GLOBALISATION TURNS INTO ITS OPPOSITE. 
DEFLATION AND THE CRISIS OF PRODUCTIVITY

Capitalist production constantly strives to overcome these immanent barriers, but it overcomes them only by means that set up the barriers afresh and on a more powerful scale. The true barrier to capitalist production is capital itself.”

Beginning in the first half of the 1990s, globalisation invigorated the world economy and produced a gusher of profits. 20 years later globalisation has turned into its opposite, in its current form it now undermines the world economy. It once again confirms Marx’s famous prediction quoted above.

This article examines why globalisation currently acts as a fetter, thus informing our outlook for the world economy. This is expressed as the ‘inexplicable’ collapse in productivity. There is clearly a crisis in productivity since the 2008 financial crash. And crises of productivity always presages a collapse in profitability.

We intend to show what appears to be a crisis of productivity is really a crisis of realisation, the consequence of the internationalisation of profits countered by an inability to invest internationally. While profitability remains high investment is relatively low. As the mass of profits now exceeds the mass of investment by a widening margin, a growing portion of the surplus product remains idle or what is the same thing, unconsumed. Thus reproduction fractures, prices are diminished and speculation is rife.

Price falls, deflation, is the reward for this lack of investment. As productivity is measured in prices, there fall creates the appearance of a fall in productivity unconnected to the physical efforts of workers. This apparent crisis of productivity is illustrated by the two graphs below, the first for the G7 the second for the USA.
In the first graph, the inflation adjusted figure is the most important. It represents the volume figure, in other words how much more physically productive each hour’s worth of labour is year by year. If inflation is high, then nominal productivity appears to be high as in the 1970s. Eliminating the distortion of price rises we find that throughout the 1990s, with information technology and globalisation thriving, there was a steady improvement in productivity to above 3% p.a. by 1999. Up to 2007 the figure oscillated around 2.5%. From the middle of 2010 it has fallen to around the 0.5% mark. This has continued into 2015. Accordingly for over four years, productivity growth has been stagnating. More importantly this has happened, not in the midst of a recession as in 1970, 1980 and 2009, but during a period of expansion.

Much of the blame for this stagnant productivity has been pinned on the fall in fixed investment. This is illustrated in the graph below which plots Fixed Asset Investment as a percentage of Gross Domestic Product for the G7 as well as 19 emerging market economies EMs (with and without China included).
Looking at the G7, the last peak occurred in 2000 at the time of the dotcom crash. It then fell until 2003 before rising gently to 2008. Thereafter it falls sharply following the financial crash. After hitting a low in 2010 it barely recovers. However, this fall in investment is not replicated around the world. In fact, investment as a share of global GDP has increased due to higher investment in China and India combined with their increased weight in the world economy. (Source: OECD)

Since 2000, China’s fixed investment as a share of GDP has grown by a third and India’s by two fifths. Indeed, it has been China’s growing investment, combined with the size of its industrial economy that was responsible for the super cycle boom in commodities both hards (metals and oil) and softs (agricultural products). It was also this investment boom that dragged the world economy out of the morass created by the financial crisis of 2008. We will comment later on the collapse of this super cycle. Finally, it was the expansion, now subsiding, of the Chinese economy, which prevented deflation becoming generalised in the world economy. Turning back to the G7. Fixed non-residential investment has three arms: structures, machinery/equipment and Intellectual Property. What has actually fallen is investment in infrastructure and structures and not in machinery and equipment which is the driver of productivity. The cheapening of these productive commodities in recent years has meant, that while its share of the GDP has fallen, its volume has not. Actual, real investment in machinery and equipment is now higher than in 2000 (blue graph).
However while the physical investment in machinery and equipment is higher than in 2000 it would be a mistake to see this as sufficient to renew this essential capital stock.

(Source: BEA Table 3.10E.)

These figures clearly show an upward curve in the age of machinery and equipment employed in manufacturing, the largest segment of productive industry. While it is true that machinery becomes more durable over time, therefore longer lasting, it is unlikely that they have become 50% more durable since 1980. For example in the early 1980, the average age fell, not because machinery lost their durability but because of the culling of factories at the time (the legendary ‘rust belt’). Technical factors appear to be the less important determination of age, especially when we factor in the advent of computers in the late 1980s which have a much shorter technical life than say a lathe or a press, and which therefore should have led to a reduction in average age.

In Japan, the average age of machinery is approaching 15 years, and this ageing process is likely to be seen throughout the G7. We may therefore conclude that while investment in equipment and machinery has increased, it has not done so at a pace needed to adequately renew the stock of existing equipment and machinery. To put it another way. The addition to the existing stock of equipment represents a diminishing portion of the total stock. The result is a drag on productivity growth.

However because investment has been concentrated in the goods producing sector rather than the service sector, differential increases in productivity, both real and illusory, has resulted. This has had significant results as employment has expanded only in the service sector. In the nine years up to 2014, combined U.S. employment for the goods producing and service sector rose from 135.1 million to 140.6 million, an increase of 4.1% (B.L.S. December 2005 to December 2014). On the other hand employment in the goods producing sector fell from 22.4 million to 19.5 million or from 16.6% of the combined total down to 13.9%. So while the service sector expanded the goods producing sector fell.

The physical number of workers is only part of the story. As we have said before, goods producing workers are more productive. If we look at Value Added per employee over the whole economy excluding manufacturing, it works out at $115,000 in 2014. The figure for manufacturing is $171,000 or nearly 50% higher. On this basis, and with a degree of latitude we could say each manufacturing worker is worth 1.5 workers in the service sector measured by the price of output, but as we shall see,
it is more complicated. (Source BEA and BLS) It is also worth pointing out that manufacturing wages are significantly higher than service sector wages.

We recognise that the division between the service industry and goods producing industry is arbitrary and has more to do with prejudice against blue collar work than with a scientific distinction. For example the production of computer hardware is accounted for under goods producing while the software that runs it is separated out and included in the service sector. As cars become more connected, that is they use more computing power, software and the cloud, it will become very difficult to decide which sector the car now fits in. A nonsense.

The service sector is also much more heterogeneous than the goods producing industry in terms of pockets of productivity. Software engineers, surgeons, scientists reside alongside industries that employ waiters, carers and window cleaners. Having averaged out these variations, it is true to say that the larger part of the service sector is labour intensive, or more accurately it operates at a lower technical composition of capital. Workers here work with far less means of production; a coffee machine and till versus robots and a production line. As a result of this, most of the investment in machinery and equipment is to be found in the goods producing sector and this is reflected in the differences in productivity growth. In the USA for example, the goods producing sector employed 42% of all equipment while purportedly producing 20.3% of GDP in 2014, while the service sector employed 58% of the equipment to produce 79.7% of GDP (Source BEA). In terms of ratios, the goods producing sector’s relative share of equipment to labour was 207% while that of the service sector was 73%. In other words, the goods producing sector employed three times as much equipment for every $1 of GDP.

The consequence of this much higher employment of equipment is shown in the table below. Since 1990, non-farm business sector productivity has increased by 50% while manufacturing has increased by 81%. Since 2007 the rates have converged with manufacturing productivity growing only 20% faster, down from 95% in the 1990s and 42% in the early 2000s. This reduction in the disparity between growth rates between the sectors is consequential as we will examine later.

**Changes in productivity, Business Sector vs Manufacturing U.S.A.**

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<th>Non-farm business sector</th>
<th>Manufacturing</th>
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<tr>
<td>1990-2000</td>
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<td>2000-2007</td>
<td>2.6%</td>
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<td>2007-2014</td>
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(Average annual change in productivity. Bureau of Labour Statistics)

We should however approach these figures with caution. The increased productivity in manufacturing (the largest component of the goods producing sector) is not simply due to investment and skill. We have to factor in the difference in the technical composition of capital and with it the value composition of capital between these sectors. In the goods producing sector, workers set in motion more means of production than is the case on average in the service sector. For example a Starbucks versus a car factory.

As a result, prices in the goods producing sector exceed their value and in the service sector they are forced below their value. If this was not the case then the rate of profit would be much higher in services than in industry. There is thus a redistribution of value from the service sector to the goods producing sector. This explains in part why the price of the output per worker in manufacturing rises to $171,000 compared to only $115,000 in the rest of the economy (excluding manufacturing).
Accordingly as productivity is the measure between the price of output divided by the number of workers (or hours), manufacturing workers appear to be more productive than they are and service sector workers less so, because the missing output from the service sector reappears in the goods producing sector as higher prices due to the movement of capital averaging out the rate of profit.

But there is more. As the technical composition of capital rises in the goods producing sector relative to services there will be an accelerated transfer of value from the one to the other, which will amplify the apparent growth in productivity in the goods producing sector at the expense of the service sector. In sum while the main component for the difference in productivity is undoubtedly actual differences in the volume of production between these two sectors, that is actual physical productivity differentials, the difference is made greater by the flow of value between them. Hence for our purposes, it is safer to use the overall productivity increase which combines both the goods and service sector as a more reliable indicator of the health of national economies. We refer of course to the economy wide increase or decrease in the rate of productivity currently hovering between 0.3 - 0.5%. (We have already noted that the productivity growth differentials between the two sectors has more than halved since 2007.)

THE IMPACT OF GLOBALISATION.

Up to now we looked at the transfer of value from the service sector to the goods producing sector. We will now look at the global picture. The pricing of output is not only a product of changes in the national economy but changes emanating from altered competition in the world economy.

Two series produced by the Department of Labour in the USA, and common to the bureaus of statistics in other countries, are the Import Price Index (IPI sometimes called the IPE) and the Producer Price Index (PPI). The IPI is the best measure of the prices imported into the USA while the PPI is the best measure for goods sold in the USA and abroad. If import prices from the EMs are under-priced, while the goods produced using them as materials, or components or even fully assembled are sold in the US, they should be fully priced. It therefore follows that the IPI should reflect this under-pricing, while the PPI should reflect the full-price. We may conclude from these assumptions that the IPI should lag behind the rise of the PPI. And this is indeed the case when we examine the graph below which plots the ratio of PPI to IPI (in quarters) from 1982 to the present. The ratio rises because the growth in the PPI exceeds that of the IPI as predicted.

(Source. US Bureau of Labour Statistics – FRED)
Since 1980 there has been a transformation in the goods producing sectors in the G7 countries. The crisis of profitability in the 1980s led to the closure of large chunks of the goods producing sector in the G7 and its export to low wage countries in Asia, particularly China. Whole swathes of industry were culled leading to the description of the rust belts: that is rotting buildings where once millions toiled producing useful and needed goods. The result of this transfer of production to the low waged, but increasingly productive economies like China, was the lowering of import prices. Moreover, as the foreign share of the goods produced in the USA grew, it held back the growth of the PPI as well.

As these lower waged economies move up the value chain so the effect on import prices is more pronounced. Finally, the bursting of the super cycle in commodities has further reduced the IPI. We note that from the second half of the 1990s, when globalisation takes off, the ratio begins to climb above 1.00 as Import Prices fall relative to Domestic Prices. The dip after 2010 is primarily a result of the super cycle kicking in and it peters out once commodity prices collapse. In this graph the trend line is most important as it evens out currency fluctuations and short term events.

The G7 are able to extract super profits from the emerging economies because they command the strategic heights of the manufacturing chain. Despite the move up the value chain by a few emerging markets, the G7 economies still command a monopolistic position in goods production. There is thus an element of under-pricing of the goods made in and obtained from EMs. This is best expressed by the value added by manufacturing in these diverse countries. In Deloitte’s 2013 Global Manufacturing Competitiveness Index, the value added by the workers in a number of countries are analysed. In 2011 the average value added for world manufacturing was $33,000. In the USA it was $68,200, Japan $44,600, Germany $43,300, China $14,200 and India $8,900. This figure appears to correlate with manufacturing employment between China and the USA - 68.8 million versus 12.7 million 2012 (Congressional Research Service - U.S. Manufacturing in International Perspective). We therefore see that each worker produced five times more value in the US than in China, and if China now has the world’s largest manufacturing base measured in Dollars, this is primarily due to the numbers employed.

However, it is likely that the figures do not provide an accurate comparison of productivity measured in volume terms (though these figures appear to be unavailable). Productivity in China if measured by volume is likely to be higher and US figures lower than when measured in monetary terms. This is due to the value transfer from manufacturing in emerging economies to that of the USA. While aggregate figures are hard to find, an analysis of the production of Apple products shows this to be the case. The authors at the University of California in 2010 found that the cost price of the iPhone4 was 32.3% and total profits therefore 67.7%. Excluding the profits of the component makers and assemblers, Apple’s international share of profits was 60.9% of the total retail price of $525. (Capturing Value in Global Networks: Apple’s iPad and iPhone. University of California.)

Furthermore, though hardly any components are sourced from the USA or assembled there, more money was spent on wages in the USA (R&D, admin, marketing and selling) than was spent on its production outside the USA. In China, where the iPhone is assembled less than $10 dollars was paid in wages for this task. In other words, aside from the R&D effort in the USA which adds value, most of the value produced took place outside the USA but was realised in the USA. Apple is not the exception. At the time it was estimated that US Hi-Tech corporations accounted for 25% of world output but realised 75% of the profits.

We may conclude that a significant component of the profits made by the leading corporations in the G7 was not produced by their workers, but workers in the global economy. Further that with the growth of globalisation the portion of profits produced outside these corporations, but which they
realise, has increased. This is the reason the ratio between the PPI and IPI has increased. The ratio
expresses the fact that foreign suppliers are underpaid, input prices are under-priced, but when the
goods are finally sold in the US consumer market, they are fully-priced.

This tends to flatter productivity rates in the G7 at the expense of EM. When profits are realised in the
US and lost from the EM countries, output prices rise in the G7 to reflect these additional profits. As
productivity is the measure of these output prices over the hours worked, in say the USA, so
productivity rises there at the expense of EM countries. If on the other hand productivity is no longer
rising in the G7 as is the case currently, we may assume that is not because productivity is falling in
the EM, but because these profits are not being realised fully in the G7 because of deflation.

Finally, we should add that the ratio between the PPI and IPI would increase even faster were it not
for the fact that some of the profits sucked in by the global corporations, but not made by them, are
often taken in countries with low tax regimes which lie outside the G7. In other words transfer pricing
is a factor here. Import prices into the G7 may be overstated due to the fact that profits are realised
in tax havens, rather than in the parent country. In fact, as is well known, invoices are routed through
tax havens, emerging with higher prices which means lower profits in the parent country. Take Ireland.
Apple’s actual sales to Irish customers is much smaller than the sales Apple’s logs there. But Ireland
has minimal corporate tax, much lower than the countries where Apple’s sales actually takes place
but are not registered. The same is true of say Amazon and Luxembourg, from where customers in a
number of European countries are invoiced. While the tax authorities are short changed in the parent
countries, these multi nationals are no poorer, because profits taken in country A rather than B does
not affect overall profits. But it does affect the IPI.

When viewed globally, or more accurately, when viewing the international operations of these multi
nationals, we note that none of this creative accounting alters the fact that they absorb profits
produced outside their ranks and that this helps to determine their final corporate profitability.

INTERNATIONALLY DERIVED PROFITS BUT NATIONALLY FOCUSED INVESTMENT.

The top 2000 companies identified by Fortune Magazine, as we have shown in an earlier article on
this site entitled Categorising the USSR as ‘State Capitalist’ is an act of political cowardice produce one
third of world output. Most of the profits produced by these 2000 companies emanate from goods
producing companies, the majority of whom are domiciled in the G7 and in particular the US. These
multi-nationals are not only the major profit makers but are profit takers as they source huge amounts
of materials and components from outside their ranks. These inputs tend to be under-priced as these
2000 companies dominate their respective markets.

The inception of globalisation thus gave the multi-nationals a significant boost to their profitability.
The mass of profit began to grow significantly in the second half of the 1990s. In under ten years a
new phenomenon became apparent: corporate cash flow was exceeding corporate investment in the
G7. In 2004 the BEA drew attention to this development with a graph showing net cash flow to
investment. Since then there has not been a year where the gusher has run dry.

At the time this young phenomena was not taken seriously. Today it is. This author has drawn
attention to the cash surpluses generated by the giant corporations as being the prime cause for the
secular decline in interest rates over the last twenty years. This is now more broadly accepted. The
amount of liquidity injected into the world economy by the global corporations far exceeds the
quantitative easing injections carried out by the Federal Reserve, the Bank of England, and the
Japanese and European central banks.
The graph below first appeared in an article on this website entitled *NEO-LIBERALISM, INVISIBLE HAND OR DEAD HAND?* It expresses the scale of this cash generation.

![Graph](image)

(Cash Flow vs Investment (1955 dollars)
Non-financial Corporate USA)

Cash flow here is composed of - after tax profits plus depreciation - and is represented by the blue graph. Investment here is fixed investment and is represented by the green graph. In order to better grasp the relative growth between the two, prices are in constant 1955 dollars. We note how cash flow begins to soar in the early 1990s as globalisation intensifies. Up to the year 2000 investment tracks the growth of cash flow. However after 2000 investment in real terms tapers off while cash flow soars and the gap between them grows exponentially. By 2013 the gap has widened to 50% of cash flow, an extraordinary amount.

What the blue line represents is the combined profits produced by the workers in these corporations and the profits taken from producers in the global economy mainly resident in the emerging markets or EMs. This has enabled corporate USA to achieve a rate of profit in 2013 which was higher than any peak since WW2. But as the green graph shows, this blessing of profits is difficult to manage. Average fixed investment, despite the fact that it now incorrectly includes Intellectual Property, is barely changed from 2000 in real terms. And if we exclude Intellectual Property investment, the balance of fixed investment actually falls in real terms.

Restated in current dollars, the undistributed cash flow of Private Industry in 2013 after investment in the USA was $2078 billion or 12.4% of GDP (*BEA Table 1.12*). This represents an enormous hoard of idle capital overfilling the banking coffers, driving down interest rates while at the same time driving up speculative bubbles and fictitious capital. In many ways it represents a new phenomenon, a surfeit of credit independent of the stage of the business cycle.

The question that is now posed is whether foreign investment could be compensating for this stagnant national investment. The answer is no. Outward investment from the USA during the same year was one sixth of this figure at 2.1% of GDP. (*OECD International Direct Investment Statistics 2014*) If we adjust for inward investment for the last five years versus outward investment, then just 1% of GDP
was exported as capital. And it is falling. As the Financial Times reported on the 23rd June, 2015, first quarter Fixed Direct Investment into Emerging Markets fell by nearly 25% year on year.

Restated, the 1% balance in foreign direct investment accounts for only 8% of this $2078 billion. If we compare it to share buy backs which average 54% of net profits for the S&P (Profits without Prosperity, Harvard Business Review) or over $500 billion in 2014, it is three times the net amount invested in foreign direct investment. If the share buy backs which equate to 3% of GDP were added to investment it would return to 2000 levels, but if we add the 1% net foreign investment it still leaves investment well below the levels achieved in the early part of the century. This is shown in the graph below. The trend is for direct investment to have fallen by 2% of GDP since then.

![Graph of Non-Residential Fixed Investment as a % of GDP](image)

(BEA Table 1.7.5 and BEA Account Code: A008RC1)

Before departing this section we would do well to briefly examine the consequence of this dammed up capital. We refer of course to the growth of fictitious capital. To obtain some idea of the magnitude of fictitious capital we turn to the figures prepared by the BEA and Credit Suisse Global Wealth Databook 2014. On page 95 of the Databook the growth in USA household wealth between mid-2013 and 2014 is estimated at $8886 trillion or just over 50% of GDP. On the other hand gross fixed investment and reinvestment of foreign income amounts to $3.5 trillion. (BEA Table 5.10) Accordingly the growth in wealth exceeds by $5.4 trillion the gross addition to the value of produced assets in the USA. This $5.4 trillion, equal to one third of GDP, represents the swelling of fictitious capital in the USA: as represented by an increase in the price of shares, bonds, derivatives and property. Fictitious capital represents a claim on real profits produced in the real economy by real workers producing real commodities. As it swells so these claims are diluted until the point is reached where the return becomes insignificant and the whole inverted pyramid over balances. If we compare totals, the value of produced assets in 2013 was $53.4 trillion (BEA Table 5.10) while total wealth was $88.9 trillion (Databook) suggesting that the stock of fictitious capital amounted to at least $35.5 trillion, equivalent to two years’ of real economic output.

IN CONCLUSION.

The total mass of commodities, the total product, must be sold.….If this does not happen, or happens only partly, or only at prices that are less than the price of production, then although the workers is certainly exploited, his exploitation is not realised as such for the capitalist and may even not involve any realisation of the surplus-value extracted, or only a partial realisation…The conditions for the immediate exploitation and for the realisation of that exploitation are not identical….The former is restricted only by society’s productive forces, the
latter by the proportionality between the different branches of production and by society’s power of consumption. (ibid page 352 our emphasis)

Throughout Book 3 of Das Kapital and in particular Chapter 15, Marx describes how capitalism seeks to develop production without limits only to be limited by the need to produce solely for profit and to convert those profits back into new and additional capital. Finally, how, when confronted by these limits, capitalism is thrown into temporary economic crisis for as long as it takes to overcome them. But in overcoming these old barriers it sets “...up the barriers afresh and on a more powerful scale (ibid page 358.)

Such a crisis broke out in the 1970s when capitalism crashed against the limits set up by the post war boom. The ensuing economic crisis was only resolved by the mass destruction of capital, the defeat of the organised working class and later, the growth of globalisation. Globalisation was the source of the new profits and markets that helped overcome the post war crises of profitability which limited capitalist development. It sustained and nourished one of the most extended and significant long waves of expansion in the history of capitalism.

Capitalism does not produce for its own sake or for the needs of society, it only produces for profit. This much is well known and incontrovertible. What is more difficult is the actual criteria undertaken to assess whether or not an investment is profitable or not. Marx deals with this under Supplementary Remarks in Chapter 15.

No capitalist applies a new method of production, no matter how much more productive it may be or how much it might raise the rate of surplus-value if it reduces the rate of profit. (ibid page 373)

The first condition for new investment is that it increases labour productivity. The capitalists experience this as a fall in marginal costs. Each commodity costs less to produce, either because the fixed and circulating costs in each commodity is reduced, or if it is not, because the wages paid to produce each commodity falls sufficiently to overcome any rise in fixed and circulating costs. The result is the marginal cost per unit of production falls as its volume increases. This creates the potential for an expansion of the profit margin.

Here the question of market price becomes key. If it does not fall, or falls by less than the fall in marginal costs, then the result is an expanded profit margin, additional profits. Some of the more sophisticated equations comparing marginal costs to marginal prices, factor in the elasticity of demand and supply. They assume the increased production will affect market prices causing them to decline, but if this expected decline is less than the decline in costs, then that investment is worthwhile.

So here the first consideration is the conditions prevailing within an industry. If the social need props up demand, such that the greater volume of production is met by this demand, then market prices remain resilient. If not then the fall in market prices resulting from the changes in supply may result in a fall in marginal prices, thus reducing this gain in profit margin and even eliminating it making further investment redundant.

Let us look at the problem more fundamentally. A typical industry is populated with firms of differing productivity. Differing individual productivities give rise to differing individual values for the commodities produced in this industry. But just as the individual productivities can be averaged out, so too their individual values to form a single market value for that commodity. It follows that the more productive firms produce at a value below the market value and the less productive firms at an individual value above the market value. But they all sell at a single price, the market price which is grounded by the market value.
A single market price in an industry populated by multiple productivities, means that the more productive firms sell their commodities at a price above their values while the less productive firms sell at a price below their value. This deviation of price from individual values results in unequal exchange because the money received in payment can either exceed or fall below the amount of labour contained in these commodities. In other words, the more productive firms are paid for more than the labour of their workers, while the less productive firms are not paid for all the labour of their workers. The result: the more productive firms earn an extra profit at the expense of the less productive firms who lose profit. The more productive firms gain from the unequal exchange while the less productive firms lose.

The loss on the one side is the gain on the other, the more productive firms mop up some of the unpaid labour produced in the less productive firms. It is this redistribution of profits that is key to rewarding the more productive firms or those firms who intend to become more productive through additional investment. This is the single biggest spur to investment, the phenomenon of individual firms making extra profits by becoming more productive.

If we return to Marx’s first law of investment, namely that the underlying condition for investment is increased productivity, we may add the following rider. An investment will only yield extra profit, if the ensuing rise in productivity is sufficient to propel its productivity above the industry average thus allowing unequal exchange to add to profits. Under this condition, the firm not only potentially appropriates more unpaid labour from its own workers but from the workers of less competitive firms. Exploitation is here understood to be social.

But there is more. This enlarged social appropriation of unpaid labour both from within and without the firm not only increases the mass of profits, but it also tends to increase the rate of profit for that firm through this redistribution of surplus value. And if this rate is above the average for the economy, it is investment well spent and investment that needs to be added to.

It is important to realise that this initial impulse of profits may bear no relation to the value of labour power or its cheapening. If the higher rate of productivity doubles production so that the same number of workers produce twice as much, but are paid their old wage, the unpaid element of their labour remains unchanged. It is merely found in twice as many commodities. However, if the price of these commodities does not fall in line with their reduced labour time, then more profits are realised, despite the rate of exploitation remaining unchanged. Here the additional profits result from the appropriation of the unpaid labour produced by less productive competitors. Only at a later stage, when market prices fall, not only for this product, but generally for all the products entering into the value of labour power, does it become cheaper to maintain the worker. It is at this point, that the employers are able to shorten the paid part of the working day thereby increasing the relative rate of exploitation and with it their overall profits.

Of course, any alteration in production, both in terms of cost and volume will affect competition. Less competitive firms may be forced to invest in similar methods and the quantity of production may therefore assume such proportions that it now exceeds the social need. The result will reduce market prices and with it profitability. Profits may now become depressed to the point where the rate of profit falls below the average for the economy and if it does, then capital will flee this industry for others where the rate is higher.

In all cases, the effect on market prices is crucial. Under conditions of regular reproduction, market prices respond to underlying changes in the cost of production between industries. When reproduction becomes irregular, then there is an alteration in the general behaviour of market prices.
Now it is a case of market prices falling everywhere, not only in one industry, but in all industries, not only in one country, but in all countries, the fall is now generalised. Reproduction becomes irregular when a portion of profits is not reinvested in the next cycle of production or insufficiently reinvested causing capital to lie idle, unspent. As a result demand will fall, or what is the same thing, overall output will exceed demand and this can only be reconciled more or less convulsively by prices falling throughout the world economy.

Falling price levels, devaluation means that not all the unpaid labour produced by workers is converted into profits or what is the same thing, realised. If this loss of profits results in individual investments no longer yielding an extra profit, because the fall in market prices is of sufficient magnitude to wipe out the gains in profits from less productive competitors, then investment will not take place. At this point, production will contract and a real recession will ensue.

Globalisation beginning in the 1990s, provided corporations (firms) with new and additional sources of profit. Profitability as measured by its rate, margin and share of GDP achieved new peaks in 2013. This peak exceeded any peak since the end of the Second World War. In turn the swelling of the mass of profits has over the last decade precipitated an epic overproduction of capital. That is to say, profits have not been converted into productive commodity capital. Instead idle capital has exited circulation, accumulated in the money markets, driving down interest rates on the one hand by its dead weight, and on the other driving up bubbles on the other.

This failure to invest has fractured reproduction. If the Chief Executive Officers are giving their unspent profits away in the form of share buy backs, this is due not only to their efforts to shore up share prices and therefore their bonuses, it also represents capitulation on their side. They simply cannot find investment opportunities to employ their surplus capital. Capacity utilisation in the G7 is not stretched, it sits below its long term average.

Most of the foreign investment by the G7 takes place between and within the G7. And yet the investment opportunities within the G7 are limited by the international division of labour. Wage rates in the G7 remain significantly higher than in emerging markets despite the gap closing. All the recent talk of repatriating production back to the G7 from countries like China which would help mop up some of this excess capital has not materialised. The contradiction is expressed thus: it is the sucking up of profits from outside the G7 combined with the failure to invest productively outside the G7 in quantities sufficient to employ this new found capital.

The irony of course is that the rate of profit in the goods producing sector, especially manufacturing far exceeds that obtained in the bond market, both corporate and government. US manufacturing enjoyed an adjusted rate of profit in 2013 approaching 20% (the highest in 60 years) or ten times that of medium term treasury bonds. And yet because of the prevailing conditions, no advantage can be taken of this higher rate of return due to the dearth of investment opportunities.

While the credit markets are more internationalised than industrial capital, they cannot compensate. International finance being more liquid and mobile is without doubt, more available to EMs. But this finance does not include the technologies, the patents and the techniques needed to build goods producing industries from scratch, at least not medium and hi tech. That lies in the province of the goods producing multi-nationals, the ones giving away their profits. The reality is that all this idle industrial capital could produce hundreds of millions of jobs around the world, industrialising most countries and preventing millions of migrants hunting for jobs around the world, provided industrial investment was truly international which it is not. In turn this industrial development of the less industrialised countries would boost production within the G7 itself.
But it can’t and it won’t. Instead, much of it has gone into the bond markets of the G7 which has enjoyed its longest bull run in history, resulting in abnormally low interest rates. A significant amount has gone into properties driving their prices beyond the reach of even skilled workers. The rest has gone on bets on bets – derivatives. The amount of fictitious capital that has been generated as we have shown is two to three times global GDP.

Until two years ago the accelerated rate of investment in China and to a lesser degree India and Brazil, helped compensate for the dearth of productive investment by the G7. This has now ended as China is cursed with excess capacity in the industries it over invested in. The first casualty of this was the collapse in commodity prices and the ending of the commodity super cycle. The second casualty will be durable and capital goods produced in the USA, Germany, Japan and South Korea. From being an importer of productive capital China is becoming an exporter of capital adding to the glut of excess capital worldwide. China is replicating its housing bubble around the world by becoming the biggest foreign investor in property. According to Bloomberg it has now ousted Canada to become the biggest foreign property investor in the USA.

As productive investment has cooled in China and elsewhere it is likely that we are witnessing the first absolute fall in productive investment since the advent of globalisation. As a result reproduction is increasingly breaking down as ever more capital piles up. And when reproduction breaks down it creates the appearance of excess production, or its mirror image, inadequate demand. The result is falling prices or deflation. The recent upward blip in interest rates based on a view that deflation has been reversed is wrong. If anything the downward momentum of PPIs around the world has accelerated, most acutely in China.

It is this underestimation of deflation that is giving rise to the conundrum over productivity. If productivity is the ratio of the price of output compared to hours or number of workers, then it is clear that productivity will appear to fall if prices fall. And prices are falling despite repeated rounds of quantitative easing around the world which were and are designed to make money increasingly worthless. It is this undercurrent of deflation that is distorting productivity as measured by price.

The fall in apparent productivity has set alarm bells ringing. This is the assessment from the U.S. government’s most recent investigation into productivity trends issued in the first quarter of 2015. “An alarming result from this year’s estimates in The Conference Board Total Economy Database™ is that the growth rate of total factor productivity (TFP) [in 2014], which measures the productivity of labor and capital together, continues to hover around zero for the third year in a row, compared to an average rate of more than 1 percent from 1999-2006 and 0.5 percent from 2007-2012. The challenge on TFP growth is widespread across the globe. Most mature economies including the United States, the Euro Area and Japan show near zero or even negative TFP growth. In China, TFP growth has turned negative, and in India it is just above zero, at 0.2 percent. Both in Brazil and Mexico TFP growth continues to be negative, respectively at -2.3 and -1.7 percent.”

In other words, over the last three years there has been an international collapse in productivity as measured by prices. All investment has been met by either a fall in apparent productivity, or at least its stagnation. Therefore, the first condition identified by Marx, that investment should give rise to increased productivity is not being met. This can only give rise to a further fall in the rate of investment and pressure on price levels.

TFP is similar to Marx’s concept of the organic composition of capital as opposed to the simpler value composition of capital. Two capitals of equal size and of equal composition within an industry may produce a different economic output if productivity levels differ between them. In other words while their value composition is the same their organic composition is not.
What zero or even declining TFP signifies most acutely is that new investment is not increasing output beyond that of the existing stock of capital or even yielding a lower output in the worst case. We refer to proportionate amounts. There is no marginal increase in output for every dollar of new investment only the same output, therefore the same profit everything else being equal. But the absence of additional profits in the presence of additional capital, implies a reduction in the rate of profit. There is thus no incentive for new investment to replace older equipment. Hence the old marches along with the new, and the mystery behind the ageing of the capital stock is revealed.

Alternatively, it can be argued that the rate of profit is so high that it enables capitals of differing productivities to co-exist alongside each other. And it is this fact rather than the above expressed opinion that explains the relative age of capital. But this would imply that demand is sufficient in every industry for market prices to be governed by the less efficient producers allowing firms with uneven levels of productivity to co-exist. The deflationary pressures in the world emanating from the lack of demand, implies this is not the case which means we may assume that it is the lack of adequate investment that is leading to an increase in the age of the capital stock rather than high profitability.

In a world of declining productivity, or even stagnant productivity, the only way to maintain or increase the rate of profit is to depress real wages and with it the “cost of labour”. Until 2012 labour costs were generally falling. However in 2013 and 2014 they started to rise as indicated in the graph below. They rose due to higher wages combined with falling rates of productivity.

![Labour Costs Graph](https://example.com/labour-costs-graph.png)

(Source: International Comparisons of Manufacturing Productivity and Unit Labor Costs Trends, Summary Table 2, 26 May 2015 US Conference Board.)

Profits fall inversely to the rise in labour costs under these conditions. Hence the reversal in profits. The rate of profit peaked in the USA in 2013. The mass of profits fell in 2014 due to falls in the second half, which has continued into the first quarter of 2015. The current expectation is another fall in the second quarter of 2015. Should that occur, profit falls of such a duration has always sparked a recession in the USA. Profits though have improved in Germany and Japan due to their weaker currencies. Recently profits have contracted for the first time in China, India and Brazil. It is therefore likely that on average there is now a generalised fall in the mass of profits worldwide.

This fall is not sudden, it is overdue given our insight into the collapse of total factor productivity over the last three years. If it has been delayed, this is due only to the rise in the exploitation of the working class, in other words to the depression of wages and the intensification of work. This is shown below. Real wages actually declined in the ten years up to 2013 in the USA. No longer. In 2013 and then in 2014 a movement erupted against low pay in the USA and this has reversed labour costs.
Here then is the chain of events. Inadequate investment caused reproduction to slow down. In turn this led to an apparent fall in productivity due to the deflation it precipitated. This fall was mitigated by intensifying exploitation. No more, real wages are rising in a number of key countries and profitability as measured by its rate is now falling. Without this fall there can be no full blown recession. This fall, should it endure, will mark the definitive end of this long, long boom. It was a boom which not only saw the advent of information technology opening up the world economy, but which also witnessed the expansion of the capitalist market boundary (Jeffries) to include all the countries lost to capitalism, particularly China and the USSR. For the first time in three generations, capitalism dominated every corner of the globe. In every way, this expansion was as momentous as it was enduring, but the time of its passing is upon us.

This fall is occurring at a time when the rate of profit continues to oscillate at a historic high. The fall has not yet been precipitous. However the current surge in mergers and acquisitions is typical of a period of declining profits, where corporations can no longer grow their profits, forcing them to buy in profits from competitors through merging with them. In the first quarter of 2015 an unprecedented $1.2 trillion worth of deals were proposed worldwide.

On balance, the underlying conditions in the world economy continue to deteriorate. This time China will not ride to the rescue, if anything its rebalancing will in the short run, deduct from the world economy. The next few months will be decisive. 2015 may yet mark the end of this long wave. If it does this recession will not be the same as 2008 which broke out in the financial sphere. This will be a full blown industrial recession taking place in the real world, the world where value is produced not squandered. For these reasons its consequences will be much more severe, much more intractable and of longer duration.

Brian Green June 2015