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EXTRAS

Where Have All The Wages Gone?

*Lost pay and profits outside
financial services*



by Howard Reed and Jacob Mohun Himmelweit

Contents

About the authors	4
Acknowledgements	4
Executive summary	5
Introduction	7
1 Trends in the UK wage share	8
Definitions	8
The wage share and average income growth	10
The wage share internationally	11
2 Explaining the shift from wages to profits	13
Do the different explanations work?	15
3 Exploring the decrease in the wage share	16
The impact of increases in employer social contributions	16
Direct taxes and the wage share	17
The employment–population ratio and the wage share	18
Self-employment and mixed income	19
4 Exploring the increase in the profit share	20
The increasing importance of financial services in the profit share	20
The profit share by industry	22
5 The distributional impact of a shift from wages to profits	25
6 The macroeconomics of a declining wage share	29
The profit share, investment, and research and development	30
7 Conclusions	32
References	33

About the authors

Howard Reed is Director of the economic research consultancy Landman Economics, which specialises in complex econometric modelling work and policy analysis. His recent projects include *Where the Money Goes* (with Tim Horton of the Fabian Society), funded by the TUC and UNISON, which looked at the distributional impacts of the spending cuts announced by the coalition government in the 2010 spending review, and a previous Touchstone report *Fairness and Prosperity*, which looked at the potential for a more equal distribution of income to improve the UK's economic performance. Other recent clients for Landman Economics research include Action on Smoking and Health (ASH), Oxfam and the Welsh Government.

Jacob Mohun Himmelweit holds a BA, first class with honours, in Politics, Philosophy and Economics from the University of East Anglia and an MSc in Development Economics from SOAS, University of London, where he achieved a distinction. He is currently undertaking a research fellowship at the New Economics Foundation, where he is conducting research on reducing inequalities in the UK labour market in terms of both income and working time.

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Executive summary

This is a report about the share of wages in national income (“the wage share”) in the UK. Over the last 35 years there has been a substantial shift from wages to profits in the UK economy. Data from the Office for National Statistics show that between 1977 and 2008 the wage share fell from 59 per cent of national income to 53 per cent, while the share of profits in national income rose from 25 per cent to 29 per cent. At the same time, average (median) earnings failed to keep pace with growth in national income (as measured by gross domestic product (GDP)). If wages had kept pace with growth in overall UK output between 1980 and 2010, median annual earnings for full-time workers would now be around £7,000 higher than they actually are. The fall in the share of wages in national income accounts for just over a third of this gap, with the other two-thirds due to earnings becoming more unequal.

Taking account of increased employer National Insurance contributions and pension contributions (which form part of employee compensation in the national accounts), the fall in the wage share is even more pronounced. A comparison with other countries using data from the OECD shows that, while most countries have experienced a declining share of wages in national income over the last four decades, the decline in the wage share in the UK is particularly high by international standards.

Empirical research on the determinants of the falling wage share using cross-country panel data suggests that four different factors are responsible:

- technological change
- globalisation (increased liberalisation of product markets and increased mobility of capital across national boundaries)
- financialisation (the increased role of financial activity and rising prominence of financial institutions in national economies)
- reductions in the bargaining power of labour.

However, the relative importance of each explanatory factor is disputed. Research from the IMF and the European Commission argues that technological change is the primary determinant of the wage share, but more recent academic research that includes financialisation as an explanatory variable finds that increased role of financial activity in the economy is the most important driver of falling wage share.

Further investigation of the factors explaining the increase in the profit share over the last 30 years shows that the share of total profits accounted for by financial sector firms increased dramatically from around one per cent in the 1950s and 1960s to around 15 per cent in the years 2008 to 2010. The whole of the upward trend in the profit share over the last 30 years is attributable to the increased profitability of the financial sector. At the same time, investigation of trends in the wage share by industry show that

the overall fall in the wage share over the last three decades has largely been driven by contraction of the industries where wage share is relatively high, and expansion of industries where the wage share is relatively low, rather than falls in the wage share in individual industries. These figures underline the importance of the 'financialisation' of the UK as a driver of recent trends in the UK economy, and underline the magnitude of the task facing politicians seeking to 'rebalance' the UK economy, with a greater role for the manufacturing industry and non-financial services; over recent decades the UK economy has been heading in the opposite direction – with financial services responsible for an ever-greater proportion of operating surplus.

In terms of the distributional impact of a shift from wages to profits, our analysis of recent data from the UK Family Resources Survey (the most accurate source of survey data on incomes in the UK) shows that income from investments is distributed far more unequally than income from wages. Each pound of family income that comes from investments makes a contribution to inequality among working-age families that is four times greater than a pound of income from gross earnings. This suggests that the falling wage share is likely to be associated with an increase in income inequality. Analysis of UK data on inequality over time confirms this; during the 1980s inequality increased markedly, and the wage share fell at the same time.

Some economists have argued that an increase in the profit share is good for economic growth because increased profitability leads to additional funds for business investment. However, the data for the UK from 1975 onwards show a negative correlation between the profit share and the level of business investment. At the same time, business expenditure on research and development – a key measure of innovation (which is essential for economic growth) – has been falling as a share of GDP since the mid-1980s.

An alternative economic argument is that, because the propensity to consume out of wage income is higher than the propensity to consume out of profit income, a higher wage share should increase growth because demand increases had – hence firms increase their investments in anticipation of being able to sell extra output. This story seems consistent with recent UK evidence, and also with most cross-country empirical work on the relationship between wage share and growth, which shows a positive relationship between the wage share and increases in output.

Introduction

This is a report about the share of wages in national income (“the wage share”) in the UK. It has been widely acknowledged and discussed in previous research that the UK wage share has fallen substantially since the mid-1970s.¹ Data from the Office for National Statistics (ONS) on employee compensation as a proportion of GDP (our preferred measure of the wage share, discussed in greater detail in Chapter 1 of this report) show that the wage share averaged around 59 per cent between 1955 and 1973; climbed to 65 per cent in 1975; then fell to around 53 per cent by 2008. Meanwhile, the share of profits in national income rose from 25 per cent in 1978 to 29 per cent by 2008. This report looks in more detail at these trends in wages and profits, and asks: Why has this happened? What are the consequences for the UK economy and for individual workers?

The structure of this report is as follows. Chapter 1 uses data from the ONS National Accounts to analyse trends in the wage share over a 50-year period between the 1960s and now. Chapter 2 discusses some of the possible determinants of the falling wage share since 1975 in the UK, including technological change, the reduced bargaining power of labour, the increased power of the UK’s finance sector, and ‘globalisation’.

Chapter 3 explores the decrease in the wage share in more depth, conducting additional empirical analysis to shed some light on what the causes of the decline might be. In particular we look at whether the fall in the wage share looks bigger or smaller once employer pension contributions and direct taxes (which are included in this measure of employee compensation) are taken into account, and whether changes in the proportion of working-age people in employment can explain wage share trends. Chapter 4 does the same for the profit share, focusing in particular on the increasing share of profits accruing to the finance sector of the UK economy, and whether recent changes in the sectoral makeup of the UK economy (for example the shift from manufacturing to service industries) have affected the average profit share.

Chapter 5 looks at the difference that the falling wage share may have made to the overall distribution of incomes in the UK, using data from the UK Family Resources Survey. Income inequality in the UK is decomposed into the contribution to inequality made by different components of income (e.g. earned incomes, self-employment incomes, investments, pension income, benefits etc.) The relationship between the wage share and overall household income inequality is explored.

Chapter 6 explores the macroeconomic consequences of a declining wage share for the economy. If firms of people receiving profits are likely to hoard cash while wages are more likely to be spent, would a higher wage share drive stronger growth? Or should a lower wage share mean higher investment because there is a higher return to capital and hence more incentive to invest? Chapter 7 concludes the report.

¹ See, for example, Bailey *et al* (2011); Lansley (2011).

1 Trends in the UK wage share

Definitions

The measurement of the wage share in the UK, as for other countries, is based on national income accounting, which is a well-established framework for measuring GDP, the primary measure of economic output. The ONS publishes detailed information about the components of annual GDP using three methods – the income method, the output method and the expenditure method – in its 'Blue Book' publication each year.² Box 1 (page 9) explains how these measures are constructed.³

Figure 1a (page 10) uses ONS data to show four components of GDP at market prices between 1948 and 2010:

- the 'wage share' (compensation of employees)
- the 'profit share' (operating surplus – i.e. profits)
- 'mixed income' (income of self-employed people)
- 'taxes minus subsidies' ((taxes on production – subsidies on production) + (taxes on products – subsidies on products)).

All four of these are expressed as a percentage share of GDP. The shares add up to 100 per cent.

Figure 1b (page 10) shows just the wage share, to give a clearer indication of trends in the wage share over time.

Figure 1b shows that for almost all of the 1960s and 1970s the UK wage share was between 58 per cent and 61 per cent of GDP. The exception was the three years from 1974 to 1976 where the wage share briefly went above 62 per cent of GDP (peaking at 64.5 per cent in 1975). After 1981 the wage share declined rapidly, falling to 53.8 per cent of GDP by 1988. The end of the 1980s saw a partial recovery (to 56 per cent by 1991) and then a further decline, to a low point of 51.7 per cent in 1996. The late 1990s saw another partial recovery (to 55.3 per cent in 2001) and then a small decline through the 2000s to 53.5 per cent in 2007. The economic crash of 2008–09 and subsequent weak recovery has coincided with a slight uptick in the wage share (to 54.9 per cent in 2010). Nonetheless, it is quite clear that the average wage share in the 1980s, 1990s and 2000s was several percentage points lower than the average in the 1960s and 1970s.

² See ONS (2011).

³ For more details see Lee (2011).

The income approach to measuring GDP

The income approach to GDP sums all income generated by production activity, also known as factor incomes. This is done in three stages:

Stage 1: calculating Gross Value Added (GVA) at factor cost

GVA at factor cost is calculated by adding together three components:

- i) Compensation of employees – the sum of all employment income, including wages and salaries, employers' pension and National Insurance contributions, bonuses and benefits in kind.
- ii) Gross operating surplus – the sum of gross trading profits and income earned through the ownership of buildings (rental income).
- iii) Mixed income – income of self-employed people, which is a combination of wages and gross operating surplus, which cannot be broken down into these components in any straightforward manner.

Stage 2: from GVA at factor cost to GVA at basic prices

GVA at basic prices is calculated using the formula:

GVA at factor cost plus taxes on production minus subsidies on production equals GVA at basic prices

Stage 3: from GVA at basic prices to GDP at market prices

GDP at market prices is calculated using the formula:

GVA at factor cost plus taxes on products minus subsidies on products equals GDP at market prices

In this chapter we measure the wage share as:

(compensation of employees divided by GDP at market prices).

The behaviour of the profit share in Figure 1a is, to a large extent, the 'mirror image' of the wage share. For most of the 1960s and 1970s profits were between 22 and 26 per cent of GDP, falling to 20.6 per cent in the mid-1970s recession. In the 1980s the profit share increased to a peak of 28 per cent and in the 1990s to almost 30 per cent. Since 2003 profits have been above 27 per cent of GDP in every year.

Taxes net of subsidies as a share of GDP was stable at about 10 per cent for the 1950s and most of the 1960s before moving up to 13 per cent of GDP in 1969 and then down to around eight per cent of GDP in 1975, before stabilising at around 12 per cent of GDP in the 1980s, 1990s and 2000s.

Finally, mixed income has been between five and seven per cent of GDP almost every year since 1955, with no clear upward or downward trend between the late 1970s and 2010.

Figure 1a: UK wage and profit shares, 1948–2010

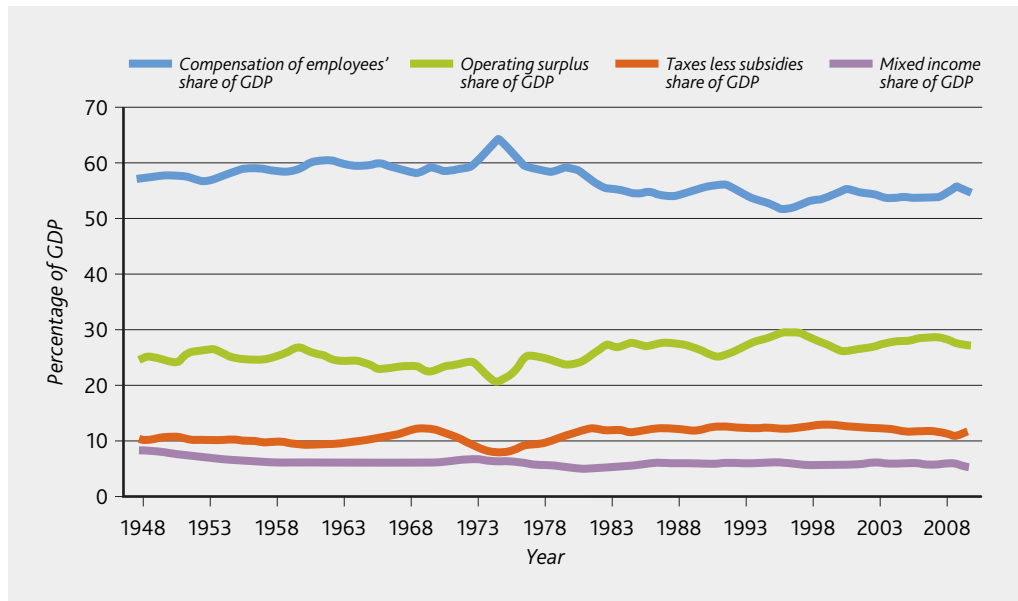
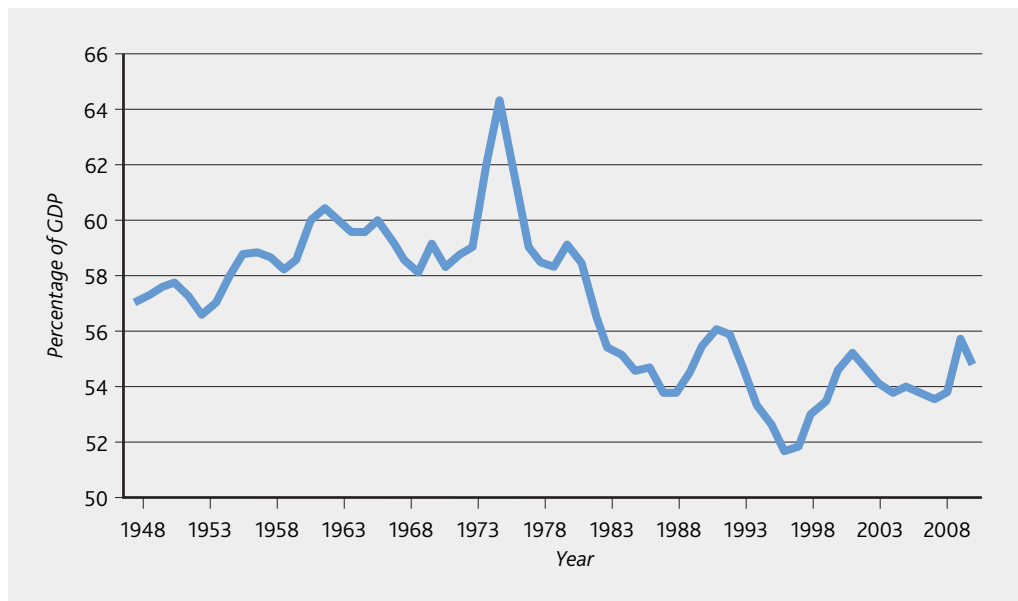


Figure 1b. A closer look at the UK wage share



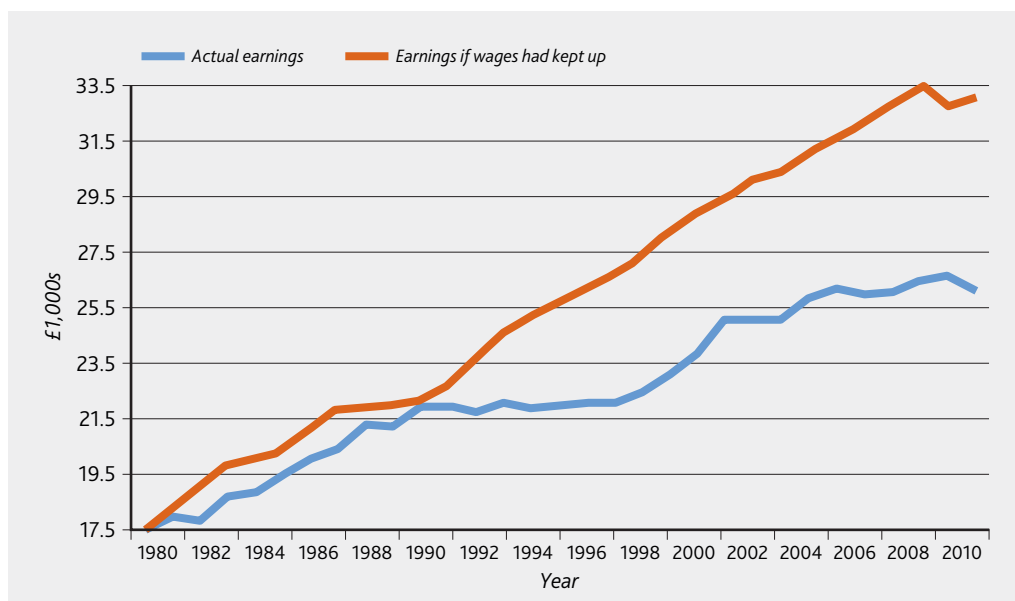
Sources: ONS Blue Book and ONS website

Notes: Statistical discrepancy (which is negligible) omitted for clarity. Mixed income series constructed as residual from other series before 1987 to ensure consistency with post-1987 data.

The wage share and average income growth

What have trends in the wage share meant for people on average earnings in the UK? Figure 2 (page 11) shows average earnings (in nominal terms) for full-time workers in the UK since 1980 (blue line) compared with what average earnings would have been if they had risen in line with GDP growth, and if the wage share hadn't fallen since 1980. Median earnings were around £7,000 (or 20 per cent) lower by 2010 than they would have been if average wages had kept pace with GDP growth and the wage share hadn't fallen. Between

Figure 2. Average earnings for full-time workers since 1980: actual earnings compared with earnings if the wage share hadn't fallen



Source: Office for National Statistics data, TUC calculations

1980 and 2010, the wage share fell from 59.2 per cent to 54.9 per cent of GDP, a fall of around 7.5 per cent.⁴ This means that just over a third of the decline in average wages relative to GDP is accounted for by the falling wage share, with the rest being accounted for by increased inequality in the dispersion of earnings.

The wage share internationally

It is instructive to compare trends in the wage share in the UK with results for other countries. In research for the Resolution Foundation, Bailey *et al* (2011) examine the wage share between 1970 and 2005 in 10 different advanced industrialised countries. Note that their analysis uses OECD statistics, which give slightly different results for the UK than the ONS data because of definitional differences. Table 1 (page 12) shows the results (we have also included, for comparison, the UK change in the wage share based on ONS data as shown in Figure 1b (page 10)).

The results show that the decline in the UK's wage share was larger than any of the countries examined in the Bailey *et al* study except for Australia. This is the case whether the OECD wage share or the ONS wage share definition is used.⁵ Six out of the ten countries featured in the study experienced falls in wage share between 1970 and 2007; only two experienced substantial increases (Japan and Denmark).

⁴ Note: this is the fall measured in per cent, not percentage points (which would be 4.3).

⁵ Note that Appendix A2 of Bailey *et al* (2011) presents an alternative set of figures using an OECD measure of the wage share, which adds self-employment income to employee compensation and looks at the combined total as a proportion of GDP. On this adjusted OECD measure the UK wage share falls by only 1 percentage point (from 72 to 71 per cent) between 1970 and 2007. The UK is the only country out of the 10 examined by the Resolution Foundation where the percentage point reduction in adjusted wage share was less than the reduction in unadjusted wage share; in all the other countries, adjusted wage share declines by the same, or more, than the unadjusted wage share. Interestingly, performing a similar adjustment to the ONS data for the UK (i.e. adding in mixed income to the wage share) does not lead to a change in the overall pattern of falling wage share, as we show in Chapter 3. This discrepancy between the OECD and ONS data for the UK remains a topic for further investigation.

Table 1: The wage share in 10 advanced economies, 1970–2007

Country	Wage share (percentage of GDP)		Change
	1970	2007	
Australia	60	53	-7.1
UK	65	60	-5.3
UK (ONS data)	59	53	-5.9
Sweden	66	61	-4.9
Canada	59	55	-3.8
Germany	59	55	-3.7
USA	64	60	-3.1
France	56	57	+0.9
Finland	55	56	+1.0
Denmark	59	65	+6.1
Japan	41	49	+8.2

Source: OECD Stat data as presented by Bailey *et al* (2011) except UK (ONS data) row, which uses ONS data as referenced in Figure 1 earlier

Overall, this chapter shows that the UK has experienced a substantial decline in the wage share since the 1970s and the mid-1990s, followed by a period where the wage share has been relatively stable at a lower level than in the 1950s and 1960s. Furthermore, the decline in the UK wage share is particularly large by international standards.

2 Explaining the shift from wages to profits

Several theories have been advanced in the literature to explain the falling wage share in the UK and many other countries. Five potential explanations (not necessarily exclusive) are as follows:

1. Technological change

This is the most favoured explanation for the falling wage share in mainstream ('neoclassical') economic theory. The neoclassical model argues that wages are at least partially determined by labour productivity, i.e. the contribution of workers to output,⁶ while profits are at least partially determined by the contribution that capital goods (i.e. plant and machinery) make to output.⁷ If technological change is 'capital-augmenting' – i.e. it improves the productivity of capital more than it does the productivity of labour – then the implication would be that the wage share would fall and the profit share would rise (other things being equal). A similar argument is used to explain increased inequality as being the result of 'skill-biased technological change' – the idea that skilled workers are now relatively more productive relative to unskilled workers than they used to be because of particular technological developments, and hence can command higher wages (e.g. in the ICT industry).⁸

2. Globalisation

The 'globalisation' of economic activity over recent decades – specifically, increased liberalisation of product markets and increased mobility of capital across national borders – is also cited as a reason for falling wage share in many analyses in mainstream economics as well as many non-mainstream approaches. In advanced economies, globalisation is mostly predicted to (relatively) benefit capital at the expense of labour.⁹ A range of explanations for this is advanced in the theoretical literature including:

- increased relative mobility of capital compared with labour – which means firms can bid down wages by threatening to move production elsewhere

6 Strictly speaking, under conditions of 'perfect competition' – when production is characterised by a large number of firms competing in the product market – wages are equal to productivity. Under the more realistic situation of 'imperfect competition', where product markets are characterised by a small number of firms, each with some market power, wages can diverge from productivity but should still be related to it.

7 An obvious problem for this theory in its purest form arises from 'joint production' – i.e. the fact that the vast majority of goods are produced by labour in combination with capital. This makes it difficult to ascertain the specific 'marginal' contribution of labour and capital to output, making it essentially impossible to derive a measure of labour productivity or capital productivity that is independent of measured wages or profits respectively – an essential precondition for the marginal productivity theory of income distribution to have any explanatory power (without this, the theory is simply circular).

8 See, for example, the explanations given for the sharp increase in income inequalities in the USA from the 1970s to the 1990s in Autor et al (1999) and Card and di Nardo (2002).

9 The implications of market liberalisation for workers in developing countries are more in dispute. See Rodrik (1997) for a detailed discussion.

- increased wage competition from low-wage, increasingly high-skill economies such as China and India, leading to pressure on wages in advanced economies and increased outsourcing of employment to developing economies.¹⁰

3. Labour market institutions

Workers' bargaining power has weakened considerably in most advanced industrialised countries since the late 1970s, with declines in the proportion of the workforce covered by trade union membership and collective bargaining agreements, and reductions in the strength and coverage of employment protection legislation in most countries, including the UK.¹¹ Increased unemployment in most advanced economies since the early 1970s is also likely to have reduced worker bargaining power as the fear of unemployment has increased. As explained by Lansley (2011), the historical experience suggests that increased worker bargaining power can lead to an upturn in the wage share and a profits squeeze. While the mid-1970s upturn in the wage share was probably unsustainable, it seems clear that since the early 1980s what has happened in the UK reflects the reverse – a wage squeeze, which has become a lot more noticeable in recent years with sustained declines in real wages for workers on average pay.¹² During the 1950s and 1960s the wage share was higher than it is currently and growth was both strong and inclusive.

4. Financialisation

Ertürk *et al* (2008) and Stockhammer (2012) argue that financialisation – defined as an increased role of financial activity and rising prominence of financial institutions in national economies – is an important driver of falling wage share. Financialisation is linked to globalisation and to the decline of workers' bargaining power. Firms are increasingly able to invest in financial assets as an alternative to direct investment in productive capital (i.e. plant and machinery) and they are also able to invest abroad instead of at home. Financialisation has also empowered shareholders relative to workers by putting additional constraints on firms that align management's interests to those of the shareholders. As Rossmann (2009) shows, this process is particularly acute in private equity funds, which buy firms by way of debt that is transferred to the firm. While the private equity funds typically receive a substantial proportion of revenue from the firm activities via dividend payments or fees, the restructured firms then face a large debt burden and have to cut costs aggressively to survive – which typically reduces worker remuneration.¹³

5. Misclassification

This is a different sort of explanation from the other four explanations outlined here because it argues that the falling wage share is essentially an artefact of measurement problems in the data – essentially that profit income is being overestimated and/or wage income is being underestimated. For example:

¹⁰ A slight variant of this explanation is that increased immigration from low-wage economies to higher-wage economies is sometimes cited as a cause of declining wages in developed countries (see, for example, Borjas (2006) for the United States). However, there is no real evidence that immigration has led to lower wages in the UK to any extent that can be measured in the available data, except perhaps at the very bottom of the earnings distribution; and even there the effect is small and would not be nearly enough to drive the large changes in the UK wage share since the 1970s. See Blanchflower and Shadforth (2009) for details.

¹¹ See Reed (2010) for a comprehensive summary of changes in trade union density and employment protection legislation across OECD countries between 1990 and 2008.

¹² For detailed evidence on the recent decline in real wages for workers on low to middle incomes see Whittaker (2012).

¹³ A review of evidence on the economic impact of private equity on worker remuneration by Watt (2008) concludes that "Cuts in wages and conditions (absolute or relative to peer groups) do seem to be a frequent occurrence" (p 561).

- Increased levels of self-employment in the economy could account for a falling measured wage share due to a transfer of workers from the wage income category of the national accounts to 'mixed income'. In fact, however, this doesn't seem to be happening because the mixed income share has been remarkably static for the last 35 years or so (as shown in Chapter 1).
- At the top end of the earnings distribution it is possible that some of the earnings are actually profits (bankers' bonuses, executive stock options etc.). However, to the extent these have increased in recent years, reclassifying wages as profits would actually lead to a bigger fall in wage share!

Do the different explanations work?

There have been several recent attempts to quantify the relative contribution of the different explanatory factors highlighted in this chapter to falls in the wage share in recent decades across many (though not all) industrialised countries. Studies by the IMF (2007b) and the European Commission (2007) find that technological change has been the main cause of changes in functional income distribution, that globalisation (of trade and production) has played an important role and, finally, that changes in labour market institutions have played a minor role.

In a more recent panel analysis of the determinants of wage share for advanced countries, Stockhammer (2012) finds that financialisation has the biggest impact, though increases in globalisation and reductions in labour bargaining power are also important. Technological effects seem to be of only marginal significance.

Most empirical cross-country studies find that increased globalisation tends to reduce the share of income accruing to labour in developed economies.¹⁴

In conclusion, although mainstream economists favour technological change as the main explanation of the falling wage share, the empirical evidence on this is far from conclusive. The results from the analysis by Bailey *et al* discussed in Chapter 1 suggest that technological change cannot be the only explanation for the falling wage share, because the wage share shows very different trends in different industrialised countries – despite the fact that (presumably) each country has access to similar technologies.

¹⁴ See for example IMF (2007b).

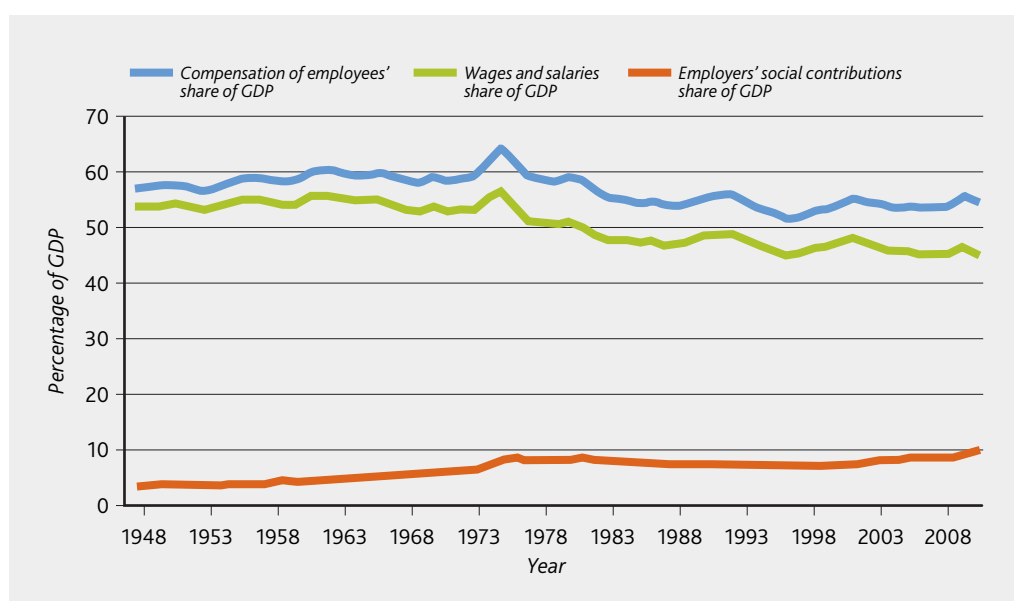
3 Exploring the decrease in the wage share

The impact of increases in employer social contributions

Although Chapter 1 defined the 'wage share' as total compensation of employees as a share of GDP, employee compensation actually equals gross wages and salaries plus employer National Insurance contributions (NICs) and employer pension contributions. Hence gross employee pay is lower as a share of GDP than total employee compensation (and take-home employee pay, after income tax and employee NICs, is lower still). Figure 3 below breaks down total employee compensation from Figure 1 into wages and salaries (the green line) and employer social contributions (the blue line). Figure 3 shows that employer social contributions rose steadily over the 1960s and 1970s, falling back a little in the 1980s and 1990s but then rising again in the 2000s to reach 9.5 per cent by 2010 compared with only five per cent in 1966. After netting off employer contributions, the decline in the wage share between 1975 and 2010 is more pronounced.

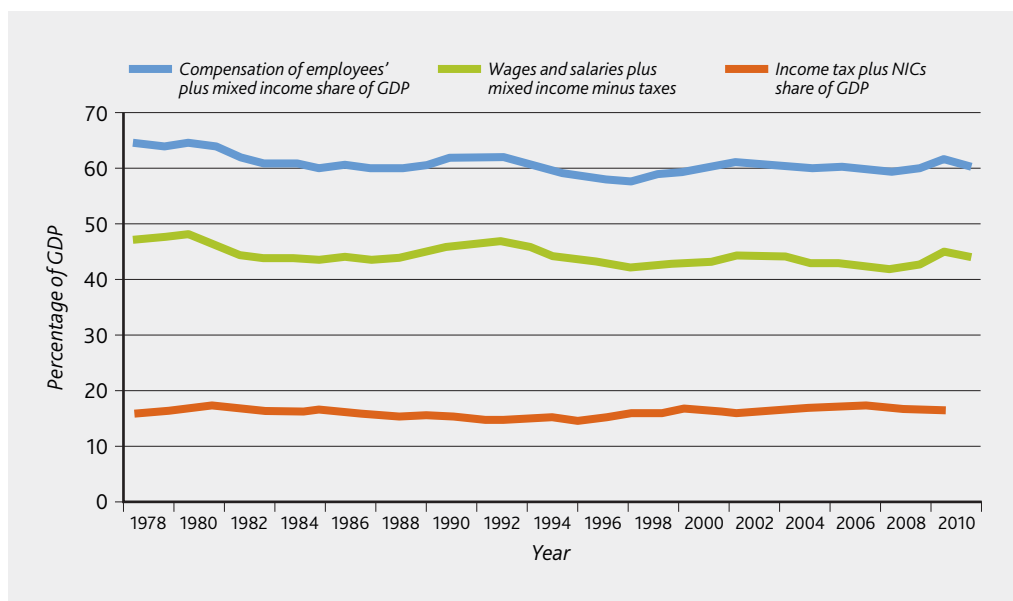
It is important to remember that not all employee contribution is directly invested in service provision. The UK's tax system is largely unhypothecated, so higher employee NICs do not necessarily represent a form of employee compensation for work.

Figure 3. Employee compensation and employer social contributions, 1948–2010



Sources: ONS Blue Book and ONS website.

Figure 4. Employee and self-employed compensation, income tax and National Insurance contributions, 1978–2010



Sources: Employee compensation and mixed income as Figure 1. Income tax and NICs data taken from HMRC statistics as collated by the IFS (2012).

Direct taxes and the wage share

It is important to note that employer social contributions as defined in Figure 3 comprise two elements; deferred pay (pension contributions) plus employer NICs (effectively a component of the tax system). It is useful to separate out the tax component to show total remuneration after direct taxes as a proportion of GDP.¹⁵ The Institute for Fiscal Studies (IFS) constructed a time series for income tax and NICs from 1978 to the present day using data from HMRC. One drawback of this time series is that it does not distinguish between income tax and NIC receipts for employees versus those for self-employed people. This means that, for consistency, we need to present income tax and NICs from the IFS data as a subtraction from employee remuneration plus mixed income (for self-employed people) to give the correct 'gross' and 'net' measures for remuneration as a share of GDP. These figures are shown in Figure 4 above. The gross remuneration figure for employees and the self-employed declines from around 64 per cent of GDP to 60 per cent of GDP between 1978 and 2010 – a decline of similar magnitude to the employee compensation figure over the same period. Meanwhile, total income tax plus national NICs as a share of GDP shows no overall pattern over the time period, fluctuating between 14 and 18 per cent of GDP and averaging just over 16 per cent. This means that net remuneration in Figure 4 follows a very similar pattern to gross remuneration. Direct taxes do not seem to have any impact on the overall pattern of the wage share.¹⁶

¹⁵ Note that the income tax figure will include some element of income tax on income from savings and investments but this is only a small percentage of total income tax revenue and so can safely be discounted for the purposes of this figure. As a rough guide, HMRC statistics on income tax receipts show that in the 2011–12 tax year, £137.7bn of income receipts was from PAYE earnings compared with £3.2bn from interest on savings and £20.3bn of self-assessment income (which is mainly earnings and self-employment income). See www.hmrc.gov.uk/stats/income_tax/table2-8.pdf

¹⁶ Indirect taxes, however, have risen substantially over the same period. Calculations by the IFS show that indirect taxes rose from 20 per cent to 25 per cent of total tax revenue between 1978–79 and 2010–11. See www.ifs.org.uk/ff/revenue_composition.xls for detailed figures.

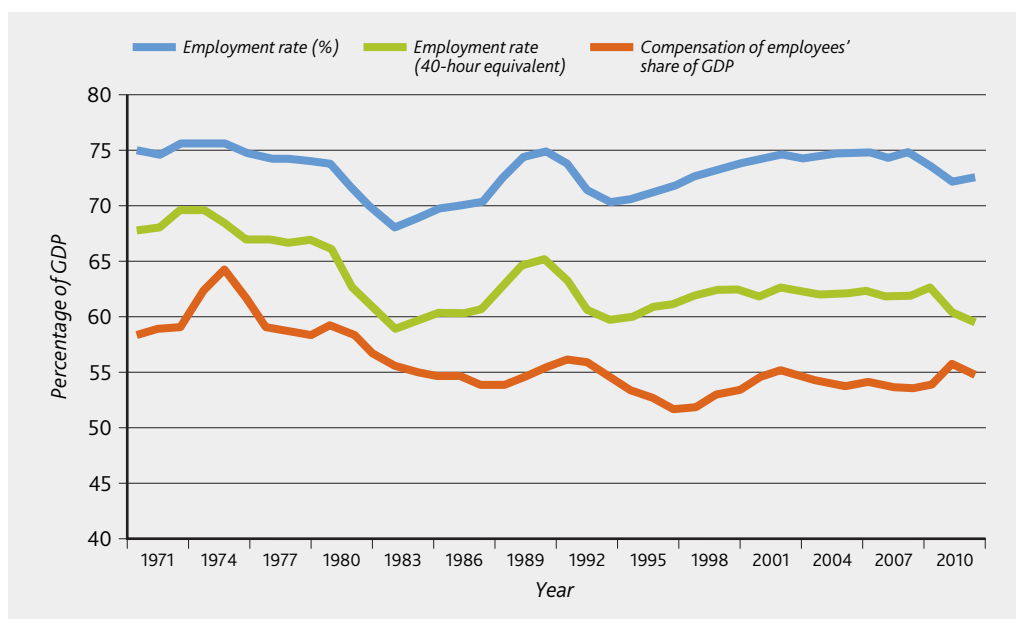
The employment–population ratio and the wage share

One important issue is whether the fall in the UK's wage share after 1975 coincided with a decrease in total employment as a share of the working age population. In other words, can a reduction in the level of employment – rather than lower average earnings per employee relative to GDP – explain the fall in the wage share?

Figure 5 below plots the wage share data from Chapter 1 along with the employment rate for men and women aged between 16 and state pension age (assuming an age of 60 for women and 65 for men) between 1948 and 2010. If the wage share line and the employment rate line tracked each other reasonably closely between the late 1970s and 2010, with clear long-term declines in both, this would provide evidence that the fall in the wage share is being driven by falling employment. However, the opposite is the case; although the employment rate falls sharply between 1979 and 1983, it then rises strongly again, so that the employment rate by the late 1980s is back up to its early 1970s level. Employment falls again in the early 1990s' recession but then recovers to similar heights of around 75 per cent by the year 2000. But although employment recovers to its early 1970s' level, the wage share remains several percentage points below its early 1970s' level. Thus, over the long term the declining wage share seems to be driven by wages for those in work not keeping pace with GDP growth, rather than falling employment.

One possible interpretation of this story is that we are measuring employment in terms of the proportion of working age people with a job. However, hours of work may also be important. If average hours of work were falling over the last three decades, then the falling wage share could be explainable by reduced number of hours per employed person rather than by reduced numbers of employed people. The green line in Figure 4 takes account of this possibility by showing the employment rate in terms of a percentage of

Figure 5. Employment rate and wage share, 1971–2010



Sources: Employee compensation as Figure 1. Employment rate and hours of work: ONS Labour Market Statistics.

the number of hours that would be worked in the economy if everyone of working age were working 40 hours per week – i.e. a ‘full-time equivalent’ employment rate.¹⁷ Average hours worked among employees in the UK did fall over the last four decades – from a peak of 36.9 hours per employee in 1973 to 33.1 hours in 2007. However, this change in average hours is not enough to mean that variations in average hours worked per person of working age can account for the fall in the wage share. In 2008, the full-time equivalent employment rate was almost exactly the same as in 1981, but the wage share was about five percentage points lower.

Self-employment and mixed income

It is sometimes asserted that one of the contributing factors towards the decline in the wage share from the early 1980s onwards is that self-employment increased (and this drove an increase in mixed income at the expense of the wage share). It is true that self-employment as a share of total employment did increase in the 1980s in particular (from around nine per cent of total employment in 1978 to 14 per cent in 1991) before falling back slightly in the 1990s and 2000s. However, Figure 1a showed that in fact mixed income has changed very little as a share of GDP over the last five decades. While this raises interesting issues in terms of average incomes of self-employed people relative to GDP (they must have declined substantially since the late 1970s), the mixed income data mean that increased self-employment cannot explain the falling wage share.

¹⁷ This assumes of course that 40 hours is the maximum working week, which is not actually the case; many people work more hours than this per week. But the shape of this line, which is what we are most interested in for our current purposes, would be the same regardless of the number of hours chosen as ‘full-time equivalent’.

4 Exploring the increase in the profit share

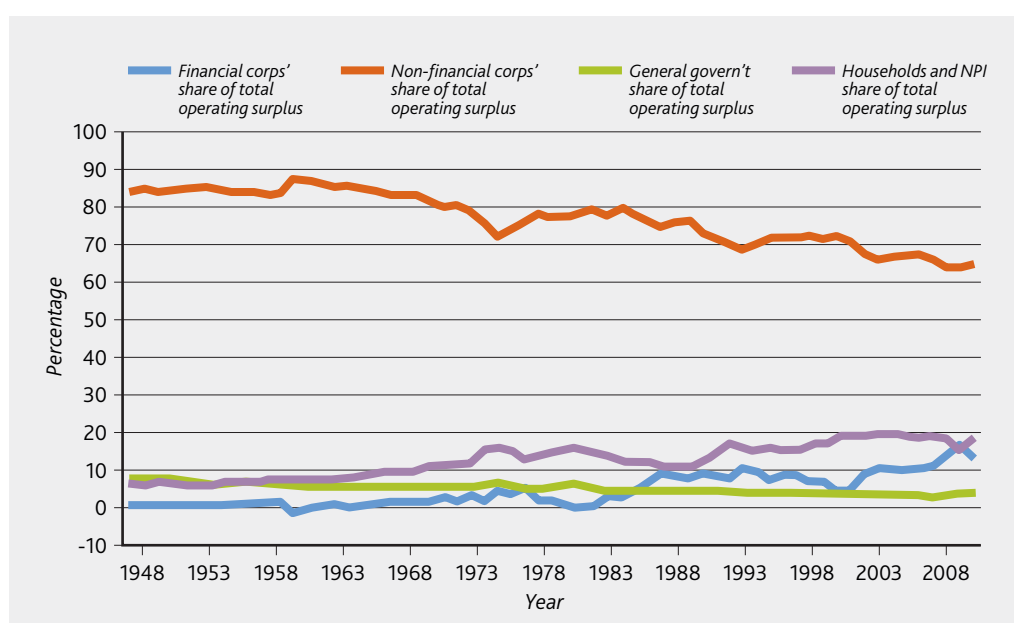
The increasing importance of financial services in the profit share

Total operating surplus as shown in Figure 1a (page 11) can be broken down into the share of surplus accruing to four subsectors of the economy:

- financial corporations (i.e. banks, insurance companies, investment funds etc.)
- other (non-financial) corporations
- general government
- households and non-profit institutions serving households.

Figure 6 below maps these different components as shares of total operating surplus. The figure shows that non-financial corporations' share of total operating surplus has been falling since the end of the 1950s. From a high of around 87 per cent of total operating surplus in 1959, non-financial corporations' share fell to around 72 per cent in 1975, partially recovered to just under 80 per cent in the early 1980s and then continued to fall, reaching 64 per cent by 2010.

Figure 6. The components of UK profit share, 1948–2010



Sources: ONS Blue Book and ONS website.

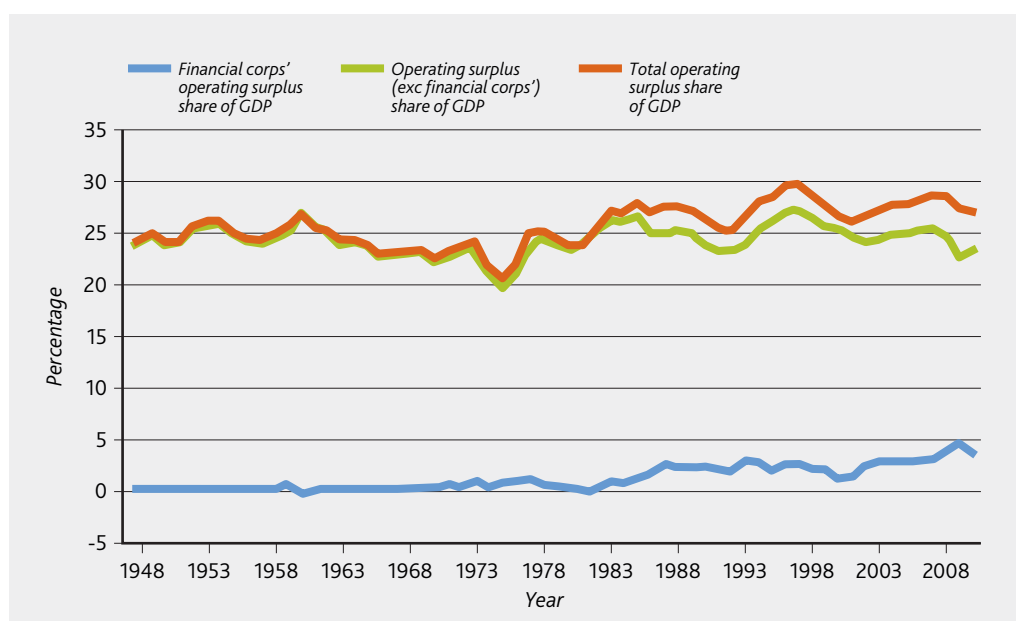
Two sectors have expanded their share as non-financial corporations have shrunk. One is households and non-profit financial institutions, which expanded from around seven per cent of total operating surplus in 1959 to almost 20 per cent in 2010. The other is financial corporations, which were only around one per cent of total operating surplus in the 1950s and 1960s, expanded to around 4.4 per cent by the mid-1970s, then declined to zero in 1981 before expanding quickly to around 10 per cent by the late 1980s.

Financial corporations stayed at around 10 per cent of total profits between 1990 and 2007 (except for a couple of years in the aftermath of the 'dot com' collapse of 2000 when their share declined). The years 2008, 2009 and 2010 have seen financial corporations with an even bigger share of total operating surplus – in the region of 15 per cent – in the wake of the financial crisis and the recession.

Figure 7 below illustrates the growing profit share of the financial sector slightly differently, by taking the total operating surplus as a share of GDP from Figure 1 and then splitting it into the proportion attributable to financial corporations and the proportion attributable to the other three components. The green line in Figure 6 shows that, if financial corporations are removed from total operating surplus, the remaining operating surplus as a share of GDP does not show any clear upward trend from 1980 onwards – rather, it fluctuates around the 25 per cent level. In other words, the whole of the upward trend in the profit share over the last 30 years is attributable to the increased profitability of the financial sector.

These figures underline the importance of the 'financialisation' of the UK (as discussed in Chapter 2) as a driver of recent trends in the UK economy. The rising role and size of the financial sector in the UK economy is one of the largest structural shifts of recent decades. Financial corporations' share of total operating surplus has gone from zero in the early 1980s to almost a fifth just before the 2008 crash. These statistics underline the magnitude of the task facing politicians in both government and opposition parties

Figure 7. Operating surplus as a share of GDP: Financial v non-financial, 1948–2010



Sources: ONS Blue Book and ONS website.

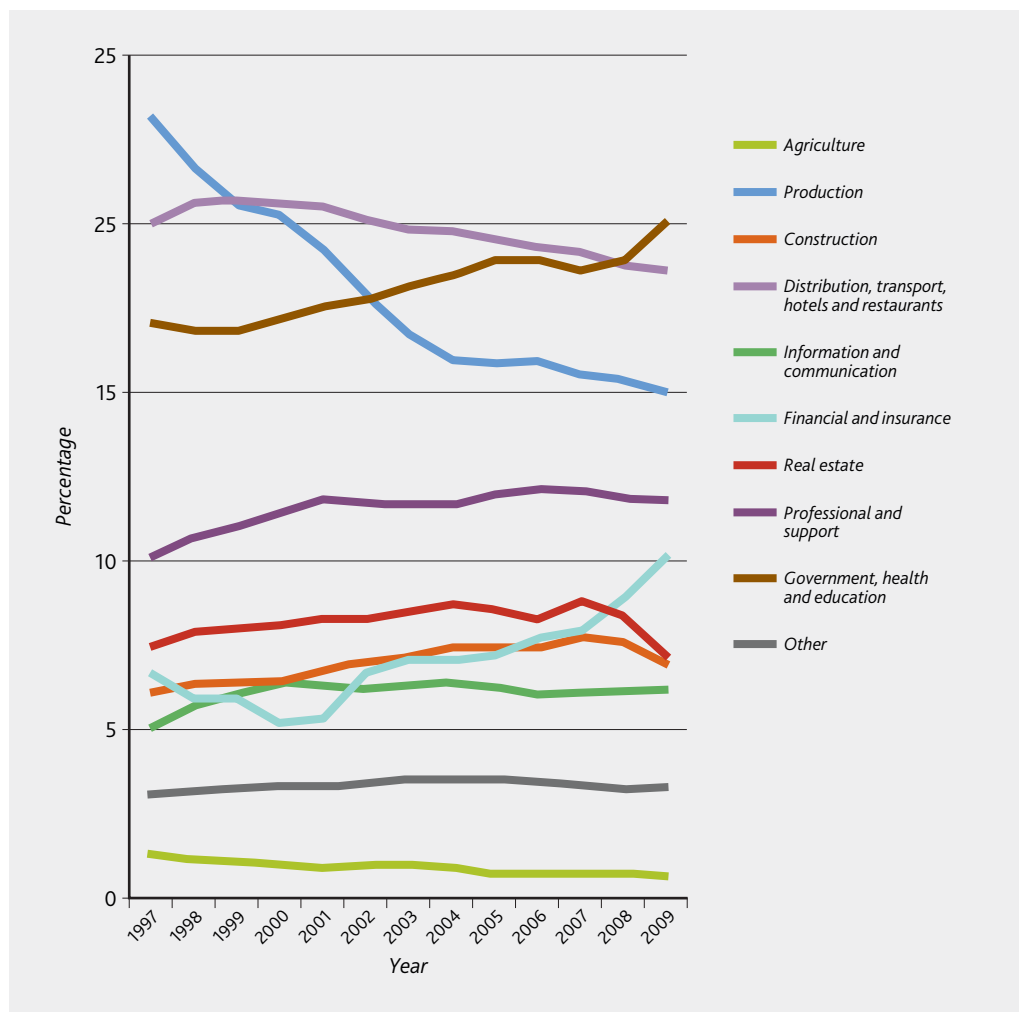
seeking to 'rebalance' the UK economy, with a greater role for manufacturing industry and non-financial services; for most of the last few years, the UK economy has been heading in the opposite direction – with financial services responsible for an ever-greater proportion of operating surplus.

The profit share by industry

Another useful way of breaking down profit shares in the UK economy is to examine changes in the wage share vis-à-vis the profit share for individual industries or sectors of the economy. An important issue is whether the aggregate increase in profit share for the UK has occurred due to increases in profit shares within each individual industry, or a compositional shift in the UK economy from industries with low profit shares to industries with higher profit shares.

Unfortunately, consistent data on output by industry is available from the ONS only from 1997 onwards (due to changes in the industry definitions used in national accounting). Nonetheless, this still allows us to examine recent trends in the sectoral composition of the UK economy and the wage share and profit share within each industry. Figure 8 below

Figure 8. Industry shares of 'all industries' GVA, 1997–2009



Source: ONS, 2011.

Table 2: Average, maximum and minimum profit share by industry, 1997–2009

<i>Industry</i>	<i>Average (%)</i>	<i>Maximum (%)</i>	<i>Minimum (%)</i>	<i>Change 1997–2009 (percentage points)</i>
Agriculture	79.3	98.6	67.0	+29.2
Production	39.8	43.2	37.9	-2.8
Construction	47.1	50.0	43.7	-0.9
Distribution, transport, hotels and restaurants	30.8	34.3	27.0	-7.3
Information and communication	37.8	41.2	34.3	-4.2
Financial and insurance	42.4	53.2	26.5	+7.1
Real estate	95.0	95.8	93.1	-2.4
Professional and support	34.9	37.0	32.3	-2.1
Government, health and education	13.7	14.4	12.9	-1.5
Other services	28.6	30.1	26.5	-3.5
Total	31.2	33.5	29.3	-3.2

Source: ONS, 2011.

shows trends in the share of each industry in total gross value added (GVA) between 1997 and 2009. The largest shifts over this period are the share of production industries (basically manufacturing plus the extractive industries), which falls from around 23 per cent to 15 per cent of GVA over the period, and financial and insurance (which rises from five per cent in 2001 to 10 per cent in 2009). There is also a reduction in the share of distribution, transport, hotels and restaurants, and an increase in the share of the government, health and education sector.

But how much variation was there in profit share within industry – in terms of both different levels of share across industries and changes across time? Table 2 above details this information by showing the average, maximum and minimum values of the profit share of GVA for each industry across the 13 years of data. With the exception of agriculture, average changes in the profit share across 1997 to 2009 within each industry are small. The biggest increase (apart from agriculture) is financial and insurance services, with a seven percentage point gain over the period, whereas the biggest reduction is for distribution, hotels and restaurants. Profit shares vary markedly across different sectors. The lowest is in government, health and education (which is to be expected as much of these industries is in the public sector, which is mostly not seeking to make a profit). 'Other services' and distribution, transport, hotels and restaurants also have below average profit shares. The highest profit shares are real estate (very close to 100 per cent – due to the use of debt to 'leverage' up returns), construction and financial and insurance services.

The data above suggests that large changes in the structure of the economy and the size of different sectors have had major impacts on the wage share in the UK. This tallies with recent work by the Resolution Foundation, which uses data from the OECD to look at longer-term changes in UK industrial structure and wage and profit share by industry, between 1977 and 2009. The Resolution Foundation analysis reports that:

“Movements in labour shares within sectors had a small positive impact on [overall wage share] while shifts between sectors had a large negative effect. Overall, the findings show that the decline in overall labour share was largely a function of the changing industrial structure of the UK rather than of trends within sectors... the dramatic shift in the industrial structure of the UK from industry, where a relatively large proportion of value generated flows to labour, to finance, where a much higher proportion of value is retained as profits, produced a strong negative effect [on the wage share].” (Whitaker and Savage 2011)

In other words, the fall in the wage share is largely driven by an expansion of industries where the wage share is relatively high, and a contraction of industries where the wage share is relatively low, rather than falls in the wage share in individual industries. This underlines the point made earlier in this chapter that ‘rebalancing’ of the UK economy towards industries with a higher wage share may be a necessary condition for increasing the wage share in the economy in the medium-to-long term.

Finally it is worth noting that in terms of the trends driving the increase in inequality of wages (rather than the falling share of wages), the Resolution Foundation research finds that this was not mainly driven by expansion in industries where wage inequality was high and contraction of industries with low inequality. Rather, earnings inequality increased within all industries (although the increase was especially pronounced in the finance sector). Chapter 5 examines the relationship between increased inequality and the falling wage share in more detail.

5 *The distributional impact of a shift from wages to profits*

As is well known, the distribution of household incomes in the UK has become significantly more unequal since the late 1970s.¹⁸ To what extent are changes in the share of wages in national income responsible for increased inequality?

To get a handle on this question, it is instructive to look at the contribution that income from wages and income from profits make to overall inequality in the UK. Table 3 (page 26) uses data for working-age families from the Family Resources Survey (FRS), which is the most reliable survey dataset on the incomes of households in the UK (the same data is used by the UK government for its *Households Below Average Income* publication, which is the official data source for inequality and poverty statistics in the UK). The data are from the 2009/10 tax year. We have excluded pensioner families from the analysis because most are retired and hence have no labour income.

Table 3 breaks down family disposable income in the FRS into the following components:

- gross (i.e. before tax) earnings for employees
- gross income for the self-employed
- gross income from investments¹⁹
- income from benefits and tax credits
- any other regular sources of income (e.g. maintenance payments, grants, payments from health insurance schemes etc.)
- direct taxes and NICs (the difference between gross and net incomes).

The first column of results in Table 3 shows the average amount of weekly income from each income source. Gross earnings is by far the largest income source, followed by self-employment income and benefit income. Investment income is the smallest income source.

The second column shows the results from a decomposition of total inequality in disposable incomes in the FRS into inequality of incomes from each source. A positive number in this column means that income from this particular source helps make total disposable income more unequal, whereas a negative number means that income from this source

¹⁸ Reed (2011) gives full details of the evolution of UK inequality over the last 45 years.

¹⁹ Note that analysts have expressed concerns that the reporting of income from investments in the FRS is not very accurate (see http://research.dwp.gov.uk/asd/frs/2010_11/frs_2010_11_report.pdf, chapter 4 for further details). However, information from the recent Wealth and Assets Survey confirms that the distribution of assets across individuals and households is considerably more unequal than the distribution of earned incomes (see National Equality Panel (2010), chapter 8).

Table 3: The contribution to overall inequality of different sources of family income in the 2009/10 FRS

<i>Income source</i>	<i>Average (£ per week)</i>	<i>Contribution to inequality (%)</i>	<i>Normalised contribution (%)</i>
Gross earnings	486	94.6	15.0
Gross self-employment income	62	32.1	39.7
Gross income from investments	19	13.5	56.1
Benefit income	55	-0.9	-1.3
Other gross income	25	2.7	8.2
Taxes and NICs	-182	-42.0	-17.7
Total	465	100.0	100.0

Source: Authors' analysis of 2009/10 Family Resources Survey as used by Department for Work and Pensions in *Households Below Average Income* statistics (DWP, 2011). Working age benefit units only.

helps equalise total disposable income. The biggest contributor to total inequality is gross earnings, followed by self-employment income and investment income. However, this is mainly because gross earnings are a much larger share of total income across the UK than self-employment income or investment income. The final column of Table 3 corrects for this by showing a 'normalised contribution' to total FRS inequality. This number should be interpreted as follows: If average incomes from each income source in the FRS were the same, what would be the contribution of each income source overall inequality? If this were the case, gross investment income would account for 56 per cent of total inequality, self-employment income for around 40 per cent, and gross earnings for only 15 per cent. (The numbers sum to more than 100 per cent because taxes and NICs and benefits and tax credits reduce inequality by just under 20 per cent in total). In other words, investment income makes around a four times greater contribution to inequality than gross earnings, controlling for the total amount of income from each source.

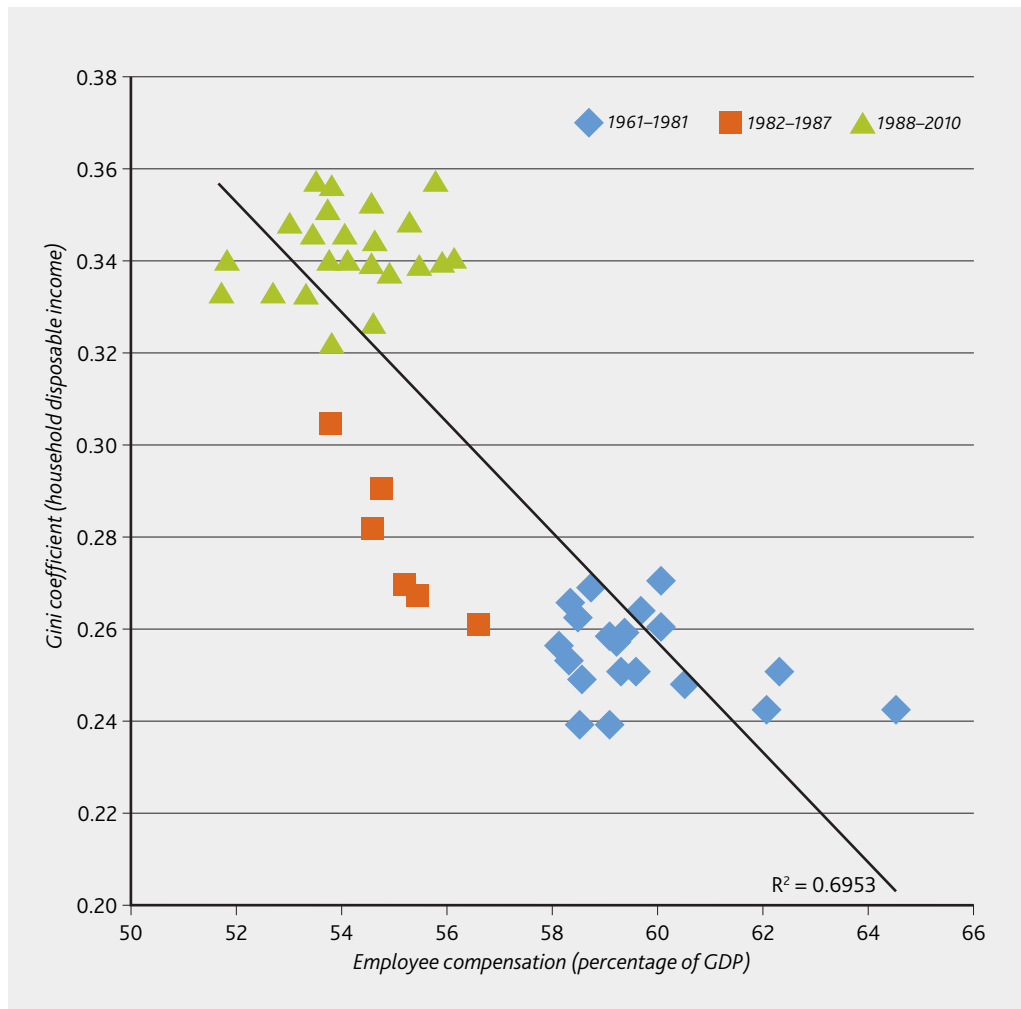
What this means is that, other things being equal, we would expect a fall in the wage share to lead to an increase in inequality. However, the exact relationship between the wage share and inequality of disposable incomes is complex, for several reasons:

- The extent of inequality depends not just on the balance between wages and profits in the economy, but how income from wages (and income from profits) is distributed. For example, we know that inequality in gross earnings in the UK and many other countries has risen substantially over the last 35 years. This means that, even if the wage share in the UK had not changed at all since the late 1970s, it is likely that income inequality would still have risen.
- The relationship between the level of profits in the UK at any point in time and household income from investments at the same point in time is not straightforward. A large proportion of income from profits in the UK is received as dividends by pension funds, which then reinvest it; a retired person receives an income stream from their pension fund only when it is used to buy an annuity, and this may be several decades after the profit income is received (depending on how old the pension holder is). Also, many firms re-invest a proportion of their profits rather than distributing dividends to shareholders; to the extent that this happens, the profit stream does not show up in household income statistics.

- Overall income inequality will depend to an extent on the incomes of families who are not in the labour market (for example retired pensioners, and unemployed and inactive people of working age).

Nonetheless it is interesting to plot the wage share (measured by employee compensation as a share of GDP) and household inequality in disposable incomes (measured by the Gini coefficient) over the period for which both measures are available. This is done in Figure 9 below. The results show that overall there is a strong relationship between the wage share and household income inequality; in a regression, variation in the wage share would explain about 70 per cent of the variation in income inequality. However, the data in the figure seem to divide into three distinct periods:

Figure 9. The wage share and inequality in household incomes, 1961–2010



Notes: Employee compensation/GDP measure as defined in Figure 1.

Gini coefficient data compiled by IFS from DWP (various years). 1961–1992: measured for Great Britain using Family Expenditure Survey data. 1993–2001: measured for Great Britain using Family Resources Survey data. 2002–2010: measured for United Kingdom using FRS data. FRS data are measured using tax years rather than calendar years – so wage share for 1993 is graphed against Gini coefficient for 1993/94, and similarly for later years.

1. 1961 to 1981: during this period the wage share was relatively high (always above 58 per cent) and income inequality was relatively low (Gini always below 0.28).
2. 1982 to 1987: over this six-year period, the wage share fell below 58 per cent and income inequality grew rapidly (with the Gini rising from 0.26 to 0.31).
3. 1988 to 2010: during this period the wage share was relatively low (between 51 and 56 per cent) and inequality relatively high (always above 0.32).

To judge from Figure 9, it looks like the 1980s were the key decade when the UK economy underwent extensive distributional changes, with inequality growing rapidly at the same time that the wage share fell. To be clear, Figure 9 does not tell us that the falling wage share caused increased inequality. Rather, it seems more likely that some combination of skill-biased technological change, increased international competition and globalisation, institutional reforms to the labour market, and increased financialisation of the economy (all of which were discussed as determinants of the wage share in Chapter 2) led to increased inequality and to a fall in the wage share over the 1980s.

6 *The macroeconomics of a declining wage share*

How does a reduction in the wage share in the UK or other industrialised countries affect levels of economic output and investment? Economists do not have a consensus on the relationship between wages, investment and growth. It is generally thought that increased investment in research and development helps drive innovation, which is the main determinant of long-run growth in the economy.²⁰ Thus, to the extent that increased investment levels lead to increased R&D, higher investment should increase growth. However, there are (at least) two competing theories of the relationship between wages, profits and investment:

- Some economists argue that a lower wage share should lead to increased growth because the corollary of a reduced wage share is an increased profit share, which frees up additional funds for business investment. In the wake of the upwards spike in the wage share in the mid-1970s, this was an argument used by right-wing advocates of the 'supply side' reforms of the 1980s, which aimed to boost business profitability.²¹
- Other economists argue that the propensity to consume out of wage income is higher than the propensity to consume out of profit income and hence that a higher wage share should increase growth because demand increases and hence firms increase their investments in anticipation of being able to sell extra output.²² Conversely, according to this theory a lower wage share should lead to lower growth.²³

It should be noted that both these competing theories on the relationship between the wage share and economic growth were initially formulated in the context of an economy closed to international trade and investment. In the real-world situation of an open economy, with international trade and investment flows across national borders, things are much more complex. For example, firms that need funds for investment can borrow from abroad rather than domestically, and firms manufacturing tradeable goods and services will take into account the potential export market for those products as well as domestic demand.

The empirical evidence on the relationship between the wage share and economic growth across countries is mixed, but in general most studies show a positive relationship between wage share and increases in output.²⁴ This suggests that a higher wage share would be likely to boost economic growth in the UK.

²⁰ See, for example, Aghion and Howitt (1997).

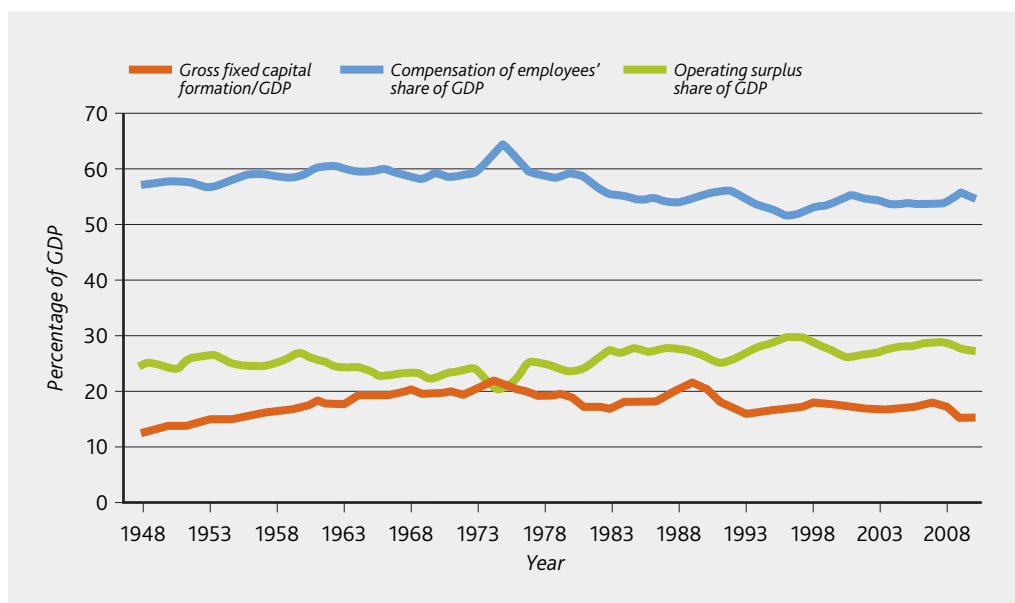
²¹ See for example Friedman and Friedman (1982).

²² An additional argument in favour of this view would be that there is no reason that investment by firms has to be financed out of current profits; it could be financed out of future profits, by borrowing. Thus, there is no obvious reason why an increase in the wage share should automatically lead to lower investment in the short run.

²³ This theory is emphasised by Keynesian and post-Keynesian economists following in the tradition of Kalecki (1954).

²⁴ For example, Bowles and Boyer (1995) and Hein and Vogel (2008) find that all the industrialised countries in their sample, including Germany, France, the UK and the USA, have a positive relationship between wage share and GDP growth. Storm and Naastepad (2007) find a negative relationship between wage share and changes in output in the USA and Japan but a positive relationship for other countries. Stockhammer and Stehrer (2011) find a positive relationship between wage share and economic growth for 10 of the 12 countries they look at; only in the UK and Ireland is the effect negative.

Figure 10. UK wage share, profit share and investment, 1948–2010



Source: ONS, 2011.

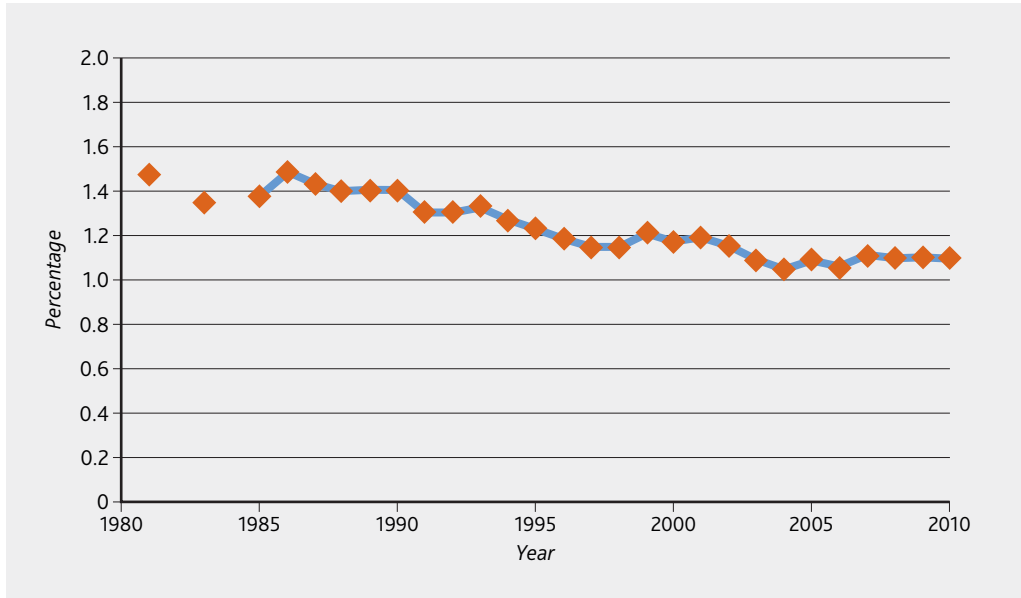
The profit share, investment, and research and development

A crucial test of the theory that a lower wage share is good for growth is to examine whether the additional profits from the increase in the profit share in the UK since the mid-1970s are feeding through to higher investment by firms. If so, then it could plausibly be argued that a declining wage share was a good thing in terms of economic growth, as it freed up an increased pool of funds for investment.

Figure 10 above compares the wage and profit share data from Figure 1 with gross fixed capital formation (the standard measure of company investment in the national accounts) between 1948 and 2010. The results show, if anything at all, a negative correlation between the profit share and investment from 1975 onwards. While the profit share increased from 25 per cent to around 30 per cent of GDP between 1980 and 2010, gross fixed capital formation fell from around 20 per cent to 15 per cent over the same period.

Meanwhile, Figure 11 (page 31), which shows business expenditure on research and development (BERD) as a proportion of GDP over the last three decades, shows that there is even less relationship between profit share and BERD than there is between profit share and investment. Business research and development has been falling as a proportion of GDP since 1986. Wherever the additional profits as a share of GDP are going, they clearly are not being funnelled into increased investment or research and development.

Figure 11: Business research and development as share of GDP, 1981–2010



Source: ONS (research and development data).

Overall, the evidence on the relationship between profit share, business investment and research and development spending shown in Section 4 does not support the notion that a reduced wage share has led to higher investment levels in the UK. If anything, the evidence on profits, investment and research and development supports the findings from the cross-country empirical studies that a falling wage share (and a rising profit share) has been accompanied by lower investment and innovation, and therefore lower growth potential.

7 Conclusions

This report has shown that over the last 35 years there has been a substantial shift from wages to profits in the UK economy and that this shift has a role to play in explaining why median wages have failed to keep pace with growth in GDP over the last 30 years (although rising inequality of wages is even more important in explaining this trend). In sectoral terms, the falling wage share has been largely driven by expansion of industries with relatively low wage shares (particularly financial services) and contraction of industries with relatively high wage shares. At the same time, increased profitability in the financial sector accounts for the whole of the upward trend in the profit share over the last three decades.

There is no evidence that the falling wage share and increased profit share have contributed to increased investment or innovation in the UK; in fact, looking across countries, a higher wage share seems to be correlated with higher economic growth. This suggests that if the UK wage share were to return to the levels seen in the 1950s and 1960s – rising from its current level of 55 per cent to around 60 per cent – the economic effects would be beneficial; lower inequality and higher growth.

But what kinds of policies might be able to increase the wage share in the UK? Rebalancing the UK economy so that the financial sector plays a less exaggerated role would be one possibility. Alternatively, policy-makers could focus on raising wage levels across all industries, through a range of policies including raising skills levels and reforming wage bargaining. A forthcoming Touchstone pamphlet in early 2013 by Stewart Lansley and Howard Reed will examine policies to boost the wage share in much more detail.

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