

A GRANULAR EXAMINATION OF US GDP AND EMPLOYMENT

I promised to do a deep dive into the employment and GDP data in the USA to verify the estimates provided recently. It seems I am not alone, there appears to be disquiet in the Congressional Budget Office itself regarding the employment data. I seem to be not the only one concerned.

The latest Congressional Budget Office (CBO) monthly report for July came out this week which was shortly after the Bureau of Labour Statistics (BLS) announcement of over half a million new jobs, surprising everyone and delighting the beleaguered White House. Politically the CBO is neutral but economically it is fiscally conservative with one predictable exception - military spending.

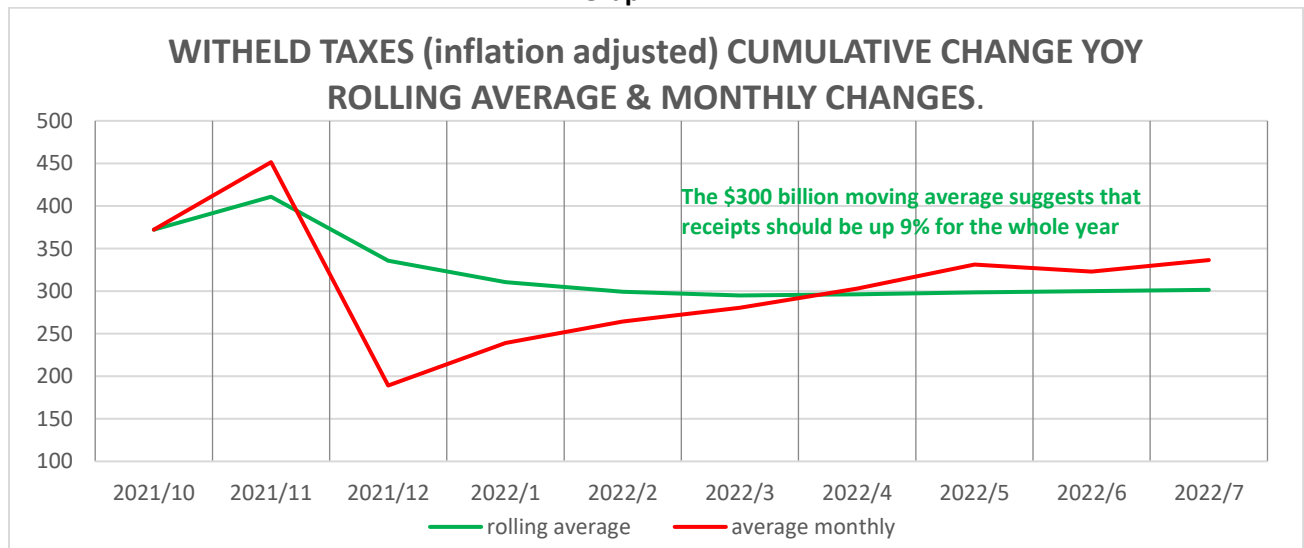
The two commentaries below are taken from the July CBO report. Reading between the lines it is a shot across the bow of the BLS. It is unusual for the CBO to zero in on one specific tax. Essentially what they are saying is that a 7% increase in withheld taxes for the period March to July is inconsistent with a rise in employment over the period equal of 1.959 million workers or 1.53%, when employment costs have risen on average by 7.35% over the first two quarters according to the [BLS itself](#). (See page 8 of its report)

*“Most significantly, employers could choose to defer payment of their portion of certain payroll taxes on wages paid from March 27, 2020 (the date of enactment of the Coronavirus Aid, Relief, and Economic Security, or CARES, Act), through December 31, 2020. That provision required half of the payroll taxes deferred in calendar year 2020 to be paid by December 31, 2021. [Growth in withheld taxes](#) has slowed noticeably in recent months; they were up by **7 percent** for the period from April through July compared with the same period last year.”* (my emphasis)

The second comment is more broadly made. *“Nonwithheld receipts collected in June and July, which include a quarterly estimated payment of 2022 taxes, **declined by 5 percent.**”* (My emphasis) It reinforces the first comment, implying that this contraction in income tax, which only occurs in the heart of a recession, means those employment figures are inflated. Notably they include July which falls into Q3.

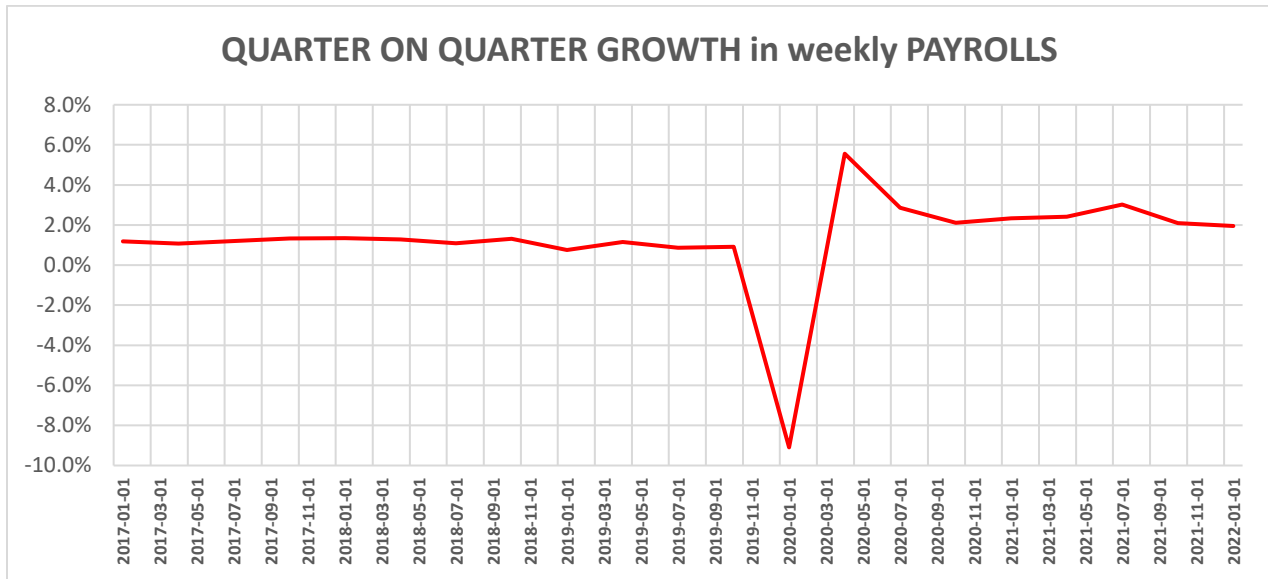
I have graphed withheld taxes for better visualisation. The important graph is the green graph which smooths monthly variations. The spike at the end of 2021 is explained in the first CBO quote.

Graph 1.



Over the same time span official employment has increased by 5% with aggregate hours increasing by 4.5%. Weekly payrolls on the other hand have increased by 10% in the first half of this year compared to the previous half year. The graph below is based on weekly payrolls and shows a quarterly increase of 2% or growing at twice the rate found in 2019.

Graph 2.



However because the figure in dispute is the monthly figure we will use the figure of 5%. If we add in the 7.35% hourly rise in compensation over the first half of the year it amounts to 12.35%. If we want to be more consistent and use aggregate hours worked, it is 4.5% plus 7.35% or 11.85%. There are no confounding factors. [The IRS has altered its 2022 tax brackets](#) to take inflation into account and the bulk of employment has gone to workers earning less than \$40K a year. Thus the discrepancy in tax paid on employment compared to the number of workers added to payrolls, is inexplicable. The only conclusion is that the payroll data have been tailored for New York and Washington. After all, the pending war with China requires a strong economy.

Inflating GDP

I would like to return to the second comment made by the CBO. A fall in receipts of 5% in real terms is a big deal. (I was in error previously as I read the fall to be nominal to which I then added inflation.) Personal income taxes provide 55% of all federal taxes. Such a fall in receipts is found only during the depths of a recession. Indeed, such was the extent of the fall in receipts that the deficit which had been rising by a monthly average of \$60 billion jumped to a monthly rise of \$79 billion because of the \$212 billion increase in June which occurred despite the 4% monthly fall in government spending.

The same loss of tax revenue is replicated at a state level. Both [New York](#) and [California](#) have reported sharp falls in their personal income tax take. In the case of New York income taxes fell by a nominal 2.4% largely because of repayments and offsets, while user taxes (sales tax etc) rose by 7.2% (-1.2% inflation adjusted). In California as the Graph below shows, total taxes of the 'Big 3' is projected to fall by 2.5% or over \$5 billion compared to the May projections of a total take of \$210 billion for the year. (It should be noted that New York personal income is influenced by bonuses and capital gains.)

Graph 3.

Updated 2022-23 "Big Three" Revenue Outlook

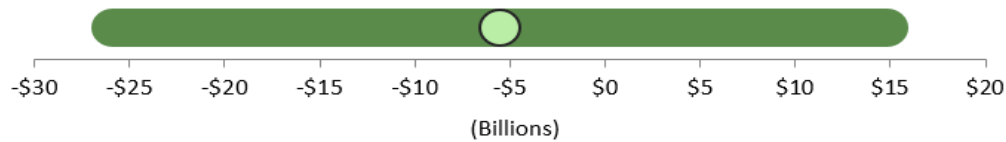
Below is our estimate of how the outlook for personal income, corporation, and sales tax (big three) revenues in 2022-23 has changed based on the most recent cash and economic data.

How Likely Are Revenues To Be Above/Below Budget Act Projections?



How Much Could Revenues Differ From Budget Act Projections?

This graph shows our updated big three forecast minus the 2022-23 Budget Act projection. The ● shows our best guess, while the colored area shows the range of the most likely outcomes around our best guess.



Updated August 1, 2022

Thus the data provided by taxes, which tends to be more reliable than other data, tends to corroborate [my estimate for a 2% GDP](#) contraction in H1 of 2022 rather than the 0.6% fall estimated by the BEA. What this article adds is that the contraction continued into July, or Q3, and that it may be accelerating. This contraction is now taming inflation as evidenced by the recent CPI which surprised on the downside.

Finally, below is the 50-year graph for withheld taxes. Through 2020 to 2022 we see the effect of inflation. The flat area from 2017 is due to the reduction in income tax rates courtesy of the Trump Administration. Originally I was going to correlate payroll figures to taxes but issues such a tax changes prevented this.

Graph 4.

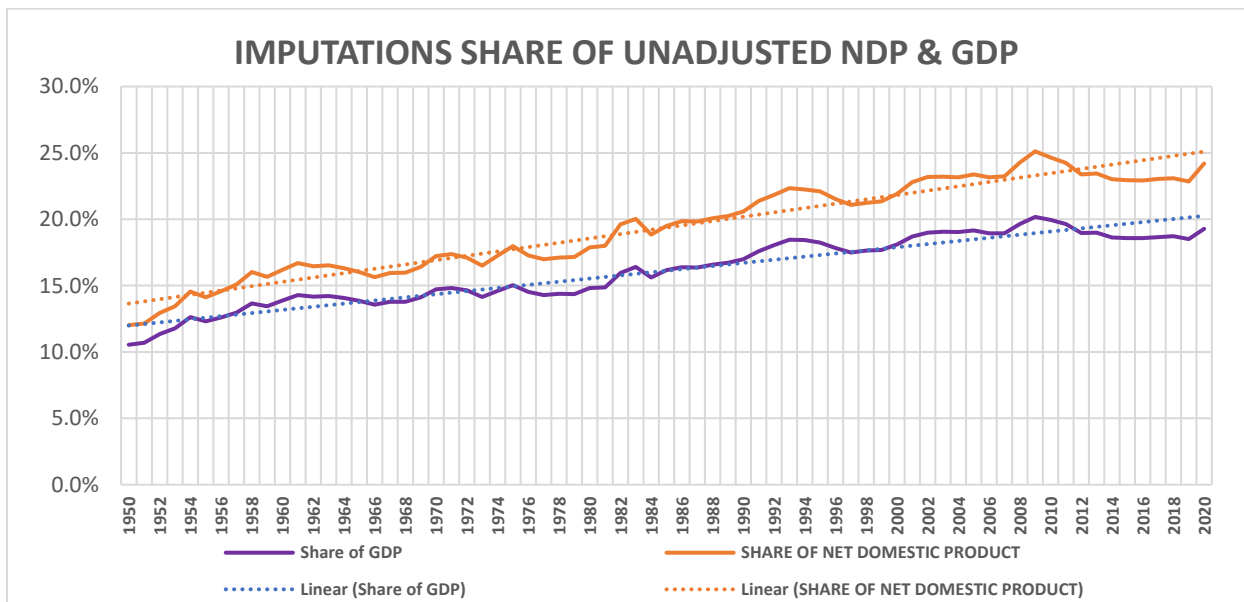


GDP and its inflation.

The reasons why GDP growth is inflated is due to three primary factors, firstly, imputations in general, secondly, imputations (fictitious sales) as they affect income and therefore GDP through inflated personal consumption, thirdly, weighting, and seasonal price adjustments affecting chained dollars. Regarding the third factor, the presence of imputations which tend to have lower price movements, also tends to restrain chain dollar type inflation.

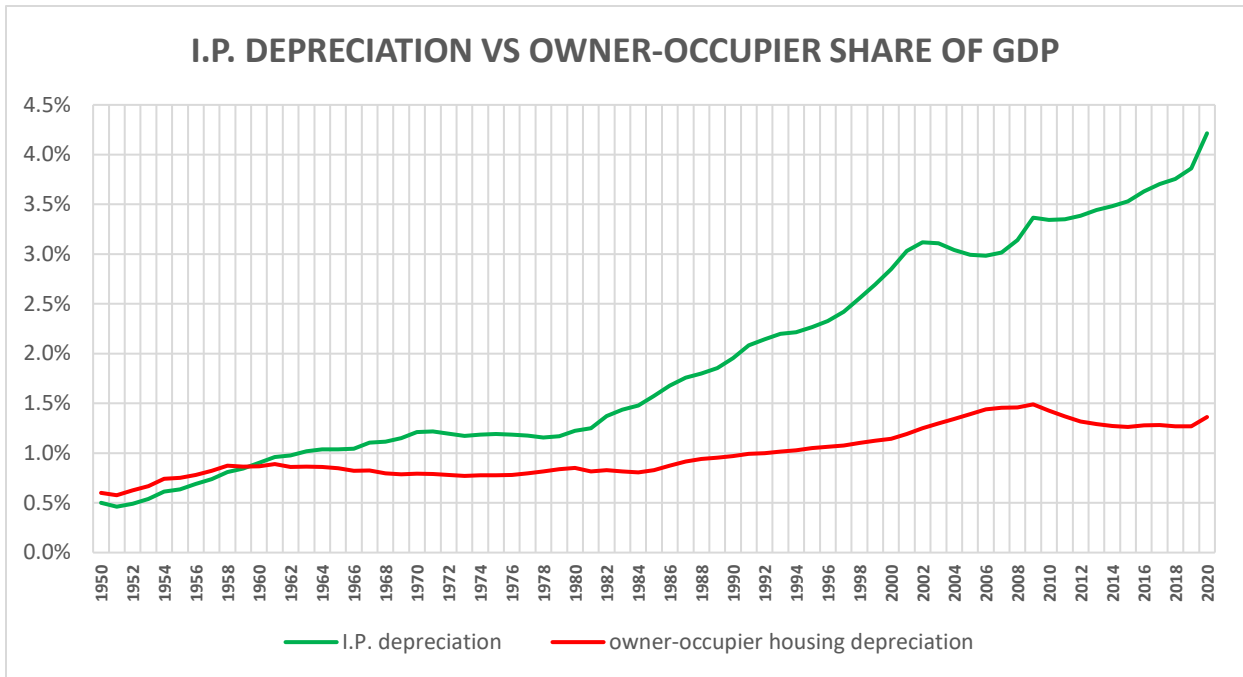
Graph 5 below gives an appreciation of the size of imputations. Since the 1950s they have effectively doubled. Two graphs are found. The blue one has as its denominator GDP before the adjustment for imputations. The brown graph is NNP which is derived by subtracting capital consumption or depreciation from GDP before adjustments. The reason I have done so is because imputations have inflated depreciation. With the 2012 revisions, Research & Development as well as in-house software has been treated as capital and thus subject to depreciation. (Good for reducing taxes on profits but little else.) This together with the rise in house prices over the last three decades has increased depreciation with the result that the brown trend line has grown faster than the blue trend line. The gap has grown from 14% to 26% which has helped inflate GDP once more because depreciation has risen relatively faster.

Graph 5.



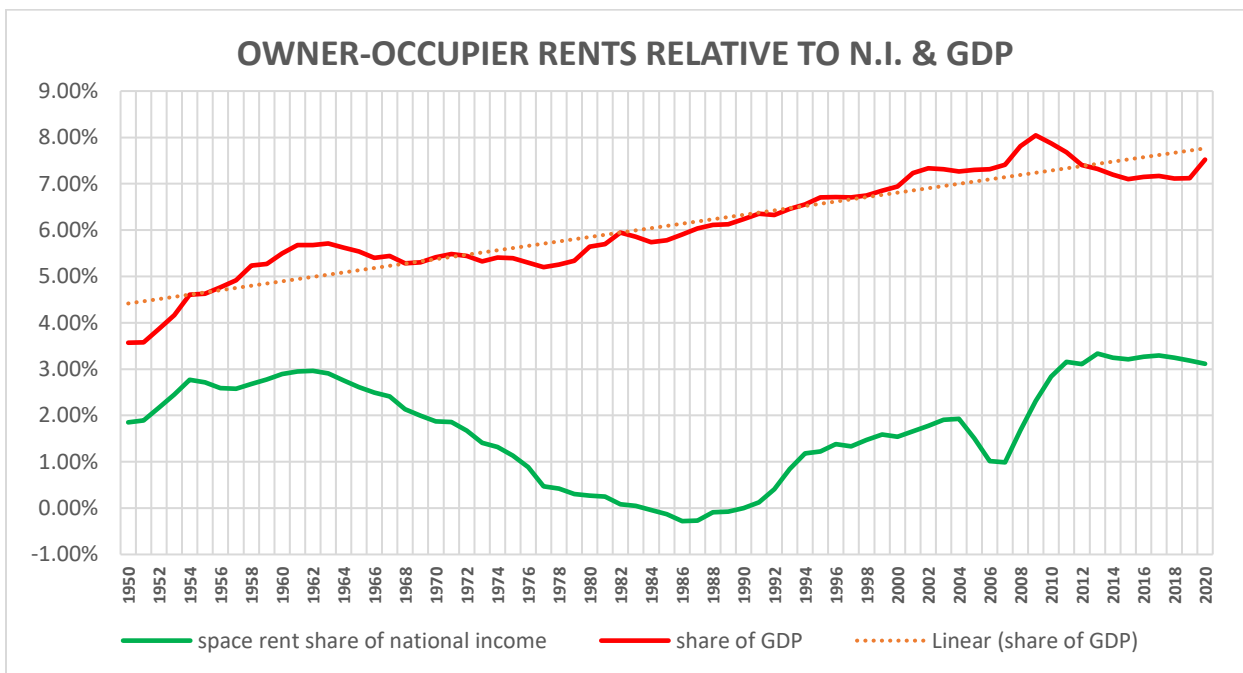
The issue of I.P. capitalisation in the context of GDP inflation is often overlooked. It must be noted, when viewing the graph below, that two thirds of Intellectual Property depreciation consists of the newly revised contribution by Research & Development and in-house software. In many ways it reflects the restructuring of the US economy from the 1980s when US capital switched from being producers to being the developers of technology monopolising the heights of the value chain. In other words, because fixed investment in actual means of production fell (production being exported to the Asia Pacific) depreciation in this area fell relative to the rise of depreciation in Intellectual Property. Thus the green graph is a product of the de-industrialization of the USA as well as the rise of the information age. In sum, it is likely that the annual revision to GDP over time is >2% from this increase in I.P. depreciation. We also note the sharp increase in 2020. Unfortunately no data for 2021 is available but not doubt it jumped even higher.

Graph 6.



Having dealt with the issue of I.P. inflation we now can deal with the much larger issue of owner-occupier additions to GDP. This can be estimated from Graph 7. Here are two graphs. The red graph is the gross amount which includes space rent plus intermediate sales plus capital consumption. As we shall see the BEA treats owner-occupiers as though they were a value producing industry. All the data is found in the accompanying spreadsheet based on NIPA Table 7.12

Graph 7.



The gap between the two graphs is primarily accounted for by inputs (purchases) and depreciation. No one doubts that owner-occupier households keep Home Improvement Chains such as *Home Depot* and *Lowe's* in business, but what is a real laugh is the issue of depreciation. Normally, depreciation is a sinking fund derived from the sale of goods. But here there is no sale because the owner-occupier cannot sell himself or herself an actual rent. In this case the sale which forms the red graph is imputed or fictitious. Now it could be argued for example that paying off a mortgage say over 30 years is equivalent to a sinking fund. Not so. All that happens is that the owner now owns his or her property instead of the bank. If they decided to knock down their home and replace it, as happens with a sinking fund replacing worn out machines or equipment, they would have to go to the bank and borrow the money all over again to rebuild.

So all of this is nonsense. What is important to bear in mind now is that when the BEA deducts all these costs from the imputed sale that forms the red graph, what remains is this space-rent (green graph). This space rent or net rent is then added to personal consumption expenditures (PCEs) boosting them by about 3%. It is interesting to note that this net rent has recovered sharply from 2008 as housing took off once again. It is probable that net rents increased sharply again in 2021 and H1 2022 given the extraordinary rise in house prices over this time. For this reason it is likely to have additionally boosted nominal GDP and PCE growth over this time. In terms of GDP, it is likely that this contribution has reached at least 8% as it did in 2008.

On a side note I would like to address the issue of [William Jefferies criticism](#) of every Marxian calculation of the rate of profit prior to his effort. Novel ideas need to be checked out to see if they have any veracity. I warned William Jefferies not to take the definitions found in the GDP primers at face value. In reality discounted cash flows are seldom used in valuing produced assets. If any category lends itself to this it is housing which comprises 43% of all produced assets. And yet, even here informally, statisticians have had to abandon this form of analysis. *"The [BEA no longer uses a discounted cash flow analysis](#) to value housing but has adopted market rent equivalences. 'In essence, [owners' equivalent rent] measures the change in the amount a homeowner would pay to rent, or would earn from renting, his or her home in a competitive market. It is a measure of the change in the price of the shelter provided by owner-occupied housing.'"*

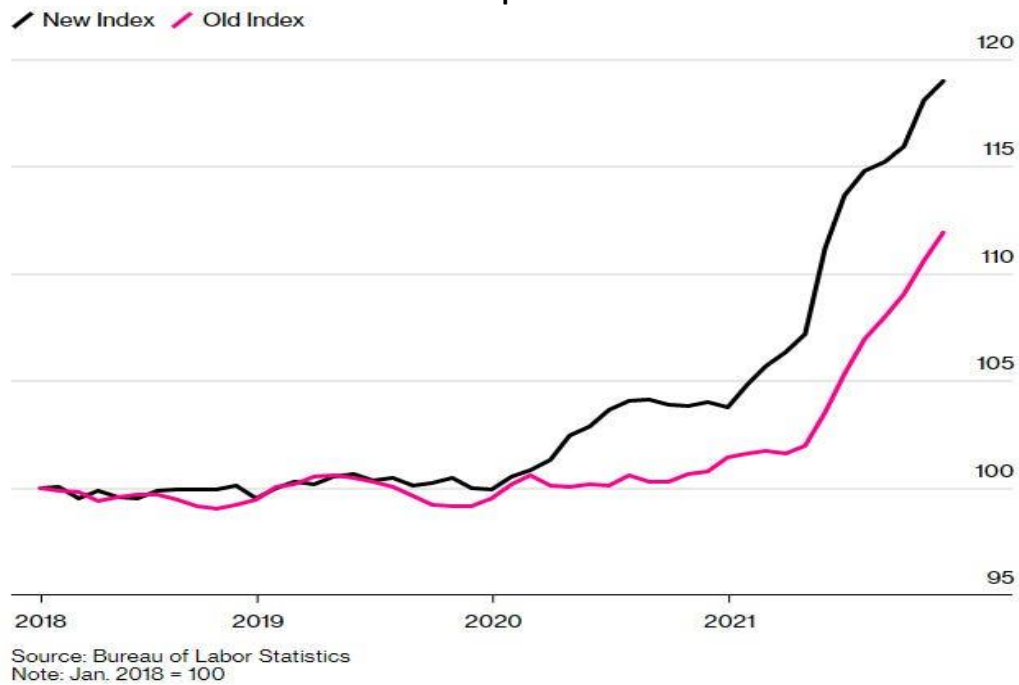
I have consistently appealed to him to withdraw his paper which has no merit only demerits in so far as it overturns every category developed by Marx including the tendency for the technical composition of capital to rise over time. In William Jeffries alternative universe this composition of capital actually falls.

The measurement of inflation.

There is a distinction between the way the US measures inflation. Inflation can be measured in the raw, that is the rise in actual prices, or in a chained manner where price rises are adjusted for volume changes. Here the assumption is that as prices rise, so consumers switch to cheaper alternatives or as they say they go down market. This period however has been different because of supply chain issues. In a number of industries - housing, cars, smartphones - the switch has not been down but up. The value share of high-end products including luxury goods has increased disproportionately. Here is a good example. The BLS revised upwards its car inflation data when it adopted the industry reference, [J. D. Powers](#) to judge car prices because it had not taken into account the surge in higher end car prices in the car lot. The difference can be seen in the graph below.

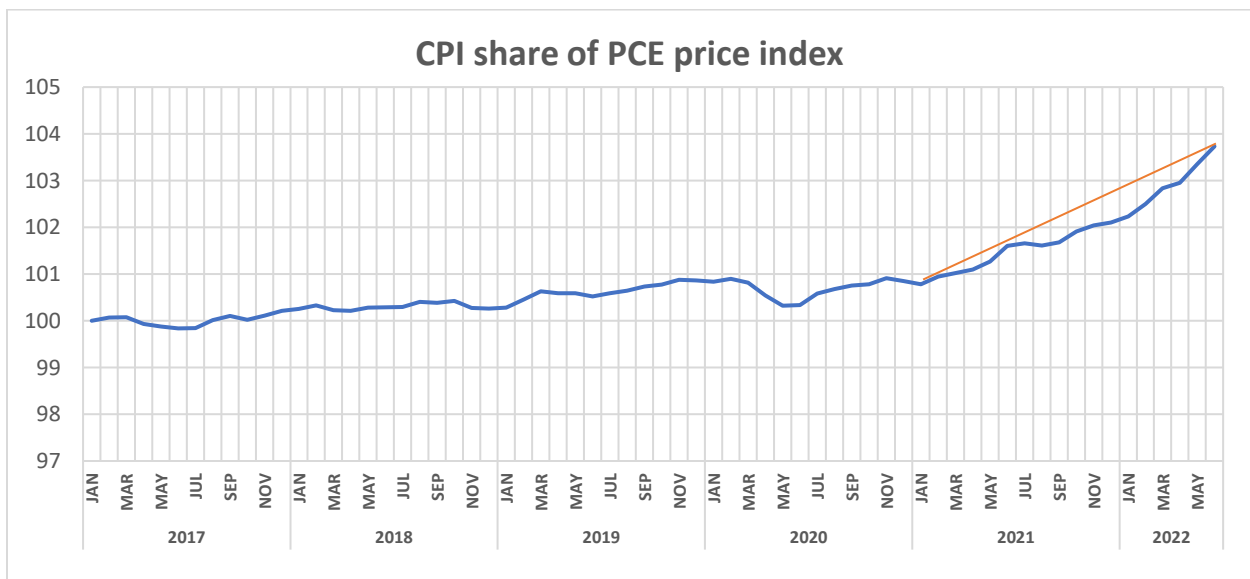
And this would be replicated in a number of other significant industries.

Graph 8.



I suspect that the BEA and the BLS have not addressed the weighting issue in the light of the changed circumstances of the pandemic. The result is that the chained rates of inflation have lagged that of actual inflation. (It is beginning to change as the recession bites and there is actual down marketing going on.)

Graph 9.



This effect can be seen in the graph above. It compares the rise in the CPI to that of PCE chained prices. Whereas the gap between the chained PCE price index and that of the PCI was under 1%, that gap has now quadrupled to 4%. And if it is the case that the modelling results in a lower chained inflation rate, then the real increase in GDP has been overstated while the fall in GDP this year has been understated.

Conclusion.

I am a big fan of the system of national accounts yielding GDP and National Income. I will not have it criticised by those who do not understand it. But it has limitations and failings which need to be teased out. This has real world consequences. If imputations were removed and inflation correctly modelled we would have had a slower growing US economy. More specifically we would have had a much sharper contraction in the economy during the first half of the year. This being so, the whole argument of whether or not the US is in recession or not, would have been settled.

Similarly with the boasting that the US remains strong and the biggest economy in the world. US GDP is at least 20% overstated, more so if we include the hugely wasteful and financialised US medical industry. Thus in Dollar terms, US & Chinese GDPs are much closer than the 35% generally assumed. The real gap in Dollar terms, not PPI terms, is likely to be between 10 and 15% currently.

As Marxists we are duty bound not to accept data at face value but to meticulously examine it, especially given the fraudulent pressures exerted on this data by Wall Street and Pennsylvania Avenue in Washington. And secondly we are required to estimate how quickly the global economy is unravelling currently as this creates the political dynamic challenging the capitalist order. This posting is my contribution to this deeper understanding of the data in these challenging times.

Brian Green, 11th August 2022.