Self-employment: what can we learn from recent developments?

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- Self-employment has become an important feature of the UK labour market, accounting for around a third of the growth in employment since 2010. Developments in self-employment — and the reasons behind them — can provide information on the overall degree of spare capacity in the labour market which, in turn, can influence wages and inflation.
- While cyclical factors have played a role, much of the recent increase in self-employment reflects longer term trends — such as an ageing workforce — that began before the recession and are, therefore, unlikely to reflect additional slack above what is already captured by staff estimates.

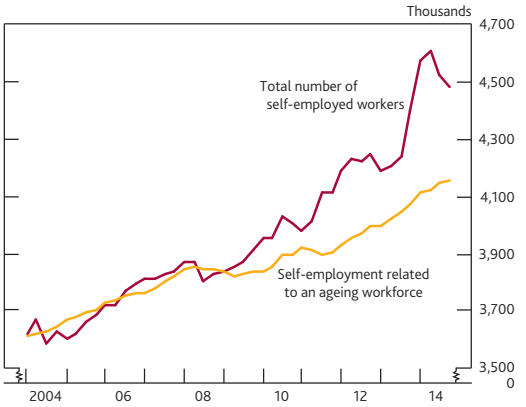
Overview

Self-employment has become an increasingly important feature of the UK labour market, with the latest data suggesting that around 15% of the workforce is self-employed. Increases in self-employment have accounted for around a third of the increase in employment since 2010.

What happens to self-employment could reflect the overall degree of spare capacity in the labour market which, in turn, can influence wages and inflation. It is therefore important to understand the extent to which recent increases in self-employment are a response to the recession: if increases in self-employment mainly reflect workers who are temporarily self-employed, while looking for jobs in companies, then this would be a form of **'hidden' unemployment**. Or it could be that self-employed workers are earning some income but would like to work a lot of additional hours, indicative of **underemployment**. Either of these scenarios would suggest a greater degree of spare capacity in the economy than would otherwise be the case.

The data suggest, however, that much of the rise in self-employment since 2008 is likely to reflect longer-term trends that began before the crisis. These include industrial and technological changes and demographic trends: the ageing of the workforce, for example, can account for around half of the increase since 2004 (see **summary chart**). Growing self-employment among female workers, alongside increasing female participation in the labour force, has also contributed to a rising self-employment rate in the population.

Summary chart The role of an ageing workforce in the rise of self-employment



Sources: Labour Force Survey and Bank calculations. See the footnote to **Chart 6** on page 61.

While the recession may have pushed some workers into self-employment where they otherwise might have been unemployed, there is little evidence to suggest this was a major factor in the rise of self-employment: across different sectors, job losses have not been not well correlated with subsequent increases in self-employment. Moreover, most self-employed workers are not looking for a job.

Although there is some evidence of underemployment among self-employed workers, this has been broadly similar to what employees have experienced. Moreover, to the extent that self-employment increases are mostly due to structural factors, this is not likely to represent additional slack above what is incorporated in Bank staff estimates of spare capacity within the labour market.

(1) The author would like to thank Chris Jackson and Philip King for their help in producing this article.

The inflation outlook depends in part on the level of aggregate demand relative to the economy's capacity to produce goods and services. The presence of spare capacity, or slack, is likely to reduce price pressures whereas very intensive use of productive capacity is likely to increase them. In forming a view on the amount of slack, the Monetary Policy Committee assesses a range of indicators. One key indicator is employment: an increase in the number of people employed is likely to facilitate an increase in the quantity of goods and services produced and can reduce the degree of spare capacity in the economy. Other things equal, higher employment, and lower unemployment, are likely to lead to greater upward pressure on wages, and so firms' costs. Employment consists of both people employed by businesses (employees) and the self-employed. The proportion of workers that are self-employed has increased over the past few decades and now accounts for almost 15% of the workforce.

One of the key features of the UK labour market during and since the recession has been the relative strength in employment. During 2008–09 the economy experienced a sharp contraction in output but employment fell by much less.(1) Since 2010 the number of workers in employment has grown by 1.9 million, much of which occurred during periods of subdued economic growth. Growth in self-employment accounted for around a third of that increase.

An important question for monetary policy is the degree to which the self-employed are really occupied in production or whether they are under-utilised and so represent spare capacity in the labour market.(2) For example, some people become self-employed because they have chosen to start businesses to create new products and services. By contrast, others might become self-employed out of necessity in order to avoid unemployment. These have different implications for the degree of spare capacity and hence inflationary pressures.

The first section of this article gives a brief overview of developments in spare capacity in the United Kingdom since the recession and outlines how to interpret changes in self-employment in this context. The second section describes self-employment in more detail, and sets out some of the factors that are likely to have determined longer-run trends in self-employment — such as regulation and technological change — as well as distinguishing between 'push' and 'pull' factors. Finally, the third section assesses to what extent more recent changes in self-employment reflect spare capacity.

Setting the scene: the evolution of spare capacity in the United Kingdom since the recession

Spare capacity in an economy can be thought of as the additional output that could be produced without creating inflationary pressures. Once spare capacity has been absorbed, companies are likely to see faster growth in costs for any additional expansion of output, which will in turn put upward pressure on their prices.

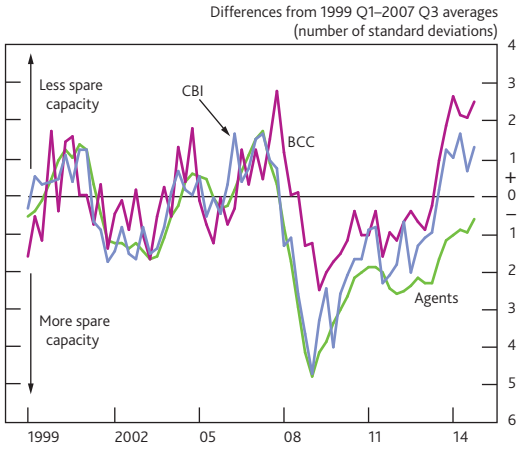
Spare capacity can exist within companies, if they are using their resources (capital or labour) below normal rates of intensity. Spare capacity can also be present within the labour market if the number of people who are underemployed or out of work is unusually high. Within the labour market, spare capacity can take a number of forms. In addition to those that are classified as unemployed, some people, even though they would like to work, may leave the labour market altogether if they become discouraged about their prospects of finding a job. Furthermore, some people in employment may wish to work more hours, such as part-time workers that would like a full-time job. The presence of such slack is likely to restrain wage growth, and hence inflationary pressures.(3)

The recession led to a large increase in spare capacity in the UK economy. Survey measures of capacity utilisation showed a sharp fall in 2008–09 (**Chart 1**) — indicating that spare capacity within firms had increased sharply. These surveys estimated the amount of slack within firms to have narrowed somewhat by 2010 and, after remaining relatively flat, narrowed further as output picked up again in 2013. Averaging across the measures shown in **Chart 1**, spare capacity within firms appeared to have returned to roughly normal levels by the end of 2014.

The evolution of spare capacity within the labour market is believed to have followed a broadly similar pattern. Bank staff estimate that the degree of slack in the labour market initially increased in 2008–09. This is shown in **Chart 2** by the movements in three indicators: the unemployment rate rose above its estimated medium-term equilibrium; the rate of participation in the labour market fell below its estimated medium-term trend; and so did the average number of hours worked. The extent of slack suggested by the participation and unemployment gaps remained broadly stable for a period since then, before narrowing in late 2012 and early 2013, respectively. However, average hours began increasing,

(1) See Faccini and Hackworth (2010).
(2) See April 2014 MPC minutes; www.bankofengland.co.uk/publications/minutes/Documents/mpc/pdf/2014/mpc1404.pdf.
(3) For a more detailed discussion of spare capacity see the box 'Assessing the degree of spare capacity' on page 29 of the May 2014 *Inflation Report*; www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf.

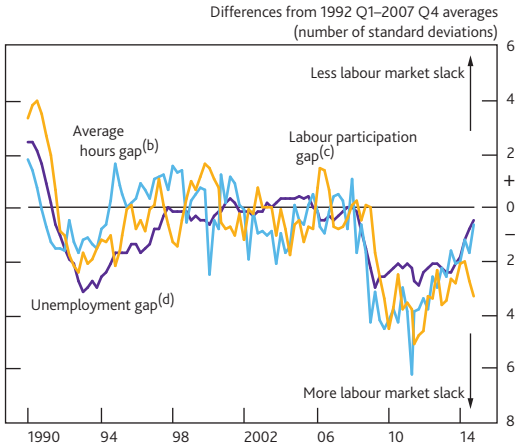
Chart 1 Survey indicators of capacity utilisation[a]



Sources: Bank of England, British Chambers of Commerce (BCC), Confederation of British Industry (CBI), CBI/PricewaterhouseCoopers, ONS and Bank calculations.

(a) Measures are produced by weighting together surveys from the Bank's Agents (manufacturing and services), the BCC (non-services and services) and the CBI (manufacturing, financial services, business/consumer/professional services and distributive trades) using nominal shares in value added. The surveys are adjusted to have a mean of zero and a variance of one over 1999 Q1 to 2007 Q3. The BCC data are non-seasonally adjusted.

Chart 2 Components of labour market slack[a]



Sources: ONS (including the Labour Force Survey (LFS)) and Bank calculations.

(a) The final data points are Bank staff estimates for 2014 Q4.
(b) Percentage difference between Bank staff estimate of the medium-term equilibrium level of average weekly hours worked and average weekly hours worked.
(c) Difference between the participation rate and Bank staff estimate of the medium-term equilibrium participation rate, which has been adjusted for the estimated impact of LFS sampling volatility in 2014 Q2 and 2014 Q3.
(d) Difference between Bank staff estimate of the medium-term equilibrium unemployment rate and the unemployment rate.

relative to their estimated trend, in the beginning of 2012. The February 2015 *Inflation Report*[1] discusses recent developments in indicators of spare capacity.

Why do trends in self-employment matter?

Understanding the factors behind the increase in self-employment is important because different explanations have different implications for monetary policy.[2]

For instance, some of the increase in self-employment could reflect **'hidden' unemployment** where it acts as a temporary option for individuals to work a limited number of hours as an alternative to unemployment but who would prefer jobs in companies. Alternatively, the self-employed might be earning some income but would like to work additional hours, indicative of **underemployment**. This could be particularly evident among those who have become newly self-employed and are looking to establish a customer base or those seeking to save enough for their approaching retirement. In these cases, self-employment could be associated with a degree of spare capacity related to cyclical demand conditions in the economy.

But an increase in self-employment could also reflect more persistent, structural, factors that lead large numbers of individuals to choose to become freelancers or set up businesses (or both). Such factors could include long-term demographic trends or industrial and technological changes that started before the recession. Such increases in self-employment are less likely to reflect additional spare capacity than those associated with a deficient cyclical demand for labour.

Self-employment in the United Kingdom: some broad historical trends

Before considering the changes in self-employment since the 2008–09 recession and what these mean for spare capacity and monetary policy, this section introduces self-employment in more detail. It explains how self-employment might arise from 'push' or 'pull' factors and discusses broad trends in self-employment in the United Kingdom over the past few decades. It also considers some of the structural factors that can influence the level of self-employment over time.

Self-employment can take many forms and generally offers workers more autonomy than working as an employee. People are considered self-employed if they run their own business and are responsible for its success or failure. The most common forms of self-employment are:

(i) **Sole traders**. A person who works on their own account. An example would be a plumber who works as a sole contractor, or a freelancing journalist.

(ii) **Partnerships**. Two or more people who own and run the business. Consultancies or accounting practices are common examples of partnerships.

(iii) **Limited liability companies**. This is a registered company and has at least one shareholder. Directors, who are self-employed, own shares in the business and run the company.

(1) Available at www.bankofengland.co.uk/publications/Pages/inflationreport/2015/feb.aspx.
(2) See April 2014 MPC minutes; www.bankofengland.co.uk/publications/minutes/Documents/mpc/pdf/2014/mpc1404.pdf.

Cyclical factors affecting self-employment

Changes in economic conditions can affect the incentives for people to become self-employed, in different ways. On the one hand, people can be 'pulled' into self-employment because of economic prosperity, if they think the benefits of self-employment will be higher than those associated with being an employee. Those leaving jobs to start their own companies are one example. Another example might be employees seeking more flexibility as independent consultants and advisers. One might expect such cyclical 'pull' factors to increase self-employment the most when the economy is growing rapidly. On the other hand, people can also be 'pushed' into self-employment due to economic adversity. Difficulties in finding a job might push unemployed workers and those in need of supplementary household income to become self-employed. This might give them the opportunity to earn additional income by selling goods and services to firms and households (see Blanchflower (2007)). 'Push' factors might increase self-employment the most when the economy is performing poorly and unemployment is high.

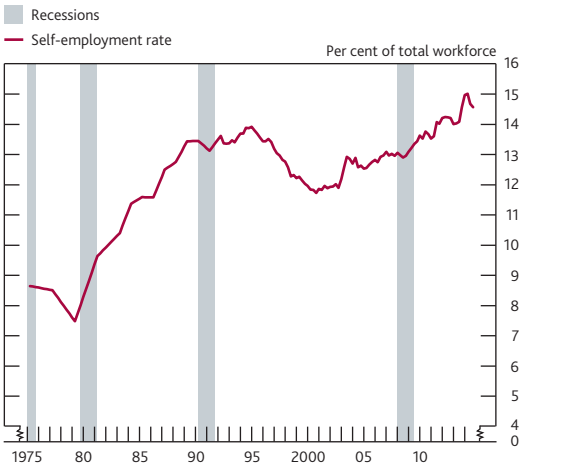
In the United Kingdom, the self-employment rate has increased since the late 1970s but has not been closely correlated with economic growth. This is perhaps because both 'push' and 'pull' factors play a role at the same time and can work in opposite directions. As the economy enters a recession more people might be pushed to enter self-employment, but fewer people are pulled into starting their own businesses. Then, as the economy begins to grow, those drivers are likely to reverse.

During the early 1980s recession, the self-employment rate rose and, in fact, continued rising after the recession ended[1] (**Chart 3**). As the economy contracted in the early 1990s, the self-employment rate fell before recovering. During the 2008–09 recession, the prevalence of self-employment in the labour force briefly fell. But it has increased since 2010 throughout periods both of subdued growth (such as from 2010 to 2012) and stronger growth (such as from 2013 to 2014).

Structural factors affecting self-employment over the long run

In addition to cyclical factors, there are a number of structural factors that affect people's decisions about whether to become self-employed. For example, the prevalence of self-employment in the workforce will be shaped by the tax code and regulation. For example, in 1995 Inland Revenue changed the taxation rules in the construction industry to reduce tax avoidance. This may have resulted in as many as 200,000 self-employed workers reclassifying themselves as employees by 1997 and could have lowered the self-employment rate by around 0.7 percentage points (see Freedman (2001)).[2] Another important example is the change in corporation tax in April 2002 that eliminated tax on the first £10,000 of company profits and allowed directors of small companies to save income tax by taking their salaries as profits. This increased the incentives to become self-employed. Correspondingly, the number of self-employed workers had increased sharply by the end of 2003, particularly in the finance and insurance industries (see Lindsay and Macaulay (2004)). More recent and upcoming reforms include the Enterprise Guarantee Scheme, the New Enterprise Allowance and the Onshore/Offshore Intermediaries legislation, all of which may affect incentives to become self-employed.

Chart 3 The self-employment rate in the United Kingdom[a]



Source: ONS (including the LFS).

(a) Data from 1975 to 1991 are not seasonally adjusted and have been interpolated to quarterly frequency.

Technological change may also influence the rate of self-employment in the economy. Many of the costs of starting a business (such as equipment and advertising), relative to other goods and services, have been falling over time.[3] This trend has been driven by the use of information, communication and technology products.[4]

For example, with internet commerce now widespread, it is much cheaper to set up an online business and there is less need for traditional bricks and mortar stores. Networking software, meanwhile, has facilitated easier matching of self-employed workers with customers interested in their goods or services. For example, online marketplaces (such as eBay or Airbnb) and mobile applications (such as the transport ordering service Uber) help sellers find customers. In many industries, the nature of the production process has also been

(1) This is thought to be due to a number of factors such as financial deregulation and easier access to credit, labour market policies to support unemployed workers in becoming self-employed, outsourcing and sub-contracting, and possible tax avoidance (see Meager and Bates (2004)).
(2) A similar but smaller effect could have been introduced by IR35 legislation in 2000. This discouraged workers from becoming self-employed if they were effectively working as employees for one company.
(3) Karabarbounis and Neiman (2014).
(4) See Oulton (2012).

changing. Globalisation and an emphasis on costs have led many companies to contract parts of their supply chain out to other firms. Breaking down the production process into many distinct tasks may have also made it easier for new firms to bid for contracts and produce parts or provide advice. This could have also increased self-employment.

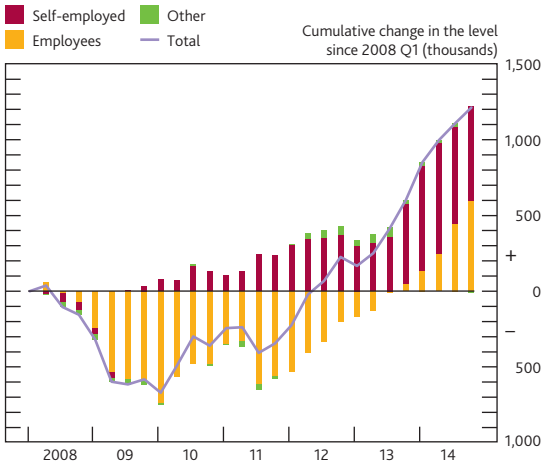
Individuals' preferences may also play a role, especially since self-employment can, in principle, be a relatively flexible form of employment. That could mean that it is appealing to particular types of workers who may wish to vary the hours they work, for example. As the composition of the UK population changes over time, that could also lead to changes in self-employment. For example, older people tend more often to be self-employed than younger people.

Overall, there are many factors that affect the rate of self-employment in the economy, both cyclical and structural. And it is difficult to assess what might be behind the recent rise in self-employment by looking at the aggregate data alone. More granular data on demographics and sectors can provide some insights. These are considered in the following section.

Understanding recent developments in UK self-employment

Since the start of the recession, self-employment has increased by around 600,000. This represents almost a third of the growth in employment since 2010 (**Chart 4**). The increase in self-employment occurred both in periods of subdued and stronger output growth.

Chart 4 Change in total employment since 2008 Q1[a]



Source: LFS.

(a) The 'Other' category includes those in government-supported training and employment programmes as well as unpaid family workers.

This section discusses why self-employment might have increased since 2008 and what that implies for the degree of spare capacity in the economy. It draws on data from the Labour Force Survey (LFS) which collects detailed information from households on their employment circumstances. The section first assesses the extent to which long-term trends could have accounted for the rise in self-employment. It then considers whether factors related to the recession matter. For example, evidence that self-employment in fact reflects 'hidden' unemployment would imply a greater margin of spare capacity than otherwise, as would the extent to which self-employed workers would prefer to work many more hours than they presently do. These are discussed in turn. Finally, this section considers data on self-employment income and what information that may reveal about spare capacity (and hence inflationary pressures) in the economy as a whole.

The impact of longer-term trends

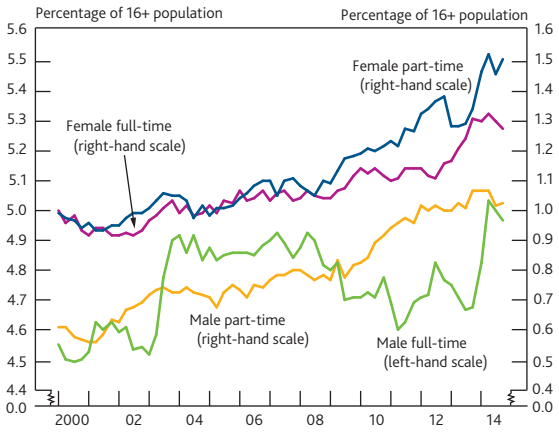
Structural factors typically influence self-employment over a relatively long period of time largely independently of the cyclical state of the economy. Increases in self-employment that are driven by long-term trends are likely to be composed of people who were 'pulled' into self-employment as a result of changes in technology, industrial structure or personal preferences, and tax/regulatory incentives.

A large part of the increase in self-employment since 2008 does indeed seem to reflect trends that began before the recession. The first is a trend increase in the female self-employment rate in the population (**Chart 5**). Part of this rise could reflect the desire to maintain a 'work-family balance' and 'flexibility of hours', which are among some of the most important reasons cited by women choosing self-employment according to a study by Hughes (2006).[1] Around half of female self-employment tends to be concentrated in services such as 'Professional and scientific' and 'Administrative and support', and the public sector. Most of the increases in female self-employment since 2008 occurred in these sectors.

In contrast, full-time male self-employment did not exhibit a particular long-term trend although the aggregate rate conceals differing developments across sectors. For example, industries such as 'Information and communications technology', 'Professional and scientific' and 'Administrative and support' have accounted for a rising share of male self-employment while the shares of other sectors, such as manufacturing or 'Wholesale and retail', have been declining over the past decade. While the general trend for full-time male self-employment has been roughly flat, the variation from 2008 onwards can largely be accounted for by variations in the number of self-employed in construction, particularly among lower-skilled workers.

(1) Based on a survey of self-employed Canadians in 2000, Hughes (2006) also reports that men place more of an emphasis on 'challenge' and 'prospects of more money'. All surveyed self-employed workers tend to value 'independence/freedom' the most. For a more detailed discussion, see Dawson, Henley and Latrielle (2009).

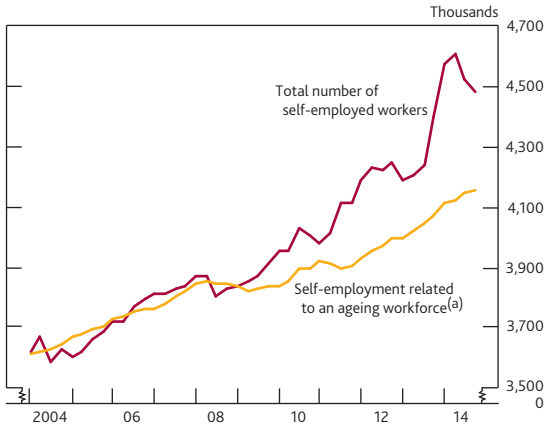
Chart 5 Self-employment rates by gender and working status



Sources: LFS and Bank calculations.

The second key trend is the ageing workforce. Older workers are more likely to be self-employed than younger workers. This is perhaps because they have accumulated more knowledge or experience to start businesses. Or it could be because they prefer the greater flexibility that self-employment offers (Blanchflower (2007)). The orange line in **Chart 6** illustrates what would have happened to the number of self-employed workers if self-employment rates for different age groups remained constant, with only the workforce age structure changing, since 2004. It suggests that around half of the increase in self-employment, shown in the orange line, over the past ten years has been associated with the ageing of the workforce.

Chart 6 The role of an ageing workforce in the rise of self-employment



Sources: LFS and Bank calculations.

(a) The orange line illustrates the effect of an ageing workforce on the level of self-employment in the United Kingdom. It is constructed by multiplying the number of workers in each age group by the proportion of workers who were self-employed in that same age group in 2004.

In summary, long-term trends such as the rising rate of female self-employment in the population and the ageing of the workforce can explain much of the increase in self-employment seen since 2008. Correspondingly less of the increase, therefore, seems likely to relate directly to the cyclical state of the economy, including the possibility that some of the increase in self-employment really represents hidden unemployment.

How much of the increase in self-employment is really 'hidden' unemployment?

Long-term trends do not account for all of the increase in self-employment, though, and so some of the rise could reflect hidden unemployment. Evidence that workers have been 'pushed' into relatively unintensive self-employment due to a lack of employee jobs could be indicative of hidden unemployment. This would imply that there is more spare capacity in the economy than standard measures would suggest. In other words, it would imply that there is a large pool of relatively unoccupied labour resources available to be put to productive use as the demand for goods and services increases. This section explores the relationship between the recession and self-employment in more detail.

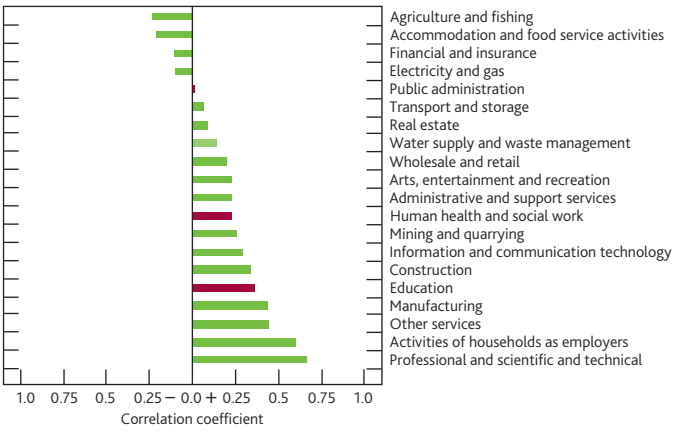
The relationship between job losses and increasing self-employment

In the public sector, employment fell by 900,000 between 2010 Q1 and 2014 Q3. Those who were made redundant could have decided to become self-employed. If that was the case, one would expect a negative relationship between changes in the number of employees and the number of self-employed. Overall, **Chart 7** shows there is little evidence of such negative correlation in industries most likely to reflect the public sector (highlighted in red). In 'public administration', falls in the number of employees have no correlation with increases in self-employment in the same quarter.(1) In 'Human health and social work' and 'Education' this correlation was actually positive. Regional data suggest that a negative relationship between changes in public sector employment and changes in self-employment was a bit stronger in some regions such as London, the East, the South East and the North West. Data on labour market flows indicate that around a quarter of the overall increase in self-employment since 2010 could be due to changes in public sector employment, assuming all of the increase in net flows from the public sector into self-employment was a result of redundancies. But this is likely to be an upper bound as some public sector workers could have become self-employed anyway.

In the private sector, a negative correlation between changes in self-employment and employee jobs is present only in a handful of sectors such as 'Agriculture and fishing' and 'Finance and insurance'. But these sectors account for a small part of the overall increase in self-employment. Since 2008,

(1) Of course, there may be a lag between the time a worker leaves a job and becomes self-employed. However, the results shown in **Chart 7** do not substantially differ for various lags between changes in self-employment and changes in employees in each sector.

Chart 7 Correlations between quarterly changes in the number of employees and self-employed workers by sector[a]



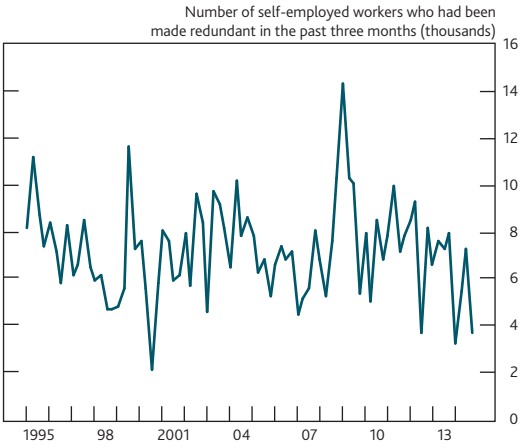
Sources: LFS and Bank calculations.

(a) The correlations refer to SIC2007 sectors and are calculated for contemporaneous quarters over the 2008–14 period.

increases in self-employment have often been mirrored by increases in employees (and *vice versa*).[1] Overall, it is not clear from these data that increases in self-employment have tended to be associated with a lack of employee jobs.

There is also specific information in the LFS about whether respondents were made redundant in the previous three months. **Chart 8** shows that the number of those who became self-employed following redundancy has not increased much since 2008. The number did spike up in early 2009 but the average during 2008–14 was only slightly higher than the pre-2008 period average. Again, this suggests there is limited evidence of a relationship between employee job losses and increases in self-employment.

Chart 8 The number of self-employed workers that had recently been made redundant



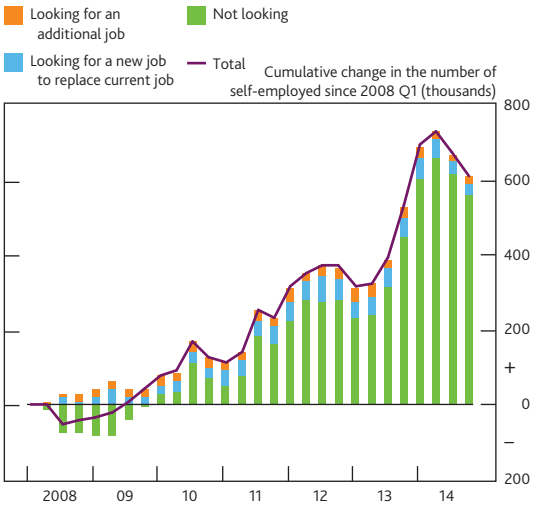
Sources: LFS and Bank calculations.

Evidence on self-employment as a temporary status

The suggestion that increases in self-employment might really represent hidden unemployment would be strengthened if there was evidence that self-employment had become more of a temporary state. For example, if there has been a rise in the number of self-employed people reporting that they were looking for additional work or an increase in those who leave self-employment for jobs within companies then that could be suggestive of a degree of some underemployment, or slack, among the self-employed.

There is limited evidence to suggest that there have been large increases in this form of hidden unemployment. **Chart 9** shows that the number of self-employed workers who are looking for an additional or new job has increased slightly since 2008. But it has only accounted for around 9% of the overall increase in self-employment; the majority has been among those who are not looking for alternative work. Overall, the proportion of those self-employed that were interested in other work was around 4% at the end of 2014 and was actually a few percentage points lower than the proportion of employees looking for another job.

Chart 9 Self-employment decomposed by job seeking status[a]



Sources: LFS and Bank calculations.

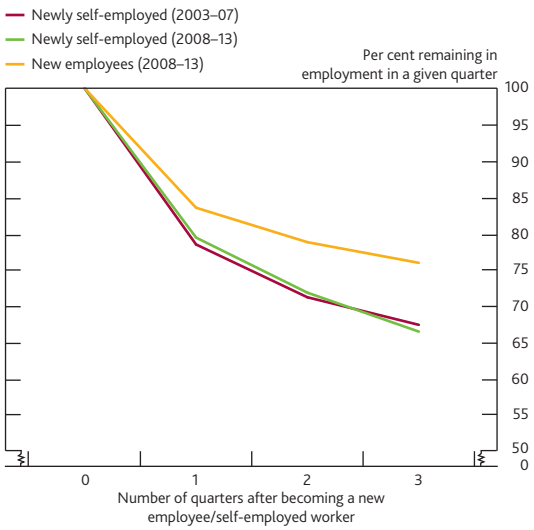
(a) Refers to LFS questions on whether respondents are looking for different or additional jobs and the type of work they are looking for.

Another way is to look at what people do soon after becoming self-employed. An increase in the proportion of newly self-employed workers moving back into jobs within companies might be indicative of the self-employed status representing unemployment in disguise.

The data do not, however, suggest that workers who became self-employed after 2008 were more likely to move back into jobs than those who became self-employed before the recession (**Chart 10**). In general, the proportion of newly self-employed who remain self-employed falls over time.

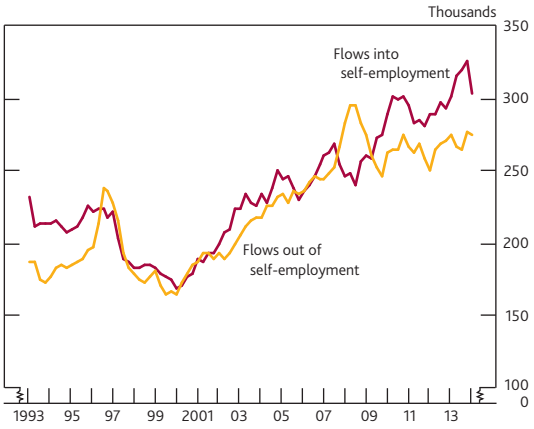
(1) However, it is possible that some redundant employees then became self-employed in a different sector.

Chart 10 Proportion of newly self-employed workers remaining in employment over time



Sources: LFS and Bank calculations.

Chart 11 Flows in and out of self-employment(a)



Sources: LFS and Bank calculations.

(a) Changes in the number of self-employed workers implied by longitudinal data above may be different to changes measured by cross-sectional data. This is due to methodological differences (see ONS (2011) for more details).

After three quarters, around a third of the newly self-employed leave self-employment with about half of those moving to jobs as employees while the other half becoming inactive or unemployed. These proportions have changed little compared with before the recession.(1) Furthermore, the proportion of the newly self-employed who stay in self-employment is not far below the proportion of new employees who stay in employment after a year.

So far, the evidence suggests that of the increase in self-employment since 2008 the majority has not happened as a consequence of economic necessity. Instead, people seem to have been voluntarily choosing to become self-employed. Survey evidence corroborates this. A survey by RSA/Populus suggests that close to 60% choose self-employment to 'have more freedom' and around 70% of respondents in a Resolution Foundation (RF)/Ipsos Mori survey who became self-employed since the recession stated that 'self-employment' is their preference.(2) Nonetheless, both studies by the RSA and the Resolution Foundation suggest around a quarter of respondents have become self-employed in the past five years out of necessity.

Postponing retirement?

While the decision to *enter* self-employment appears in large part not to be closely related to the recession, the decision to *leave* (or outflow from) self-employment could have been affected by cyclical factors. If some workers, particularly those shortly due to retire, have postponed leaving self-employed work then this could explain some of the increase in self-employment.

Part of the increase in self-employment can be attributed to relatively lower outflows (**Chart 11**).(3) It is possible that the recession has resulted in wealth losses which may have led to some self-employed workers choosing to work longer in order to boost their retirement income.

Asset prices fell substantially following the financial crisis and it took the FTSE All-Share index five years to recover while house prices still remain slightly below pre-crisis levels (**Chart 12**). Interest rates remain low and the cost of buying an annuity, that is, a stream of pension income, remains higher than before the crisis.(4) Furthermore, the weakness in self-employment income since 2008 may have led to older workers choosing to work longer to save the same amount. According to a Saga survey carried out in 2014, around a third of older workers do not feel confident enough to retire.(5) But the LFS data suggest that only 2.6% of older self-employed workers are looking for additional work so it is unclear whether there is spare capacity among these workers.

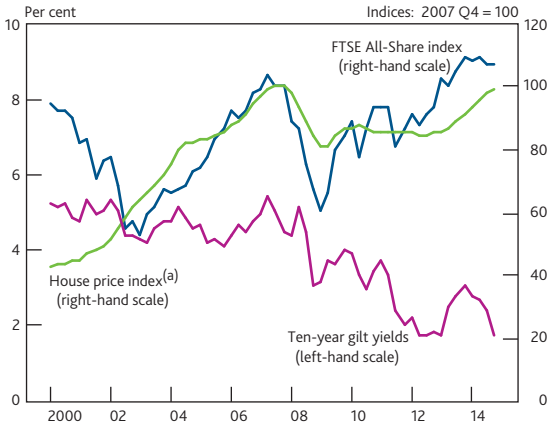
On balance, there appears to be limited evidence of hidden unemployment among the self-employed: although there has been a small increase in the number of self-employed workers looking for other work, most of those who are self-employed appear content with their choices.

Underemployment: desired and actual hours worked

Another way of assessing spare capacity is to look at underemployment. For example, people who are self-employed might like, and have the potential, to work

(1) Since 2008, those newly self-employed who leave self-employment are slightly more likely to end up unemployed. But this increase is relatively small.
(2) The Populus survey is a survey of microbusinesses and was commissioned for the RSA report on self-employment (see Dellot (2014)). Ipsos surveyed self-employed adults for Resolution Foundation's research on self-employment (see D'Arcy and Gardiner (2014)).
(3) D'Arcy and Gardiner (2014) estimate that around a third of the increase in self-employment is due to a lower outflow rate. In contrast, a study by the ONS (2014) suggests most of the increase is because fewer people are leaving self-employment than in the past.
(4) Annuity rates are closely related to long-term gilt yields. The lower the long-term gilt yield, the more expensive it becomes to buy a given stream of pension income.
(5) The survey was conducted as part of Saga's September 2014 Employment Report.

Chart 12 Asset values and long-term gilt yields



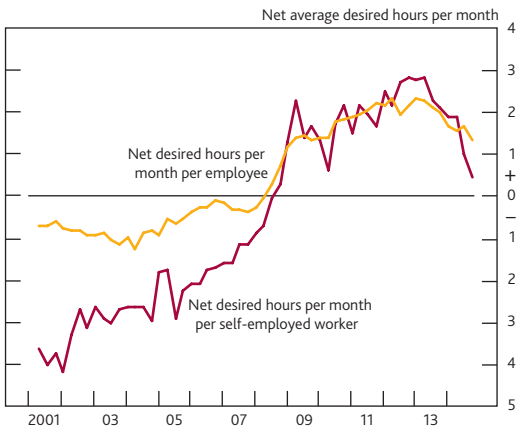
Sources: Bank of England and Bloomberg.

(a) The house price index is an average of Nationwide and Halifax price indices.

more hours than they actually do. This spare capacity can be used up as the economy recovers before inflationary pressures build.

The LFS asks people about the hours they would like to work. The difference between that and their actual hours is a measure of underemployment — that is, spare capacity. Before 2008, workers on average worked more hours than they wanted to and this reversed after the recession (**Chart 13**). But since 2008 the actual hours worked by self-employed workers do not indicate an unusual degree of underemployment relative to employees. On average, the self-employed worked 1.3 hours more per week than employees in 2014. The number of additional hours the self-employed have wanted to work has, on average, been similar to what employees have reported. Moreover, as the economy started growing strongly in 2013, this has fallen more sharply for the self-employed. Overall, the increase in net desired hours since 2008 among the self-employed only accounts for around a tenth of the increase in overall net desired hours. This degree of underemployment among self-employed workers is already captured by Bank staff estimates of spare capacity within the labour market.

Chart 13 Average net desired hours(a)



Sources: LFS and Bank calculations.

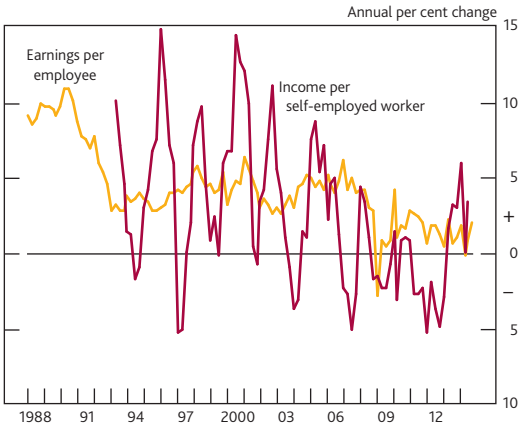
(a) Average net desired hours are calculated as the difference between the sum of all additional hours workers want to work and the sum of hours they wanted to decrease, divided by the number of workers.

Insights from self-employment income data

In principle, developments in income could provide a more direct indication of self-employed workers' activity and, therefore, how much spare capacity there might be. Income from self-employment might be weak if people are looking for a job within a company or want to work a lot of additional hours. Even if the hours worked reported by the self-employed have remained reasonably strong, they may generate less output if a significant amount of time is spent soliciting work and pitching projects. This is likely to be cyclical as it can take more effort to obtain business during periods of weak economic growth, which would show up in the economic data as weaker productivity.

On the face of it, there is some evidence that earnings for the typical self-employed worker fell more sharply than for employees. **Chart 14** suggests self-employment income fell sharply in the recession and was around 7% lower in 2012 than in 2008. Although it appears to have recovered somewhat since 2013, it is unclear to what extent lower income from self-employment may reflect the impact of spare capacity or weaker productivity among self-employed workers.

Chart 14 Growth in self-employment income compared to employees' average weekly earnings growth(a)



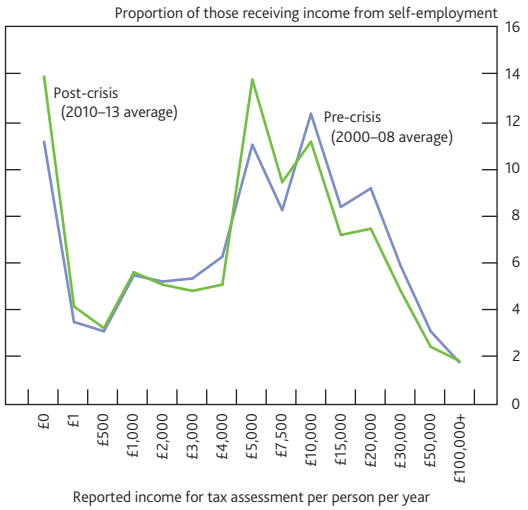
(a) Self-employment income shown above is mixed income based on the quarterly national accounts data. It includes HMRC data up to 2013 Q2. The rest is imputed, based on average weekly earnings (AWE) data for employee earnings and self-employment data from the LFS. Earnings per employee are based on the historical AWE series prior to 2000.

Moreover, it is difficult to interpret recent movements in self-employment income for a number of reasons. First, income from self-employment can be difficult to measure. The LFS does not ask about the income of self-employed workers. Tax returns are submitted to Her Majesty's Revenue and Customs (HMRC) with a twelve-month lag, which means that recent changes have to be estimated. Also, since income is self-reported there is scope for income data to be misstated.

Second, self-employment income can also be difficult to interpret due to compositional effects and volatility. Since around 2004, for example, self-employment income growth has mostly been lower than total employee earnings growth. Much of this wedge may therefore not be cyclical, and may be due to structural changes such as increases in self-employment among workers whose level and/or growth of income might be less than for the average self-employed worker. This would pull down on average income growth. Income from self-employment is also more volatile than employees' earnings growth. This is perhaps unsurprising given that self-employed workers take on more risk and their incomes may behave more like company profits than wages.

An important compositional change affecting income measurement is that the rise in self-employment in recent years appears to have been concentrated, on average, in relatively lower income workers. **Chart 15** shows that the proportion of self-employed workers earning between £5,000 and £7,500 per year has increased since 2008. This could be suggestive of spare capacity to the extent that these lower income workers also prefer to work additional hours. But this also might, to an extent, reflect a growing prevalence of lower income, less intensive self-employment that occurred before the recession. There has also been an increase in those reporting almost no income from self-employment. This is difficult to interpret as the HMRC data also captures employees who earn some additional income outside their main job, from freelancing.(1)

Chart 15 Distribution of self-employment income(a)



Sources: HMRC and Bank calculations.

(a) Self-employment income is defined as reported profits minus losses and capital allowances.

Furthermore, the implications of falls in self-employment income growth for inflationary pressure will depend crucially on the underlying reasons for weaker income. On the one hand, to the extent that there is underemployment among the self-employed, workers could increase their hours without causing strong upward pressures on other workers' pay and/or prices of the goods and services the self-employed offer. On the other hand, falls in self-employment income growth could reflect persistently lower productivity, with workers unable to produce as much output as previously for a given amount of hours. In this case, increases in hours would result in upward pay and price pressures. There are many reasons for the weakness of labour productivity in the United Kingdom and a more detailed explanation of the 'productivity puzzle' is provided in Barnett *et al* (2014).

Overall, it is hard to draw firm conclusions from self-employment income data. Income from self-employment seems to have weakened since 2008 but it is unclear what might have caused this. While changes in income appear to be more cyclical for self-employed workers than for employees, the data are also volatile and influenced by compositional changes.

Conclusion

Self-employment has become an increasingly important feature of the UK labour market. Self-employment now accounts for almost 15% of the UK workforce, and growth in self-employment has accounted for a third of the increase in employment since 2010. Developments in self-employment can affect the overall degree of spare capacity in the labour market which, in turn, can influence wages and inflation. An important question, therefore, is to what extent the increase in self-employment since 2008 is a cyclical response to the recession.

There appears to have been a cyclical effect on the hours self-employed workers desire to work. But the data do not suggest anything particularly unusual relative to employees. Declines in self-employment income since 2008 do appear to be more cyclical for self-employed workers than for employees, but it is hard to draw firm conclusions from the data.

Instead, the data suggest that overall, much of the rise in the number of self-employed workers since 2008 is likely to reflect trends that began before the recession. Structural factors such as changes in the composition of the workforce and technological change may have, over a longer period of time, led people to choose to move into self-employment. While the recession may have pushed workers into self-employment as an alternative to unemployment, there is little evidence to suggest this was a major factor in the rise of self-employment. Outflows from self-employment, compared to inflows, have remained relatively flat and this might be affected by older workers' retirement decisions.

(1) Employees who earn additional income from freelancing do not appear in the LFS as self-employed unless freelancing is their main activity or source of income.

To the extent that most of the increase in self-employment can be accounted for by structural factors, the cyclical effects are not likely to represent any additional slack above what is incorporated in Bank of England staff estimates of spare capacity within the labour market.

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