

# Economic Outlook

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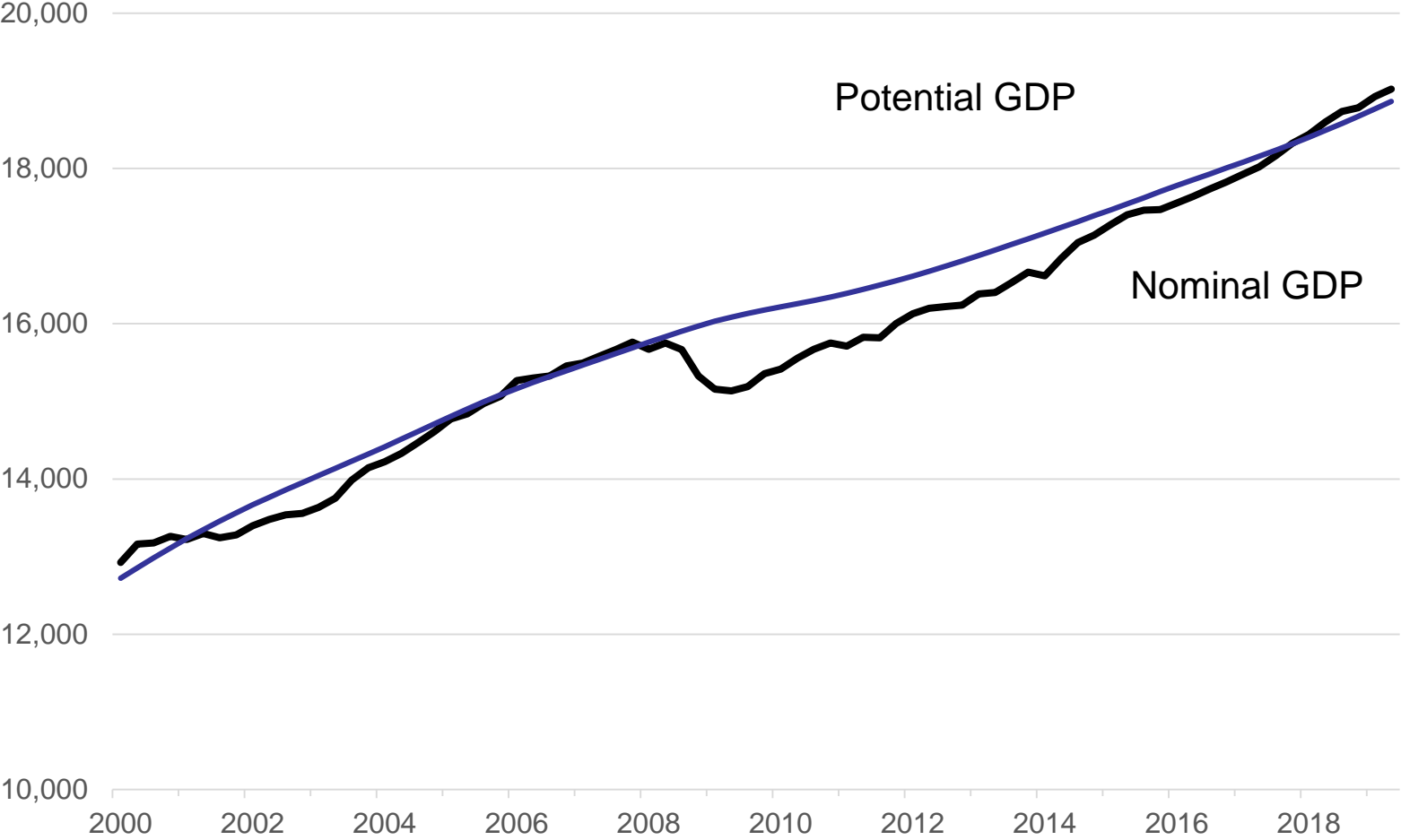
*Kozuch Director, Research Center in Economics*

Krannert School of Management

Purdue University

# GDP is now above Potential GDP

Billions of Chained  
2012 Dollars  
Seasonally Adjusted

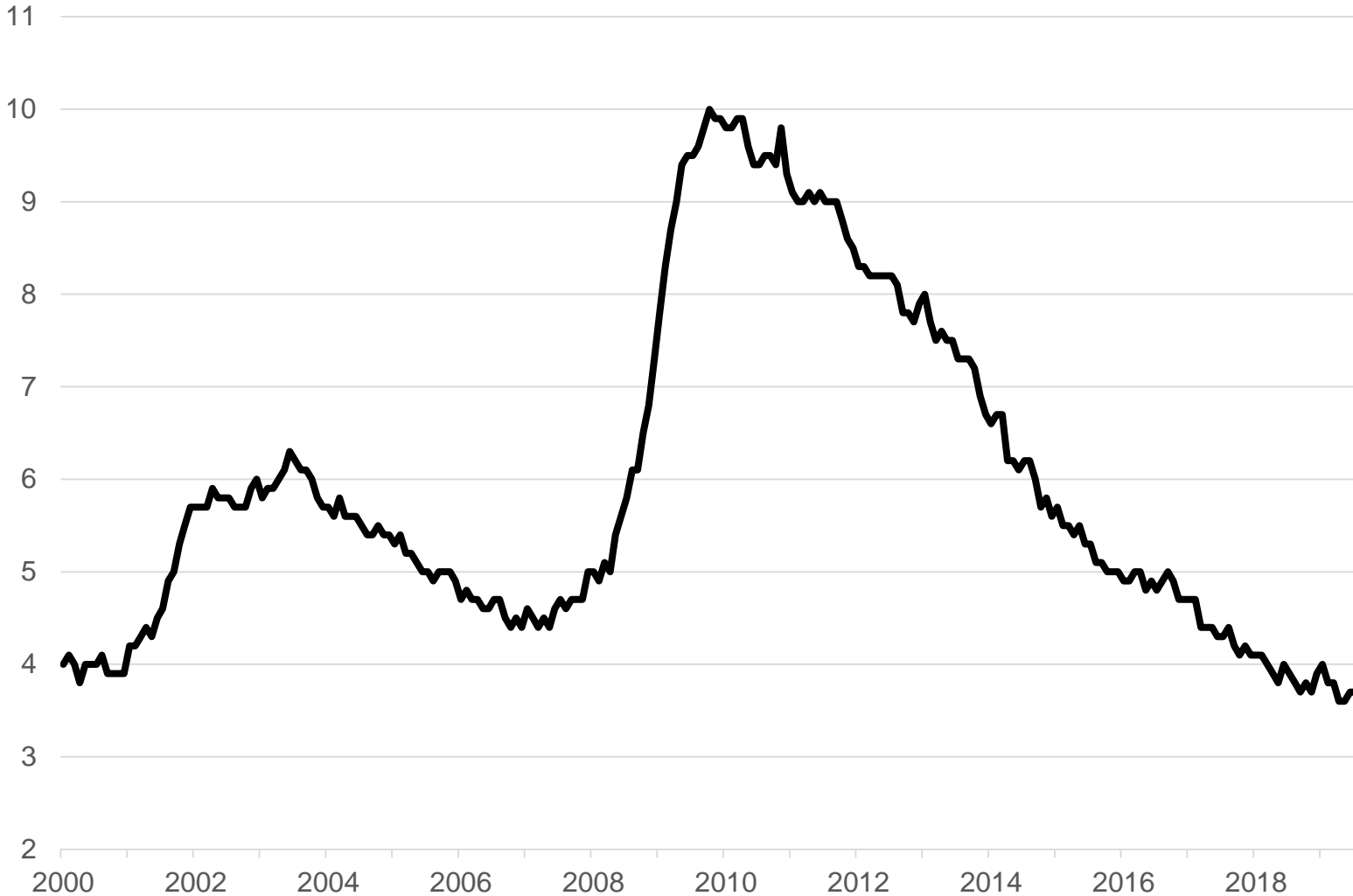


**GDP is the market value of all final goods and services produced in the U.S. in a year**

Source: Bureau of Economic Analysis (<https://fred.stlouisfed.org/series/GDPC1>) (<https://fred.stlouisfed.org/series/GDPPOT>)

# Unemployment is below pre-recession levels

Percent of Labor  
Force (age 16+)  
Unemployed

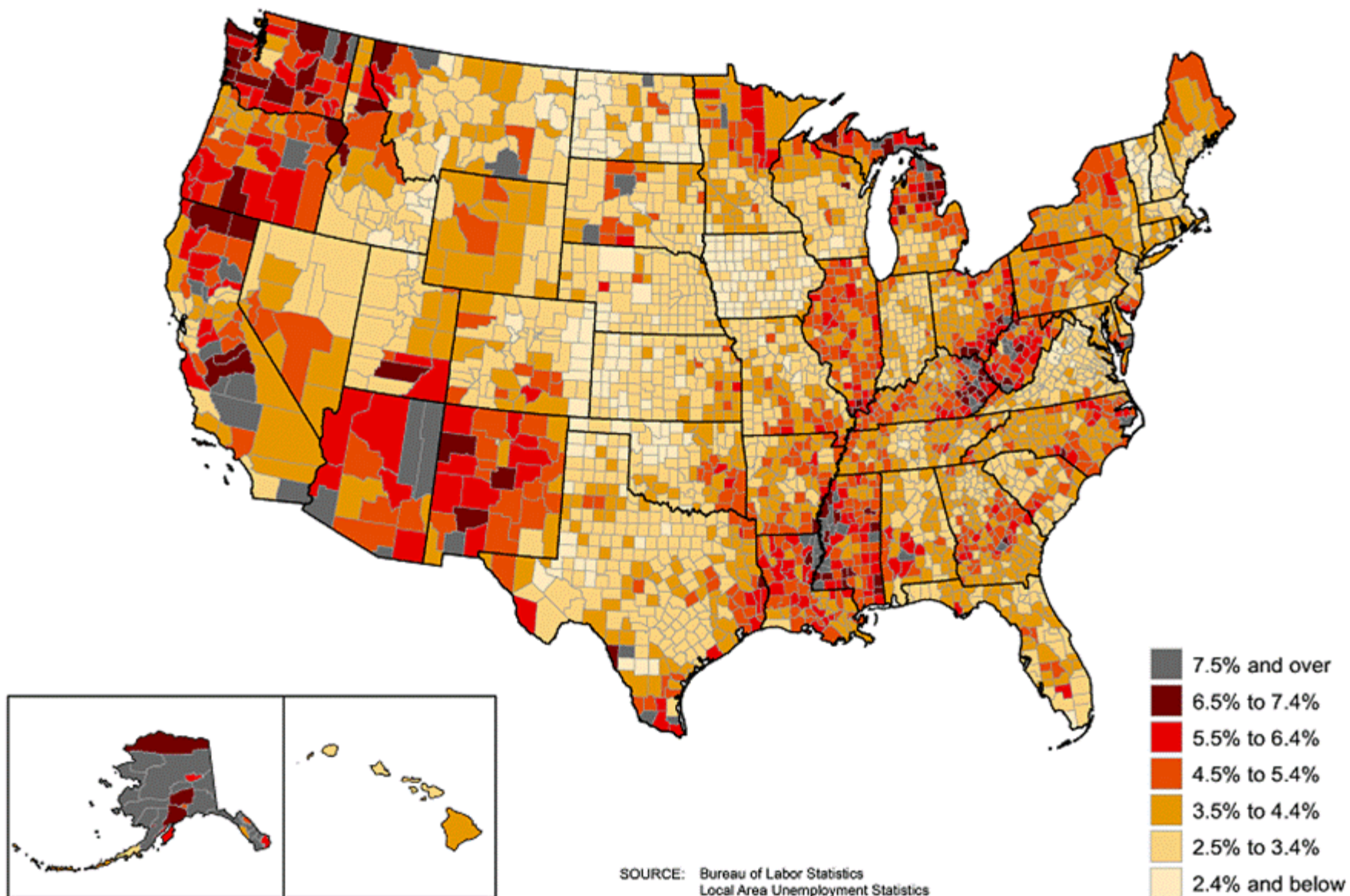


The Unemployment Rate is the percent of the labor force (age 16 and over) who report not having worked for pay in the past two weeks.

Source: Bureau of Labor Statistics (<https://data.bls.gov/timeseries/LNS14000000>)

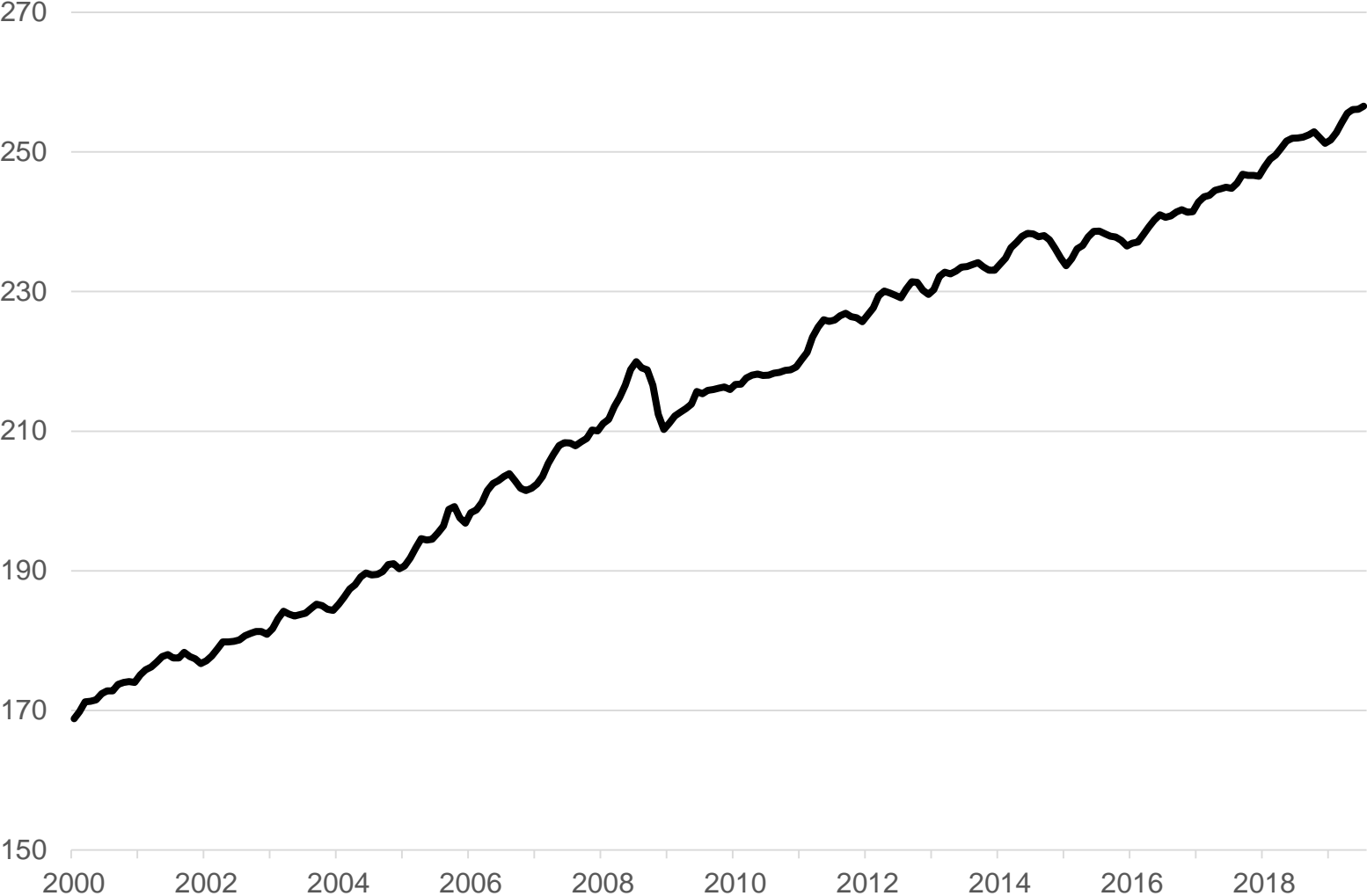
# Unemployment rates by county, October 2018-September 2019 averages

(U.S. rate = 3.7 percent)



# Consumer Price Index (Urban Consumers)

Price index with 1982-1984 as the base period

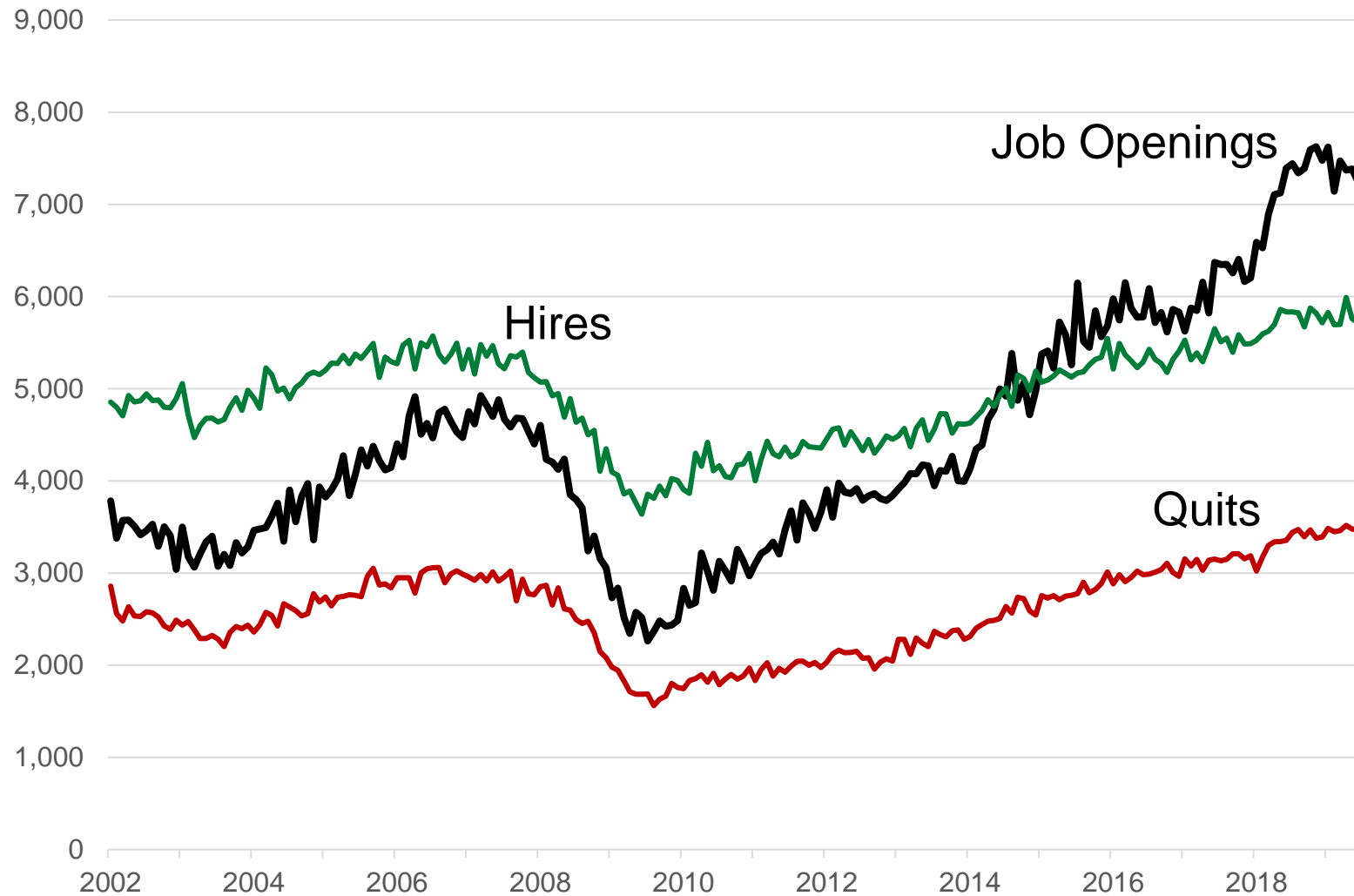


**CPI measures inflation, the price increase for a fixed basket of goods and services relative to 100 (1982-1984)**

Source: Bureau of Labor Statistics <https://www.bls.gov/cpi/data.htm> (CUUR0000SA0)

# Total Private Job Openings, Hires, and Quits

Seasonally adjusted, in thousands

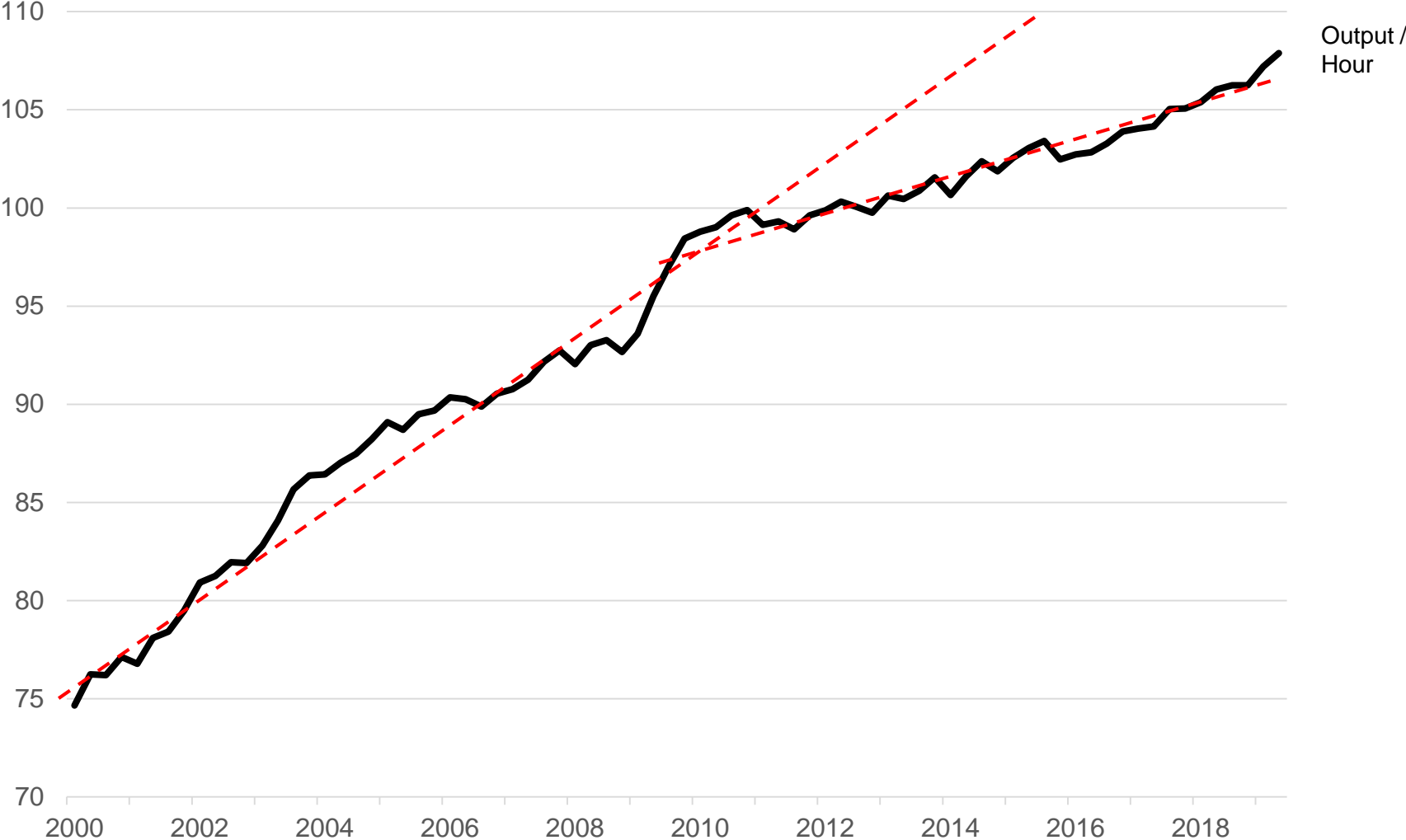


**Job Openings is the aggregate number of postings; Hires only includes new employees; Quits does not include layoffs or discharges**

Source: BLS, Job Openings and Labor Turnover Survey, <https://data.bls.gov/PDQWeb/jt> (JTS00000000HIL, JTS00000000JOL, JTS00000000QUL)

# Labor Productivity

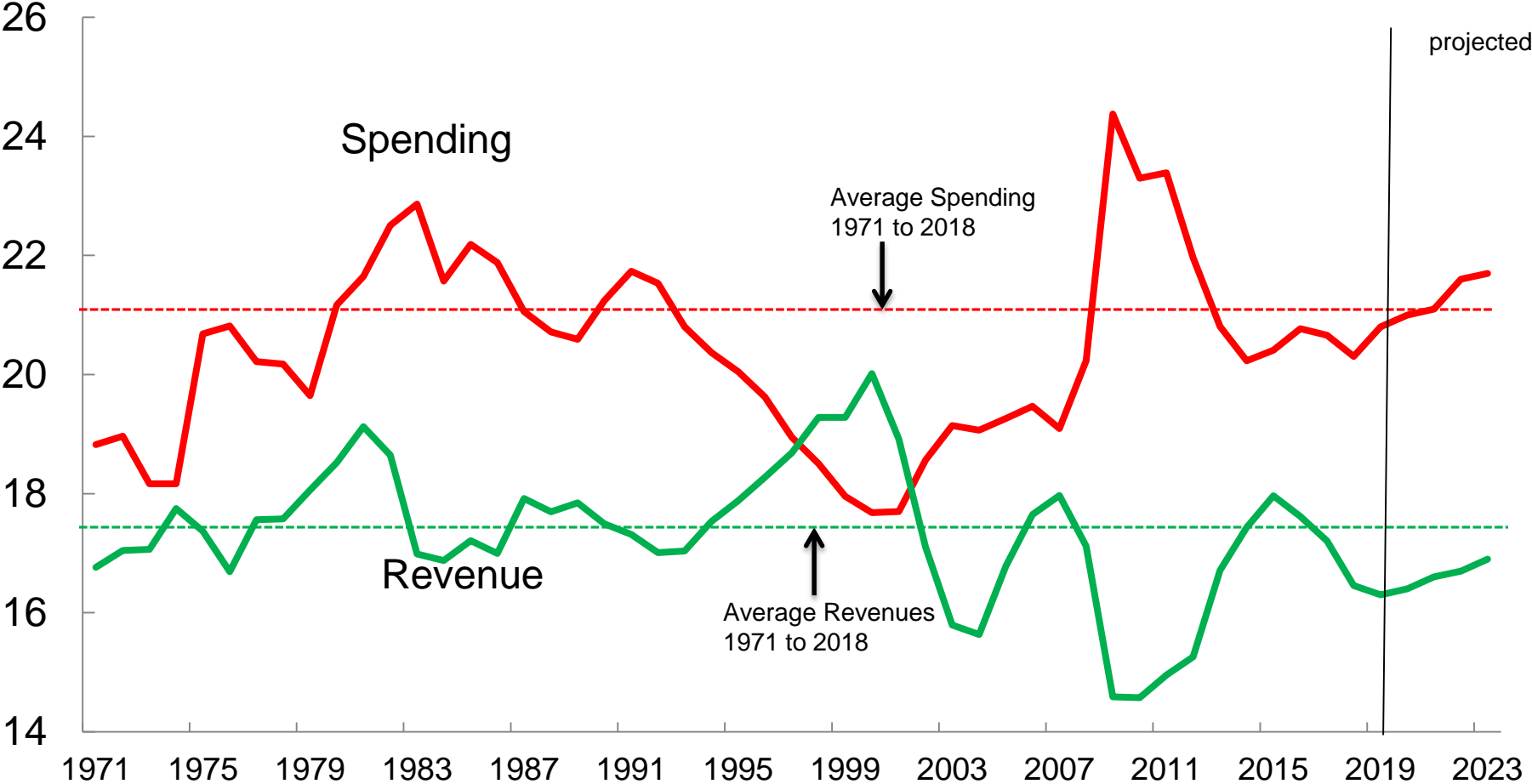
Index of output per hour with 2012 base year



**Labor Productivity measures the average value of output per hour of work**

Source: Bureau of Labor Statistics <https://www.bls.gov/data/#productivity> (PRS84006093)

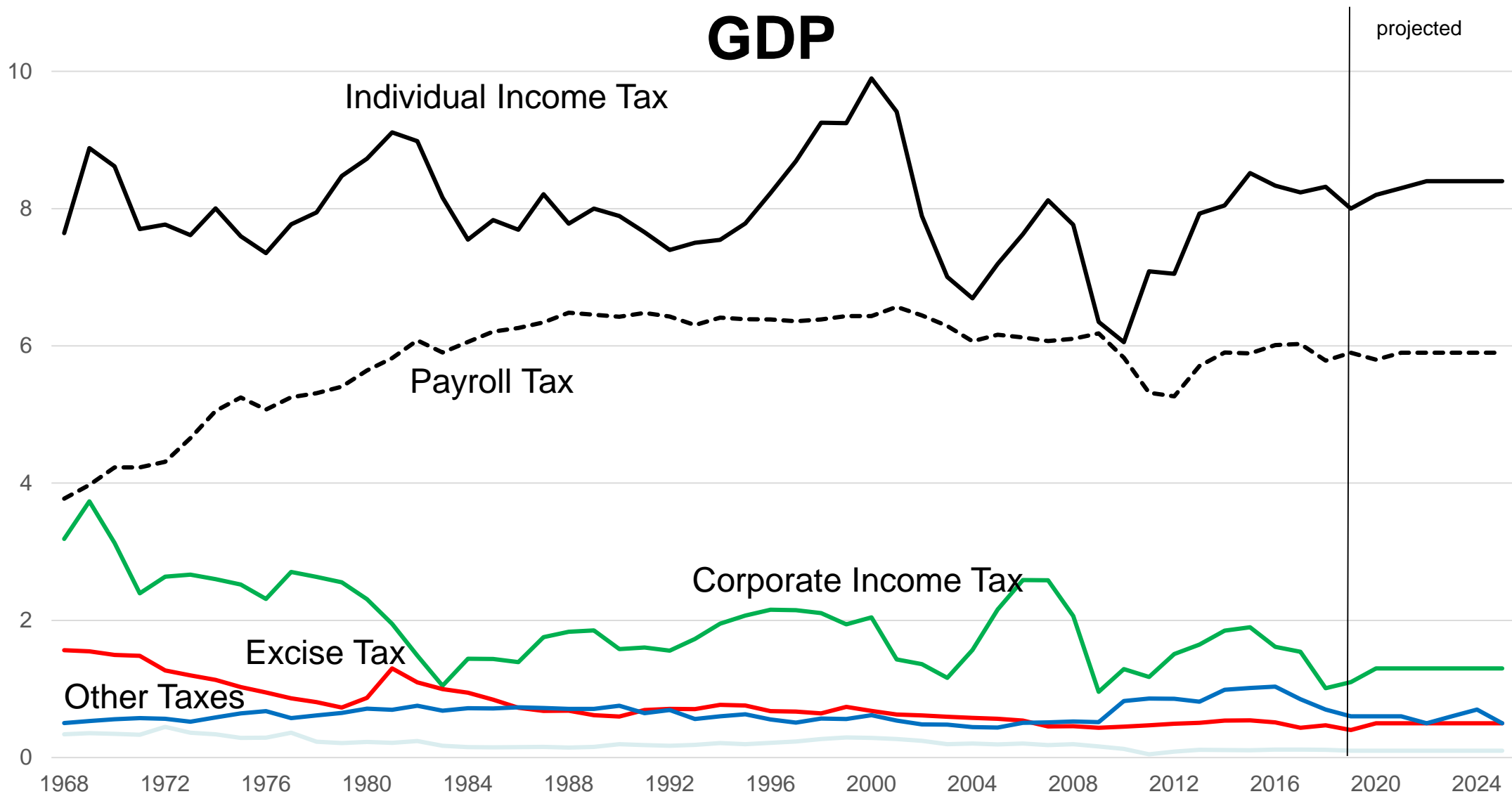
# Federal Revenue and Expenditure as % of GDP



Source: US Congressional Budget Office (historical budget data) and (projections under current law)

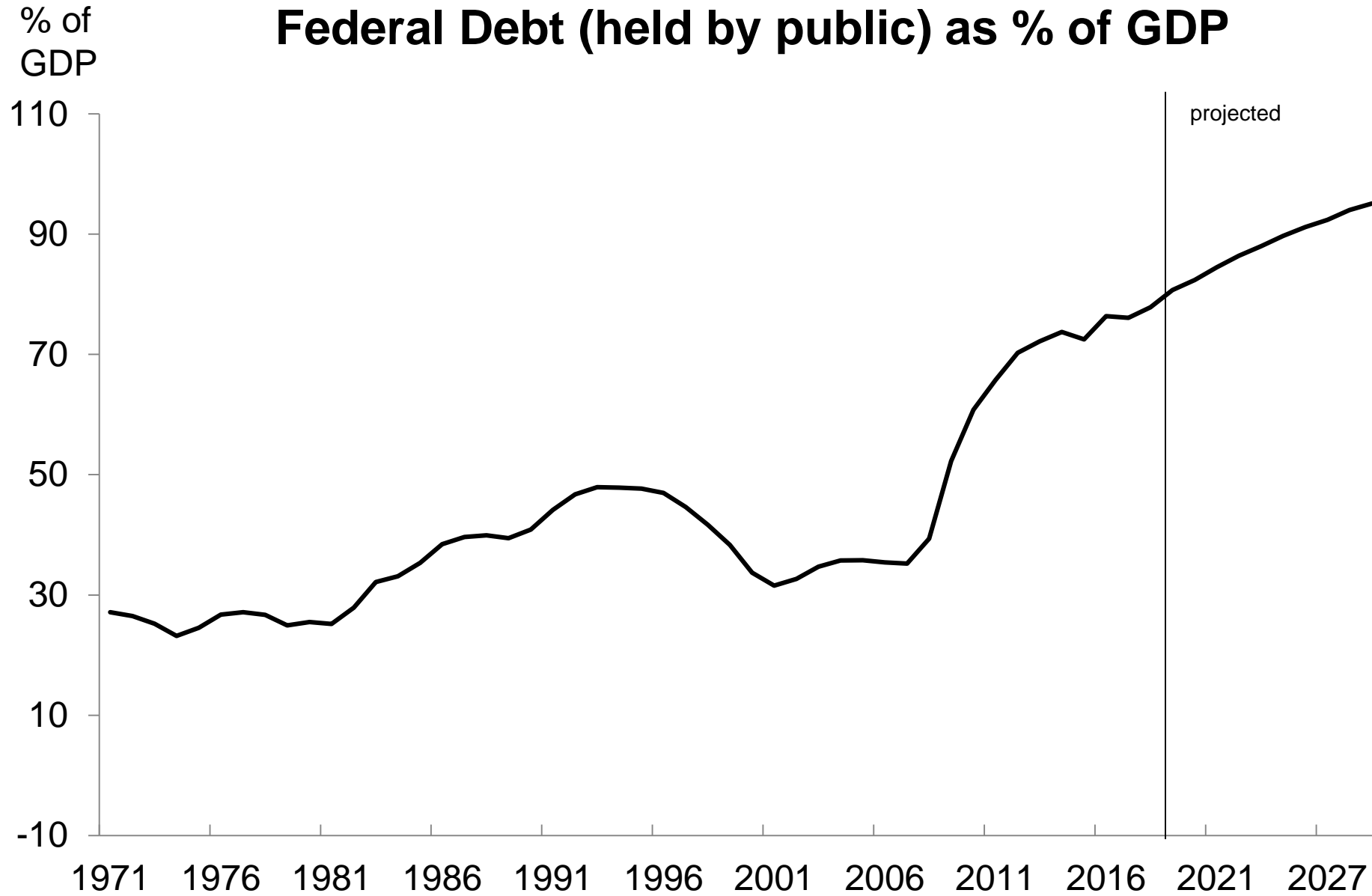


# Federal Revenue by Source as % of GDP



Source: US Congressional Budget Office (historical budget data) and (projections under current law)

# Federal Debt (held by public) as % of GDP

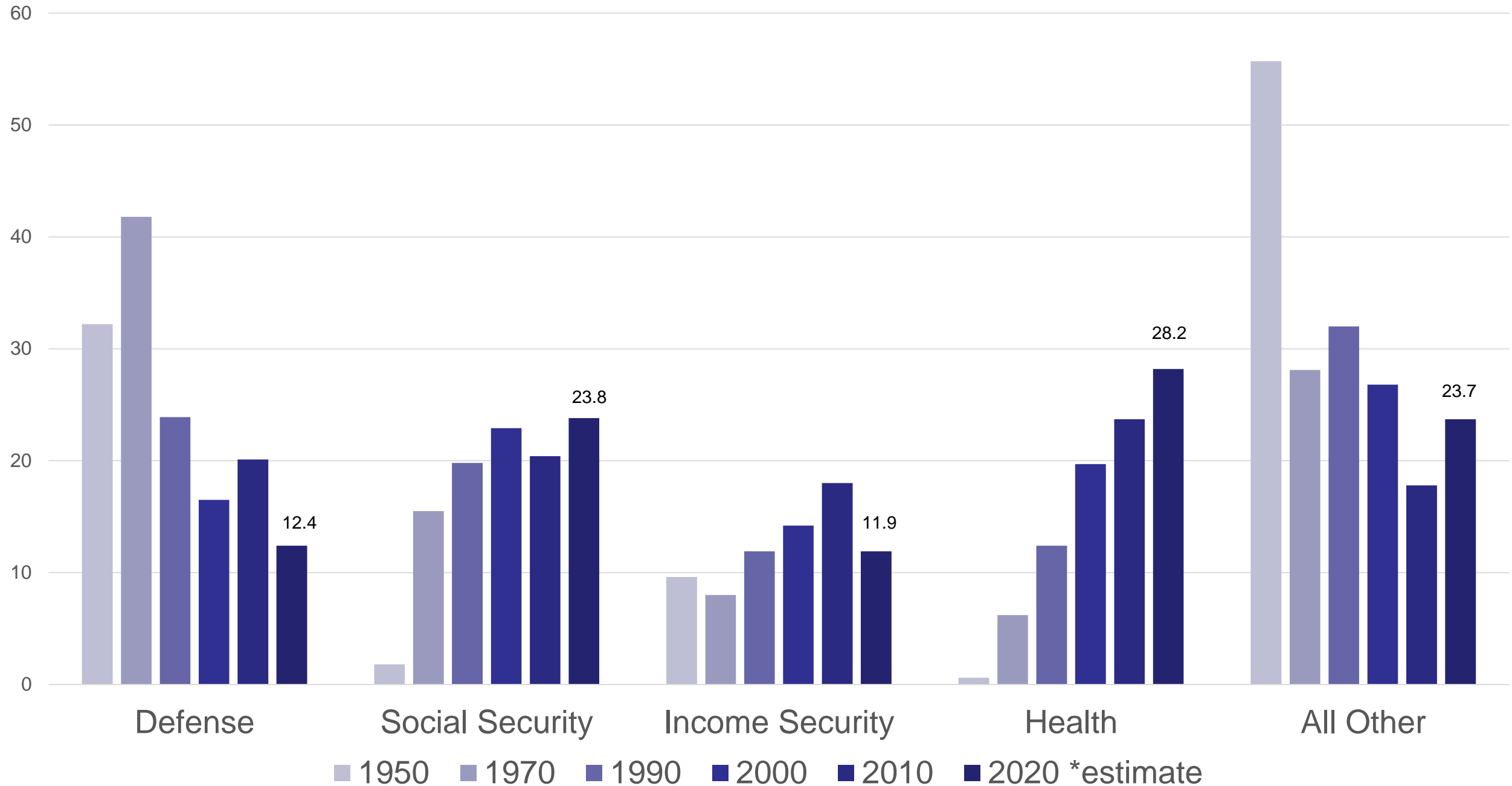


Source: US Congressional Budget Office (historical budget data) and (projection of federal debt)

## What Do Budget Deficits Do?

- Lower deficit → higher investment and net exports
- Over the long run
  - higher wages
  - higher GDP growth rate
- Magnitude depend on how the deficit is reduced (higher taxes or lower spending)

# Percent of Total US Federal Spending



## Social Security Legacy Debt

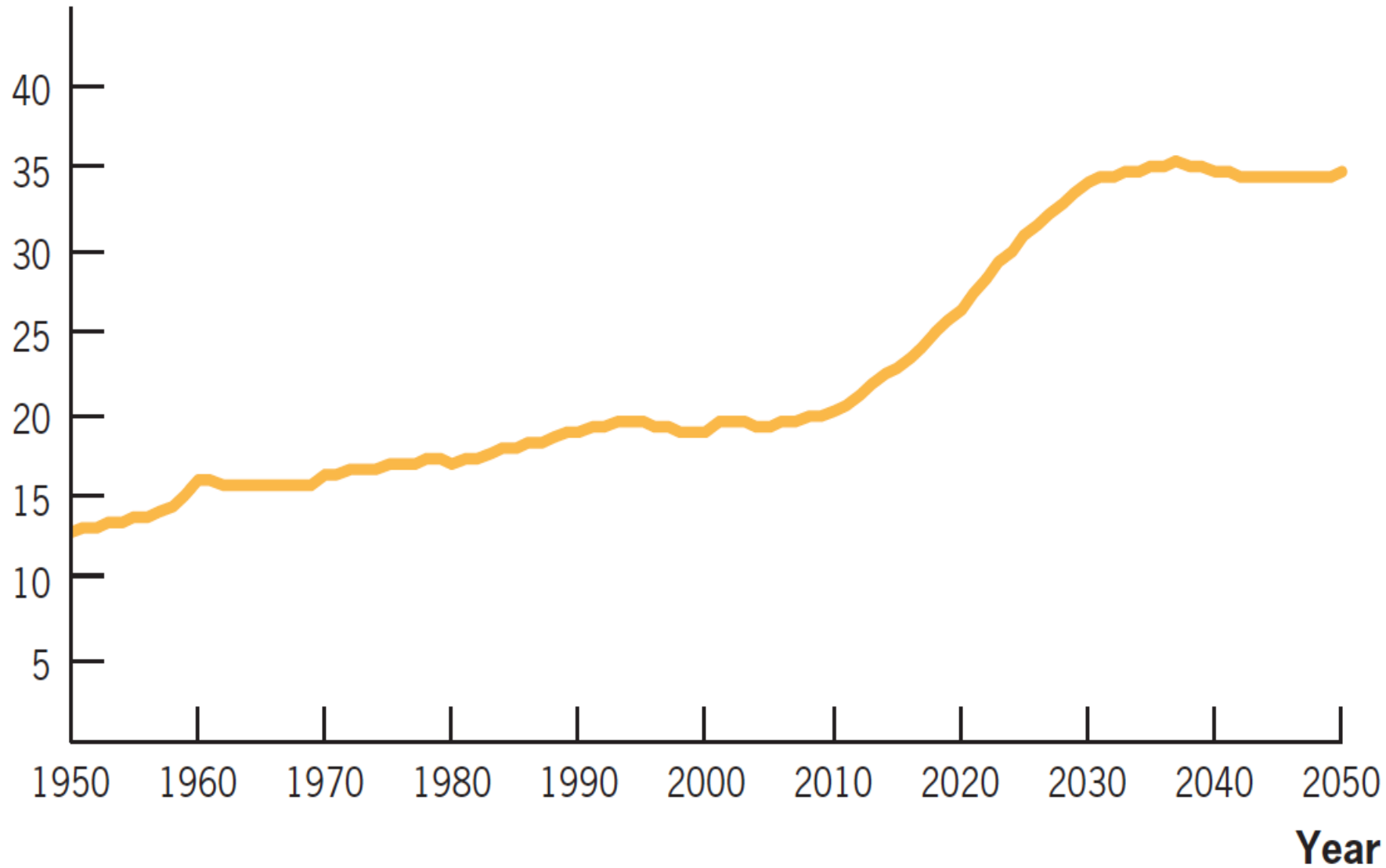
- Ida May Fuller was born in 1874 in Vermont
- Social Security began collecting taxes in 1936
- In 1939, Ida May Fuller retired
- She had paid a total of \$24.75 in payroll taxes over 3 years
- Her Social Security monthly payment was \$22.54
- She lived for 35 more years and collected a total of \$22,888.92
- 924% nominal return on her investment

# Overlapping Generations Model

- Every one lives 2 period, earn \$20,000 in income when young.
- **0% population growth rate**, 5% growth rate in real wage
- Social Security begins in period 2 with a 10% payroll tax

Period	Young	Old	Earnings per young worker	Taxes Paid per young worker	Taxes Paid total	Benefits per old retiree	Rate of Return for retiree
1	100	95	\$20,000	0	0	0	-
2	100	100	\$21,000	\$2,100	\$210,000	\$2,100	Infinite
3	100	100	\$22,050	\$2,205	\$220,500	\$2,205	5%
4	100	100	\$23,153	\$2,315	\$231,500	\$2,315	5%
5	100	100	\$24,310	\$2,431	\$243,100	\$2,431	5%

**Number of  
Elderly per  
100  
Working Age  
People**



# Social Security Tax Revenues and Outlays, With Scheduled Benefits

Percentage of Gross Domestic Product

