UNIVERSITY OF COLORADO BOULDER **LEEDS SCHOOL OF BUSINESS**

COLORADO BUSINESS REVIEW

A publication of the Business Research Division
Volume 84, Number 3, 2018

Colorado 2018 Midyear Economic Update

Richard Wobbekind

Overview

After signaling a slowdown, Colorado's economy recorded a clear reacceleration in 2017 and 2018. Employment growth slowed to under 1.9% in September 2017—the lowest level in almost six years—before staging a rebound that led to 2.8% growth year-over-year in June 2018. Likewise, real GDP growth in Colorado slowed to just 1.4% in 2016—the lowest level since 2010—before rebounding to 3.6% in 2017 and 4.5% year-over-year in Q1 2018. Personal income and per capita personal income followed similar trajectories, slowing to 1.9% and 0.3% in 2016 before resuming growth. Even population net migration slowed from 67,781 in 2015 to 60,773 in 2016 and 46,626 in 2017, 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 generally reported a more bullish outlook for their sectors in 2018 than projected in late 2017. The revised employment projection for 2018 is 2.4% growth for the year.

Assuming economic growth continues through June 2019, the United States is on track to post the longest economic expansion in U.S. history. Macroeconomic forecasts position U.S. growth shy of 3% in 2018, followed by slower growth in 2019 (2.6%), partially due to the waning positive effects of the tax cuts, as well as the impacts from higher interest rates, uncertain foreign policy, productivity gains, labor constraints, and other factors.

The United States is at full employment, with an unemployment rate of 3.9% as of July, and the labor utilization (U-6) rate fell to 7.5%. Personal income grew 4.7% in Q2 2018, real disposable personal income was up 2.9%, and real disposable per capita personal income rose 2.2%. Real GDP growth shot up to 4.1% in Q2 2018 after growth of 2.8%, 2.3%, and 2.2% over the prior three quarters.

Advanced 2017 gross domestic product (GDP) estimates released by the Bureau of Economic Analysis (BEA) show that in 2017 Colorado's real GDP

Photo: Envato Market.

continued on page 2

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FROM THE EDITOR

This issue presents a midyear review of the Colorado economy. The information presented is compiled from remarks made 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. Key factors influencing recent economic trends are also noted.

We greatly appreciate the time and input from the individuals who contributed to this update; their names are listed on page 16. 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-FOURTH ANNUAL COLORADO FORECAST

2019 Colorado Business Economic Outlook Forum

SAVE THE DATE

Mark your calendar to attend the 2019 Colorado Business Economic Outlook Forum on December 10 at the Grand Hyatt Denver. Check colorado.edu/business/brd for event updates.

– Richard Wobbekind

Photo: Ryan Kanode.

grew by 3.6% compared to the nation's GDP growth of 2.2%. Colorado also recorded higher increases than the nation in terms of home prices, employment, and personal income in 2017. 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.

Colorado currently has one of the lowest unemployment rates in the nation, 2.7% in June. The state has been recording an increasing labor force participation rate, which has enabled continued employment growth in the face of declining net migration.

In December 2017, the Colorado Business Economic Outlook presented economic indicators for each sector of Colorado's economy. Job growth in Colorado was forecasted to be 1.8%, or 47,100 jobs, with growth across all sectors of the economy. As of mid-2018, the forecast of overall employment growth for the state was revised up to 62,600, or growth of 2.4%. Some sectors are outperforming expectations while others are underperforming.

Labor shortages are almost unanimously reported as constraining industry. Nearly all meeting attendees mentioned the challenge of finding skilled workers. Many firms want to hire more employees but struggle to find candidates with the necessary skills in the state's tight labor market. This was also noted as the number one challenge facing the economy in the Q3 2018 LBCI survey.

Data in the following sections are from the Colorado Department of Labor and Employment, Current Employment Statistics (CES). The June 2018 figures are seasonally adjusted except where indicated.

Population and Employment

According to the State Demography Office, Colorado's population is projected to be near 5.7 million in 2018. With an expected net gain of 75,000, Colorado's population growth continues to increase at slower rates. Natural increase (births minus deaths) is expected to account for nearly 27,000 people, while net migration is anticipated to total about 48,000.

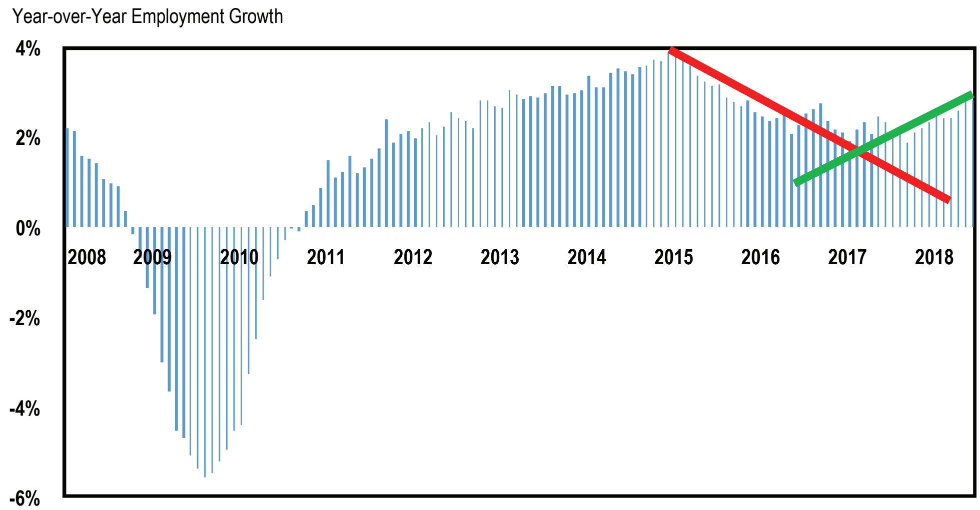
Looking back at 2017 estimates, the fastest-growing counties for absolute growth were in El Paso, Weld, Denver, Douglas, and Arapahoe counties. In percent change, the five fastest-growing counties were Crowley, Custer, Archuleta, Bent, and San Juan counties. Among the metropolitan statistical areas (MSAs), the Greeley MSA recorded the fastest growth in 2017, followed by the Colorado Springs and Fort Collins-Loveland MSAs.

Colorado total nonfarm employment in June 2018 was 2.7 million, a year-over-year increase of 2.8% or 74,600 jobs. Natural Resources and Mining had the greatest employment growth of 13.1%, followed by Construction (5.2%), Leisure and Hospitality (4.7%), Information (4.3%), and Professional and Business Services (4.1%). Government employment increased by 2.6% year-over-year in June. Manufacturing recorded modest year-over-year growth, with 1.8%, followed by Trade, Transportation, and Utilities (1.7%); Financial Activities (1.7%); and Education and Health Services (1.3%). Other Services was the only sector to experience a year-over-year decline, 1.9%, which is largely attributable to a data classification change rather than a true industry decline.

Greeley had the greatest year-over-year employment growth in June 2018, with 4.1%, followed by Colorado Springs (3.3%) and Denver-Aurora-Lakewood (2.8%). Boulder, Fort Collins, Grand Junction, and Pueblo rounded out the metropolitan areas with 2%, 1.8%, 1.7%, and 1.4% growth, respectively.

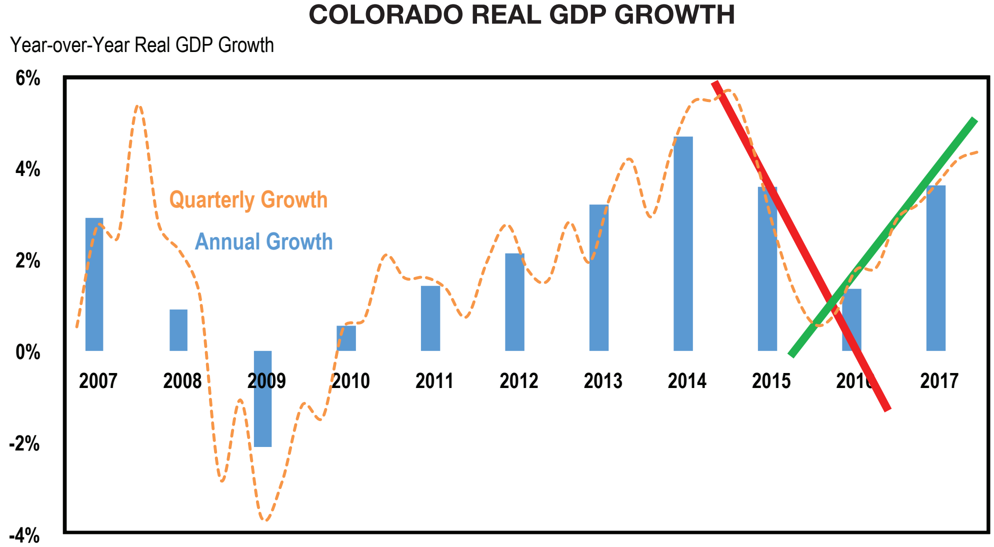
Colorado's unemployment rate remained low, at 2.7%, in June 2018. Colorado had the third-lowest unemployment rate in the nation. Fort Collins-Loveland had the lowest unemployment rate in the state, with 2%, followed closely by Boulder (2.1%), Greeley (2.2%), and Denver-Aurora-Lakewood (2.3%). Colorado Springs had 2.8% unemployment, and Grand

COLORADO EMPLOYMENT GROWTH



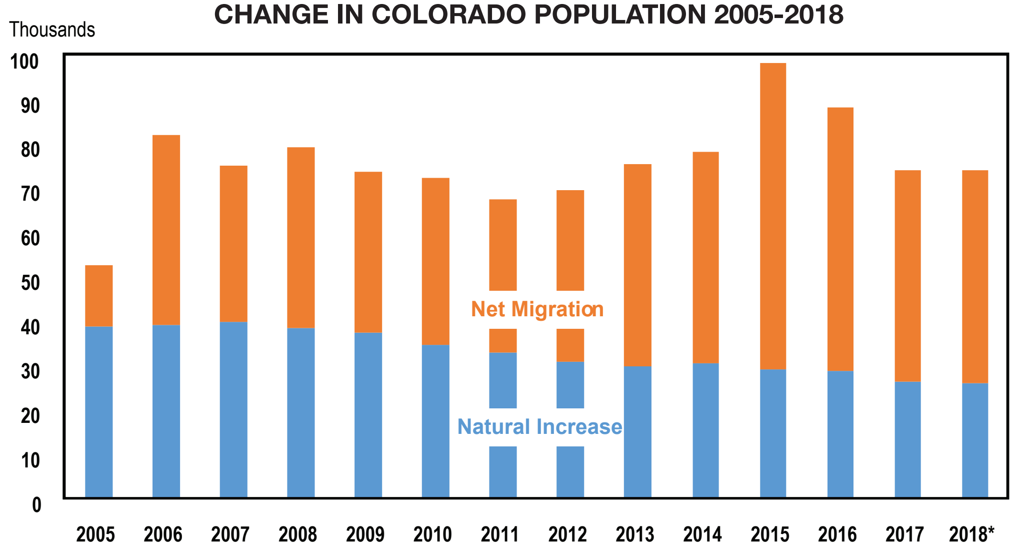
Source: Bureau of Labor Statistics, CES.

COLORADO REAL GDP GROWTH



Source: Bureau of Economic Analysis.

CHANGE IN COLORADO POPULATION 2005-2018



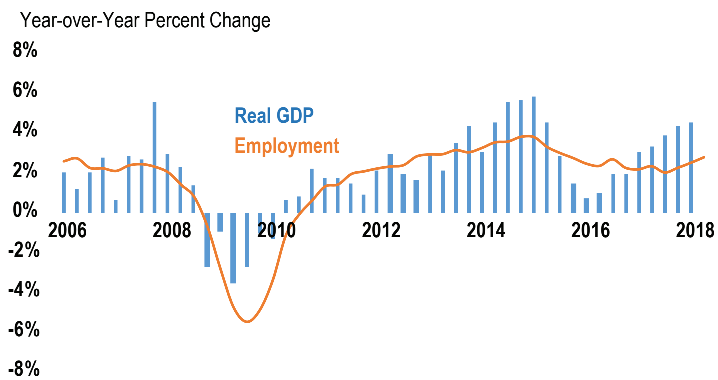
Source: State Demography Office and U.S. Census Bureau. *Projected.

Junction had 2.9% unemployment. Pueblo had the highest unemployment rate in the state, at 3.5%. Unemployment rates have remained steady for the state, but the MSAs saw lower unemployment in May 2018 than in May 2017.

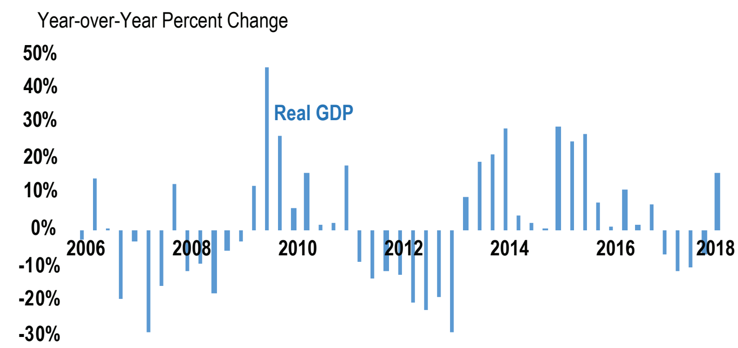
Colorado's nominal GDP was $356 billion in Q1 2018. In terms of real GDP, Colorado was the second fastest-growing state and the 17th largest overall. In 2018, Colorado's annual real GDP growth rate was 6.6%. The three

COLORADO GDP AND EMPLOYMENT GROWTH BY INDUSTRY

COLORADO TOTAL

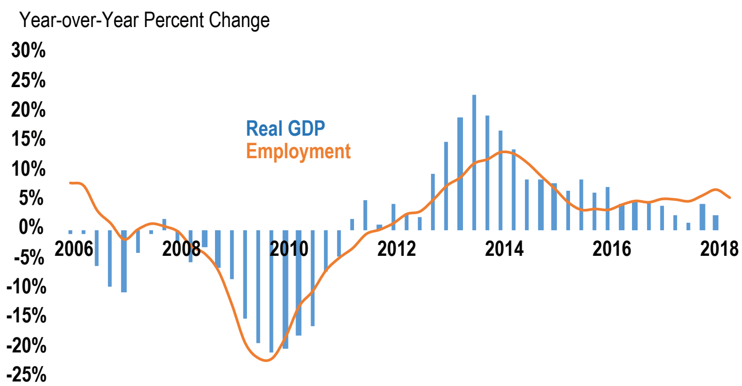


AGRICULTURE

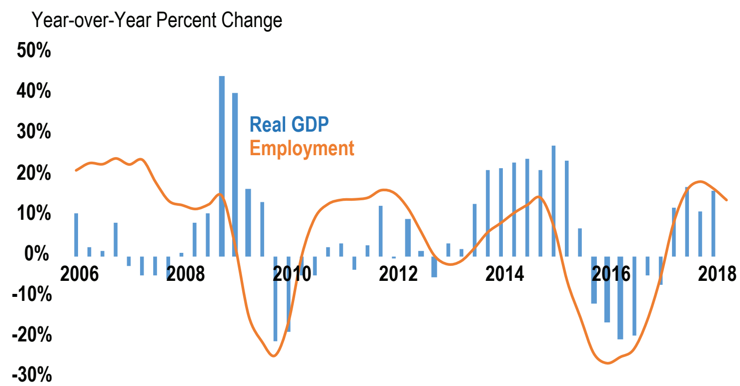


Note: Agriculture is not included in nonfarm employment from the BLS.

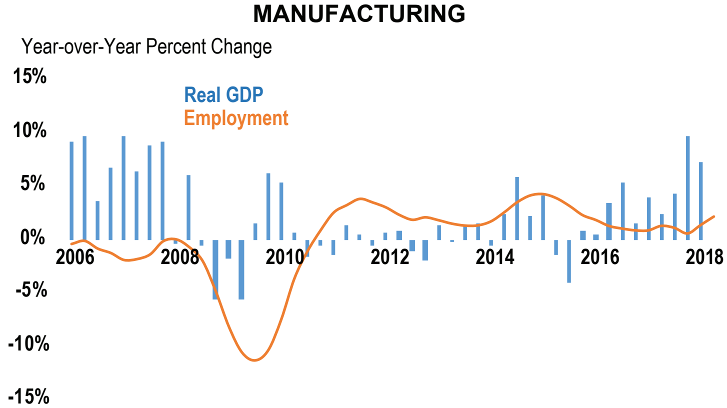
CONSTRUCTION



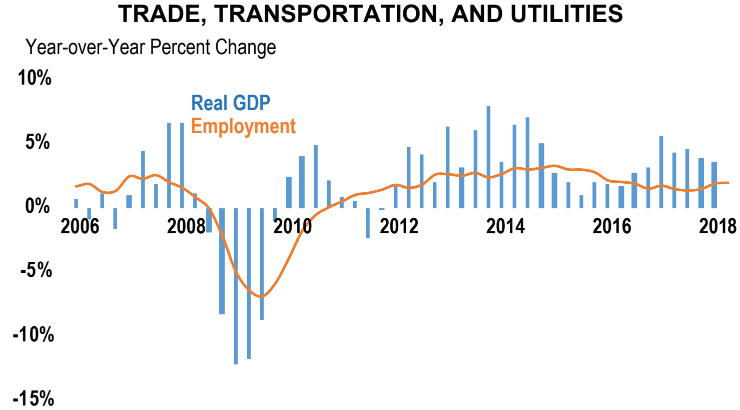
NATURAL RESOURCES AND MINING



MANUFACTURING



TRADE, TRANSPORTATION, AND UTILITIES



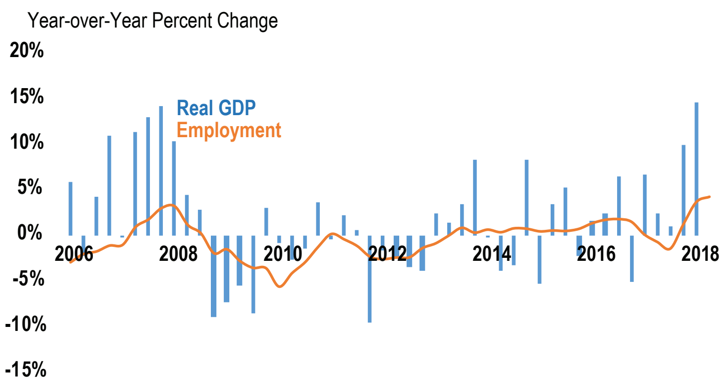
Sources: Bureau of Economic Analysis and Bureau of Labor Statistics (CES Nonfarm).

largest industries for GDP were Financial Activities (18.3%); Trade, Transportation, and Utilities (15.6%); and Professional and Business Services (14.9%). The three fastest-growing industries were Agriculture (16.2%), Natural Resources and Mining (16.1%), and Manufacturing (7.3%). Real GDP decreased for the Information and Government sectors.

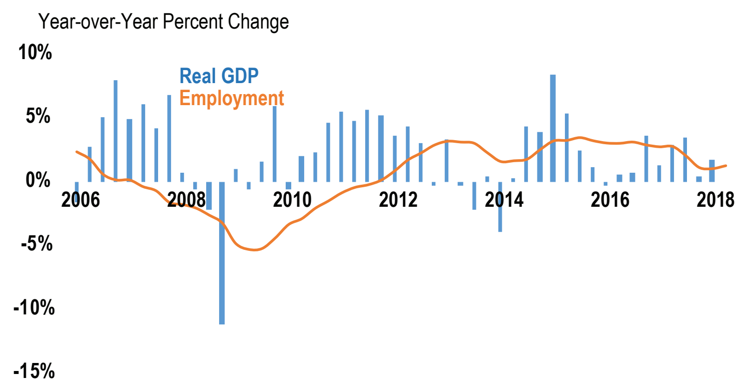
The revised outlook for full-year 2018 calls for growth of 2.4%, reflecting broad strengthening across most of Colorado's industries in the first half of the year.

COLORADO GDP AND EMPLOYMENT GROWTH BY INDUSTRY

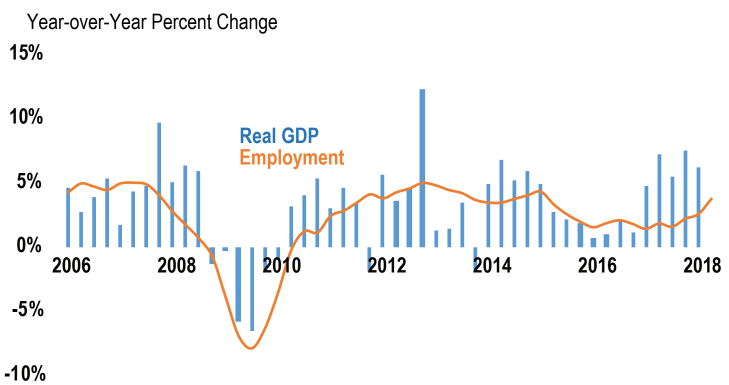
INFORMATION



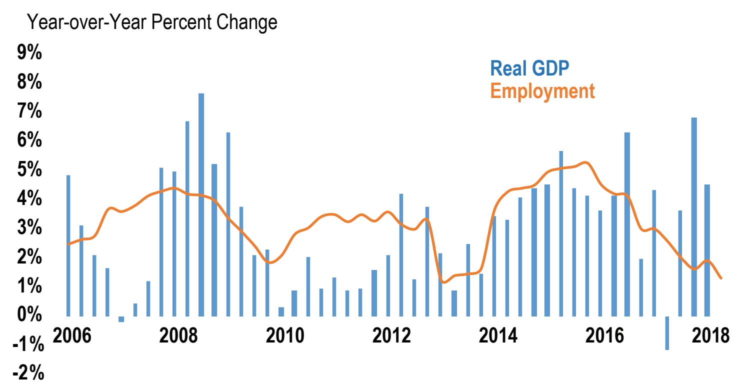
FINANCIAL ACTIVITIES



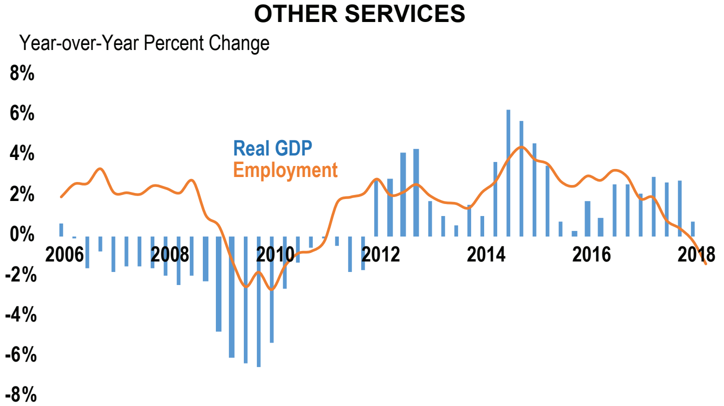
PROFESSIONAL AND BUSINESS SERVICES



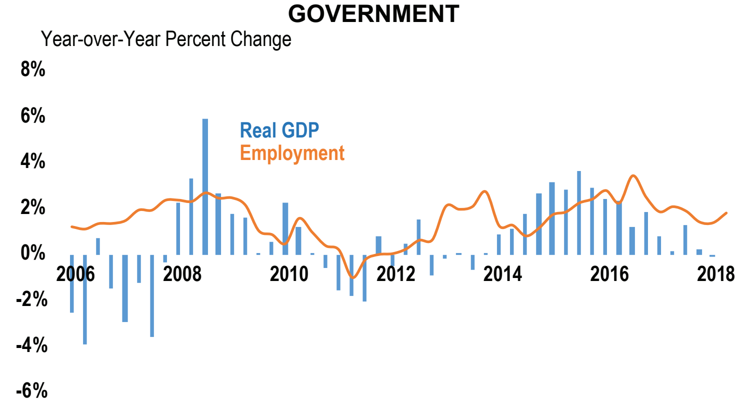
EDUCATION AND HEALTH SERVICES



OTHER SERVICES



GOVERNMENT



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

Photo: Toni Pauling.

Agriculture

According to the BEA, Agriculture, Forestry, Fishing, and Hunting contributed about $2.4 billion to the Colorado economy in 2017, a 1.4% decline from 2016. However, real GDP (GDP adjusted for price changes) dropped by 8.9% year-over-year. The industry recorded strong growth early in 2018, with real GDP increasing 16.2% year-over-year.

Colorado growers are struggling to support their business in 2018 due to depressed commodity prices that remain below historical averages. As of late July 2018, corn prices have declined 32.1% compared to their respective value five years ago and have dropped 5.8% year-over-year. Wheat prices have risen less than 1% from their value five years ago but have been improving slightly in 2018, posting a 2.6% year-over-year gain. Beef prices have been volatile in the past five years and are expected to increase 0.5% to 1.5% in 2018. Some farmers and ranchers are operating in an environment where revenues do not exceed the cost of production. Farm income is about half of where it was five years ago.

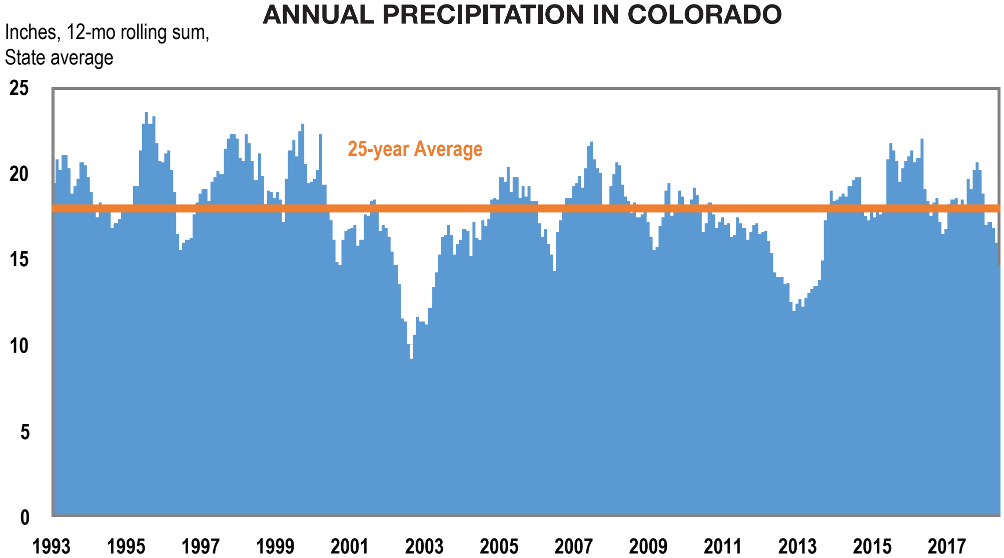
Significant challenges remain for the Agriculture Sector in 2018. Drought, wildfires, and historically low commodity prices are all significant challenges for the industry. The largest sectors of Colorado agriculture are beef and grains. Prices of both commodities are dropping due to plentiful supply in China and around the world. Canada and Mexico remain two of Colorado's largest agriculture export markets, and NAFTA is currently being renegotiated. More broadly, tariffs pose negative threats to agriculture export markets and farm income.

In retaliation to U.S. tariffs on steel and aluminum, China and other trade partners have placed tariffs on agricultural imports, which has contributed to the strain farmers currently face. The Trump administration will provide short-term incremental payments to uphold prices of soybeans, cotton, corn, wheat, and pork in order to keep farmers afloat as trade negotiations with China are resolved.

Other U.S. export factors have also been affecting Colorado growers. The U.S. dollar's strong value relative to other currencies makes U.S. agricultural goods cost more for foreign consumers compared to other countries' agricultural goods. Weaker demand for Colorado produce and meat has been hurting growers across the state.

During July 2018, extreme drought conditions were reported in southern Colorado, an area that produces cattle, wheat, hay, corn, and vegetables. Some of the top agricultural counties—Prowers, Crowley, and Otero—are in the region affected by extreme and exceptional drought. Wildfires also are threatening the agriculture industry. Six major Colorado wildfires have been documented during 2018, burning over 262,798 acres of land.

ANNUAL PRECIPITATION IN COLORADO



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

Natural Resources and Mining

Natural Resources and Mining employment grew 8.4% in 2017, and was up 13.1% year-to-date as of June 2018. Industry real GDP grew 7.8% in 2017 and 16.1% year-over-year in Q1 2018. The revised outlook is for 13.7% employment growth in 2018.

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 Natural Resources and Mining job was $84,191 compared to $56,916 average annual pay for all industries.

The industry made up 1% of the Colorado covered nonfarm employment in 2017 compared to 0.5% for the nation. The June 2018 year-over-year seasonally adjusted employment growth rate in Colorado increased 13.1%, 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 more efficiently extract oil by drilling laterally a mile or more.

As the price of WTI oil rises, more projects become financially feasible, and the industry will ramp up production. In May 2018, the price of oil increased 44% year-over-year, to $69.98 a barrel. The number of drilling permits issued in the first five months of 2018 totaled 4,012. For perspective, for all of 2017, a total of 5,548 permits were issued. An average of 371 more permits are being issued per month in January through May 2018 than were issued in January through May 2017.

Gas production has increased 5% over last year, most of which is focused in Weld County. Drilling permits in Weld County have nearly doubled, from 462 permits a month in June 2017 to 818 permits a month in June 2018.

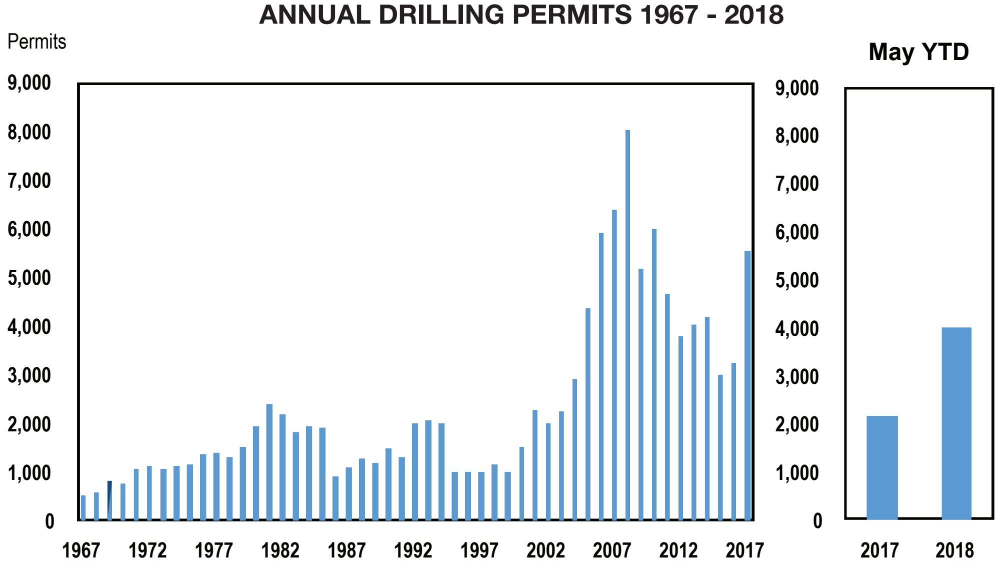
Ballot Initiative 97 proposes a 2,500-foot setback for new oil and gas development. According to the Secretary of State's office Ballot Title Setting Board, the initiative is

> A change to the Colorado Revised Statutes concerning a statewide minimum distance requirement for new oil and gas development, and, in connection therewith, changing existing distance requirements to require that any new oil and gas development be located at least 2,500 feet from any occupied structure and any area designated for additional protection and authorizing the state or a local government to increase the minimum distance requirement.

The Colorado Oil and Gas Conservation Commission estimates that 85% of nonfederal land in Colorado would be potentially off limits, severely curtailing new oil and gas development in the state.

Coal production continues a slow and steady decline; the estimated production of coal in 2018 is 14 million tons, reflecting a 1.2 million ton decrease over 2017.

ANNUAL DRILLING PERMITS 1967 - 2018



Source: Colorado Oil and Gas Conservation Commission.

Construction

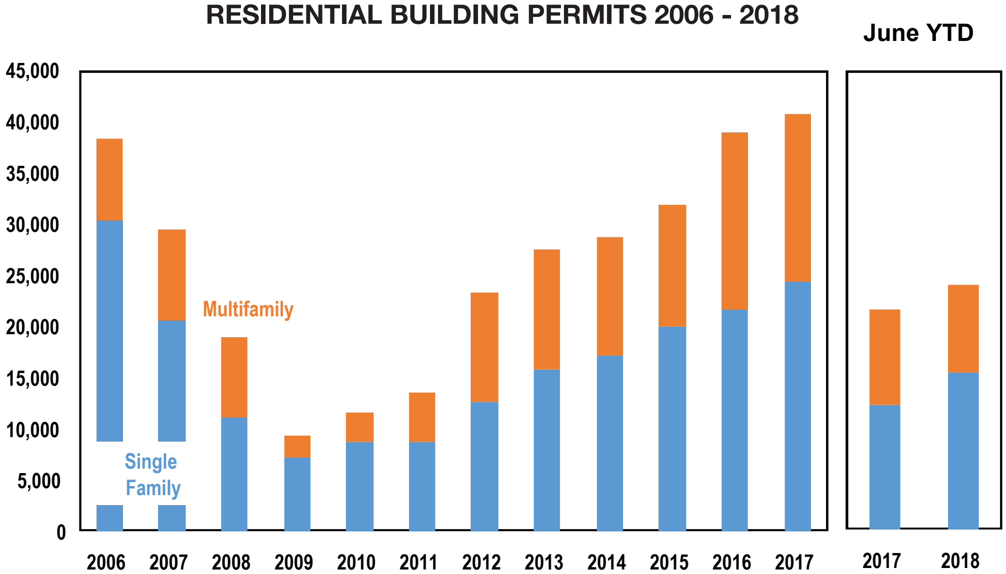
Construction employment grew 5.3% in 2017, and was up 5.2% year-to-date as of June 2018. Industry real GDP grew 3.2% in 2017 and 2.6% year-over-year in Q1 2018. The revised outlook is for 4.9% employment growth in 2018.

The Construction industry is composed of firms that engage in the construction of new buildings and engineering projects, as well as subdividing land for sale. This industry comprises three sectors: residential (e.g., houses, apartments), nonresidential (e.g., retail, medical), and nonbuilding (e.g., water treatment, highway work, 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 171,200 as of June 2018, a 5.2% year-over-year increase. Employment has finally surpassed the July 2007 peak of 170,100. As of 2017, the average annual pay in the industry was $59,446, slightly above the average Colorado pay of $56,916.

In Q1 2018, nominal GDP for the Construction industry totaled $21.5 billion, accounting for 6% of Colorado's total nominal GDP. The year-over-year real GDP growth rate for Construction was 2.6% in Q1.

RESIDENTIAL BUILDING PERMITS 2006 - 2018



Source: U.S. Census Bureau.

Single-family housing is a strongpoint for the Construction industry. Single-family permits totaled 24,338 in 2017, an increase of 12.8% over 2016; multifamily permits totaled 16,335, a decrease of 6.1%. Through June, single-family permits continued to climb 26.2% year-over-year, while multifamily permits slid 8.2%. According to the U.S. Census Bureau, the value of Construction also climbed, up 14.9% year-over-year through June. The Construction Committee projects the industry will see 31,000 single-family starts in 2018, an upward revision to the December figures. Small builders are finally returning after the deep recession and existing builders are finding creative ways to be more productive. Despite substantial ongoing work on multifamily projects, new multifamily permits are coming in below expectations, with just over 16,000 projected for the year, partially driven by slower migration.

According to Dodge Data & Analytics, the value of nonresidential construction has flattened year-over-year in June 2018. In part, this can be accounted for by projects started (permits pulled) in 2017 but still under construction in 2018. The Construction Sector is enjoying a wider reach as significant activity no longer is confined mostly to the Front Range from Denver north. Resort areas and Colorado Springs are recording an increase in activity. A large volume of pending activity remains for warehouses, school construction, the National Western Complex, DIA, and the Colorado Convention Center.

Nonbuilding construction declined 58% year-to-date as of June 2018. The 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 because of the point-in-time issuance of the permit. Nonbuilding work continues on Peña Boulevard and on Thornton’s water project. The multiyear Central 70 project work started this summer.

The main factor restricting growth in the Construction Sector is labor constraints. Due to the lack of available labor, average hourly wages in Construction increased 5.9% year-over-year in June 2018, from $26.85 to $28.43 an hour. Still, firms are not able to complete projects as quickly as they would like to due to the lack of labor.

Nationally, the 25% tariff on steel imports and the 10% tariff on aluminum imports have yet to stifle Colorado’s Construction industry. When the tariffs drive raw material costs up, construction projects will become more costly.

Manufacturing

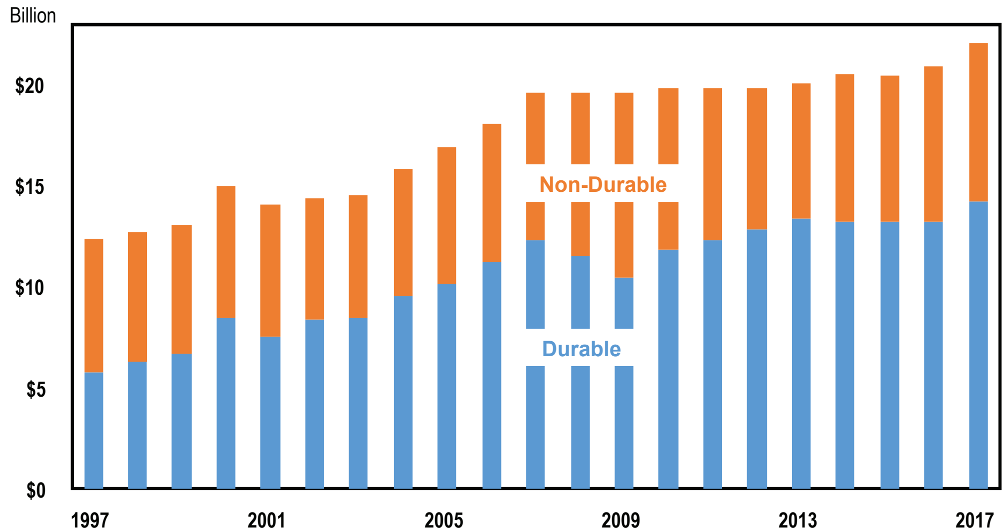
Manufacturing employment grew 0.9% in 2017, and was up 1.8% in June 2018. Industry real GDP grew 5.1% in 2017 and 7.3% year-over-year in Q1 2018. The revised outlook is for 1.4% employment growth in 2018.

Manufacturing includes the subsectors of durable and nondurable goods. Durable goods are goods that are not intended for immediate consumption and also 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 2018, Manufacturing employment totaled 147,100 in the state. As of June 2018, year-over-year employment grew 1.8%, an increase of 2,600 jobs. In Q1 2018, Manufacturing made up 7.4% of Colorado’s real GDP, with durable goods accounting for 66% of that output and nondurable making up 35%. 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 1.4% year-over-year—1,300 jobs—in June 2018. Nondurable goods added 2,000 jobs, a 3.7% year-over-year employment growth.

Manufacturing is a critical input to the state's key industry clusters—aerospace, biosciences, beverage production, and others. Despite these industries increasing use of automation, growth in these sectors is outpacing job loss due to automation. Technology continues its stronghold in manufacturing, focusing on improving efficiency. Tariffs imposed on steel and other durable goods raise concern for this industry; however, potential negative effects are being currently being offset by tax reform and regulatory relief. The price increase of manufactured goods is being absorbed by consumers.

MANUFACTURING REAL GDP, 1997 - 2017



Source: Bureau of Economic Analysis, real GDP (billions of chained 2009 dollars).

Trade, Transportation, and Utilities

Trade, Transportation, and Utilities employment grew 1.4% in 2017, and was up 1.7% in June 2018. Industry real GDP grew 4.7% in 2017 and 3.7% year-over-year in Q1 2018. The revised outlook is for 1.8% employment growth in 2018.

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 7,700 jobs year-over-year in June 2018, an increase of 1.7%. This sector currently employs 468,500 people and accounts for 17.2% of statewide employment. Tax revenue in Colorado continues to increase. Preliminary estimates show state retail tax collections increased by $231.8 million year-over-year, or growth of 8.6%.

The Retail Trade Sector saw growth in 2017, with real GDP increasing at an annual rate of 3.8%. Growth continued at 4.3% in Q1 2018. The retail sector accounts for 5.9% of Colorado's real GDP. Employment within retail trade grew 1.6% year-over-year in June 2018, with total employment at 275,000. While marijuana sales continue to help drive retail sales growth in Colorado on the margin, retail overall is exhibiting strong year-over-year increases. Growth in e-commerce has been outperforming sales growth at brick-and-mortar stores, causing many traditional retailers to adapt to an e-commerce environment.

The Wholesale Trade Sector consists of two subsectors: durable goods and nondurable goods. Employment in this sector has steadily increased since November 2010. In June 2018, the year-over-year employment growth rate was 0.3%, with nondurable goods outperforming durable goods. Durable goods employment accounts for 58.3% of Wholesale Trade.

In June 2018, employment in Transportation and Utilities added 3,200 jobs year-over-year for a 3.8% increase. The transportation sector is showing strong growth in multiple modes of transportation, from air and trucking to commuter.

Information

Information employment declined 0.3% in 2017, and was up 4.3% in June 2018. Industry real GDP grew 4.9% in 2017 and 14.7% year-over-year in Q1 2018. The revised outlook is for 1.6% employment growth in 2018.

The Information Sector has had a good start in 2018, averaging growth of 3.9% (2,800 jobs) year-over-year through the first five months after a year of modest decline (0.3%, 200 jobs) in 2017. The Publishing, Broadcasting, and Telecommunications subsectors should all post gains in 2018. This is the strongest start to the year since the early 2000s.

Despite the lack of employment growth in 2017, the industry recorded 4.9% real GDP growth in 2017. This continues an industry trend—over the past five years Information real GDP grew 10.7% while employment grew 2.7%. Sector data through 2016 (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 jobs growth for eight consecutive months, Information employment grew to 74,000 in June 2018. Nationally, the Information Sector has pulled back 1.4% year-to-date in 2018.

Municipal broadband/rural broadband initiatives are still alive, and investment in higher-speed networks (i.e., 5G) are happening in Colorado's urban settings.

Financial Activities

Financial Activities employment grew 2.3% in 2017, and was up 1.7% as of June 2018. Industry real GDP grew 2% in 2017 and 1.7% year-over-year in Q1 2018. The revised outlook is for 2% employment growth in 2018.

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 2017, annual employment in Colorado increased by 3,700 jobs and experienced an annual growth rate of 2.3%. Employment continues to increase in 2018, growing by 2,800 jobs year-over-year in June. In 2017, this sector was responsible for 20.1% of Colorado's real GDP, but only 6.3% of employment.

Capital markets are experiencing a great deal of volatility in 2018. Despite volatile markets, major U.S. indices—the NASDAQ, the Dow Jones Industrial Average (Dow), and the S&P 500—posted gains in 2018. On August 10, 2018, the S&P 500 posted a 6% year-to-date increase compared to an 8.9% year-to-date increase in 2017. The NASDAQ gained 13.6% year-to-date compared to the 2017 year-to-date increase of 15.5%; the Dow increased 2.4% year-to-date compared to 10.5% in 2017. Although the indices are positive year-to-date, they are on track to end 2018 below last year's performance.

While rates have improved in the past year, as of late July 2018 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 2.9% rate, though there is anticipation of a flattening or possibly inverted yield curve in coming years. 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 0.4% yield, the United Kingdom maintains a yield curve of 1.2%, and Japan maintains a 0.1% 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 2018, insured U.S. institutions reported year-over-year growth in net income and domestic deposits 27.5% and 3.8%, respectively. With record employment and income, banks are seeing deposits grow. Total assets held in Colorado banks increased by 9% year-over-year in Q1 2018. The number of institutions decreased by 6, from 88 to 82 in Q1 2018.

Real Estate, Rental and Leasing Employment grew 2.7% year-over-year in June 2018 compared to year-over-year growth of 2.1% in June 2017. According to Dodge Data & Analytics, the value of residential construction year-to-date in June 2018 is 17% more than the value of construction year-to-date in June 2017. According to the Federal Housing Finance Agency (FHFA) house price index, Colorado housing prices have been increasing. In Q1 2018, Colorado's house price index grew 9.9% year-over-year; the house price index for the nation recorded 6.1% year-over-year growth. Colorado ranks fourth 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 $1,532, increasing 6% year-over-year. According to the Denver Metro Apartment Association, through 2017 apartments in the Denver Metro region had strong net absorption, meaning more apartments were rented in 2017 compared to 2016. In Denver, high demand is causing prices to increase as Colorado continues to be a desirable place to live.

Professional and Business Services

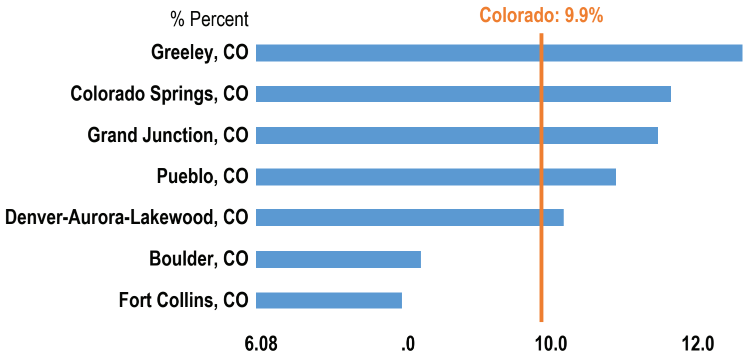
Professional and Business Services employment grew 1.8% in 2017, and was up 4.1% in June 2018. Industry real GDP grew 6.1% in 2017 and 6.3% year-over-year in Q1 2018. The revised outlook is for 2.9% employment growth in 2018.

Professional and Business Services (PBS) is one of the largest services-providing sectors in the state, totaling 413,200 employees in 2017, or 15.5% 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 added 17,100 jobs since June 2017 for a 4.1% 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 2018, PST employed 223,100 workers and added 7,200 jobs year-over-year. Year-over-year employment growth in June 2018 was 3.3%. PST accounted for 51.8% of total PBS employment in June 2018 and 62% of real GDP within the industry. Although Computer Systems Design and Related Services showed weakness year-over-year in June 2018, certified information systems security positions and security certification jobs have both seen large spikes. The increase in security professionals can be accounted for by the increase of cyberattacks around the

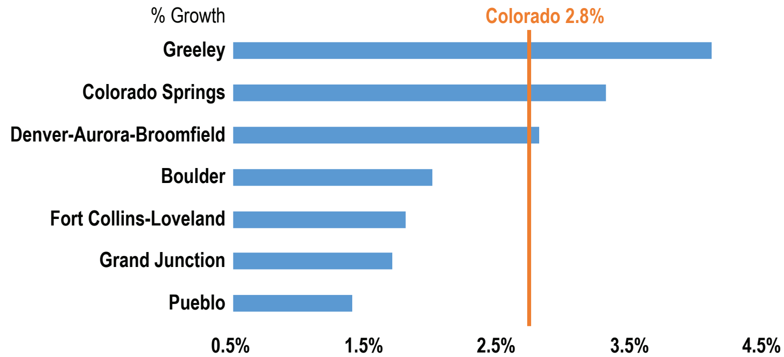
Colorado MSA Metrics

FHFA HOME PRICES
Q1 2017 - Q1 2018



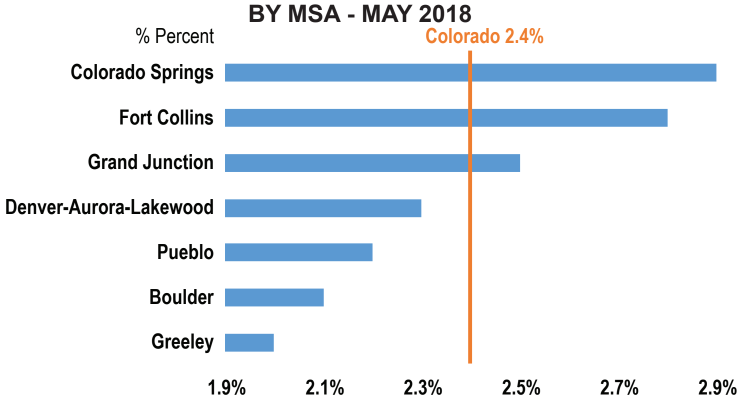
Source: Federal Housing Finance Agency, All Transactions Indexes (Not Seasonally Adjusted).

EMPLOYMENT GROWTH YoY CHANGE
BY MSA - June 2018



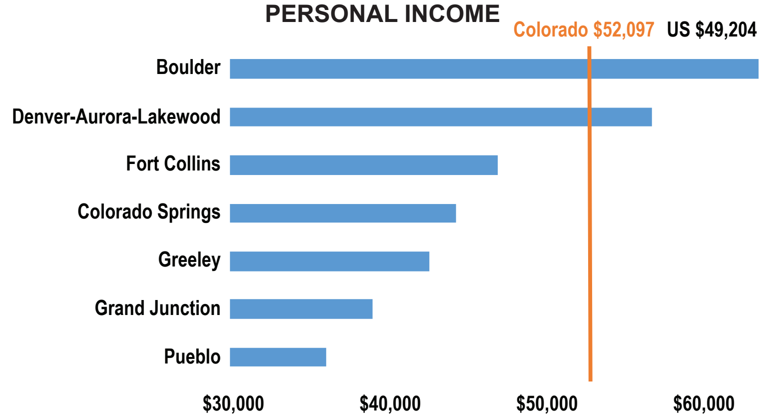
Source: Bureau of Labor Statistics, Current Employment Statistics (Seasonally Adjusted).

UNEMPLOYMENT RATE
BY MSA - MAY 2018



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

COLORADO PER CAPITA
PERSONAL INCOME



Source: Bureau of Economic Analysis, 2014 annual data.

world. More companies are spending money to protect consumer information. Employment in Legal Services increased slightly following a longer-term trend of relatively slower growth compared to other professional services.

Administrative and Support and Waste Management and Remediation Services accounted for 39.1% of PBS employment as of June 2018 and 64.7% of real GDP. The sector experienced 6.2% year-over-year growth, or a gain of 9,500 jobs. GDP rose 6.5% in 2017. 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 permanent positions; however, the reliability of this as a leading indicator has 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.

MCE made up 9% of employment and 17% of real GDP in 2017. As of June 2018, MCE gained 400 new jobs for a 1% growth rate year-over-year. In terms of GDP, MCE increased 23.9% year-over-year to a total of $7.9 million. MCE is difficult to estimate because it is generally composed of holding companies operating in a vast array of areas. Examples of Colorado-based 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.

Photo: Travis Harvey.

Education and Health Services

Education and Health Services (EHS) employment grew 2.4% in 2017, and was up 1.3% in June 2018. Industry real GDP grew 3.4% in 2017 and 4.6% year-over-year in Q1 2018. The revised outlook is for 1.7% employment growth in 2018.

The 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 18.4%.

Private Educational Services experienced a 5.5% employment decrease year-over-year (though this is expected to be positive by year-end), while Health Care and Social Assistance increased 2.3%. In terms of 2017 annual real GDP growth, Educational Services was flat, while Health Care and Social Assistance increased 3.8%.

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. Private and public educational services have been stable, though there is some instability in small institutions (e.g., the Colorado Art Institute will be closing by the end of 2018).

Health care in Colorado is mostly covered by seven companies; all counties in Colorado have access to at least one of these companies' plans. The number of uninsured Coloradans is down from 14.3% five years ago to 7.8%. Insurance rates are set to increase 5.9% for 2019, with the majority of the price increases being concentrated around Silver and Gold premium plans. This is the smallest rate increase Colorado has seen in years; some companies under insurance provider Anthem are even requesting rate decreases for 2019. Colorado Insurance Commissioner Michael Conway describes the efforts of the health care industry to be, "Concentrated on maintaining and furthering the stability we secured last year. Moving forward, we will be doubling down on our focus to address and attack the ever-increasing healthcare costs that drive premiums and push coverage out of reach for many. For too long Colorado consumers have been forced into the uncomfortable and oftentimes impossible position of paying for ever increasing healthcare costs."

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 1.3 million, a drop of 5.4% year-over-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 75,000 to 82,000 from June 2017 to June 2018, a 10.7% increase.

Colorado ranked 7th in the nation for overall health in 2017, two places higher than in 2016. Strengths include relatively low prevalence of obesity, children in poverty, and diabetes. Weaknesses include relatively high prevalence of excessive drinking (rank 42), large disparities in health status by educational attainment (ranked 48th), and high incidence of pertussis. Though Colorado is faring better than the rest of the nation, Colorado's rates of obesity, drug deaths, and cardiovascular deaths are increasing.

Leisure and Hospitality

Leisure and Hospitality employment grew 3% in 2017, and was up 4.7% as of June 2018. Industry real GDP grew 4.1% in 2017 and 4.9% year-over-year in Q1 2018. The revised outlook is for 2.9% employment growth in 2018.

The Leisure and Hospitality Sector covers establishments in the tourism, travel, and recreational industries. Employment in this sector increased by 15,800 jobs, or 4.7% year-over-year, in June 2018. In 2017, Leisure and Hospitality accounted for 5% of Colorado's nominal GDP. The sector's real GDP output increased 4.1% in 2017.

According to an article in the *Denver Business Journal,* 2017 was another strong year for tourism in Colorado. The state ranked ninth in the nation as a tourist destination and has just launched a new advertising campaign highlighting unique locations such as Paint Mines Interpretive Park and Pawnee National Grassland.

According to the most recent study from Colorado Tourism Office, 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%.

In 2017, Denver welcomed 15 million overnight leisure travelers who collectively spent $4.5 billion during their stay, according to VISIT DENVER. These figures represent a 1% year-over-year increase in overnight visits to the city and a 6% increase in total spending by overnight visitors. A total of $1.7 billion was spent on accommodation, almost $1.1 billion was spent on eating/drinking, $1.6 billion was spent on transportation, $688 million was spent on retail, and $536 million was spent on recreation. There were 2,605 new hotel rooms added in 2017.

The National Park Service (NPS) reported recreation visits increased 2.1% in 2017. Black Canyon of the Gunnison National Park recorded an annual visitation increase of 29%, followed by Curecanti National Recreation Area (6%) and Mesa Verde National Park (5.2%). The NPS reported Rocky Mountain National Park recreation visits dropped 1.8% in 2017. Colorado Parks and Wildlife reported an increase in state park visitation from 14.3 million visitors in 2016 to 15.4 million visitors in 2017.

According to the FAA, DIA ranked as the fifth busiest airport in the nation in 2017. In 2017, DIA saw a record-setting 61.4 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 40% of total passengers. Southwest Airlines and Frontier Airlines follow, with market shares of 30% and 11%, respectively.

According to Colorado Ski Country USA, member ski resorts hosted 7.1 million skier visits in the 2017–18 ski season, just slightly above the five-year average and 2% lower than the 2016–17 season. Considering the mountains faced historically low snowfall, the ski resorts still faired pretty well through the season.

Throughout June and July, southern and western Colorado was impacted by extreme dry conditions and wildfires. Officials were forced to close San Juan National Forest in June, and flights through Aspen were cancelled, all due to wildfires. Although it is still too early to tell, initial indications show that visitation to state and national parks are similar to last year's numbers, year-to-date. The economic effects of the wildfires and drought on tourism have yet to be determined, but will disproportionately impact rural tourism counties.

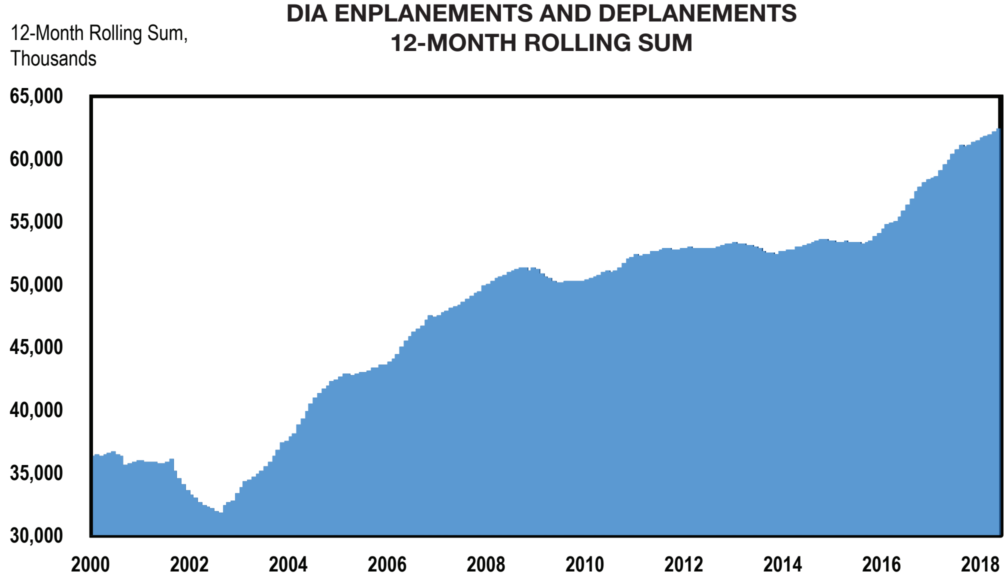
Other Services

Other Services employment grew 1.3% in 2017, and was down 1.9% year-to-date as of June 2018. Industry real GDP grew 2.6% in 2017 and 0.8% year-over-year in Q1 2018. The revised outlook is for 0.7% employment growth in 2018.

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. In 2017, a total of 15,776 businesses were classified in the Other Services Sector. This represents an increase of 619 businesses from the previous year.

DIA ENPLANEMENTS AND DEPLANEMENTS 12-MONTH ROLLING SUM



Source: Denver International Airport.

Photo: BigStock Photos.

Other Services made up 4% of total state employment in 2017. As of June 2018, the sector lost 2,100 jobs, decreasing by 1.9% year-over-year; however, industry statistics have been affected by a classification change that has impacted industry statistics. In total, the sector employed 106,900 in June 2018 according to the BLS. According to the BEA, in Q1 2018 the Other Services real GDP in Colorado represented 2.1% of the state total, and increased 0.8% year-over-year.

Government

Government employment grew 1.9% in 2017, and was up 2.6% year-to-date as of June 2018. Industry real GDP grew 0.7% in 2017 and was flat year-over-year in Q1 2018. The revised outlook is for 1.9% employment growth in 2018.

The Government Supersector comprises federal, state, and local government, including higher education institutions and public schools. In June 2018, the Government Sector employed 442,800 individuals, a year-over-year increase of 2.6%. The industry accounted for 16.4% of total Colorado employment in 2017.

The local government subsector includes city, county, school, and special district employees. Local government experienced a year-over-year increase in total employment, rising by 1,400 jobs year-to-date in June compared to the same period last year. The number of local government employees who work in the educational services sector increased by 900 year-over-year through June 2018. 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, independent agencies such as the National Park Foundation, federal courts, federal laboratories, and other institutions managed and funded by the federal government. Federal government employment recorded a year-over-year decrease of 1,400 jobs year-to-date in June 2018.

The state government subsector includes agencies and departments run by the state, such as the Colorado Department of Transportation and the Colorado Department of Regulatory Agencies. State agency and department employees include a vast array of individuals, such as state patrol officers, state university professors, and fishery supervisors for the Colorado Department of Corrections. State government employment increased 6,900 year-to-date in June, but this is partially driven off a reclassification of private-sector entities to the public sector.

International Trade

According to data from the BEA, U.S. net exports increased at a seasonally adjusted annual rate of 6% in May 2018. Exports of goods rose 14% year-over-year, and exports of services grew 7.3%. Imports increased 8.3%—imports of goods climbed 8.7% and imports of services rose 6.6%. The nation's top five trading partners are Mexico, Canada, China, the Republic of Korea, and Malaysia.

In May 2018, Colorado exports rose 12.3% year-over-year, continuing a recent growth trend that began in March 2016. May year-to-date exports in 2018 outpaced those of 2017 by 11%, while those of 2017 outpaced 2016 by 7.3%. Despite this recent growth, exports are still 4.6% less 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 WISERTrade, in May 2018 Colorado's top five export markets were (in order): Mexico, Canada, China, the Republic of Korea, and Malaysia. While year-to-date exports to Canada increased by 3.7%, May 2018 saw a year-over-year decline of 5.2%.This decline, after recording growth in the beginning of 2018, is likely a balancing of 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, month-to-month export volatility, and uncertainty surrounding NAFTA negotiations and the steel and aluminum tariffs. Exports to Mexico are down 6.7% year-over-year in May 2018, but year-to-date levels have increased 10.4% through May 2018. Exports to Mexico have grown steadily since 2009, despite the relative weakening of the Mexican peso against the U.S dollar. One reason may be the strength of the Mexican economy, especially in the beginning years of the recovery (2009 to 2012), when its GDP purchasing power parity (PPP) grew by 4.4% per year on average. The decline in May, which followed year-over-year increases in every of month of 2018, may be due to similar trade tensions as those between the United States and Canada.

France emerged as Colorado's 3rd-largest export destination in May 2018, up 427% year-over-year and up 410% over April 2017. This exponential rise can be attributed to a sizable sale of art from Colorado to France—the export volume of original sculptures from Colorado to France reached $23 million in May while the total volume of all works of art exported worldwide from Colorado in 2017 was about $17 million. These figures are not likely to continue into 2019. For year-to-date levels, France was the 12th-largest export destination. Exports to France have declined significantly since 2000, when it was Colorado's 5th-largest destination market and accounted for about 6% of volume. Exports to China have risen 10.6% year-over-year in May 2018 and 5.3% year-to-date. Exports to the Republic of Korea increased 32.9% year-over-year and 27.9% year-to-date. 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 2018, accounting for about 53% of total volume, were (in order): Meat and Edible Meat Offal; Industrial Machinery, including Computers; Optic/Photo/Medic or Surgical Instruments; and Electric Machinery. Year-to-date, all of these products increased in volume over 2017, with only Meat showing a year-over-year decline in May 2018. Meat increased by 0.9% year-to-date and decreased by 3.1% year-over-year; Industrial Machinery increased by 15.4% and 19.7%, respectively; Optic/Medical Instruments increased by 7.5% and 13%, respectively; and Electric Machinery increased by 19.3% and 0.3%, respectively. The 5th-largest export product in May 2018 was Works of Art, which saw a year-to-date increase of 706.5% and year-over-year increase of over 18,000%. These staggering numbers partly align with those of France, which received $23 million of original sculptures, and are likely representative of an isolated sale rather than a burgeoning trend in art exports. Also included in these works of art export growth figures were about $22 million in paintings/drawings that were exported to Brazil and Switzerland. Meat has been on an upward trajectory since the beginning of the recovery, with a moderate decline between mid-2014 and early 2016, Industrial Machinery and Optic/Medical Instruments have been declining steadily since late 2012/early 2013, and Electric Machinery has remained relatively flat but volatile (several times increasing or decreasing nearly 20% of value month to month) since late 2011.

Year-to-date, the value of goods that Colorado imported increased by 6%, continuing an upward trend since a post-2011 low in February 2016. However, in May imports contracted 2.2% year-over-year and are down 15.6% from the post-recession high in October 2014. The top three countries for Colorado imports are (in order): Canada, China, and Mexico.

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. 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 quarters of 2017. Imports from China have been on a slight decline since mid-2015, and those from Mexico have been flat but volatile since mid-2014. The May 2017 year-over-year increase in imports from Canada was 54.2%, followed by an increase of 25.9% in 2018. Year-to-date imports from Canada also increased, at 3.5%. Imports from China were up in 2017, gaining 4.5% year-over-year in May before falling 6.4% through May 2018. This is in line with the trend since the beginning of the year: year-to-date levels in May 2018 were 11.8% below those of 2017. The value of imports originating from Mexico grew 3.4% year-over-year in May 2017 then slid 9.3% year-over-year in May 2018, with the year-to-date levels in May 2018 up 22.9% over the previous year.

The increase in U.S. tariffs and retaliation from trade partners raise concern for international trade and the U.S. economy in coming years. As of July, evidence is limited as to the impact on Colorado trade volumes. The steel products covered by the U.S. tariffs imposed in March decreased in April and May, but the year-over-year values for both months were substantially above those in 2017. Aluminum products, also substantially above April and May 2017 values, grew during both months after the tariffs were imposed. On the retaliation side, there have been recent reductions in Colorado exports to Canada and Mexico, but these came before the retaliatory tariffs from these countries were published, and exports overall, including those selling in China, have increased year-to-date and year-over-year in May 2018. Volumes in June and July, when the exemptions from the steel and aluminum tariffs for the nation's largest trading partners expired and the retaliatory tariffs against U.S. exports were imposed, should provide more insight into the effect on trade.

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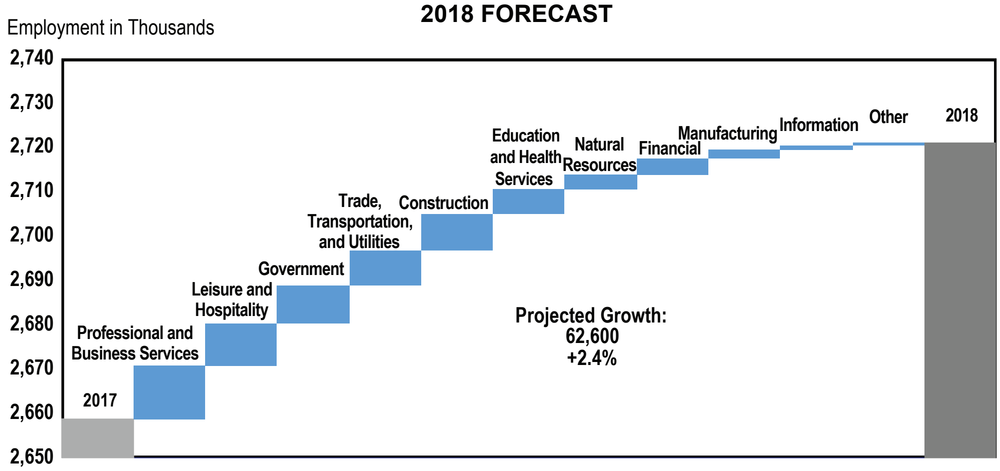
COLORADO EMPLOYMENT CHANGE
2018 FORECAST



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

COLORADO BUSINESS REVIEW

Leeds School of Business
UNIVERSITY OF COLORADO BOULDER
BUSINESS RESEARCH DIVISION

The CBR is a quarterly publication of the Business Research Division at CU Boulder. Opinions and conclusions expressed in the CBR are those of the authors and are not endorsed by the BRD, the Leeds School of Business faculty, or the officials of CU.

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Richard L. Wobbekind, editor; Cindy DiPersio, assistant editor; Brian Lewandowski, technical advisor; Shannon Furniss, design.

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