briefing notes

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THE INSTITUTE FOR FISCAL STUDIES
Briefing Note No. 18

Published by
The Institute for Fiscal Studies
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www.ifs.org.uk

ISBN 1-903274-19-2

Published online at http://www.ifs.org.uk

UK Investment: High, Low, Rising, Falling?

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The Chancellor of the Exchequer has claimed recently that 'business investment ... as a share of our economy' is 'over 14 per cent, higher than at any time in forty years' (Budget Speech, 7 March 2001). The Treasury has published a graph that appears to show that business investment as a share of GDP is now higher in the UK than in the US, France or Germany (Chart 2.3, *Productivity in the UK*, November 2000). This note examines the evidential basis for these claims, and the broader picture on investment in the UK in recent years. We conclude that, whilst business investment spending as a share of GDP has risen, it has not reached levels that are historically unprecedented in the UK or higher than current levels in the US or Germany. Broader measures of investment, which do not exclude investment by general government or investment in housing, continue to show a comparatively low level of total investment spending as a share of GDP in the UK.[1]

UK Business Investment as a Share of GDP

The government has given considerable prominence to a measure of 'business investment' as a share of GDP. Business sector investment excludes investment in residential construction and investment by general government (that is, by central government and local authorities) but includes investment by public corporations[2] as well as investment by the private sector in assets other than dwellings. Let us initially postpone any concerns about this particular definition of investment, and simply ask whether business investment spending as a share of GDP has indeed risen to record high levels in the UK.

Recent ONS figures report that total business investment in 2000 was £114,886m.[3] Gross domestic product at market prices in 2000 was £934,618m.[4] Business

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[1] All the measures of investment we consider in this Briefing Note are gross of depreciation or 'capital consumption'. Estimates of depreciation and hence net investment are generally not comparable across countries.

[2] The main exception concerns investment by NHS Trusts, which is excluded from business sector investment by the Office for National Statistics (ONS) to maintain comparability with earlier years, when NHS investment was classified as part of the general government sector.

[3] *Monthly Digest of Statistics*, March 2001, Table 1.12. This is the figure for business investment in current prices, which measures the amount actually spent on business investment in 2000.

[4] *Monthly Digest of Statistics*, March 2001, Table 1.1. Similarly this is the figure for GDP at current market prices, which measures the actual value of GDP in 2000.

investment as a share of GDP was therefore 12.3 per cent during this period. The same figure for 1999 was 12.4 per cent, whilst in 1989 this ratio was 14.1 per cent.[5]

How, then, can the Chancellor claim that this share is now 'over 14 per cent, higher than at any time in forty years'? The resolution appears to be as follows. The figure of 12.3 per cent calculated above is the answer to the simple question: '*what share of GDP was spent on business investment last year?*'. However, a little over 14 per cent is the correct answer to a different and hypothetical question: '*what share of GDP would the business sector have had to spend on investment in order to buy the capital goods that were actually purchased last year, if firms had been obliged to buy those capital goods not at the prices they faced last year, but rather at the real prices of capital goods that were observed in 1995?*'.

This hypothetical question produces a much higher figure for business investment as a share of GDP, because the real price of investment goods has fallen substantially since 1995. ONS figures suggest that the price of investment goods purchased by the business sector has *fallen* by 1.1 per cent since 1995, whilst the GDP deflator has risen by 14.0 per cent, implying a real price fall of about 15 per cent.[6] This real price fall should be familiar to anyone who has followed the price of computers over this period. There is no doubt that a substantial fall in the real price of capital goods has occurred. Thus, if firms had indeed bought the same capital goods they bought last year at the higher real prices prevailing in 1995, they would have had to spend substantially more money.

Whether we look at business investment in current prices as a share of GDP in current prices, or whether we look at business investment in 1995 prices as a share of GDP in 1995 prices, therefore makes a substantial difference to the apparent growth in business investment as a share of GDP over the last two decades, and especially in the period after 1995. These two series are plotted in Figure 1.[7] The ratio measured in current prices shows the share of GDP that was actually spent on business investment in each year. This series has fluctuated with the business cycle, but shows no discernible long-term trend. The ratio measured in constant 1995 prices shows the share of GDP that would have been spent in each year, if the same capital goods had been purchased at their real price in 1995. This series trends upwards, reflecting the fall in the real price of capital goods over the period. Neither series is 'right' and neither series is 'wrong' – each provides the correct answer to a question, but the questions are different.

Nevertheless, the case for the Chancellor's exclusive emphasis on the constant price series is not compelling. When firms bought capital goods last year, they did not actually buy these capital goods at their 1995 real prices, and they did not actually invest the higher notional amount that this calculation implies.[8] Nor is it at all clear that firms would have chosen to buy the same capital goods if they had in fact faced

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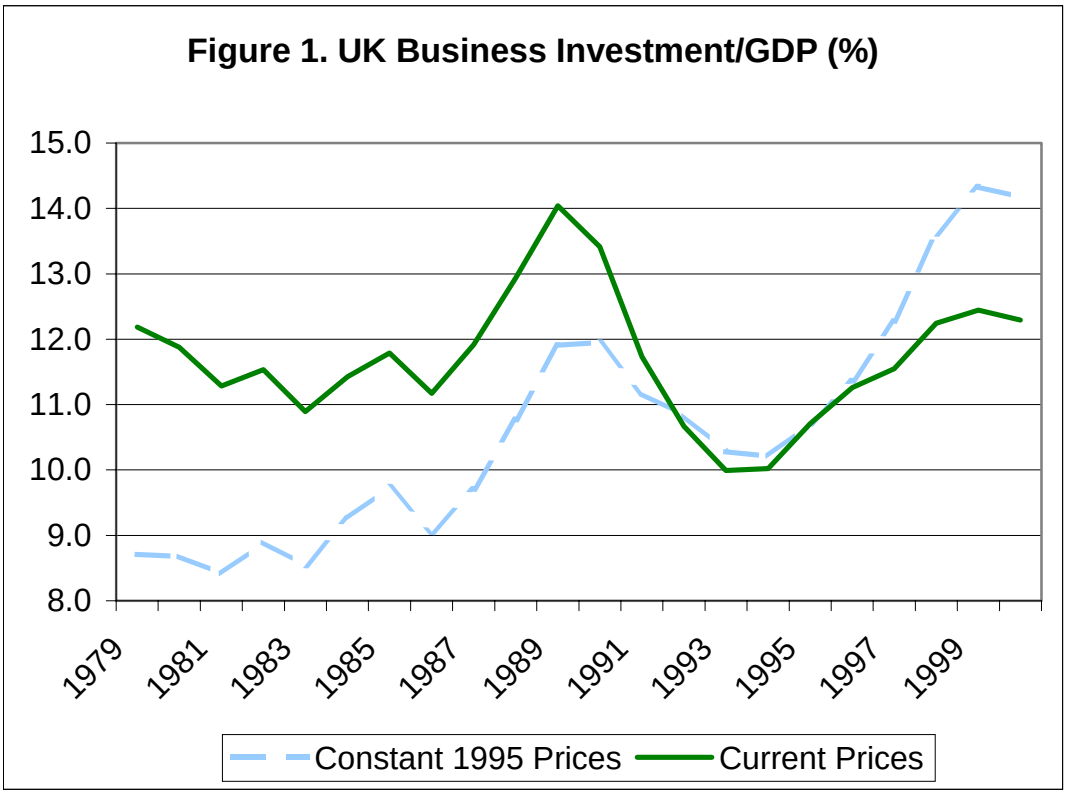
[5] *Economic Trends Annual Supplement*, 2000 edition, Tables 1.3 and 1.8.

[6] *Monthly Digest of Statistics*, March 2001, Tables 1.1, 1.11 and 1.12.

[7] Figures for 1979–99 are from *OECD Economic Outlook*, volume 68, December 2000. Figures for 2000 are from *Monthly Digest of Statistics*, March 2001.

[8] If we take the reference year back further, we can make business investment appear even higher as a constant price share of GDP. For example, at constant 1987 prices, the figure for 2000 becomes 16.7 per cent of GDP. If we go back far enough to measure relative prices, then buying the computer on which this Briefing Note was typed would have cost an enormous share of GDP.



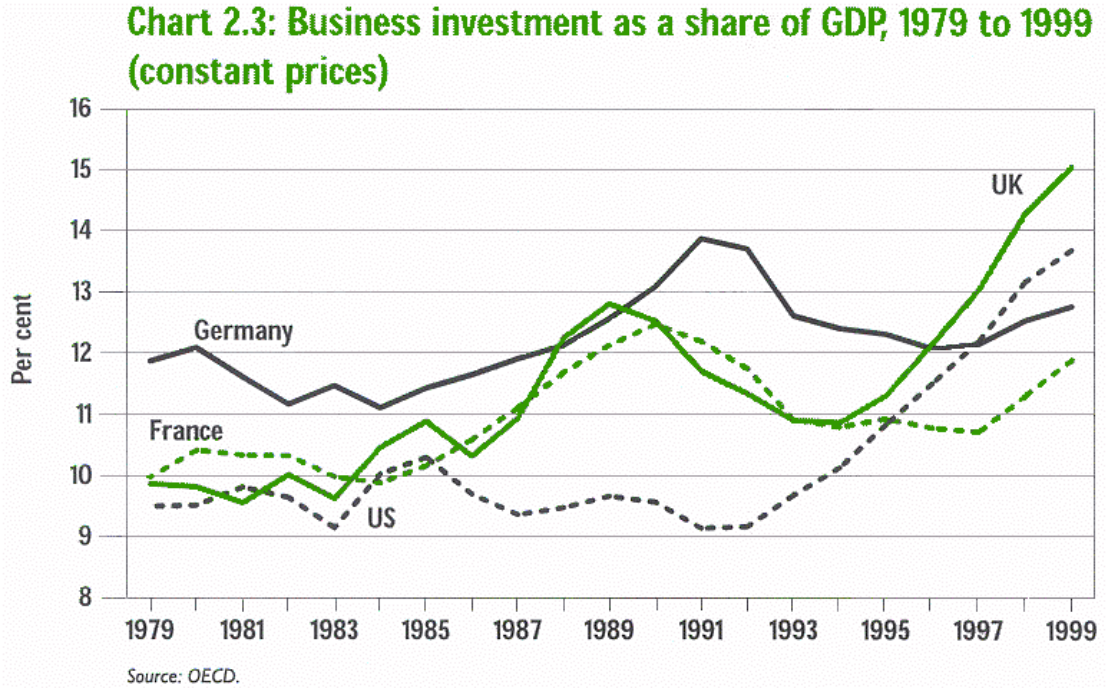
the much higher real prices that prevailed in 1995. The share of GDP that was actually spent on business investment last year was 12.3 per cent. This share is higher than the 11.5 per cent of GDP that was actually spent on business investment in 1997, but much lower than the 14.1 per cent of GDP that was actually spent on business investment in 1989. The government's assertion that business investment as a share of GDP is at record high levels is not unambiguously correct.

This is not to suggest that the developments in the real price of investment goods are irrelevant. It is pertinent to point out that 12.3 per cent of GDP spent on business investment last year purchased more or better capital than the same share of GDP spent on business investment in earlier years would have purchased. Though, by the same token, a lower real price of investment goods means that the same volume of capital can be accumulated with a smaller reduction in consumption. It is not clear that focusing on how high business investment spending would have been, if firms had bought the same capital goods at higher prices, is the most transparent way of presenting figures for business investment as a share of GDP.

International Comparisons of Business Investment as a Share of GDP

In its November 2000 paper on *Productivity in the UK*, the Treasury published a graph that appeared to show that in 1999 business investment as a share of GDP, both measured in constant 1995 prices, was higher in the UK than in the US, Germany or France. This Chart 2.3 is reproduced here for comparison.

Careful readers will notice that the figure suggested here for UK business investment as a share of GDP in constant 1995 prices, around 15 per cent in 1999, is higher than that shown in Figure 1. There is an anomaly in the UK series presented in this chart,



Reproduced from *Productivity in the UK: The Evidence and the Government's Appproach*, HM Treasury, November 2000

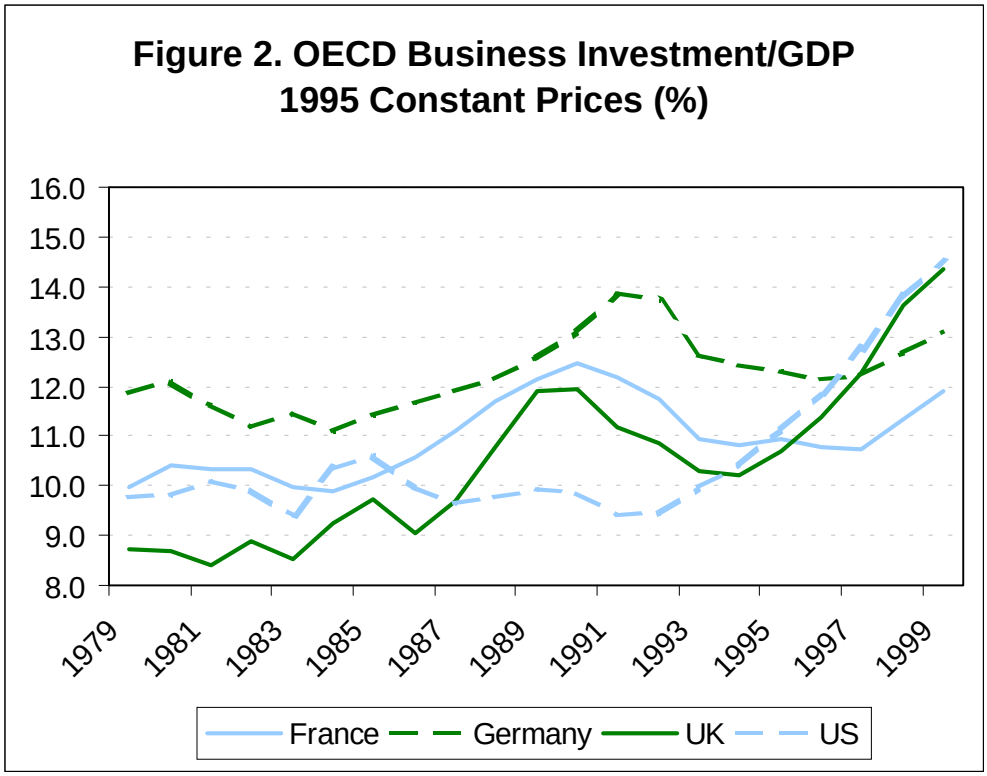
which is higher than the ONS series for business investment as a share of GDP in constant 1995 prices and also higher than the series for business investment as a share of GDP in constant 1995 prices reported in *OECD Economic Outlook*.[9] We understand that investment by NHS Trusts and certain transaction costs associated with buying and selling land and buildings have been included as part of business sector investment in the Treasury's Chart 2.3 series but are not counted as part of business sector investment in either the ONS or the *OECD Economic Outlook* definitions. The Treasury has published the standard UK series for business investment as a share of GDP, in constant 1995 prices, for example in Chart 11 of the Supplementary Material to this year's *Financial Statement and Budget Report*, and this is the basis of the 14 per cent figure quoted by the Chancellor in his Budget Speech. So far as we are aware, the government has not published this standard UK series alongside the same measure of investment in the US, Germany and France.

Figure 2 thus compares business investment as a share of GDP in these four countries, in constant 1995 prices, using the latest available data from the *OECD Economic Outlook*.[10] As can be seen, this measure of business investment as a share of GDP remains lower in the UK than in the US.

The comparisons in Chart 2.3 and Figure 2 are all presented in constant 1995 prices. As we discussed in the previous section, the fall in the real price of investment goods since 1995 tends to exaggerate the increase in these series after 1995, compared with the share of GDP that was actually spent on business investment in the most recent years. We might expect that the fall in the real price of investment goods would have

[9] The *OECD Economic Outlook* and the ONS figures for business investment are identical after 1994.

[10] This figure and all subsequent figures in the Briefing Note use data from *OECD Economic Outlook*, volume 68, December 2000.



been similar in all four countries, and that therefore this effect would not distort the comparison of investment trends across countries. However, this appears not to be the case, at least when using the different national price indices for the real price of investment goods, on which these OECD figures are based.

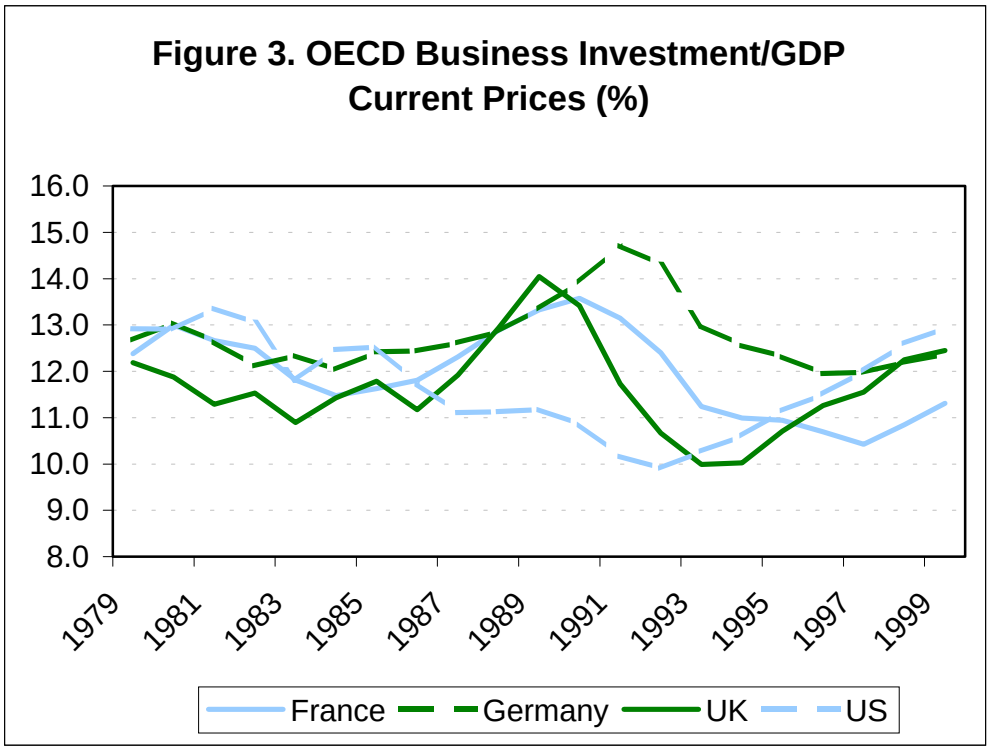


Figure 3 shows the shares of GDP actually spent on business investment, both measured in current prices, again using the most recent OECD data available. We see that in 1999, the share of GDP actually spent on business investment was higher in the UK than in France but similar to that in Germany and rather lower than that in the US. This presents a rather different picture from that suggested by Chart 2.3 of the Treasury's November 2000 paper.

In the long run, it would be surprising if the real trends in the relative price of investment goods purchased by the business sector were very different in these four countries. In the short run, they may differ as a result of exchange rate fluctuations – the strength of sterling and the dollar and the comparative weakness of the euro may help to explain why the real price of investment goods appears to have fallen further since 1995 in the UK and the US than in Germany and France. A more worrying possibility is that these different trends may also reflect different approaches of the national statistical agencies to measuring the real price of investment goods. Annex A of the Treasury's November 2000 paper correctly points out the methodological difficulties of measuring the real price of high-tech capital equipment during a period of rapid technical progress and the fact that this is not currently done in a comparable way by different national statistical agencies. This concern would appear to suggest placing less weight on the comparison across countries of business investment as a share of GDP in constant 1995 prices – which is affected by the national measures of the real price of investment goods – and more weight on the comparison across countries of the shares of GDP that were actually spent on business investment – which is not.

Broader Measures of Investment

In the preceding sections, we have focused on business sector investment as a share of GDP, in line with the emphasis in recent government publications and statements. However, in our view, there are serious concerns both with the statistical classification of investment spending to the 'business sector' and with the conceptual basis for excluding investment by general government from the measure of investment considered.

The difficulty of consistently classifying different types of investment spending to the 'business sector' has already been noted in the context of investment by NHS Trusts, and is further illustrated by the effects of the Private Finance Initiative (PFI) and Public Private Partnership (PPP) schemes in the UK. Since 1994, a significant share of capital expenditure that was previously undertaken by central and local government has been undertaken by private sector businesses under these schemes. This has the effect of transferring investment spending from the general government sector to the business sector, even if no additional capital spending occurs in total. As a result, both the ONS and OECD definitions of business sector investment will tend to be higher in the UK after 1994 than they were before.

The ONS is unable to give us exact figures on the size of this effect. Estimates of total capital spending under PFI schemes published in the annual *Financial Statement and Budget Report* suggest that the level fluctuated between £1.4bn and £3.9bn in the last three financial years. Estimates provided by the Treasury, based on more recent information, suggest that the out-turn figures have been around £1.5bn per annum in recent years. This would suggest that on a consistent basis – excluding investment under the PFI from the 'business sector' – business sector investment spending as a

share of GDP in the UK would be around 0.15–0.2 percentage points lower than the OECD and ONS figures shown in Figures 1 and 3.

The deeper issue here is why investment by general government should be excluded from our measures of investment at all. Doing so certainly introduces the problems of consistency over time discussed above and similar concerns about the comparability of these classifications across countries. This would be unavoidable if there were a clear conceptual case for distinguishing between investment done by general government and investment done by the business sector. But it is not clear that there is.

If the general government sector were investing optimally, this might suggest that the last pound spent on investment by the general government sector would be as valuable as the last pound spent on investment by the private sector or by public corporations. In this case, it would seem more appropriate to consider the total investment done by general government and business sectors, rather than attaching particular significance to the latter. If we thought that the general government sector was investing far too much, we might want to attach a lower value to investment done by general government than to investment done by the business sector. But it would seem rather extreme to give no weight at all to investment done by central and local government, which could be implied by an emphasis on comparisons of business sector investment alone. There are certainly reasons to be interested in the composition as well as the total level of investment, but the case for focusing on only one component of total investment is less clear.

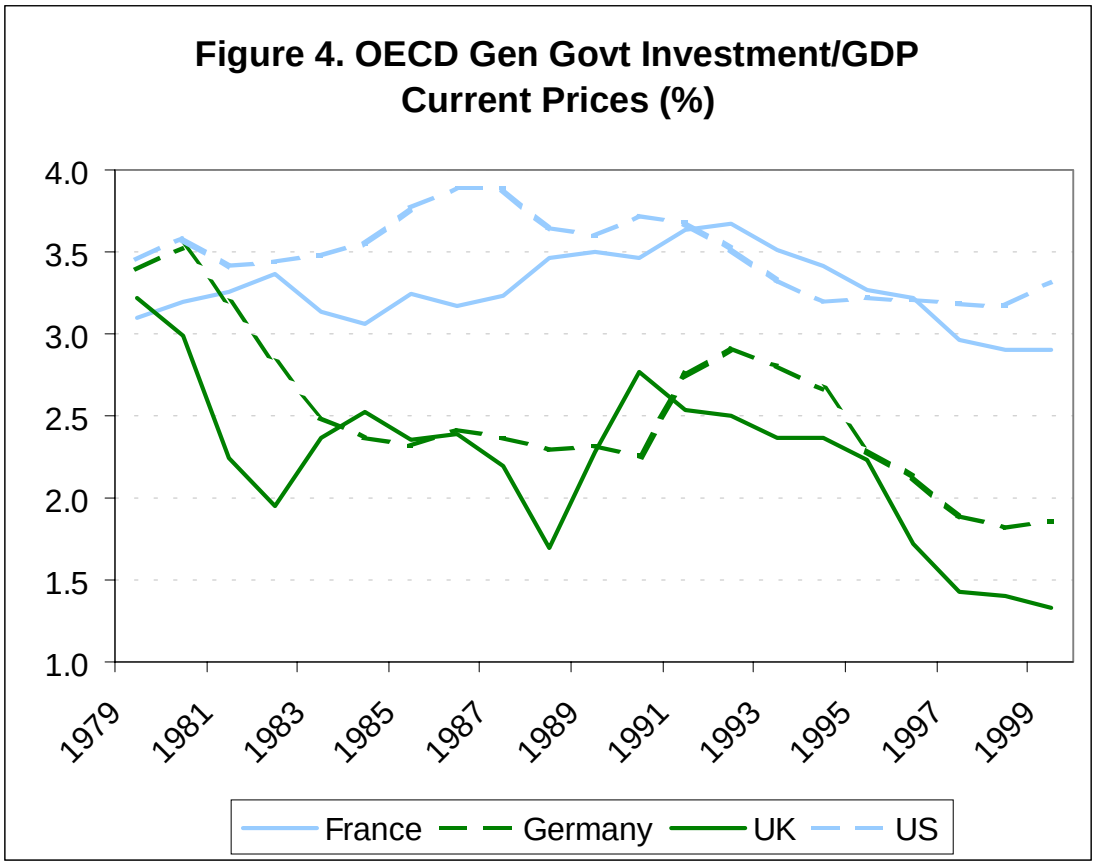
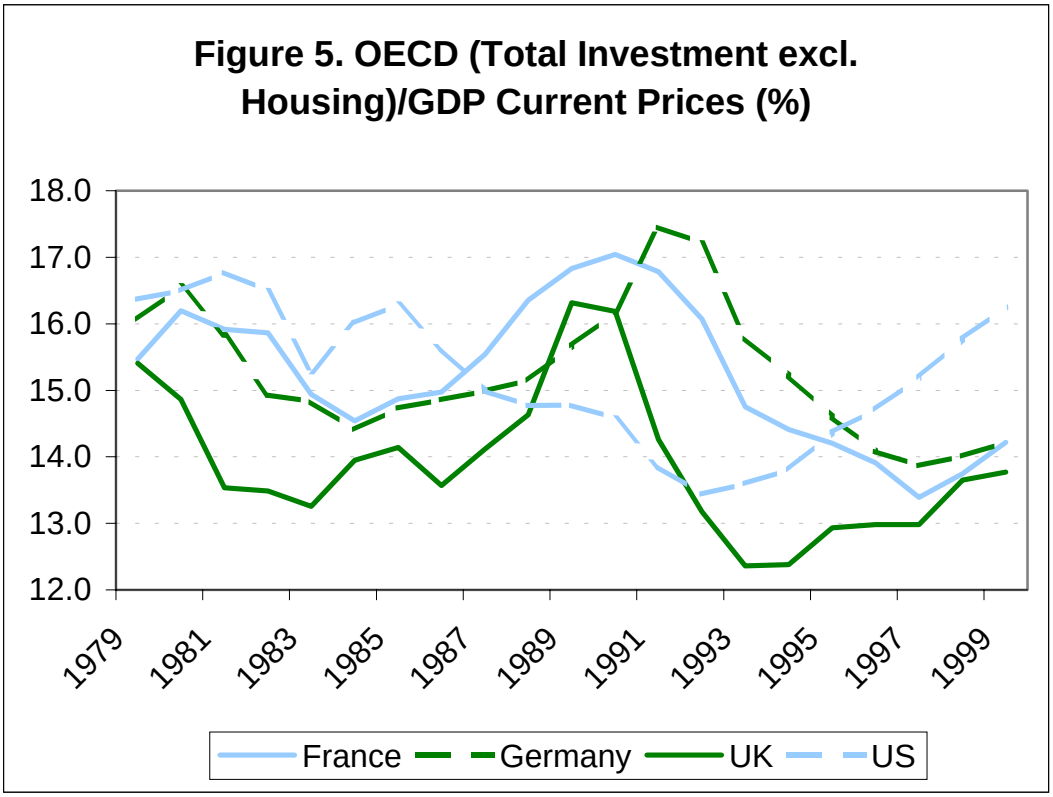


Figure 4 reports the *OECD Economic Outlook* figures for general government investment as a share of GDP, both measured in current prices, in France, Germany, the UK and the US. It can be seen that general government investment as a share of GDP in the UK has fallen to very low levels according to these figures. In part, this reflects the reclassification of investment spending under the PFI and PPP schemes. However, this is only part of the story. Even if we were to add around £1.5bn to UK general government investment in recent years, this would only increase the UK figure to around 1.5 per cent of GDP in 1999, which is still lower than figures in the other three countries.[11] It is also noteworthy that the general government sector invests a relatively high share of GDP in France – which currently has the lowest share of business sector investment in GDP among these countries according to comparisons such as those in Figure 3.

Excluding investment by general government from the measure of investment considered therefore tends to flatter the UK's position in international comparisons of investment spending as a share of GDP, whilst lowering the position of France. Figure 5 reports the latest available *OECD Economic Outlook* figures for total investment excluding housing as a share of GDP, both measured in current prices.[12] Not surprisingly, the main effect is to raise the comparative position of France and the US relative to the UK and Germany. Again we see that investment spending as a share of GDP has risen modestly in the UK in recent years, but not to levels that are exceptionally high by either historical or international standards.



[11] It should be noted that these OECD figures for 1999 pre-date the Government's Spending Review 2000, which plans significant increases in UK government investment.

[12] Total investment excluding housing corresponds to the sum of business sector and general government investment using these *OECD Economic Outlook* figures. Costs of ownership transfer for land and buildings are treated as part of housing investment in this source.

Figure 6. OECD Housing Investment/GDP
Current Prices (%)

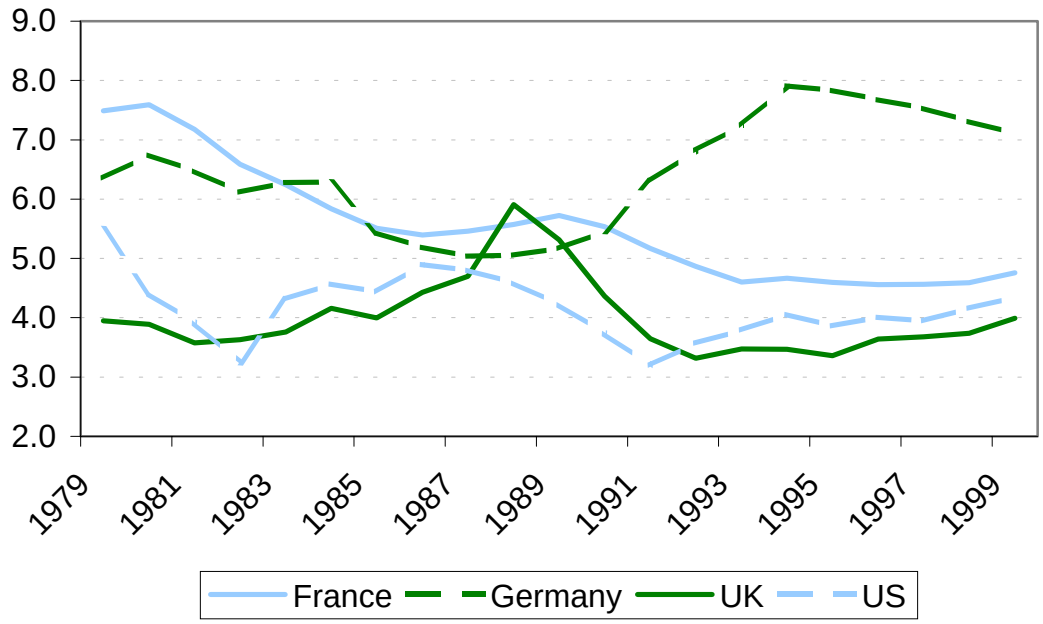
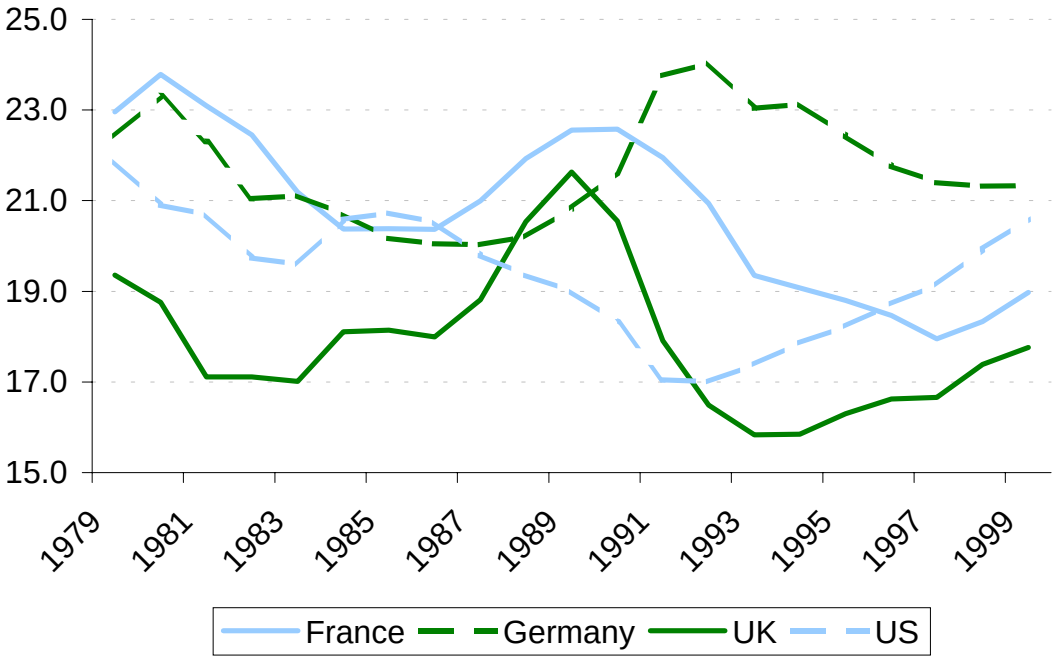


Figure 7. OECD Total Investment/GDP
Current Prices (%)



Finally, it is worth noting that housing investment as a share of GDP is also comparatively low in the UK. Figure 6 reports the latest available *OECD Economic Outlook* figures for housing investment as a share of GDP, both measured in current prices, whilst Figure 7 reports the latest available figures for total gross fixed capital formation as a share of GDP, again with both numerator and denominator of the ratio measured in current prices. Total gross fixed capital formation includes both investment by the general government sector and investment in housing. This broad measure continues to show a comparatively low level of total investment as a share of GDP in the UK, despite the modest rise in recent years. We note that the 'business sector' measures to which the government has given prominence exclude two categories of investment – investment by general government and investment in housing – in which the UK still invests a low share of its GDP by comparison with other advanced economies.

Conclusions

Whilst business investment as a share of GDP has certainly risen in the UK in the period since 1995, the share of GDP that is actually spent by the business sector on investment has not soared to record levels and is not exceptionally high compared with the US or Germany. France also has a similar level once we include general government investment in the comparison. The ratios of investment to GDP expressed in constant 1995 prices tend to exaggerate the increase in the shares of GDP that were actually spent on investment in the period after 1995. Comparisons of business sector investment as a share of GDP exclude two major categories – investment by general government and investment in housing – in which UK spending has been and still is low by comparison with the US, Germany and France. Broader measures show that investment spending has risen as a share of GDP but continues to be comparatively low as a share of GDP in the UK relative to these countries. Suggestions that there has been a sea change in the level of UK investment are difficult to reconcile with the range of available evidence.