9,364 jobs) in manufacturing; 7.1% (7,123 jobs) in accommodation and food services; and 5.8% (5,827 jobs) in agriculture. These are the top-six industries in the regional economy (Table 1.4).

The fastest-growing industries in the regional economy between 2012 and 2018 included private educational services (an increase of 44.7%); manufacturing (32.5%); arts, entertainment, and recreation (22.8%); real estate and rental and leasing (16.0%); professional, scientific, and technical services (12.4%); and construction (12.2%) (Table 1.4). Manufacturing employment has increased dramatically in the region as compared to the United States, Idaho, or Washington, which illustrates an important success story of the region.

Higher Education Drivers: Higher education is very important to the regional economy. Washington State University supports 10,811 direct jobs (Whitman County), University of Idaho 6,510 jobs (Latah County), and Lewis-Clark State College 548 jobs (Nez Perce

County). There are also other branch campuses and with operations in the region. The jobs are included in the state government employment classification in government databases.

Manufacturing Drivers: Nez Perce County (4,297 jobs) and Whitman County (3,022 jobs) have a strong manufacturing presence that is driving regional growth.

Table 1.4: *Percentage Share of Employment (2018) and Growth by Industry (2012-2018) (Lewiston Seven County Regional Economy)*

Industries	Employment Shares (2018)	Growth (2012-2018)
Government	25.6%	7.0%
Health Care and Social Assistance	10.6%	7.3%
Retail Trade	10.5%	9.4%
Manufacturing	9.4%	32.5%
Accommodation and Food Services	7.1%	10.9%
Crop and Animal Production	5.8%	-0.1%
Other Services (except Public Administration)	4.4%	1.1%
Construction	4.2%	12.2%
Real Estate and Rental and Leasing	4.1%	16.0%
Professional, Scientific, and Technical Services	4.0%	12.4%
Finance and Insurance	3.0%	-8.4%
Wholesale Trade	2.2%	8.9%
Administrative and Support and Waste Management and Remediation Services	2.1%	5.5%
Transportation and Warehousing	2.0%	2.4%
Arts, Entertainment, and Recreation	1.9%	22.8%
Educational Services	1.4%	44.7%
Information	1.0%	-3.3%
Mining, Quarrying, and Oil and Gas Extraction	0.4%	-7.5%
Utilities	0.3%	-5.1%
Management of Companies and Enterprises	0.2%	-53.0%
Other Industry	0.0%	Insf. Data
Total	100%	9.1%

Source: Emsi and Bureau of Economic Analysis (BEA)

Health care: The broad region has seven major hospitals as well as several dozen physician offices, health clinics, nursing homes, and surgery centers. Nez Perce County has 3,867 jobs in the health care industry, followed by Latah County (1,936 jobs), Whitman County (1,748 jobs), Asotin County (1,636 jobs), Idaho County (674 jobs), Clearwater County (512 jobs), and Lewis County (232 jobs).

Agriculture: In the broad economy, the agricultural industry is proportionally dominant in Lewis, Clearwater, and Idaho counties. In terms of employment, Latah County supports 1,489 agricultural jobs, followed by Whitman County (1,465 jobs), Idaho County (984 jobs),

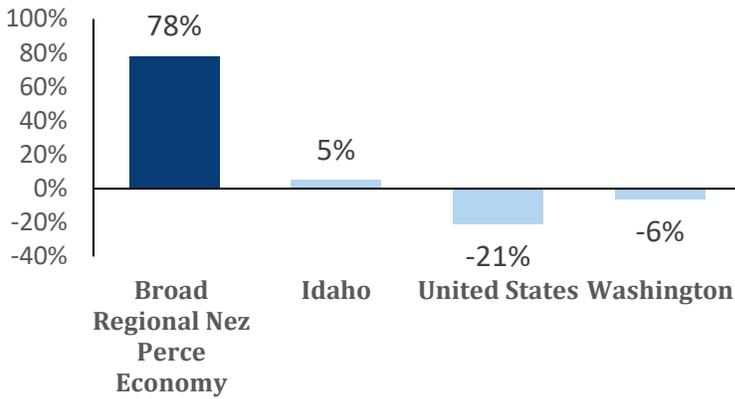
Nez Perce County (657), Clearwater County (502 jobs), Lewis County (420 jobs), and Asotin County (310 jobs),

Retail trade: The respective retail trade centers for the region are Nez Perce, Latah, Asotin, and Whitman counties. The Nez Perce County retail trade industry supports 3,068 jobs, followed by Latah County (2,483 jobs), Whitman County (2,084 jobs), Asotin County (1,439 jobs), Idaho County (736 jobs), Clearwater County (403 jobs), and Lewis County (250 jobs). Retail trade growth was mixed throughout the region between 2012 and 2017. Nez Perce County, the central place of the broader regional economy, showed a 5.3% growth in retail trade and Clearwater County had 16.1% growth. Whitman County saw an 18.5% growth rate while Latah County saw 9.9% growth between 2012 and 2018. Latah holds a slight advantage as the retail leader on the Palouse. Asotin County retail trade grew 10.6% and hosts both a Super Walmart and Costco. Both Idaho and Lewis counties declined slightly during this time period. The US traditional retail trade establishment is facing fierce competition from online retailers, most notably Amazon, which may produce a structural shift in the industry that could force the closure of many firms and some shopping centers.

Total manufacturing: Another important story is the growth in manufacturing employment. The regional economy (especially the LC Valley) has been bucking the national trend of a declining manufacturing industry for the last few decades. Without the strong surge in manufacturing jobs, the regional economy would likely be in a major recession. Manufacturing jobs increased by 78% (4,113 new jobs) from 2001 to the beginning of 2018. In contrast, Idaho manufacturing increased by 5%, Washington declined by 6%, and US manufacturing declined by 21% (Figure 1.3). Following the recession, from 2012 to the beginning of 2018, manufacturing jobs in Asotin County increased 76.3%, Nez Perce County (49.5%), Whitman County (27.2%), Idaho County (7.7%), Latah County (2.3%), Clearwater County (1.7%), while Lewis County declined by 22.8%.

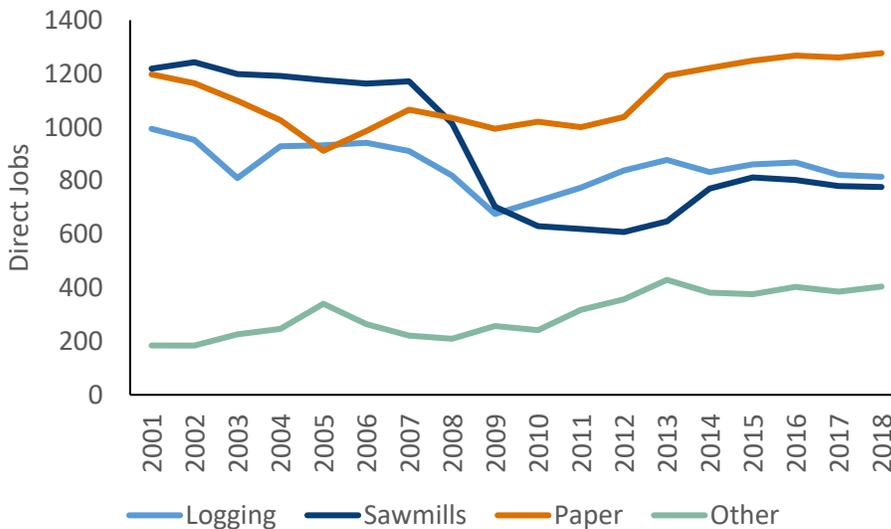
There are some very recent countertrends in manufacturing in Lewiston. First, there has been a decline in the ammunition manufacturing cluster with layoffs following national trends, and some layoffs at Clearwater paper. Total Nez Perce County manufacturing employment stood at an estimated 3,727 jobs in 2019. The future expansion of Schweitzer Engineering Laboratories in Lewiston may offset these reductions in 2020.

Figure 1.3: Cumulative Percentage Change in Manufacturing 2001 to 2018



Wood and paper products: Wood and paper products manufacturing (including logging) employed 3,277 workers in 2018, down 10% from 3,622 in 2001. Clearwater Paper (formerly the Potlatch Corporation) now employs about 1,150 workers, but once (about 25 years ago) employed over 2,000 (including a now-closed sawmill) in Lewiston alone. The wood products industry was once the predominant industry in the regional economy and is still very important, albeit relatively less so today as a percentage of the total economy. Clearwater Paper recently invested in a \$160-million digester upgrade to its capital plant that will provide stability to the firm and help support long-run viability (Figure 1.4).¹

Figure 1.4: Wood Products Manufacturing Jobs 2001 to 2018



¹ Williams, Elaine. 2015. "Clearwater Paper begins efficiency upgrade Foundation poured for pulp holding tank," Dec 5, 2015, Lewiston Tribune, from http://lmtribune.com/northwest/clearwater-paper-begins-efficiency-upgrade/article_697b4278-e0bc-5861-8410-efc9a131ad66.html.

Occupation and Staffing Analysis

The broad economy job-and-occupation picture and performance are quite mixed. It has a strong industrial mix of relatively high paying jobs, university employment with living-wage jobs, and relatively high paying healthcare-related jobs. There are also many lower-paying retail trade and service jobs, which creates a somewhat bimodal economy. A substantial number of low-skilled service or retail trade jobs pay low wages.

Historically, the regional economy has developed a substantial inventory of skilled labor, beginning with the rise of the wood products industry in the 1920s. Over the following decades, the region developed a critical mass of job skill sets in demand by manufacturing industries. This skilled labor pool is one of the primary reasons why Clearwater Paper recently upgraded its paper manufacturing facility with a \$160 million new digester instead of leaving the region.² It also helps explain the ammunition and gun manufacturing cluster in the Lewis-Clark Valley. Although now on hold, Vista Outdoor had decided to expand by 100 jobs and build a \$70 million addition even though they were being “courted” by other cities and states to relocate, citing the pool of dedicated skilled labor as one of the reasons to remain in the community.³

Table 1.5 illustrates the occupations and yearly salaries for the broader regional economy. Column 1 represents the average yearly salary by occupation (aggregated to the two-digit Standard Occupational Classification code [SOC]). Column 2 represents the total jobs in the year 2001 by occupation. Column 3 represents the total jobs in the year 2018 by occupation. Column 4 represents the cumulative change in jobs from 2001 to 2018. Column 5 represents the cumulative percentage change in jobs by occupation from 2001 to 2018.

Overall, the region had a cumulative 15.6% increase in jobs from 2001 to 2018. Production jobs (i.e., mostly manufacturing) increased by 49.5% during the same time. The highest paying occupation was health care practitioners at \$75,221, and the lowest was food preparation and service at \$22,864. The average salary was \$40,384 across all occupations and these numbers include fringe benefits.

Table 1.6 presents the average salary per job for 2016 *including fringe benefits*. The U.S. national average salary per job was \$66,447. Washington was higher at \$72,444 and Idaho lower at \$51,087. Column 1 is the region, column 2 is average salaries, and column 3 is the region’s salary expressed as a percentage of the United States. Finally, Column 4 is the region’s salary expressed as a percentage of the average salary in Idaho. Regionally, the average salary (unweighted) was 73% of the US average and 95% of the Idaho average, constituting below-average salaries at both the US and state levels. Lewis County salaries were 63% of the US level and only 82% of Idaho’s average. Idaho County salaries stood at

² Peterson, S. 2015. The Economic Impacts of Clearwater Paper on the Lewis-Clark LC Valley. Prepared for LC Valley Vision, June 2015.

³ Mills, Joel. 2016. Vista Outdoor plans growth, seeks tax break. Lewiston ammunition manufacturer is being courted by other states. Lewiston Tribune. Retrieved from http://ltribune.com/northwest/vista-outdoor-plans-growth-seeks-tax-break/article_445c9246-8293-5657-bf3d-1ab9a8d2b6e1.html.

71% of the US level and 92% of Idaho's average. Nez Perce County, with its various industrial clusters, was 78% of the US level but 101% of the Idaho average. Whitman County, home of WSU and Schweitzer Engineering, was 109% of the US level and 130% of the Idaho average.

Table 1.5: Regional Occupational Table

Occupation	Annualized Earnings	2001 Jobs	2018 Jobs	Cumulative Change	Percentage Change
Management	\$49,564	7,890	8,796	905	11.5%
Business and Financial Operations	\$59,015	3,170	3,667	497	15.7%
Computer and Mathematical	\$63,695	1,280	1,501	221	17.3%
Architecture and Engineering	\$71,076	832	1,327	494	59.4%
Life, Physical, and Social Science	\$47,854	1,649	1,667	18	1.1%
Community and Social Service	\$45,596	1,448	1,678	230	15.9%
Legal	\$67,908	412	411	-2	-0.4%
Education, Training, and Library	\$52,203	7,559	8,338	779	10.3%
Arts, Design, Entertainment, Sports, and Media	\$30,008	2,251	3,048	796	35.4%
Healthcare Practitioners and Technical	\$75,221	3,498	4,619	1,121	32.1%
Healthcare Support	\$29,057	1,897	2,429	532	28.0%
Protective Service	\$44,540	1,424	1,485	61	4.3%
Food Preparation and Serving Related	\$22,864	6,019	7,171	1,151	19.1%
Building and Grounds Maintenance	\$25,195	3,273	3,771	498	15.2%
Personal Care and Service	\$22,984	3,763	4,567	803	21.4%
Sales and Related	\$32,178	9,714	11,268	1,554	16.0%
Office and Administrative Support	\$33,824	11,462	12,575	1,113	9.7%
Farming, Fishing, and Forestry	\$39,257	1,842	2,097	255	13.8%
Construction and Extraction	\$39,558	3,587	3,807	220	6.1%
Installation, Maintenance, and Repair	\$42,273	3,827	4,062	235	6.1%
Production	\$39,935	4,238	6,337	2,098	49.5%
Transportation and Handling	\$36,362	4,750	4,677	-73	-1.5%
Military	\$37,178	651	561	-90	-13.9%
Unclassified	\$28,699	102	168	66	64.3%
Average/Total	\$40,384	86,542	100,024	13,482	15.6%

Source: BLS

Table 1.6: Average Salary Comparisons by Region

Region	Average Salary	% U.S.	% Idaho
Clearwater, ID	\$49,541	75%	97%
Latah, ID	\$44,647	67%	87%
Nez Perce, ID	\$51,647	78%	101%
Lewis, ID	\$41,910	63%	82%
Idaho, ID	\$46,848	71%	92%
Asotin, WA	\$45,925	69%	90%
Whitman, WA	\$58,871	89%	115%
Idaho State	\$51,087	77%	100%
Washington State	\$72,444	109%	142%
United States	\$66,447	100%	130%

Source: BEA



Chapter 2: Institutional Profile

In the 21st Century, colleges and universities have emerged as an important source of human capital, entrepreneurship, and job training for regional economies. Higher education is also a strong contributor to jobs, income, and tax revenues in regional economies arising from annual operations. Higher education is a key component in attracting and retaining top-performing employers and employees in a regional economy. It helps create high wage jobs both directly and indirectly in communities. The decision to locate technology and industrial parks are often tied to the local availability of higher educational opportunities.

Schweitzer Engineering Laboratories' decision to open a high technology manufacturing facility in the Port of Lewiston's technology park is a good example. The company expanded to Lewiston because of the skilled labor force available in the LC Valley and now offers over 350 relatively high-wage jobs. LC State's vocational and industrial programs provide vital skill sets needed by the manufacturing workforce. Schweitzer Engineering Laboratories also donated \$2 million to build a new \$24.5 million-dollar (LC State) Schweitzer Career & Technical Education Center near the site of the new Lewiston High School. Another \$1 million was donated by the Schweitzer family. The facility will provide technical and industrial classes to high school students, college students, and the community. This new facility will deepen the links of LC State's educational programs to K-12 students and provide lifetime learning opportunities for the community.

The LC Valley is transportation constrained, situated in a rural, geographically isolated region of Idaho and Washington states. Yet the regional economy has maintained its role in natural resource-related manufacturing and expanded into high technology manufacturing and services. Manufacturing jobs increased by about 33% from 2001 to 2018. In contrast, Idaho manufacturing increased by 5%, Washington declined by 6%, and US manufacturing declined by 21% over the same 2001-2018 time period. The skilled labor force enhanced by LC State's educational programs have played a key role in manufacturing success in the regional economy.

LC State has a storied history in the LC Valley, founded 126 years ago in 1893. The main campus is situated near downtown Lewiston on approximately 46 acres. The college has four residence halls and relatively inexpensive off-campus housing. LC State has the look and feel of a small private, elite college but still has the lowest tuition of any four-year institution in the state. The student-teacher ratio is 13:1 for academic programs and 8:1 for career-technical programs. LC State delivers instructional programs at the LC State-Coeur d'Alene Center and has outreach centers in Grangeville and Orofino.

LC State serves an important and unique niche in Idaho's higher educational landscape. It is a *destination campus* for the northern Idaho counties, distinct from the offerings of the University of Idaho (35 miles away). It also has students from 28 states and 32 countries. The college provides a wide array of educational programs ranging from certificate programs to four-year bachelor's degrees, tailored for the educational needs of the

population and regional economy. LC State offers over 150 degree and certificate programs, seven academic divisions, and two technical educational divisions. The college is fully integrated into the local economy. It provides technical and industrial skills for basic manufacturing, skills for high technology manufacturing and services, and life skills for job success. The LC State nursing programs provide needed workers in the regional health care cluster that pay good salaries. The liberal arts degrees provide the critical thinking skills and the foundational skills of speaking, writing, and presentation needed by local businesses.

LC State’s placement rate is 94% for academic graduates and 97% for career-technical graduates. The college has a state-of-the-art fitness center for the academic community, 60 student clubs, and seven intramural sports. Specific college data for the 2017-2018 academic year and 2018 fiscal year are provided below. These figures represent key inputs to the economic model and subsequent impact analysis.

Employment profile

Lewis-Clark State College employs 427 full-time and 121 part-time faculty and staff. The 548 employees represent a total of 467 full-time-equivalent jobs. While all of these individuals work in Idaho some live in Washington. Table 2.1 provides a brief breakdown of the resident and employment patterns for the Nez Peirce-Asotin County region.

Table 2.1: *Place of Residence and Place of work information for LC State Faculty and Staff*

Class	Location	Employees
Place of Work	In Region	526
	In State	548
Place of Residence	In Region	416
	In State	427

Source: LC State and IPEDS

The reason this information is critical is because employees living in the Moscow-Pullman region, for example, are likely spending a good portion of their salaries and wages outside of the two-county economy. This has an effect on how the economy is ultimately impacted by the presence of the college (see chapter 3).

Student Profile

LC State enrolls 4,883 individuals. However, many of these students register for both credit and non-credit based curriculum. This is important to note since non-credit curriculum also generates valuable workforce skills that enhance economic value in the economy. A total of 3,563 enrollments occurred annually for non-credit workforce training curriculum.

The LC State student body is following the same national trend of growing female and declining male enrollments. Today 62.5% of enrollees are female and 37.5% are male. However, the minority enrolments, 20% at LC State, are higher than at many state schools. The average age of the student body is 24. However, that averages across both traditional and non-traditional students including some dual-credit high school and workforce

training students. Table 2.2 shows the distribution of current students according to their present education level.

Table 2.2: *Student body education level at the beginning of the academic year*

Education Level	Enrolment	Percentage
Less Than High School	930	19.1%
High School or GED	1,500	30.7%
Some College	1,353	27.7%
Associate	767	15.7%
Baccalaureate degree	388	8.0%

Source: LC State and IPEDS

A large portion of the student body, 54%, come from outside the two counties. These students that enter the economy to attend LC State are bringing their dollars and spending habits with them to the LC Valley. Twenty percent of the student body is not physically present in the economy, either because they are online students or located in and taking classes in Coeur d’Alene. Those students that originate from outside the region primarily commute into the LC Valley for school (40.7%) but roughly 9% relocate to Lewiston while attending college.

While the origins of the students are critical for determining the flow of dollars into and out of the region, settlement patterns are also important in determining where the students ultimately end up putting their education to work. Roughly 43% of students remain in the local labor force, and 73% remain in the state. These are students that continue to contribute to the economy year after year and whose education is paying dividends to the local and state economies.

Historic Enrollments

While LC State was established in 1893, enrollment measures under the current formulation go back to 2001. It is important to know how enrollments have changed over the years since a large portion of past students remain in the local workforce. We will be valuing the economic contributions of these past students, at least those still currently employed in the LC Valley, and so we need a measure of those students. Table 2.3 shows the historic enrollments back to 2001. Not all these students are still employed locally, some may have retired or migrated out of the region. This is discussed in more length in the productivity measure section of chapter 3.

Table 2.3: LC State Historical Enrollment

Academic Year	Enrollments
2001-2002	3,335
2002-2003	3,924
2003-2004	4,090
2004-2005	4,429
2005-2006	4,273
2006-2007	4,825
2007-2008	4,671
2008-2009	4,658
2009-2010	4,955
2010-2011	5,336
2011-2012	5,816
2012-2013	5,911
2013-2014	5,964
2014-2015	5,625
2015-2016	5,690
2016-2017	4,779
2017-2018	4,883

Source: LC State and IPEDS

Financials

Though faced with funding and enrollment challenges not unlike those experienced by other Idaho post-secondary institutions, LC State’s financial position is generally healthy. Total revenues for the college exceeded \$53 million in FY 2018, the majority of which, \$27.5 million, came from state sources. Tuition and Fees captured another \$12.8 million. The remaining \$13.5 million came from various federal and private sources. LC State should be commended for operating a financially viable state institution. Revenues by source are outlined in Table 2.4.

Table 2.4: LC State Revenues for Fiscal Year 2018

Tuition and Fees	\$12,800,649
Local Government	\$332,526
State Government	\$27,465,650
Federal Government	\$6,776,173
Private Donations and Funds	\$2,678,821
Other Sales Type Revenue	\$3,706,757
Total	\$53,760,576

Source: LC State and IPEDS

Nearly 70% of the college’s entire budget is spent on salaries, wages, and benefits for its faculty and staff. This is not uncommon for service-based industries with fewer material inputs. In order to understand average annual spending, only the depreciation cost of capital is used in the impact assessment. This is because capital expenses tend to come in

waves when a new building or facility is constructed or older buildings are expanded. Other inputs to the college's production, (e.g., paper supplies, vendor fees, electricity, materials for classes, etc.) amount to just over 25% of total expenses. Expenditures for the college are outlined in Table 2.5.

Table 2.5: *LC State Expenditures for Fiscal Year 2018*

Salaries, Wages, and Benefits	\$35,555,236
Amortized Capital	\$2,695,324
Other Expenditures	\$13,461,133
Total	\$51,711,693

Source: LC State and IPEDS



Chapter 3: Economic Impacts

This chapter covers the annual impacts of LC State on the Nez Perce and Asotin County economy. The impacts are broken down into several components: 1) the college's annual expenditures and operations, 2) the new or retained dollars the students expend in the economy, 3) the additional expenditures visitors bring into the economy, and 4) the increased productivity that past students and alumni generate through the application of the increased knowledge and skills they gained at LC State.

There are fundamentally two steps to each impact component: 1) figuring out the shock to the economic system, this is referred to as the direct effect, and 2) figuring out the associated multiplier effects as the direct impacts ripple through the economic supply chains. In each section of the analysis, we report how the direct effects are calculated for each of the four specific measures listed above. Those direct shocks are entered into an input-output model produced by IMPLAN in order to calculate the multiplier impacts. The multipliers are broken into two types: business-to-business transactions in the supply chain, referred to as "indirect impacts," and household-to-business transactions, referred to as "induced impacts." Total impacts are reported as the sum of the direct, indirect, and induced impacts.

Impacts are reported in four separate ways: 1) Sales, 2) Gross regional product, 3) Income, and 4) Employment. While it is important to have a comprehensive overview of economic activity, official impacts figures are reported on a gross regional product basis (see the Sales vs. Gross Regional Product box). Employment in this context should also be understood as full-time-equivalent employment. It is not headcounts that are being reported. If two individuals each have a half-time job they will show up in the data as one FTE job.

Sales vs. Gross Regional Product: Often, sales figures are reported as impacts due to their large size and imposing rhetorical effect. However, those figures represent a great deal of double counting. Imagine a wheat farmer selling wheat to a flour mill, the mill selling the flour to a bakery, and the baker selling bread to an individual. If we sum up the sales from each transaction, the value of the wheat is being counted three times. Those transactions are happening, but the productivity of the economy is overstated through the triple counting of the wheat. That is why best practices in Impact Analysis require impacts to be reported on a value-added basis.

When measuring value-added, or gross regional product, we are measuring only the value of the new activity. So the flour mill only gets to count the increased value added to the wheat through the milling process. This avoids the double, triple, and quadruple counting. The results are less imposing, but far more indicative and accurate of the impacts from an economic shock.

College Expenditure Impacts

As reported in Chapter 2, LC State spent roughly \$51.7 million. However, this differs from the direct shock entered in the model (see Table 3.1). Two primary adjustments need to be made before the direct effects can be calculated. First wages and salaries do not all occur in the LC Valley, and since wages and salaries are the primary expenditure category of the college this is key. Faculty and staff living in Moscow-Pullman, for example, are spending their housing and personal expenditure dollars outside of the LC Valley. Those dollars will not be generating multiplier impacts in the region and thus must be net out of the direct shock. This is similar to some of the college's spending that doesn't impact the local economy because it goes to pay for goods and services that are sourced from outside of the region (e.g., travel expenses or meals at conferences).

The second discount that must be made is designed to account for the portion of money in the college's budget that stems from local sources. It is important to understand what dollars represent new monies to the economy and what dollars already exist in the economy. This differentiation is key to understanding *net gains* in economic activity versus activity that would have occurred in the region even if LC State weren't there. Dollars originating from local tax sources or resident students do not represent new dollars to the economy. Even though that money is spent at the college, and the college, in turn, spends the money in the economy, the college operates as more of a pass-through organization for those dollars rather than a revenue creator. Those dollars would have been spent regardless of the college's presence in the economy and those alternative expenditure patterns must be net out of the total multiplier impacts. This discounting is in keeping with the AAU-APLU guidelines on impact analysis.⁴

Once all required discounting is made, the net increase in direct expenditures from the college's annual operations amounts to \$34.7 million. Those dollars ripple through the economy generating another \$1.4 in local business-to-business transactions, usually referred to as indirect effects. These indirect impacts may include things like payments to local power companies and telephone services, or even purchases the university makes at local retail stores for school supplies, or accounting and legal services.

The wages of faculty and staff residing in the economy generate another \$23.2 million in household-to-business transactions referred to as induced effects. It is not surprising that the induced impacts are so much higher than the indirect effects. Not only do salaries, wages, and benefits compose the biggest line item in the college's budget, but household expenditures are far more oriented towards local purchases. Faculty and staff pay for accounting and legal services locally, but their groceries and personal goods are purchased from local retailers as well. A large portion of their entertainment dollars are spent in the region. It is likely that that the boats, ammunition, and other specialty purchases they make

⁴ Economic Engagement Framework: Economic Impact Guidelines

come from local sources as well. Table 3.1 summarizes the impacts of the college's operational spending.

Table 3.1: Annual College Operations and Spending Impacts

	Sales	GRP	Income	Employment
Direct	\$34,728,623	\$30,860,319	\$26,400,551	690
Indirect	\$1,475,520	\$717,027	\$464,091	11
Induced	\$23,151,831	\$13,315,307	\$7,873,058	183
Total	\$59,355,975	\$44,892,653	\$34,737,700	884

Source: IMPLAN and author's calculations

One problem with the sales/spending numbers from Table 3.1 is that they “double count” some spending (See the text box above for more details). To account for this, impacts are reported in gross regional product (GRP) terms, sometimes referred to as value-added. The new household incomes, \$34.7 million, and net total employment, 884, are also shown in Table 3.1.

Student Expenditure Impacts

The student spending impacts are driven by two distinct sources of income: 1) new money brought into the region as out of region students move into the college's service area, and 2) retained money from students that are able to stay in the local area rather than move to another region to acquire their education.

It is critical that we not double count funds that have already been allocated to the college. Tuition and fees received and spent by the college do not show up as part of the student expenditure impacts because they have already been captured in the college expenditure impacts above. In order to be conservative, we also assume that students buy their texts and supplies at the college (i.e., those monies showed up in the college's revenues and expenditures and the associated multipliers are captured by the college spending impacts.)

The average student is expected to spend roughly \$7,340 in room and board, \$1,895 in personal expenses, and \$1,380 in local transportation expenses, for a total per student spending figure of \$10,615 annually. This is multiplied by the number of students relocating to the region to attend LC State, and the estimated number of retained residence, a total of roughly 1,000 students. This represents roughly \$10.6 million in spending but that needs to be reduced to account for what the impact literature refers to as trade margins (i.e., excludes cost of goods sold). This reduces the volume of spending funneled into the model to just under \$8.4 million dollars of direct local spending. That spending would not have occurred in the local economy had it not been for the presence of LC State.

Table 3.2: Annual Student Expenditure Impacts

	Sales	GRP	Income	Employment
Direct	\$8,397,181	\$4,525,623	\$1,322,608	61
Indirect	\$2,036,130	\$1,029,714	\$551,189	14
Induced	\$2,994,098	\$1,815,480	\$1,131,474	25
Total	\$13,427,409	\$7,370,818	\$3,005,272	101

Source: IMPLAN and author's calculations

As those student dollars are spent, they ripple through the economy generating multiplier impacts totaling another \$5.0 million for a total student expenditure impact of \$13.4 million. This number must be converted into a gross regional product figure. Total impacts on the economy, from the student attraction and retention aspects of the college, are \$7.4 million dollars. Those GRP impacts result in \$3.0 million in employment income which supports 101 full-time-equivalent jobs in the economy.

Visitor Expenditure Impacts

Visitor expenditures are not greatly different from the student expenditures discussed above. Though the visitors are assumed to only be in the LC Valley for a short while, attending a sporting event or commencement, for example, the volume of visitors greatly outstrips the number of students attracted to the region. Total attendance at the various conferences and events at LC State exceeded 123,000 in 2018. Of those, an estimated 37,000 were non-local visitors coming from outside the much broader economy. These visitors spent money locally for hotels, taking their students out to dinner, and buying retail goods. To avoid double-counting, the money expended at the college for ticket sales or memorabilia was not included, as those dollars were already captured under the college expenditure impacts. In total, visitors spent over \$6.1 million in the local economy and off-campus. Generating a total of \$10.6 million in regional sales.

Table 3.3: Annual Visitor Expenditure Impacts

	Sales	GRP	Income	Employment
Direct	\$6,104,736	\$3,651,053	\$3,367,286	126
Indirect	\$1,430,841	\$644,170	\$400,379	10
Induced	\$3,085,253	\$1,543,722	\$961,379	23
Total	\$10,620,830	\$5,838,946	\$4,729,045	159

Source: IMPLAN and author's calculations

Total economic impacts stemming from the activity of LC State visitors was \$5.8 million. The majority of that GSP became income for residents, \$4.7 million, and supported 159 full-time-equivalent jobs.

Productivity Impacts

One of the most prominent but overlooked aspects of educational impact analysis is the increased productivity of the students. As students obtain new knowledge, skills, and abilities from their education, they become more productive as they apply this new human

capital in their local jobs. The value of the education is recaptured by the students in the form of higher wages and by their employers in the form of increased business profits.

Many of LC State’s past students and alumni leave the local economy to pursue employment elsewhere in the state or nation. The increased productive capacity of those students does not contribute to the local economy. Even though their impacts cannot be claimed locally they do affect the state and nation. In this way, LC State’s impacts extend well beyond the local and state borders.

However, over 23,000 individuals who received some form of educational training at LC State are continuing to live and work in the LC Valley and as long as they do so, their education continues to provide value in the local economy. The welder that was trained at LC State and makes aluminum boats for one of the manufacturing firms in town, the accountant who earned their degree at LC State and now manages the books for a local retail store, or an LC State nurse that now works at St. Joseph, all have those jobs and are more productive in them because of LC State. This is how LC State is integrated into the local workforce and how it makes local businesses more profitable and productive.

The income differential of those 23,000 students, between what they are currently making and what they would have made in the absence of their education, is the first step in calculating the direct impacts of the LC State alumni. Some of the productivity in the LC Valley may still have occurred even without the college since the businesses may have been able to recruit that talent into the region from elsewhere. If, for example, there weren’t enough human resource graduates from LC State the local paper mill would still be able to recruit a human resource officer in from somewhere else. In order not to overstate the regional productivity, therefore, we discount such measures for the substitutability of labor.

The increased direct sales, due to the higher productivity of LC State alumni in the local economy amounted to \$31.6 million. Through the multiplier effects that number grew to \$78.5 million.

Table 3.4: *Annual Productivity Impacts*

	Sales	GRP	Income	Employment
Direct	\$31,638,240	\$15,561,668	\$11,844,276	244
Indirect	\$6,854,954	\$3,337,345	\$2,030,831	49
Induced	\$40,052,659	\$25,202,494	\$20,043,635	396
Total	\$78,545,853	\$44,101,506	\$33,918,741	689

Source: IMPLAN and author’s calculations

Total economic gains to the local economy from the increased productivity of alumni and past students amounts to \$44.1 million in gross state product, \$33.9 million of which is received as additional income. This increased productivity supports an estimated 689 full-time-equivalent jobs in the LC Valley that would not be there without these alumni.

Another critical thing to keep in mind regarding the productivity measure is that this represents a regional asset to the LC Valley. While the college expenditures, student expenditures, and visitor expenditures all represent flow values, the productivity measure is a stock value. That is to say if LC State were to shut down, the college, student, and visitor expenditures would all stop immediately. On the other hand, the productivity measure would continue until the last alumni of LC State retired or moved out of the local economy.

Total Impacts

The sum of the impacts discussed above are shown in Table 3.5. The net overall impacts of LC State through its operations, its attraction of students’ and visitors’ dollars to the LC Valley, and the increased output of their local alumni amounts to \$118.4 million in gross regional product annually. That represents 4.3% of the entire economy, more than any other individual company can claim. They are responsible for roughly \$90.1 million in annual wages and over 1,800 full-time equivalent jobs.

Table 3.5: Annual College Operations and Spending Impacts

	Sales	GRP	Income	Employment
Direct	\$80,868,780	\$70,723,475	\$56,537,423	1,121
Indirect	\$11,797,445	\$5,728,257	\$3,446,491	84
Induced	\$69,283,841	\$41,948,435	\$30,069,806	628
Total	\$161,950,067	\$118,400,166	\$90,053,720	1,833

Source: IMPLAN and author’s calculations



Chapter 4: Athletic Impacts

The Lewis-Clark State College athletic program (i.e., the Warriors) has been an integral component of the LC State student experience for several generations. The program competes in the National Association of Intercollegiate Athletics (NAIA), Frontier Conference, and offers men's and women's basketball, cross country, golf, track and field, and tennis teams. LC State athletics also offers baseball and women's volleyball teams.

All LC State teams are nationally competitive. In particular, the "standout" baseball team has won 19 NAIA World Series championships since 1984, most recently securing titles from 2015-2017. LC State has hosted the NAIA World Series 28 times in its history and hosted the series continuously since 2000. There were 28,097 visitors attending in 2019, with an astonishing cumulative 1,005,122 visitors over its storied legacy at LC State.

The LC Valley historically has been a baseball town for generations and Warrior baseball has provided an important component to the cultural and recreational interests of the community. The LC Valley has produced outstanding American Legion teams (i.e., the Twins) and both Lewiston and Clarkston high school teams. Baseball begins young in the LC Valley with grade school, middle school, and Babe Ruth teams.

Women constitute approximately 62.5% of the student body at LC State and women's sports have been important in the recruiting and retention of students. The women's teams are dynamic and nationally competitive.

The athletic program is far more important to the success of LC State than commonly understood. The program is a crucial marketing arm of the college and provides cohesion and unity to the college community. Athletic teams are often the "face" or "front porch" of universities and colleges in the U.S., and that is true for LC State. Warrior baseball, for example, is known throughout the U.S. and has brought national recognition to the college. It is an important recruiting tool for students around the region. The program is also vital for attracting alumni and donor support for the institution and students.

The LC State Warriors are role models for the youth of the LC Valley. They create a "brand" identity not only for LC State but for the Lewis-Clark Valley.

Athletic Program Overview

The athletic program has 25 full time and part-time coaches, 13 men's coaches, and 12 women's coaches. The overall program has a total of 99 employees (23 full time and 76 part-time employees) with a total annual payroll of \$1.713 million. Overall, the athletic department has an approximate \$4.9 million budget, of which an estimated \$2.7 million represents new local spending that is included in the economic impacts.

There is an average total of 192 student-athletes (unduplicated count), of which 111 are men and 81 are women. In total, they receive about \$1.9 million in athletically related student aid.

Economic Impacts of LC State Athletics

The economic impacts of LC State athletics are *included* in the overall economic impact totals above and are broken out and reported separately in this section.

Athletic program spending: Most of the revenues of the athletic program are “designated” or restricted and cannot be used for any other purposes and would mostly dissipate out of the institution in the absence of athletics. A common misperception is that athletic funding can easily be re-appropriated to other programs within a university or college.

The revenue sources are a mix of state funding, private donations, student fees, ticket sales, receipts, conference distributions, and institutional support. We estimate that approximately \$2.7 million of the \$4.85 million athletic budget represents new monies to the community economy.

Student athlete-related spending: There are approximately 191 student-athletes, and all were counted in the student spending component of the economic analysis. They either relocated to the campus or would have left the college in the absence of the athletic program. We estimate that an additional 59 students attend LC State specifically because of the athletic program. They consist of “significant others” and potential walk-ons to the athletic program. The total additional LC State students directly attributable to the athletic program are 250. Total direct (net) student athletic *local* community spending is about \$2.1 million, or about \$8,400 per student.

These calculations do not count other non-athlete students who attend LC State because of the athletic program. Many college students want the full “college experience” that includes intercollegiate athletics and they would not attend a college or university without athletics. Thus, these impacts represent a relatively “narrow” measure of the athletic program.

Visitors and event attendees: Athletics attracts a significant number of visitors to the LC Valley for its athletic events. Overall, we estimate that there are 96,328 visitors to LC State Warrior athletic events including NAIA World Series attendees of 29,950. Attendees include local fans and alumni; visiting teams and their entourages; and nonresident fans and visitors. It is estimated by local stakeholders that approximately 30% of the visitors (28,898) are nonresidents bringing new monies to the LC Valley. We estimate that they spend an average of \$75 per person on food and drink and \$50 on shopping. In addition, about half of these visitors (or 15% of the total) spend about \$155 for a hotel night stay. Total direct revenues are \$5.9 million (gross) or \$4.8 million (net of cost-of-goods sold).

Economic productivity impacts: Many athletes who complete their education remain in the LC Valley after completing their education. We measure the increased productivity in the workforce from these students' enhanced human capital. We estimate that about 4% of the total LC State alumni (920 workers) in the workforce are LC State former athletes. They add \$1.2 million in direct expenditures to the LC Valley annually.

Results

Overall, the LC State athletic program creates 171 direct jobs, increasing to 239 jobs when the multiplier effects are captured. The program adds approximately \$12.4 million to the economy in gross regional product, which includes \$9.0 million in additional wages and salaries in the region (Table 4.1).

Table 4.1: Summary of Athletics Impacts by Category

	Sales	GRP	Income	Employment
Athletic Department	\$4,655,064	\$4,276,119	\$3,270,285	63
Athlete Spending	\$3,361,237	\$1,845,112	\$752,299	25
Visitors	\$8,295,930	\$4,560,800	\$3,693,857	124
Productivity	\$3,072,344	\$1,725,044	\$1,326,742	27
Total	\$19,384,576	\$12,407,075	\$9,043,183	239

Source: IMPLAN and author's calculations



Athletic Summary

LC State athletics is an important component of LC State operations and contributes substantially to the full college experience of LC State students. The athletic program has a budget of about \$4.9 million of which \$2.7 million is spent locally. The program competes in the National Association of Intercollegiate Athletics (NAIA), Frontier Conference, and offers men and women's basketball, cross country, golf, track and field, and tennis teams. LC State athletics also offers men's baseball and women's volleyball teams. It supports 191 student-athletes and attracts an additional 59 students to LC State, for a total of 250 students. The program hosts the NAIA World Series on an annual basis that contributes substantially to the local economy. Overall, the athletic events attract approximately 96,328 visitors of which about 30% are non-residents bringing new monies to the LC Valley. The overall program has a total of 99 employees (23 full time and 76 part-time employees) with a total annual payroll of \$1.7 million

Athletics is a critical marketing arm of LC State and important in overall student recruiting. The program creates about \$12.4 million in economic activity to the region supporting 239 jobs, including the multiplier effects.

Chapter 5: Fiscal and Construction Impacts



State and Local Tax Impacts of Lewis-Clark State College

Lewis-Clark State College has a substantial economic footprint on the regional economy. Those diverse activities create substantial tax impacts on the local and state economies. LC State generates approximately \$1.52 million in local property taxes annually. In addition, the college’s economic activities generate \$2.47 million in sales and excise taxes and \$1.36 million in state income taxes, for a grand total of \$5.35 million annually in local and state coffers, including the multiplier effects. This information is summarized in Table 5.1.

Table 5.1: State and Local Fiscal Impacts from LC State

Property	\$1,517,213
Sales & Excise	\$2,471,183
Income	\$1,358,979
Total	\$5,347,375

Source: IMPLAN

Construction Impacts of the Schweitzer Career & Technical Education Center

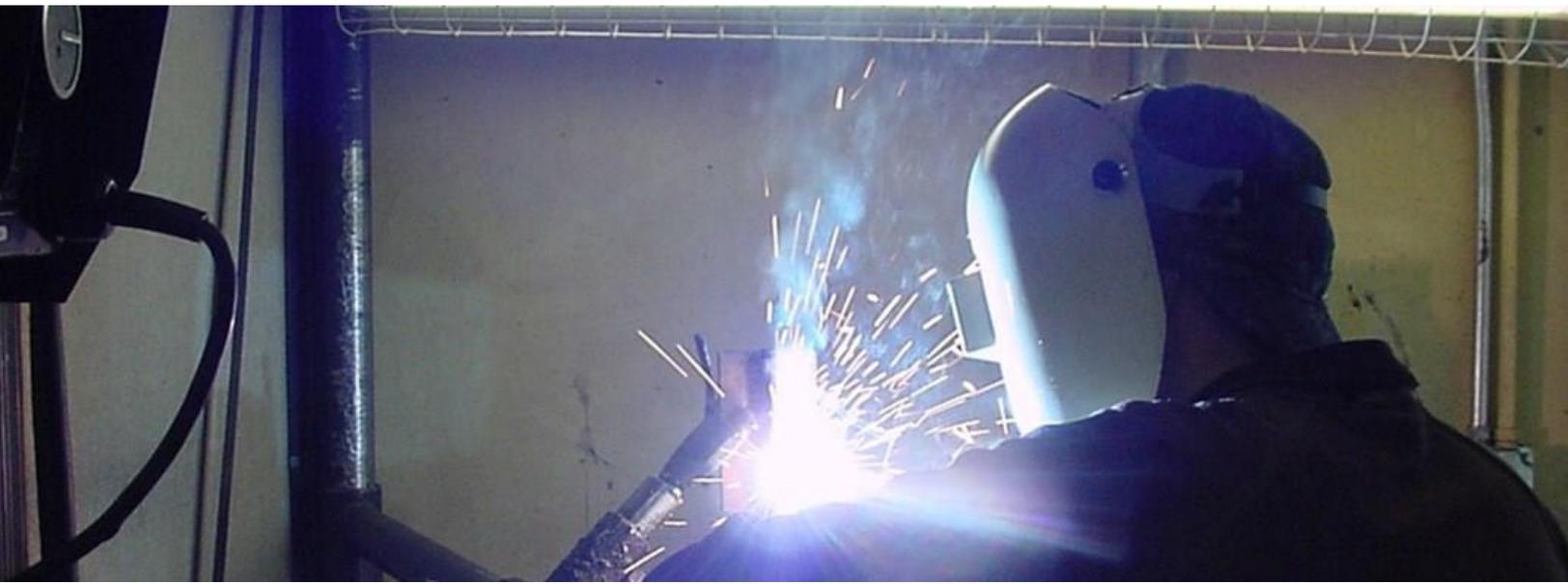
While annualized construction impacts are captured under the college operation impacts discussed in chapter 3, we do not analyze specific construction projects currently underway. The Schweitzer Career & Technical Education Center (CTE) is one such specific construction project worthy of highlighting. It is a 75,000 square-foot, \$24.5 million new facility near the new Lewiston High School that will open in the fall semester of 2020.

It will be the home of LC State Technical & Industrial Division classes and programs. These will include: auto mechanics technology, CNC machining technology, information technology, engineering technology, industrial electronics technology, and heating, ventilation, air conditioning, and refrigeration (HVAC-R) technology, and the first year of the millwright program. It will also serve the CTE needs of Lewiston High School students and others throughout the region.

The Idaho Legislature contributed \$10 million towards this project and LC State has generated over \$6 million through private donations thus far, \$2.0 million of which came

from Schweitzer Engineering Laboratories and another \$1.0 million from Ed and Beatriz Schweitzer's own funds.

The CTE construction will create one-time construction impacts of \$35.7 million in sales (output), and \$17.1 million in gross regional product, \$11.7 million in wages and benefits, and 200 job-years (Job-year = 1 FTE job for one year). Most of these impacts will be felt in 2019-2020. It should be understood that construction impacts are temporary, and the associated jobs can only be counted during the construction phase of the project. The project will also generate a one-time \$224,501 increase in property taxes, \$365,659 in sales and excise taxes, and \$227,315 in state income taxes, for a total of \$817,475 (including the multiplier effects). Once the facility is fully staffed and operational it will generate annual impacts that can then be captured under LC State's operational expenditure impacts.



Chapter 6: Conclusions

LC State has been a key asset to the Lewis-Clark Valley since it opened its doors in 1893. Since that time, it has been producing highly skilled members of the local and state workforce, ultimately increasing the productivity and output of businesses in the LC Valley. While the college only employs 548 people directly, its operations, its ability to attract students and visitors, and the increased productivity of the local workforce is responsible for directly and indirectly employing over 1,800 people. Without LC State, the LC Valley would be roughly \$118.4 million dollars smaller today. The valley would lose its ability to attract high-tech manufacturing firms and high-skilled industries like Vista Outdoor and Schweitzer Engineering Laboratories without LC State. Total additional income in the region due to the presence of LC State amounted to over \$90.0 million.

LC State athletics represents a significant part of the impacts outlined above. Table 6.1 shows the total impacts by source and the portion of those impacts LC State athletics is responsible for. Of the \$118.4 million in total impacts, LC State athletics accounted for \$12.4 million or roughly 10% of the total. Total annual state and local tax revenues generated during the 2018 fiscal year amounted to over \$5.3 million.

Table 6.1: *Total LC State and LC State Athletic Impacts by Source*

	Total Impacts	Athletic Impacts
College Expenditures	\$61,088,896	\$4,276,119
Student Expenditures	\$7,370,818	\$1,845,112
Visitor Expenditures	\$5,838,946	\$4,560,800
Productivity	\$44,101,506	\$1,725,044
Total	\$118,400,166	\$12,407,075

Source: IMPLAN and Author's calculations

Appendix 1: Bibliography

- Ambargis, Zoë, Charles Ian Mead, Stanislaw J. Reznik, David Swenson, Janet Weisenberger. (2014). "Economic Engagement Framework: Economic Impact Guidelines." Association Of Public and Land-Grant Universities and Association of American Universities. <https://www.aplu.org/projects-and-initiatives/economic-development-and-community-engagement/economic-engagement-framework/related-resources/cicep-impact-guidelines-201412.pdf>
- IMPLAN Group LLC, IMPLAN System (2015) Washington State Data IMPLAN Pro v3, 16905 Northcross Dr., Suite 120, Huntersville, NC 28078 www.IMPLAN.com
- Miller, Ronald E. & Blair, Peter D. (2009). *Input-Output Analysis: Foundation and Extensions (2nd ed.)*. Cambridge University Press, New York.
- Moretti, E. (2000), "Estimating the social return to higher education," *NBER Working Paper* No. 9018
- Willis, Dave & Holland, Dave (1997). "Translating Farm Enterprise Budgets into Input-Output Accounts: Another Example from Washington State." WSU Agricultural Economics Publication No. A.E. 97-1

Appendix 2: Data Sources

Bureau of Economic Analysis

- Local Area Personal Income and Employment (LPI)
- National Income and Product Accounts (NIPA)
- Annual Input-Output (I-O) Accounts
- Benchmark Input-Output (I-O) Accounts
- GDP by State

Bureau of Labor Statistics

- Quarterly Census of Employment and Wages (QCEW)
- Current Employment Statistics (CES)
- Current Population Survey (CPS)

U.S. Census Bureau

- Current Population Survey (CPS)
- Population Estimates
- U.S. National and State Population Projections
- County Business Patterns (CBP)

National Center for Health Statistics

National Center for Education Statistics

- Integrated Postsecondary Education Data System (IPEDS)

IMPLAN (IMPact-PLANning) Data

- Washington 2017
- Idaho 2017

Economic Modeling Specialists Int.

- Industry Employment 2019.2
- Occupation Employment 2019.2

Appendix 3 Investment Analysis and Taxpayer Returns

Student Investment Analysis

Students that attend LC State invest a great deal of time and money into their education. As with any investment, it is important to understand the returns one should expect. In order to evaluate LC State as an investment from a student or parent's perspective, we must account not only for the direct costs of attendance but also for the opportunity costs of time and forgone wages the student might otherwise have been making. In order to calculate the returns on investment for one year of education, we use total costs (direct costs of attendance plus forgone wages) for the 2017-2018 student body. We weigh those costs against the increased earnings of the students over their lifetime. That is, we only claim the differential earnings between what they would be expected to earn with their degree versus what they would be expected to earn without a degree.

Total costs for the 2017-2018 student body amounted to \$63.4 million. The education generated during that same academic year increased the productivity and earning capacity of those students for their remaining working lives. The net present value between their increased earnings and their current costs was \$384.2 million. This represents the difference between their present value income gains (\$447.6 million) and their present value costs (\$63.4 million). Their average annual rate of return⁵ on the investment was 17.5% better than what someone would normally receive on a balanced portfolio. For every dollar invested, the average student sees a \$7.10 return over their working life and can expect to recover the initial investment in under nine years.

Taxpayer Investment Analysis

Though public investment in education is incumbent upon state and local taxpayers, they benefit from the education of these students as well. The higher earnings of the students and the increased productivity of the businesses they work for result in increased tax revenues. The total present value investment made by state and local taxpayers in 2018 amounted to \$27.8 million (see Table 2.4). The present value benefits from that investment came to \$52.4 million, resulting in a net present value of \$24.6 million and an average annual rate of return of 6.3%. Most public investments in things like parks and museums generate no returns at all. For each public dollar invested in LC State, \$1.90 is put back into the public coffers, ultimately reducing the rate at which property, sales, and income taxes grow. Total public investments are recovered in less than 19 years. While this may seem like a long time for an investment to pay off, the average LC State student will have a working life of 40 years after leaving the college. That means the state is collecting increased tax revenues for over 20 years after the investment is fully paid back.

⁵ Internal Rate of Return is used to calculate the return-on-the-investment and return-of-the-investment since the principal payment is not returned at the end of the investment cycle, which would be typical with a bond or the selling of a stock or other asset.