



Colorado Economic Update Focus on Manufacturing

Colorado Advanced Manufacturing Alliance
March 9, 2017
Gary Horvath



Basics of Global and U.S. and Economies

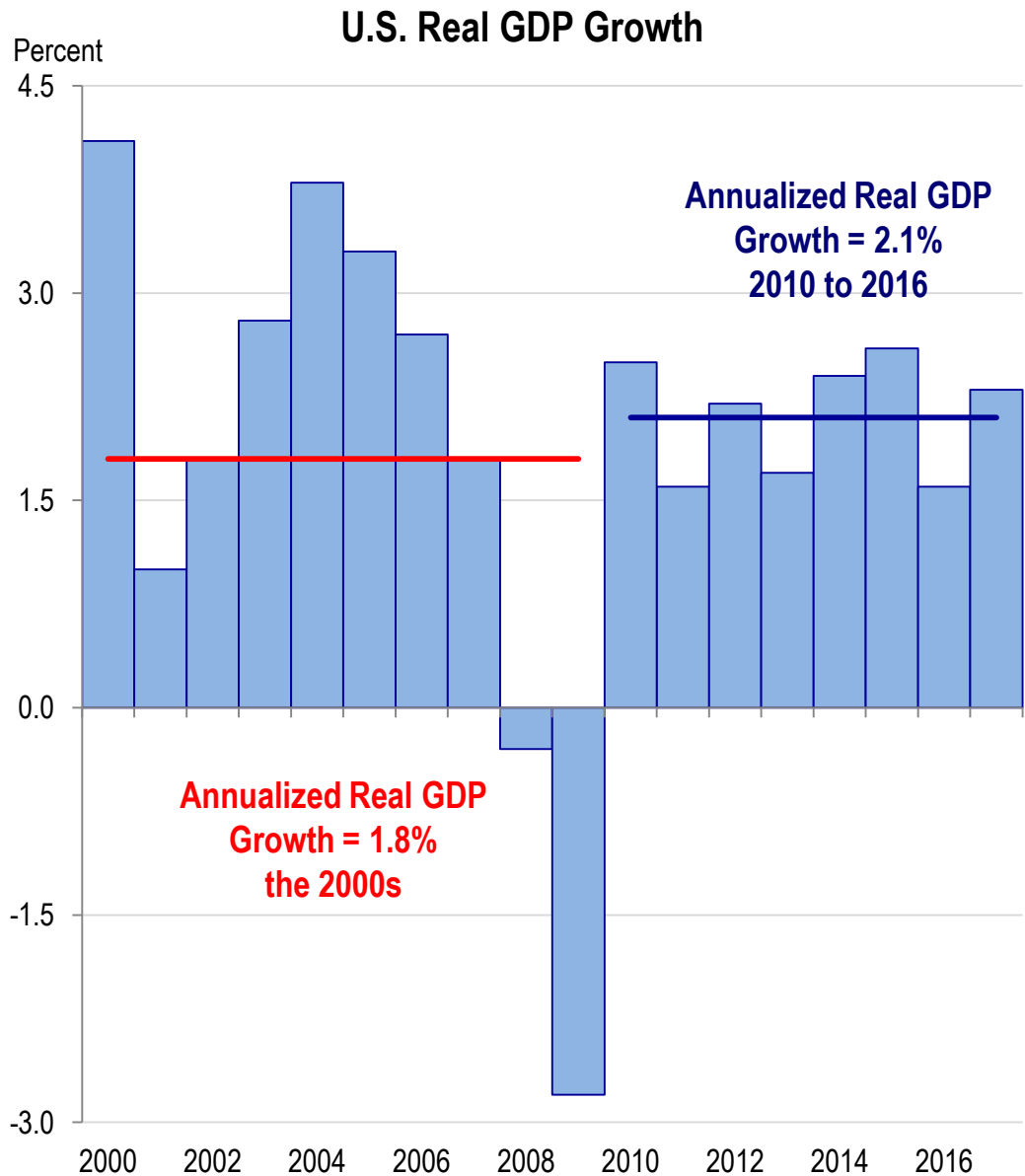
U.S. Real GDP Growth

C+I+G+X

Real GDP will grow at a rate between 2.1% to 2.5% in 2017.

- As is usually the case, personal consumption will drive real GDP growth in 2017. It will increase at a rate slightly greater than the rate of growth for the GDP.
- Business investment will increase if corporate tax rates are lowered. Stronger investment will benefit the economy in many ways.
- Government spending will see a slight increase.
- The trade deficit will increase as a result of the lack of demand caused by a strong dollar.

GDP = Consumption + Private Investment + Government Spending + Net Exports

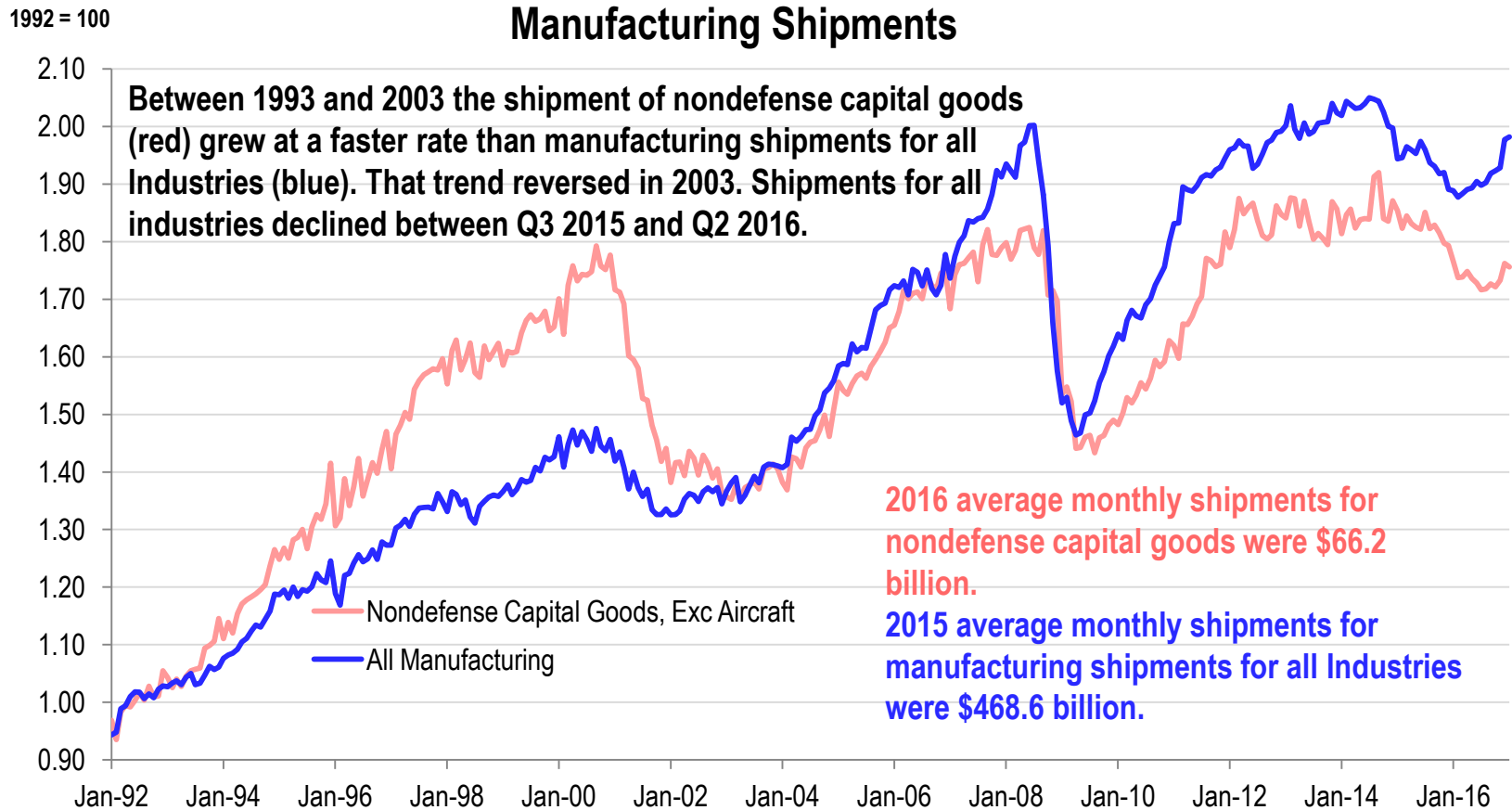


Source: Bureau of Economic Analysis, cber.co, chained in 2009 dollars.

Colorado-based Business and Economic Research <http://cber.co>

United States Manufacturing Shipments

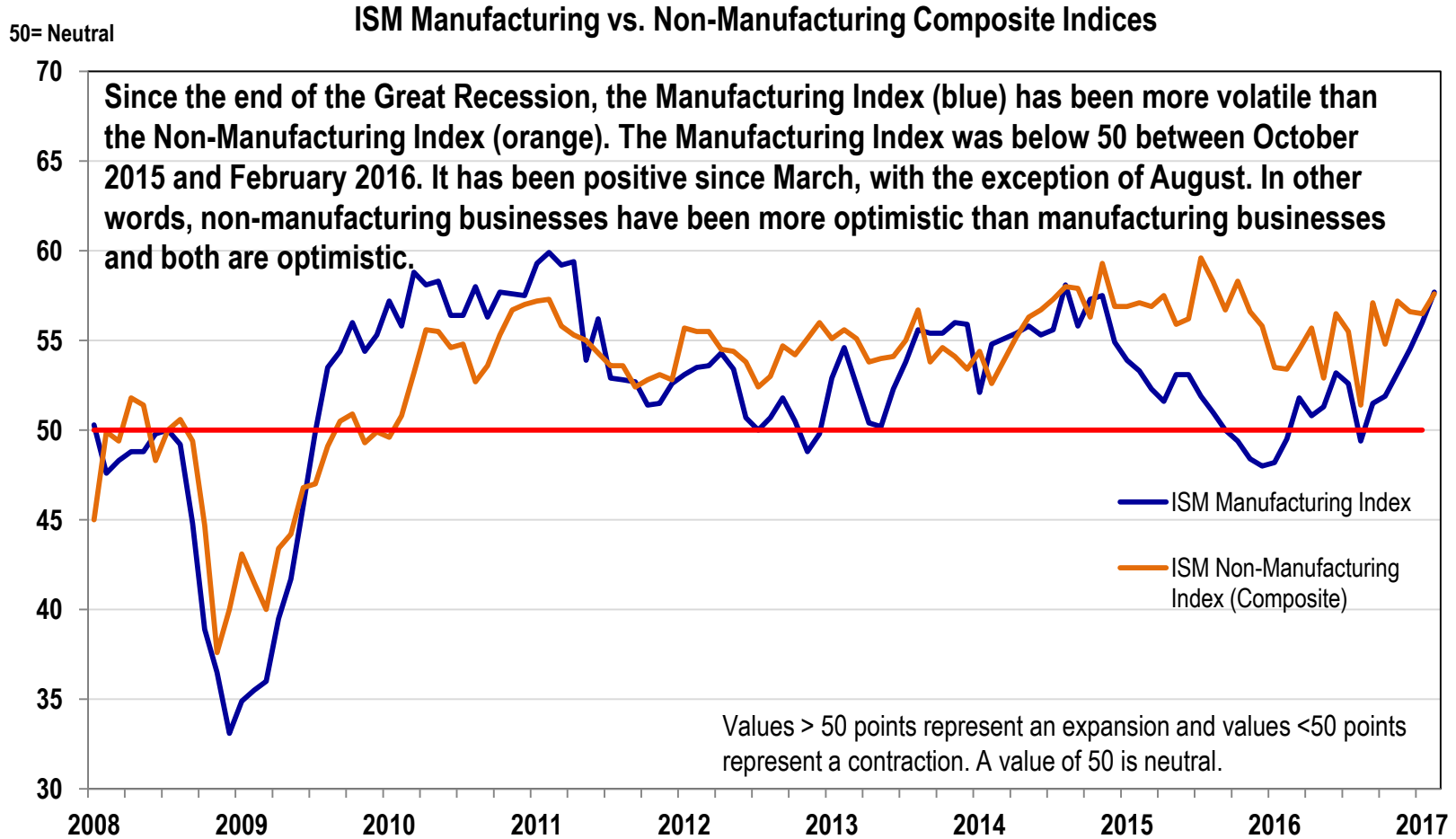
All Industries vs. Nondefense Capital, Excluding Aircraft



Source: FRED, SA. U.S. Bureau of the Census, cber.co. Note: Not adjusted for inflation.

ISM PMI Composite Indices

Manufacturing vs. Non-manufacturing



Sources: Institute for Supply Management (ISM), FRED, cber.co.

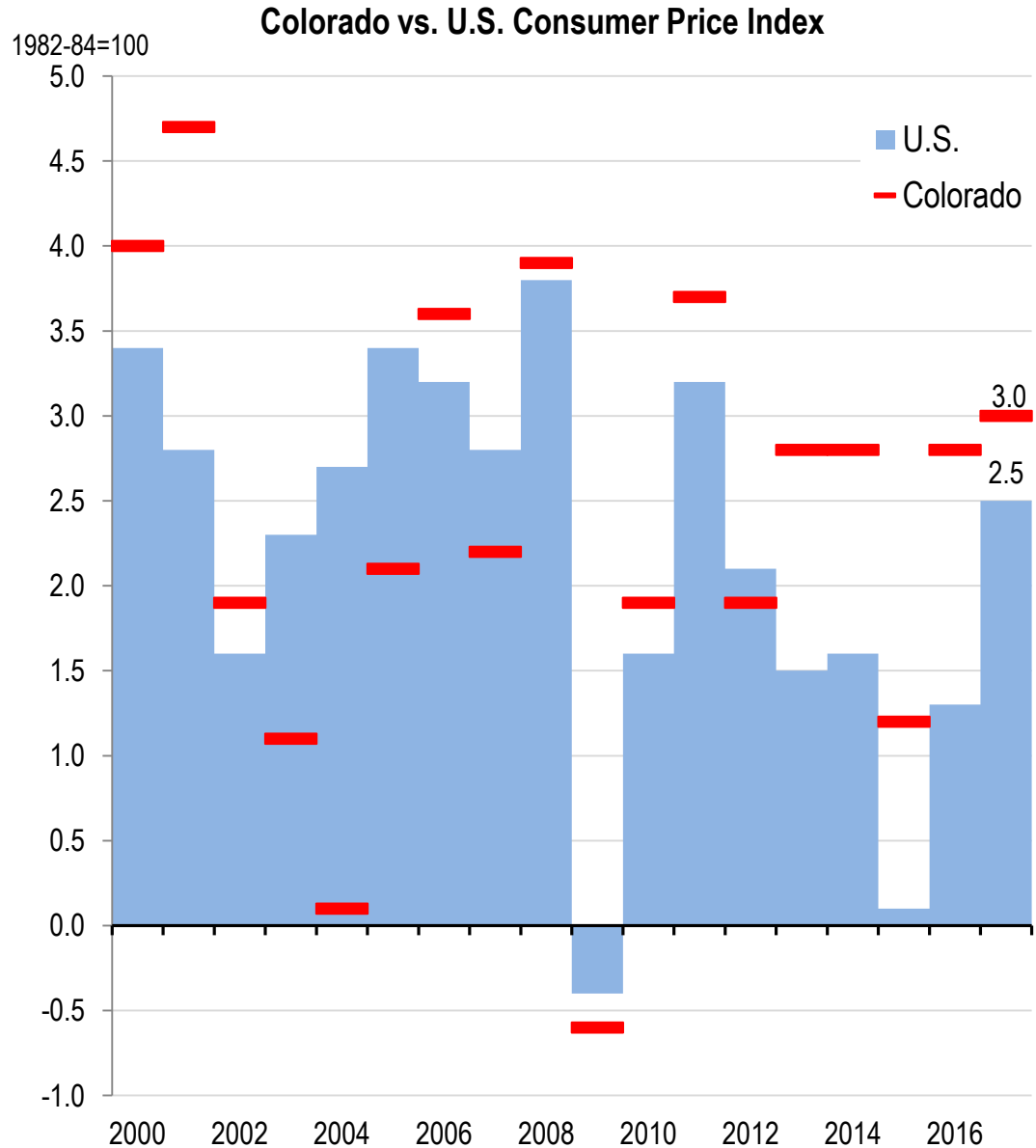
Consumer Price Index (CPI)

The Denver-Boulder-Greeley CPI (red bars) is sometimes used as a proxy for Colorado inflation.

It has been greater than the U.S. CPI 12 of 18 times between 2000 and 2017. Five of the six years that Colorado inflation was lower were between 2003 and 2009.

Recently, higher housing prices and medical costs have caused Colorado to be a more expensive place to live.

The Denver-Boulder-Greeley CPI is expected to rise by 2.8% in 2016 and 3.0% in 2017.



Source: Bureau of Labor Statistics, cber.co.

● The Global and U.S. in 2017

● Factors that Will Affect Manufacturing

●

1. Improved global economy (real GDP growth), 2.9%.
2. Stronger real GDP growth for the U.S., 2.2% to 2.4%.
3. Nationally, 1.9 million to 2.1 million jobs added.
4. The Fed is optimistic about the economy, interest rates will continue to rise in 2017.
5. Increased inflation 2.5% in the U.S. and 3.0% in CO.
6. After being down, manufacturing shipments are trending upwards.
7. Strong surge in optimism from the purchasing managers.
8. The dollar will continue to be strong.

2017 will be a year of extremes – both good and bad.

There is more upside potential than downside risk.

There is a much smaller pool of potential workers.



Basics of Colorado Economy

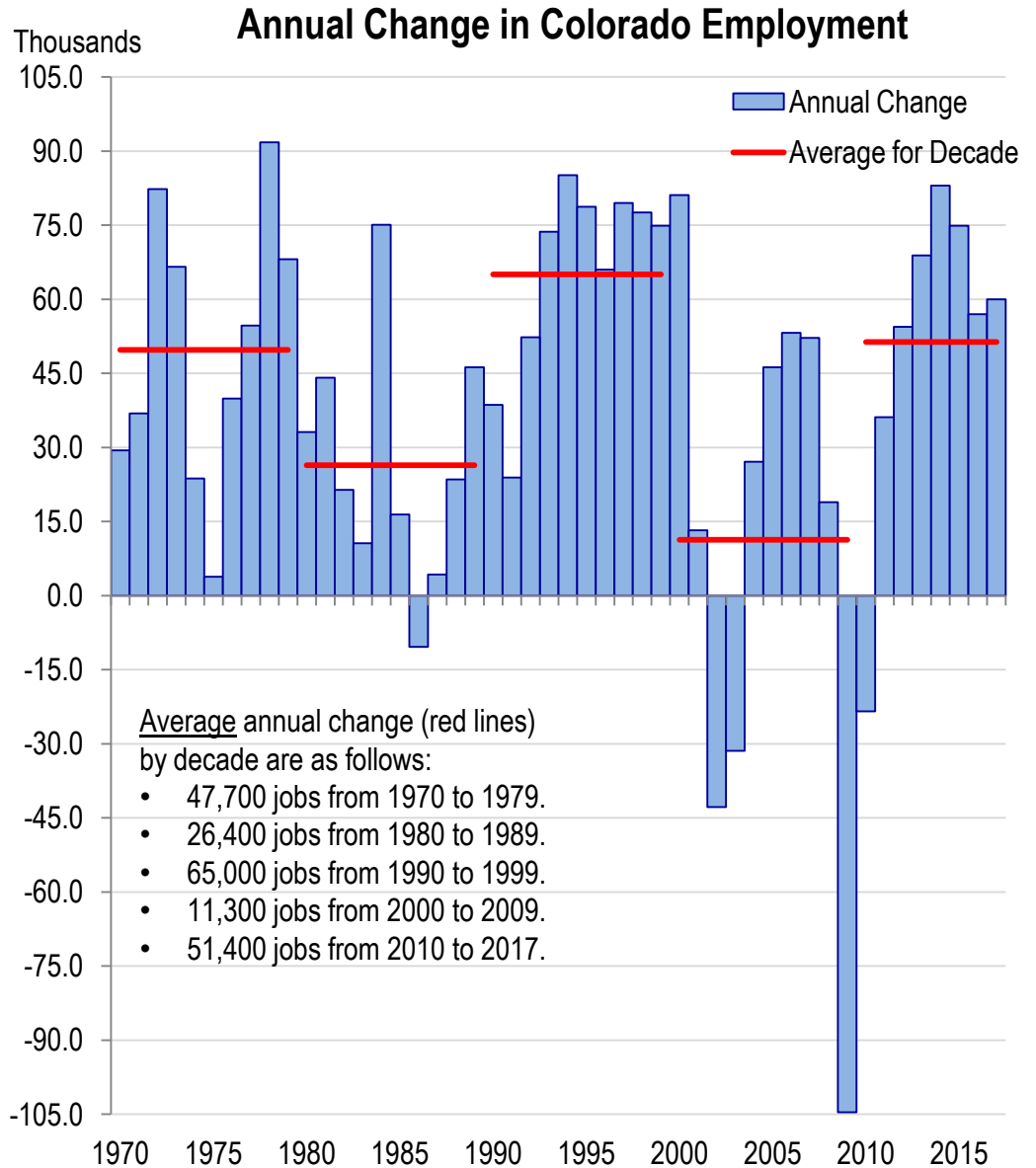
Employment, Unemployment, Population

Annual Employment Change in Colorado

The 2017 forecast assumes that Colorado added 74,900 jobs in 2015 and 57,000 jobs in 2016.

For the first 8 years of this decade, Colorado has added an average of 51,400 jobs.

The state will add 57,000 to 63,000 jobs in 2017. Colorado employment will increase by 2.2% to 2.4%.

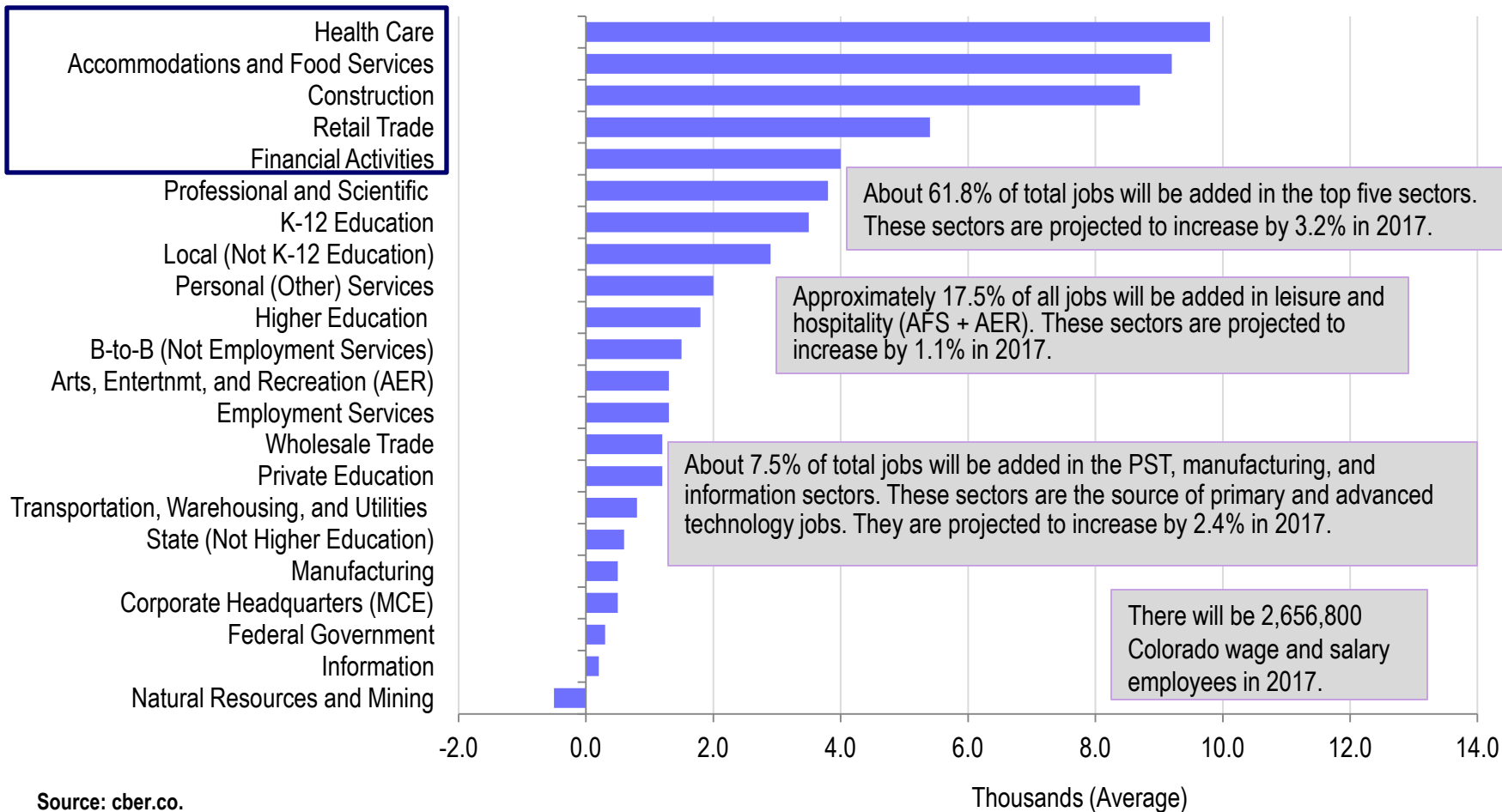


Source: Bureau of Labor Statistics, cber.co.

Projected Job Changes

2017 Forecast

Job Change All Sectors



About 61.8% of total jobs will be added in the top five sectors. These sectors are projected to increase by 3.2% in 2017.

Approximately 17.5% of all jobs will be added in leisure and hospitality (AFS + AER). These sectors are projected to increase by 1.1% in 2017.

About 7.5% of total jobs will be added in the PST, manufacturing, and information sectors. These sectors are the source of primary and advanced technology jobs. They are projected to increase by 2.4% in 2017.

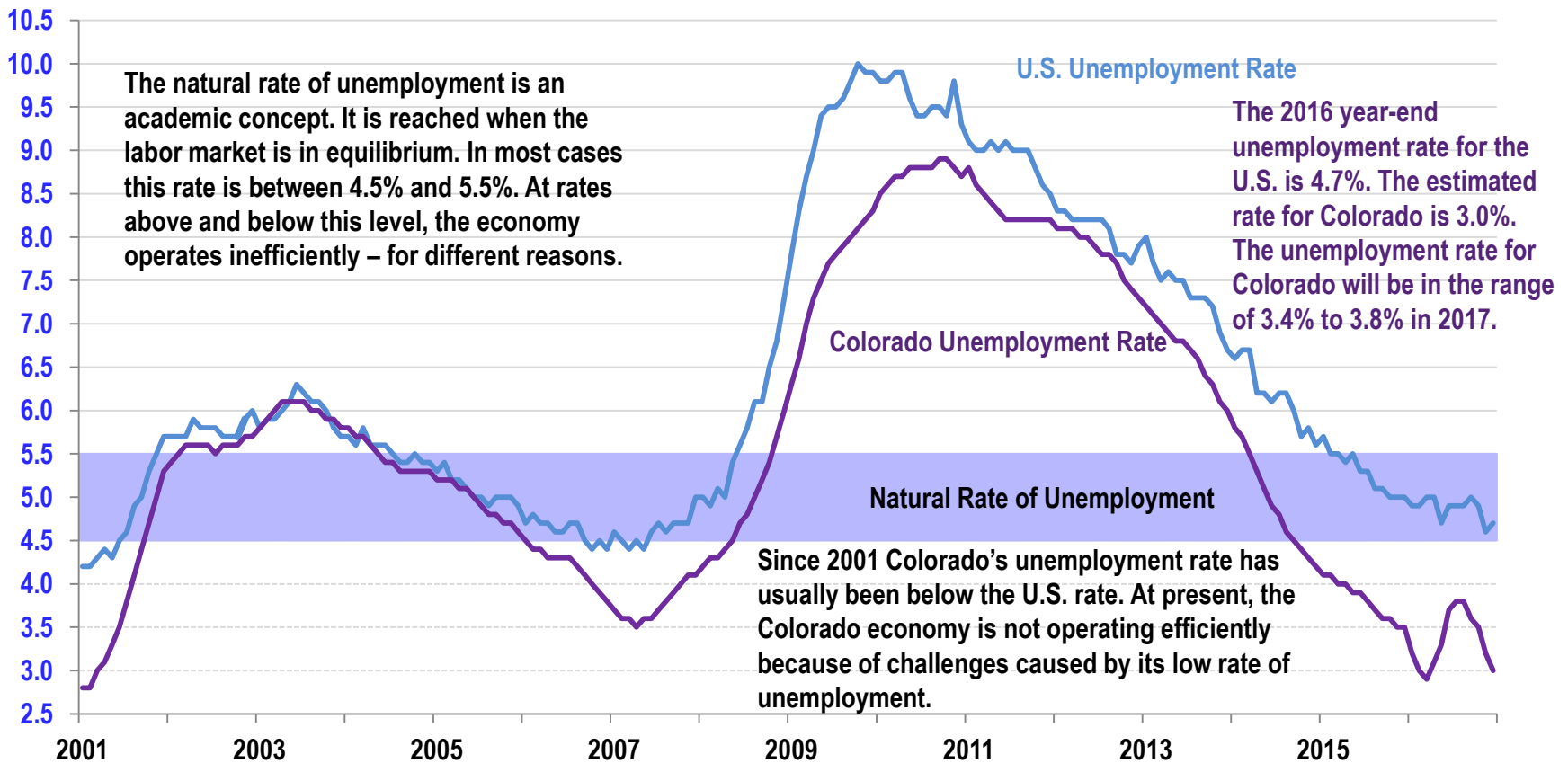
There will be 2,656,800 Colorado wage and salary employees in 2017.

Unemployment Rate

United States vs. Colorado

Percent

United States vs. Colorado Unemployment Rate



Source: Bureau of Labor Statistics, SA, cber.co.

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Colorado Population

Components of Change

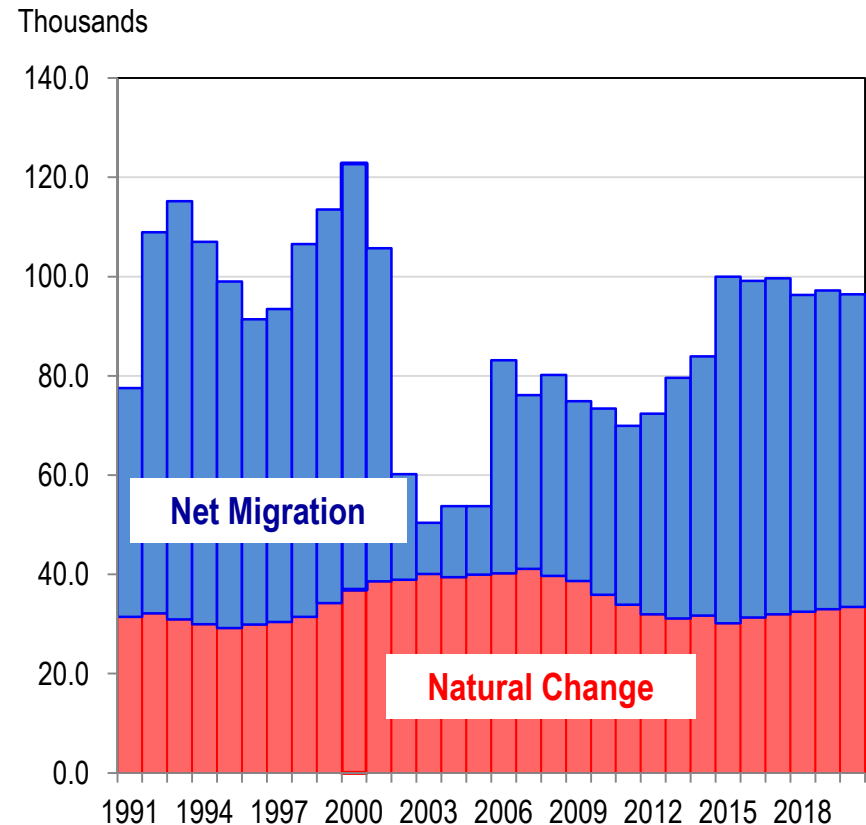
The population increases and decreases are a result of the natural rate of change (births minus deaths) and the change in net migration (people moving into the state minus people moving out of the state).

Over the past 2½ decades the natural rate of change (red bars) varied from a low of 29,145 in 1995 to a peak of 41,124 in 2007. For the past 10 years it has been slightly above 30,000.

Changes resulting from net migration (blue bars) are closely tied to the strength of the economy and the change in state employment. For example, there were five years, from 1986 to 1990, when net migration was negative (not shown on this chart). More people moved out of state than moved into the state to escape a regional recession. During the past two recessions, net migration declined, but did not turn negative. It was difficult for people to move anywhere to escape the downturn.

The Colorado population will increase by about 100,000 in 2015, 2016, and 2017. In 2017 the state's population will increase by 1.8% to 5.655,405.

Change in Colorado Population 1991 - 2016



● The Colorado Economy in 2017

● Factors that Will Affect Manufacturing

1. Modest, but diverse job growth
2. Construction will be solid
3. Extractive industries are on solid ground again.
4. Strong population growth
5. State government has budget challenges

There is a much small pool of potential workers.

How will businesses and manufacturers react to the small talent pool.



The Colorado Economy

Manufacturing – Size of Manufacturers, Establishments, Employees, Wages, GDP, Location Quotient

U.S. Establishments and Employment

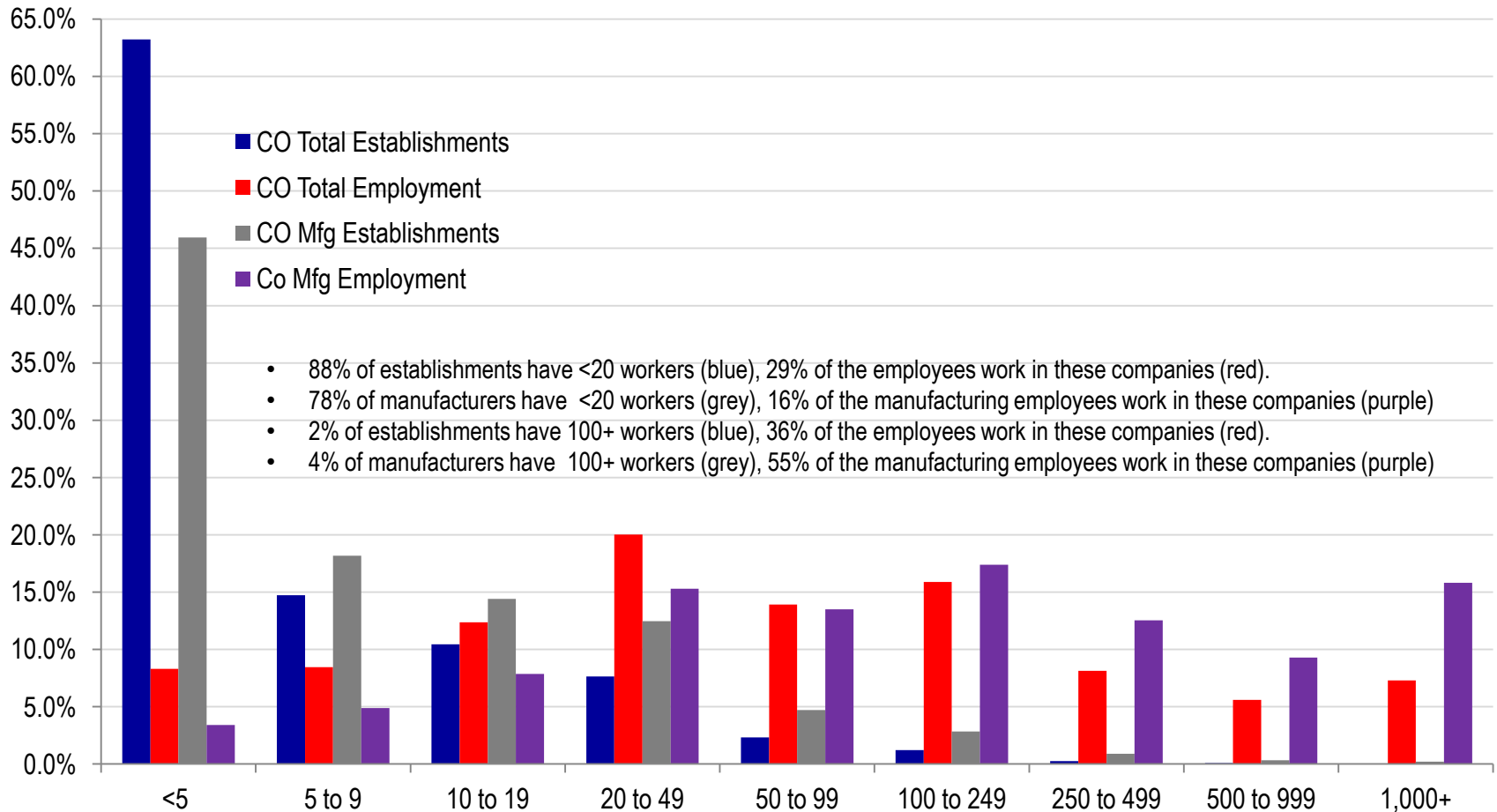
Total Employment vs. Manufacturing (2015)



Source: Bureau of Labor Statistics, cber.co.

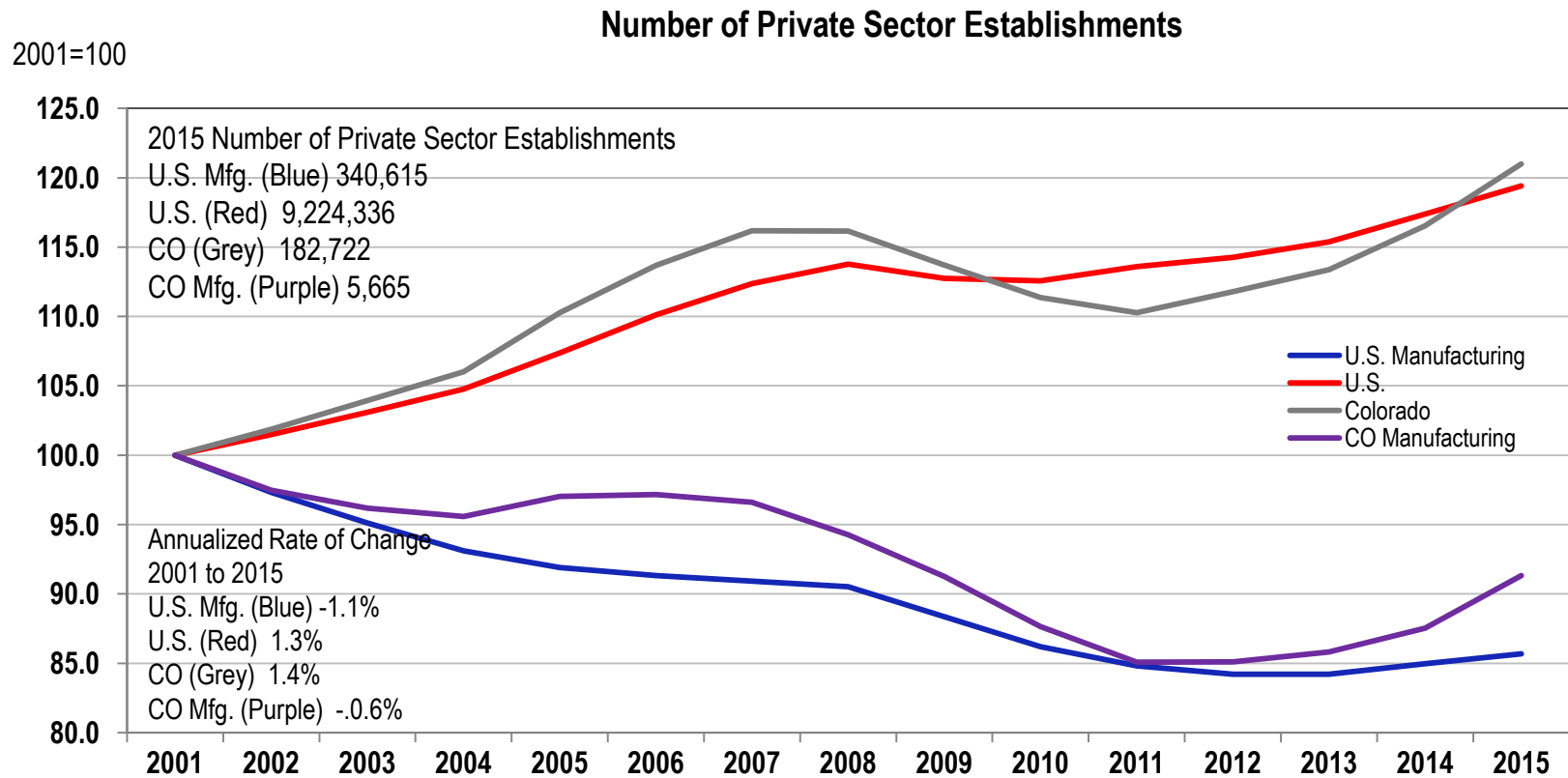
Colorado Establishments and Employment

Total Employment vs. Manufacturing (2015)



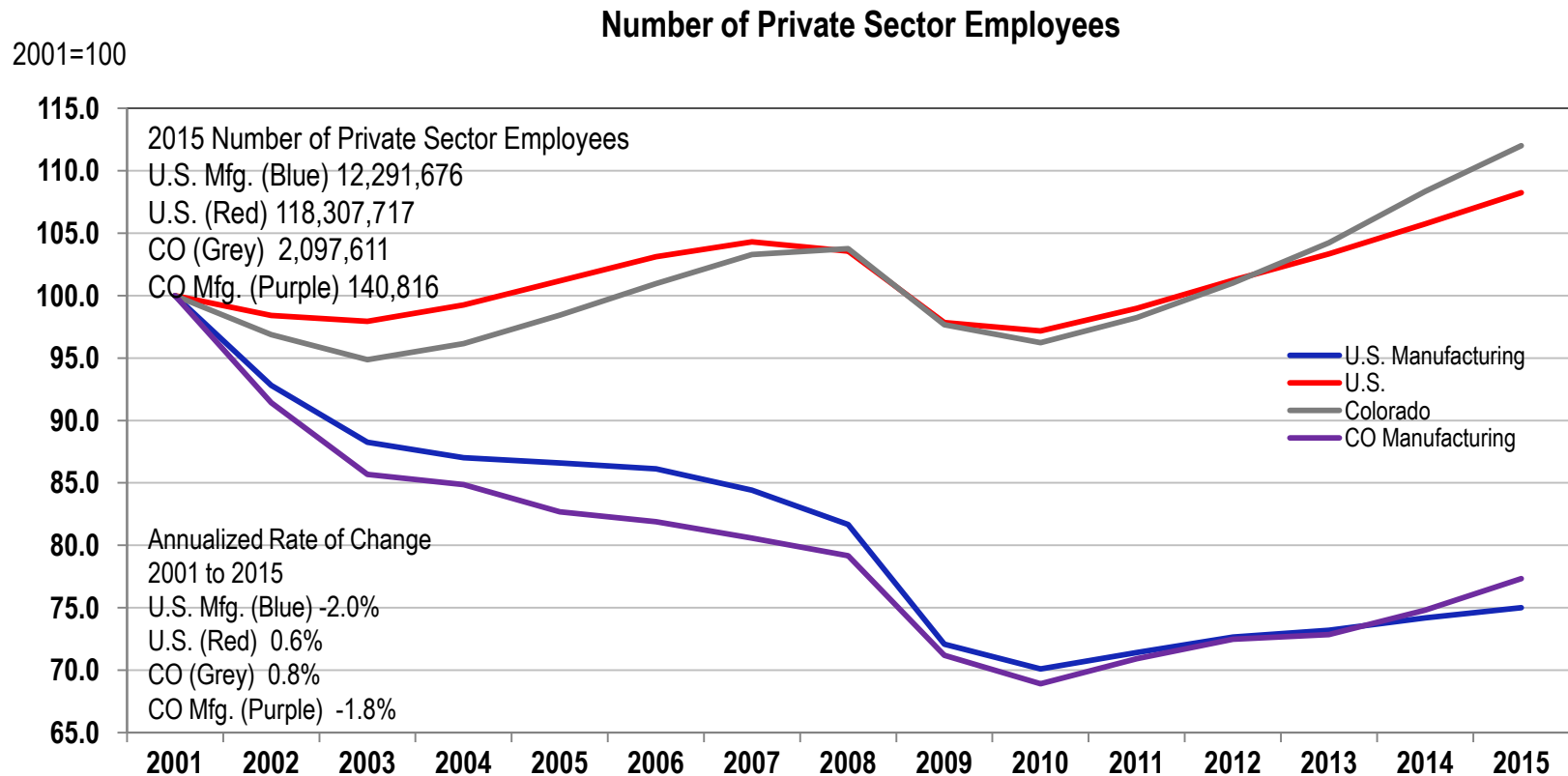
Source: Bureau of Labor Statistics, SA, cber.co.

- Number of Establishments
- Colorado vs. U.S. Private Sector
- Total and Manufacturing



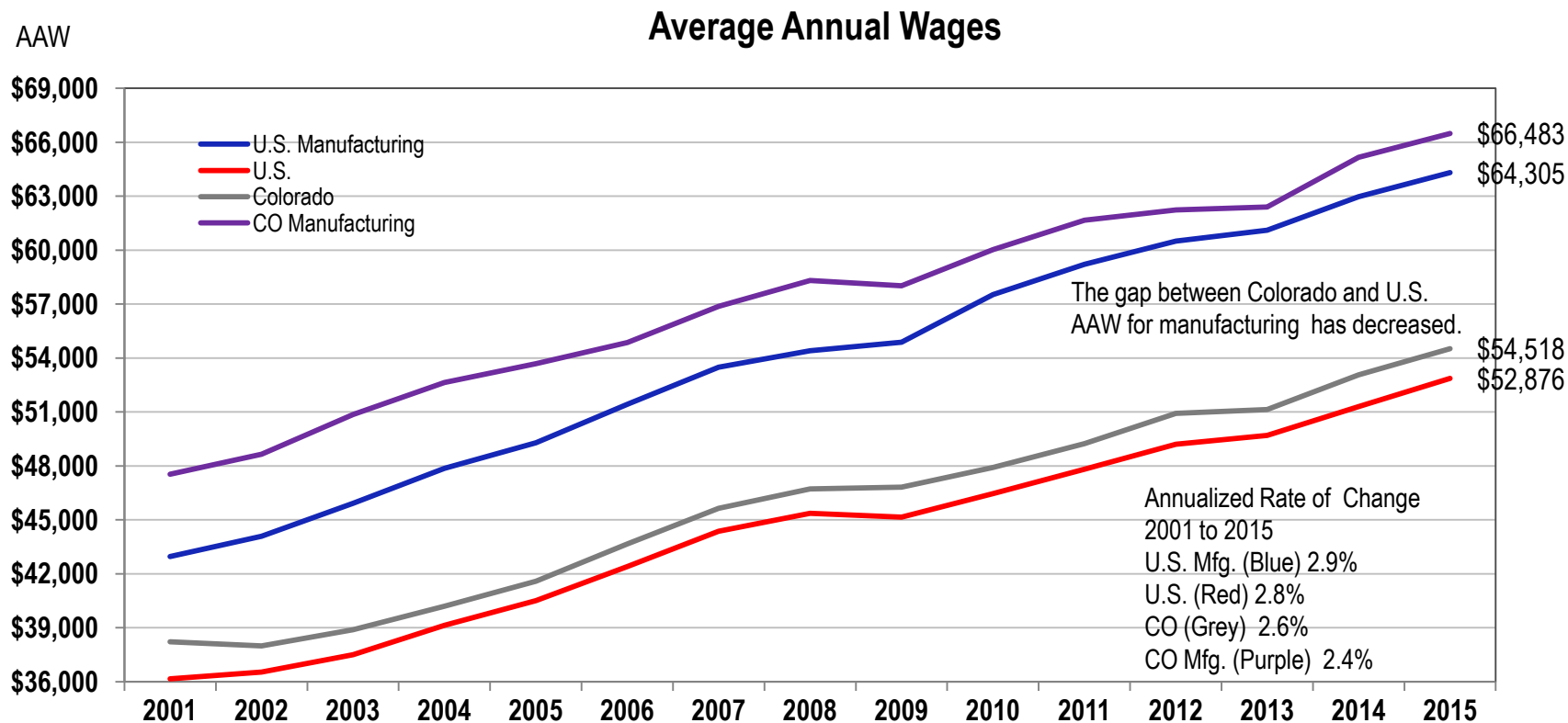
Source: Bureau of Labor Statistics, cber.co.

- Number of Employees
- Colorado vs. U.S. Private Sector
- Total and Manufacturing



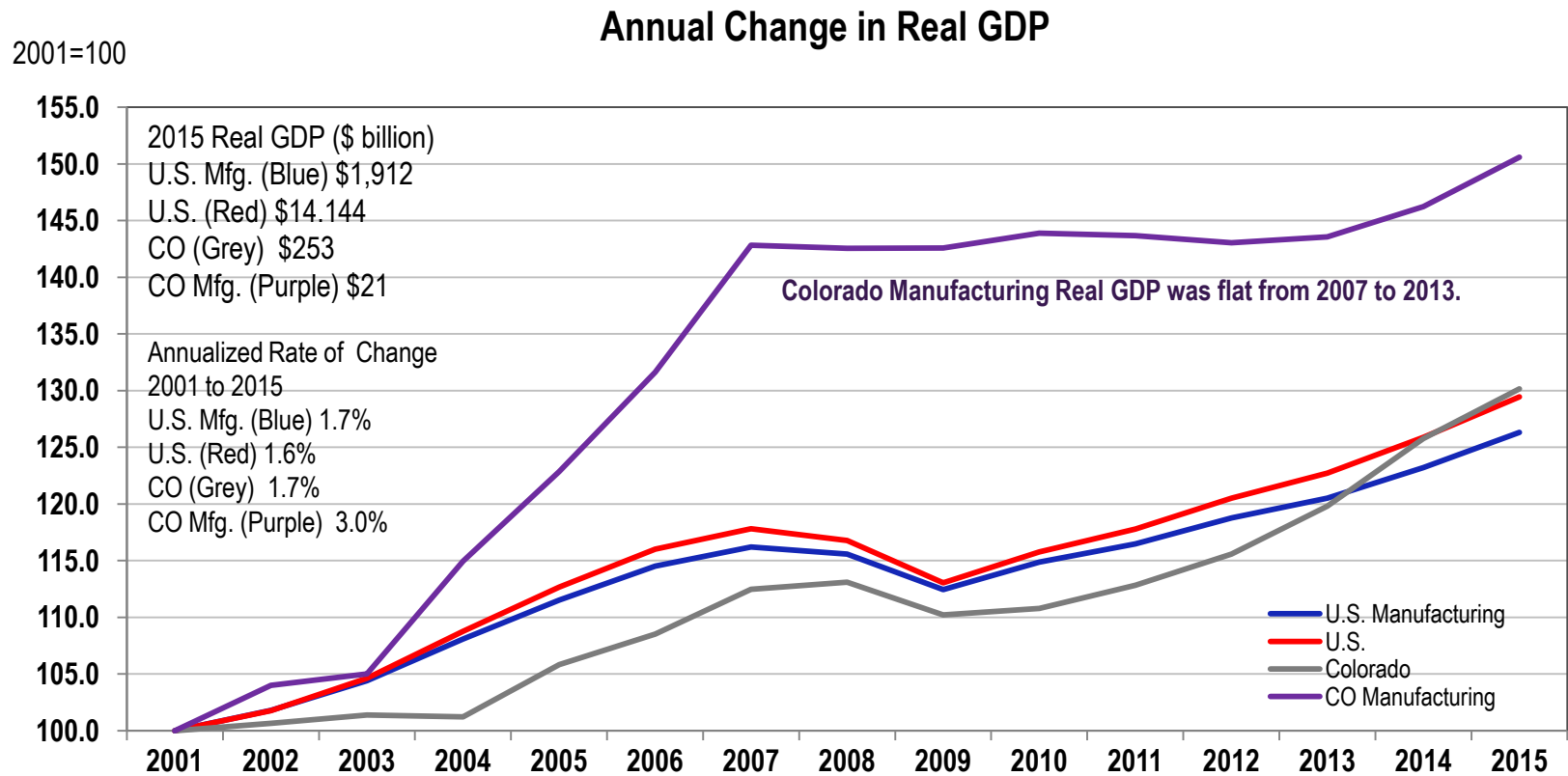
Source: Bureau of Economic Analysis, cber.co.. Note: U.S. real GDP is summary of states GDP.

- Average Annual Wages
- Colorado vs. U.S. Private Sector
- Total and Manufacturing



Source: Bureau of Labor Statistics. cber.co.

- Change in Annual Real GDP
- Colorado vs. U.S. Private Sector
- Total and Manufacturing



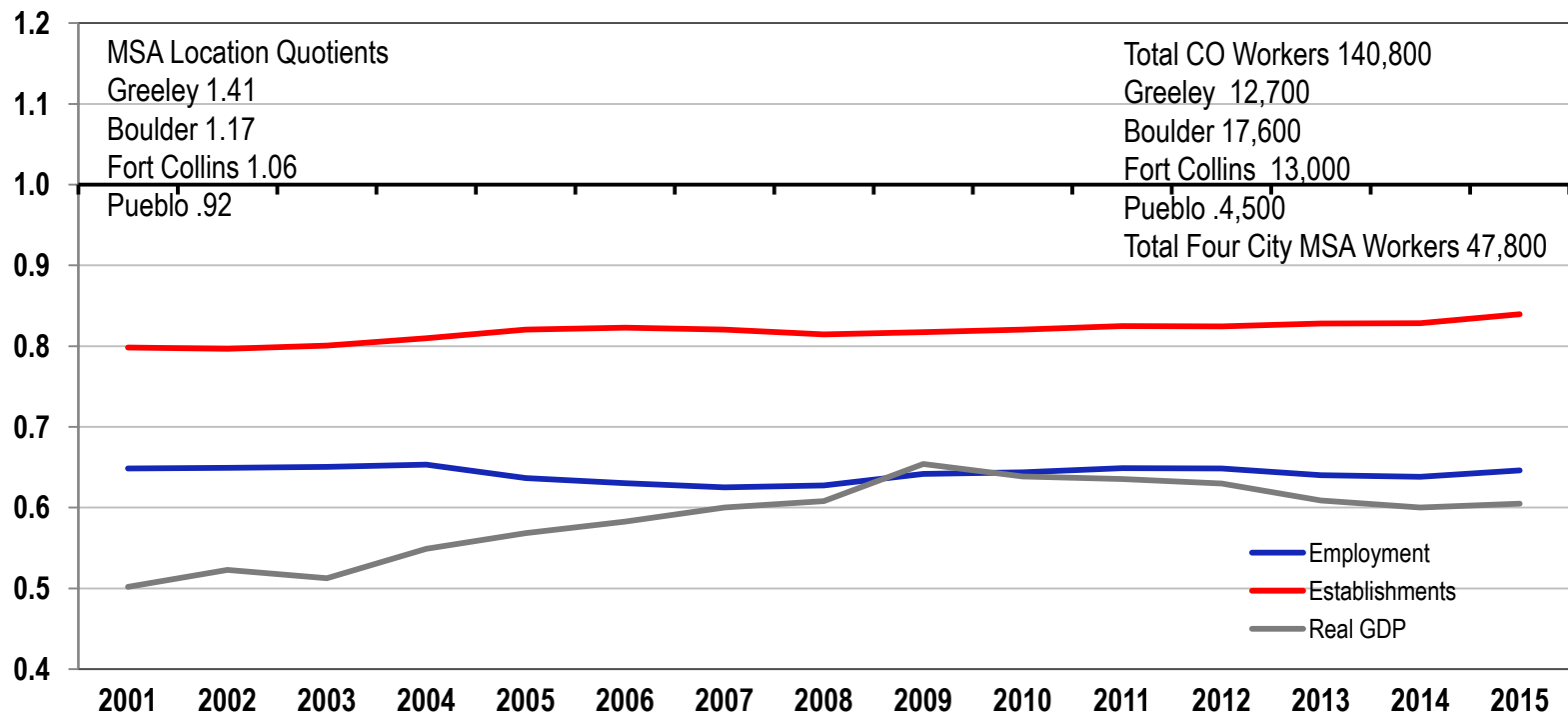
Source: Bureau of Economic Analysis, cber.co. Note: U.S. real GDP is summary of states GDP.

● Manufacturing Location Quotient

● Employment, Establishments, GDP



Manufacturing Location Quotient



Source: Bureau of Economic Analysis, cber.co. Note: U.S. real GDP is summary of states GDP.



Questions



cber.co Colorado Manufacturing Update

This analysis is for informational purposes only. Any opinions or interpretations of data are those of the presenter. As such, they do not represent the viewpoints of any group or particular organization.

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ABOUT THE AUTHOR

Gary Horvath has produce annual employment forecasts of the state economy for over 25 years. They have been supplemented by monthly economic updates and indices that track economic performance over the short term. In addition he has directed three statewide analyses that included reviews of all 64 county economies.

In addition, Horvath was the principal investigator for a state and federally funded project to prepare a nanotechnology roadmap for Colorado. As well, he was a co-founder of the Colorado Photonics Industry Association, a trade group for Colorado’s Photonics cluster. Horvath has been an active board member of the group since its inception.

Horvath has also served on the Board of Directors for the Economic Development Council of Colorado, Northwest Denver Business Partnership, Adams County Economic Development, and Broomfield Economic Development Corporation. Horvath has also been the lead for the photonics/electronics cluster in OEDIT’s early stage and proof of concept grant programs.