# UNIVERSITY OF COLORADO BOULDER LEEDS SCHOOL OF BUSINESS



# Colorado 2019 Midyear Economic Update

Richard Wobbekind



Photo courtesy of Savannah Schlaufman.

### **Overview**

Though Colorado continues to grow in 2019, this growth has slowed slightly since the strong reacceleration in 2018. Colorado employment growth slowed from 2.8% year-over-year in June 2018 to 1.9% year-over-year in June 2019. Likewise, real GDP growth in Colorado slowed from 4.5% year-over-year in Q1 2018 to 3.5% year-over-year in Q4 2018. Despite this, personal income grew 5.1% year-over-year in Q1 (5th in the nation), and per capita personal income grew 3.6% (12th in the nation). Population net migration slowed from 59,628 in 2016 to 47,640 in 2017, but saw an uptick to 52,979 according to the U.S. Census Bureau. At a meeting held in late July, the chairs of the 14 Colorado Business Economic Outlook Forum committees collectively reported a more cautious outlook for 2019. The revised employment projection for 2019 is 1.9% growth for the year compared to the 2% growth projected in December.

Assuming economic growth continued through June 2019, the United States is on track to post the longest economic expansion in U.S. history. U.S. growth in 2018 was 2.9%, on par with macroeconomic forecasts. Future forecasts predict slower growth in 2019 (2.6%), partially due to the waning positive effects of the tax cuts and uncertain foreign policy.

The United States is at full employment with an unemployment rate of 3.7% as of July, and the labor utilization (U-6) rate fell to 7%. Personal income grew 3.2% quarter-over-quarter in Q1 2019, real disposable personal income was up 2.2%, and real disposable per capita personal income rose 1.7%. Real GDP grew 2.1% in Q2 2019 after growth of 2.9%, 1.1%, and 3.1%, respectively, over the prior three quarters.

GDP estimates released by the Bureau of Economic Analysis (BEA) show that in 2018 Colorado's real GDP grew by 3.5% compared to the nation's GDP growth of 2.9%. Colorado also recorded higher increases than the nation in terms of home prices, employment, and personal income in 2018. According to the Leeds Business Confidence Index (LBCI), a measure of business leaders' confidence and expectations for the state and national economies, business leaders have more confidence in the Colorado economy than they do in the national economy.

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COLORADO BUSINESS REVIEW 1

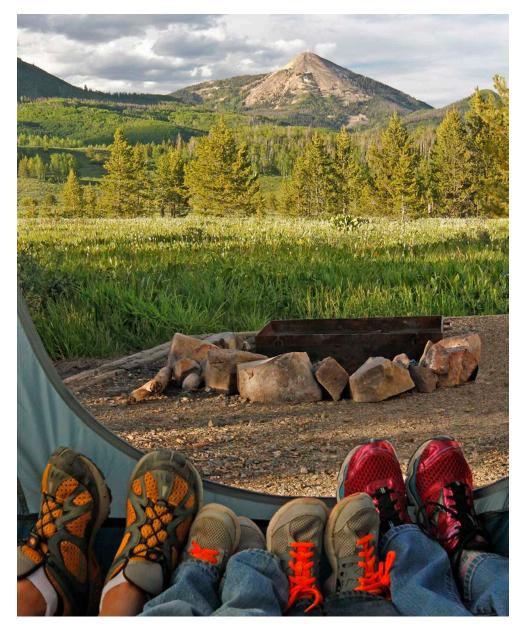


Photo courtesy of Vick Schendel/CPW.

Colorado currently has one of the lowest unemployment rates in the nation, 3% in June 2019. The state has been recording a fluctuating labor force participation rate; the first two months of 2019 exhibited growth, while the rate in the remaining months dropped slightly. The overall trend is growth, which has enabled continued employment growth in the face of declining net migration.

In December 2018, the Colorado Business Economic Outlook presented economic indicators for each sector of Colorado's economy. Job growth in Colorado was forecasted at 2%, or 53,200 jobs, with growth across all sectors of the economy. As of mid-2019, the forecast of overall employment growth for the state was revised down to 50,900, or growth of 1.9%. Some sectors are outperforming expectations while others are underperforming.

Data in the following sections are from the Colorado Department of Labor and Employment, Current Employment Statistics (CES). The June 2019 figures are seasonally adjusted except where indicated.

# **Population and Employment**

According to the State Demography Office, Colorado's population is projected to top 5.7 million in 2019. With an expected net gain of 76,300, Colorado's population growth continues to increase at slower rates. This deceleration is due

# FROM THE EDITOR

We present a midyear review of the Colorado economy in this issue. The information presented is compiled from remarks made by Colorado Business Economic Outlook Estimating Group chairs at a roundtable meeting held in July. Industry sector summaries include comparisons of the current economic situation to the forecast presented last December. In addition, key factors influencing recent economic trends are noted.

We greatly appreciate the time and input from the individuals who contributed to this update; their names are listed on the back page. I also acknowledge the BRD research staff who collected data and conducted additional analysis for this issue.

We are interested in your suggestions for topics of upcoming issues. Please contact me directly at 303-492-1147.

# FIFTY-FIFTH ANNUAL COLORADO FORECAST

# 2020 Colorado Business Economic Outlook Forum

### SAVE THE DATE

Mark your calendar to attend the 2020 Colorado Business Economic Outlook Forum on December 9 at the Grand Hyatt Denver. Check colorado.edu/ business/brd for event updates.

## - Richard Wobbekind

to several factors, including a drop in the total birth rate, an increase in deaths due to an aging population, and increases in the cost of living, which makes Colorado less competitive. Natural increase (births minus deaths) is expected to account for 25,000 people while net migration is anticipated to decline slightly, from 52,979 new residents in 2018 to 50,000 new residents in 2019. Deaths continue to increase, with a projected 39,000 deaths in 2019, which is 700 more than in 2018.

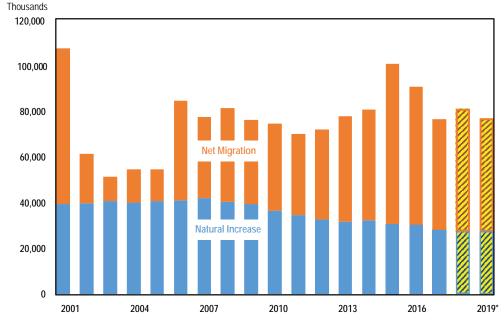
The fastest-growing counties in 2018 for absolute population growth were El Paso, Denver, Weld, Adams, and Douglas. In percent change, the three fastest-growing counties are San Juan (7.2%), Huerfano (3.7%), and Park (3.5%). In 2018, only seven counties experienced net out-migration, continuing a similar pattern since 2015. In 2018, Denver was the 13th fastest-growing city in the United States and 19th largest in the nation. According to the State Demography Office, 88% of population growth in Colorado in 2017 was along the Front Range. Population growth rates in the Boulder MSA, the Grand Junction MSA, and the Pueblo MSA were between 0.6% and 1.2%-the three slowestgrowing metropolitan areas in Colorado.

In 2018, Colorado was the 7th fastestgrowing state in terms of percent change and 8th in total growth. The state was 21st in total population overall.

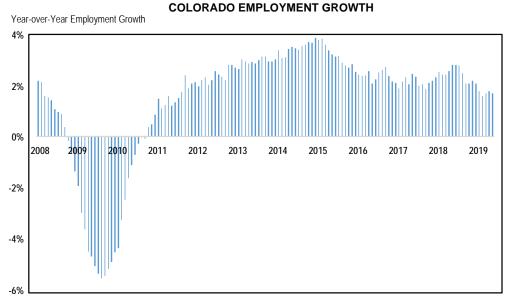
Colorado gained 40,900 housing units between 2017 and 2018, a 13% increase from the 35,800 housing units added between 2016 and 2017.

Colorado total nonfarm employment in June 2019 was 2.7 million, a year-overyear increase of 1.9% or 52,800 jobs. Professional and Business Services had the greatest employment growth, 6.2%, followed by Other Services (4%), Natural Resources and Mining (2.1%), and Leisure and Hospitality (2.1%). Education and Health Services recorded modest year-over-year growth of 2%, followed by Government (1%), Construction (0.9%), and Manufacturing (0.8%). Information had no growth year-over-year, with employment numbers remaining flat, while Financial Activities decreased by 1.3% year-over-year in June 2019.

CHANGE IN COLORADO POPULATION 2001-2019



Source: State Demography Office and U.S. Census Bureau. \*Projected





#### Year-over-Year Employment Growth 6% 4% 2% ٥% 2010 2011 2007 2008 2009 2012 2015 2016 2017 2018 2006 2013 2014 -2% -4%

COLORADO REAL GDP GROWTH

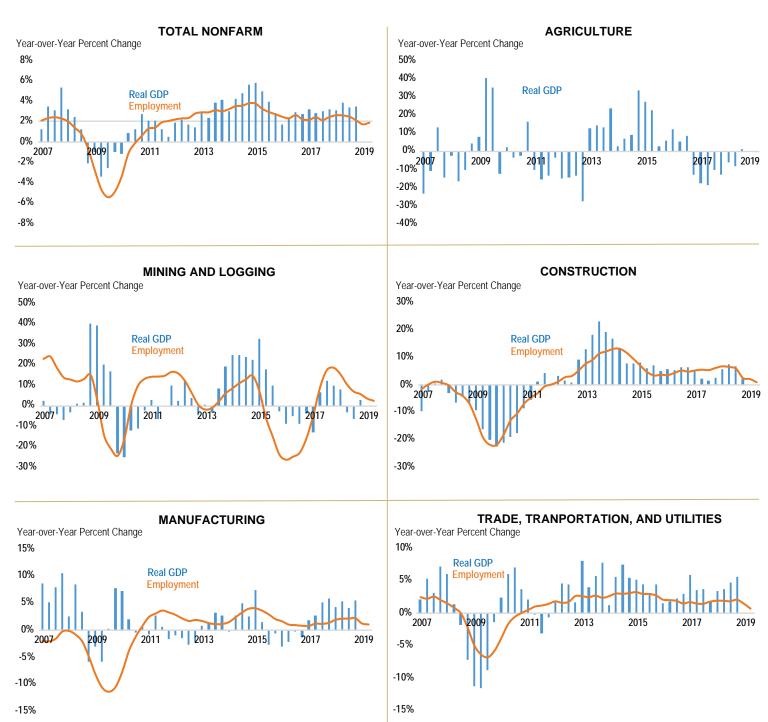
Source: Bureau of Economic Analysis.

Boulder had the greatest year-over-year employment growth in June 2019, with 2.9%, followed by Grand Junction (2.5%), Greeley (2.4%), and Colorado Springs (2.4%). Denver-Aurora-Lakewood, Fort Collins, and Pueblo rounded out the metropolitan areas with 1.4%, 1%, and 0.6% growth, respectively.

Colorado's unemployment rate remained low, at 3%, in June 2019, with

the 13th-lowest unemployment rate. Fort Collins-Loveland and Boulder had the lowest unemployment rates in the state, with 2.3%, followed closely by Greeley (2.5%) and Denver-Aurora-Lakewood (2.7%). Colorado Springs and Grand Junction each had a 3.3% unemployment rate. Pueblo had the highest unemployment rate in the state, at 4.1%. Unemployment rates have remained steady for the state, but the MSAs have seen a trend of lower unemployment rates year-over-year.

Colorado's nominal GDP was \$376 billion in 2018. In terms of real GDP, Colorado has the 16th largest overall. In 2018, Colorado's annual real GDP growth rate was 3.5%. The three largest industries by GDP were Financial



#### COLORADO GDP AND EMPLOYMENT GROWTH BY INDUSTRY

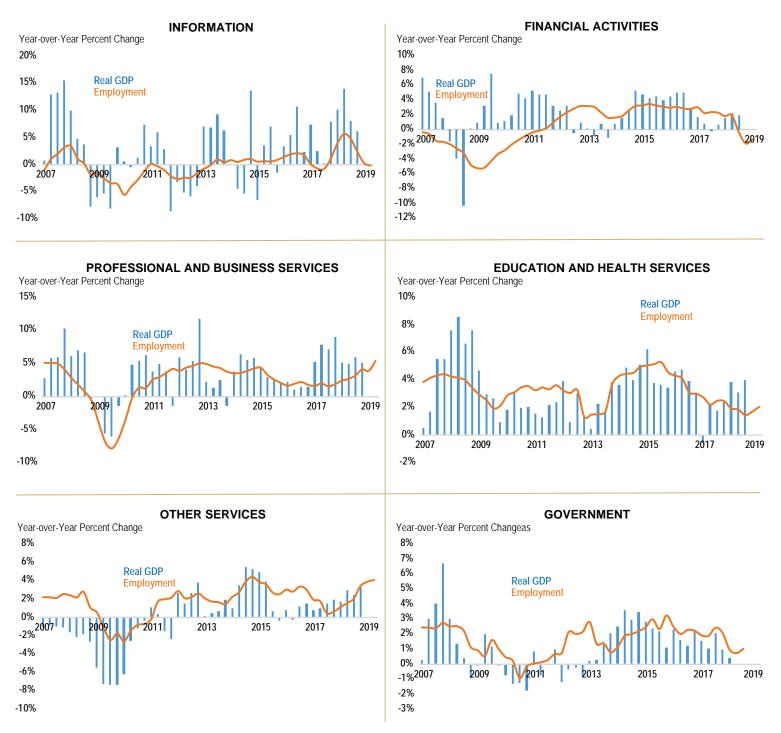
Sources: Bureau of Economic Analysis and Bureau of Labor Statistics (CES Nonfarm).

Activities (20.2%); Trade, Transportation, and Utilities (16.1%); and Professional and Business Services (14.8%). The three fastest-growing industries were Information (9.4%); Construction (5.5%); and Trade, Transportation, and Utilities (5.2%). Real GDP decreased for the Natural Resources and Mining Sector.

## Agriculture

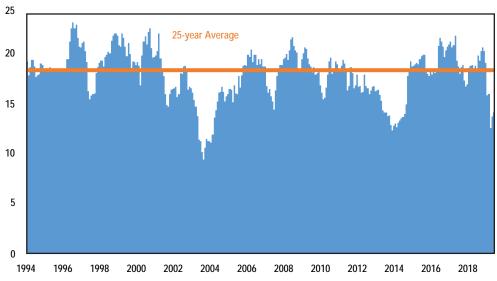
According to the BEA, Agriculture, Forestry, Fishing, and Hunting contributed about \$2.2 billion to the Colorado economy in 2018, a 3.1% decline from 2017. However, real GDP (GDP adjusted for price changes) increased by 1% year-over-year. The industry recorded strong growth at the end of 2018, with real GDP increasing 44% quarter-over-quarter. As of July 2019, corn prices have increased 14.9% compared to their respective value five years ago and rose 18.5% year-over-year. Wheat prices have dropped 2% from their

#### COLORADO GDP AND EMPLOYMENT GROWTH BY INDUSTRY



Sources: Bureau of Economic Analysis and Bureau of Labor Statistics (CES Nonfarm).

Inches, 12-mo rolling sum, State average



Source: NOAA, US Climate Division, Earth System Research Laboratory. Precipitation (inches) mean, state area averaged

value five years ago and have remained flat in 2019, with no change in year-overyear prices. Some farmers and ranchers are operating in an environment where revenues do not exceed the cost of production, and farm debt is increasing, although the debt-to-asset ratio remains low. Net farm income is about half of where it was seven years ago.

Significant challenges remain for the Agriculture Sector in 2019. Tariffs implemented by the United States, mostly intended to pressure our trade partners to negotiate more favorable trade policy. have more often than not brought about retaliatory tariffs and weakened international demand for many U.S. food and agricultural products. This has had a direct impact on U.S. farmers, leading the government to provide nearly \$30 billion in subsidies. However, the subsidies have primarily been given to soybean producers and do not directly benefit Colorado producers as most do not farm soybeans. In response to the tariffs, China has vowed to retaliate further on U.S. products, particularly agricultural goods.

Trade tensions extend beyond China, with trade difficulties increasing with Canada, Mexico, and Japan. Along with China, these countries make up four of Colorado's top five goods export markets. Food exports have dropped 17%, and uncertainty around trade and U.S. trade policy is the driving factor in the decrease as buyers are reluctant to enter into longterm contracts when future trade policy and tariffs are uncertain.

During spring 2019, heavy flooding in Nebraska, Iowa, Indiana, and Illinois severely damaged or destroyed several crops, including corn. As such, many farmers either had to replant late or opted to not plant entirely, driving down corn production and raising the price of corn (up from \$3.50 to \$4.60 a bushel in two months), benefiting Colorado farmers. Heavy rain was also recorded in Colorado, leading to greener pastures, which led farmers to increase the number of cattle in their herds and driving down cattle prices.

Industrial hemp has had a massive increase over the past year, with hemp production doubling. The Colorado Department of Agriculture estimates there will be 50,000 acres of hemp by the end of 2019, a 2,660% increase from when hemp was first grown in the state in 2014. The sharp increase in hemp production is primarily driven by the boom in the cannabidiol (CBD) market in Colorado, and Colorado still holds a first-mover advantage from an early legalization of marijuana.

#### **Natural Resources and Mining**

Natural Resources and Mining employment grew 6.8% in 2018, and was up 2.8% year-to-date as of June 2019. Industry real GDP decreased 0.1% in 2018 and increased 2.6% year-over-year in Q4 2018. The revised outlook is for 1% employment growth in 2019.

The Natural Resources and Mining (NRM) Sector comprises the subsectors of agriculture, forestry, fishing and hunting; and mining, quarrying, and oil and gas extraction. This includes mineral solids coal, petroleum extraction, and all natural gases. In Colorado, the average annual pay for a mining and logging job was \$88,507 compared to \$59,305 average annual pay for all industries.

The industry made up 1% of the Colorado covered nonfarm employment in 2018, compared to 0.5% for the nation. The June 2019 year-overyear seasonally adjusted employment growth rate in Colorado increased 2.1%, demonstrating an industry that is in recovery with new projects and increased efficiency.

Oil and gas extraction has been a story of technological efficiencies and improvements. For example, rig count has remained the same year-over-year, but now with horizontal drilling, the industry can extract oil more efficiently by drilling laterally a mile or more.

As the price of WTI oil rises, more projects become financially feasible, leading the industry to ramp up production. In May 2019, the price of oil decreased 5.7% year-over-year, to \$63.60 a barrel. The number of drilling permits issued in the first five months of 2019 totaled 1,103. For perspective, for all of 2018, a total of 5,116 permits were issued. An average of 151 fewer permits are being issued per month in January through May 2019 than were issued in January through May 2018.

Gas production has increased 9.3% over last year, most of which is focused in Weld County. Drilling permits in Weld County have continued to increase, from 818 permits a month in June 2018 to 880 permits a month in May 2019.

Colorado Proposition 112, which would have required any new oil and gas

development to be located 2,500 feet from any occupied structure and other vulnerable areas, was defeated in the 2018 local election. However, 2018 saw a 73% uptick in the number of drilling permits received, from 5,880 in 2017 to 10,215 in 2018, as permits flooded the system in anticipation of Proposition 112 passing. This has created a backlog in the system as over 6,000 permits are waiting to be reviewed.

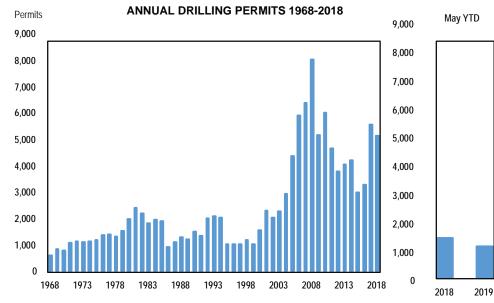
Also contributing to this backlog was the passing of Senate Bill 19-181 in April 2019. This bill changed the state's Oil and Gas Conservation Act to focus on "regulating [rather than fostering, which was the commission's former mission] the responsible development of Colorado's oil and gas natural resources in a manner consistent with the protection of public health, safety, and welfare, including the environment and wildlife resources." The new bill is primarily regulatory changes, including hearing procedures and a technical review board, along with increased site impacts and analysis, among others. Although the market has yet to respond to the bill, the increase in regulations and criteria for well permit locations spells uncertainty for the future.

Coal has seen a slight uptick since 2018; there was a 6.4% year-to-date increase of coal production in Colorado between Q1 2019 and Q1 2018. According to the U.S. Geological Survey's Mineral Commodity Summary for 2018, Colorado's nonfuel mineral production was valued at roughly \$1.4 billion, with Colorado accounting for 1.7% of U.S. total mineral production. The principle commodities are cement (portland), gold, molybdenum concentrates, sand and gravel (construction), and stone (crushed).

# Construction

Construction employment grew 5.3% in 2018, and was up 1.4% year-to-date as of June 2019. The revised outlook is for 2.4% employment growth in 2019

The Construction Committee members reported that the Construction Sector is growing in all aspects. In spite of potentially confusing statistics, the volume of work is stable or higher in nearly all subsectors.



Source: Colorado Oil and Gas Conservation Commission.

The industry is composed of firms that engage in the construction of new buildings and infrastructure projects. This industry comprises three sectors: residential (e.g., houses, apartments), nonresidential buildings (e.g., retail, medical), and nonbuilding (e.g., road, bridge and highway work, water storage and treatment, and other infrastructure).

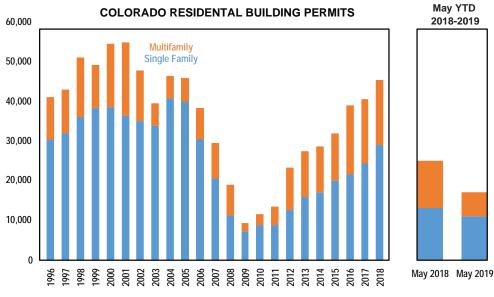
In Q4 2018, nominal GDP for the Construction industry totaled \$21.5 billion, accounting for 5.7% of Colorado's total nominal GDP. The year-over-year real GDP growth rate for Construction was 8.3% in Q4. Industry real GDP grew 5.5% in 2018 and 2.3% year-over-year in Q4 2018.

Single-family housing is a strongpoint for the industry. The latter half of 2018 saw contracts and starts off sharply, but homebuilders nevertheless took out a total of 26,134 permits in 2018, an increase of 7.4% over 2017. Multifamily permits totaled 16,493, an increase of 1%. Through May 2019, single-family permits decreased 18.4% year-overyear, while multifamily permits slid 30.3%. The committee believes that there is still a lot of unsatisfied demand despite the decrease in permit activity.

New multifamily housing has experienced a very high level of activity for several years, and some pullback has been expected. There is a better balance in the rental market, and the slowdown partially is driven by slower migration. Small builders are finally returning after the deep recession, and existing builders are finding creative ways to be more productive.

According to Dodge Data & Analytics, the value of nonresidential construction has decreased 44% year-over-year in May 2019. In part, this can be accounted for by projects started (permits pulled) in 2017 and 2018 but still under construction in 2019. While new commercial projects have slowed, governmental and institutional projects have picked up. Resort areas and Colorado Springs are recording an increase in activity. DIA construction continues, with a projected finish in 2022. An additional 250,000 square feet are being built in Denver's Tech Center, while the Ballpark Neighborhood and the River North Art District (RiNo) are seeing an increase in construction spending. New land sales, especially in downtown Denver, indicate that developers see future promise for large new structures.

Nonbuilding construction increased 33% year-to-date as of May 2019. The Construction Committee noted that this data point, too, is also an issue of timing. A number of so-called "mega projects," which are accounted for in the first year of construction but take several years to complete, are causing the discrepancy in the data. Firms and their work crews are still working on these projects but the work is not showing up in the data



Source: U.S. Census Bureau.

because of the point-in-time issuance of the permit. Nonbuilding work continues on Peña Boulevard, Gross Reservoir, and the Gap Project of Interstate 25 between Monument and Castle Rock. The multiyear Central 70 project, which began summer 2018, continues this summer and over the next three years. The General Assembly added \$300 million during this year's legislative session to the normal base of \$500 million for infrastructure.

The Construction Committee reported that the labor shortage, especially skilled labor, remains a critical challenge for the industry. According to the Bureau of Labor Statistics (BLS), total employment in the Construction industry in Colorado was 175,000 as of June 2019, a 0.9% year-over-year increase. Employment has finally surpassed the July 2007 peak of 170,100. As of 2018, the average annual pay in the industry was \$62,414, above the average Colorado pay of \$58,942.

The main factor restricting growth in the Construction Sector is labor constraints, especially as an increasing number of construction workers are retiring with fewer younger individuals filling those jobs. Furthermore, an uncertain and unstable U.S. immigration policy limits the number of workers entering the workforce, especially skilled labor with prior experience. Various initiatives have begun in order to combat the lack of new workers into the sector, such as apprenticeship programs and a boost in wages. Average hourly wages in Construction increased 4.6% year-overyear in May 2019, from \$28.65 to \$29.97 an hour. Although firms are struggling with labor constraints, many projects were finished in the past year due to increasing efficiency in the industry as it takes less time to finish projects.

# Manufacturing

Manufacturing employment grew 2.3% in 2018, and was up 1.2% year-to-date. Industry real GDP grew 4.8% in 2018 and 5.5% year-over-year in Q4 2018. The revised outlook is for 1.6% employment growth in 2019.

Manufacturing includes the subsectors of durable and nondurable goods. Durable goods are goods that are not intended for immediate consumption and have a long lifespan. Industries within durable goods include wood product manufacturing; primary metal manufacturing; fabricated metal product manufacturing; machinery manufacturing, computer and electronic product manufacturing; electrical equipment, appliance, and component manufacturing; transportation equipment manufacturing; and furniture and related product manufacturing. Nondurable goods are goods that are used immediately or have a short lifespan.

Industries within nondurable goods include food manufacturing; animal slaughtering and processing, textile mills, textile product mills, apparel manufacturing; paper manufacturing; and plastics and rubber products manufacturing. Colorado manufacturing has a substantial presence within aerospace/electronics, food and beverage, bioscience/medical, brewing/ distilling, consumer/lifestyle, built environment, industrial/equipment, energy/environmental, and supply chain clusters. Manufacturing in the state continues to benefit from positive growth in the national sector; national regulatory relief and tax reform are trickling into Colorado.

In June 2019, manufacturing employment totaled 148,600 in the state. As of June 2019, year-over-year employment grew 0.8%, an increase of 1,200 jobs. In Q4 2018, Manufacturing made up 7% of Colorado's real GDP, with durable goods accounting for 61% of that output, and nondurable making up 39%. With increased automation and technological advancements, manufacturing companies are able to produce goods with fewer employees. Both durable and nondurable goods are experiencing modest growth. In the durable goods subsector, employment increased 0.1% year-over-year-100 jobs-in June 2019, with notable job growth in the fabricated metal products subsector. Nondurable goods added 1,100 jobs, a 2% year-over-year employment growth. For nondurable goods, beverage and tobacco manufacturing remains a rapidly growing sector, despite a slightly struggling craft brewing industry.

Manufacturing is a critical input to the state's key industry clusters – aerospace, biosciences, beverage production, and others. Growth in these clusters has supported ongoing job growth in the Manufacturing Sector as employment is on track to expand for the ninth consecutive year. Technology continues to shape the Manufacturing Sector, focusing on improving efficiency. U.S. trade policy uncertainty, as well as an increased number of tariffs, has negatively affected manufacturing due to disruptions in supply chains and decreased investment, especially in industries dependent on exports and trade activity.

### Trade, Transportation, and Utilities

Trade, Transportation, and Utilities employment grew 1.8% in 2018, and was up 1.1% as of June 2019 year-to-date. Industry real GDP grew 4.3% in 2018 and 6.1% year-over-year in Q4 2018. The revised outlook is for 1.3% employment growth in 2019.

Trade, Transportation, and Utilities (TTU) is part of the services-providing supersector and consists of three subsectors: Trade, Transportation and Warehousing, and Utilities. TTU is a diverse industry that covers everything from air transportation, truck transportation, warehousing and storage, couriers and messengers to food and beverage stores, and general merchandise stores. The TTU Sector added 2,600 jobs year-over-year in June 2019, an increase of 0.6%. This sector currently employs 472,200 people and accounts for 17% of statewide employment.

Tax revenue in Colorado continues to increase. Preliminary estimates show state retail tax collections increased by \$150.7 million year-over-year as of March 2019, or growth of 5.3%.

The Retail Trade Sector saw growth in 2018, with real GDP increasing at an annual rate of 4.1%. Growth continued at 4.3% in Q4 2018. The retail sector accounts for 5.6% of Colorado's real GDP. Employment within retail trade declined 0.2% year-over-year in June 2019, with total employment at 272,200. While marijuana sales continue to help drive retail sales growth in Colorado on the margin, retail overall is exhibiting mixed results. Traditional brick-andmortar stores are struggling in the era of e-commerce, and many malls and department stores across the state and the nation are closing as consumers prefer online shopping.

The Wholesale Trade Sector consists of two subsectors: durable goods and nondurable goods. Employment in this sector has steadily increased



Photo courtesy of Margaret Sanderson.

since November 2010. In June 2019, the year-over-year employment growth rate was 1.3%, with durable goods outperforming nondurable goods. Durable goods employment accounts for 60.7% of Wholesale Trade.

In June 2019, employment in Transportation and Utilities added 1,800 jobs year-over-year for a 2% increase. The Transportation Sector is showing strong growth in multiple modes of transportation, from air and trucking to commuter. As Xcel looks to run on completely carbon-free energy by 2050, renewable utilities continue to rise in demand and production with the addition of 1,100 megawatts of wind power and 700 megawatts of solar generating power under the Colorado Energy Plan.

# Information

Information employment increased 4.2% in 2018, and was flat in June 2019. Industry real GDP grew 9.4% in 2018 and 6.1% year-over-year in Q4 2018. The revised outlook is for 1.6% employment growth in 2019.

The Information Sector recorded 0% growth year-over-year through June 2019. By component, the increases are nested in Software and Telecommunications, while the Publishing subsector is losing jobs.

In 2018, the industry recorded increases in both employment and GDP,

recording 9.4% real GDP growth. This continues an industry trend—over the past five years Information real GDP has grown 21.3% since 2014 while employment has climbed 6.5%. Sector data through 2017 (most recent data available at the sector level) indicate real growth is coming from the Publishing Sector (including software) and the Data Processing, Internet Publishing, and Other Information Services Sector. The decline is in the Film and Broadcasting sectors.

Recording year-over-year job growth, Information employment stayed flat, at 75,500, in June 2019. Nationally, the Information Sector grew 0.5% last year, and is down modestly in 2019. Thus, Colorado is still leveraging comparative competencies in this key industry sector.

Year-over-year growth was recorded in both small and large firms, but it appears that growth is coming from relatively new entrants—companies like Google, Zayo, and Ibotta versus CenturyLink and IBM.

Internet often attracts the largest share of venture capital (VC) funding in the state. CB Insights data show that the software and the mobile and telecommunications sectors received \$456 million in VC investment in 2017, \$766 million in 2018, and \$308 million year-to-date in June 2019, with Q1 pacing similarly over the past three years.

# **Financial Activities**

Financial Activities employment grew 1.4% in 2018, and was down 1.7% as of June 2019. Industry real GDP grew 1.4% in 2018 and 0.2% year-over-year in Q4 2018. The revised outlook is for an increase of 0.9% in 2019.

The Financial Activities Sector includes establishments primarily engaged in financial transactions, as well as establishments engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets. In 2018, annual employment in Colorado increased by 2,400 jobs and experienced an annual growth rate of 1.4%. Employment has since declined in 2019, falling by 2,300 jobs year-overyear in June. In 2018, this sector was responsible for 18.3% of Colorado's real GDP, but only 6.1% of employment in June 2019.

Capital markets are experiencing a great deal of volatility in 2019. Despite this, major U.S. indices-the NASDAQ, the Dow Jones Industrial Average (Dow), and the S&P 500-posted gains in 2018 and are expected to do the same in 2019. On June 27, 2019, the S&P 500 posted a 16.7% year-to-date increase compared to a 1.8% year-to-date increase in 2018. The NASDAQ gained 20.8% year-to-date compared to the 2018 year-to-date increase of 7.8%, and the Dow increased 13.8% year-to-date compared to -0.2% in 2018. The indices are positive year-to-date, and they are on track to end 2019 above last year's performance.

Rates have declined over the past year, and as of August 2019 interest rates for 10-year government bonds around the world remain low. The United States currently maintains one of the highest yields in the world, with a 10-year Treasury note yield of 1.6%. However, the spread between the 2-year Treasury yield and the 10-year yield inverted in August for the first time since June 2007. This is cause for concern as flat yield curves indicate reduced incentive for banks to lend money and are known for foreshadowing recessions. Germany maintains a -0.65% yield, the United Kingdom maintains a yield curve of 0.44% and Japan maintains a -0.22% yield. These low interest rates make it difficult for investors to make income. As yields rise, the banking industry can expect to see an increase in profits and growth.

In Q1 2019, insured U.S. institutions reported year-over-year growth in net income and domestic deposits of 10.9% and 4.5%, respectively. With record employment and income, banks are seeing deposits grow. However, total assets held in Colorado banks decreased by 9% year-over-year in Q1 2019. The number of institutions decreased by 5, from 74 to 69 year-over-year in Q1 2019.

Real Estate, Rental and Leasing Employment increased 1.1% yearover-year in June 2019. According to Dodge Data & Analytics data, the value of residential construction year-to-date in May 2019 has decreased 24% from the value of construction year-to-date in May 2018. According to the Federal Housing Finance Agency (FHFA) house price index, Colorado housing prices have been increasing. In Q1 2019, Colorado's house price index grew 7% year-over-year; the house price index for the nation recorded 5.4% year-overvear growth. Colorado ranks 28th in the nation in terms of year-over-year FHFA house price index growth. In Denver, rent prices continue to increase. The average monthly rent in July 2018 was \$1,602, increasing 6% year-over-year. According to the Denver Metro Apartment Association, apartments in the Denver Metro region had strong net absorption in Q1 2019, meaning more apartments were rented in Q1 2019 compared to Q1 2018. In Denver, high demand is causing prices to increase as Colorado continues to be a desirable place to live.

# Professional and Business Services

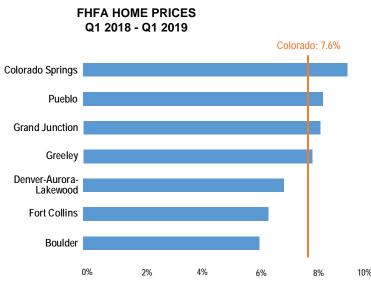
Professional and Business Services employment grew 3.1% in 2018, and was up 4.6% in June 2019. Industry real GDP grew 5.2% in 2018 and 5% year-over-year in Q4 2018. The revised outlook is for 3.4% employment growth in 2019. Professional and Business Services (PBS) is one of the largest servicesproviding sectors in the state, totaling 425,600 employees in 2018, or 15.4% of total employment. It consists of three subsectors: Professional, Scientific, and Technical Services (PST); Administrative and Support and Waste Management and Remediation Services; and Management of Companies and Enterprises (MCE). The sector has added 26,300 jobs since June 2018 for a 6.2% year-over-year growth rate.

PST includes establishments that engage in activities where human capital is the major input. Industry groups such as legal services, accounting, and tax preparation fall within PST. As of June 2019, PST employed 243,200 workers and added 18,500 jobs year-over-year. Year-over-year employment growth in June 2019 was 8.2%. PST accounted for 54% of total PBS employment in June 2019 and 66% of real GDP within the industry in Q4 2018. There is a strong demand for engineers in this sector in Colorado, and Colorado schools such as the University of Colorado, Colorado State University, and the Colorado School of Mines have all seen enrollment increases in their engineering programs as a response.

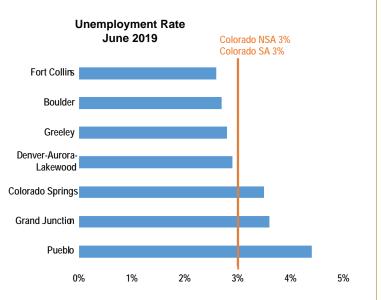
Employment in Legal Services decreased; this is following a downward trend as automation and e-Legal services produce contracts for no charge. Furthermore, there is a large offshoring movement among companies that still rely on legal services performed by humans, with many moving their legal work to India.

Administrative and Support and Waste Management and Remediation Services accounted for 36.6% of PBS employment as of June 2019 and 19.6% of PBS real GDP in Q4 2018. The sector experienced 3.9% year-over-year growth in June 2019, with a gain of 6,200 jobs. Sector GDP rose 5.2% in 2018. Job growth in this industry includes office clerks, security jobs, janitors and cleaners, and laborers and freight movers. Previously, increases in temporary services would have preceded growth in more positions that are permanent; however, the reliability of this as a leading indicator has

# **Colorado MSA Metrics**



Source: Federal Housing Finance Agency, All Transactions Indexes (Not Seasonally Adjusted).



Source: Bureau of Labor Statistics, Current Employment Statistics (Not Seasonally Adjusted).

wavered in the past few years. This may be a result of the increasing role of the "gig" economy characterized by multiple side jobs that do not necessarily translate into full-time positions. Furthermore, as software as a service becomes more accepted, automation is increasingly taking over jobs in this sector, and companies forego workers and instead rely on technology.

MCE made up 9.9% of employment and 14.7% of real GDP in 2018. As of

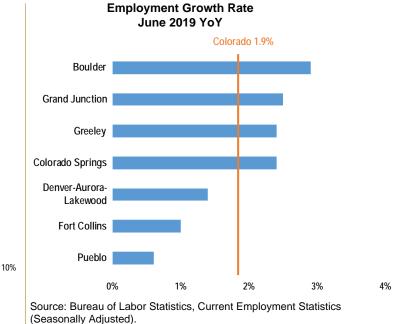
June 2019, MCE gained 1,600 new jobs for a 3.9% growth rate year-over-year. In terms of GDP, MCE decreased 5.2% year-over-year in Q4 2018 to a total of \$7.7 million. MCE is difficult to estimate because it is generally composed of holding companies operating in a vast array of areas. Examples of Coloradobased firms in this sector include Vail Resorts, Comcast, MDC Holdings, DaVita, and DISH Network. Growth within this sector depends on the

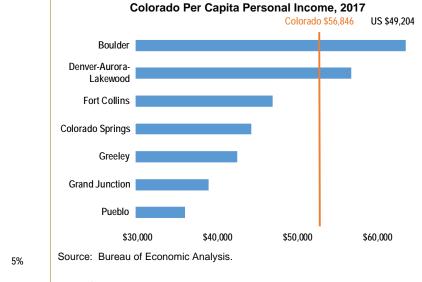
success of the components held by each individual company.

# **Education and Health Services**

Education and Health Services employment grew 1.9% in 2018, and was up 1.9% in June 2019. Industry real GDP grew 3.4% in 2018 and 4.2% year-overyear in Q4 2018. The revised outlook is for 2.4% employment growth in 2019.

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The Education and Health Services (EHS) Sector includes establishments that provide instruction and training by private schools and universities, as well as establishments that provide health care and social assistance to individuals. A total of 12.5% of Colorado's workforce is employed in the EHS Sector; the national average is 16%.

Education and Health Services recorded year-over-year employment growth in June 2019 of 2%. Educational Services experienced a 3.1% employment increase year-over-year, while Health Care and Social Assistance increased 1.9%. In terms of 2018 annual real GDP growth, Educational Services and Health Care and Social Assistance each increased 3.4%.

According to the Colorado Department of Higher Education, Colorado has 103 private education and seminary institutions enrolling 122,994 students. Public education institutions total 31 and 14 are four-year schools. In the past year, Ecotech Institute, a small college in Aurora focused on renewable energy, was the only school in the state to close.

The insurance companies that provide the majority of coverage to Coloradans include:

- Aetna
- Anthem
- Cigna
- Humana
- Kaiser Permanente
- UnitedHealthcare

These companies provide a mix of insurance products that may include large and small group plans, individual and family plans, and Medicare Part C plans. However, while a number of insurance companies participate in the overall Colorado health insurance market, these companies may limit their offerings to specific types of plans or specific geographic regions within the state. As a result, there are limited insurance product offerings within some regions of the state. This drives up the cost of coverage for both businesses and individual health insurance purchasers in these areas. In the individual market, there is at least one insurance provider in every county.

Two announcements that will negatively impact specific geographical regions

include Kaiser's announcement to exit the individual market in the mountain market in December 2019 and the UnitedHealth Group purchase of the DaVita Medical Group. Kaiser's announcement will limit the number of offered individual plans in Eagle and Summit counties. Unitedhealth Group's purchase of the DaVita Medical Group could negatively impact the Colorado Springs area due to UnitedHealth Group's existing contractual agreements with area providers. Colorado's attorney general stated that, "If left unchecked, the merger would result in reduced competition, higher health care costs, reduced benefits and fewer choices for seniors."

In April 2019, Governor Polis launched a roadmap for closing the remaining gap on uninsured Coloradans and reducing health care costs in Colorado. A total of 6.5% of Coloradans remain uninsured in 2019. These individuals are generally not eligible for Medicaid due to income qualifications, do not have an employer offering, and have chosen not to participate in the individual market. In the short term, Polis is looking to decrease costs by increasing transparency, efficiency, and consumer costs, as well as lowering the cost of prescription drugs by importing from Canada. In the long term, there are plans to launch statebacked health insurance to increase competition, and expand and reform health care models and workforces. The governor plans to accomplish this through a combination of passing laws and bills, as well as increasing investment in health care and homeand community-based workforces.

Two of the governor's earliest initiatives will be implemented in 2020, including reinsurance in the individual market and employer alliances. The reinsurance waiver for the individual market is one of the governor's initiatives that received federal approval for 2020. The average decrease in costs across all markets is 18.6% but larger decreases occurred outside of the more populated Front Range. The largest decrease was 29.1% for the west region. As a result of this approval, the insurer Oscar Health will enter the individual market. Polis also supports the Peak Health Alliance, and this aligns to SB19-004. This is an alliance of mountain region employers that are collaborating to improve negotiation power with providers and insurance companies. The alliance plans to launch plans in 2020, with the aim of reducing health care costs for low-income residents by 20%. This alliance covers 20% of year-round mountain residents.

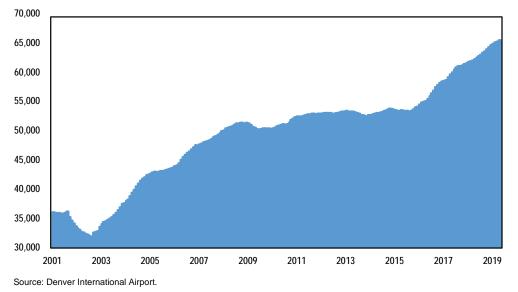
The number of people currently enrolled in Medicaid has declined over the past year in Colorado. Having reached a high point in enrollment in May 2017, the caseload of Medicaid patients is down to 1.2 million, a drop of 3.6% yearover-year. This decline is expected with the improving market; Colorado lags most other states in caseload declines. The number of children enrolled in the Colorado Health Plan Plus (CHP+) grew from 82,000 to 82,809 from May 2018 to May 2019, a 0.9% increase.

Colorado ranked 8th in the nation overall in United Health Foundation's America's Health Rankings 2018 annual report, one place lower than in 2017. Strengths include relatively low prevalence of obesity, children in poverty, and diabetes. Among the weaknesses are a high incidence of pertussis (whooping cough) and a low percentage of high school graduation. Although Colorado is faring better than the rest of the nation, Colorado's rates of obesity, drug deaths, sexually transmitted infections and diseases, and cardiovascular deaths are increasing. Recent rankings by WalletHub on Best and Worst States for Health Care in 2019 placed Colorado 11th overall, 12th for access, 3rd for outcomes, and 47th for cost.

### Leisure and Hospitality

Leisure and Hospitality employment grew 2% in 2018, and was up 2.1% as of June 2019. Industry real GDP grew 3% in 2018 and 2.4% year-over-year in Q4 2018. The revised outlook is for 0.6% employment growth in 2019.

The Leisure and Hospitality Sector covers establishments in the tourism, travel, and recreational industries. Employment in this sector increased by 7,100 jobs, or 2.1% year-over12-Month Rolling Sum, Thousands DIA ENPLANEMENTS AND DEPLANEMENTS 12-Month Rolling Sum



year, in June 2019. In 2018, Leisure and Hospitality accounted for 7.7% of Colorado's real GDP. The sector's real GDP output increased 3% in 2018.

According to an article in *The Denver Post,* 2019 is looking to be a banner year for Colorado tourism. After a series of wildfires in June and July 2018 restricted tourists from visiting places in southwest Colorado, cities such as Durango are looking forward to a safer summer following the heavy winter snow of the past year. Colorado tourism is also looking to combine outdoor recreation and tourism with conservation, and popular tourist destinations such as Hanging Lake have put a cap on daily visitors to preserve the environment.

In 2017, Colorado recorded 37.9 million overnight visitors. Marketable leisure travelers (these visitors could vacation anywhere but chose Colorado) were up 2% and spending rose 10%. The year 2019 is looking to be on par or see growth in these numbers. Colorado's "Come to Life" tourism campaign, now in its seventh year, is well received by tourists, and the Colorado Tourism Office's increased effort to integrate tourism and sustainability has attracted more visitors.

In 2018, Denver welcomed 17.3 million overnight visitors who collectively spent \$5.6 billion during their stay according to VISIT DENVER. These figures remain on par with the numbers from 2017 the two years are statistically equal to one another. A total of \$1.7 billion was spent on accommodation, almost \$1.1 billion on eating/drinking, \$1.6 billion on transportation, \$660 million on retail, and \$535 million on recreation. Denver added an additional 4,650 hotel rooms and 250 new restaurants in 2018.

Food services and drinking places saw a large dip in employment growth between 2017 and 2018. In Q4 2017, Colorado ranked 8th in the nation with 2.8% growth, but fell to 24th in Q4 2018 with 1.1% growth. This 1.7 percentage point drop in Colorado's employment growth rate was much steeper than the nation's 0.7 percentage point decline and the 7th-worst decline nationally.

The National Park Service (NPS) reported recreation visits in Colorado decreased from 7.62 million in 2017 to 7.57 million in 2018, a 0.7% drop. Florissant Fossil Beds National Park recorded an annual visitation increase of 10.9% in 2018, followed by Rocky Mountain National Park (3.5%) and Hovenweep National Monument (1.5%). The NPS reported Rocky Mountain National Park was the third most visited national park in the state in 2018, with over 4.5 million visitors.

According to the FAA, DIA ranked as the fifth-busiest airport in the nation in 2018. In 2018, DIA saw a recordsetting 64.5 million passengers. Due to the presence of three hub airlines and a number of rival airlines, DIA is known for its competitive airfare pricing. United currently holds the largest market share at DIA, with 31% of total passengers. Southwest Airlines and Frontier Airlines follow, with market shares of 30% and 11%, respectively. DIA has also increased the number of direct flights to international cities, causing an increase in international visitors to Colorado. Colorado draws a large number of tourists from Canada, Mexico, and the United Kingdom, and has recently seen a large increase in tourists from China and India.

According to the National Association of Ski Areas, the Rocky Mountain ski region broke an all-time record of 24 million visitors, a 15.6% increase over the prior year. Colorado Ski Country USA saw a 13% increase in visitors, with a record-breaking 13.8 million skiers to its 23 resorts during the 2018-19 ski season. This is due, in part, to the high snowfall that occurred this year; Colorado's snowpack was 161% of the 1981–2010 median as of May 2019. This high snowfall, most of which occurred late in the season, allowed ski resorts to stay open longer, with some staying open into mid-June.

### **Other Services**

Other Services employment grew 2% in 2018, and was up 4% year-to-date as of June 2019. Industry real GDP grew 2.6% in 2018 and 3.3% year-over-year in Q4 2018. The revised outlook is for 1.2% employment growth in 2019.

Establishments in the Other Services Supersector are services not specifically categorized elsewhere in the classification system. The three subsectors in this supersector are highly fragmented and diverse as a result. Car washes, beauty salons, religious organizations, funeral homes, grantmaking foundations, and labor unions are examples of the type of industries in this sector. Population demographics and disposable income are the main influencers of industry growth. According to the committee, establishments within the Other Services Sector tend to be small, averaging about five employees per business.



Photo courtesy of James Alec Macduff.

Growth in the supersector has been strong through the first four months of 2019, averaging 4.3% each month, which is primarily driven by the Repair and Maintenance Sector. Year-over-year, employment in the Personal and Laundry Services Sector was up 3.3% in June, while the Religious, Grantmaking, Civic and Similar Organizations and Repair and Maintenance sectors were up 1.8% and 1.1%, respectively.

Other Services made up 4% of total state employment in 2018. As of June 2019, the sector gained 3,700 jobs, increasing 3.3% year-over-year. In total, the sector employed 114,600 in June 2019 according to the BLS. According to the BEA, in Q4 2018 Other Services real GDP in Colorado represented 2.1% of the state total, and increased 3.3% year-over-year.

# Government

Government employment grew 1.9% in 2018, and was up 0.8% year-to-date as of June 2019. Industry real GDP grew 1.1% in 2018 and 0.4% year-over-year in Q4 2018. The revised outlook is for 2% employment growth in 2019.

The Government Supersector comprises federal, state, and local government, including higher education institutions and public schools. In June 2019, the Government Sector employed 451,600 individuals, a yearover-year increase of 1.1%. The industry accounted for 16% of total Colorado employment in 2018.

The local government subsector includes city, county, school, and special

district employees. Local government experienced a year-over-year increase in total employment, rising 1.6%. Total employment in local government stood at 272,000 as of June 2019. The number of local government employees who work in the educational services sector increased by 2,600 jobs year-over-year in June 2019, representing growth of 1.9%. Local government has been driven largely by growth in the population as K–12 schools and local jurisdictions accommodate more people.

The federal government subsector includes such agencies as the Department of Defense, the National Park Service, federal courts, federal laboratories, and other institutions managed and funded by the federal government. Federal government employment totaled 53,500, recording a year-over-year increase of 1.5% in June 2019.

The state government subsector includes state agencies and departments such as the Colorado Department of Transportation, the Colorado Department of Regulatory Agencies, and public universities. State government employees include a vast array of professions, such as state patrol officers, university professors, park rangers, and janitors. As of June 2019, state government employed 126,100 individuals, remaining flat year-over-year.

### **International Trade**

According to data from the BEA, U.S. net exports decreased at a seasonally adjusted annual rate of 2.2% in April 2019. Exports of goods rose 7.7% yearover-year, and exports of services grew 3.5%. Imports increased 7.8%—imports of goods climbed 8.6% and imports of services rose 4.3%. The nation's top five trading partners are Canada, Mexico, China, Japan, and the United Kingdom.

In May 2019, Colorado goods exports decreased 11.4% year-over-year. May year-to-date exports in 2019 were 9.6% less than those in 2018, while those of 2018 outpaced 2017 by 11%. Exports are currently 15.5% lower than the high recorded in August 2014; exports declined from mid-2014 through early 2016 as the U.S. dollar strengthened against most other currencies.

According to the U.S. Census Bureau, in May 2019 Colorado's top five goods export markets were (in order): Canada. Mexico, China, South Korea, and Malaysia. Of these, South Korea was the only country to see growth in May yearto-date volumes. Year-to-date exports to Canada decreased by 5.7%; May 2019 saw a year-over-year decline of 2.7%. After recording growth in the beginning of 2018, this decline is likely due to several key factors: the Canadian dollar's difficulties in breaking away from its current weakness against the U.S. dollar (which has eroded Canadian customers' ability to purchase U.S. goods), Colorado oil and gas exports building momentum after persistent inactivity due to production cuts in response to the severe crude oil price drop of 2014-15, monthto-month export volatility, uncertainty surrounding NAFTA negotiations and U.S. trade policy, and steel and aluminum tariffs. Exports to Mexico were down 19.1% year-over-year in May 2019, and year-to-date levels have decreased 28.5% through May 2019. Although there has been historic steady growth in exports to Mexico since 2009, the recent decreases in exports may be a result of the relative weakening of the Colorado economy, as well as trade tensions between the United States and Mexico similar to those between the United States and Canada as trade negotiations and tariffs continue. Increases in exports to the Netherlands, Taiwan, the United Kingdom, and Switzerland helped balance the declines in growth year-to-date.

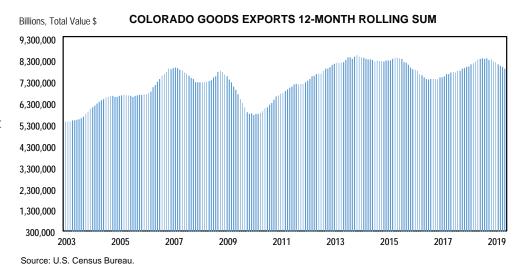
China emerged as Colorado's thirdlargest export destination in January 2019, down 13.2% year-over-year and 15.9% lower compared to January 2017. Exports to France have declined significantly since 2000, when it was Colorado's fifth-largest destination market and accounted for about 6% of volume. Exports to China have decreased 6.1% year-over-year in May 2019 and declined 12.7% year-to-date. Exports to the Republic of Korea declined 1.1% yearover-year and increased 1.6% year-todate. Colorado exports vary widely from month-to-month in response to seasonal demand, countries' currencies, and market attitudes.

Colorado's top four exports in May 2019, accounting for about 59% of total value of Colorado exports, were (in order):

- Meat and Edible Meat Offal;
- Nuclear Reactors, Boilers, Machinery Etc.; Parts
- Optic/Photo Etc./Medical or Surgical Instruments
- Electric Machinery Etc.; Sound Equip; TV Equip; Pts

Year-to-date, the vast majority of these products decreased. Optics/Photo/ Medic or Surgical Instruments increased by 2.6% year-to-date and decreased by 0.4% year-over-year; Meat and Edible Meat Offal decreased by 4.8% and increased by 0.5%, respectively; Electric Machinery decreased by 16.9% and 3.1%, respectively; and Nuclear Reactors decreased by 11.5% and 1.2%, respectively. The fifth-largest export product in May 2019 was Articles of Iron or Steel, which saw a year-to-date decrease of 0.4% and year-over-year increase of 74.6%. Meat has been on an upward trajectory since the beginning of the recovery, with a moderate decline between mid-2014 and early 2016 and a slight decrease at the end of 2018. Industrial Machinery and Optic/Medical Instruments has been declining steadily since late 2012/early 2013, and Electric Machinery has remained relatively flat but volatile since late 2011 (the value has fluctuated by as much as nearly 20% month-to-month multiple times).

Year-to-date, the value of goods that Colorado imported decreased by 5.3%. In May, imports contracted 0.9% yearover-year and are down 15% from the



post-recession high in October 2014. The top three countries for Colorado imports are (in order): Canada, Mexico, and China.

Through May, the top import products (by volume) to Colorado were (in order): Industrial Machinery/Computers, Mineral Fuels (Crude Oil), Electrical Equipment, Optic/Medical/Precision Instruments, and Aircraft/Spacecraft Parts. Industrial Machinery and Electrical Equipment both saw large declines of 11.5% and 21.5%, respectively, due, in large part, to tariffs against China. Global import tariffs accounted for a double-digit drop for articles of iron/steel, aluminum, articles of aluminum, wood, articles of wood, organic chemicals, and ceramic products.

Fluctuations in the import volume from Canada have been the main driver behind the fluctuations in total Colorado import volume since the beginning of the current economic expansion, with Canadian imports at times reaching 40% of the total. However, as of May 2019 year-to-date it only accounted for 28.7%. As such, the high in October 2014 and low in February 2016 are congruent with those of the Canadian import volume. Between this peak and trough, Canadian imports dropped 64.4%. Since then, they have shown an upward trend, with a moderate decline during the final three guarters of 2017 and then an increase through 2018. Imports from China have been on a decline since mid-2015, and those from Mexico have been flat but volatile since mid-2014.

In 2018, imports from Canada, Colorado's largest import partner, rose by 8%. This growth has continued at a rate of 5% year-to-date in May 2019. Unlike Canada, imports from China and Mexico decreased in 2018 (7.4% and 2.5%, respectively). Imports rebounded in 2019 for both countries, with a year-to-date increase of 6.9% for China and 14.3% for Mexico.

The increase in U.S. tariffs and retaliation from trade partners raise concern for international trade and the U.S. economy in the coming years. The impact on Colorado trade is clear as both imports and exports decreased, especially from Canada, China, and Mexico-all top trade partners of Colorado. Aluminum decreased 48% year-over-year in May in Colorado, with a May year-to-date 55% decrease. Certain products have helped mitigate these dramatic losses, with a 45% yearto-date increase in Colorado aircraft exports as of May 2019. However, as trade tensions continue to rise among U.S. trade partners, and tariffs continue to be mounted and retaliated against, both the United States and Colorado will continue to see a decrease in both imports and exports.

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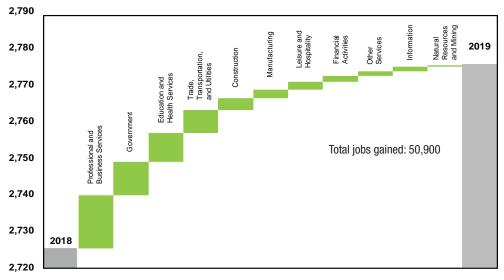
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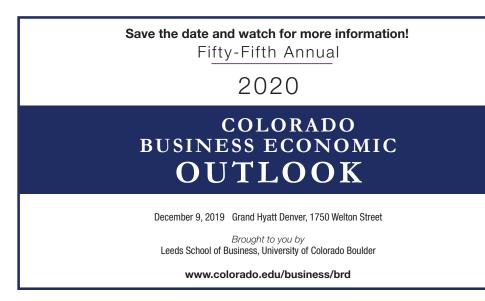
**Leisure and Hospitality** Tony Gurzick Colorado Parks and Wildlife

#### COLORADO EMPLOYMENT CHANGE - 2019 GROWTH FORECAST

Employment in Thousands



Source: Bureau of Labor Statistics, Current Employment Statistics (Seasonally Adjusted), and the Colorado Business Economic Outlook Committees.



Manufacturing David Hansen Development Research Partners

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