

Measuring and Adjusting for Inflation

House Ways and Means Committee

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Outline of talk

Part 1: Why does adjusting for inflation matter?

Part 2: Historical inflation

Part 3: Which measure is best?

Part 4: Considerations

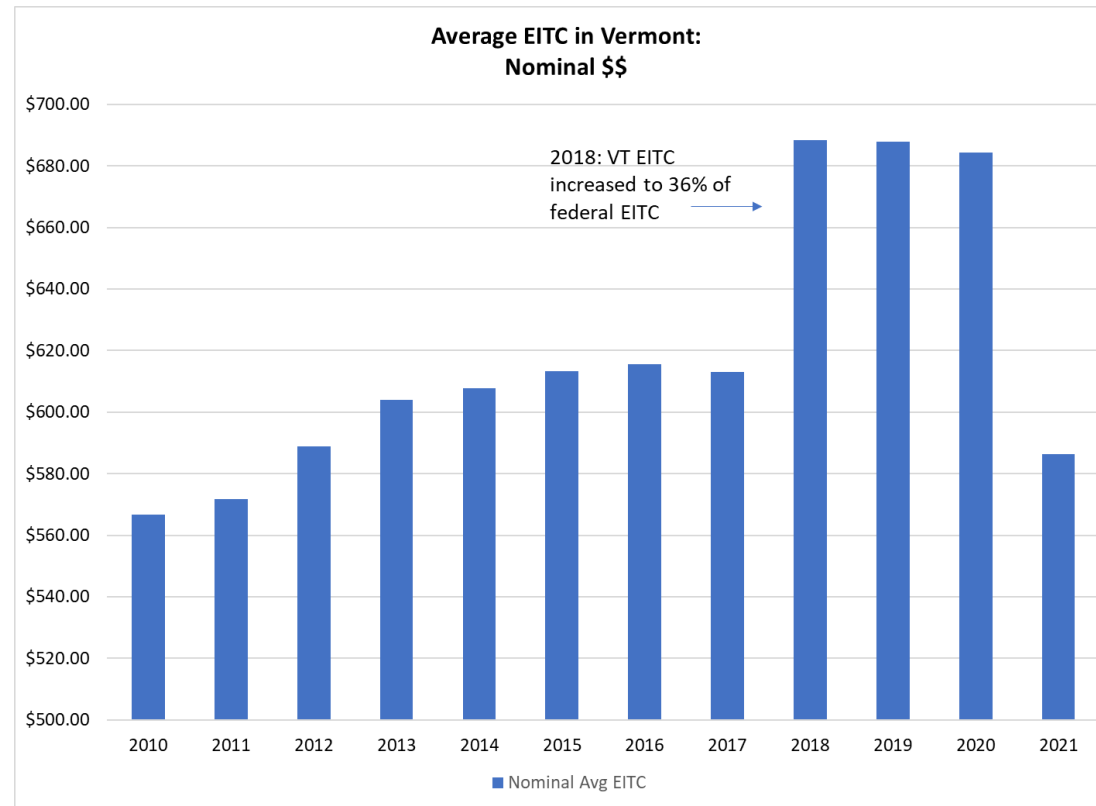


Part 1: Why does adjusting for inflation matter?

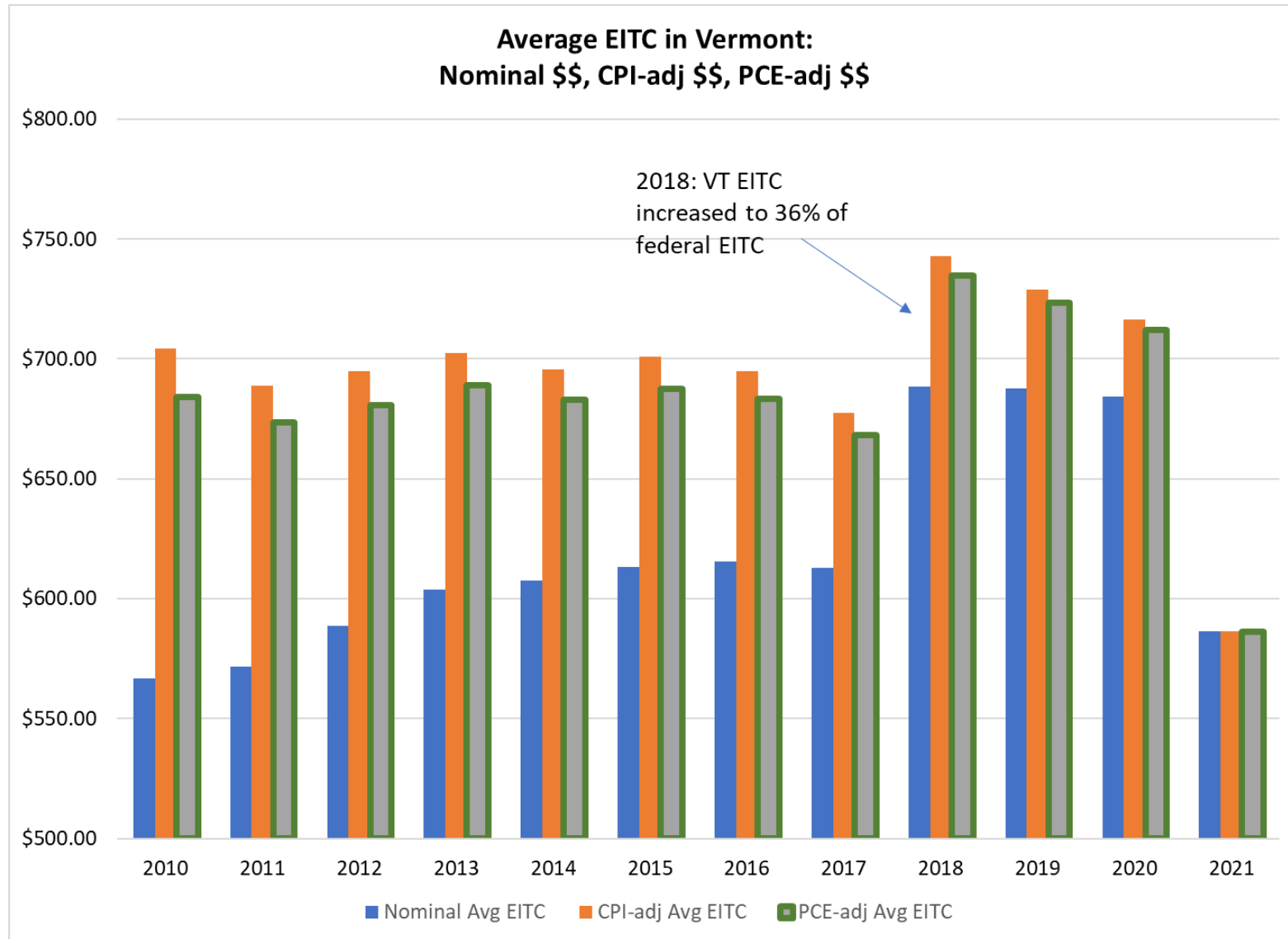


Why pay attention to inflation when looking at data?

- Interpretation of patterns over time can be influenced by whether the data show nominal or real (inflation-adjusted dollars).
- Consider the average value of the EITC in Vermont: “relatively consistent?”
- Note label: “nominal \$\$”



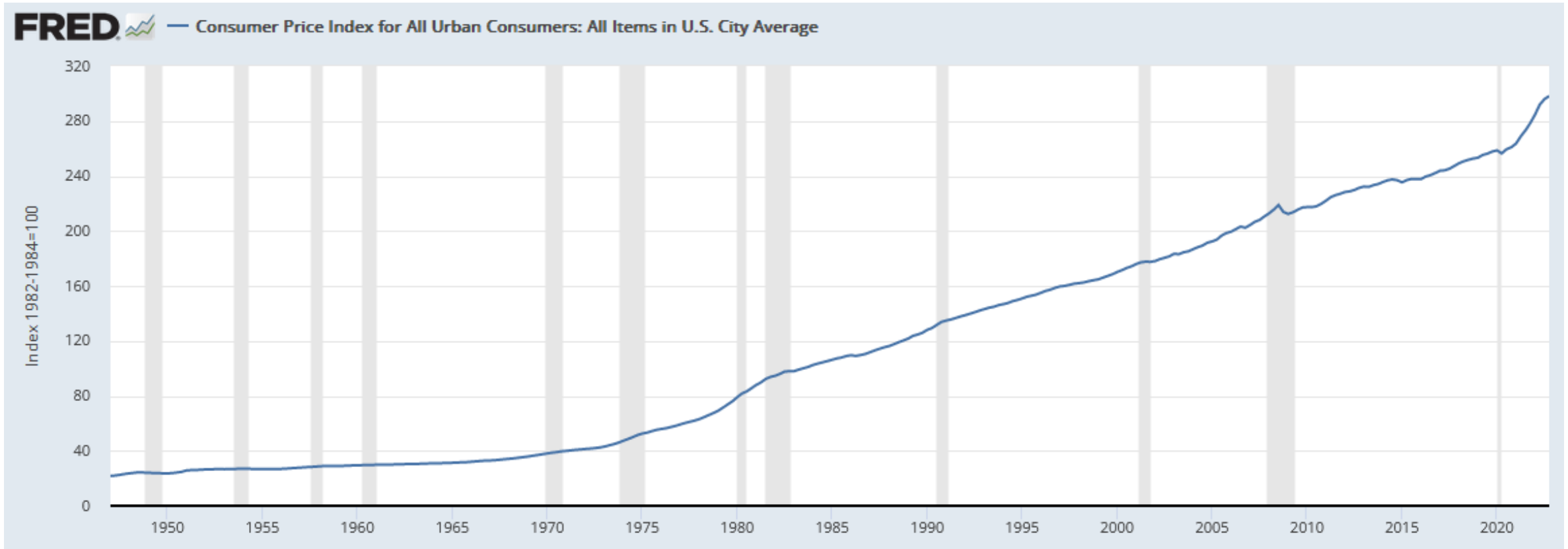
Using inflation-adjusted values



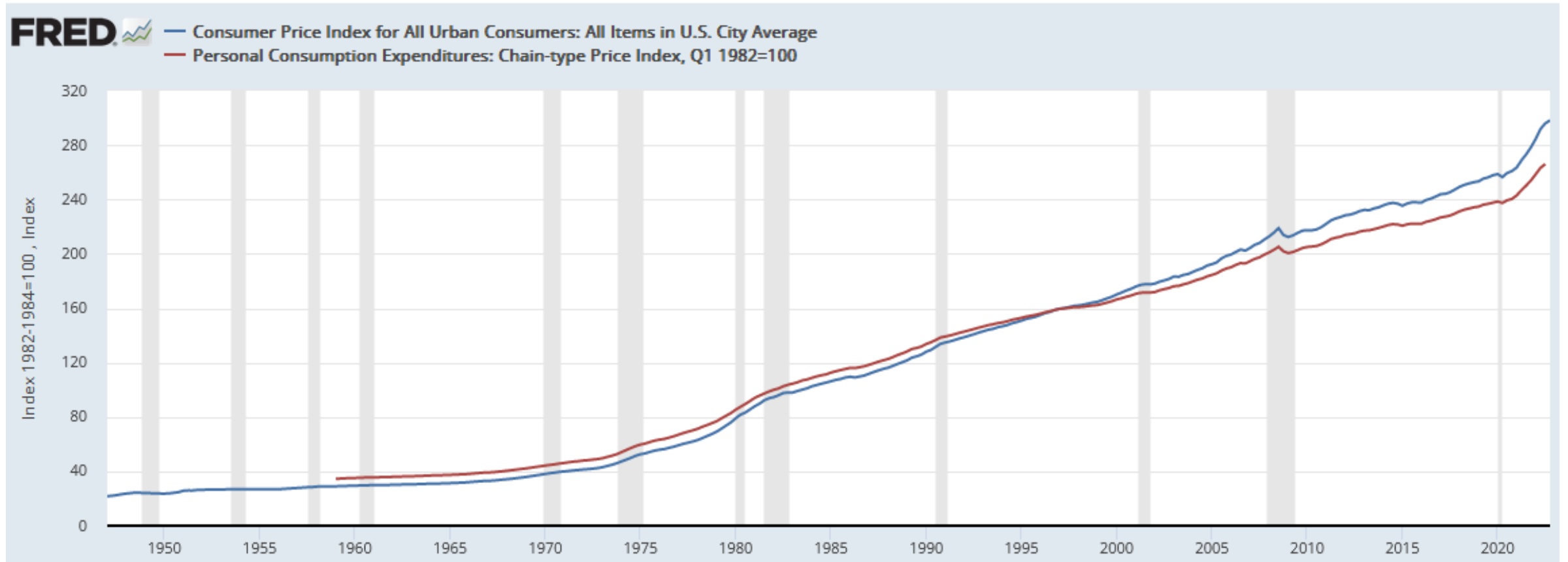
Part 2: Historical inflation



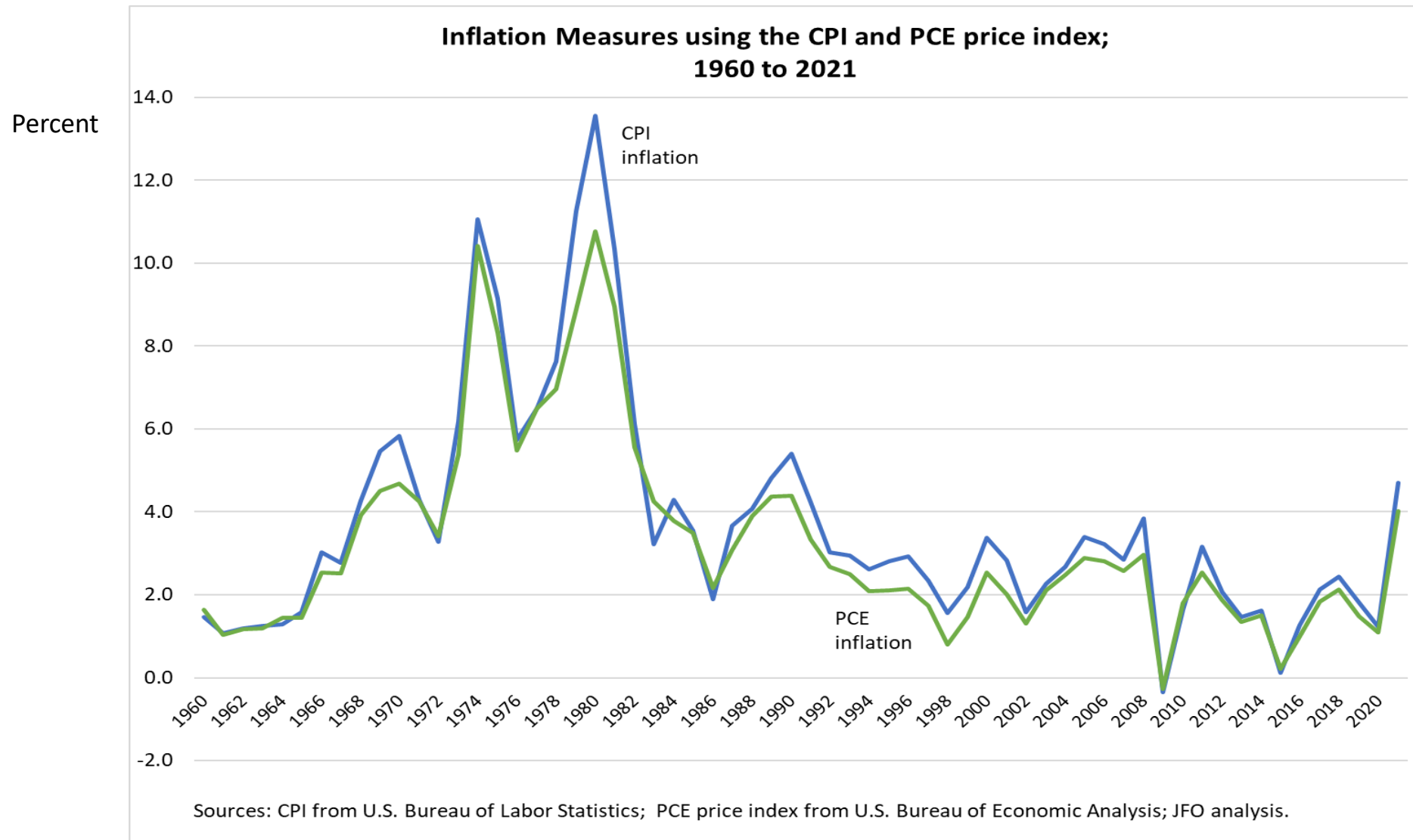
The Consumer Price Index, or CPI; 1947:Q1 to 2022:Q4



The Consumer Price Index (CPI); 1947:Q1 to 2022:Q4 and The Personal Consumption Expenditures (PCE) Index, 1959:Q1 to 2022:Q3



Measures of Inflation: Annual change in the CPI and the PCE price index; 1960 to 2021



Part 3: Which measure is best?

The Bureau of Labor Statistics (BLS) produces the CPI.

The Bureau of Economic Analysis (BEA) produces the PCE price index.



How is the CPI from BLS defined?

- Consumer Price Index: A monthly measure of the average change over time in the prices paid by consumers for a market basket of consumer goods and services.
- The CPI-U is based on the spending patterns of urban consumers.
 - Objective: to calculate the change in the amount consumers need to spend to maintain a constant level of satisfaction. Substitution is allowed only within categories.
 - The cost of shelter is measured using rental equivalence.
 - The CPI-W used by the Social Security Administration covers wage earners.
- Does NOT include final goods and services bought by businesses and governments
- Note: The core CPI excludes two categories prone to volatile prices that may distort overall trends: food and energy
 - Watched by the Federal Reserve



How is the Personal Consumption Expenditure (PCE) index from BEA defined?

- PCE index: A measure of the prices that people living in the United States, or those buying on their behalf, pay for goods and services.
 - The PCE price index is known for capturing inflation (or deflation) across a wide range of consumer expenses and reflecting changes in consumer behavior.
- Used by the Federal Reserve to measure inflation
- Similar to the BLS Consumer Price Index; the formulas and uses differ
- Captures consumers' changing behavior and a wide range of expenses



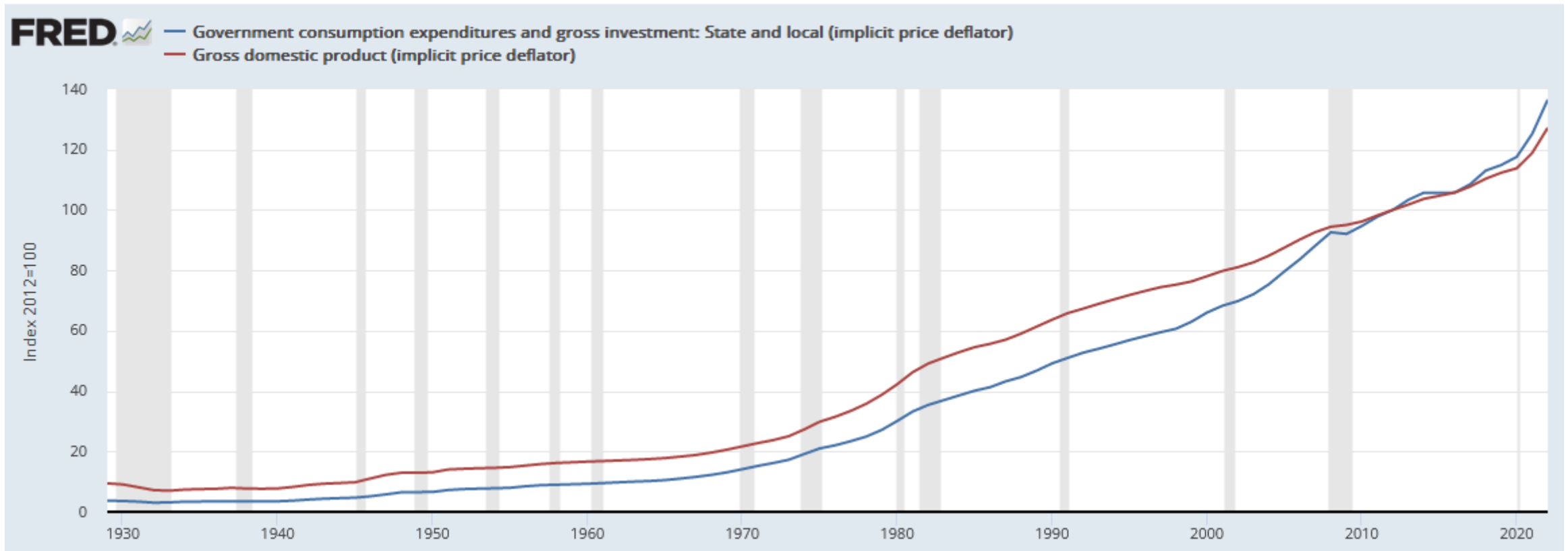
How is the GDP price index from BEA defined?

- GDP price index: Measures changes in the prices of goods and services produced in the United States, including those exported to other countries.
 - Recall that $GDP = \text{consumption} + \text{investment} + \text{government spending} + \text{exports} - \text{imports}$
 - Prices of imports are excluded.
- Measures only U.S.-produced goods and services
 - Does not include goods and services imported to the U.S.
- Does include final goods and services bought by businesses and governments



How is the State and Local Government deflator defined?

- State and Local Government implicit price deflator: the ratio of current dollar gross domestic product (GDP) to constant dollar GDP for state and local governments.



Part 4: Considerations



Priorities

- First, when looking at data in nominal (current) dollars over time, ask if some adjustment for inflation is appropriate
 - Especially now, when inflation is running 5% or 8% per year
 - Expect to see adjustments using a price index or deflator
 - Consider looking at data as a share of some other measure
 - For example, State of Vermont spending as a share of Vermont GDP
- Second, which adjustment is best?
 - Expect the data user to be able to justify the choice of adjustment factor
 - Consider the PCE deflator for items related to consumers
 - Consider the State and Local Government deflator for items related to State government spending and investment

Where are inflation adjustments used in Vermont statutes?

- Minimum wage law
 - Indexed to the CPI, not to exceed 5 percent
 - 2022 was \$12.55, increased to \$13.18 based on CPI from Sept 1, 2021, to Aug 30, 2022
- Education finance
 - Use State and Local Govt deflator
 - To grow the grand list used in data underlying the Yield Model
 - To calculate block grants for special education
- State pension cost of living adjustment
 - Indexed to CPI in some way for most groups; some use Northeast Region CPI
 - For example, Groups C and F going forward: indexed to increase by the CPI, not to exceed 4%; no adjustment if less than 1% or 0%
- Vermont Reach Up amounts
 - Adjusted each year by adjusting basic needs by the CPI plus look at current housing costs; then compare to funding available
- Transportation: town highway aid – adjusted by the CPI
- Campaign Finance amounts – adjusted by the CPI
- Renewable Energy programs – adjusted by Northeast Region CPI

Thank you!

