

# What Drives Prosperity? Lessons from the Economics of Growth

Legislative Economic Development Task Force  
October 18, 2012



# Our Goal for Today

---

- Present some lessons from the economics of growth.
- Provide framework to help organize the knowledge you already have.
- We'd like an informal, classroom-style discussion, where we use your examples to illustrate the framework.



# Economic Output

---

- What is it?
- How can we measure it?



# Economic Output

---

- Economic output occurs when we transform “inputs” into higher-valued “outputs.”
- Inputs --- also referred to as “factors of production” --- include capital and labor.
- The rate at which we transform inputs into outputs varies across regions and over time, and is referred to as “productivity.”



# Economic Output

---

- Output is usually measured by Gross Domestic Product.
- It is the total value of the goods and services produced.
- Equivalently, it is the total income earned, coming from wages, rents, interest, and profits.



# Economic Output

---

- How does economic output translate into wealth and increase in standards of living for residents of a region?



# Growth in Output

---

- What causes growth in output?



# Growth in Output

---

- Growth in output must come from one of two things:
- **Factor Accumulation** We can produce more output when we have more inputs. Hence, increases in the amount or quality of capital or labor will increase output.
- **Productivity Improvements** We can do more with less when we learn/choose to transform inputs into output more efficiently.



# Factor Accumulation

---

- What causes accumulation of capital?



# Factor Accumulation

---

- We refer to the process by which we accumulate capital as investment. Hence, the level of investment is a key determinant of growth.



# RioTinto

Kennecott Utah Copper



# Factor Accumulation

---

- What causes accumulation of labor?



# Factor Accumulation

---

- The amount of labor is determined by population growth.
- Note that population growth can lead to either increases or decreases in per-capita output.
- Investments can make labor more productive, so accumulation of labor inputs can also come via investments that make people healthier and better educated. We refer to this process as human capital accumulation.



---

# Utah's Unique Demographic Profile

In the country...

Highest fertility rate

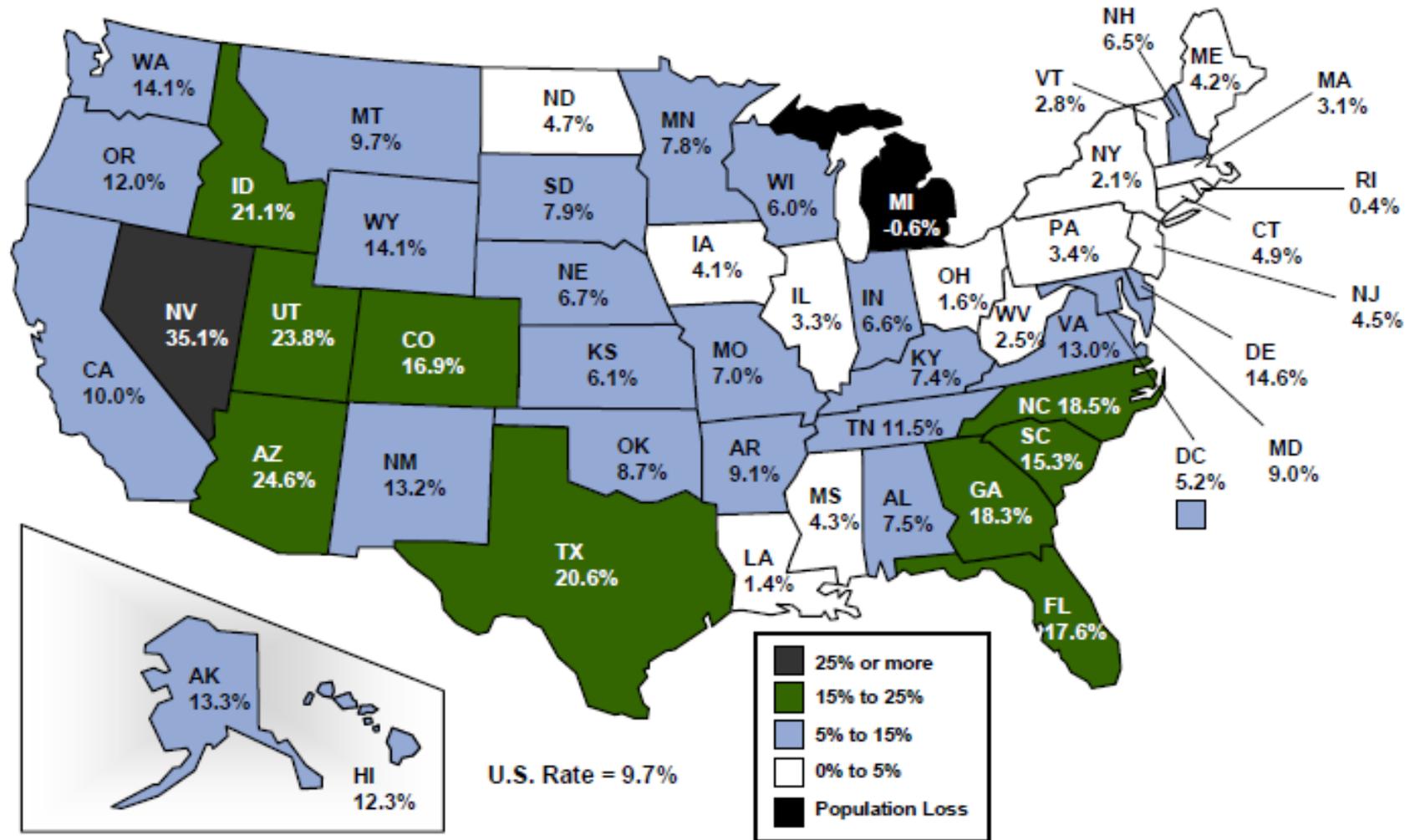
Lowest median age

Largest household size

Third fastest growing

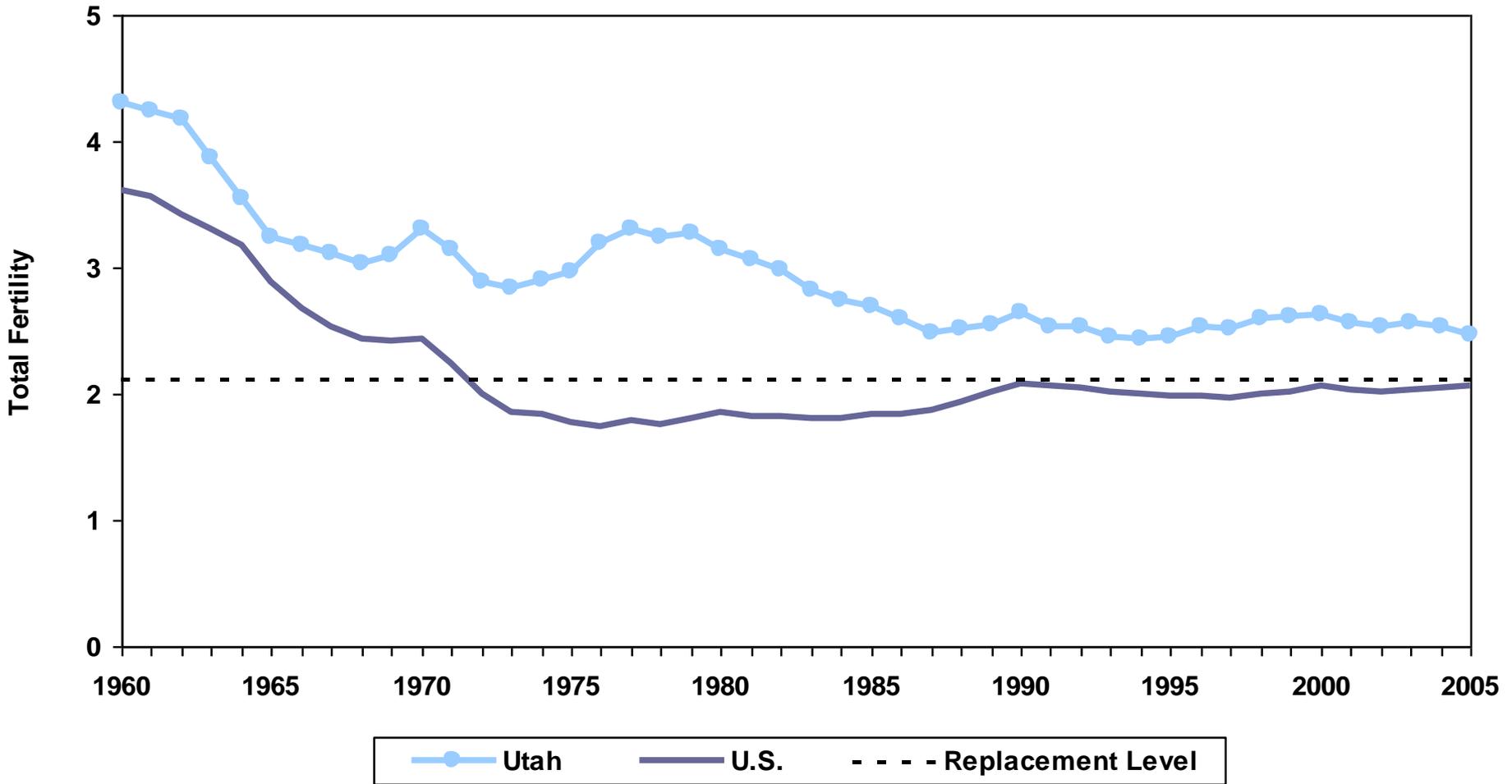


**Figure 8**  
**Percent Change in Population for States: 2000 to 2010**



Source: U.S. Census Bureau, 2010 Census

# Total Fertility

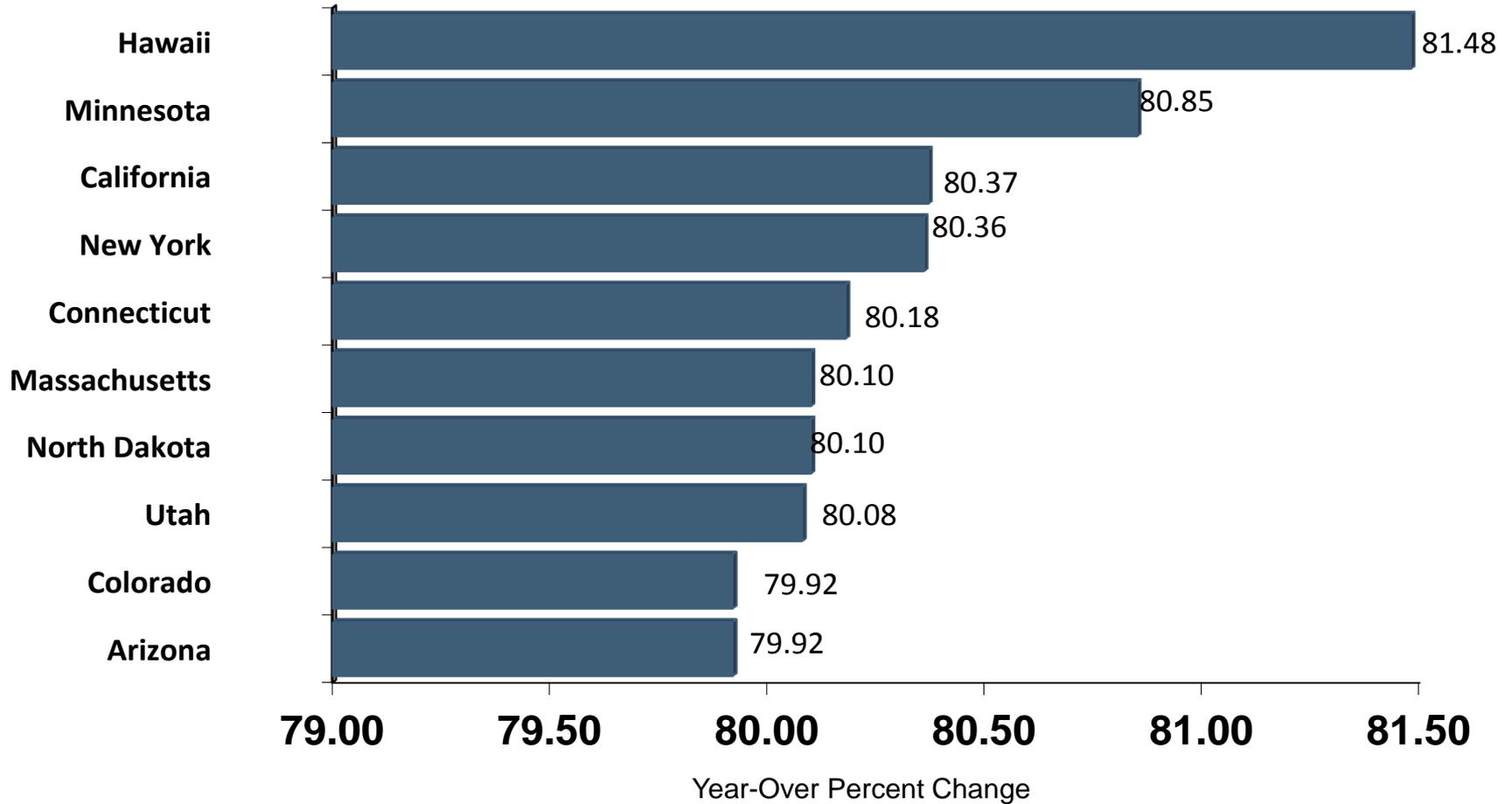


Note: The Replacement Level is the fertility level at which the current population is replaced

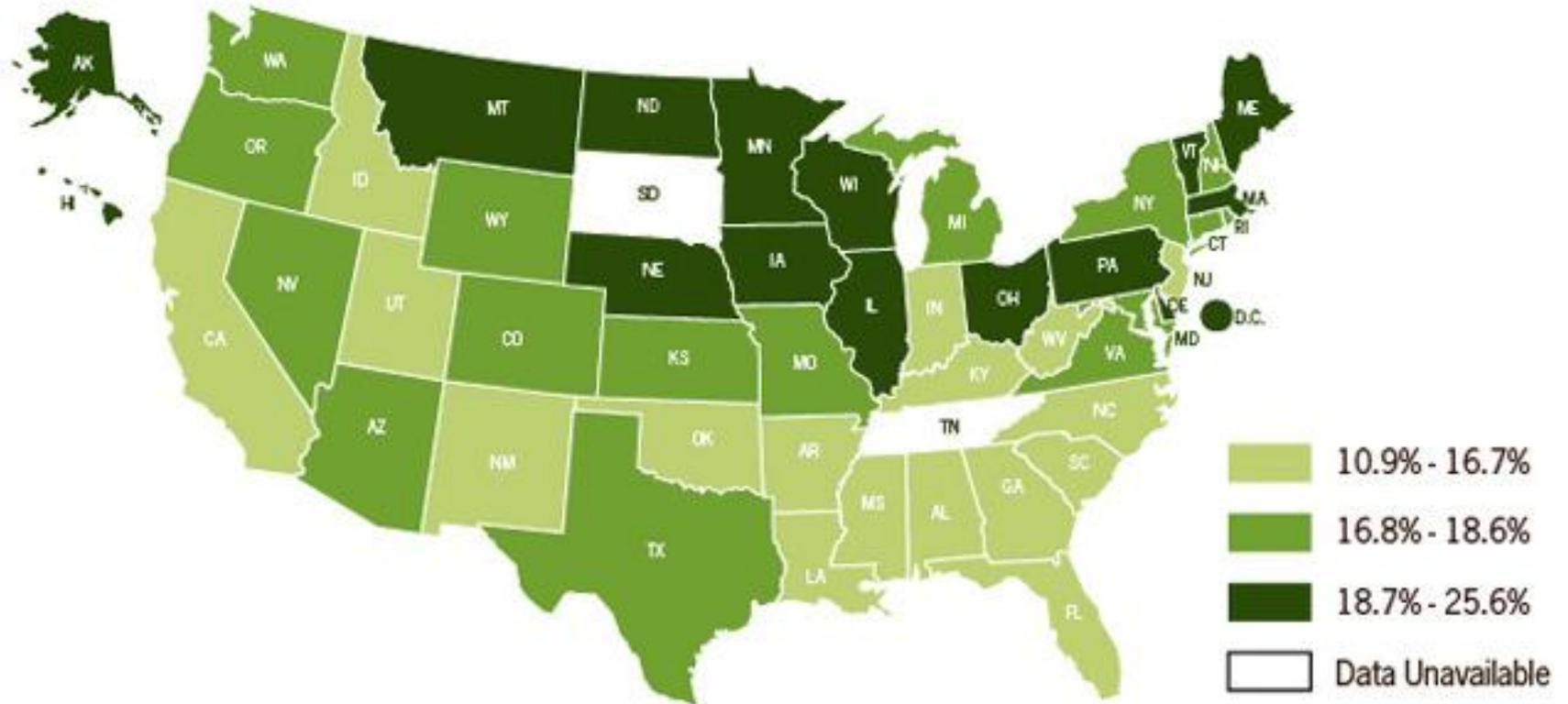
Sources: National Center for Health Statistics

# Life Expectancy

## Top Ten States



# Utah has the lowest rate of binge drinking in the nation

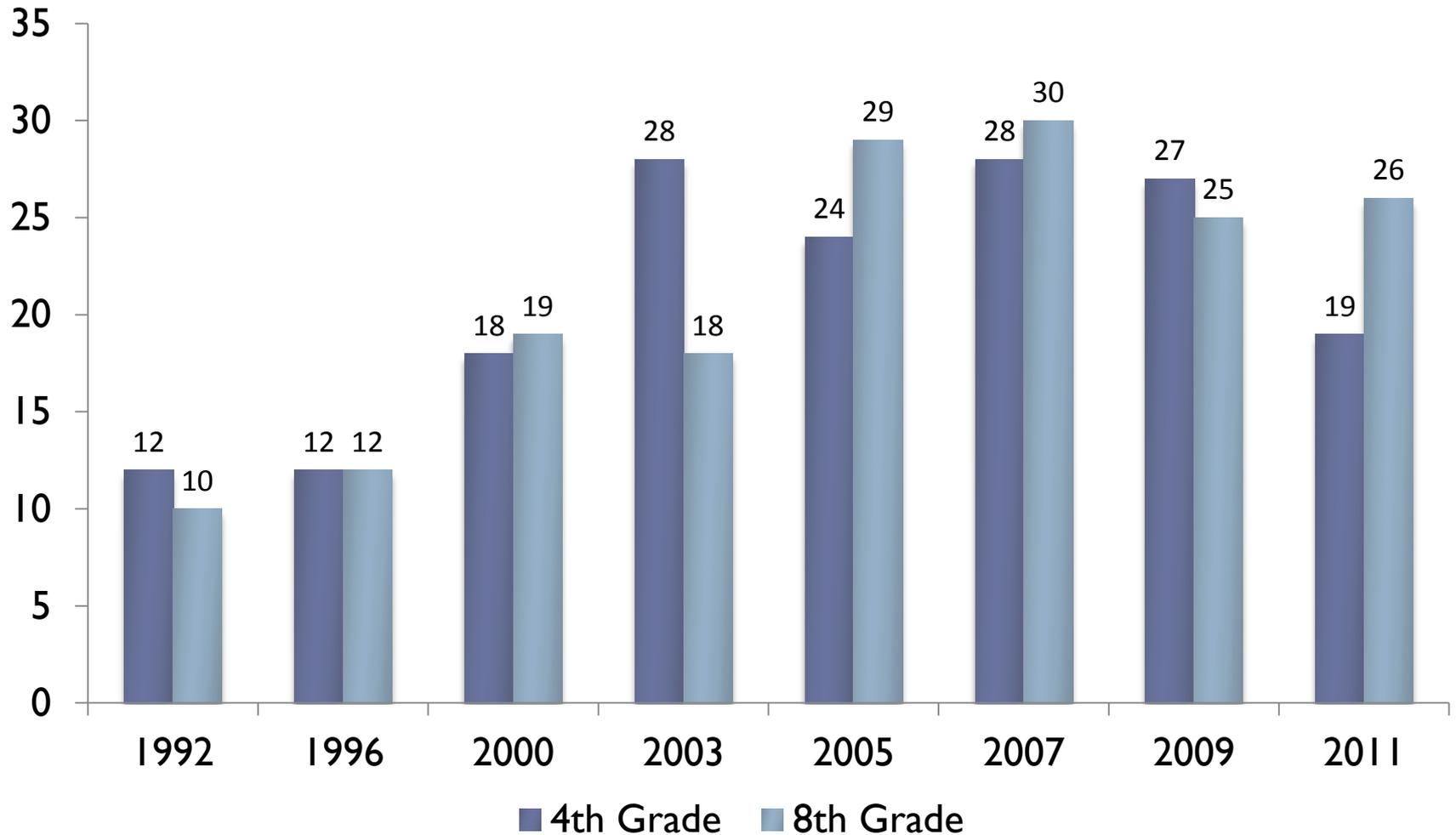


SOURCE: 2010 Behavioral Risk Factor Surveillance System Combined Landline and Cell Phone Developmental Dataset, Adults Aged 18 and Older, US



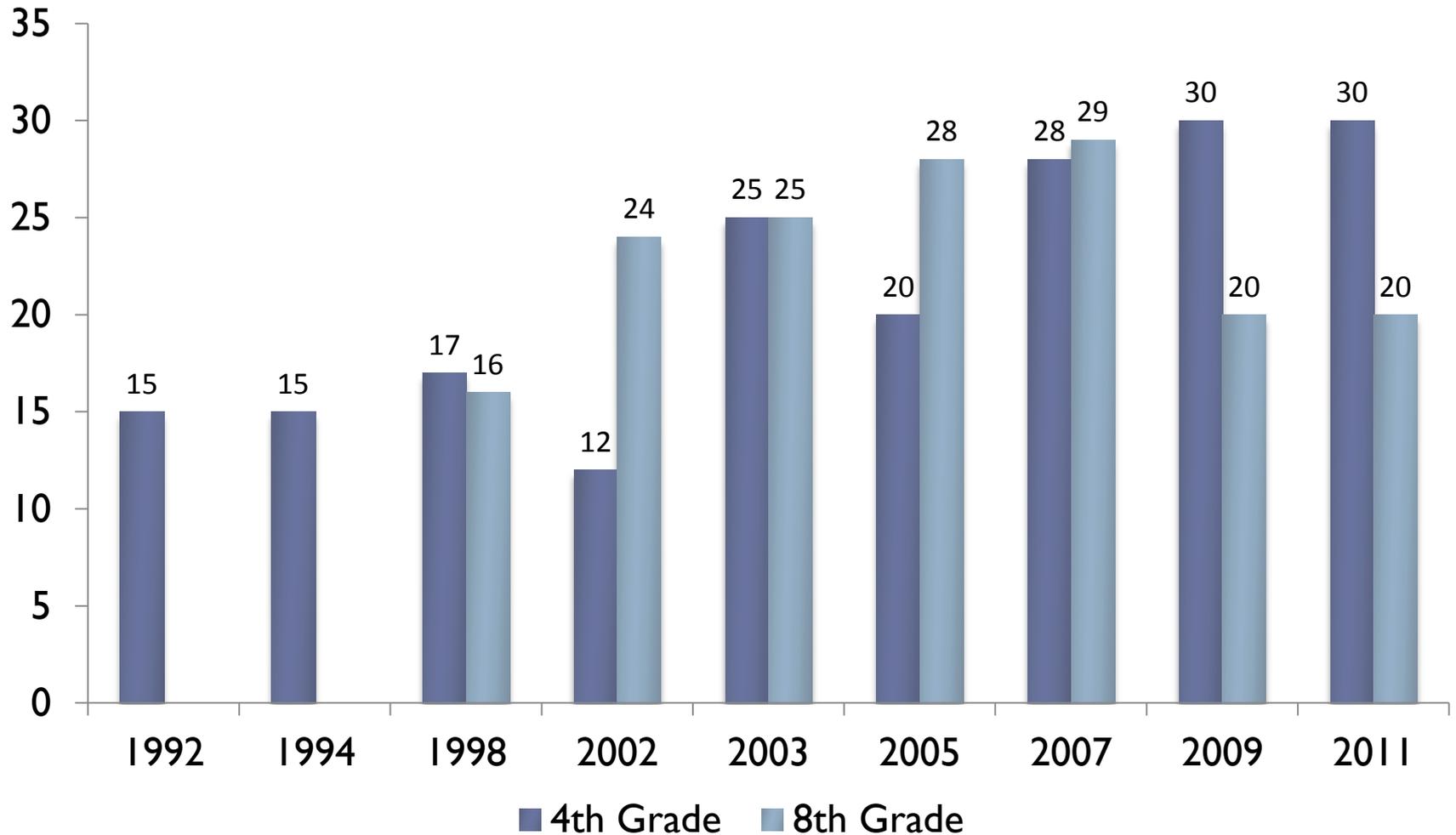
# Math Test Score Comparisons

Utah's rank among states



# Reading Test Score Comparisons

Utah's rank among states



# Productivity

---

- What improves productivity?



# Productivity

---

- Productivity rises when we have better technology and when we produce more efficiently.
- Technology means know-how and innovation.
- Efficiency means that we are providing the right incentives for individuals to generate output.

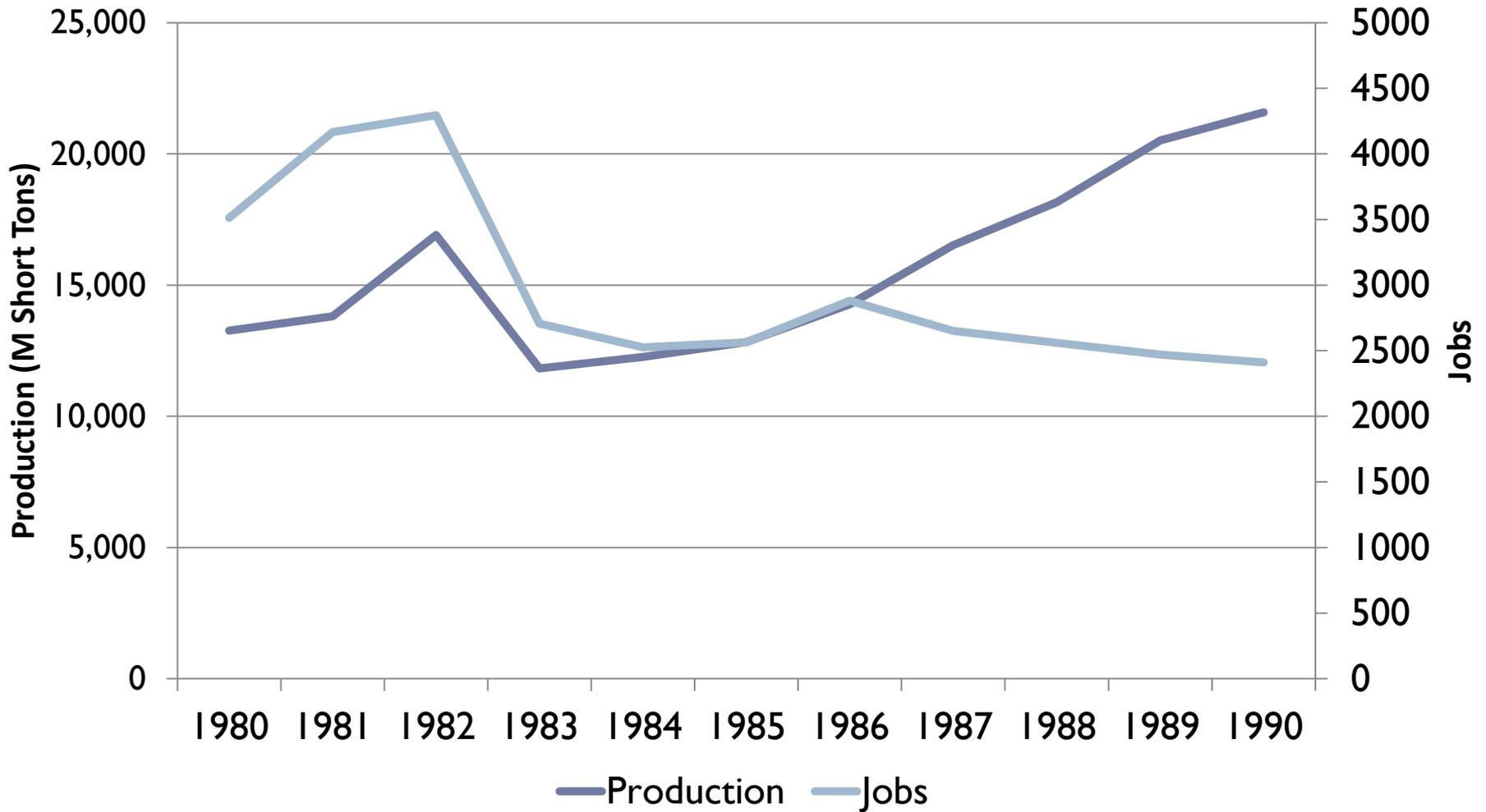




**GENEVA STEEL**



# Utah Coal Mine Production and Productivity



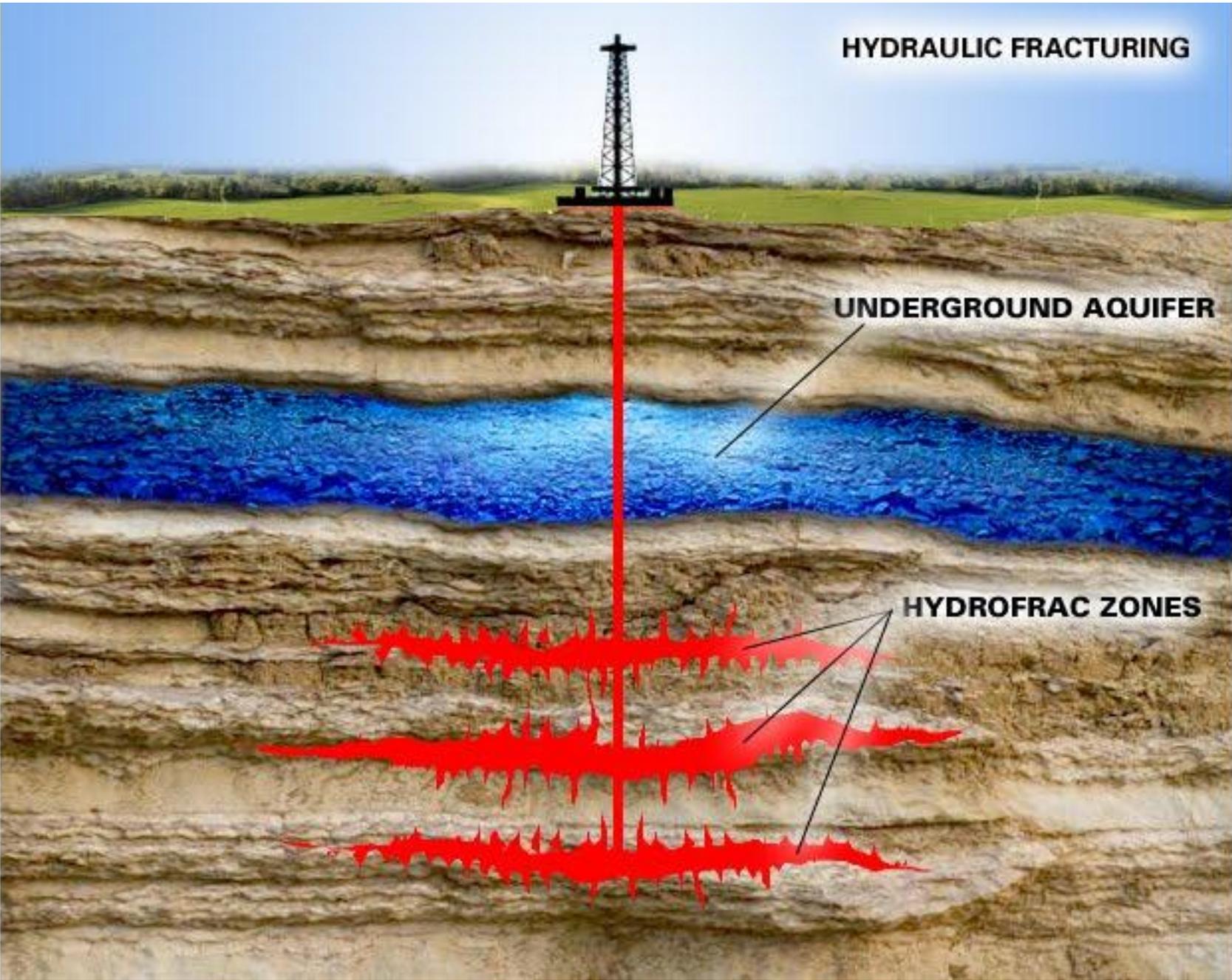
Source: Economic Report to the Governor 1991

**HYDRAULIC FRACTURING**



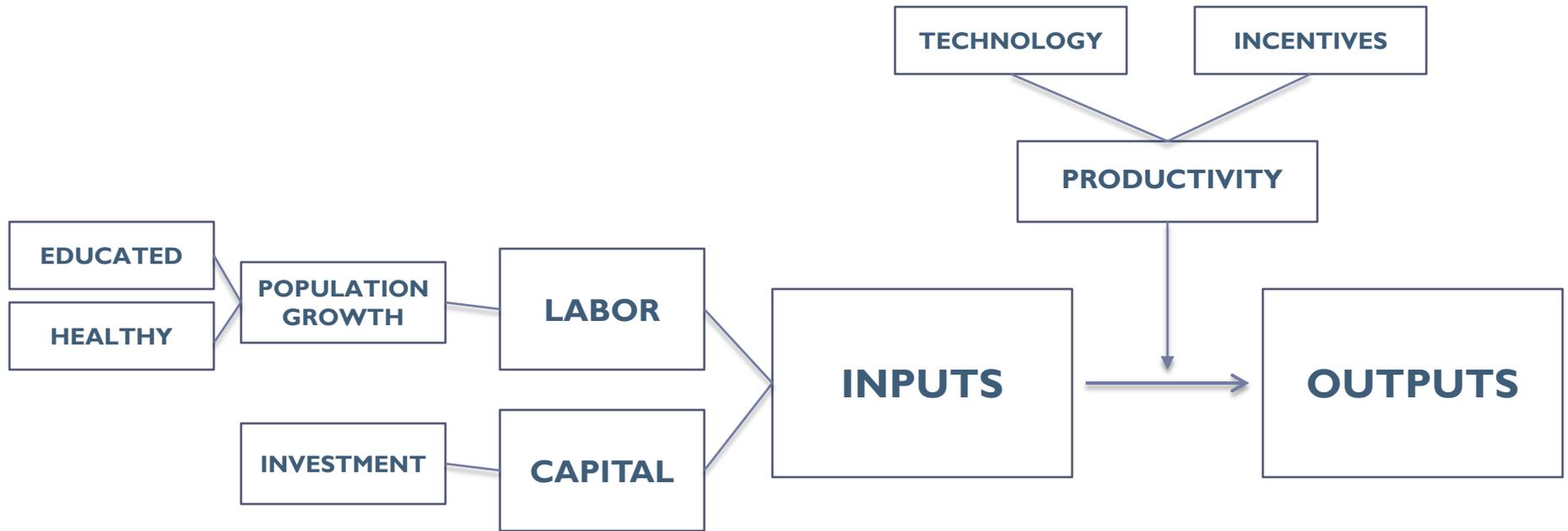
**UNDERGROUND AQUIFER**

**HYDROFRAC ZONES**



# Economic Growth Framework

---



# Broad Questions for Policymakers

---

- Factor Accumulation
  - Is govt making the right public investments in capital?
  - Is govt encouraging the right private investments in capital?
  - Is govt making the right public investments in human capital?
  - Is govt encouraging the right private investments in human capital?



# Broad Questions for Policymakers

---

- Productivity
  - Is govt making the right public investments in innovation?
  - Is govt encouraging the right private investments in innovation?
  - Are the private incentives to produce output sufficiently strong



# Broad Questions for Policymakers

---

- Distribution
  - Who is capturing the value that is created via economic output?
  - Are increases in output likely to affect standards of living?



---

# Current Utah Economic Context

---



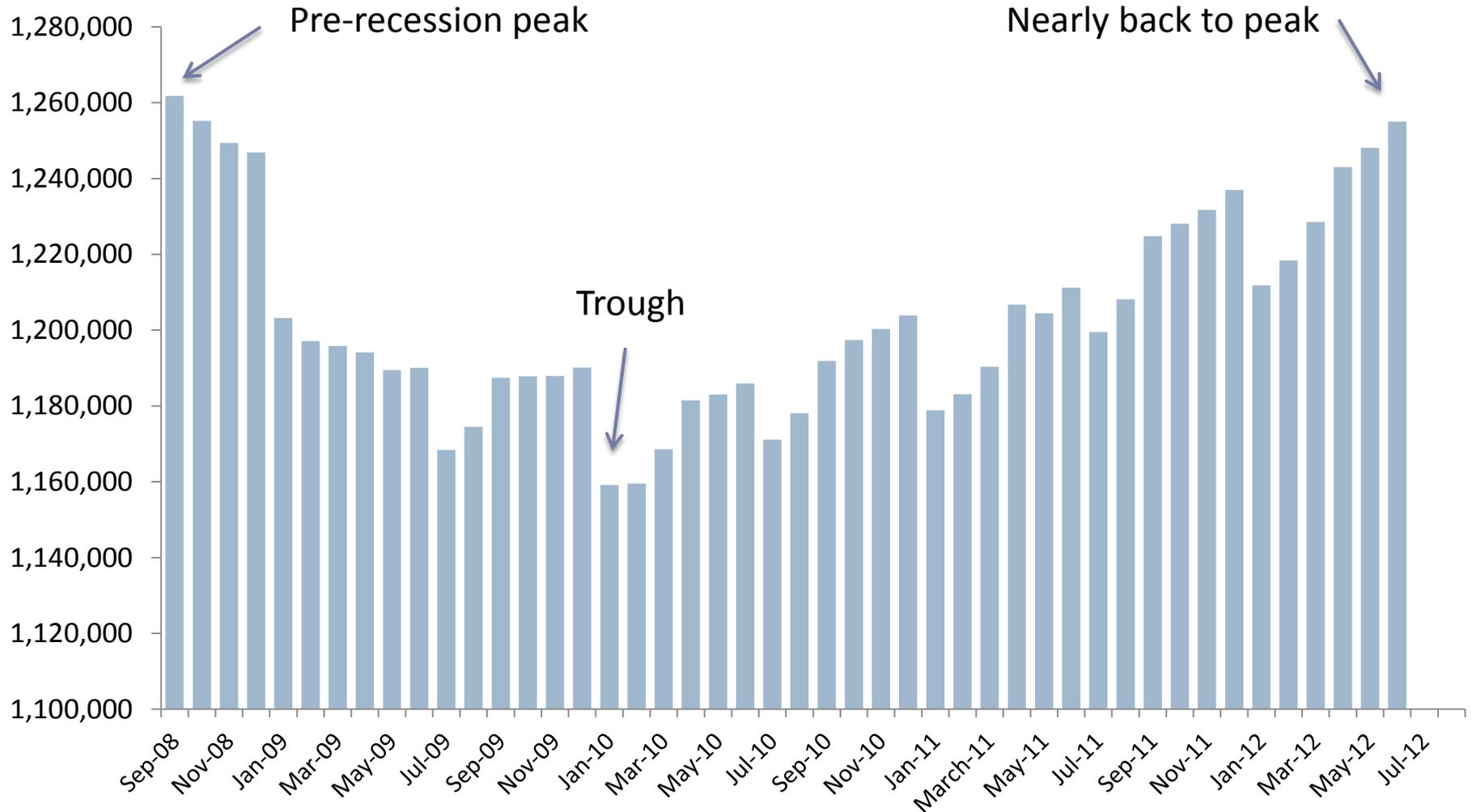
# Utah Economic Peak and Trough

---

<b>Peak</b>	Sept. 2008 1,261,819 jobs
<b>Trough</b>	June 2010 1,159,150 jobs
<b>Job loss</b>	102,669 jobs

# Utah Jobs Reach Pre-Recession Peak

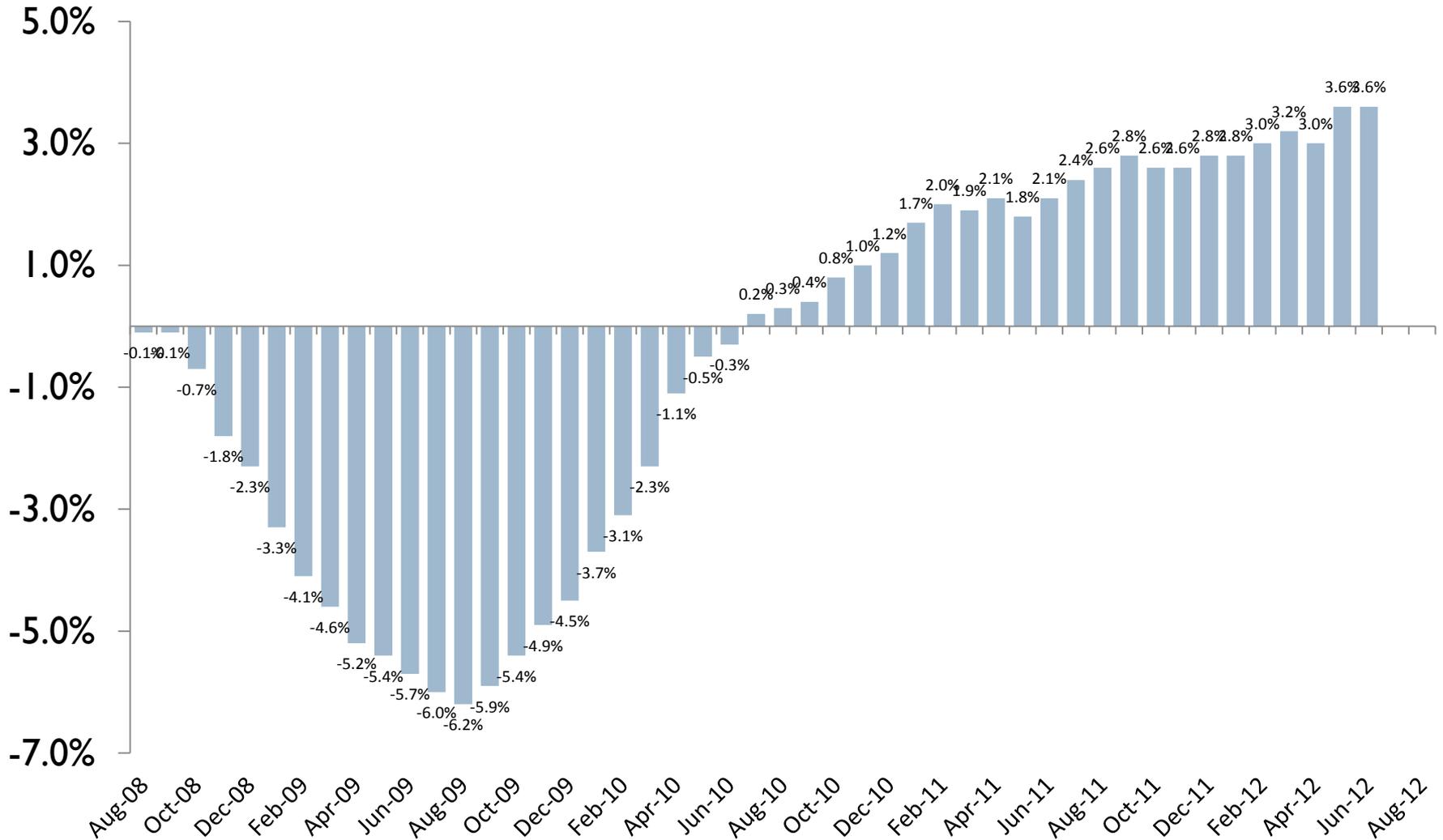
Utah job count



Source: Utah Department of Workforce Services and Bureau of Labor Statistics

# Utah Job Growth

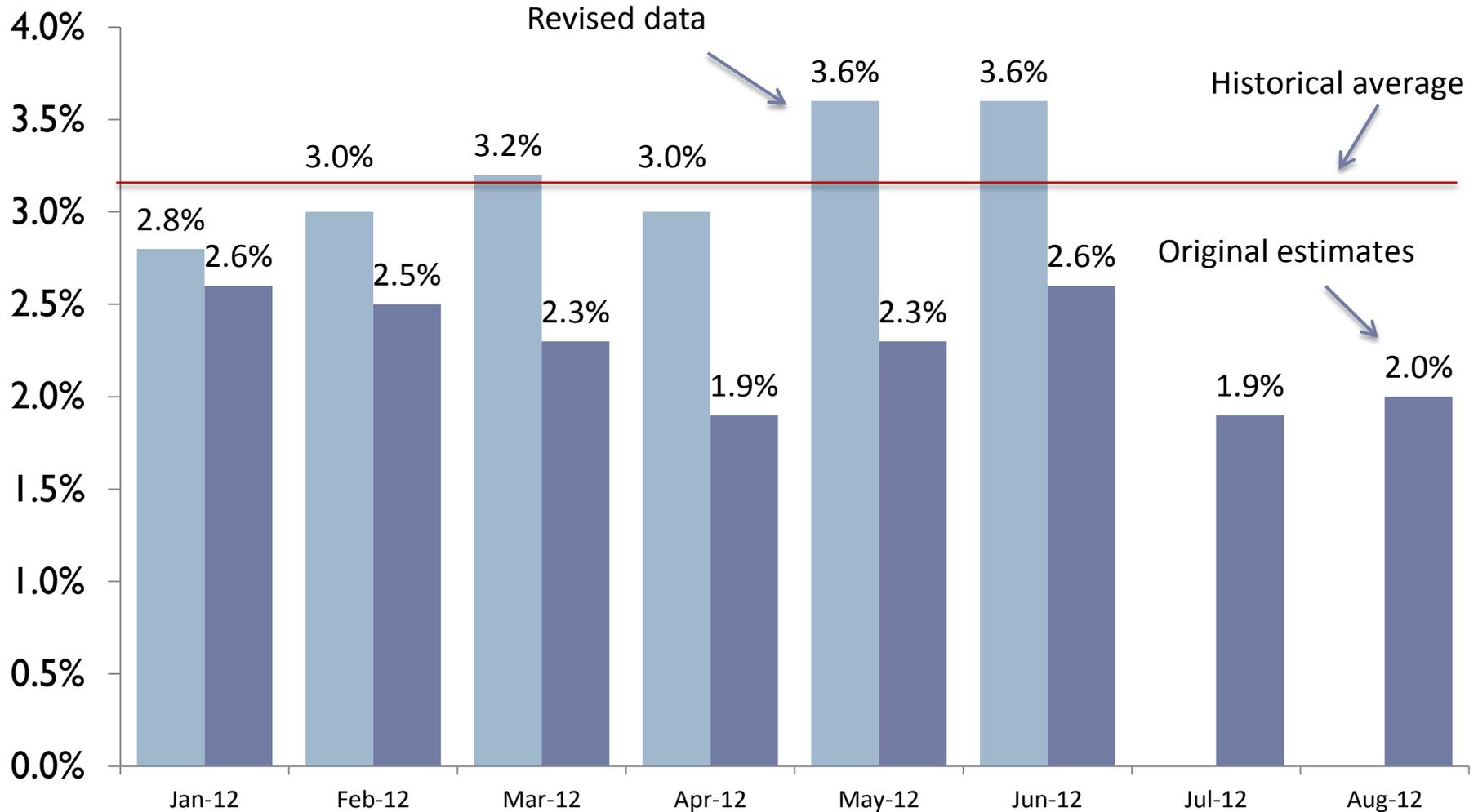
Monthly Year-Over Percent Change



Source: Utah Department of Workforce Services and Bureau of Labor Statistics

# Utah Job Growth

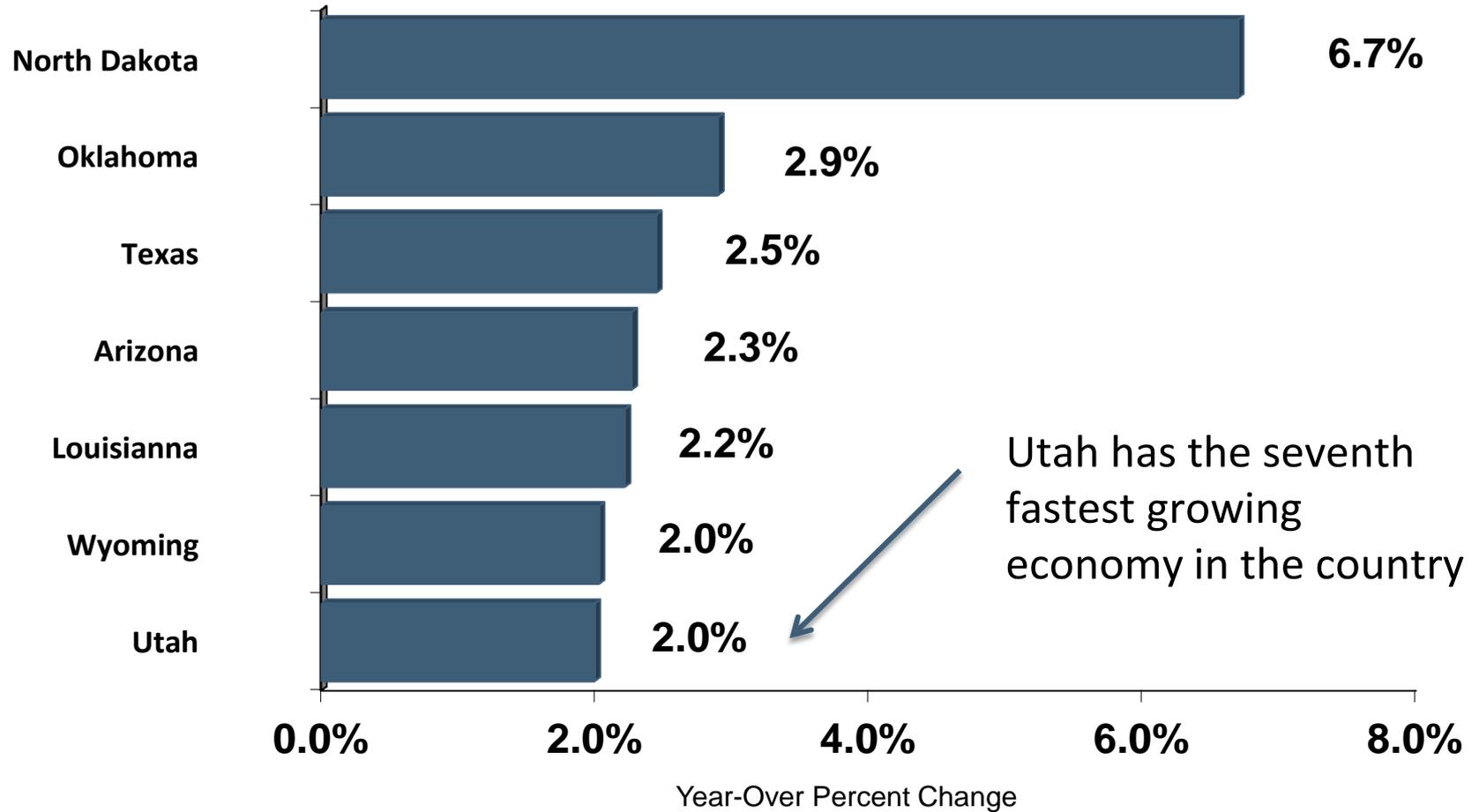
Original and revised year-over growth



Source: Utah Department of Workforce Services and Bureau of Labor Statistics

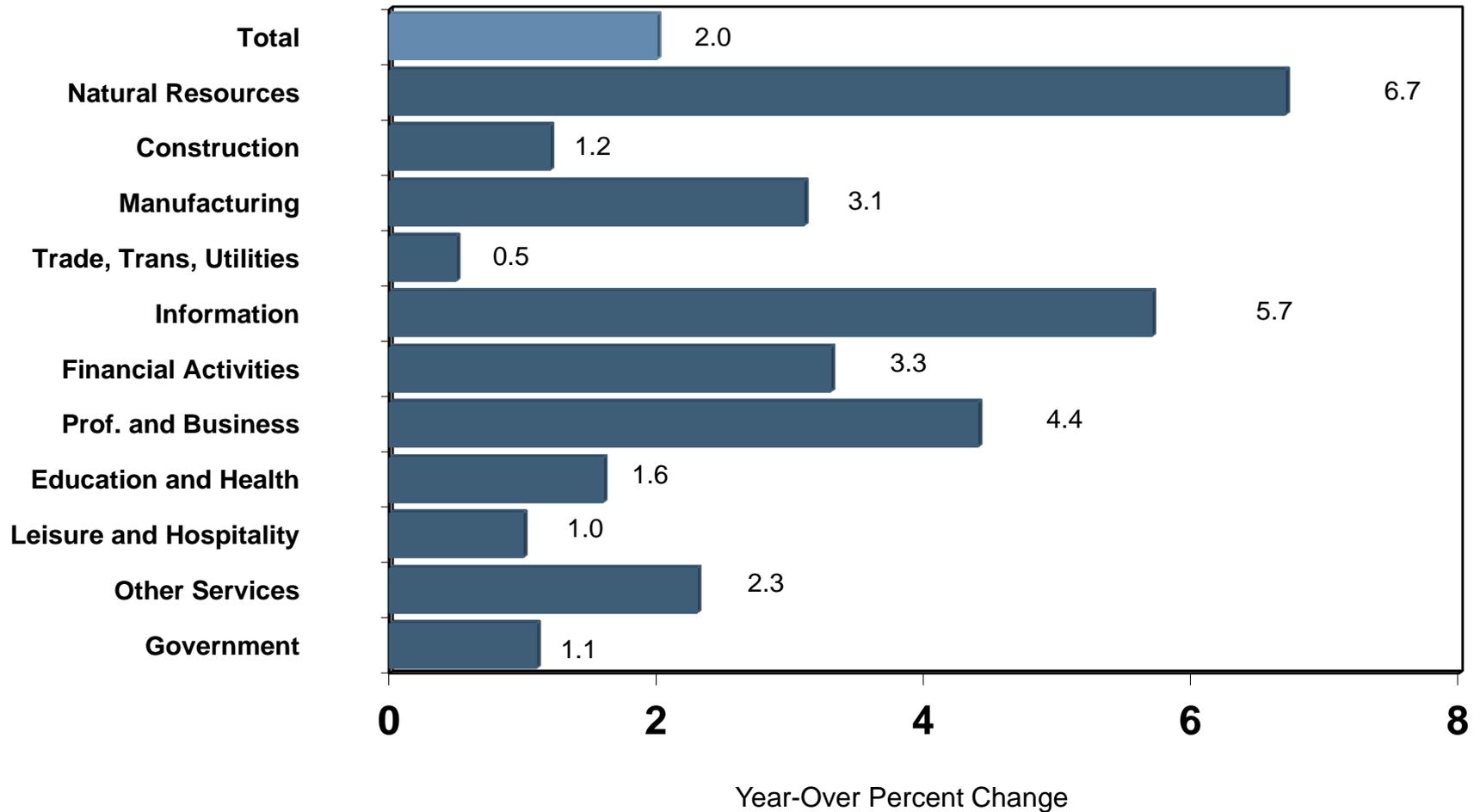
# Fastest Growing Economies

Job growth August 2011 – August 2012



# Utah Job Growth by Industry

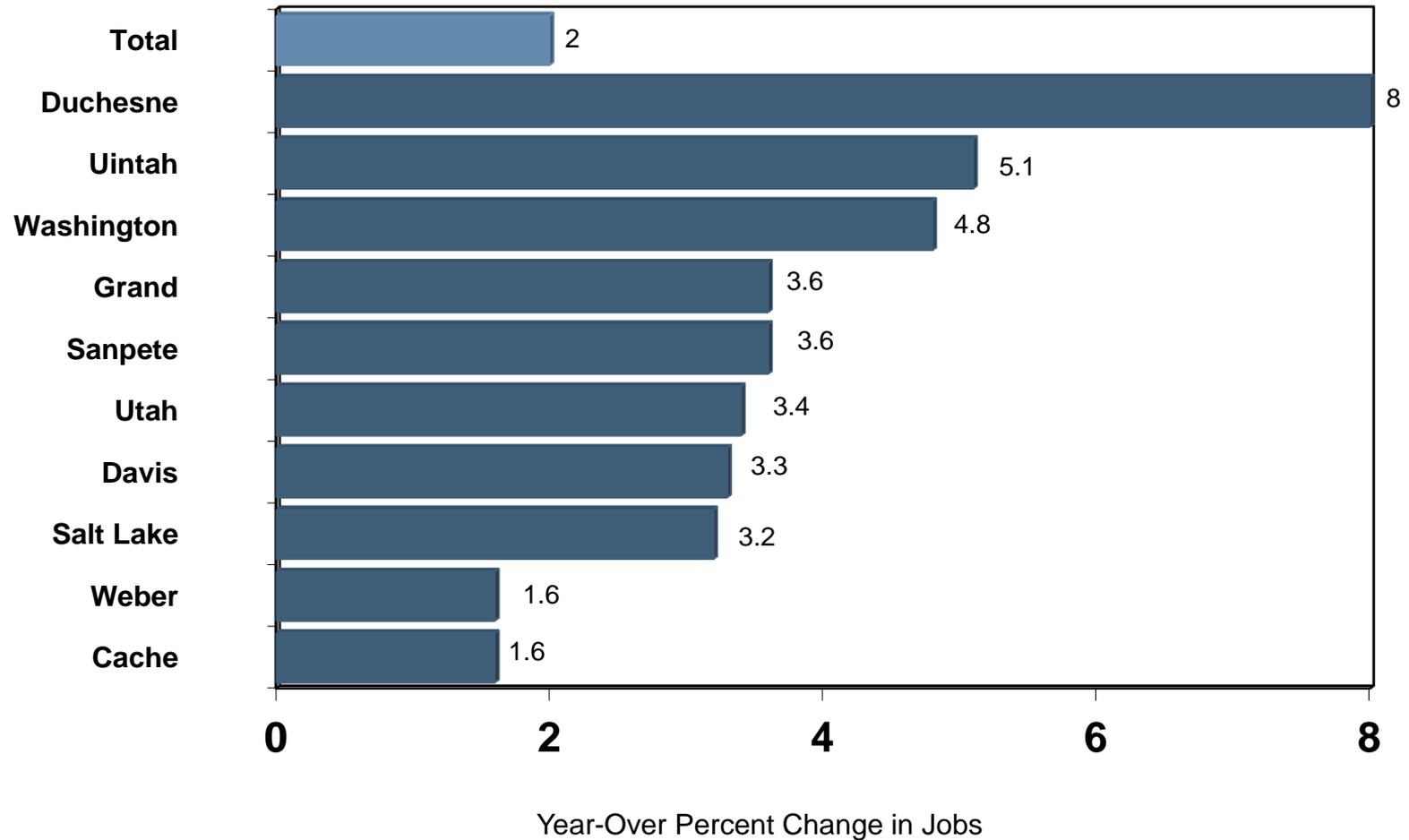
August 2012



Source: Utah Department of Workforce Services

# Fastest Growing Economies in Utah

August 2011–2012



Source: Utah Department of Workforce Services