Perspectives on Inflation and Productivity Growth

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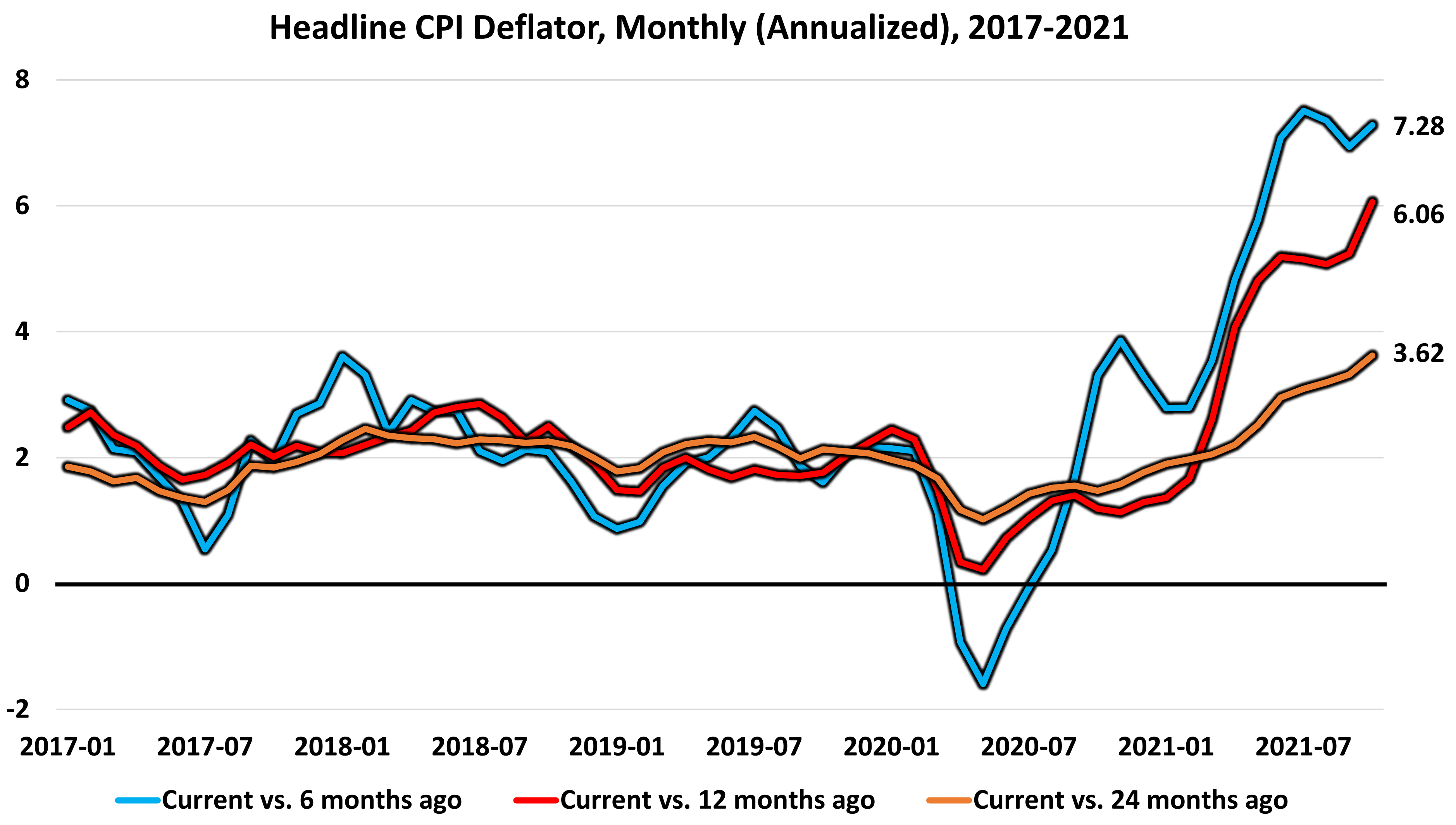
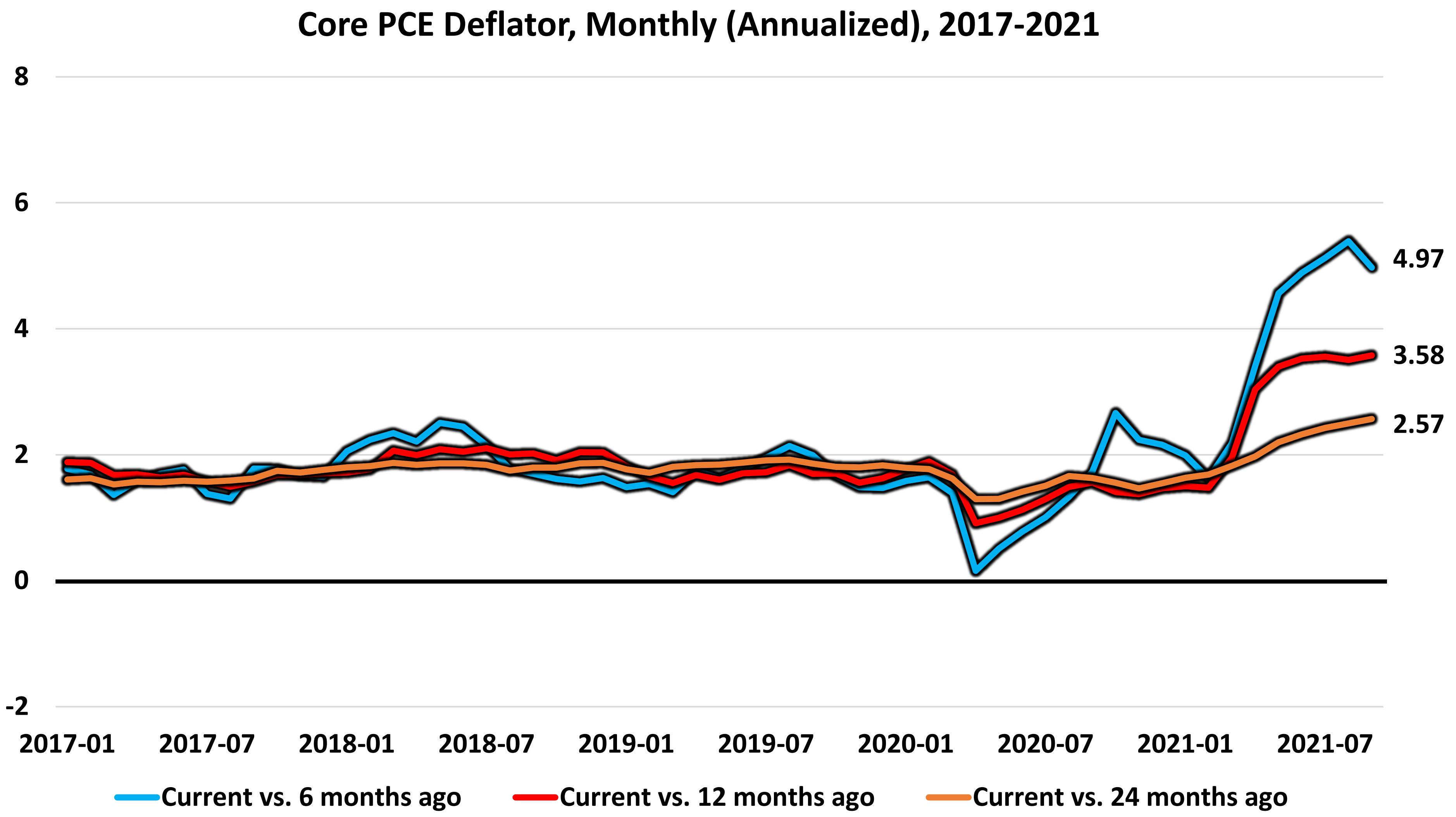
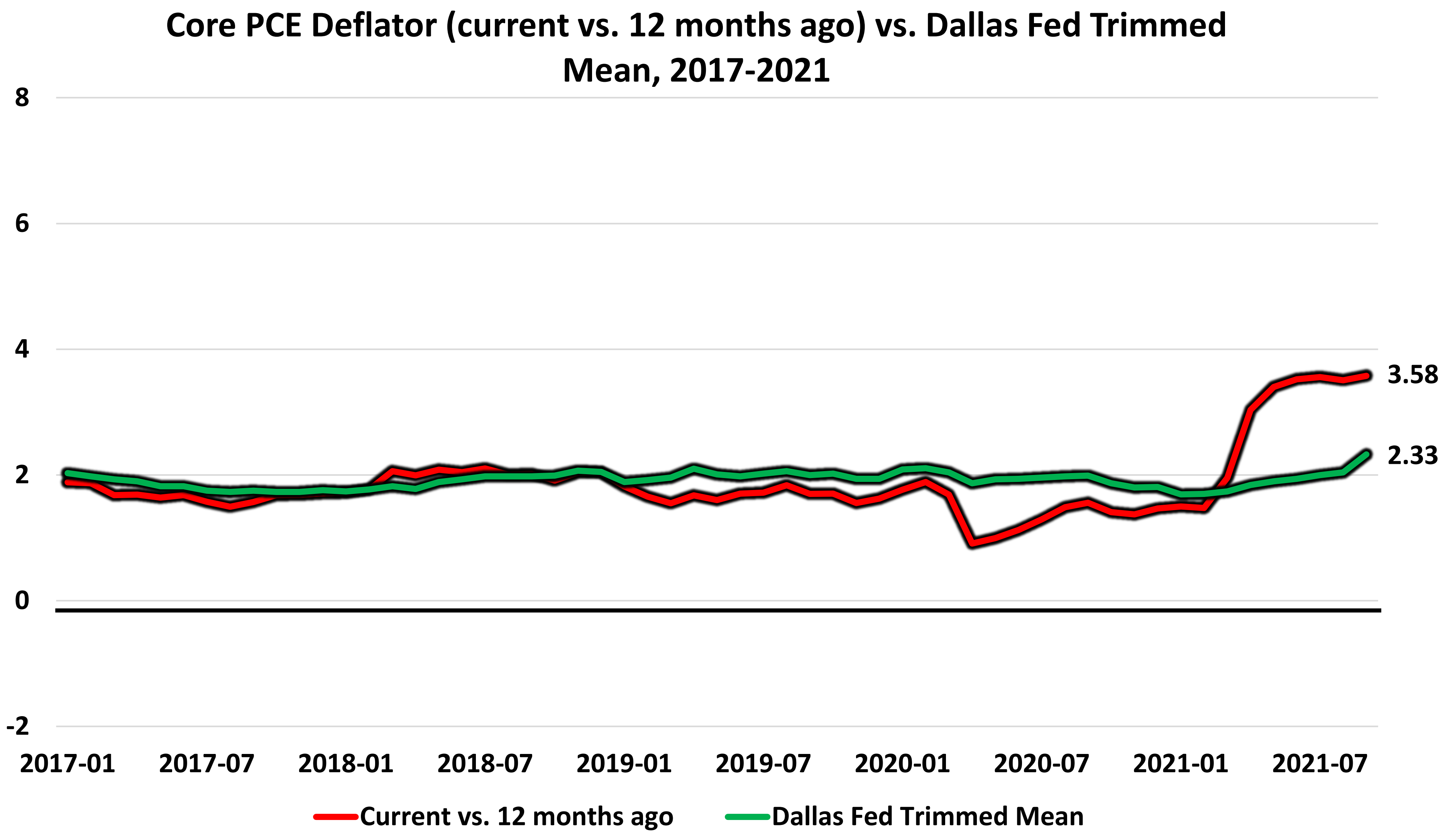
Headline CPI Inflation, Three Time Horizons, Jan. 2017 – Oct. 2021



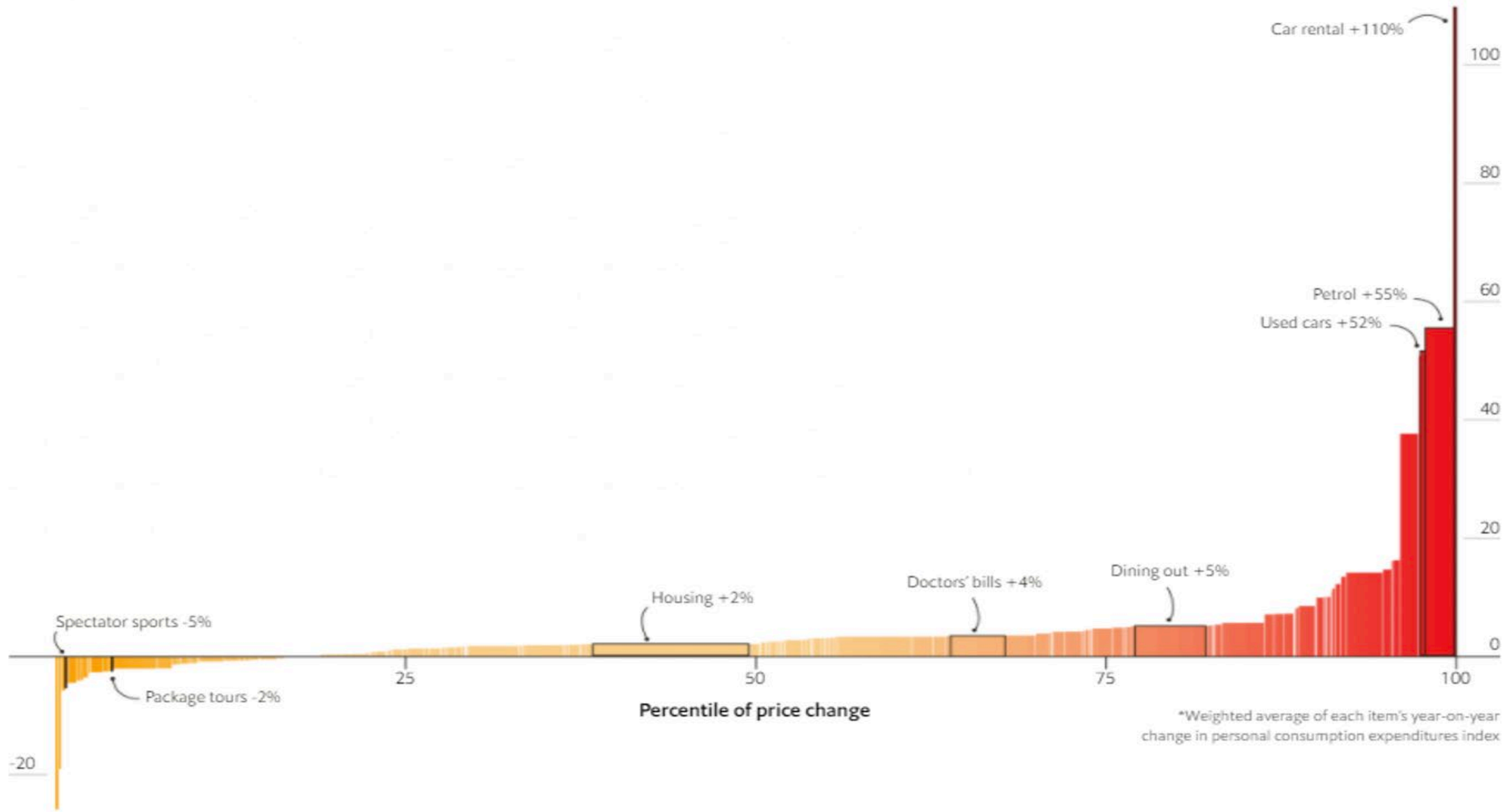
Core PCE Inflation, Three Time Horizons, Jan. 2017 – Sept. 2021



12-Month PCE Core versus Dallas Fed Trimmed Mean CPI



Splitting Up the Headline PCE Deflator Into Its Pieces, 12-months Ending May 2021



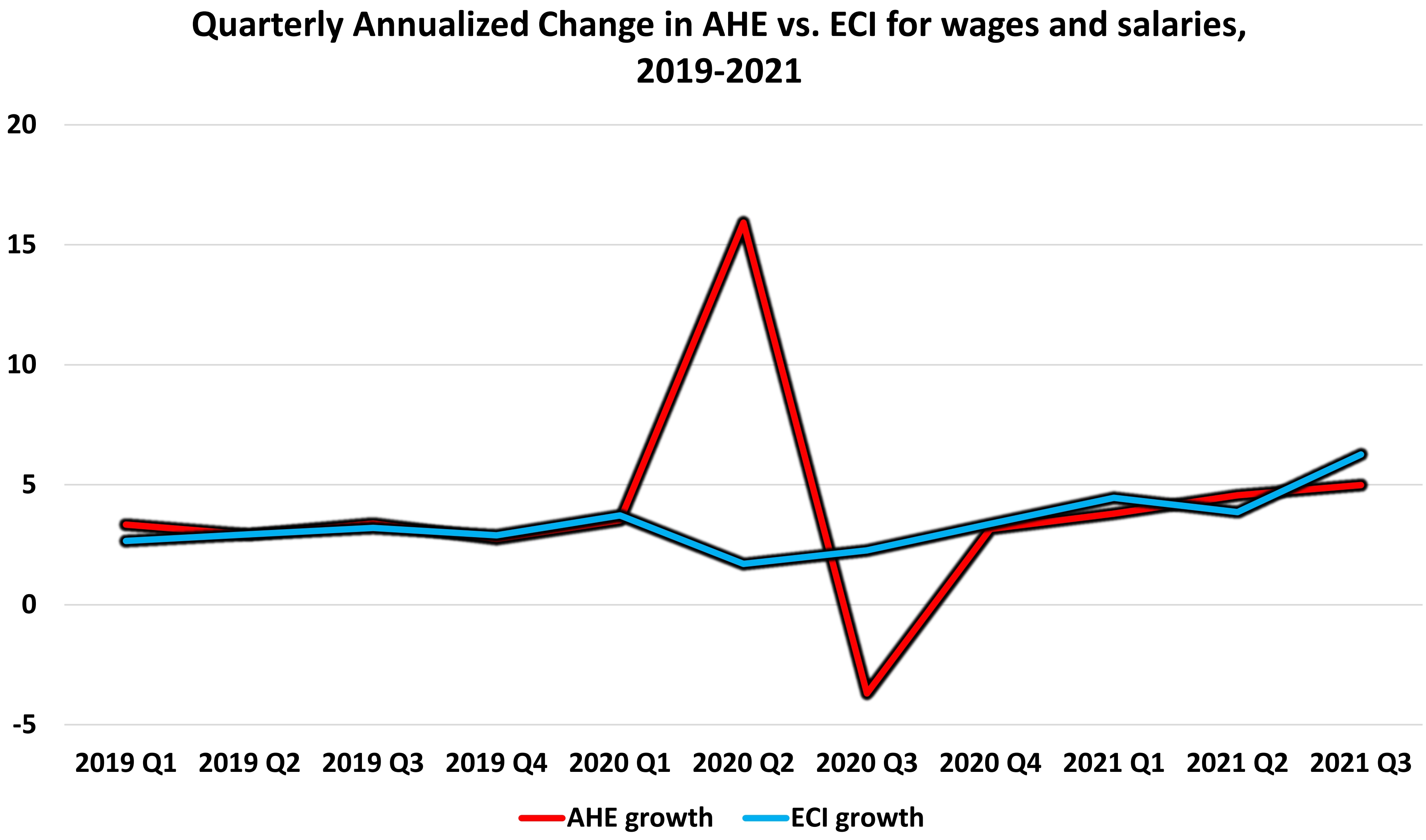
Aspects of the Inflation Outlook

- Similarities to supply shock inflation of 1973-75
  - Then: oil shock + food shock + end-of-price controls shock (July 1974)
  - Now: moderate oil + food added to supply chain disruption and chip shortages
- Outcome for inflation depends on size of shock, duration, and demand response. The case for a more temporary outcome than 1973-75:
  - Then: shocks raised level to a new high, temporary positive rate of change
  - Now: some shocks (supply chain, chips) cause a temporary level effect, prospect of a reversal to negative rate of change
  - Much less wage indexation
- Reasons core PCE inflation will settle down at 3 to 3.5, not 2.0
  - Rapid M growth combined with $2-trillion overhang of excess saving
  - Labor shortages have already boosted wages, this will continue into 2022, 23

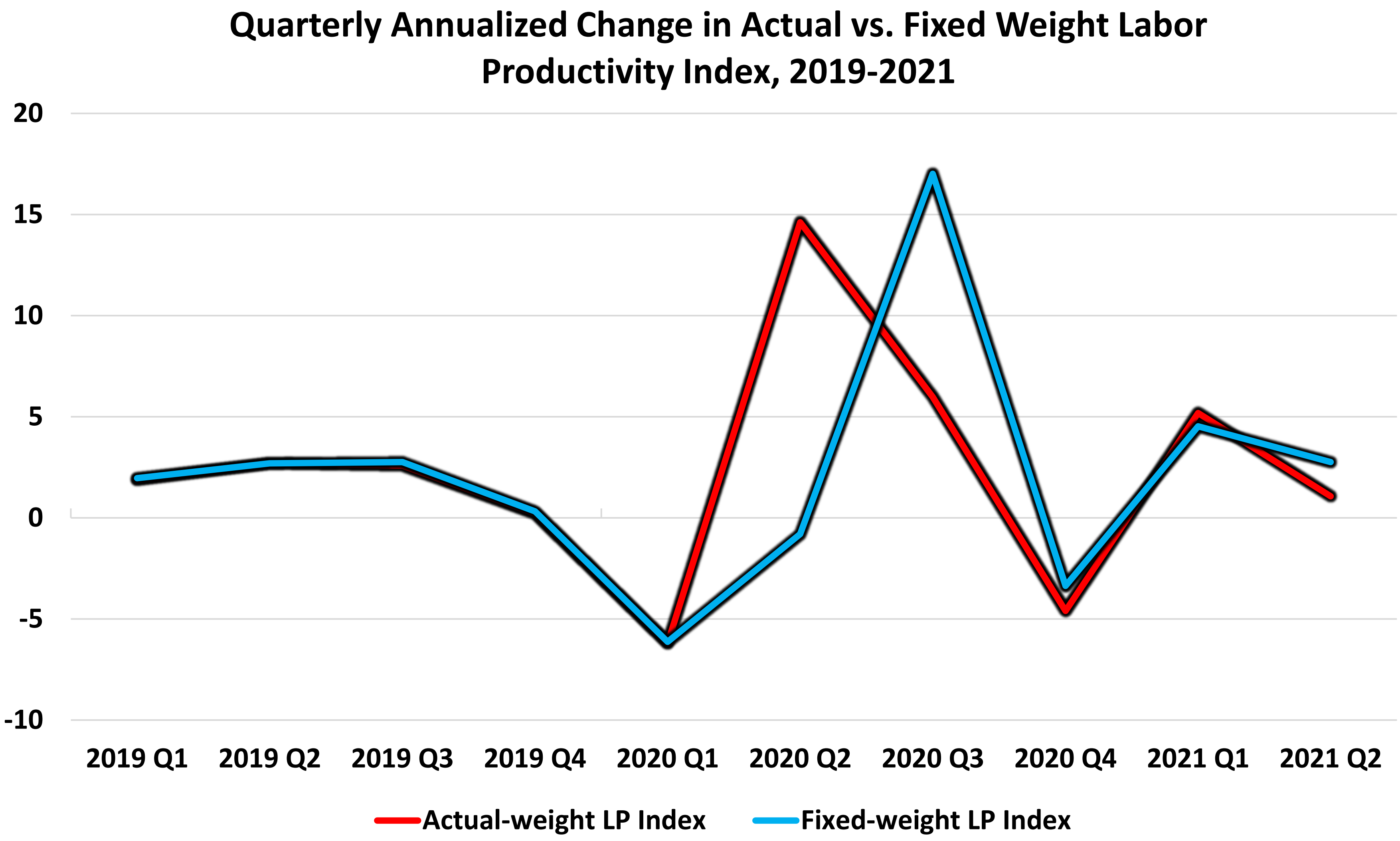
The 2020-21 Revival of Productivity Growth: Will it "Pay For" More Rapid Wage Growth?

- Wage growth in 2021:Q3 (quarterly change at annual rate)
  - 6.3% for ECI, 5.0% for AHE
- Productivity growth, annual rate
  - Six quarters 2020:Q1 to 2021:Q2. 3.1%
  - Seven quarters 2020:Q1 to 2021:Q3. 2.0%
- Combine wage growth of 5 percent with
  - 3 percent productivity implies 2 percent increase in unit labor costs
  - 2 percent productivity implies 3 percent increase in unit labor costs
- Thus outlook for inflation, whether headed back to 2 percent, back to 3 percent, or higher depends on interpretation of productivity data

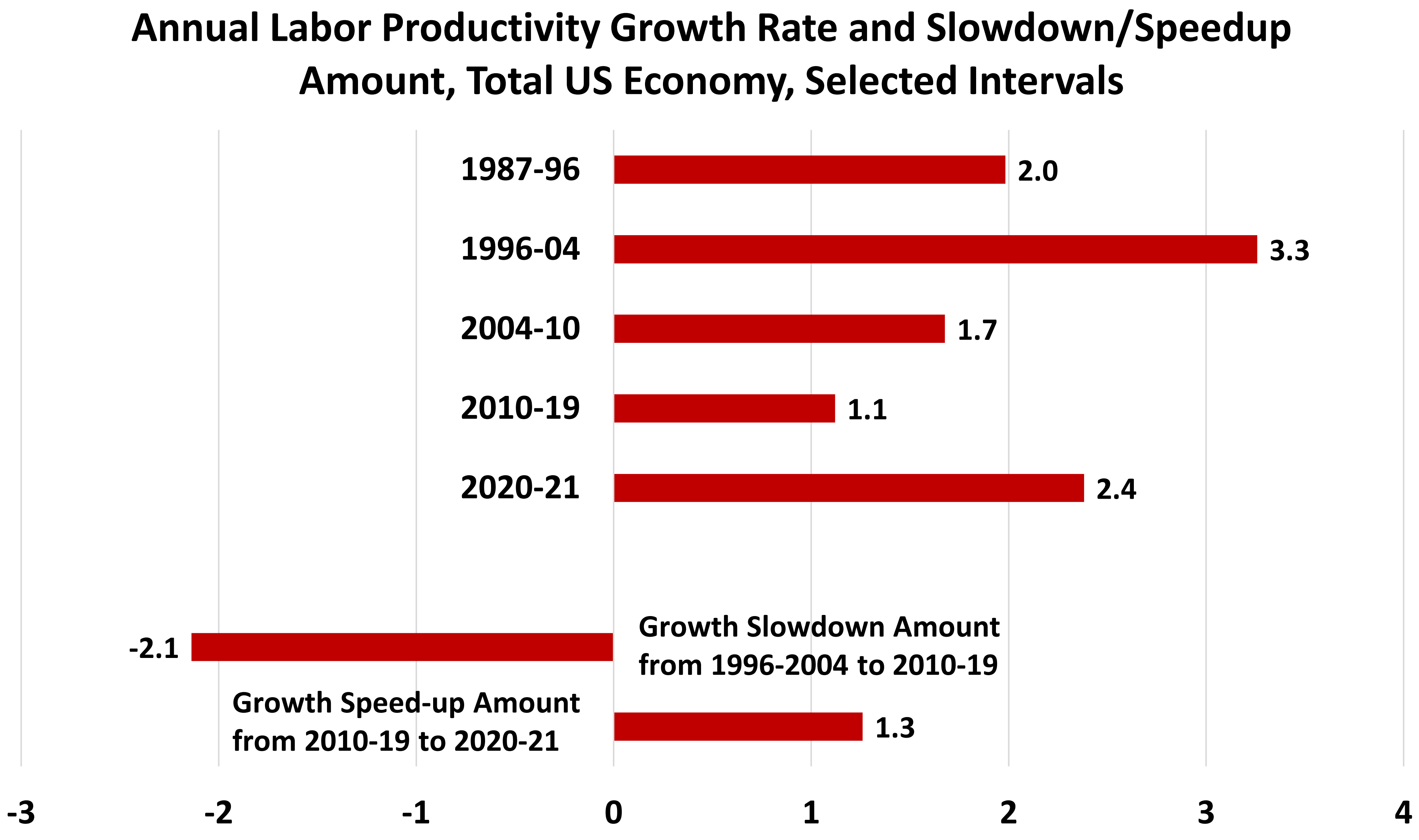
The Importance of Fixed Weights, AHE vs. ECI for Wages and Salaries



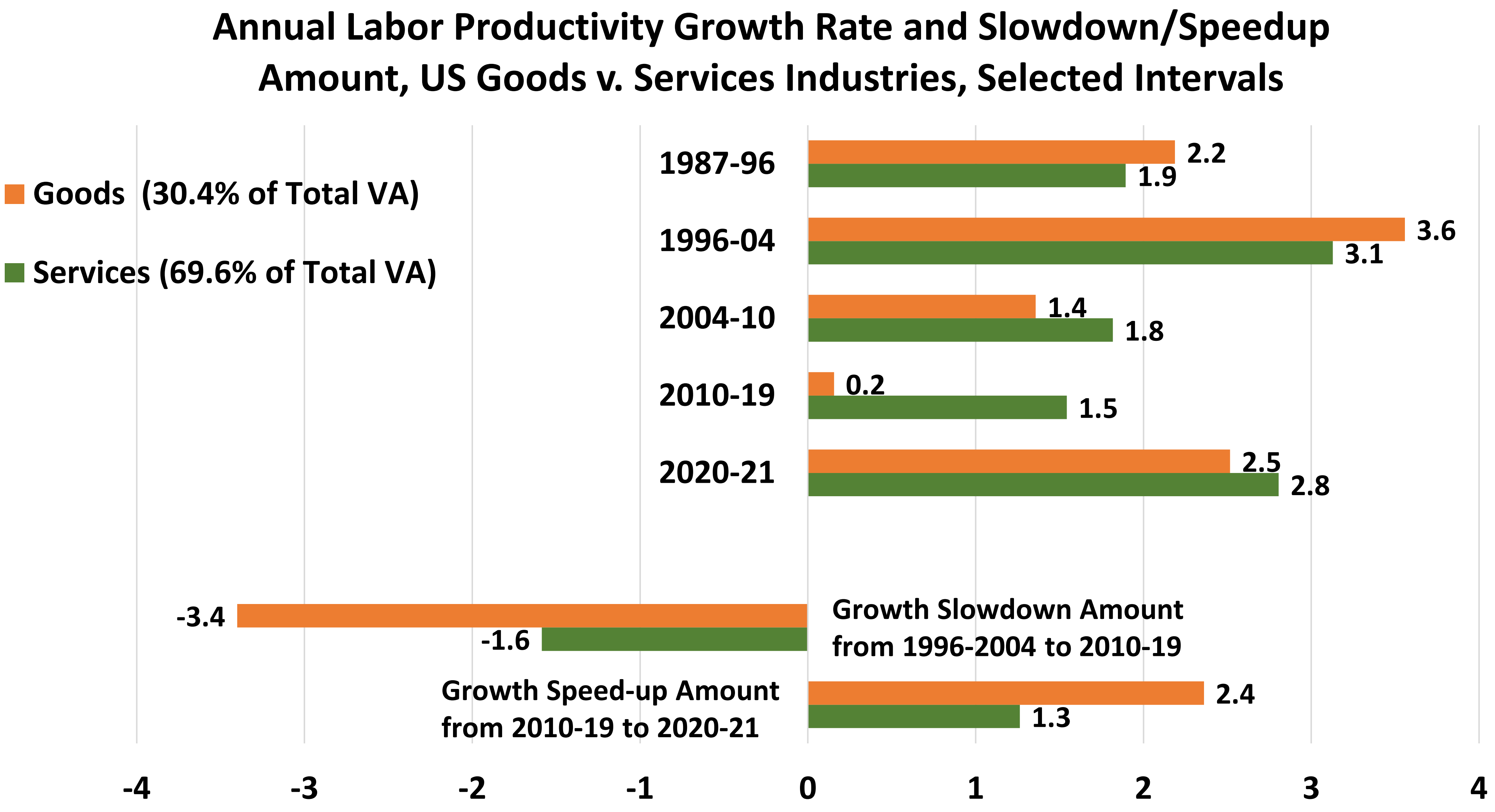
Productivity Growth, Actual Weights vs. Fixed Weights, 2019:Q1- 2021:Q2



U.S. Private Business Economy since 1987



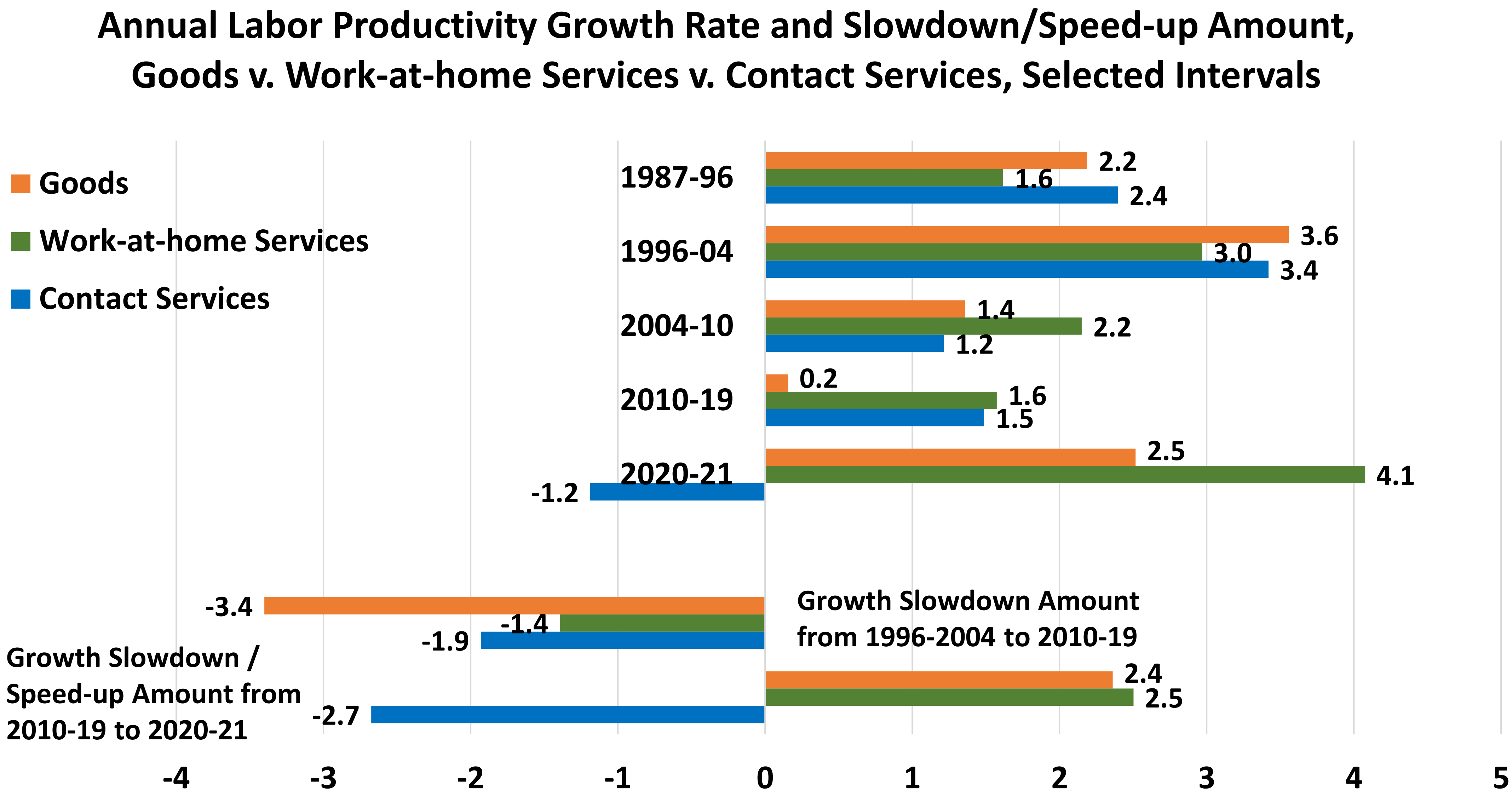
Goods vs. Services, 1987-2021



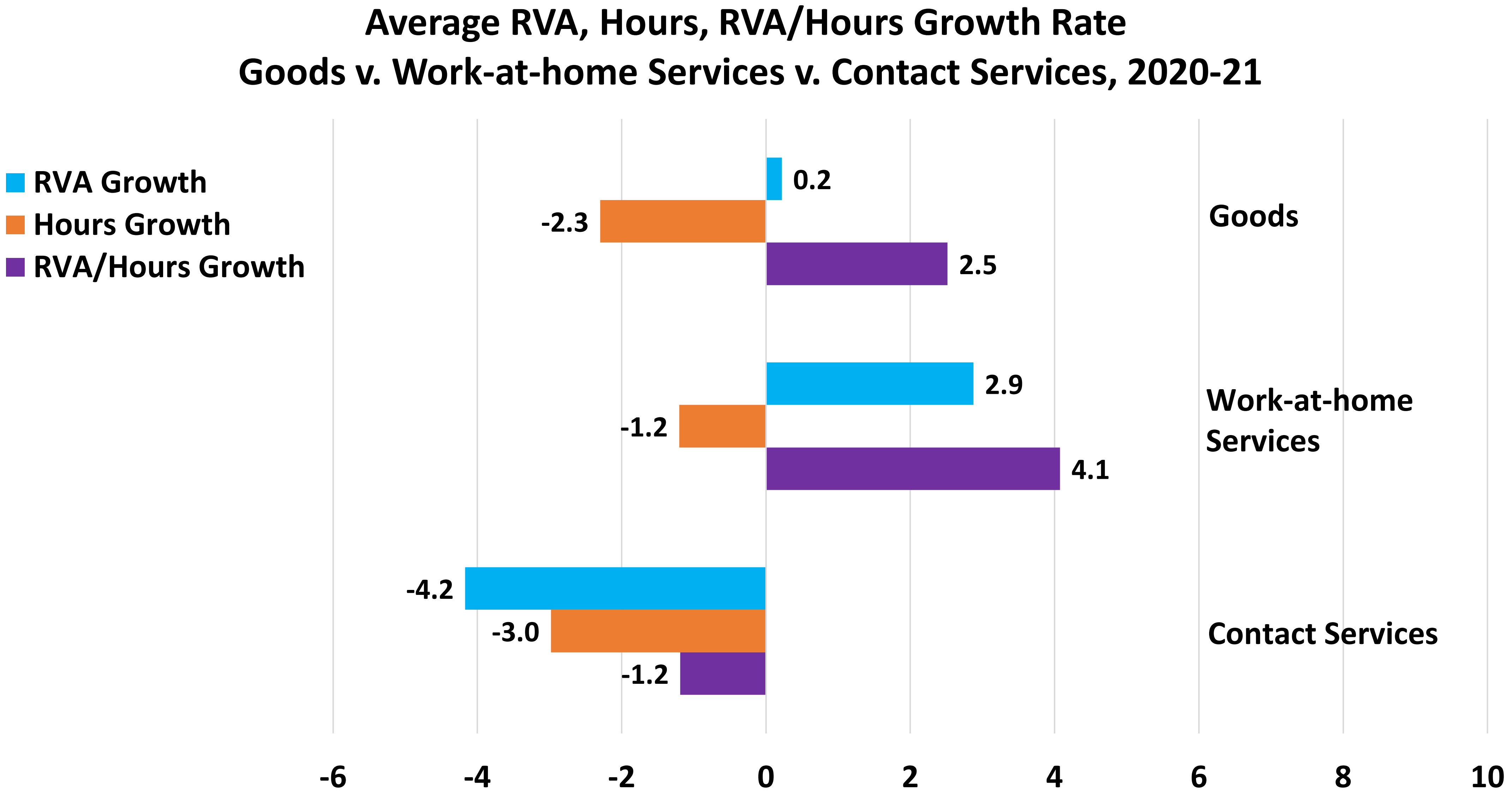
Division of Service Industries: Work-at-home vs. Contact Services with Real Value Added per Hour in ( )

Work-at-home Services	Contact Services
Information (234.5)	Wholesale Trade (92.7)
Finance, insurance, real estate, rental, and leasing (208.0)	Arts, entertainment, and recreation (68.9)
Management of companies and enterprises (90.6)	Transportation and warehousing (49.5)
Professional, scientific, and technical services (83.8)	Retail Trade (45.8)
Educational services, health care, and social assistance (40.0)	Other services, except government (37.7)
Administrative and waste management services (35.0)	Accommodation and food services (27.1)

Divide Services Into Two Groups: Work-at-home vs. Contact



Divide Industries: Goods, Work-at-home vs. Contact Services



Possible Explanations

- Jump in goods productivity
  - Excess layoffs in recession, similarities 2009-10 and 2020-21
- Contact services, widespread labor shortages
  - Labor shortages means productivity is mismeasured (longer waiting times, empty shelves, diminished consumer satisfaction)
- Reasons for labor shortages
  - Drop in female participation, due to at-home schooling, shortage of child care
  - Fear of Covid exposure in contact jobs
  - High saving from $5 trillion of transfers, reconsidering low-wage jobs (record-high quit rate)

More Possible Explanations

- Demand shifted from contact services to goods and at-home services, shifting productivity along with it
- Poor measurement of at-home hours: people are working more time in hours at home that used to be devoted to commuting and in-office small talk
  - Bloom-Davis evidence: 40% of commuting time now spent at work
- Relatively strong investment in 2020-21 in comparison to weak investment in 2008-10
  - Credit lending criteria were tight in 2009-10 following crisis
  - Stable investment with falling hours implies a jump in “capital deepening” contribution to productivity growth