Economic Implications of Student Loan Debt on Colorado Businesses

Arapahoe/Douglas
WORKFORCE BOARD
COLORADO

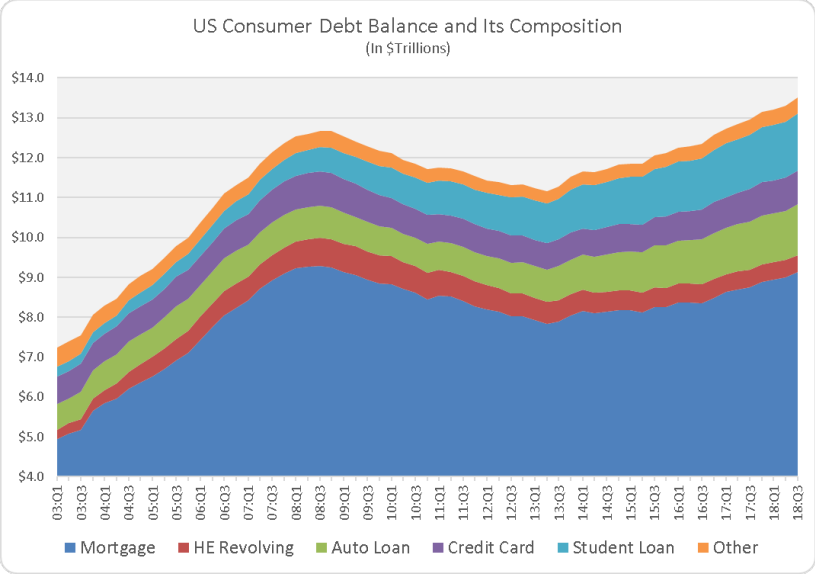
Background

This report was requested by the Arapahoe/Douglas Workforce Development Board for the purpose of informing policy makers about the economic impact of student loan debt in Colorado.

The paper explores:

- The student debt situation nationally
  - Current student debt
  - Growth rate of student debt
  - Student debt statistics
  - Racial and ethnic disparities
  - Changed economic behavior
    - Later starts on families
    - Fewer home purchases
    - Fewer new business starts
    - Less wealth building
- Student debt in Colorado
  - Demand for newly degreed graduates, history and projections
  - Foregone demand for local goods and services
  - Structural issues in the state budget
    - Forces driving tuition up
    - The need for more affordable postsecondary training
- Conclusions
  - Moral aspects
  - Economic aspects
  - Implications for Colorado businesses
  - Student debt and public policy

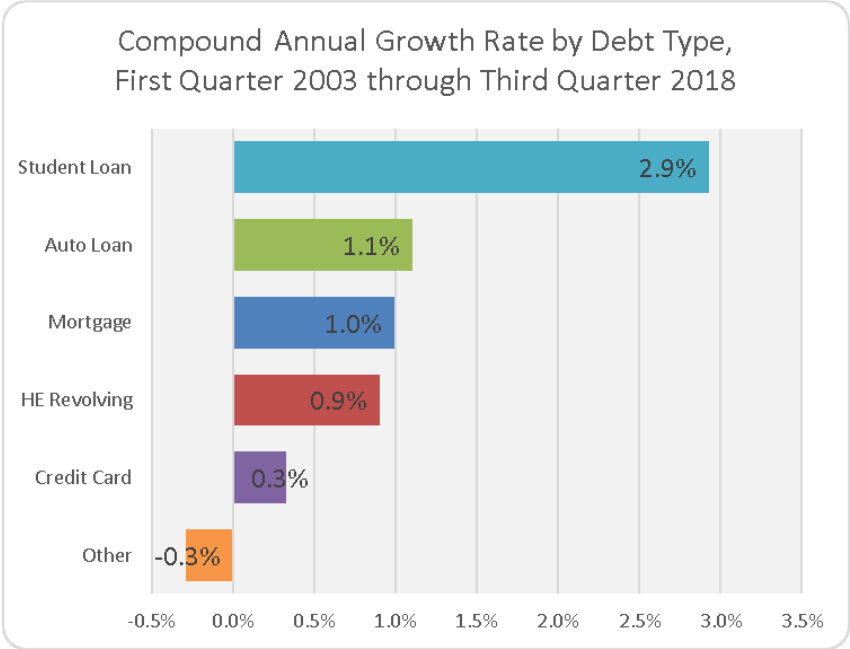
Student Debt in the United States



According to the most recent data, through the fourth quarter of 2018, released by the Federal Reserve Bank of New York, national student debt now stands at $1.457 trillion, and makes up just over 10.7% of total U.S. consumer debt.

Note: In the above area graph, the term 'HE Revolving' is Home Equity revolving credit accounts – people borrowing on the equity in their homes for various reasons.

Historical Growth of Student Debt in the United States



This bar chart, (also from the New York Federal Reserve Bank), shows that national student debt has grown much more rapidly between 2003 and 2018 than other types of consumer debt.

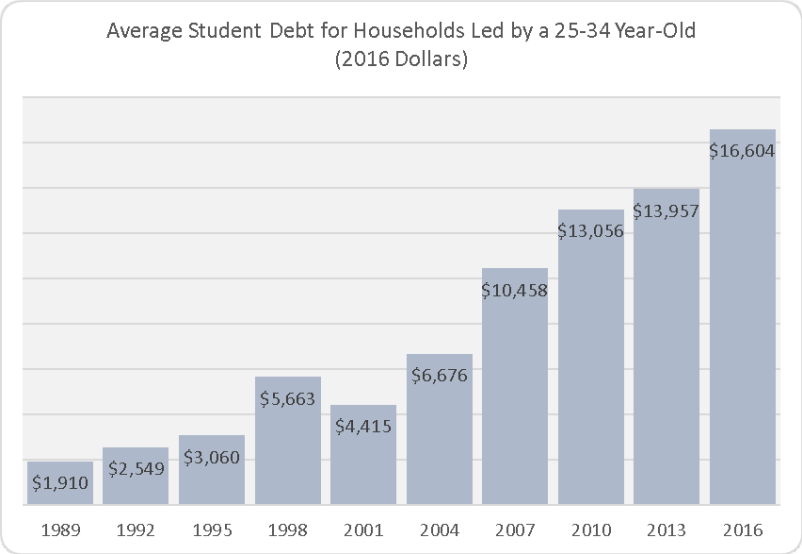
The growth of student debt has been fueled nationally by the dramatic rise in tuition and fees. The 2018 Organization for Economic Cooperation & Development (OECD) 'Education at a Glance', says Americans spend nearly twice as much as the world's average on postsecondary education from vocational/technical education (in the US, $14,294 annually vs. $8,927 OECD average), and college/university education ($30,003 annually in US vs. $15,656 OECD average).

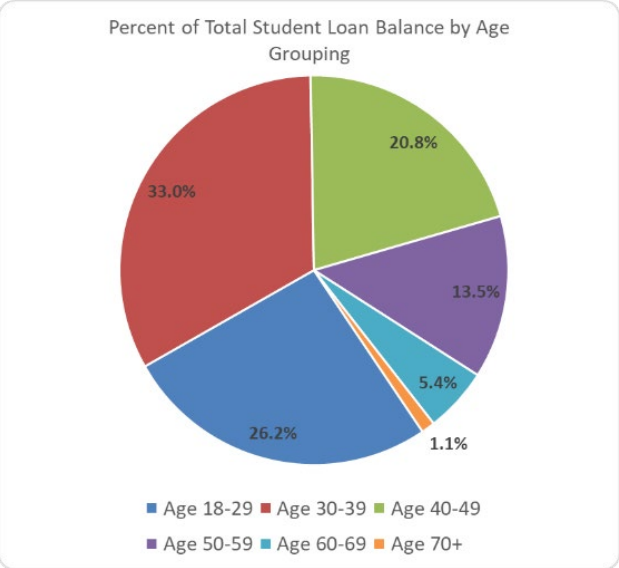
According to a September 2018 article in the Atlantic entitled 'Why Is College in America so Expensive?,' author Amanda Ripley points out that three in four postsecondary students in the United States attend public institutions, and overall costs have risen so much, at least in part, because state legislatures continue to cut funding to higher education because of other funding pressures, such as Medicaid expansion, increased need for prisons, road and bridge projects, K-12 and a host of other conflicting priorities.

State disinvestment comes at a time when a postsecondary credential has become an economic necessity (in Colorado). The Colorado Commission on Higher Education's Master Plan, Colorado Rises, establishes as an overarching goal increasing the number of adults who hold a high-quality postsecondary credential to 66 percent by 2025. This attainment goal recognizes research suggesting that by 2020, almost three-fourths of jobs will require some education beyond high school. Colorado's shift away from a funding structure largely supported by state appropriations and towards one primarily dependent on tuition revenues has challenged institutions' ability to balance operational realities with the need to provide affordable access to higher education for Colorado students and families. (Paccione, 2019)

National Student Loan Statistics

The pie chart uses data from the US Dept. of Education to show distribution of student debt by age band. Together, the two youngest age groupings, 18-29, and 30-39, account for nearly 60% of aggregate student debt, not surprising in light of the rapid growth of student debt during the last decade. The bar chart shows the rapid growth of average student debt among the 25-34 age band, which is presently made up of Millennials who are in the early stages of their post-college careers (Bricker, 2017).





Other relevant national statistics

According to a July 2018 Research Report by the Urban Institute, Millennials, who are currently between 22 and 37 years old, are less likely to purchase a house than Generation X or Baby Boomers were when they were in the 25-34 age range. The U.S. Census American Community Survey shows that home ownership in the 25-34 age group in 2015 was 37% as opposed to Generation X (45.4%), or Baby Boomers (45%) when those generations were age 25-34. (Choi, et al, 2018).

One of the factors cited in the Urban Institute report is that while the percentage of heads of household between ages 18 and 34 who have had some college or more had grown to 65.8% in 2015, for those who were in the same age grouping back in 1990, 55.7% of those with at least some college owned a home.

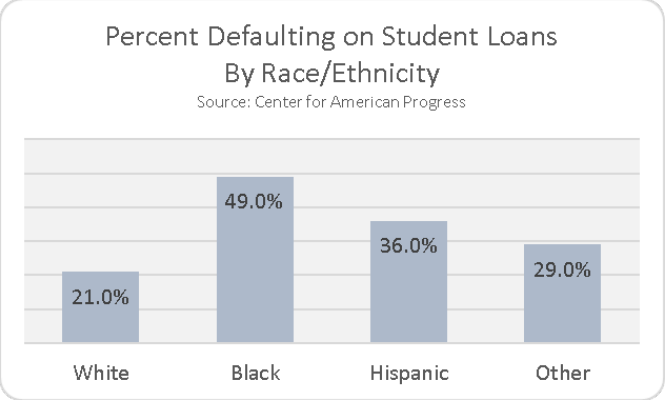
While it is difficult to determine if high student loan debt among Millennials is a causal factor in delaying to purchase homes and start families, over three quarters of Millennial respondents to a recent survey by American Student Assistance and the National Association of Realtors reported that education debt had affected their decision concerning both. (Choi, et al, 2018).

Here are student loan statistics as of the fourth quarter of 2018 (Scally 2018, Josuweit, 2018, Latreille, 2019):

- 44 million Americans have student loan debt.
- Aggregate student loan debt is $1.48 trillion.
- This is an average debt of $33,636 per borrower.
- 5.1 million (11.5%) of these loans are in default.
- 7.6 million (17.2%) are deferred or in forbearance.
- Some deferred loans and all loans in forbearance are still accruing interest.
- 30 million borrowers are currently repaying their loans.
- The average monthly payment for a borrower age 20-30 is $351.

Racial and Ethnic Disparities

Data from a longitudinal study from the U.S. Department of Education shows serious racial and ethnic disparities in loan outcomes (Miller, 2017). The bar graph shows how default rates are disproportionately higher for racial and ethnic minorities.



The table shows significant differences in the percent of students who enter college and take out student loans. The highest percentages borrow to attend private for-profit insti-tutions.

According to data from the U.S. Department of Education (Miller, 2017):

- Of all college students, 33% drop out entirely.
- An additional 24% are still enrolled part-time after six years.
- In community colleges, 43% of students drop out before completing.
- While 38% of white students drop out of college, numbers are much higher for African-Americans (62%), and Hispanics or Latinos (55%).

Percent Borrowing by Race/Ethnicity

Race/Ethnicity	Total	Public 4-Year	Private Non-Profit 4-Year	Public Two-Year	Private For-Profit
White	57.0%	60.0%	66.0%	46.0%	90.0%
Black or African-American	78.0%	87.0%	82.0%	62.0%	95.0%
Hispanic or Latino	58.0%	65.0%	74.0%	40.0%	84.0%
All Students	60.0%	62.0%	68.0%	48.0%	89.0%

Source: Center for American Progress

Percent Who Dropped Out Defaulting Within 12 Years of Entry
By Type of Institution

Race/Ethnicity	Public 4-Year	Private Non-Profit 4-Year	Public Two-Year	Private For-Profit
White	39.0%	33.0%	32.0%	50.0%
Black or African-American	64.0%	65.0%	54.0%	75.0%
Hispanic or Latino	50.0%	Unknown	29.0%	63.0%
All Students	44.0%	40.0%	36.0%	62.0%

Source: Center for American Progress

Dropping out of a postsecondary degree program is one of the most significant predictors of future default. This table shows comparative default rates for Whites, Hispanics/Latinos and Blacks/African-Americans (Miller, 2017).

This is compounded by the fact that 40-60% of incoming freshmen must take remedial mathematics, English or both prior to embarking on their college-level coursework. These students are much less likely to complete, with less than 25% finishing their intended degree program (Miller, 2017). These students are disproportionately persons of color, African-American (56%), Hispanic/Latino (45%), versus 35% of white students (Jimenez, 2016).

Forever Loans

Student loan debt cannot be cancelled under the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act unless undue hardship can be proven. In addition, if a loan goes into deferment status, interest will continue to accrue on some types of loans, in essence growing the balance. This is also true of loans that are in forbearance – they grow larger as time passes with accrued interest. A person may also make payments to their student loan based on their income as opposed to the balance/interest rate on the loan. *Unfortunately, this may also result in the principle balance of the loan continuing to grow*.

This table shows the median percentage of the original student loan still outstanding 12 years after the borrower entered college. This table includes those who have paid off their student loans in their entirety.

Median Percentage of Original Student Loan Balance Still Owed 12 Years After College Entry		
Race/Ethnicity	2003-04 Entry	1995-96 Entry
White	65.0%	60.0%
Black or African-American	113.0%	101.0%
Hispanic or Latino	83.0%	72.0%
All Students	80.0%	68.0%

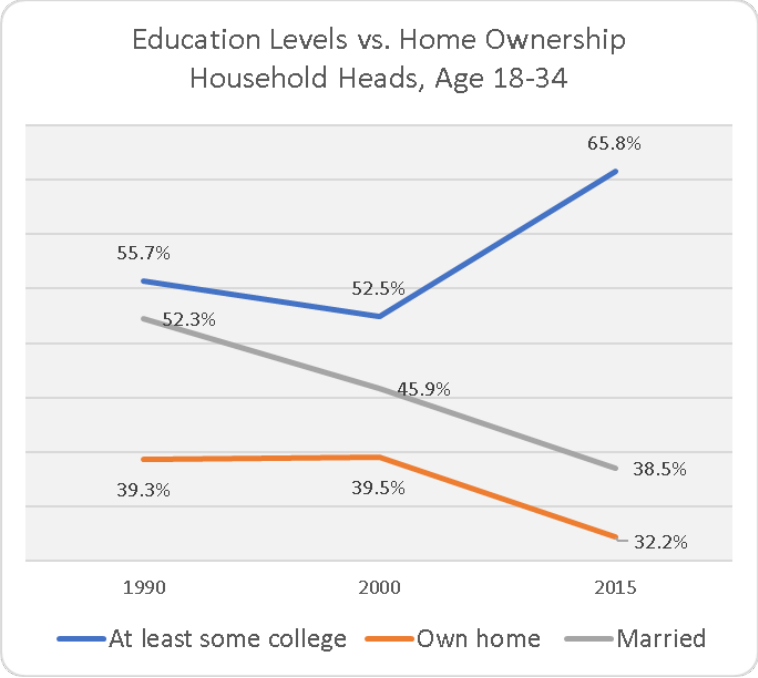
Source: Center for American Progress

Median Percentage of Original Student Loan Balance Still Owed 12 Years After Entry (2003-04 Academic Year)				
Educational Attainment	Overall	White	Black/African American	Hispanic or Latino
Attained Bachelor's Degree	60.0%	47.0%	114.0%	79.0%
Attained Associate Degree	92.0%	76.0%	124.0%	100.0%
Attained Certificate	76.0%	70.0%	108.0%	Unknown
Still Enrolled	101.0%	97.0%	115.0%	100.0%
Dropped Out	83.0%	68.0%	106.0%	79.0%

Source: Center for American Progress

Note: the two tables above were constructed by Ben Miller from the Center for American Progress (Miller, 2017) using longitudinal data from the U.S. Department of Education, National Center for Education Statistics (NCES). The accuracy of the data presented in these two tables was verified independently by Pablo Traverso and Serena Hinz, NCES Help Desk (Verification Request 24C-242D2339-0003, Wednesday, March 29, 2019).

Millennial Generation Delaying Major Life Steps



According to a July 2018 research report by the Urban Institute (Choi, 2018), Millennials are more highly educated than Generation X or Baby Boomers when they were the same age.

At the same time, though educational attainment has gone up 10.1% for Millennials, home ownership in the age 18-34 grouping has declined by 7.1% and the marriage rate by 13.8%,

This line graph, sourced from the same report, shows this relationship. The report states that 76% of Millennials cite high student debt as a reason they have not bought a home, and 55% said it was a factor in their decision to delay marriage.

In addition, according to the same report, the percent of persons between 18 and 34 years old still living with parents has risen from 26% in 1990 to 35.5% in 2015. Though the Urban Institute does suggest other factors may contribute to these changes, student loan debt is likely one of the causes (Choi, 2018).

> "Researchers from the Federal Reserve Bank of New York found that the increase in education debt explains 11 to 35 percent of the 8 percentage-point decline in homeownership for 28-to-30-year-olds between 2007 and 2015 (Bleemer et al. 2017). A Fannie Mae survey in 2014 found that 26 percent of young renters with education debt think their debt is their biggest obstacle to getting a mortgage. Higher education costs not only decrease residual income, making saving for a down payment more difficult, but also raise debt-to-income ratios, which further decreases the probability of getting a mortgage application approved." (Choi, 2018)

Parenting, College and Student Debt

According to a fact sheet issued by the Institute for Women's Policy Research in 2014, 4.8 million (26%) of all undergraduate students are parenting. Seven in ten of the parenting college students are women, and 2 million (43%) of the 4.8 million parenting students are single mothers. This percentage is not so high in Colorado. Of 300,000 Colorado students enrolled in college, 50,000, (16.6%) are parenting, while at the same time only 8% of colleges in Colorado are affordable for parenting students, using the Lumina Foundation's 'rule of ten' affordability benchmark, which holds that students should pay no more for college than 10% of their discretionary income over a ten-year period (Young Invincibles, 2019).

Declining Wealth Among Younger Americans

Unlike previous generations, young adults today face rising college tuition and unprecedented student debt, largely driven by budget cuts at the state level. Understanding these trends is a prerequisite for understanding the generation's financial health. While income declined across education levels, a college degree – with or without debt – is still worth it.

Boomers with a college degree, who took on student debt to finance their education, earned nearly $68,000 annually; the same type of young adults today earned under $51,000, a 25 percent decline. Boomers who earned a degree, but didn't have any student debt, earned over $13,000 more than the same Millennials today. The declines across education levels were so steep that young people today that have a degree with debt earn roughly the same as young workers with no degree in the late 1980s. (Allison, 2017)

Generational Decline in Earnings, Age 25-34		
Median Income	1989	2013
Individual Worker	$50,910	$40,581

Source: Young Invincibles, 2017

Median Assets, Age 25-34		
Median Income	1989	2013
Degree Without Debt	$244,872	$133,800
Degree With Debt	$150,751	$43,510
No Degree	$34,470	$16,000

Source: Young Invincibles, 2017

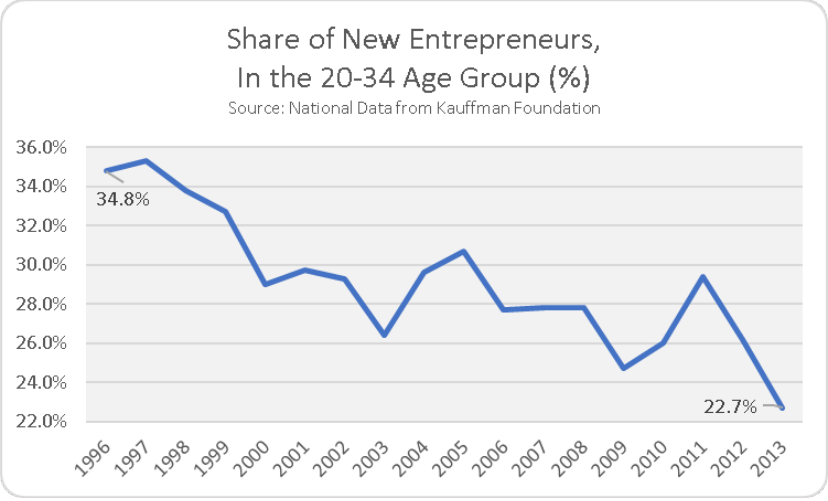
Net Wealth, Age 25-34		
Median Income	1989	2013
Degree Without Debt	$125,572	$75,000
Degree With Debt	$86,547	$6,600
No Degree	$16,322	$7,750

Source: Young Invincibles, 2017

The tables below use data from a paper published in January 2017 by the Young Invincibles titled, "Financial Health of Young America: Measuring Generational Declines between Baby Boomers & Millennials," Tom Allison.

Decreased Entrepreneurship

Small businesses play a huge role in the US economy. In 2016, the US Small Business Administration Office of Advocacy reported there are 30.2 million small businesses in the United States. Small businesses make up 99.9% of all firms in the country and 97.7% of firms with paid employees. Between 2000 and 2017, small businesses in the United States accounted for 65.9% of all new job creation, and 47.5% of all existing employment.



This is why it is a concern when the formation of small business decreases, yet that is what is happening with the Millennial generation. In 2017, Tim Wasick of the New York Times wrote, "Because of the corrosive impact of student debt on start-ups, millennials seem to be the new lost generation of entrepreneurs. Although it is difficult to pin down a direct relationship between college loans and entrepreneurial activity, the weight of student debt appears to be deterring some would-be business owners. (Wasick, 2017).

In 2014, the Kauffman Foundation on Entrepreneurship reviewed the relationship between rising student loan debt and decreased business formation on the part of Millennials.

Among the many trends affecting the entrepreneurial promise of millennials, student debt has been a particularly prominent issue. Although we cannot yet infer any causal relationships, rising student debt levels have, to an extent, coincided with falling entrepreneurship rates among young people. Intuitively, a relationship between the two makes sense. Entrepreneurs need capital to start new businesses, and young people with student debt lag far behind on accumulating net worth. (Reedy, 2014).

As measured using data from the US Department of Education and the Kauffman Foundation, there is significant negative correlation (-0.79) between the average student debt in households led by someone in the 25-34 age group and entrepreneurship in the 20-34 age band. In other words, as student debt goes up, the percent of companies being started by persons in the 20-34 age band is going down.

A significant correlation, either positive or negative, does not necessarily infer cause, this correlation suggests rising student debt may be a contributing factor to fewer Millennials launching their own businesses.

This has ramifications in Colorado, as well. The 2018 Small Business Profile for Colorado, released by the US Small Business Administration Office of Advocacy points out that 611,495 small businesses in Colorado employ 1.1 million people. This is 48.6% of the total private employment in the state and 99.5% of Colorado businesses. Should small business start-up activity decrease, it could adversely affect the state's economy.

Student Debt: A Colorado Perspective - Lost Demand for Local Goods and Services

If the national statistics are sobering, the numbers for Colorado are even more so. On January 22, 2019, the Student Borrower Protection Center (SBPC) and New Era Colorado released an analysis of Colorado student debt using data obtained from the U.S. Department of Education and the Federal Reserve Bank of Philadelphia. This analysis revealed that presently there are 733,700 people in Colorado who owe student debt of $26.4 billion. This is an average of $36,032 per student debtor. Of these, 632,449 are currently paying, and 101,251 are in default.

Opportunity Cost of Student Loan Repayment in Colorado

Level	Average Interest	Estimated Number	Avg. Payment	Aggregate Annual Cash Outflow
Undergraduate	4.81%	385,548	$304.68	$1,409,626,195
Graduate	6.38%	230,764	$331.55	$918,117,894
PLUS	7.44%	16,137	$350.43	$67,857,237
Totals	5.45%	632,449	$315.65	$2,395,601,326

Sources: 2019 Analysis by Student Borrower Protection Center (SBPC) and New Era Colorado, US Census, US Bureau Labor Statistics, US Dept. of Education

A variety of other data sources were used to produce a credible estimate of the opportunity cost to Colorado's economy from this student debt load in terms of lessened demand for local goods and services.

Essentially, as shown in the table above, nearly one in four working age Coloradans (23.5%) are paying an average monthly remittance of $315.65 to service their student loans. This adds up to an aggregate amount of nearly $2.4 billion leaving the state each year, remitted to either the federal government or private lenders, and not being used to purchase local goods and services.

Value Taken Out of Colorado Economy by Aggregate Student Loan Remittance Combining Data Aggregated from 2019 Student Borrower Protection Center/New Era Colorado Analysis With Estimates from the Latest Bureau of Labor Statistics Consumer Expenditure Survey (CEX)			
Expenditure Category	Category Spending Rate	Aggregate Annual Loss to Colorado Economy	*"The average Coloradan with student debt has this much less to spend annually."*
Housing	33.80%	($809,713,248)	($1,280)
Healthcare	8.20%	($196,439,309)	($311)
Transportation	16.00%	($383,296,212)	($606)
Food	12.00%	($287,472,159)	($455)
Apparel & Services	3.10%	($74,263,641)	($117)
Insurance & Retirement Investments	11.00%	($263,516,146)	($417)
Entertainment	5.30%	($126,966,870)	($201)
Personal Care	1.30%	($31,142,817)	($49)

Source: U.S. Bureau Labor Statistics, Consumer Expenditure Survey

This table was built using the latest consumer expenditure data available from the U.S. Bureau of Labor Statistics.

The far-right column shows how much less each student loan debtor has to spend on needed goods and services.

The "Aggregate Annual Loss to Colorado Economy" is the total estimated opportunity cost to Colorado businesses, the amount of money ***not*** spent, but that otherwise would be spent, on local goods and services by nearly three quarters of a million Coloradans.

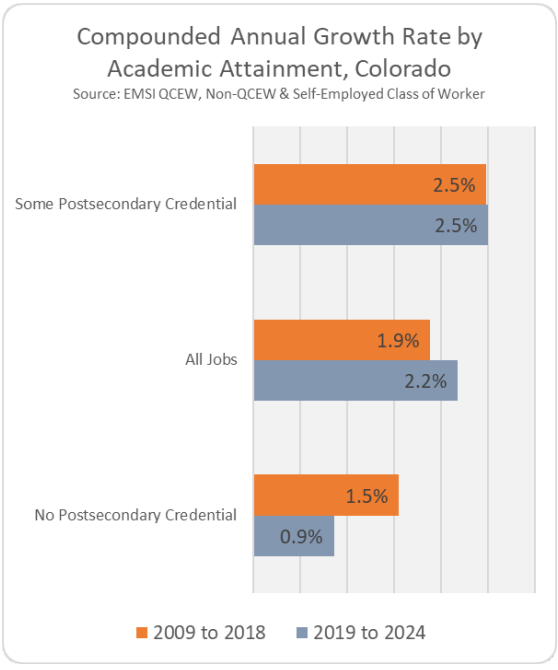
According to the U.S. Department of Education, if someone goes into default on a student loan, the entire unpaid balance becomes immediately due (this is called "acceleration"). The debtor can no longer receive deferment or forbearance, and loses eligibility for other benefits, such as the ability to choose a repayment plan. When the loan is past due 90 days, it goes on the person's credit reports, and at 270 days goes into default status. This affects the ability to purchase or sell homes or automobiles. Student debt cannot be relieved by bankruptcy, wages may be garnished and tax refunds withheld. In addition, the school can withhold a person's grade transcript, rendering them unable to obtain higher-paid work based on their academic training.

According to the SBPC/New Era Foundation's January 22, 2019 report, 13.8% of student loans in Colorado are currently in default. This means there are an estimated 101,251 Coloradans, 20,000 of whom live in the rural parts of the state, who are in serious default and living with the consequences outlined above.

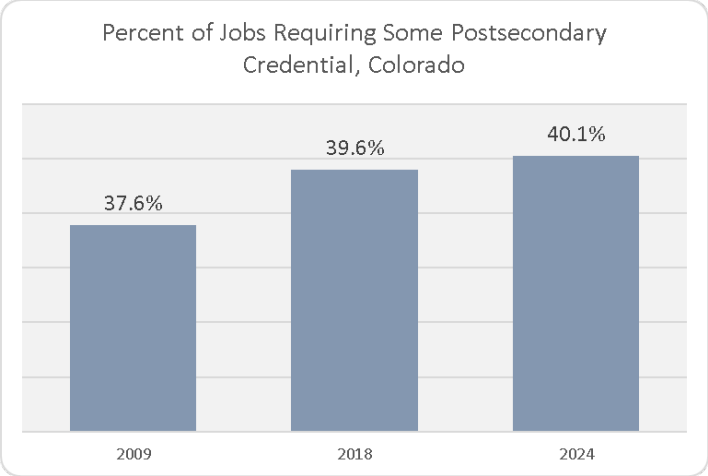
Growing Demand for Degreed Individuals, Colorado

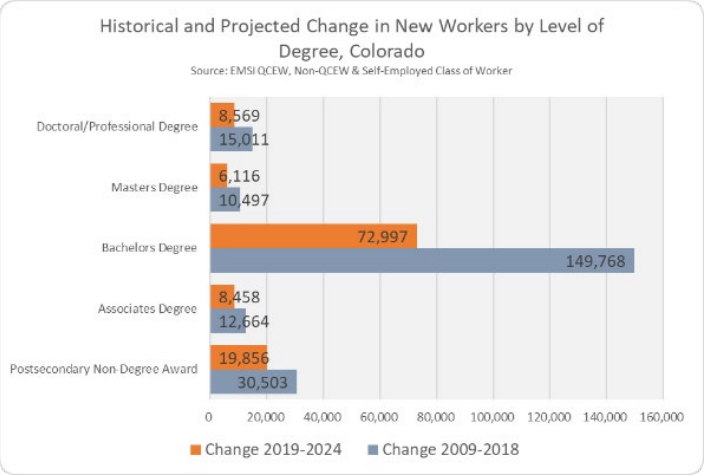
In Colorado, employer demand for newly degreed individuals is growing significantly faster than the demand for jobs requiring no postsecondary degree or credential. This bar graph, generated by EMSI Developer uses data from the first quarter of 2019 to show these comparative rates. In Colorado:

- The number of new jobs not requiring any credential beyond a high school diploma or equivalency:
  - Grew between 2009 and 2018 from 1.6 to 1.9 million, a change of 244,457 (14.8%).
  - Projected growth between 2019 and 2024 is 1.7 to 1.9 million, a change of 138,828 (8.0%)
- The number of new jobs that did require some postsecondary credential:
  - Between 2009 and 2018, grew from 0.9 to 1.1 million, a change of 218,445 (24.6%).
  - Between 2019 and 2024, projected to grow 1.3 to 1.4 million, a change of 135,852 (10.3%).



These bar graphs, also taken from EMSI, further illustrate the growing demand for newly degreed individuals throughout Colorado.





In order to project the increasing student debt load resulting from employer demand for individuals with postsecondary degrees at all levels, projected job growth trends were examined by occupational family, and the number of those jobs requiring various types of degrees were calculated using the typical level of educational attainment required for each occupation within that family (postsecondary non-degree award, associate's, bachelor's, master's and doctoral/professional). These estimates were then placed side-by-side with data on average student debt by type and level of degree.

Projected Employer Demand for New Degrees, All Levels, Colorado, 2019 through 2024							
SOC	Occupation Family	New Jobs Added	Postsecondary Non-Degree Certificate	Associates	Bachelors	Masters	Doctoral or Professional
11-0000	Management Occupations	14,678		12	13,901	671	
13-0000	Business and Financial Operations Occupations	18,383	23		17,862		
15-0000	Computer and Mathematical Occupations	13,192		842	10,403	233	
17-0000	Architecture and Engineering Occupations	5,631		1,175	4,230		
19-0000	Life, Physical, and Social Science Occupations	2,883		532	1,443	240	667
21-0000	Community and Social Service Occupations	5,807			3,241	1,727	
23-0000	Legal Occupations	2,259	21	748	15		1,392
25-0000	Education, Training, and Library Occupations	16,948	253	1,016	8,702	603	2,836
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	5,051	205	13	3,727		
29-0000	Healthcare Practitioners and Technical Occupations	20,884	3,122	3,219	7,334	2,642	3,674
31-0000	Healthcare Support Occupations	12,509	7,956	462			
33-0000	Protective Service Occupations	5,281	671		10		
35-0000	Food Preparation and Serving Related Occupations	25,673	5				
37-0000	Building and Grounds Cleaning and Maintenance Occupations	9,289					
39-0000	Personal Care and Service Occupations	16,170	1,944	21			
41-0000	Sales and Related Occupations	20,513			1,803		
43-0000	Office and Administrative Support Occupations	27,519		155	13		
45-0000	Farming, Fishing, and Forestry Occupations	1,947			27		
47-0000	Construction and Extraction Occupations	17,321					
49-0000	Installation, Maintenance, and Repair Occupations	10,252	2,736	191			
51-0000	Production Occupations	6,091	19				
53-0000	Transportation and Material Moving Occupations	16,400	2,901	72	270		
	Totals	274,681	19,856	8,458	72,981	6,116	8,569

Source: EMSI QCEW, Non-QCEW & Self-Employed Class of Worker

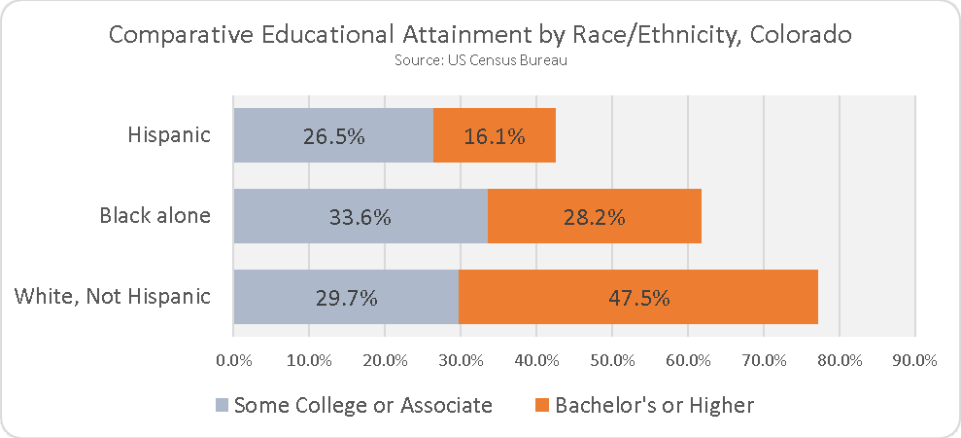
Using this approach, it is reasonable to estimate that the same economic growth over the next five years in Colorado that results in the need for 115,980 newly-credentialed people will ***also*** add $2,723,516,350 to the aggregate debt load for individuals in Colorado, and raise the aggregate amount of student debt in the state by 10.3%% from the $26,436,678,400 currently owed to over $29.1 billion.

Projected New Student Loan Debt, Colorado, 2019 through 2024				
Degree Level	2016-2017 Graduates	Percent with Debt	Average Debt at Graduation	Aggregate Debt
Postsecondary Non-Degree Award	19,856	41.0%	$10,000	$81,409,600
Associates	8,458	41.0%	$13,895	$48,184,803
Bachelors	72,981	69.0%	$29,800	$1,500,635,322
Masters	6,116	57.1%	$64,276	$224,466,961
Doctoral/Professional	8,569	65.5%	$169,300	$950,229,264
Total	115,980	54.3%	$43,279	$2,723,516,350

Sources: U.S. Dept. of Education, College Board, Urban Institute, Student Loan Hero

Applying the data above, by 2024 the annual demand for local goods and services in Colorado will be reduced by $2.83 billion, an 18.2% increase from the current opportunity cost of remittance for student debt.

Lagging Educational Attainment



Colorado is experiencing several demographic changes. Most relevant here is the increasing proportion of the labor force comprised of racial and ethnic minorities. The Colorado Demographer projects that racial and ethnic minorities will make up 48% of the state's total labor force by 2050.

Yet, there is a problem. Currently, the educational attainment levels of racial and ethnic minorities are lagging significantly behind those of white members of the labor force. The graph shows this lag, and it is important to be mindful that employers in Colorado are currently requiring 33.7% of workers to have a bachelor's degree or higher.

According to the US Census Bureau, Colorado had a net job-to-job in-migration of 22,488 for the year ending in the third quarter of 2017. Since Colorado's non-seasonally-adjusted employment grew by 109,992 (Local Area Unemployment Statistics) during this same time period, the net job-to-job in-migration is not sufficient to make up for the lagging degree attainment among racial and ethnic minorities.

Work-Based-Learning

During the last four years, since inception of the Workforce Innovation and Opportunity Act, there has been an increasing emphasis on 'work-based learning,' which is, essentially, learning a job on-the-job. While it may have elements of classroom training, as in a registered apprenticeship, there is some doubt whether this approach can produce enough workers to meet projected demand, particularly at the high skill levels implied by a bachelor's or graduate degree.

While some large information technology companies, notably Microsoft and IBM, are attempting to switch to a skill-based hiring paradigm, it may prove unrealistic to expect the short-term on-the-job-training offered through the workforce development system, or even apprenticeships, to help populations with low educational attainment or literacy/numeracy insufficiencies be truly competitive side-by-side with degreed individuals.

Credentialization and Stagnant Wages

A 2018 study by the Roosevelt Institute challenges the idea that accruing increasing amounts of student debt has improved the earnings of Americans. The authors of this study point out that even though the millennial generation is the most educated generation in the history of the United States, these increased levels of education have not led to higher earnings, except relative to those with only a high school diploma, whose earnings, or at least purchasing power, have declined.

The study suggests that wages have not risen commensurately with the trend toward more and more educational attainment, and questions whether the employer demand for increased attainment, and the accompanying student debt, is really necessary. It calls this inflation of academic requirements for the same jobs 'credentialization' (Morgan, 2018). Why, the study asks, have employers themselves deflated the value of postsecondary credentials by demanding higher credentials for jobs that did not previously require them without raising the pay for those jobs based on the additional level, and cost, of educational attainment? By using year-over-year Occupational Employment Statistics (OES) from the U.S. Bureau of Labor Statistics, we can cite several examples of this phenomenon in Colorado:

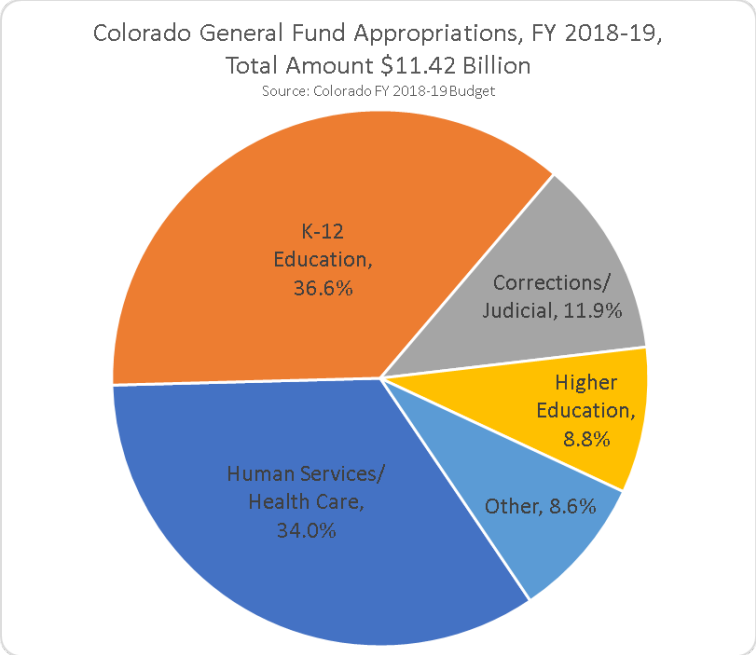
- Physical therapy previously required a bachelor's degree with specific classes. Now, it requires a doctoral/professional level degree to be a physical therapist. This increase in expected educational attainment has not resulted in significant increases in wages to match the cost of the doctoral-level Physical Therapy degree. According to OES, in 2017, the occupation had a median annual wage of $79,726.40 in greater metro Denver, up from $71,676.80 in 2011, a compounded annual growth rate (CAGR) of 1.53%, only slightly above the overall CAGR for healthcare occupations during that time period of 1.43%.
- Registered nurses required an associate's degree in nursing until early in the last decade, when a small but growing number of hospitals started the practice of only hiring nurses at the baccalaureate level. In 2008, only 35% of RNs had bachelor's degrees, while by 2013 that number had risen to 55%. Between 2001 and 2017, the median annual wage for a registered nurse in greater metro Denver moved from $70,948.80 in 2012 to $74,006.40, a CAGR of only 0.85%.
- A third example is the Masters in Business Administration (MBA). Though the MBA is now losing some of its prestige, it was at one time considered a 'rite of passage' in several key industry groups, with a person not able to progress beyond a certain level without one. In 2011, the median annual wage for a general operations manager was $129,667.20. By 2017, it had moved up to $140,836.80, a CAGR of 1.19%, significantly lower than the CAGR for all management occupations (2.03%).

These three examples suggest that the authors of the Roosevelt Institute study may be correct in their assertion that the increased education, and commensurate debt to get the extra education now required to advance, doesn't result in increased earnings high enough to offset the new debt (Morgan, 2018).

> More education has not led to higher earnings over time. The data show that many more Americans have debt, and the burden of that debt is more significant now than for previous generations. Although the country's populace is becoming more educated, each educational group is becoming less well paid. (Morgan, 2018)

Structurally Unsustainable Budget

This pie chart shows the allocations from the Fiscal Year 2018-19 Colorado State Budget. The General Fund only allocates 8.8% of the $11.42 billion budget to Higher Education.



The cost of services the state government must fund or help local governments fund is growing faster than revenues are allowed to grow under the Taxpayer Bill of Rights (TABOR), and attempting to increase revenue through the ballot as required by TABOR is unpredictable at best, even when that revenue is critically needed.

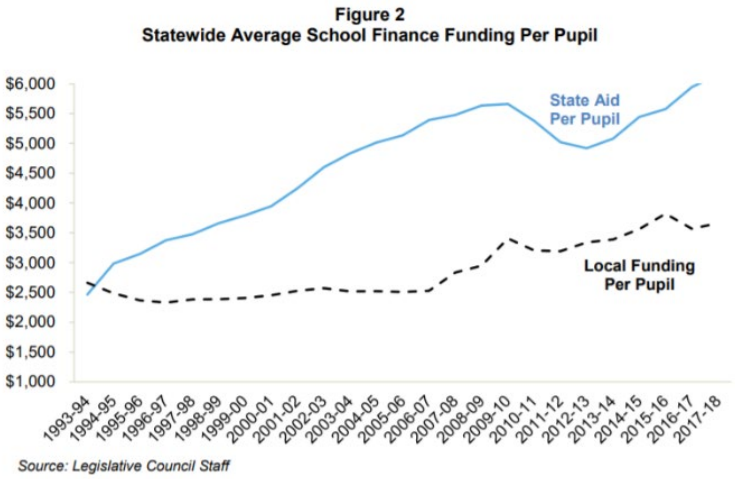
Rising mandatory expenditures, pushing against constraints caused by TABOR and the Gallagher Amendment, which governs property taxes, have created an increasing structural unsustainability in Colorado's budget.

For example, the Affordable Care Act, which gave states the option to expand Medicaid services to uninsured people whose incomes are at or below 138% of the Federal Poverty Level, has resulted in the addition of over 554,000 people to Colorado's Medicaid rolls between 2013 and 2018. The Kaiser Foundation reports the current average Medicaid expenditure in Colorado is $4,898 per enrollee annually.

Temporary Aid to Needy Families is currently block-granted, meaning that Colorado receives a fixed amount of the Federal appropriation, and must use that to provide benefits regardless of the number of cases, which fluctuate based on economic conditions.

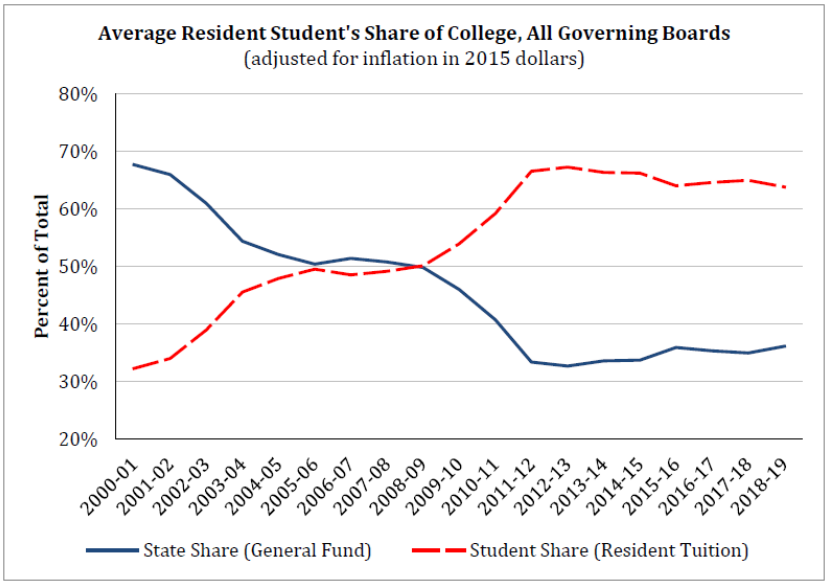
Over the last several decades, Colorado's incarceration rate has grown at a pace 5% above the national average. The new prisoners require space and services, and the state corrections budget is increasing at the expense of other Colorado Departments, including Higher Education.

Costs for the public K-12 system have grown with the state's population. At this point, the state must provide a growing portion of per-pupil costs. The line graph shows this gap is increasing yearly.



The School Finance Act of 1994 requires funding to public K-12 schools on a per-pupil basis. This line graph (Figure2), taken from the Colorado Legislative Council's April 2018 School Finance in Colorado report, shows the proportion state aid per K-12 pupil has consistently exceeded local funding, and this gap is increasing.

As a result of these budgetary pressures, higher education is one of the only places that can be cut. This has forced the share of costs that must be borne by students through tuition and fees to increase steadily over the last two decades. This line graph, from the Fiscal Year 2018-19 Tuition and Fees Report issued in January 2019 by the Colorado Commission on Higher Education, shows this upward pressure on student share of expenditures as state funding has gone down.



In today's economy, higher education is no longer a luxury for the privileged few, but a necessity for individual economic opportunity and America's competitiveness in the global economy. At a time when jobs can go anywhere in the world, skills and education will determine success for individuals and for nations. As a result, a college education remains the best investment a student can make in his or her future. Too many recent college graduates feel the weight of their student loan payments holding them back from fulfilling their full potential. And far too many prospective college students feel as though they are simply priced out of the education they need to set themselves up for future success. (US Department of Education)

Implications for Colorado's Central Planning Region (Urban Front Range)

Twelve counties make up Colorado's Central Planning Region. They are Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, El Paso, Gilpin, Jefferson, Larimer and Teller. Together, these counties make up most of Colorado's urban Front Range, that is that portion of the state that is most heavily populated. Major urban areas included in the Central Planning Region are Fort Collins, Boulder, greater metro Denver and Colorado Springs.

Comparative Need for Newly Degreed Individuals, 2019-2024			
Level/Period	Colorado	Central Planning Region	Percent
All Jobs	274,680	220,887	80.4%
Postsecondary Non-Degree Award	19,856	15,976	80.5%
Associates Degree	8,458	7,000	82.8%
Bachelors Degree	72,997	60,316	82.6%
Masters Degree	6,116	5,001	81.8%
Doctoral/Professional Degree	8,569	6,975	81.4%

Source: EMSI QCEW, Non-QCEW & Self-Employed Class of Worker

The table shows that this heavily populated area, which has about 75% of Colorado's jobs, will bear the brunt of employer demand for newly degreed people, and the commensurate increasing student debt that will come with it.

During the current economic growth phase, Colorado's urban Front Range is highly ranked nationally and internationally as a good place to do business that has an excellent quality of life, a highly educated and technically skilled labor force that can accommodate virtually any industry relying on advanced technology, including aerospace and other advanced manufacturing, financial services, information technology, broadband, biosciences and health care.

Applying the percentages in this table to the statewide numbers above:

- Businesses along Colorado's urban front range, excluding Greeley, are currently losing $1.97 billion per year in potential demand for local goods and services due to the opportunity cost of student loan remittance.
- By 2024, businesses will be losing an estimated $3.22 billion annually in foregone demand for goods and services due to reduced demand caused by student loan remittance.

Conclusion

Colorado counts on a sophisticated, highly skilled, highly educated labor force to attract, expand and retain businesses, particularly in its key industry groups. At the same time, we have allowed costs of higher education to escalate so much that nearly one in four working age Coloradans owe an average of $33,256 in debt and an average monthly payment of slightly over $315.

Remittance on student loans costs Colorado businesses $2.4 billion a year in lost demand for goods and services. Because of growing employer demand for newly degreed individuals, by 2024 the annual demand for local goods and services in Colorado will be reduced by $2.8 billion, an 18.2% increase from the current opportunity cost of remittance for student debt. This represents a steady drain on Colorado's economy.

Young people are given the very strong message that they must get some kind of postsecondary education in order to have a decent job that makes ends meet, but the cost of postsecondary education is increasingly out of reach due to a variety of factors, including decreased federal financial aid funding, decreased spending at the state level on postsecondary education, predatory loan regulations that allow the principal balance to increase even if payments are being made, and increased educational requirements for jobs that did not previously require so much education.

So, in spite of escalating costs, Colorado students borrow ever more money to attend college because a postsecondary credential is more important now than it has ever been. As this paper shows, this is especially true for newly degreed people at the baccalaureate level. By 2024, employers in the state will be demanding 73,000 more bachelors-level people to fill critical jobs.

The younger generation is not the only generation affected by student loan debt. Older students are affected, as well. When there is a downturn in the economy, many people return to postsecondary schools to upgrade their skills. Forty percent of student loan debt is held by people over 40 years old, and one in five people owing on student loans are over age 50.

This paper shows that the opportunity cost of expensive higher education is borne by society. This cost takes the form of lower wealth creation, lower home ownership, fewer people taking the risk to start new businesses, and reduced economic resilience.

In light of these structural challenges, thought leaders and policy makers in Colorado must act together to manage the state's labor force so that postsecondary education is more affordable for a greater number of young people, more accessible and affordable for minority students and older returning students. People need to be able to attend Colorado's higher education institutions and graduate with minimal debt so they can find work and begin to engage in those economic behaviors that keep our economy strong by encouraging wealth-building and entrepreneurship, and normal consumer behavior.

Policy makers in the state must realize that investing in the postsecondary education of Coloradans of all ages not only helps individuals but ensures Colorado's long-term economic future and well-being.

Bibliography

- Allison, Tom, "Financial Health of Young America: Measuring Generational Declines between Baby Boomers & Millennials," Young Invincibles, January 2017.
- Bricker, Jesse, et al, "Federal Reserve Bulletin: Changes in U.S. Family Finances from 2013 to 2016: Evidence from the Survey of Consumer Finances," Board of Governors of Federal Reserve System, Vol. 103, No. 3, September 2017 (and historical tables from 1989 to 2016).
- Campbell, Colleen, "Student Loan Default Crisis for Borrowers with Children," November 15, 2017, Center for American Progress.
- Campbell, Colleen, "The Forgotten Faces of Student Loan Default," October 16, 2018, Center for American Progress.
- Campbell, Colleen, "What Do We Know About Student Loans? Less Than You Think," August 16, 2018, Center for American Progress.
- Carter, Mike, "New Analysis Reveals more than 730,000 Coloradans Suffer Under the Weight of Historic Levels Of Student Debt, State Must Take Action to Protect Borrowers," New Era Colorado Foundation, January 22, 2018.
- Cheng, Diane, et al, "13th Annual Report: Student Debt and the Class of 2017," The Institute for College Access & Success, September 2018.
- Choi, Jung, et al, "Millennial Homeownership: Why Is It So Low, and How Can We Increase It?" Research Report," Urban Institute, July 2018.
- Crowe, Portia, "Another Sign that MBA Degree are Losing Their Prestige," Business Insider, June 4, 2015.
- DeMers, Jason, "Where'd All the Millennial Entrepreneurs Go?" Entrepreneur, November 16, 2017.
- Economic Modeling Specialists, Incorporated (EMSI) Developer, Occupation and Education Pipeline Data, www.economicmodeling.com.
    - Integrated Postsecondary Education Data System (IPEDS) data pulled from EMSI uses completions from 2017.
    - Occupational information is from EMSI's First Quarter 2019 data run.
- Fernandez, Chris, et al, "Developmental Education and Student Debt: Remediation's Uncertain Impact on Financial and Academic Outcomes," TG Research & Analytical Services, October 2014.
- Gault, Barbara, et al, "Fact Sheet: 4.8 Million College Students are Raising Children," Institute for Women's Policy Research, November 2014.
- Green, Bill, "Millennial Entrepreneurs Are Held Back Because of This 1 Reason," Inc. February 6, 2018.
- Jimenez, Laura, et al, "Remedial Education, the Cost of Catching Up," Center for American Progress, September 28, 2016.
- Josuweit, Andrew, et al, "2017 Student Loan Debt Statistics: A comprehensive look at the student loan situation in the United States – backed by numbers and data," Student Loan Hero, 2018.
- Landers, Pim, et al, "Mapping Student Debt," Washington Center for Equitable Growth, 2018.
- Latreille, Bonnie, et al, "Colorado Student Debt by the Numbers," Student Borrower Protection Center, January 22, 2019.
- Looney, Adam & Constantine Yannelis, "A Crisis in Student Loans? How Changes in the Characteristics of Borrowers and in the Institutions They Attended Contributed to Rising Loan Defaults," Brookings Institute, Fall 2015.
- Miller, Ben, "New Federal Data Show a Student Loan Crisis for African American Borrowers," Center for American Progress, October 16, 2017.

- Morgan, Julie Margetta, and Marshall Steinbaum, "The Student Debt Crisis, Labor Market Credentialization, and Racial Inequality: How the Current Student Debt Debate Gets the Economics Wrong," Roosevelt Institute, October 2018.
- OECD (2018), "Education at a Glance 2018: OECD Indicators," OECD Publishing, Paris.
- Paccione, Angie, Ph.D. et al, "Tuition and Fees Report: Fiscal Year 2018-2019" Colorado Department of Education, Colorado Commission on Higher Education, January 2019.
- Reedy, E.J., et al, "Student Debt And The Millennial Entrepreneurship Paradox," Kauffman: The Entrepreneurship Foundation & Forbes, September 15, 2014.
- Ripley, Amanda, "Why Is College in America So Expensive? The outrageous price of a U.S. degree is unique in the world," Atlantic, September 11, 2018.
- Scally, Joelle, et al, "Quarterly Report on Household Debt and Credit: 2018 Q4," Federal Reserve Bank of New York, Research & Statistics Group, November 2018.
- Tomar, David, "Trade Schools on the Rise," The Quad, 2019.
- Staff, "School Finance in Colorado," Colorado Legislative Council, April 2018.
- Staff, "Four Years After a Bachelor's Degree: Employment, Enrollment, and Debt Among College Graduates," U.S. Department of Education, May 2017.
- Staff, "Official Cohort Default Rates for Schools (by State and Type of Institution," U.S. Department of Education, Federal Student Aid Office, August 18, 2018
- Staff, "Today's Student: Student Parents in Colorado," Young Invincibles, January 30, 2019.
- Staff, "Small Business Profile: Colorado," US Small Business Administration Office of Advocacy, 2018.
- Staff, "Why Higher Education Costs are What They Are," National Center for Higher Education Systems, submitted to Colorado Department of Higher Education, June 30, 2015.
- Staff, "The Millennial Economy: National Public Opinion Survey," Economic Innovation Group, September 2016.
- US Census Bureau, American Community Survey, 2017 1-Year Estimates.
- Wasick, John F., "For Young Entrepreneurs, College Debts Can Snuff Out Start-Up Hopes," New York Times, January 11, 2017.
- Woo, Jennie H. et al, "Repayment of Student Loans as of 2015 Among 1995–96 and 2003–04 First-Time Beginning Students," National Center for Education Statistics, October 2017.

Acknowledgements

Thanks to the following for constructive feedback, data corrections and edits:

- The Arapahoe/Douglas Workforce Board staff.
- The Arapahoe/Douglas Works! management team.
- The Colorado Workforce Intelligence Data Expert (WIDE) group, with special thanks to:
    - Amanda Repella, Data Program Lead and Workforce Economist, Larimer County.
    - Greg McBoat, Administrative Analyst/Talent Pool Coordinator, Adams County Workforce & Business Center.
    - Kyle Allbright, Workforce Data Coordinator, Jefferson County Business & Workforce Center.
    - Barb Larsen, Business Support Analyst, Workforce Boulder County.
    - Mark Hoblitzell, Business Services Coordinator, Northwest & Rural Resort Workforce Area, Colorado Rural Workforce Consortium, Colorado Department of Labor & Employment.
- Brandon S. McReynolds, Ph.D., Talent Development Research Analyst and Postsecondary Coordinator, Colorado Department of Education/Colorado Workforce Development Council.

And special thanks to:

- Bonnie Latreille, J.D., Director of Research and Advocacy, Student Borrower Protection Center for providing several data corrections.
- Pablo Traverso and Serena Hinz at the National Center for Education Statistics for data verification.

Arapahoe/Douglas WORKS! Workforce Center
A proud partner of the americanjobcenter network

www.adworks.org

@adworks303 ADW Connections

prepared by

Arapahoe/Douglas WORKFORCE BOARD COLORADO

Arapahoe/Douglas Workforce Development Board
Patrick Holwell, Workforce Economist
April 1, 2019