A Marxist theory of inflation

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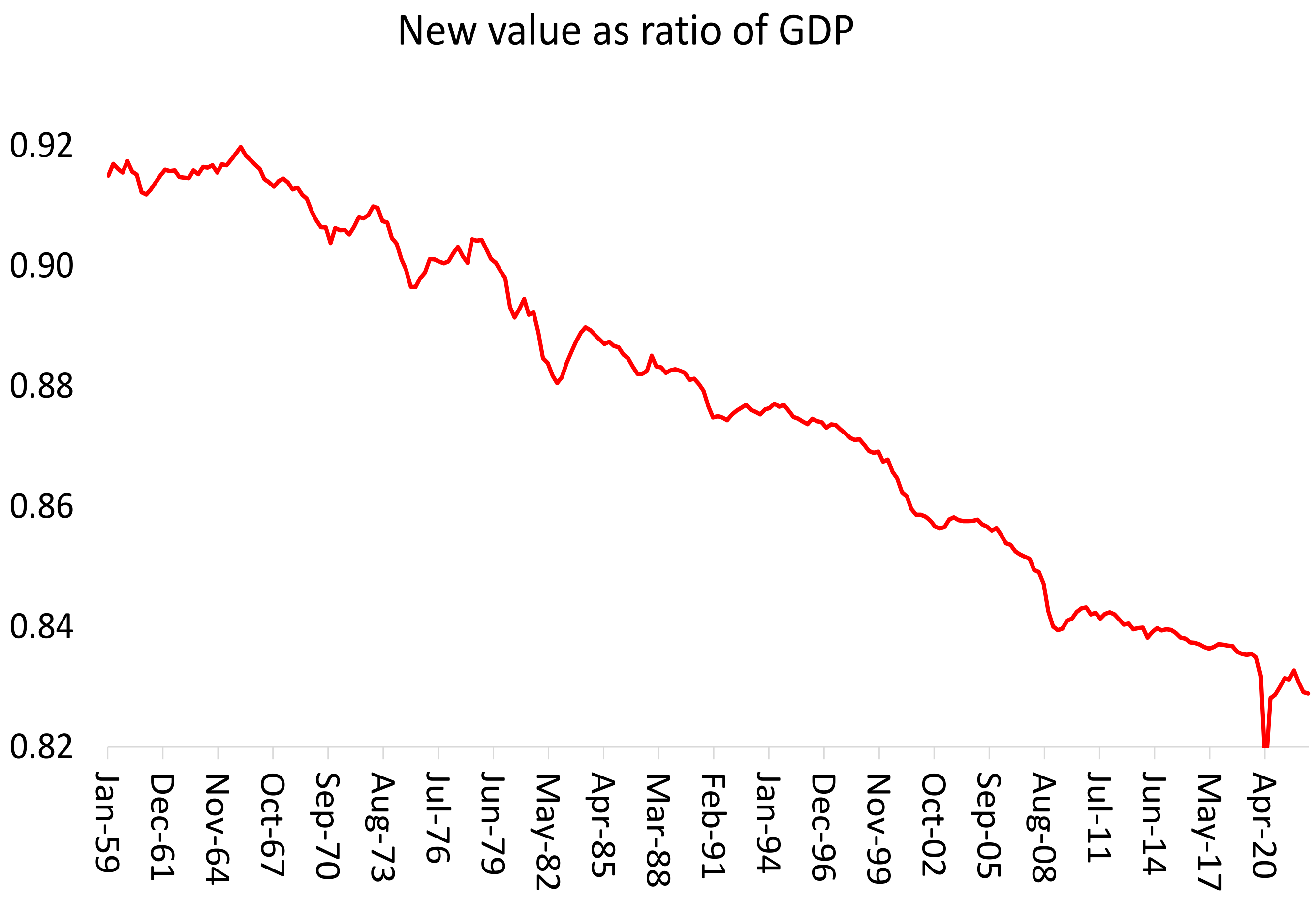
We understand better now how little we understand about inflation."
Jay Powell, head of the US Federal Reserve, June 2022

A value theory of inflation

- New value and money supply are the two factors: the first is determinant and second is determined
- c+v+s = V = P
- where c is the constant capital used up in production ie fixed assets and raw materials
- New value created is v+s ie divided between value of labour power (v) and surplus value (s)
- Assume for now. Value = P (prices of production) where money is neutral
- New value declines as share of total output because C/v rises and ROP falls.
- So the rate of change in new value slows. This acts as a downward force on prices of production and thus on the inflation of prices.

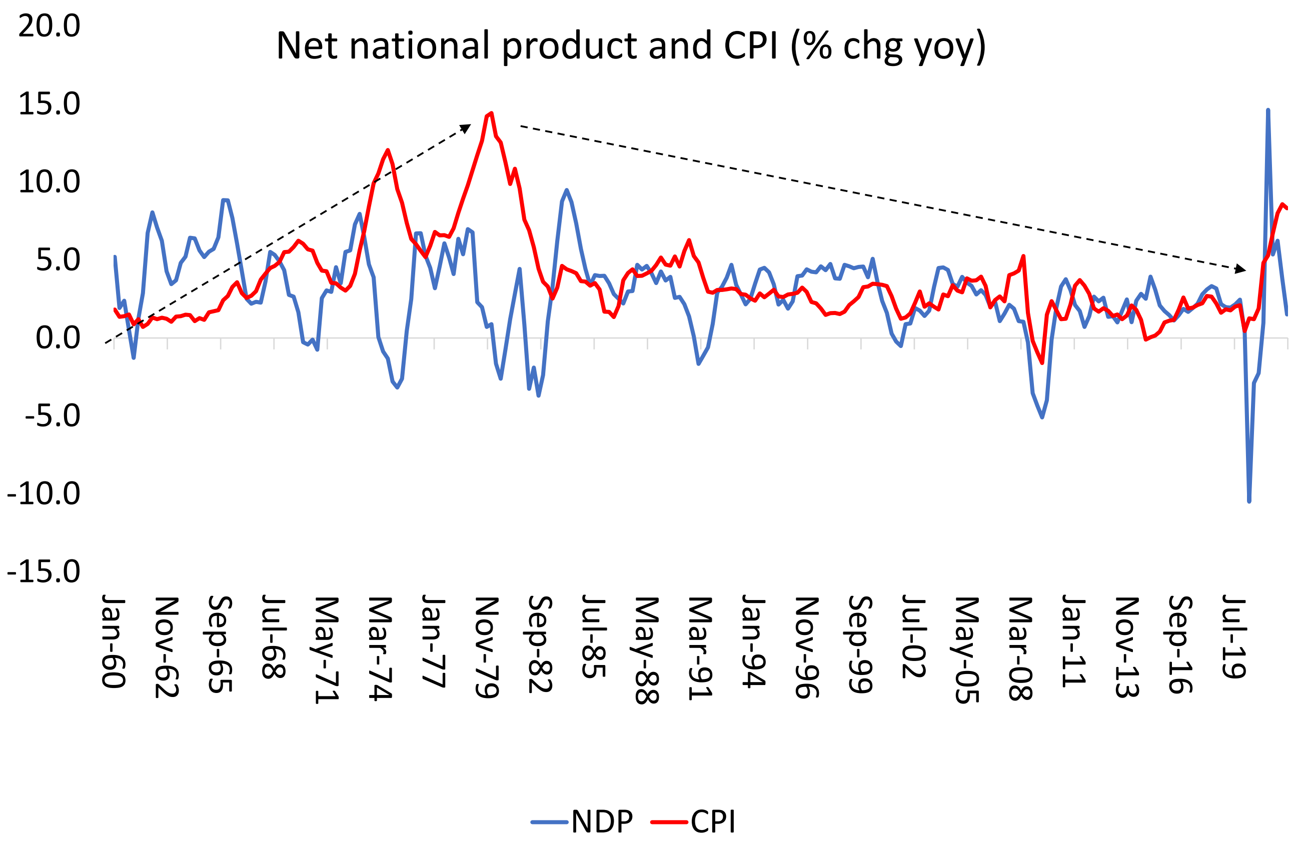
New value declines as a share of total output

- In capitalist production, new value will tend to decline as a share of total output as per Marx's law of capitalist accumulation.
- New value is calculated as net national product. The deduction from gross national product is the consumption of fixed capital and raw materials (constant capital consumed).
- The consumption of constant capital will rise compared to new value: C/v rises and so C/v+s rises.
- V = c+v+s where c rises as a share of V and v+s falls as a share of V.



New value growth drives CPI growth

- The trend in new value growth matches that of the change in CPI inflation. As new value creation growth slowed, so did CPI inflation.
- Between 1960 and 1979 new value annual growth averaged 3.8%, while CPI inflation averaged 4.9%. This was a period of rising inflation.
- Between 1979 and 2019, new value growth slowed to 2.4% a year and CPI inflation slowed to 3.2%. This was a period of disinflation.
- In the first period, new value growth matched 78% of CPI inflation and in the second period, 74%.



The counteracting factor of money

- But money supply acts as a counteracting factor. Money is mainly the result of demand from money for transactions in commodity production. Banks provide money/credit for such and the central bank (where it exists) ‘prints’ money to meet this demand.

- But money, even as a commodity (gold), can vary above or below demand as created by new value. Gold production abroad can increase and flood a national economy causing inflation. Alternatively, a trade deficit can lead to an outflow of gold causing deflation.

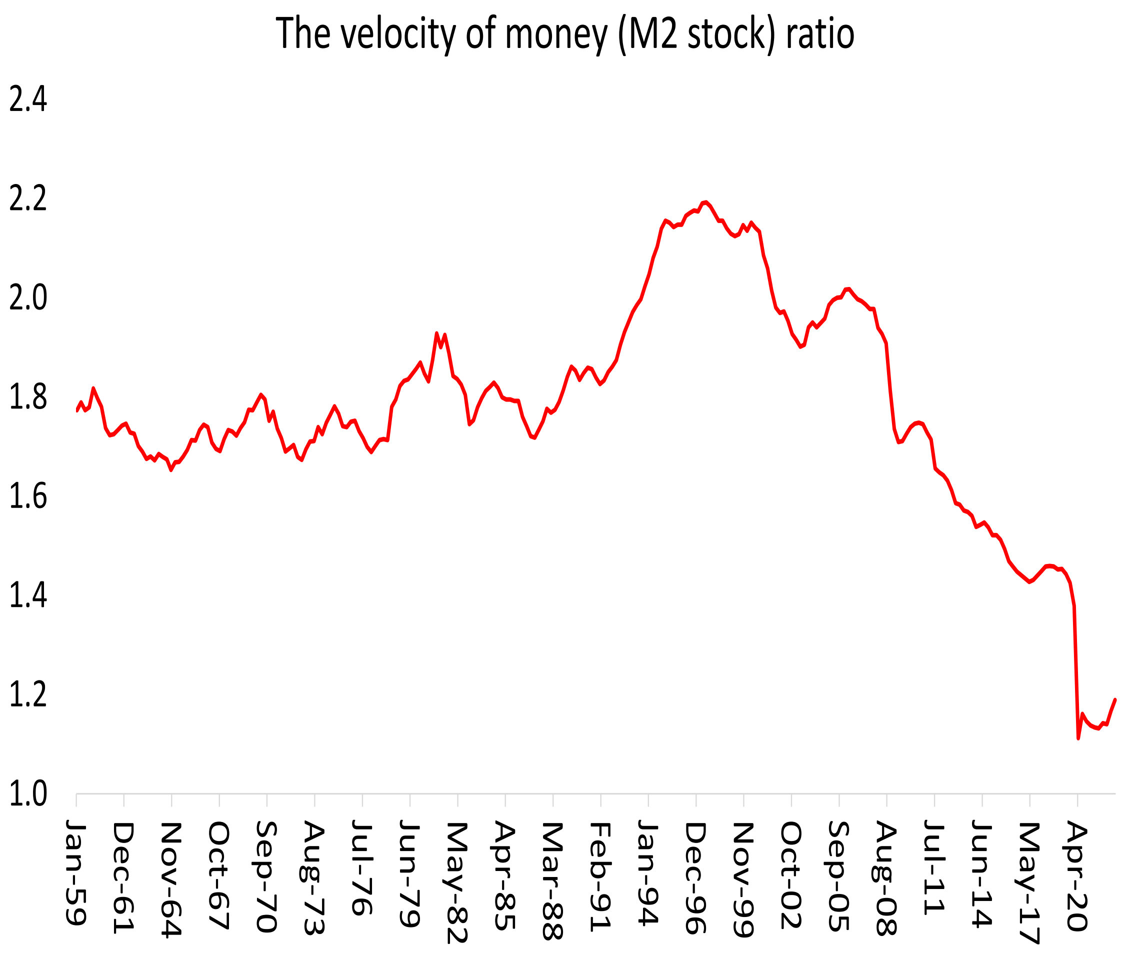
- With fiat currencies, the monetary authorities and the state can also increase or decrease money supply relative to new value in production. That will lead to inflation or deflation as demand in monetary terms will rise or fall above and below new value production growth. Seignorage and coin corruption existed even before capitalism. In modern times, monetary policy by central banks becomes part of macro management.

The determining and determined

- These are the two factors causing inflation: one is new value growth, the determining factor; the other in money supply growth, the counteracting factor.
- This value theory of inflation is not a monetarist theory a la Friedman.
- In **monetarism**, it is money that is the determinant directly of price changes. In **value theory,** it is the opposite: money supply reacts to the production of value.
- The monetarist equation $MV = PT$
- **Monetarism**: if we assume V velocity of money is steady and T (transactions or production) is steady,
- then $M = P$ and M leads P.
- But in a **Marxist approach**, it is P (prices of production as the modification of value creation) that leads M
  So $P = M$ and P leads M.
- But M can also act in reaction to movements in P that lead to $M>P$ or $M<P$.

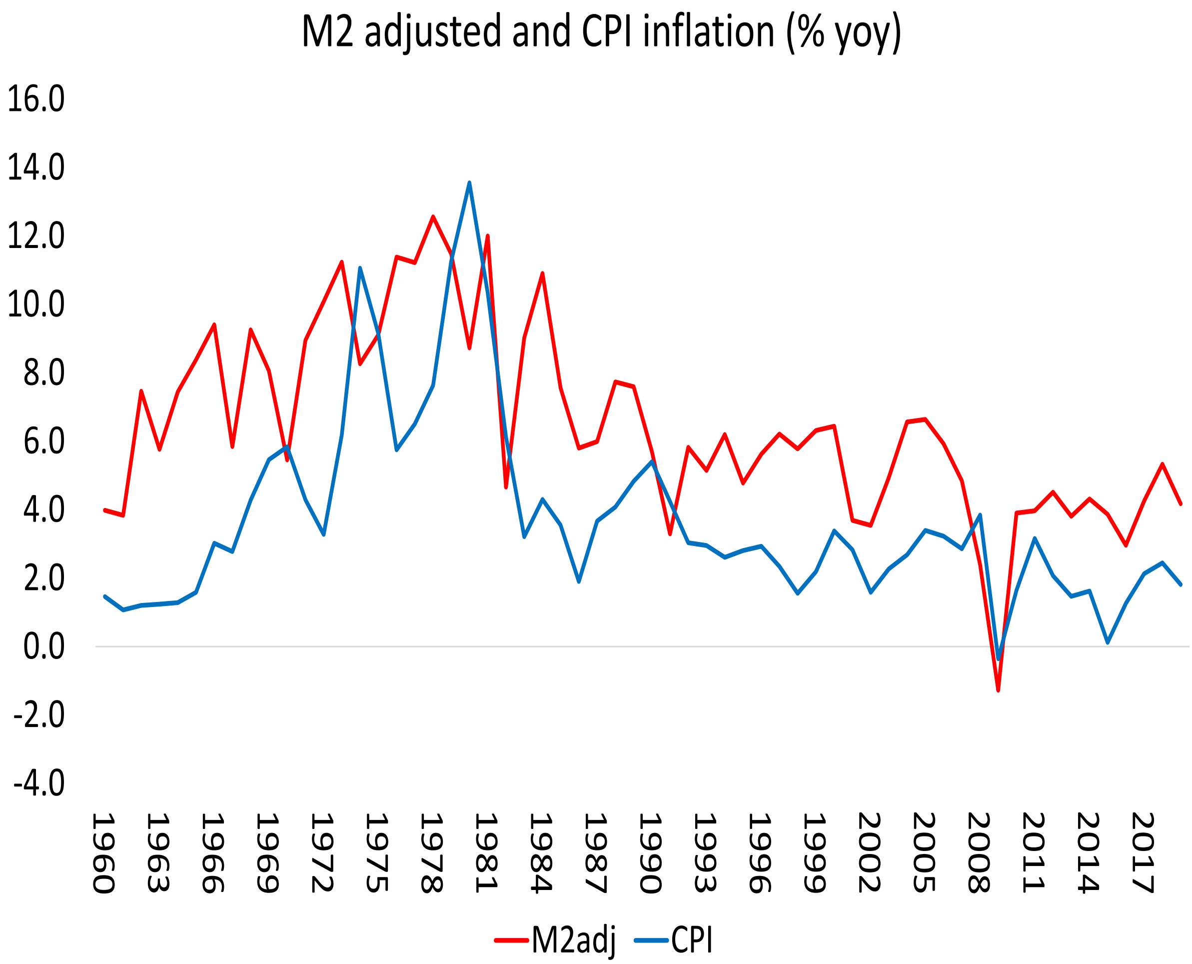
The reaction of money supply

- First, we must adjust for the velocity of money. Friedman did not do this, but the velocity of money varies considerably.
- In Marxist theory a decline in the velocity of money implies hoarding of cash or the switch of money out of transaction purchases for goods and services and into financial assets (fictitious capital) or property (the prices of which are not directly reflected in CPI).
- The velocity of money dropped sharply from the late 1990s. This reflects the relative shift out of purchases in commodities by companies and households into financial assets and property – financialization if you like.



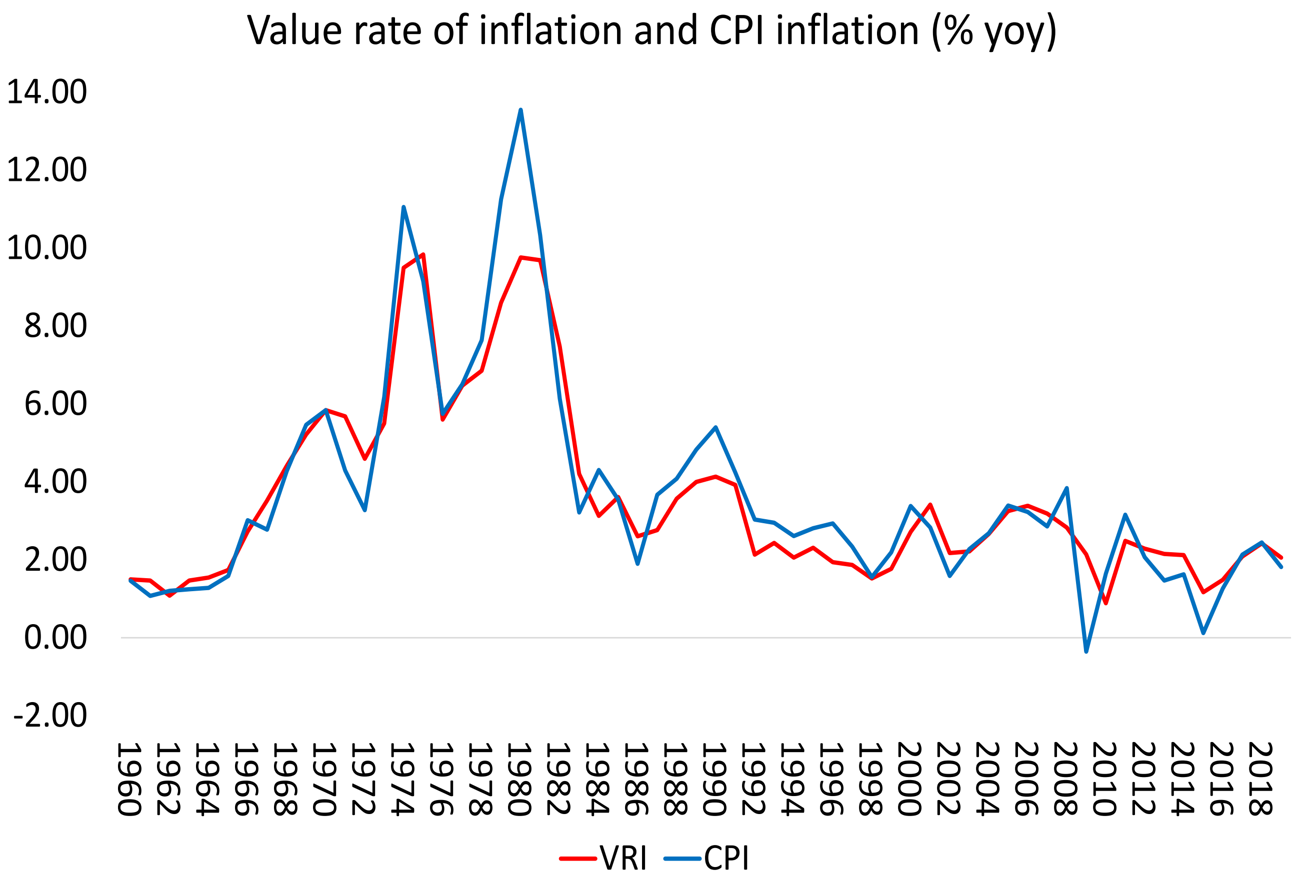
The adjusted money supply

- By deducting the change in the velocity ratio from the change in the money supply, we can obtain an effective or adjusted change in money supply.
- Now we can compare the change in money supply (as adjusted) with CPI inflation. In the first period 1960-79, money supply grew at an annual average rate of 8.5% compared to CPI inflation of 4.9%; in the second period from 1980-2019, it grew at 5.5% compared to CPI inflation of 3.2%.
- In the first period it rose 80% faster than CPI inflation and in the second period by 70% faster. So, while new value growth exerted a downward pressure on CPI inflation, money supply growth invariably exerted an upward pressure, but with varying impact.



The value rate of inflation

- The combination of both new value growth and adjusted money supply growth can be considered as the Value Rate of Inflation (VRI).
- MV=PT P = MV/T. So if we deduct the *change* in new value from the *change* in adjusted money supply. This gives us the **Value Rate of Inflation**.
- It should result in determining (predicting) the CPI inflation rate.
- Does it do so? Here are the results of VRI compared with CPI inflation. The correlation is extremely high at 0.91.



Predictive power

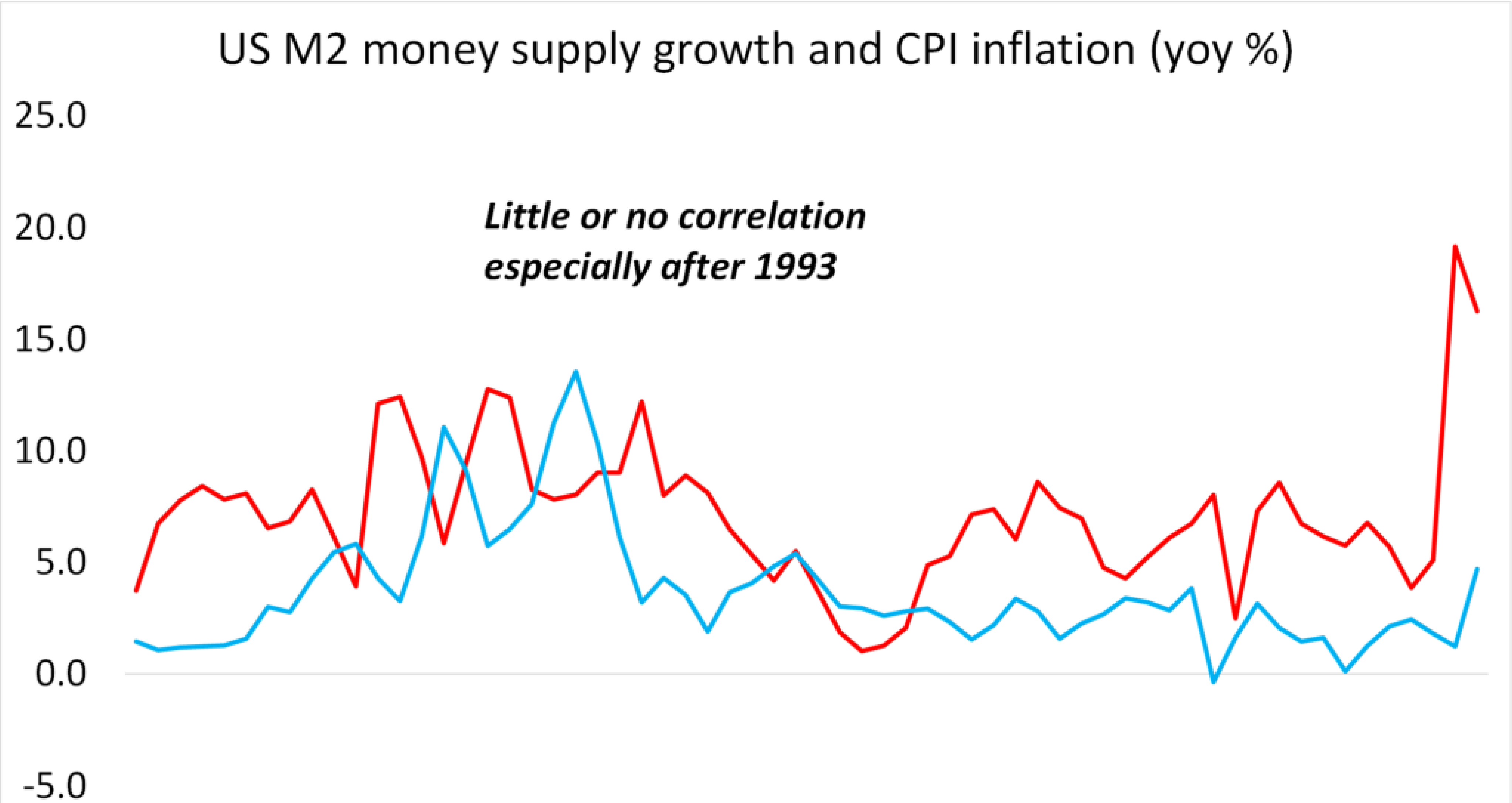
- This would suggest strong predictive power. The pandemic slump has generated violent movements in new value production and inflation rates.
- However, the VRI model can still provide some interesting predictions.

	CPI	VRI	*Diff*
2001	2.83	3.41	*0.59*
2002	1.59	2.17	*0.58*
2003	2.27	2.21	*-0.06*
2004	2.68	2.66	*-0.01*
2005	3.39	3.25	*-0.15*
2006	3.23	3.39	*0.16*
2007	2.85	3.18	*0.33*
2008	3.84	2.83	*-1.01*
2009	-0.36	2.14	*2.49*
2010	1.64	0.89	*-0.75*
2011	3.16	2.48	*-0.68*
2012	2.07	2.28	*0.21*
2013	1.46	2.15	*0.69*
2014	1.62	2.12	*0.50*
2015	0.12	1.16	*1.05*
2016	1.26	1.48	*0.22*
2017	2.13	2.09	*-0.04*
2018	2.44	2.42	*-0.02*
2019	1.81	2.05	*0.24*
2020	**1.23**	**-2.93**	***-4.16***
2021	**4.70**	**2.89**	***-1.81***
2022	**8.00**	**6.65**	***-1.35***
2023		**3.79**	

The Monetarist theory of inflation

- Milton Friedman: “Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output.” (Friedman, 1970).

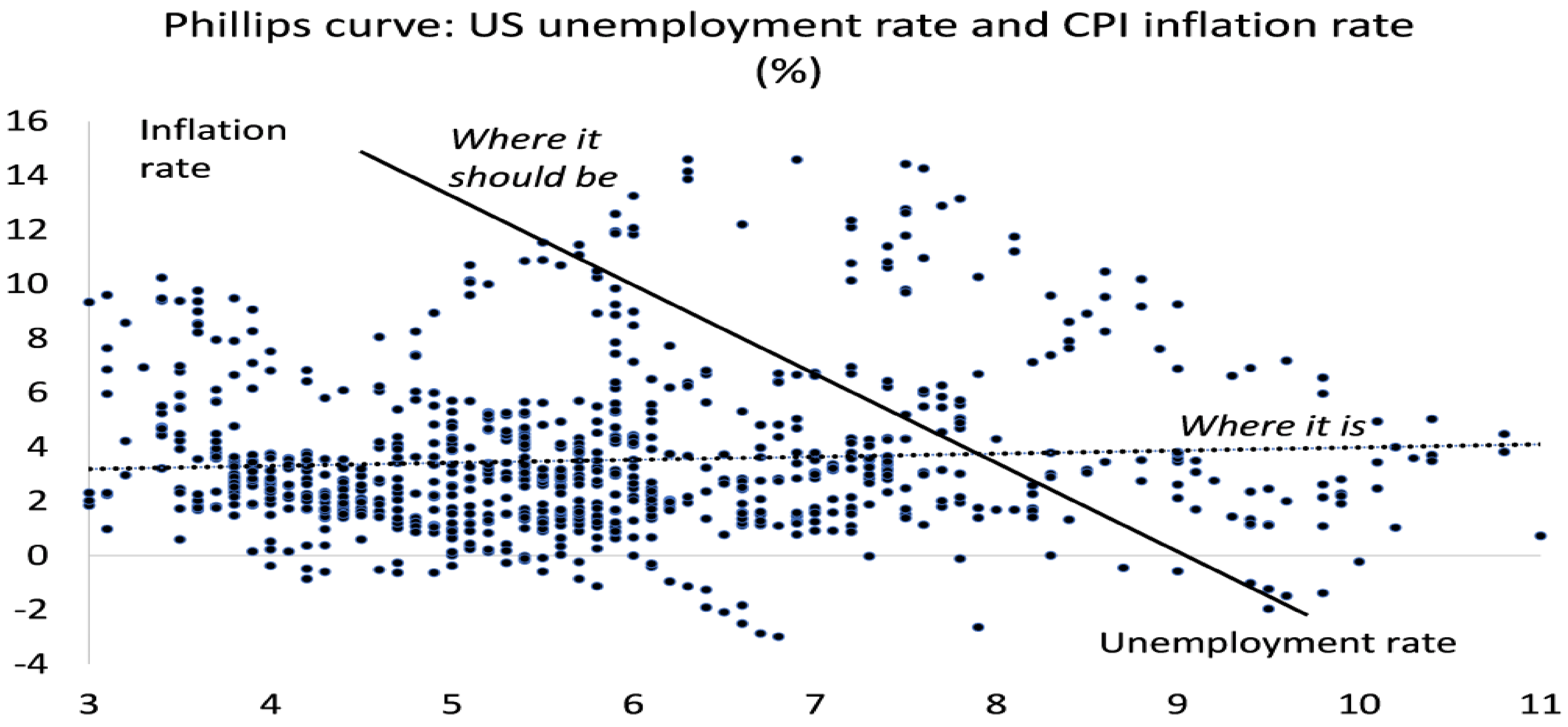
Monetarist theory



Wage rises cause inflation?

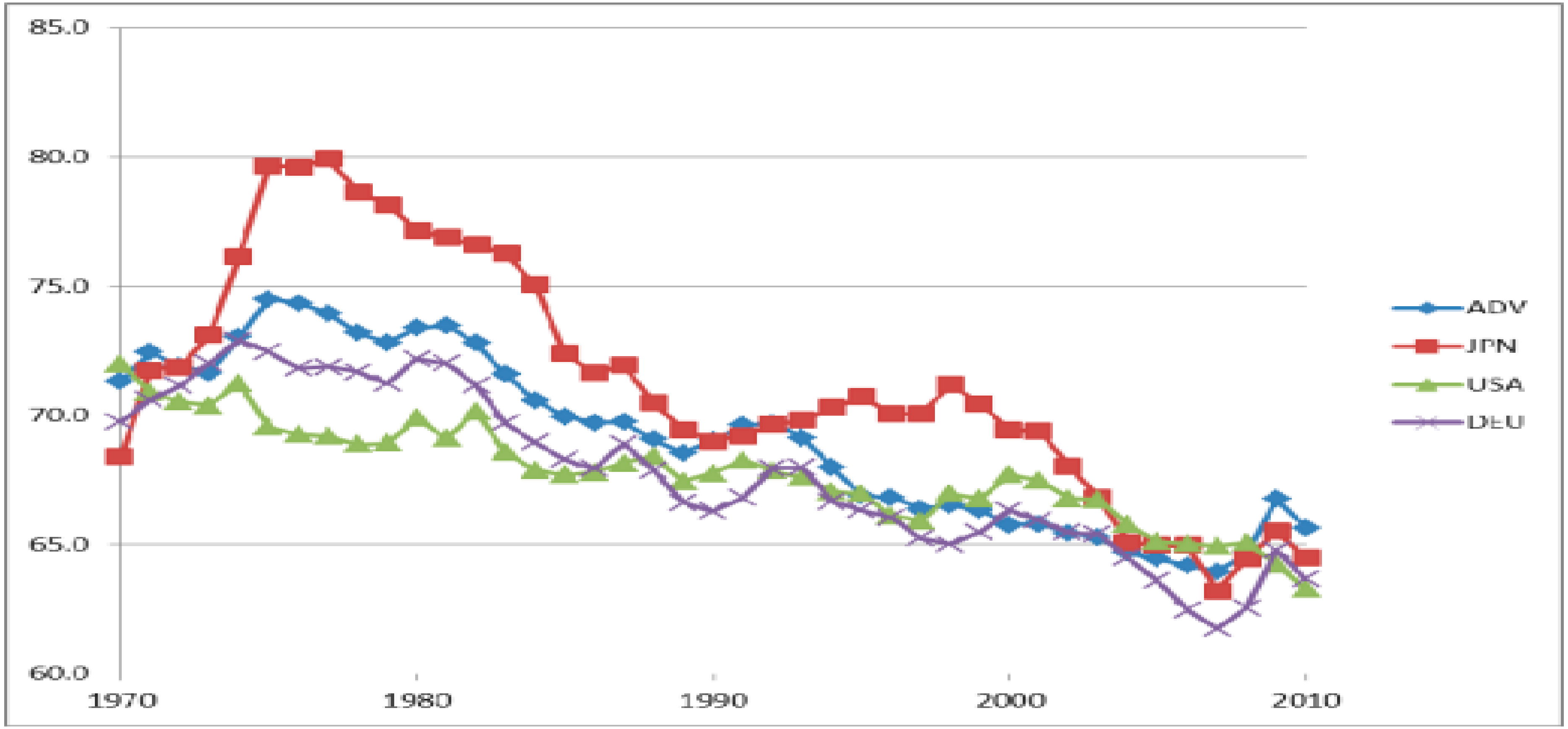
- The Governor of the Bank of England, Andrew Bailey: *"I'm not saying nobody gets a pay rise, don't get me wrong. But what I am saying is, we do need to see restraint in pay bargaining, otherwise it will get out of control".*
- *"When wages go up that leads prices to go up. If airline fuel or food ingredients go up in price then airlines or restaurants raise their prices. Similarly, if wages for flight attendants or servers go up then they also raise prices. This follows from basic micro & commonsense."* Jason Furman leading mainstream economist.
- "So in principle ..., by moderating demand, we could ... get wages down and then get inflation down without having to slow the economy and have a recession and have unemployment rise materially. So there's a path to that." Jay Powell, US Federal Reserve
- As FT columnist and Keynesian Martin Wolf puts it "*What [central bankers] have to do is prevent a wage-price spiral, which would destabilise inflation expectations. Monetary policy must be tight enough to achieve this. In other words, it must create/preserve some slack in the labour market.*

No correlation between labour market and CPI



Wage share in new value has been falling

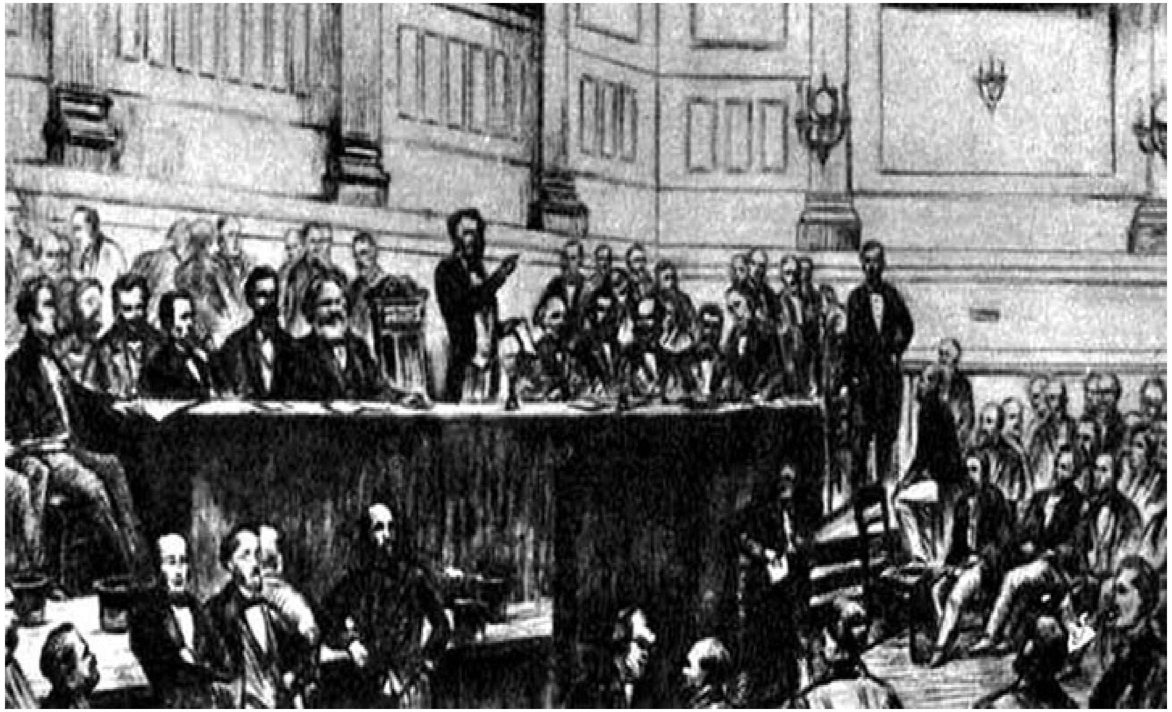
Figure 1. Adjusted wage shares in advanced countries, Germany, the USA and Japan, 1970-2010



Note: ADV stands for unweighted average of high income OECD countries (without South Korea)[2]
Source: AMECO

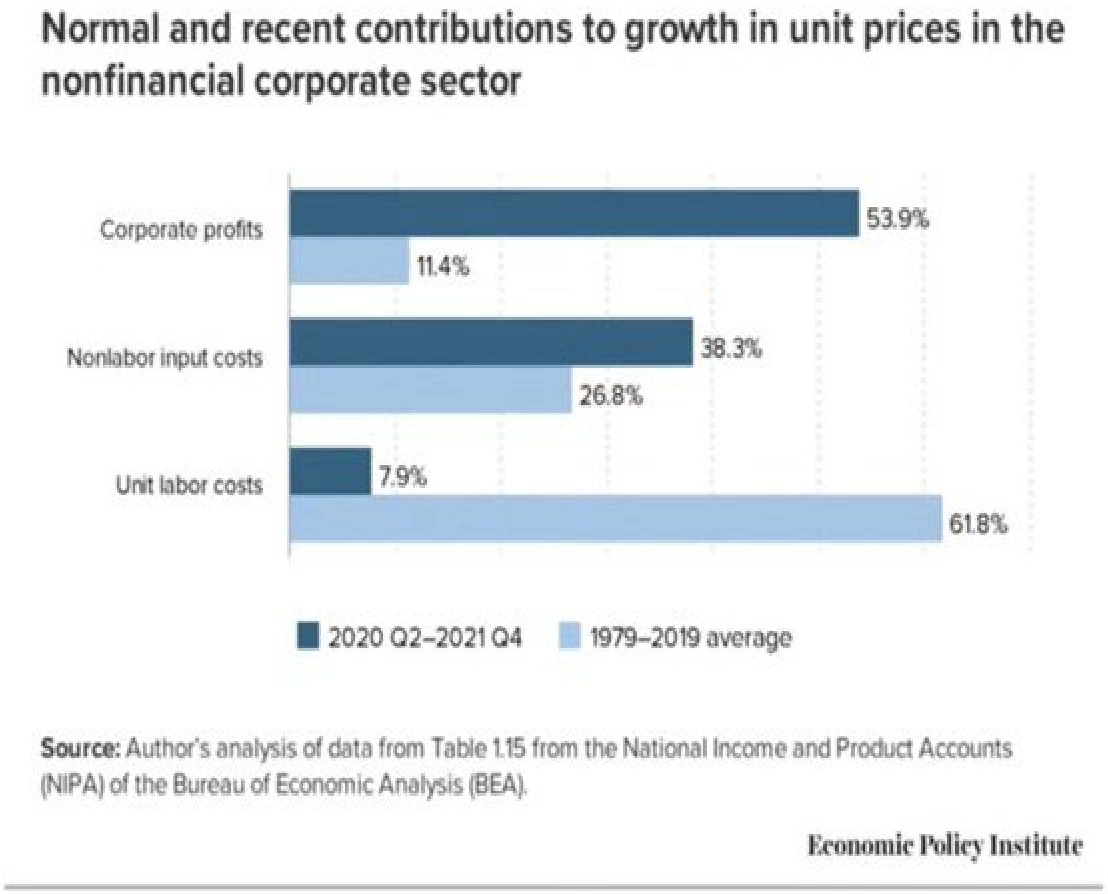
So what about profits?

- In 1865, John Weston, carpenters unionist and General Council member argued tha: wage rises will only lead to bosses raising prices, so inflation will only put wages back where they were in real terms.
- Karl Marx replied (Value, Price and Profit):
- *1. "a struggle for a rise of wages follows only in the track of previous changes In prices"*
- *2. Many other things affect price changes: "the amount of production, the productive powers of labour, the value of money, fluctuations of market prices, different phases of the industrial cycle".*
- Assuming those things, *"A general rise in the rate of wages will result in a fall of the general rate of profit, but not affect the prices of commodities."*



Profits and prices

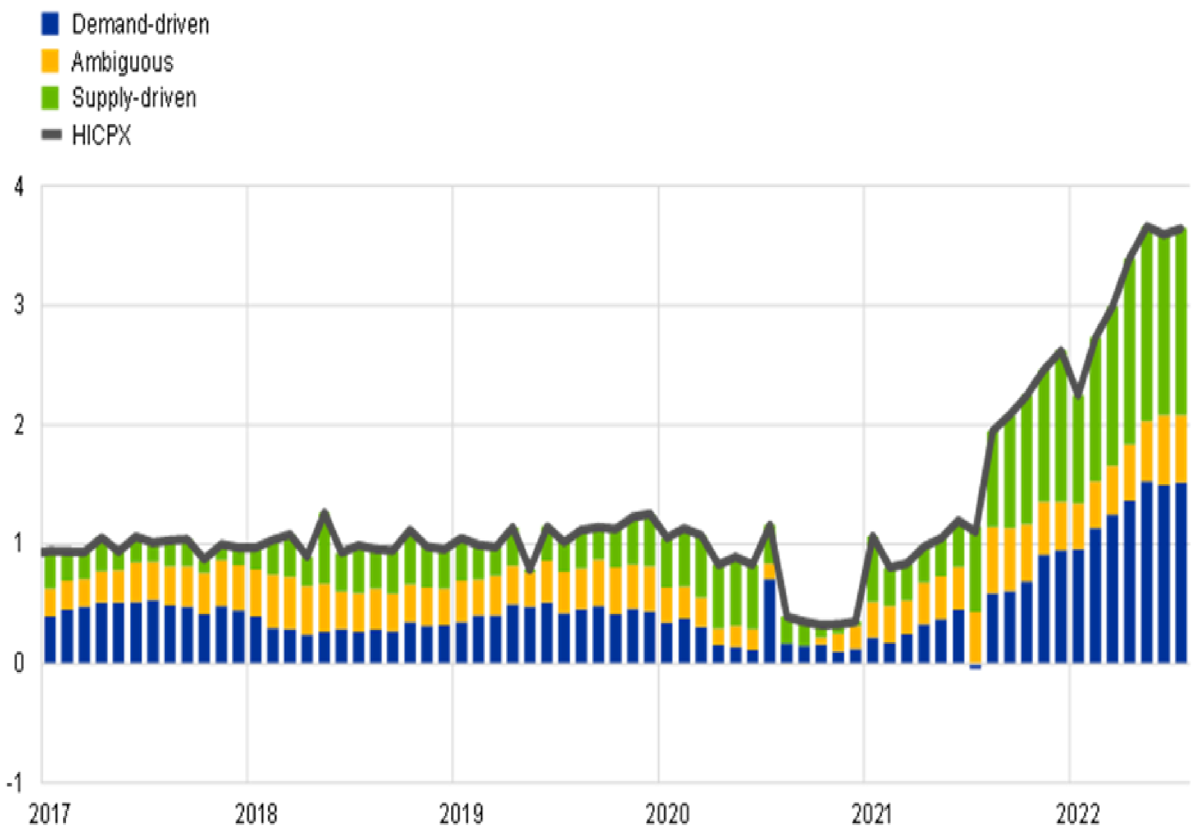
According to the EPI, between 2020 and 2022 “an estimated 54 percent of the average price increase in the United States non-financial sector was attributable to higher profit margins, compared to only 11 percent in the previous 40 years.”



Raw materials and the inflation rate

- The rate of profit is thus 'inversely proportional to the value of the raw materials' (Marx, 1967, III, p. 111). The cheaper the raw materials and energy, the higher the rate of profit.
- The dynamism of capitalist production leads the 'portion of constant capital that consists of fixed capital … [to] run significantly ahead of the portion consisting of organic raw materials, so that the demand for these raw materials grows more rapidly than their supply' (pp. 118–19).
- Raw materials become 'scarce' relative to the rise in fixed asset investment.

The composition of the rise Eurozone inflation rates (% pts)



"supply disruptions and bottlenecks and components that are strongly affected by the effects of reopening following the pandemic together contributed around half (2.4 percentage points) of HICPX inflation in the euro area in August 2022." ECB report.

Alternative Marxist theories

- How does the VRI theory compare with other proposed Marxist theories of inflation? There are two to consider.

- Anwar Shaikh's theory of inflation depends on changes in the rate of profit which decides the expansion of capital stock, the degree of utilization of that capital stock and changes in 'new credit'. In many ways, this is similar to our approach in that it starts from Marx's law of profitability as key to growth and demand for goods.

- However, Shaikh's approach does not rely on value creation as the determinant of inflation. Instead, he uses GDP and employment as a measure. And it is the degree of utilization of existing output capacity that drives inflation. This is similar to Keynesian wage cost push, except that Shaikh uses the relation between purchasing power and the level of utilization of capital, not wages relative to employment.

- Although Shaikh includes 'new credit' as a factor in inflation, it does appear in his model to determine inflation rates.

- So Shaikh's model Is not value-based but 'physicalist' and does not incorporate money. In our view, this makes the Shaikh model lack predictive power compared to the VRI model proposed here.