MEASURING THE ELUSIVE RATE OF PROFIT.

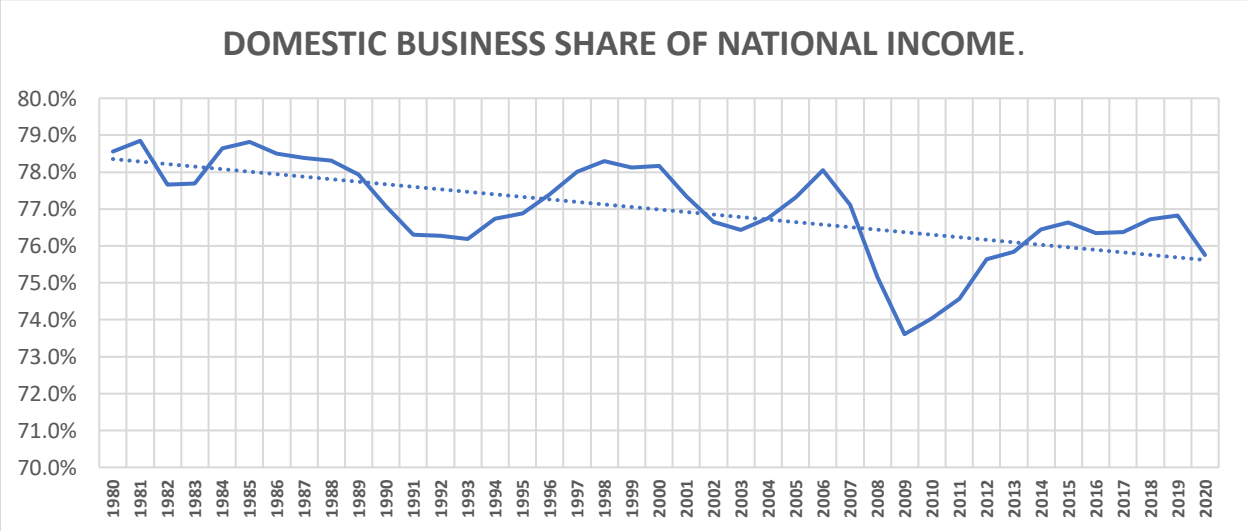
Marx's observation that the tendency for the rate of profit to fall marks capitalism out as a time limited crisis ridden mode of production, is central to his critique of Capitalism. But how to accurately measure the rate is the question? The tendency for the rate of profit to fall is not addressed by theory but answered by data, data which either confirms or denies this tendency.

I have always argued that the biggest sector providing reliable data upon which an estimate for the rate of profit can be drawn, is the non-financial corporate sector. I was reminded of this when Michael Roberts sent me a PDF written by Peter Jones who attempts to plot a course through all the duplications, imputations and substitutions which litter whole economy GDPs in order to discern the whole economy rate of profit. Has Mr Jones, whom I highly regard, succeeded in writing a follow on to Das Kapital in terms of his comprehensive examination of the capitalist mode of production or has he been on a fool's errand? I cannot say, my mathematical prowess falls far short of making any determination. The reader can obtain his PDF using this link. https://openresearch-repository.anu.edu.au/handle/1885/150582?mode=full

In statistics, a sample is considered powerful if it covers a sufficiently large area thereby increasing the probability that its results are representative of the whole. I believe that the non-financial corporate sector is sufficiently powerful so as to provide a representative estimate for the prevailing rate of profit in the economy. To demonstrate this a series of graphs follow. The denominator here will be National Income or GDP less depreciation, or Net Domestic Product which National Income sits alongside.

The biggest contributor of National Income is Domestic Industry or Domestic Business which comprises the corporate sector and non-corporate sector. Graph 1 provides the relative size of the Domestic Business Sector. Most of the data for the graphs are taken from NIPA Tables 1.13 and 1.14 as found in the two spreadsheets attached.

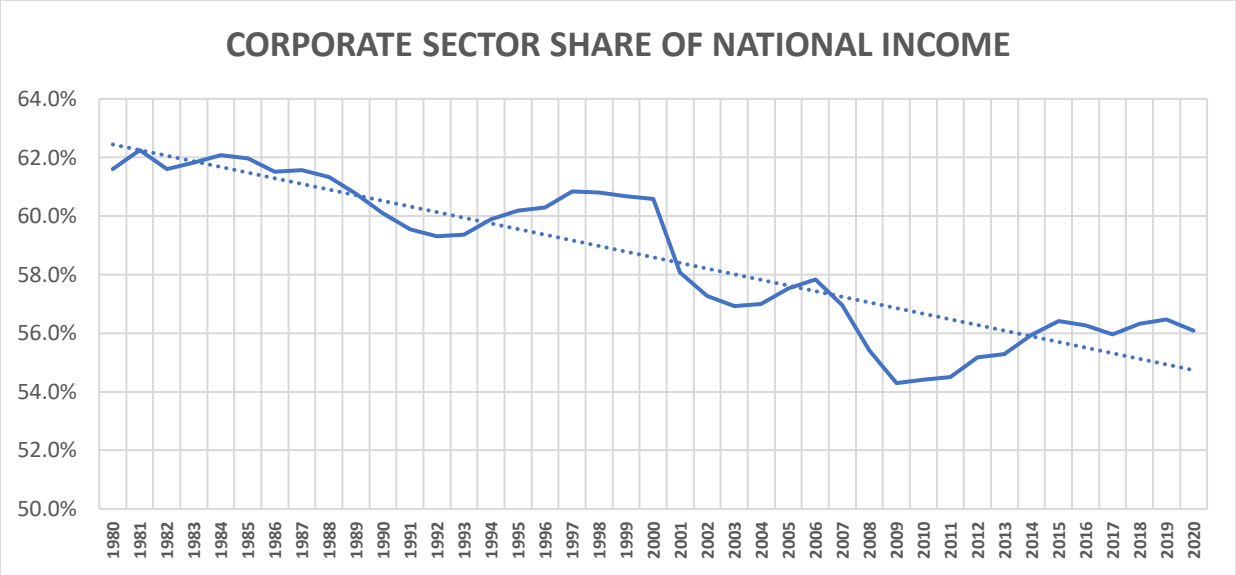
Graph 1.



We note that Domestic Business is about three quarters of the economy, though its share has declined by 3% over the last 40 years. I will give a brief explanation for this later, but it has to do with the rise in inequality.

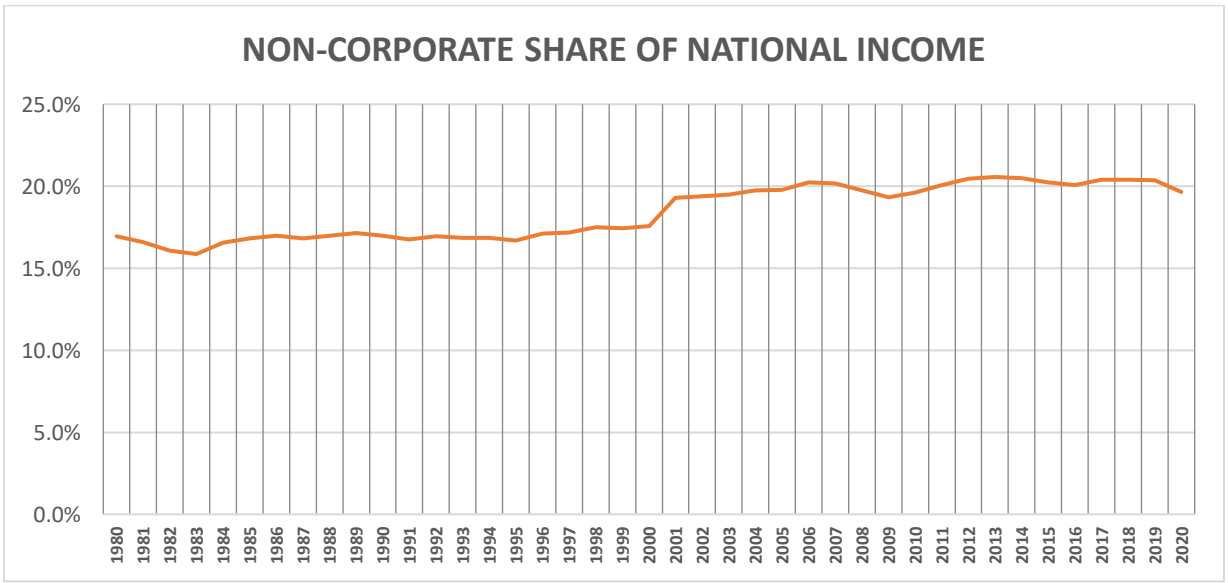
The next graph plots the how big the corporate sector is in terms of National Income.

Graph 2.



We note that there has been an even sharper fall in the share of National Income produced by the corporate sector compared to the share of Domestic Business as a whole. This has been due to the rising share of non-Corporate Business.

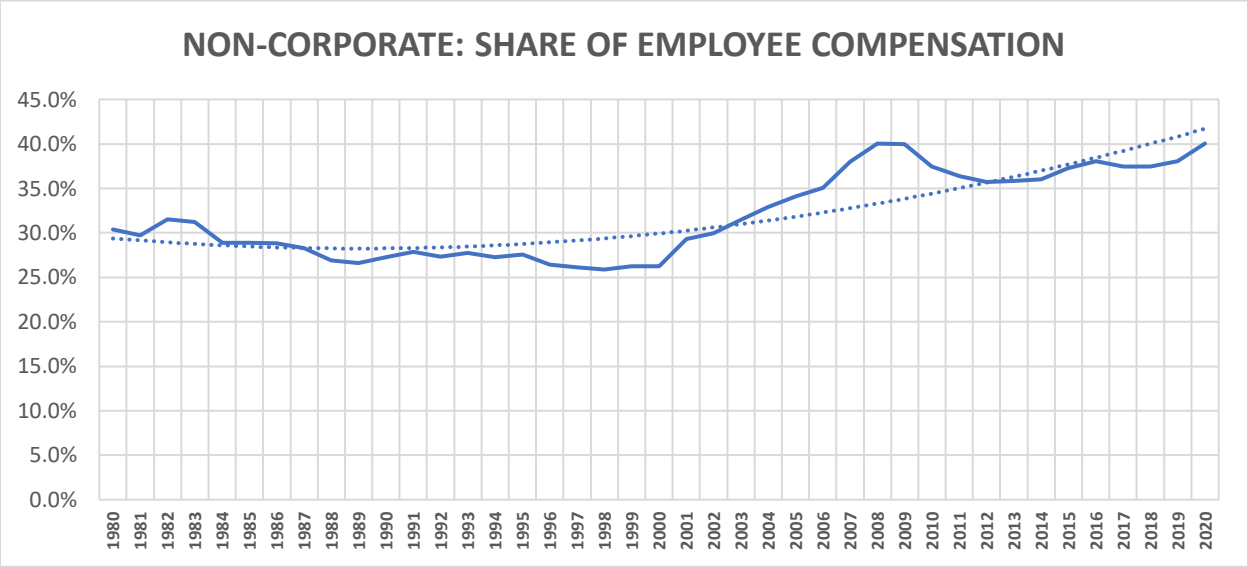
Graph 3.



As a share of National Income, non-corporate business has increased by a quarter this century to over 20% of National Income. Non-corporate Business comprises Partnerships and Sole Proprietors. This has given the impression that the rise in this sector is mainly due to the influx of the self-employed or as they are also called Sole Proprietors.

In fact this is not the case. The main reason for the increased share of this sector this century has been the rise in Hedge Funds and Private Equity. There is a simple test to prove it. These two forms of capital have large workforces, so if they are beginning to dominate this sector, we should see a relative rise in worker renumeration compared to other forms of income, and indeed this is the case. Self-employed income is not taken as renumeration. This century, as Graph 4 shows, renumeration has grown by a third.

Graph 4.



The legal structure of Mutual Funds as well as Private Equity is that of partnerships which is why they appear in the non-corporate sector. *"A vast majority of hedge funds are structured as limited partnerships under the Delaware Uniform Limited Partnership Act (the DULPA). The code is very flexible and allows the limited partnership agreement (LPA) to be drafted in a very manager-friendly manner."* https://hedgefundlawblog.com/tag/limited-partnership-agreement In the USA there are more than 5000 hedge funds who own and control assets worth $3.16 trillion. It goes without saying that it is a highly concentrated sector with 10% of the funds controlling 90% of the assets.

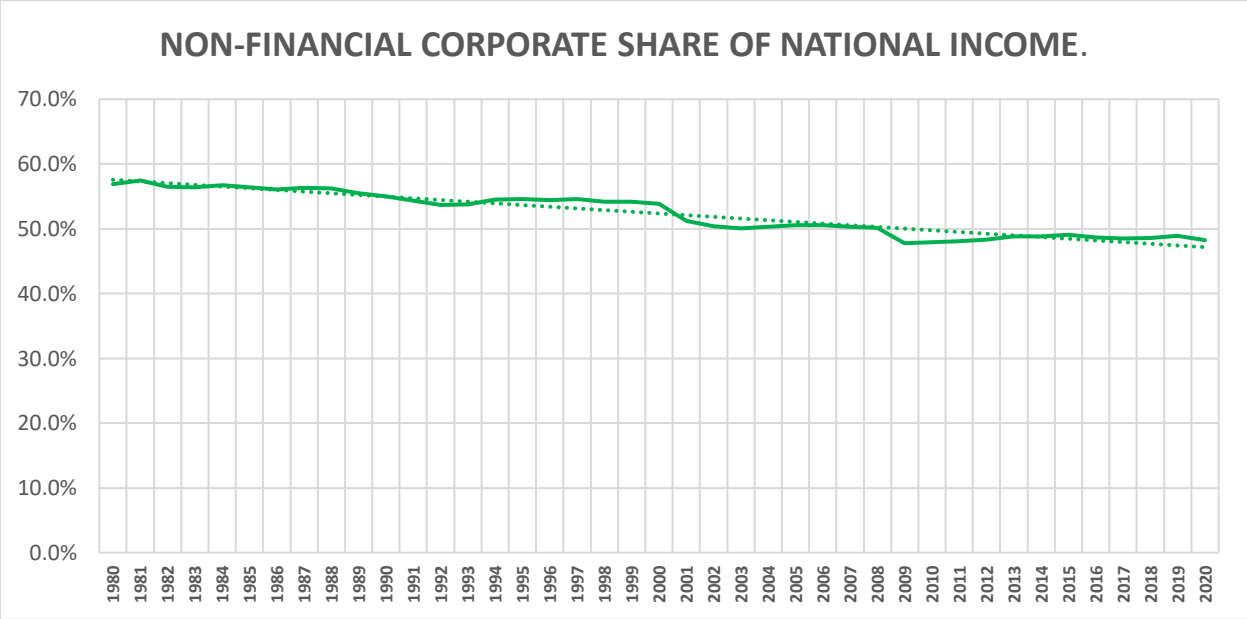
Private Equity is structured slightly differently. "*Private equity firms are structured as partnerships with one GP making the investments and several LPs investing capital. All institutional partners of the fund will agree on set terms laid out in a Limited Partnership Agreement (LPA). Some LPs may also ask for special terms outlined in a side letter. The industry has $2.9 trillion available to invest. Similar to a mutual fund or hedge fund, a private equity fund is a pooled investment vehicle where the adviser pools together the money invested in the fund by all the investors and uses that money to make investments on behalf of the fund. Unlike mutual funds or hedge funds, however, private equity firms often focus on long-term investment opportunities in assets that take time to sell with."* Note the longer-term outlook. https://www.mckinsey.com/~/media/mckinsey/industries/private%20equity%20and%20principal%20investors/our%20insights/mckinseys%20private%20markets%20annual%20review/2021/mckinsey-global-private-markets-review-2021-v3.pdf In addition Private Equity with Total Assets $7.34 trillion is about twice as large as Mutual Funds and they currently hold about $4 trillion in liquidity ready to pounce.

Together these two forms of capital have creamed off a significant portion of surplus value from the corporate sector this century. (Note 1.) This represents a major structural change in the nature of capitalist

property this century. We are reminded of Marx's haunting remarks in Chapter 27 in Volume 3 when he talks about an economically important fact: "*Since profit here simply assumes the form of interest, enterprises that merely yield an interest are possible and this is one of the reasons which hold up the fall in the general rate of profit, since these enterprises, where the constant capital stands in such tremendous ratio to the variable, do not necessarily go into the equalization of the general rate of profit."* (page 568 Penguin Edition) In Mutual Funds and Private Equity, Marx's prediction has come true. These capitals tend to swop out equity for debt, and they take their revenue as interest. Thus if we were to take the whole of the Domestic Business, and not limit ourselves only to the Corporate sector, then the activity of these funds would have a positive effect on the overall rate of profit, because a whole slice of constant capital would no longer form the denominator for the rate of profit. (To determine this effect may be a worthwhile exercise in the future, but for the purposes of this article it does not effect the rate of profit estimate here.) The key question here is their recent accelerated growth, a product of the falling rate of profit since 2014?

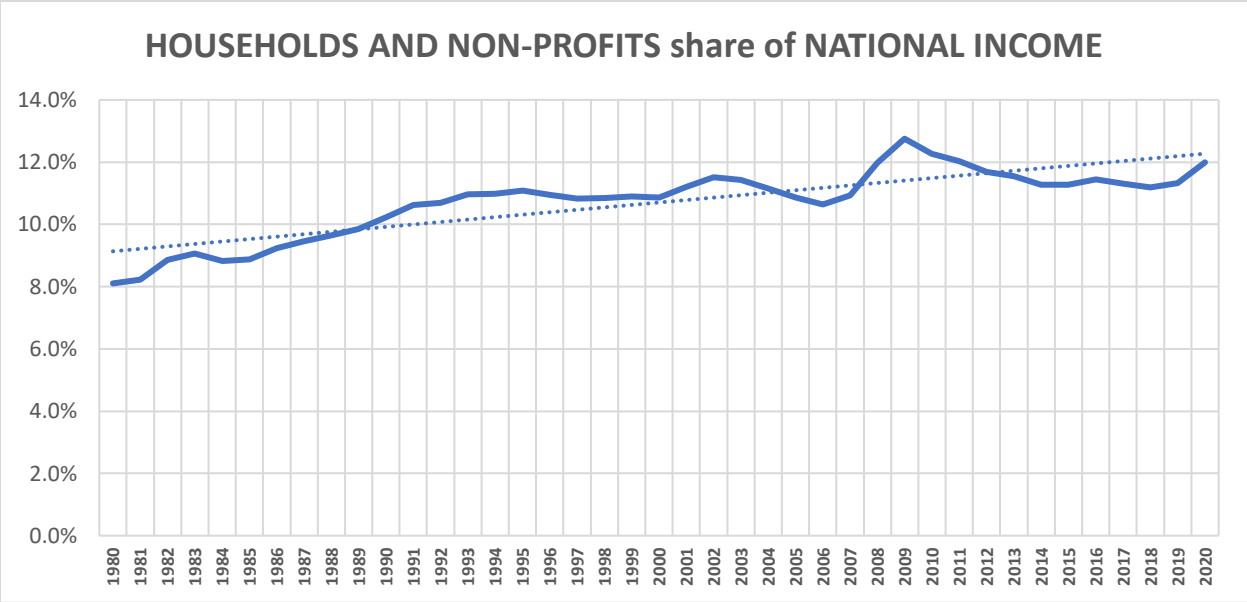
Finally, the question posed is how large is the non-financial corporate sector, for its size determines its power statistically?

Graph 5.



The sector is about half the size of the whole economy. Currently it is just below 50%. So big enough. If we strip away all the dross which means about 20% of national income, then in fact it is over 60% of the real economy. Talking of dross. One of the reasons why the share of National Income produced by the corporate sector has fallen has been the rise in inequality. Inequality tends to boost the household sector, (more servants or personally unproductive workers) and the charity or non-profit sector as the super-rich massage and inflate their egos through charitable giving, an act of illustrated kindness arising out of the unkindness of having robbed their workers first. The rise in these two sectors can be seen in Graph 6 below. These sectors, originally one-twelfth of the economy have risen to one-eighth. Absurdly, the BEA designates subsectors as industries, and there is even an industrial designation for religious charities. Even God it seems creates value through his blessings.

Graph 6.



The issue of unproductive labour.

I have not ignored unproductive labour. It is not an issue because the effect of unproductive labour on variable capital and profits is incorporated in the rate of profit itself. The non-financial corporate sector embodies both industrial and commercial firms, say manufacturing as well as retail firms. It is thus littered with unproductive workers. In the case of industrial firms they tend to be the clerical office workers commonly referred to as SGA workers or Selling, General and Administrative worker. They are paid out of variable capital which is why I refer to them as functional unproductive workers essential for the orderly metabolism of capitalist production. The cost of their employment is found on the Loss side of the Profit and Loss Account which reduces Gross Profit to Net Profit, and which is then transferred to the Balance Sheet where further reductions yield pre-tax enterprise profits. In short, employers are reimbursed the variable capital they pay their SGA workers from the revenue generated by the productive workers in their employ.

In the case of commercial firms all their workers are unproductive but paid out of variable capital funded by the discounts received from industrial firms. Because these discounts have become customary and habitual, they have become unseen. Once again these discounts will reduce the profits of the industrial firms so there is no duplication affecting the general rate of profit.

This does not diminish the importance of analysing unproductive labour. The growth of unproductive labour does depress the rate of profit by increasing variable capital (or circulating capital) while reducing the mass of profits. Further, as the productivity of industrial workers increases, increasing the volume of commodities, it tends to raise circulation costs pro-rata. For example if a car salesman or woman is physically only able to sell 100 cars per annum, they could be provided these cars by one auto worker who is capable of assembling 100 cars p.a. But if that auto worker's productivity doubles over time so that now he or she can produce 200 cars p.a., it would now require 2 car salesmen or women to circulate the cars. This explains the constant tug of war as capitalists struggle to restrain the rise in circulation costs.

Methodology.

We are now in a position to use the data found in the non-financial corporate sector to estimate the rate of profit. Once again, though the data is not perfect, it is sufficiently reliable to obtain a functional estimate. Attention is now drawn to how the rate of profit is calculated.

For the numerator I use pre-tax unadjusted profits. This can be found in row 43 in Table 1.14. Unadjusted is best because it relates most closely to the net surplus. I use pre-tax for two reasons. Firstly, tax rates over time change so it is difficult to retain continuity of profit over a substantial period of time, because within that period there is bound to be a number of upward or downward revisions to the tax rate. Secondly, because of tax dodging. Some corporations are better placed than others to avoid tax, particularly internationally based corporations, and this ability distorts post-tax profits.

I do not use the bigger net surplus (or undivided profits) as the numerator, because the purpose of this rate of profit is its bearing on investment decisions. The rate of profit used is the enterprise rate of profit, what firms have left over after deducting their expenses and contributions to financiers, landlords etc. It is this leftover value which is critical in determining whether or not it is worthwhile to make an investment, and it is these decisions concerning investments which determine the pace or direction of production.

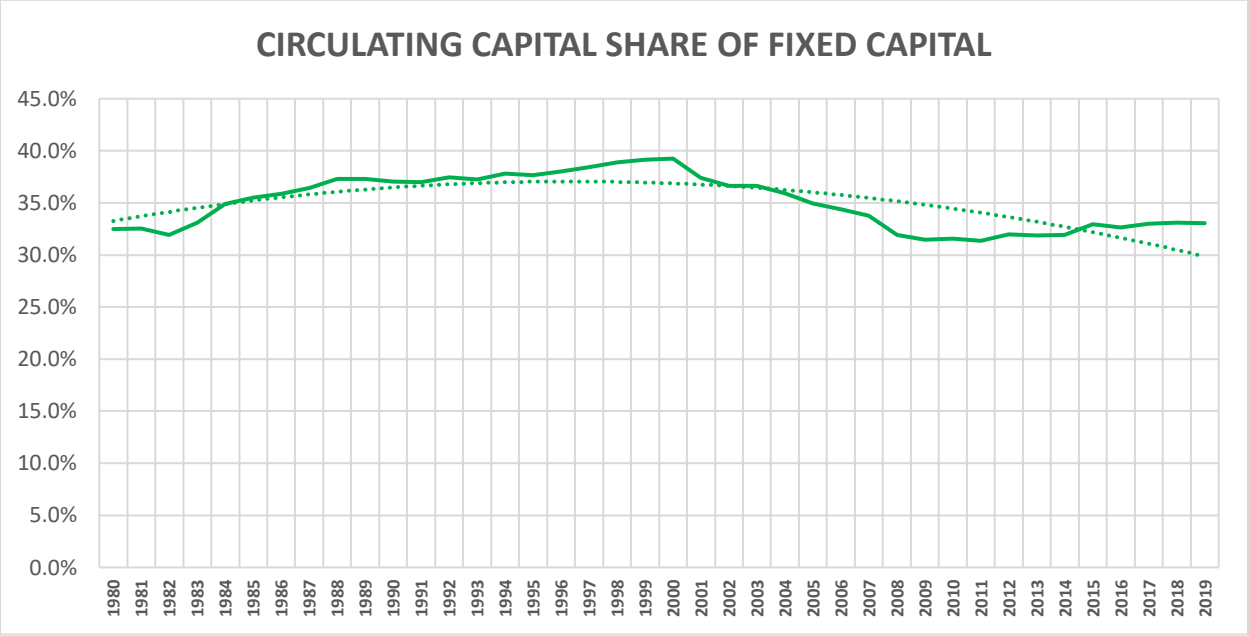
The denominator is even more important. Marxist theoreticians are generally satisfied with using only fixed capital. This will not do. Marx made it clear that total capital exists as fixed and variable, or better still, as fixed and circulating (which he sometimes referred to as fluid). The reason Marxists were satisfied with fixed, was the opinion that circulating capital was incalculable. It was un until the turnover formula was revealed to be GO/GVA + (GO -GVA)/GVA where GO stands for Gross Output and GVA for Gross Value Added. Once we have distilled annual rates of turnover we can convert annual compensation into variable capital and gross output into circulating capital via the following formula.

> Annual Gross Output less Annual Net Surplus equals Cost of Gross Output (equal to inputs plus renumeration).
> Then, Cost of Gross Output divided by the number of annual turnovers equals circulating capital.

The importance of circulating capital is demonstrated in Graph 7 below. Compared to fixed capital, circulating capital is about a third as large. Enough to reduce the rate of profit significantly when added to the denominator in the profit equation. Equally important has been its movement. It rose in the 1980s due to the culling of fixed capital creating what came to be called the rust belt, and its share has been rising since the 2008 financial crash due to the deceleration in fixed investment.

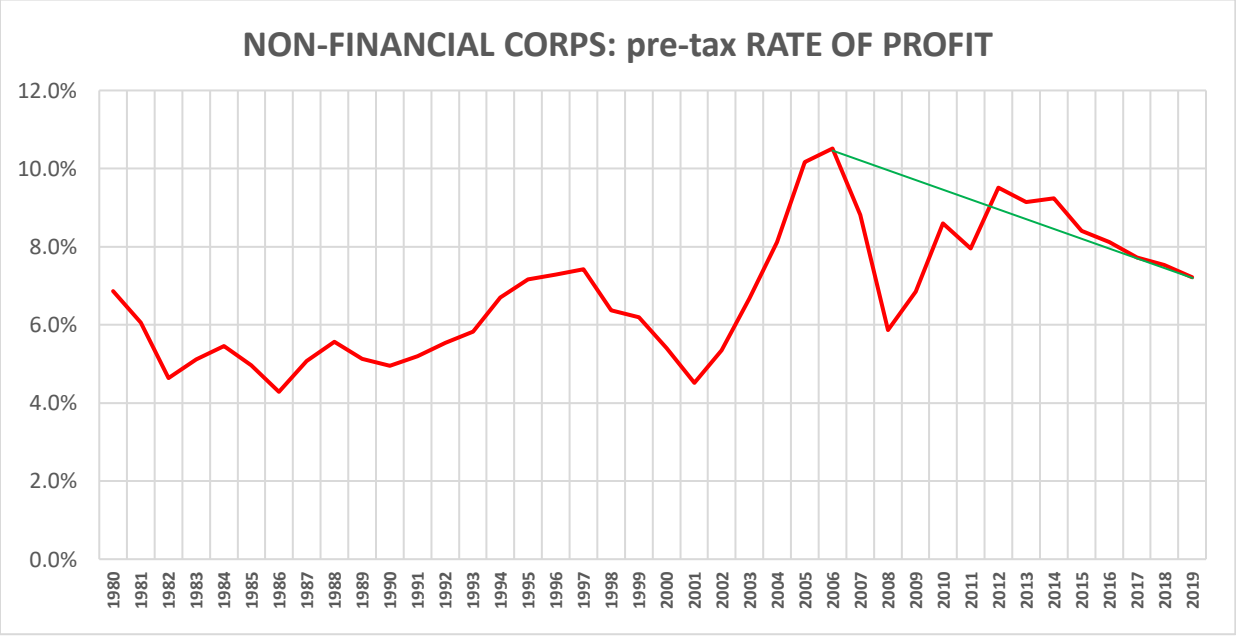
Fixed Capital is taken at current cost and never at historic cost. Current cost is not the same as replacement cost. Current cost is the blend of older and newer capitals and most closely approximates the value of fixed assets found on balance sheets. Because current costs stand below replacement costs, they do not completely answer the question whether or not investors will continue to invest or even increase their investments, because the rate of expected profit based on replacement cost will always be lower than the rate based on current cost. Nevertheless, the rate of profit based on current cost remains the best generalised estimate of the prevailing rate of profit when using the data from the System of National Accounts.

Graph 7.



And when we apply the equation - pre-tax unadjusted profits over fixed and circulating capital - we obtain the following rate of profit which is significantly lower than other estimates.

Graph 8.



Regular readers may note this rate is slightly higher than previous estimates. This is due to a subtle change in the Net Surplus deducted from Gross Output to yield circulating capital. I have decided to use an adjusted Net Surplus which no longer includes certain taxes and subsidies (found in row 40 of Table 1.14) because of the effect Covid funds have had on subsidies in 2020 and 2021. This will allow continuity in the rate of profit in the years to come when these subsidies are absent.

What is more significant has been the duration of the fall in the rate of profit. I intend to do a comprehensive workout of the rate of profit once turnover and profits can be calculated in the third quarter of this year. This will be the first quarter free of the distortions caused by subsidies. I expect it will show that the rate of profit has fallen for 7 years in a row, an unprecedented and extended period, and it has done so without causing a recession. An abnormal state of affairs which has only deepened the problems facing capitalism.

Returning back to Peter Jones. There is symmetry between our rates of profit, but their values differ significantly. I am not surprised by the symmetry. It merely confirms the weight of the non-financial corporate sector. What is interesting as well, is that he is one of the few theorists who correctly discern within the longer-term rate of profit, an improvement coinciding with the emergence of globalisation. This improvement only goes into reverse after 2014 globally as the potential found in globalisation becomes exhausted. I set the period of globalisation from around 1995 to 2015.

A final observation on Graph 8. The reader will note that the rate of profit in 2019, a year in which the global economy teetered on the edge of recession, did not fall as far as 2001 and 2008. This is not comparing like with like. In those recessionary years, profits were depressed by write downs and write offs as firms took their medicine. This did not happen in 2019 nor in any year since 2014. When the financial world crashes, as it will do, then the write downs and write offs could very well depress the rate of profit below 0% given the enormous build of precarious assets driven by FED induced comatose interest rates.

An enhanced methodology.

As mentioned I intend to do a comprehensive assay of the rate of profit in the third quarter once the necessary data has been released. For a number of years I have been wondering how to refine the rate of profit based on fixed and circulating capital. One way of doing this is to ensure that all the data is commensurate. That no temporal incongruities exist, so to speak. And there is an incongruity. The valuation of fixed capital and inventories is at year end. But circulating capital only applies to a period and there are a number of periods per year not a single period.

I use the Goods Sector turnover rate for non-financial corporates. I am satisfied it is sufficiently powerful given that goods production dominates this sector. This said, the rate varies over time between 3.7 and 4.2 turnovers per year depending on the phasing of the business or industrial cycle. On average it is about four cycles per year. That means it is possible to divide the year into quarters as this coincides with turnover periods. Fortunately the BEA issues relevant quarterly data for Table 1.14. Thus taking the data from the final quarter of each year, circulating capital can be made commensurate with fixed capital as they are now being valued in proximity to each other.

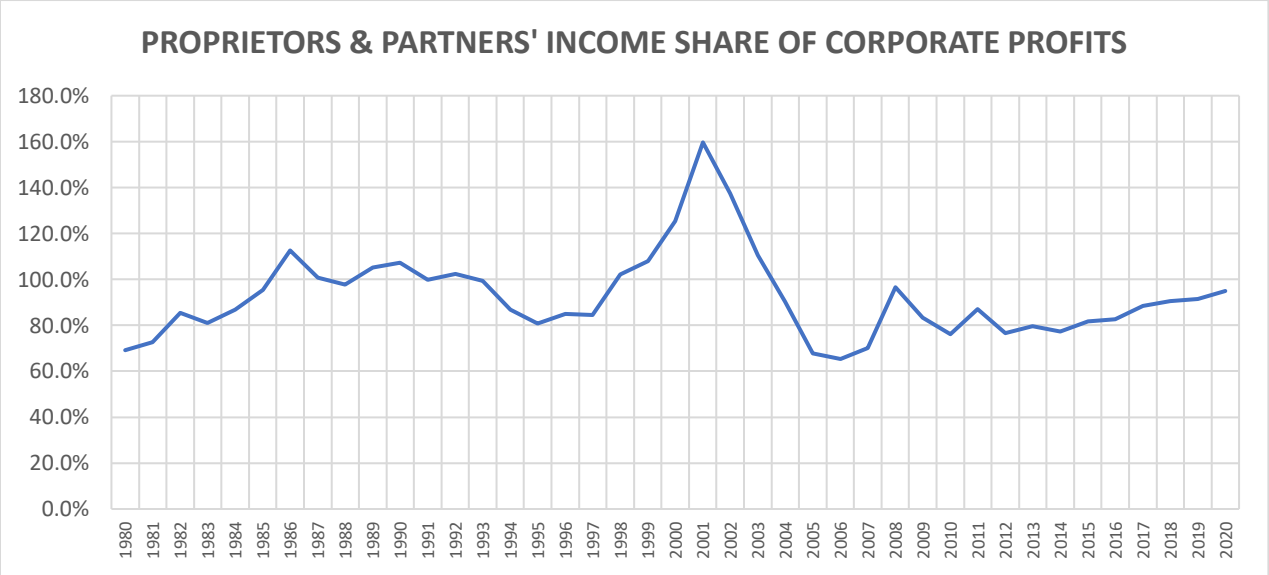
Furthermore, annual profits are realised four times a year as well, and cumulatively they form annual profits. So the profits that emanate from period 1 is unknowingly being added to period 2, then onto 3 and finally 4. The amount of profit emanating from each period always differs, thus the annual figure smooths out these differences which means that when we divide this annual profit figure by 4, the average will differ from the profits generated in each period. Therefore, what I intend to do in Quarter 3, is to take the profit for that quarter and annualise it, because this is the profit figure generated when circulating capital is calculated and fixed capital is valued.

I will provide both rates of profit, one based on cumulative profits in the regular case, and for the first time, the rate of profit based on the annualising of current profit. I do not believe the rates will differ significantly, but Marxists should never ignore ways of improving accuracy.

Note 1.

The final graph below shows once again, why we cannot use the non-corporate sector to help determine the average rate of profit. It shows that the income attributable to partnerships and sole proprietors approximates the pre-tax profits found in the entire corporate sector. And this occurs despite the fact that the corporate sector is three times larger when measured by value added, it employs five times more workers when measured by renumeration and it contains nearly eight times as much fixed capital. Clearly the surplus value measurement in the non-corporate sector arises not from the exploitation of workers but from the missteps made by statisticians which contaminates the data.

Graph 9.



Brian Green, 4th September 2021.