

# UK Crises: Historical Description and Theoretical Explanation

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## Introduction

The financial crisis that began in August 2007, and the subsequent ‘great recession’ after the collapse of Lehman Brothers in September 2008 have been the defining events of the new century. While they frame all discussion of contemporary economic policy, they also have profound significance for understanding how contemporary capitalist economies work, and therefore for theories that claim to provide such understanding. Of course, the crisis initially centred on the dedicated investment banks (Bear Stearns, Lehman Brothers etc.), and the corresponding investment desks in the universal banks (HSBC, Barclays, NatWest etc.). But investment bank operations in financial markets reached across all major capitalist economies, and none escaped the effects of the financial crisis.

The focus in this article is on the UK economy, and it examines two issues. First, how important in an historical perspective was the crisis that began in 2007? Until recently, it has been very difficult to obtain long runs of time series data for the UK economy, but with the publication by the Bank of England of its ‘Three Centuries’ database (see the Appendix below for details), it is now a lot easier to make an informed judgement. The second issue is more theoretical: given the empirical evidence, how satisfactory has been the Marxist approach at explanation? This is a complicated question, because every major recession is different, and yet every major recession is the same, and the challenge is to do adequate justice both to historical specificity and theoretical generality. Briefly, the answers are, first, that the crisis beginning in 2007 was very important in a historical context, and second, that traditional Marxist approaches are seriously lacking.

Throughout, the treatment is broad brush. Specific interpretations are not attributed to particular writers, but are merely sketched (although there are some references to typical examples). While this does some violence to detail and nuance, the aim is for generality, concluding with where a Marxian approach should go if it is to be a progressive research agenda rather than a metaphysical dogma.

## How Important Was The Crisis Beginning In 2007?

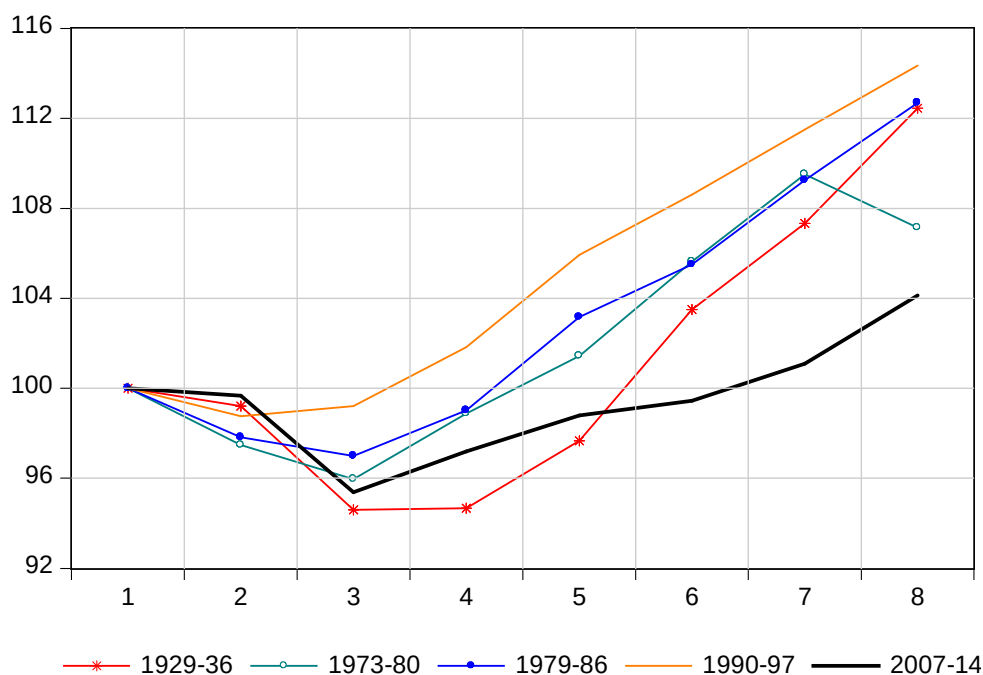
The periods immediately after World War 1 and World War II were both periods of very significant economic difficulty. But they were each also periods of transition from a wartime to a peacetime economy in straightened circumstances. Indeed, the period from 1918 to around 1926 was perhaps the most difficult for British capitalism of any period.

Transitions to very different peacetime circumstances from an economy geared to war production make comparison with wholly peacetime recessions both difficult and potentially misleading. In order to compare like with like, these transitions following world war are excluded from the historical comparisons.

The eight years from 2007 to 2014 define the scope of comparison, and we compare these years with four other eight year periods: 1929-36, 1973-80, 1979-1986, and 1990-1997. Within each eight year period, the variable investigated is set equal to 100 in the first year, so that all five periods can be examined on the same graph and the time-path of the relevant variable compared. Hence the eight points on the horizontal axis represent years since the onset of recession, with point 1 representing the starting years 1929, 1973, 1979, 1990 and 2007, point 2 the next year and so on.

Since recessions are conventionally defined as two successive quarters of negative growth in Gross Domestic Product (GDP) in real terms (ie at constant prices), it is appropriate first to consider real GDP, which is displayed in Figure 1.

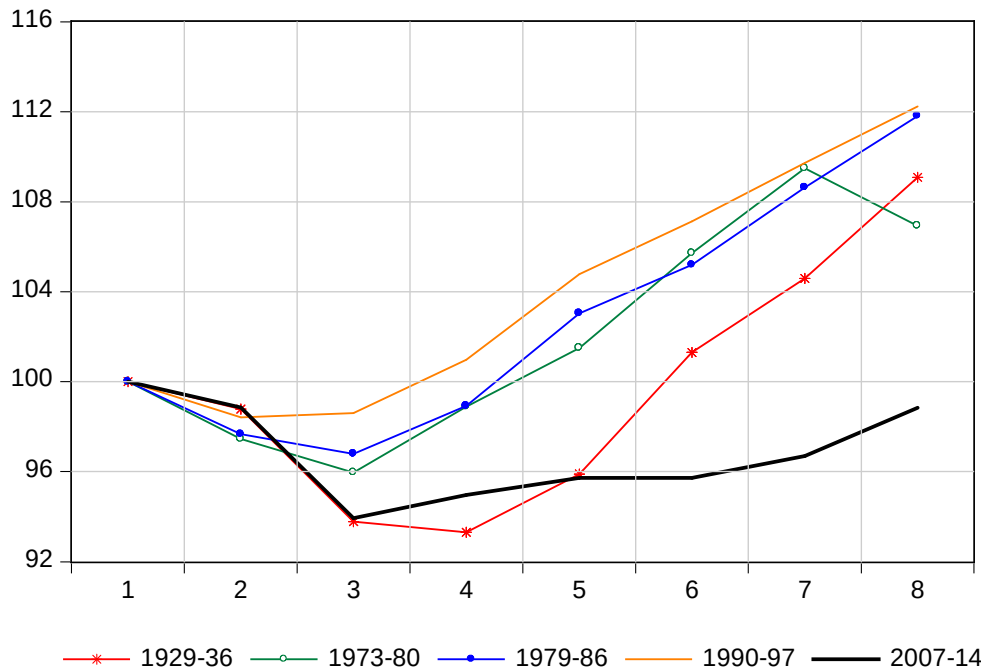
Figure 1 GDP (2011 prices) across Five Recessions



Initially, real GDP behaved similarly in the 2007-14 recession as in the 1929-36 recession; it was a year before it started to fall sharply, and then it fell in a similar manner, and further than in 1973-80, 1979-86 and 1990-97. Year 3 (2009) marks the nadir, as compared with year 4 (1932) in the earlier period. But then in the earlier period, real GDP growth was greater, for GDP recovered its 1929 level between years 5 (1933) and 6 (1934). By contrast, in the 2007-14 period, real GDP only recovered to its starting point between years 6 (2012) and 7 (2013), so that the current recovery is the slowest of all peacetime recessions.

This longevity of recovery is further emphasised by considering real GDP per head of population, which is examined in Figure 2.

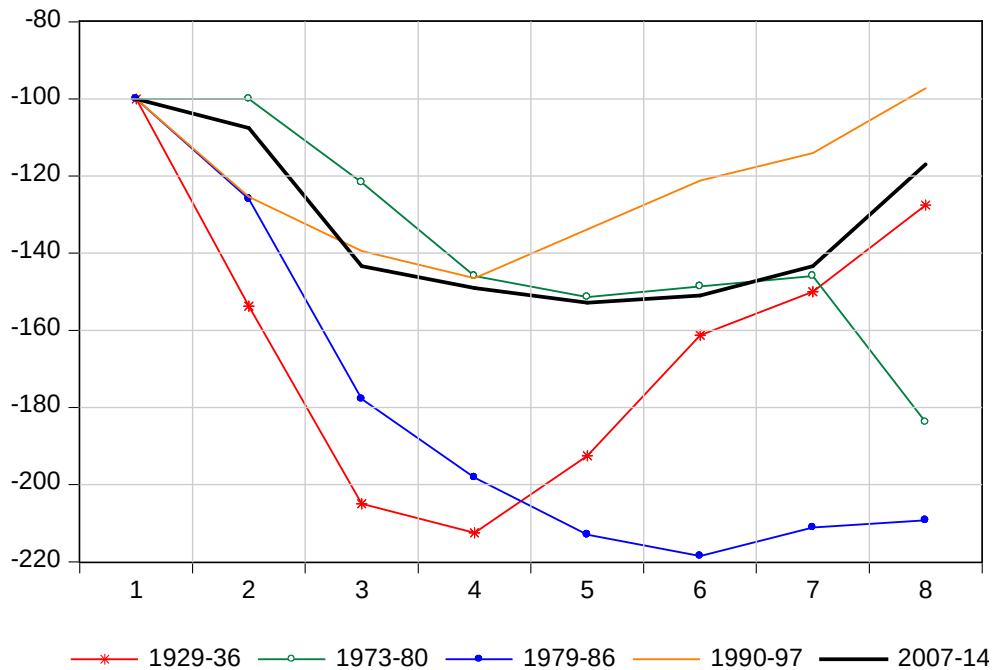
Figure 2. GDP per capita (2011 prices) Across Five Recessions



Again, the 1929-36 and 2007-14 recessions were the worst, and by some distance. Again, in the earlier period, once recovery in real GDP per capita began after the nadir of year 3 (1932), it was quite rapid, surpassing its year 1 (1929) level between years 5 (1933) and 6 (1934). And again, in the 2007-14 period, recovery was very slow; indeed, by year 8 (2014), real GDP per capita had not recovered its year 1 (2007) level.

However, in contrast to the (both absolute and relative) poor performance of output in the 2007-14 period, that of unemployment has been rather different. Figure 3 shows the comparative record of unemployment, using the internationally standardised definition rather than the administrative criteria of the claimant count.

Figure 3. Unemployment Across Five Recessions



Note: the graph shows the negative of unemployment, so that the graph is visually comparable with other graphs.

Unemployment in the 1929-36 recession is iconic, and indeed Figure 3 shows that the rise in unemployment (fall in the graph) after year 1 (1929) was the steepest of all the recessions considered, although after year 4 (1933), responding to growth in GDP and GDP per capita, it recovered quite sharply (the UK's leaving the gold standard in year 3 (1931) was important in facilitating this). But the deepest trough compared with year 1 was not in the 1929-36 period, but rather the 1979-86 period. The neo-liberal onslaught on the working class from the collapse of the 'Social Contract' at the end of the 1970s to the miners' strike and beyond was unprecedented in its effects. As for the 2007-14 period, unemployment increased by about 50% and then started to fall, so that by year 8 (2014) it was lower (higher on the graph) relative to year 1 than in any comparable recession except that of the 1990s. Thus the rise in unemployment after 2007 was nothing like as severe as that following 1929 and 1979. This is a puzzle given the falls in output in Figures 1 and 2, and remains the subject of continuing research.

That unemployment did not rise as much as might have been expected given the fall in output implies less social damage (measured by poverty, skill destruction, discouragement of labour market attachment and so on) to the working class than might otherwise have been the case. But this conclusion is not quite so unambiguous, as is shown in Figure 4.

Figure 4. Average Weekly Real Wages Across Five Recessions

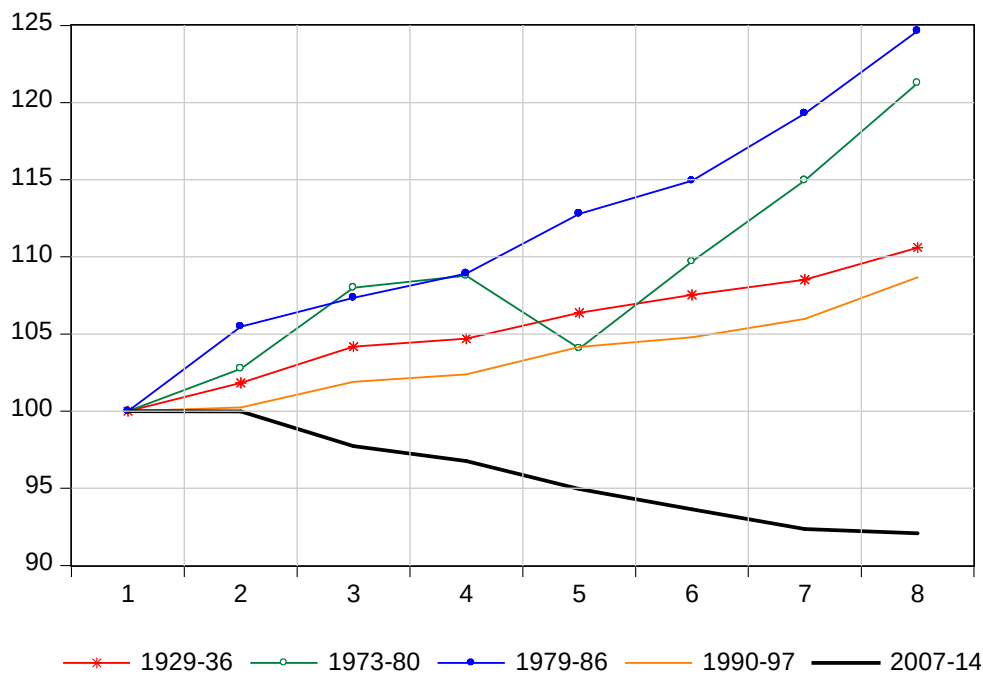


Figure 4 shows the comparative time paths of average weekly wages, adjusted for price changes. Over all recessions except 2007-14, real wages per week consistently rose (apart from in the one year 1976-77). By contrast, over the 2007-14 period, real wages per week have consistently fallen compared with their year 1 (2007) level.

Multi-dimensional comparisons are difficult to evaluate in any simple ranking. But the 2007-14 period is comparable with the 1929-36 period. Output did not fall quite as much, but neither has it recovered as much; the unemployment record is rather better, but the weekly real wage record is much worse. So the 2007-14 period is the worst recession in UK

peacetime history since the Great Depression, and on many dimensions is worse than the Great Depression itself.

## **Explanations of Crisis**

‘Crisis’ is an overused word in the Marxist lexicon. Originally a medical term describing that stage of a fever in which the patient would either die or recover, it has been stretched to describe the whole illness of the patient, and sometimes her whole life. In political economy, it is sometimes used to describe a sudden event (or related set of events) that has (or have) dramatic consequences (for example, the 1929 Wall Street crash, the US bank failures of the early 1930s, the 1973 OPEC price rise, the 1973-74 UK secondary banking crisis, the 2007 failure of Northern Rock, the 2008 collapse of Lehman Brothers); but it is also used as a catch-all summary of those consequences, usually a particularly severe recession. Casually used as a descriptor of almost any empirical situation at all, it is also frequently used as a general descriptor of the capitalist mode of production (as in ‘the crisis of capitalism’). In part, this imprecision is because Marx himself did not present a systematic and comprehensive theoretical account of crisis. Instead, there are scattered remarks and passages in his writings concerning both the possibility and the necessity of crisis, with some (at times ambiguous) distinction of crisis from the periodic fluctuations of the business cycle. Clearly, a crisis is a reflection of the contradictory nature of capitalist accumulation, something inherent and intrinsic to the process rather than merely contingent and extrinsic. But so too is the business cycle. Because there is no agreement on the precise causal mechanisms involved, the word ‘crisis’ is used so freely as to have little meaning, which is of no help analytically.

What then are the causal mechanisms that generate particularly severe (as opposed to mild) recessions as a repetitive feature of the history of capitalism? And can such severe

recessions meaningfully be associated with sudden cataclysmic events that warrant the description of crisis?

### **(i) The Falling Rate of Profit**

One common answer runs in terms of ‘over-accumulation’. Too much capital is being produced relative to the amount of profit that can be produced; this leads to falling profitability, which periodically generates crisis through its negative effects on accumulation, usually through falls in investment. The crisis is then resolved via the writing down (both devalorization, or destruction, and devaluation, or reduction) of the value of large amounts of fixed capital (means of production in the form of machinery). As weaker firms go bankrupt, their fixed capital either becomes worthless (destruction of value), or it is sold at knock-down prices to other firms (reduction of value). More profitable firms survive, and the overall profit rate rises, putting a temporary end to the over-accumulation of capital, ushering in a new phase of accumulation, and leading in due course to over-accumulation again. Thus growth and crisis cyclically repeat, each being necessary to the other.

This whole sequence occurs because capitalist competition is a war between capitalist firms, fought through productivity increases in pursuit of increased market share. These productivity increases are typically realised through labour-saving and means-of-production-using (LSMPU) innovations: the innovating firm can undercut its rivals and gain both market share and ‘super-normal’ profits until competing firms are forced to adopt the innovation. If the output involved directly or indirectly forms a part of customary working class living standards (directly, for example clothing; indirectly, for example, machinery that produces clothing), its cheapening reduces the value of labour-power and increases the surplus-value accruing to the capitalist class. For this reason, Marx called the whole process the ‘production of relative surplus-value’, and he saw it as the typical mechanism of accumulation in developed capitalism.



While each capitalist behaves in a rational manner in pursuit of increased profit, the net effect on all capitalists is to reduce the average rate of profit in the economy as a whole. For while the unit-value of output falls, the total value of output (for a given total number of hours worked) does not change. With LSMPU technical change, less and less labour works with more and more means of production to produce more and more output. So what changes with the production of relative surplus-value are the proportions in which the total new value produced is divided between the working class and the capitalist class, the former proportion falling and the latter rising. Marx's argument was that *if the value of labour-power is held constant*, the rate of profit must fall. This is necessarily true. For the rate of profit ( $r$ ) is total surplus-value ( $S$ ) divided by total capital advanced ( $C+V$ ). So we can write  $r = S/(C+V)$ , and expand it as  $r = (S/V)[V/(C+V)]$ . If the value of labour-power is held constant then the rate of surplus-value (the first term on the right-hand side) is held constant. But the second term on the right-hand side is the ratio of variable capital advanced (to purchase labour-power) to total capital advanced, and LSMPU technical progress means that this term falls. Hence the rate of profit, as the product of a constant term and a falling term, must fall

Allowing for the effects of productivity increases on values means that first, the rate of surplus-value rises, and second, that while the quantity of means of production rises, the value of each unit of means of production will tend to fall. These are the two most important counteracting tendencies to falling profitability, and the overall effect on the rate of profit will depend on relative magnitudes. Marx is often interpreted as saying that nevertheless, despite the counteracting tendencies, the rate of profit *must* exhibit a tendency to fall in the long run. This is an attractive proposition since it suggests that any reformist management of capitalism short of the socialisation of investment cannot succeed. Further, not only does the very operation of a capitalist economy necessarily produce crisis; it is also the case that in the working class capitalism produces its own gravedigger.

However, this proposition of a long run falling rate of profit has been the subject of much theoretical controversy, and the general consensus is that in logic, when all the changes consequent upon a technical innovation have worked themselves through, then as long as the real wage does not rise, it *cannot* be theoretically demonstrated that LSMPU technical change necessarily produces a long run falling rate of profit. The latter theoretically requires a rising real wage. (The mathematical argument is in Roemer 1981, who generalised an argument due to Okishio some 20 years earlier; a simpler exposition is in Foley 1986).

That said, a much weaker proposition might be true: regardless of cause, it might still be the case contingently that there have been periods of falling profitability that have generated crisis. To investigate this empirically requires a more detailed definition of the rate of profit. There are many possible definitions, each determined by a definition of the numerator (total profit) and a definition of the denominator (the capital advanced). Suppose for simplicity that wages are paid in arrears (as they actually are in practice) rather than paid in advance as an advance of variable capital. Then the denominator of the rate of profit can be restricted to constant capital, or, neglecting flows of non-labour inputs, the fixed capital stock. Some of the different definitions are then motivated by theoretical issues of measurement: should the capital stock be measured at historical cost (what it actually cost at the time the means of production were purchased), or at replacement cost (what it would hypothetically cost in each year to replace the means of production at the prices of that year)? If prices do not change over time there is no difference in these measures. But prices do change, partly because of productivity increases, and partly because of general inflation. Most (but not all) economists argue that only valuation at replacement cost is compatible with a view of the firm as a going concern. A second issue concerns whether an allowance should be included for wear and tear of the means of production (called ‘depreciation’ or ‘capital consumption’). The obvious answer is that an allowance should be made, but capital

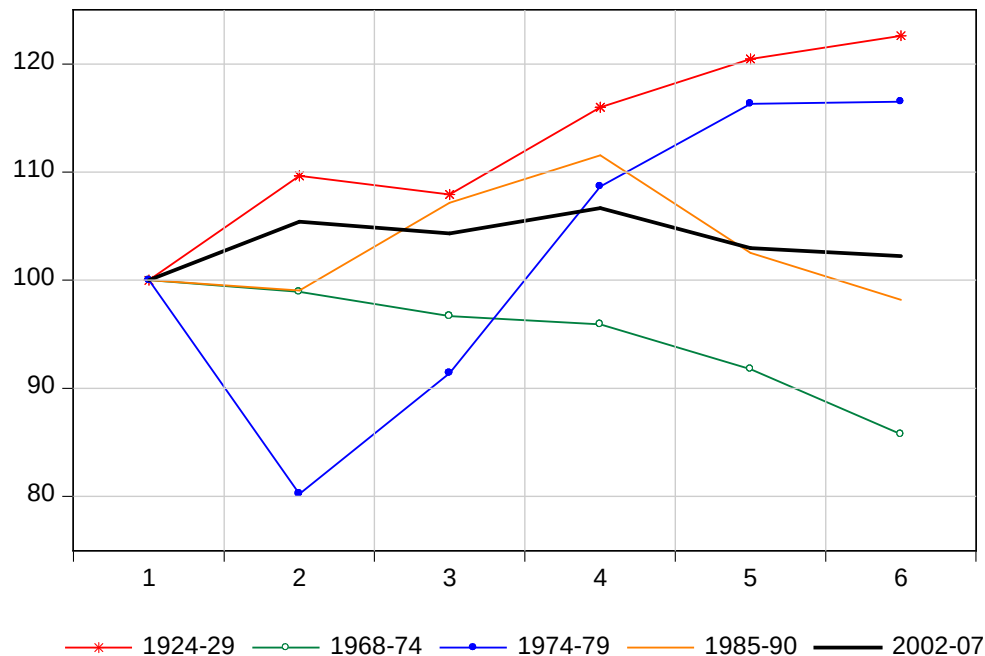
consumption estimates are among the least reliable of statistics produced in the National Accounts. A third issue is whether stocks of inventories (goods awaiting sale), plus semi-finished goods and work-in-progress, should be included as part of the means of production. These are very variable within a business cycle, and in comparison across cycles should probably be excluded, but the issue is debatable. And a fourth issue is whether the means of production should include residential housing (an enormous stock of assets); most economists agree that the fixed capital stock should be confined to equipment, software and industrial structures.

Consider now the numerator of the rate of profit, that is, total profit. Since everything that is not wages has to come out of profits one way or another, the most general definition of profit is the value of net output produced in the economy as a whole less total wages paid out. Or at the other extreme, one can consider the post-tax retained profits of nonfinancial corporations (since, together with borrowing, this is the source of investment). The breadth of the measure of profit chosen will also determine the coverage of the fixed assets in the denominator. The most general definition of profit will require an economy-wide definition of the fixed capital stock. At the other extreme, the post-tax retained profits of nonfinancial corporations will require that only the fixed capital stock of those nonfinancial corporations is included (but even then a decision is required as to whether to include in these corporations the very profitable operations of companies drilling for oil and gas in the North Sea). It should be clear from this discussion that *any* empirical measure of the rate of profit is likely to excite controversy, for there are very many possible measures.

Define the rate of profit then as follows. The numerator is GDP less capital consumption (valued at replacement cost) less compensation of employees less an estimated wage component of mixed (self-employed) income. The denominator is economy-wide

equipment, software and industrial structures, valued at replacement cost, excluding both residential housing and stocks and work-in-progress. This definition approximates the rate of

Figure 5. Rates of Profit Preceding Five Recessions



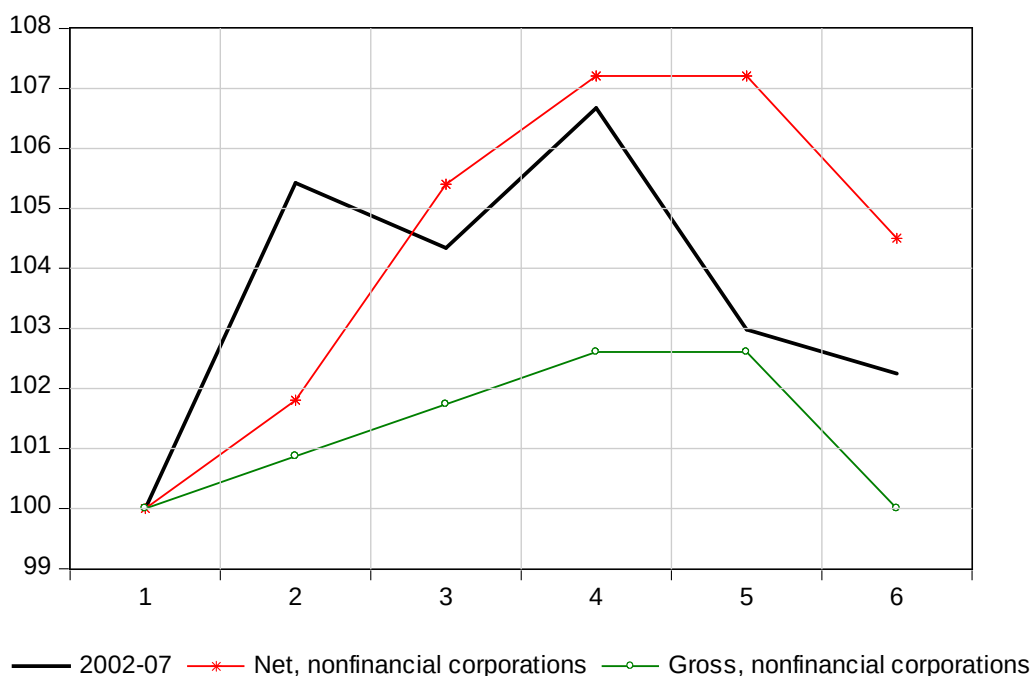
profit for the economy as a whole, and is depicted in Figure 5 over the six years prior to the onset of crisis, for the five recessions already outlined in Figures 1-4.

It is easy to see from Figure 5 that the last years of the ‘golden age’ (the run-up to the recession beginning in 1974) were indeed characterised by a falling rate of profit. In 1968 (year 1) it was 15.4%, and it fell to 13.2% by 1973 (year 6). It is not however obvious that this 2.2 percentage points fall over six years was sufficiently large to cause a recession. The second half of the 1980s (the run-up to the recession beginning in 1990) also saw a falling rate of profit, from 14.1% in 1988 (year 4) to 12.4% in 1990 (year 6). This was a sharper fall than that in the early 1970s, but as Figures 1-4 show, the recession of the early 1990s was not in fact a severe one by historical standards. Apart from these recessions beginning in 1974 and 1990, no other recession was preceded by a falling rate of profit. The second half of the 1970s and the second half of the 1920s both saw sharply rising rates of profit, and over the

period 2002-07 the rate of profit was essentially flat: 15.5% in 2002 (year 1), rising to 16.5% by 2005 (year 4) and falling to 15.8% by 2007 (year 6). So prior to the two most severe peacetime recessions, the rate of profit for the economy as a whole was either rising (to 1929) or was flat (to 2007). The empirical evidence for a falling profit rate as the cause of severe recession is just not there.

It might be argued that this profit rate is not appropriate. Here one should be careful, because it is important to distinguish argument (this profit rate might not be appropriate because corporate decisions on the basis of corporate profits drive investment) from metaphysics (since the rate of profit must fall, the empirical evidence is wrong). So consider directly the profit rate of nonfinancial corporations. For the period 2002-07, Figure 6 reproduces the 2002-07 graph from Figure 5 (with a magnified vertical scale), and also shows the profit rate for nonfinancial corporations, both net (allowing for capital consumption, so directly comparable with the 2002-07 graph from Figure 5) and gross (making no allowance for capital consumption). Again each series is indexed to 100 in year 1.

Figure 6. Rates of Profit Preceding the 2007 Crisis



There is indeed a fall in the (gross and net) rate of profit for nonfinancial corporations from 2006 (year 5) to 2007 (year 6), but it is very small; the net rate fell from 11.9% to 11.6%, and the gross rate fell from 11.8% to 11.5%. It is difficult to imagine how, or to believe that, falls of such small magnitude could have triggered a recession of the severity depicted in Figures 1-4.

In sum, over-accumulation, manifested as a falling rate of profit, theoretically requires rising real wages. If real wages are constant and technical progress is LSMPU, then the rate of profit cannot fall. But real wages over the long run have of course risen. Yet empirically such rises have not been such as to cause a significantly falling rate of profit. It is just not the case empirically that there were significant downward profitability pressures in the years preceding the five recessions under review.

## **ii) Under-consumption**

The alternative theory of crisis in the Marxist tradition runs in terms of ‘under-consumption’: capitalism is a system characterised by structural deficiencies in aggregate demand that periodically generate crisis (when what is used to remedy the deficiency fails in some way). The general idea is that total demand is constrained. Working class consumption demand is structurally limited because workers are only paid an equivalent in wages of a part of the net product; capitalist consumption demand (for all the conspicuous private jets, yachts, luxury houses and so on) is limited by the competitive necessity of devoting resources to investment in order that accumulation proceed. But investment demand is also restricted. For the demand for means of production by the consumption goods sector is constrained by constrained overall consumption good demand, so that there is a tendency for the potential output of the means of production producing sector to exceed the demand for means of production. Under-consumption and disproportionality are thus two sides of the same coin:

aggregate demand falls short of the realisation necessary for crisis-free growth of the economy.

The most famous account historically in this vein is that of Rosa Luxemburg, who tried to show that the conquest and exploitation of foreign markets was a response to intrinsically weak demand at home. For her, imperialism was founded on the attempt to colonise external markets in order that the excess domestic production could be realised. Her account is generally recognised to be flawed, in that there is no specification of how and why these external (initially non-capitalist) markets overseas have the resource to realise the surplus production of the imperialist countries. To argue that these external markets supply labour-power and raw materials to the imperialist countries is no answer, because that merely adds the same amount to the value of the imperialist commodities produced as it does to the demand for them, so that the realisation problem remains.

As well as Rosa Luxemburg's, there are other well-rehearsed accounts of the way in which the system might cope with a shortfall of aggregate demand relative to the output produced. One focus is on a reduction of potential output through monopoly tending to replace price competition and hence eroding the impetus for innovation. However, it must be conceded that this idea of progression from competitive capitalism to monopoly capitalism (and even to state-monopoly capitalism) sits very uneasily with any realistic description of the market processes of the contemporary era of neoliberalism. Another focus is on 'artificial' increases in demand. This might be through socially useless arms expenditures; and/or it might include the expansion of other forms of 'waste' (planned obsolescence of consumer goods, a bloated advertising sector extolling minor variations in product as must-have goods, and so on). But the extra necessary expenditure does not have to be on wasteful or socially useless activities. In a similar manner to a focus on arms expenditures, one might consider

more generally the expansion of state activities, particularly welfare state expenditures on health and education, boosting the 'social wage' and hence demand.

This last point suggests that none of these approaches to under-consumption is very different from a radical Keynesian (or post-Keynesian) approach. For if the fundamental problem is a lack of demand, the obvious remedy is to boost demand using state expenditures. Of course, it might be objected that the state is not a neutral instrument that can mediate class conflict and act in the interests of all. But profitability is very sensitive to demand, rising when demand increases and falling sharply with decreases in demand; since employment too moves in the same direction, then it is not obvious why a capitalist state does not move to increase demand in the face of demand deficiency. This is sometimes approached in contemporary literature in the following way. An increase in aggregate demand will increase employment, and this tightening of the labour market will tend to raise wages. But rising wages are both a source of extra demand and an extra cost of production. Extra demand will boost profits; extra cost will reduce them. If the former effect proves quantitatively more significant, then the economy is 'wage-led', and if the latter, then the economy is 'profit-led'. But while this distinction might be politically important in devising policies which might mitigate tendencies towards under-consumption, it does not address the issue of what causes crisis as a sharp, sudden shock and its immediate consequences.

### **iii) From under-consumption to financialisation**

Under-consumption is better characterised as a theory of secular stagnation (together with an account of policies that might be advocated to boost aggregate demand), rather than a theory of crisis. It is the imbalances entailed by under-consumption that cause a crisis. Consider again the imbalance between aggregate demand on the one hand and what is necessary to be realised in order to ensure crisis-free growth on the other. Implicitly, the presumption of inadequate demand has assumed that current production has to be financed



from past sales revenues. But now suppose it is possible to borrow, such that current production can be financed out of presumed future sales revenues. This suggests that credit might fill the gap between demand and output. And once one starts to think of credit as financing current production, one can think also of aggregate demand as deriving both from incomes earned in past production and from borrowing in credit markets. That is, financial markets, which deal with the future, deserve rather more attention.

This theoretical point can be buttressed by the empirical observation that the two worst peace-time recessions of the last 100 years were preceded by a financial crisis, in the autumn of 1929 in the US stock market (the Wall Street crash), and in the summer of 2007 in the market for commercial paper (short term corporate debt) and then spreading more generally across wholesale money markets over the following year. Marxism has traditionally seen finance as a veil over the real economy, so that problems in finance are interpreted as reflections of problems in the real economy. Perhaps there was some warrant for this in Marx's day, since the main credit instrument in financial markets was the bill of exchange, and bills of exchange were used directly to finance production. But in contemporary financial markets, there is much more going on than the centralisation of large quantities of small savings to make available large quantities of credit to corporations to finance industrial projects.

In the last few years, contemporary work in Marxist political economy has begun to grapple with these issues, prompted by the necessity of jointly explaining the growth in debt in the household sector, shareholder value in the corporate sector and (more recently) sovereign debt in the state sector, or in sum, the growth in the importance of the financial sector. For example, if inadequate demand constrains the growth of potential output so that it is increasingly difficult to find profitable outlets for investment in the real economy, then investment managers might turn their attention to the financial economy, with subsequent

asset-price rises and bubbles also serving to stimulate demand (Foster and Magdoff 2009). Alternatively, asset bubbles increase demand, via debt-financed consumer spending, beyond normal levels such that more productive capacity is created, and when the asset bubble bursts the over-investment relative to more normal demand levels makes itself felt (Kotz 2015, but see also Bakir and Campbell 2015).

A different approach focuses on income distribution. While the typical progressive approach to income distribution has been to focus on the damaging effects of unbridled capitalism to living standards in the bottom half of the income distribution, more recent work has begun to emphasise the importance of what has been happening (particularly in the US and the UK) at the top of the income distribution (Stockhammer 2015, Mohun in Subasat 2016). The huge increases in top incomes over the last thirty years or so have been a characteristic feature of the neoliberal era. Enabled by a succession of working class defeats, these enormous top incomes have been in part both a consequence of the growth of finance and a cause. They have been a consequence simply because of the enormous salaries ('compensation packages') common in finance. And they have been a cause because these enormous amounts of cash need a secure home, which they find in securities in the wholesale money markets, thereby driving the securitisation process. Securitisation is the conversion of streams of income from debts (credit card debt, auto debt, student debt and mortgage debt, but in principle could include any regular income stream) into capital assets or bonds. Developed from the mid-1980s, it has become a major defining feature of the 'financialisation of the economy' (Orhangazi 2008, Lapavitzas 2013).

These approaches all suggest the importance of a more comprehensive and nuanced approach to finance in order to renew the theory of crisis. It is not that traditional theories take no account of credit and debt. It is rather that the importance given them has not been commensurate with their importance in reality. While this is now beginning to change, there

are significant problems to overcome. For example, trading in financial markets is about trading future prospects, which means that trading risk and uncertainty are central. But a historical materialist approach to risk is conspicuous only by its absence. Secondly, asset price bubbles are not well-understood outside of a general approach that relative stability breeds confidence, and then over-confidence and euphoria, which encourages leveraged speculation, which creates bubbles, whose bursting is the crisis. This is a long way from the traditional Marxist approach to crisis, but it is difficult to deny its relevance either to the 1929 Wall Street crash or to the growing chaos in wholesale money markets from the run on commercial paper in the summer of 2007 to the collapse of Lehman Brothers a year or so later. Economists working in the Marxian tradition have a lot to do, but, encouragingly, this is increasingly being recognised in contemporary work in political economy.

## **Appendix**

The data for all Figures are calculated from the Bank of England's 'Three Centuries' dataset, version 2.2, which can be downloaded from:

<http://www.bankofengland.co.uk/research/Pages/onebank/threecenturies.aspx>.

Additionally, in Figure 6, the net and gross profit rate data for nonfinancial corporations are calculated from series LRWV (gross rate) and series LRWW (net rate), available from the Office for National Statistics, 'Profitability of UK Companies, Quarter 2 (April to June) 2015 Dataset', published 1 December 2015, and downloadable from

<http://www.ons.gov.uk/ons/datasets-and-tables/index.html>

## **Further Reading**

Apart from the works of Marx himself, two general expositions that are particularly useful are Foley (1986) and Heinrich (2005). But there is a very wide variety of competing interpretations, and there is no substitute for the interested reader making up her own mind.

## References

- Bakir, E. and A. Campbell (2015), 'Is Over-Investment the Cause of the Post-2007 US Economic Crisis?' *Review of Radical Political Economics* 47(4): 550-7
- Foley D. K. (1986), *Understanding Capital*, Cambridge Mass and London UK: Harvard University Press
- Foster, John Bellamy and Fred Magdoff. (2009), *The Great Financial Crisis: Causes and Consequences*, New York: Monthly Review Press
- Heinrich M. (2004), *An Introduction to the Three Volumes of Karl Marx's Capital*, New York: Monthly Review Press
- Kotz D. M. (2015), *The Rise and Fall of Neoliberal Capitalism*, Cambridge Mass and London UK: Harvard University Press
- Lapavistas C. (2013), *Profiting Without Producing*, London and New York: Verso
- Mohun S. (2016), 'Inequality, Money Markets and Crisis'. In Subasat (2016)
- Orhangazi O. (2008), *Financialization and the U.S. Economy*. Cheltenham, UK, and Northampton, USA: Edward Elgar
- Roemer J. (1981), *Analytical Foundations of Marxian Economic Theory*, Cambridge: Cambridge University Press
- Stockhammer E. (2015), 'Rising inequality as a cause of the present crisis', *Cambridge Journal of Economics* 39(3): 935-58.
- Subasat, T. (2016), *The Great Financial Meltdown: Systemic, Conjunctural or Policy-Created?* Cheltenham, UK, and Northampton, USA: Edward Elgar