

Profit Trends and Investment Levels amongst Developed Economies

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Investment levels have fallen amongst developed economies, whilst there has also been a secular shift in income shares with a rising capital/falling labour share since the 1980s. In various accounts low investment levels have been explained in terms of falling profit rates, despite the shift towards profits shares. A range of authors have claimed that the general rise in capital's share, though, has not led to a trend increase in profit rates; rather it has been claimed that the secular profit rate trend has been downwards. Whilst *ceteris paribus* one would expect profit shares and rates to move together, this depends on capital-output ratios and relative price movements. Centrally proponents of the hypothesis of declining profit rates claim that aggregate profit figures obscure key sectoral trends – before the current crisis at least, financialisation had led to relatively high aggregate profit rates in the financial sector whilst there were claimed to be key differences between profit rates trends between tradable and non-tradable sectors. Aggregate figures have, it has been argued, obscured divergent trends between buoyant profitability in sheltered sectors whereas profitability has been eroded in tradable sectors by rising international competition generally and increased competition from emerging market economies in particular. These claimed trends in profit rates may be of particular importance in explaining the emergence in the 2000s of surpluses in the corporate sector of developed economies.

Recent analysis of profitability trends has concentrated almost exclusively on the US case. This paper extends work across developed economies to examine profitability trends and how these have affected profit rates. It views this in relation to particularly to response to past levels of corporate indebtedness and has implications for the viability of post-crisis macroeconomic strategies reliant on a sustained recovery in private investment.

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1. Introduction

Since the 1980s profit shares appear to have risen across developed economies accompanied by, on some measures at least, a recovery in profit rates. Yet despite an apparent recovery in profitability and falling (base) interest rates from the 1990s investment has remained sluggish in many developed economies even before the global financial crisis (GFC). Further, the non-financial corporate sector becoming a net saver over the 2000s in a range of developed countries. This phenomenon has been increasingly noted in some academic and policy circles, and even amongst wider commentators¹. A variety of explanations have been proposed in the literature, which are explored below.

Generically explanations here either posit that this apparent recovery in profitability is illusory, or that there has been a regime change in the relationship between profitability and investment associated with financialisation. In some accounts claims of a recovery in profitability are dismissed *tout court*; alternatively some accounts claim the apparent aggregate recovery conceals key sectoral differences and in practice is driven by recoveries in sheltered sectors and/or the special case of the finance sector. For example, recent analysis by the US Council of Economic Advisers (2016) finds that market power has risen and competition has fallen in key sectors; this provides a possible explanation for rising profitability with sluggish output.

The *CJE* has long been concerned with the determinants of profitability and the nature of the link between profitability and investment profitability and investment (e.g. Glyn, 1997). Much of the detailed work here, though, has focused on the US case, and this study broadens out the focus here. From classical economics onwards, it has been proposed that in the long run profit rates would be expected to equalise between sectors (e.g. Dumenil and Levy, 1987). Of course this is proposed as a long run phenomenon; differentials would be expected to arise and provide incentives for inter-sectoral shifts in investment funds. Nevertheless, in general sectoral profit differentials would not be expected to persist.

2. Profitability Trends

Earlier analysis pointed to declines in profitability at the end of the post-war boom leading to a profit squeeze from the late 1960s in terms of both profit rates and the share of profits in national income (e.g. Chan-Lee and Sutch, 1985). This decline in profitability was strongly associated with a decline in private business investment (Glyn, 1997). From the mid-1980s the wage share in national income appears to have fallen, a trend initially documented for Western European economies, which has now been widely documented for the US, the UK and across developed and emerging economies.² A variety of explanations have been advanced have been proposed to explain this trend in terms of labour-augmenting technical change and falling real capital prices; further, some accounts have noted an apparent disconnect emerging between productivity and real wage growth – whilst historically productivity has driven real wage growth institutional declines in labour bargaining power and trade openness and capital mobility have acted to undermine this (Jayadev, 2007; Judzik and Sala, 2013; Guscina, 2006; Stockhammer, 2015), as well as institutional changes in respect of labour bargaining. The effective expansion in the global labour force from the 2000s in particular led to a rise in profit rates across major economies (Daly and Broadbent, 2009).

For profit shares, a break point around 1985 appears common (Ellis and Smith, 2007). The widely used Ameco database indicates recoveries in profits shares and, to varying degrees, profit rates from the mid-1980s. These estimates have been seen as broadly reliable at least in

terms of country trends over time, if less so in terms of direct cross-country comparisons (cf. ECB, 2004; Ellis and Smith, 2007), although there remain significant caveats concerning treatment of self-employed income (cf. Pionnier and Guidetti, 2015), and estimates of capital stock. Although *ceteris paribus* a rising capital share would be expected to lead to rising profit rates (absent offsetting movements in capital productivity), and headline figures do indicate significant recoveries in profit rates since the 1980s, the lack of recovery of investment raises questions over this. In practice changes in profit rates on Ameco data (net returns on net capital stock) are driven by changes in capital shares, as there is little change in capital-output ratios recorded for these economies in the database. Furthermore, these are whole economy figures and thus do not lend themselves to examining sectoral trends.

Although it has received much attention recently, limited investment recovery despite rising had been noted from the 1990s (Andersen *et al.*, 1999; Glyn, 1997; Hein and Kramer, 1997); Andersen *et al.* (1999), in particular, found that adjustment towards equilibrium capital stock was very sluggish with a number of European economies appearing to operate with sub-optimal capital stocks.

Much of the more detailed work on profitability trends and investment has concentrated on the US case. Wolff (2003) found evidence for a recovery of profitability in the US from the 1980s so that by the late 1990s rates were comparable to the 1960s peaks; this was driven by rises in the capital share and sectoral shifts. Mohun (2009) also found evidence of rising capital productivity from the early 1980s; the 1990s in particular saw the application of new information and communication technologies (ICTs) in the US economy that would have been expected to raise capital productivity.

Other evidence indicates limits to recovery in US profitability. Basu and Vasudevan (2013) find that US profitability declined in the post-war period to the early 1980s, with either no trends or some evidence of recovery since. However, whilst capital productivity did appear to rise during the 1990s ICTs boom it has fallen back since in the 2000s. Kliman and Williams (2015) in particular effectively dispute that there has been any sustained recovery in profit rates for the US once capital stocks are properly accounted for (in particular for higher depreciation rates for ICT capital³) and thus no puzzle over trends in investment rates. Somewhat related to this they also deny the financialisation thesis, considered below, in the light of these results.

Mejorado and Roman (2014) find broadly similar results for the US and, to some extent, for other developed economies too on the basis of Ameco and OECD data. Although they do find evidence for rising capital shares from the 1980s once capital productivity and capacity utilisation are properly accounted for profit rates for non-financial corporations experienced a fall in the 1970s which has not been reversed since. There is no evidence of a change in the relationship between investment and profitability – on the contrary, capital accumulation has tracked profitability closely for major developed economies in the post-war period and continues to do so. Sluggish investment thus largely reflects developments in profitability.

Although Mejorado and Roman (2014) do consider some data for developed economies, much of their evidence is for the US. Brenner (2002; 2006) advances a similar thesis for profitability trends for the G3, finding that recoveries in profitability are essentially driven by rises in profitability in non-tradable industries, with profit rates in tradable industries still squeezed by growing global competition. Arestis and Karakitsos (2010: ch. 5), amongst others, make similar claims for the US. This can be seen as consistent with other recent work for the US with evidence that recovery of profit rates is based on sector where competition has been significantly less intense (Bessen, 2016; Council of Economic Advisers, 2016; Grullon *et al.*, 2016).

Alternatively or additionally various theses concerning financialisation have been advanced. In part this is an assertion that apparent recoveries in profitability have been largely driven by rising profitability in the financial sector; more generally, it has been claimed that financialisation processes have been central to a divergence between business accumulation of financial assets and investment in fixed capital.⁴

There have been some attempts to test directly for profit rate equalisation. Shaikh (2008) examined rates of return amongst eight manufacturing industries in eight economies and for a greater range of industries within the US; in general manufacturing will be exposed to international competition, but the degree of competition may vary between industries. Key here is not just the average rate of profit, where Shaikh finds some evidence of convergence between industries, but also whether differences in marginal profit rates give rise to expected differentials in rates of growth of the capital stock between industries. Following this study, among others, Vaona (2011; 2012) found some evidence of gravitation of profit rates towards a common value, with such trends being strengthened when restricted to manufacturing industries. Oulton and Rincón-Aznar (2012) examined profitability trends for major industry branches across developed countries and also found some evidence that growth rates of capital services were positively related to sectoral rates of return

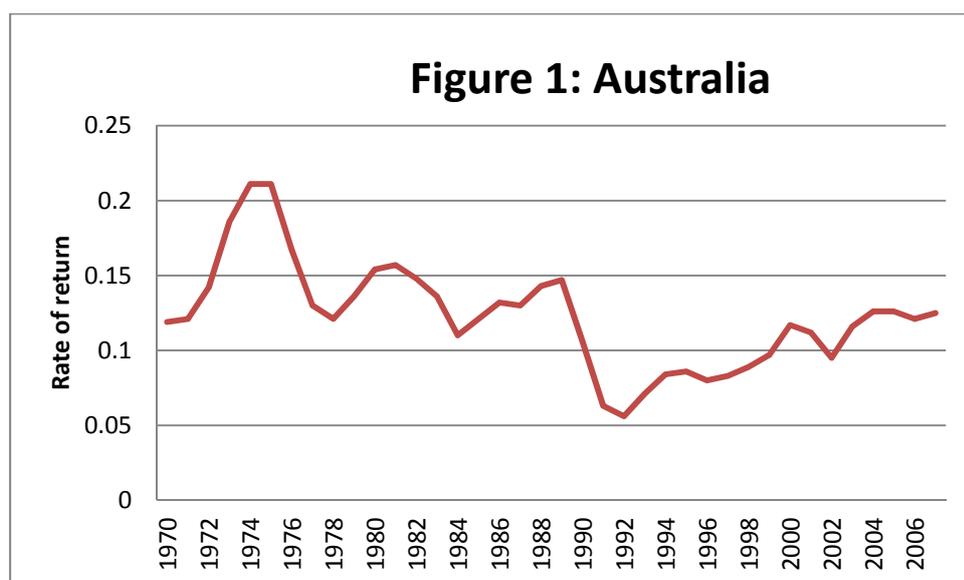
More specifically here, the profit rate differentials are widely claimed to have developed between the tradable and non-tradable sectors. Whilst there may be some plausibility that the non-tradable sector would be more protected and less competitive, it cannot simply be assumed that this is the case. Further, a persistent profit differential between tradables and non-tradables would have implications for the relative production of each and thus a country's current account position. Current account imbalances have emerged and persisted in developed economies since the 1990s, not least in the US, but persistent differentials in profitability between the two sectors can be seen as incompatible with external balance. Glyn (1997; 2007) found some evidence for manufacturing rates of return to decline relative to services amongst developed economies in the post-war period, although this might be expected anyway with structural change associated with deindustrialisation. Other evidence is less supportive: Citron and Walton (2002) found that for most developed economies profit rates were higher in manufacturing than in the services sector in the 1990s. The US was an exception to this, as was the UK but not Germany (Spain and Norway were also exceptions). Elsewhere amongst developed economies manufacturing profit rates were typically higher than in the services sector and rises in profit rates through the 1990s are due in part to rising profit rates in manufacturing; indeed in several countries the gap between manufacturing and services profit rates has widened since 1990. Citron and Walton (2002) speculate that the greater volatility facing tradables producers may lead to a higher risk premium on investment in manufacturing and hence a higher observed rate of return and find that the premium tended to be higher the more open the economy. Brenner (2002) finds evidence that for the USA particularly downward pressures on profits have been less and the non-manufacturing sector has managed to regain profit rates similar to those experienced in the Golden Age. Whilst by definition non-tradables do not face international competition, it cannot be assumed that their mark-ups and/or profit rates will be higher than in the tradables sector. Non-tradables prices do tend to rise more rapidly than tradables prices, but this would be expected from the Balassa-Samuelson effect. Very few studies have considered the role of mark-ups here: most work on the Balassa-Samuelson effect assumes perfect competition. However, he attributes these to industry-specific human capital. If firms in the non-tradables sector were persistently earning higher rates of return than in the tradables sector we would expect to see entry in response to this. Indeed Bartelsman *et al* (2005) found that for developed economies turnover rates – rates of firms entering or exiting an industry – were higher in the services sector than

for manufacturing. Given lower economies of scale this is not surprising and as such we would not expect the non-tradables sector to earn persistently higher profits. In places Brenner appears to be arguing non-tradables wages driving those in the tradables sector, as Alesina *et al* (2002) do more explicitly. Nevertheless, the Strauss (1998) finding of wage differentials between the sectors queries the strength of this.

3. Further Evidence

The following builds on the KLEMS database, rather than the Ameco and OECD databases widely used in the earlier literature. There are a number of reasons for doing so. This data set allows for sectoral estimates of rates of return and does make allowance for incomes of the self-employed (O'Mahony and Timmer, 2009). Crucially in terms of the issues raised by Kliman and Williams (2015), amongst others, these estimates explicitly distinguish between ICT and non-ICT capital, accounting for differences in depreciation rates between these types of capital. The data starts is for 1970-2007 (at most), which prevents direct comparison with golden age profitability levels, but the 1970s profitability trends relative to the golden age are fairly well established. It also precludes direct analysis of developments since the GFC.

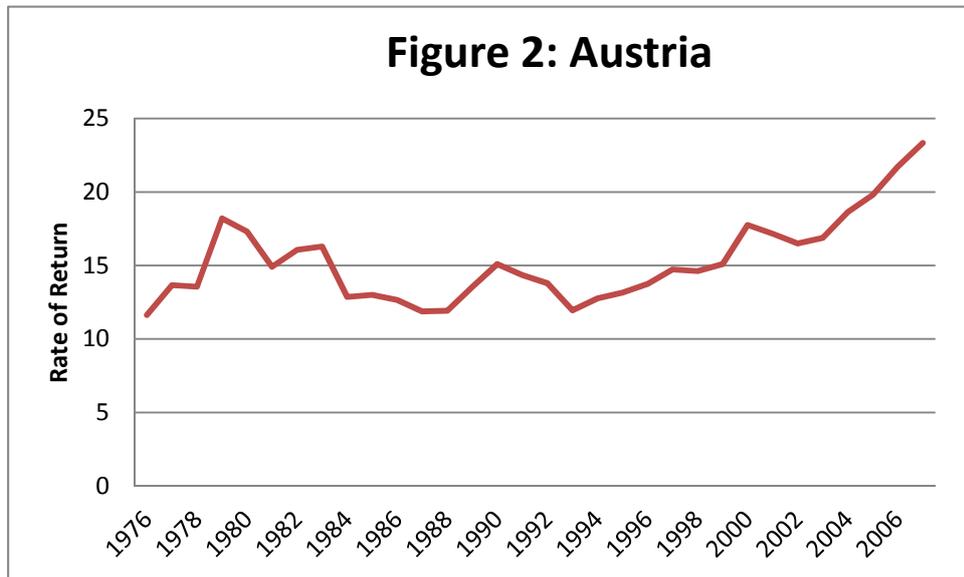
The Australian case differs somewhat from the standard trends for OECD countries in earlier studies (data here for all industries, but the financial sector profitability is not particularly high in Australia and this would not affect these trends substantially).



Elsewhere this data can be used to estimate explicitly the returns for non-financial corporations. The financialisation thesis has a number of key aspects; nevertheless, Krippner (2011, ch. 1) finds that rises in US profitability during the 2000s were largely driven by rises in financial sector profits. This can be examined more widely here; rates of return in the financial sector do appear to be very high (Oulton and Rincón-Aznar, 2012).

The Austrian case appears to show developments more consistent with expectations of profitability recovery – weakening profitability in the 1980s saw some recovery through the 1990s and into 2000s. However, this should be seen in context – it is only at the end of the period that Austrian rates of return appear to pass earlier peaks on this data; although this is

not directly comparable to earlier figures, other evidence indicates that Austrian profit rates in the 1970s were substantially below their highest levels during the post-war golden age.



More results to follow

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¹ See, for example, Rana Foroohar, ‘American capitalism’s great crisis’, *Time*, May 12, 2016.

² For US see Elsby *et al.* (2013) and Lawrence (2015); for the UK see Haldane (2015); more generally see Ellis and Smith (2007), Guscina (2006), ILO/OECD (2015), Karabarbounis and Neiman (2014), OECD (2012), Rodriguez and Jayadev (2010), and Stockhammer (2015).

³ Although Glyn (1997) notes that with estimates of net returns on net capital stock any errors in depreciation estimates may be partly offsetting.

⁴ See *inter alia*: Hein, (2012; 2015), Hein and van Treeck (2010), Krippner (2011), Lapavitsas (2013), Orhangazi (2008), Skott and Ryoo (2008), and Stockhammer (2004, 2005/06).