

The post-crisis labour market and the challenges to policymakers

Julia Darby & Stuart G. McIntyre, University of Strathclyde

Introduction & Overview

While headline figures on employment, the participation rate and the unemployment rate for the UK are encouraging, there is widespread agreement that the evolving changes in the labour market underlying these figures are more complex. One consequence is that headline labour market figures are less useful than they were previously for measuring the overall health of the labour market, not just in Scotland, but across the UK and many other countries.

It is unclear at this stage whether many of the changes that have occurred will turn out to be temporary, and so can be expected to revert back to pre-crisis behaviour and norms as the recovery progresses, or whether the severity of the Great Recession has caused persistent changes in the functioning of the labour market. This is important, not least since persistent structural changes may mean that policies that worked well in the past may no longer be appropriate.

In this article we begin with a discussion of some key features of the post-crisis labour market. We then review a number of the challenges that the post-crisis labour market poses for policymakers, starting with how changes in the labour market impact on fiscal balances. We then emphasise that the UK Monetary Policy Committee's assessment of the remaining slack in the labour market is critical to their decision as to how long monetary policy can be supportive of the recovery, without risking raising inflation above its target.

We argue that it is critical to gain an understanding of the extent and nature of *underemployment* in the economy when making assessments of current labour market slack¹. This understanding is also critical to motivating well designed policy interventions to deliver better labour market outcomes for those currently underemployed. We review a number of specific policy prescriptions, drawing on the existing literature, as well as on UK and Scottish government experiences. We argue that appropriate policy design is now of critical importance to reducing the risks of polarization of the labour market and secular stagnation.

Recovery is progressing but evidence of a post-crisis hangover remains

The most recent release of UK GDP data indicates that the 2008 peak in real GDP was finally surpassed during 2013 and the latest GDP growth figures are more buoyant, particularly when compared to those in much of the rest of Europe. For some time now employment figures have been stronger than forecasts of the Office of Budget Responsibility (OBR) and the Bank of England. The path of

¹ The Scottish Parliament's Economy, Energy and Tourism Committee published a report on "Underemployment in Scotland" in April 2013. This report discusses the definition of the term, evidence on its prevalence, costs to individuals and the economy as a whole and sets out a number of policy options.

employment since 2010 has been markedly stronger than in previous recessions, although underlying the aggregate employment figures, the composition of employment is markedly different in the post-crisis period and productivity and earnings have remained weaker than expected during the recovery. Much of the increase in total jobs has been concentrated in self-employment, part-time and temporary employment. Alongside this a small decline in numbers in full time employment is still evident relative to 2008.

These compositional changes are important. Self-employment has accounted for over one third of the rise in employment since 2010, and figures released by the Office of National Statistics ONS in August 2014 show an increase of 732,000 since 2008:Q1 which accounts for 67% of the rise in total employment over the same period, see ONS (2014). This rise, in part, reflects a long-term trend, though the increase has been stronger than forecast. Prior to the crisis the construction industry was the most common sector for the self-employed, with around 40% of construction workers classified as self-employed. However the crisis hit this sector the hardest, and between 2009 and 2014 it had seen the slowest growth in self-employment compared with other major industry groups. ONS figures show that the recent rise in self-employment was largest in professional, scientific and technical activities which include roles such as management consultant, book-keepers, photographers and chartered accountants.

Reliable information on income from self-employment is only available with a long lag as early survey based estimates are replaced with data from self-assessed tax returns, but available information confirms that earnings of many of the new self-employed lie at the lower end of the income distribution. The Family Resource Survey indicates that in 2012/13 the average median income from self-employment was £207 per week, a fall of 22% (after taking into account inflation) since 2008/09¹ compared with a fall of around 6% for employees over the same period. It's likely that the aggregate figure includes some workers who became self-employed in response to temporarily low demand for labour and are working fewer hours than they desire. Some policy makers assume affected workers will prefer to switch back into employment as demand recovers.

Another feature of the post-crisis labour market is underemployment. In broad terms underemployed include those working fewer hours than they would like or working in jobs that underutilise their skills; i.e. part-time workers that would prefer to be full-time and skilled workers currently in low paid, low skill jobs. Underemployment is distinct from unemployment in that the individuals are in work but are not working at their full capability. A benefit of underemployment, relative to unemployment, is that workers remain attached to the labour market. It is widely accepted that underemployment has contributed to the resilience of employment through the recession. However, it also seems likely that underemployment is one factor that can help to explain the weakness of productivity in the face of rising employment, the so called productivity puzzle, which is evident both in terms of low output per worker and low output per hour, see for example Barnett et al. (2014). In our view, restoring productivity to pre-crisis trends is likely to require substantial outflows from underemployment into employment to better match desired hours and better utilise workers skills.

It is particularly difficult to judge to what extent, and how quickly, underemployment of will dissipate. Janet Yellen, Chair of the Federal Reserve, touched on these issues and the challenges they pose to

those responsible for US monetary policy in her speech at the Federal Reserve Bank of Kansas City's Economic Symposium at Jackson Hole in August, Yellen (2014). UK policymakers face similar challenges, as we now explain.

The implications of labour market developments for UK macroeconomic policy

Policymakers have to make difficult judgments about the extent to which labour market developments such as those described above are cyclical and can be expected to revert to better understood norms as the recovery progresses, and the extent to which they are structural and can be expected to persist.

Arguments that increases in participation, in part-time employment and in self-employment are likely to be temporary and will reverse as recovery progresses include suggestions that increased participation largely reflects firms' and households' responses to temporary impacts of the financial crisis. For example, increased participation of older workers can reflect postponement of retirement in response to reduced real asset values and lower income from savings. At the same time, additional entrants into the labour force may be working to compensate for losses in household incomes associated with poorer outcomes for primary earners who have faced cuts in their hours and/or earnings. As asset values recover and primary earners return to their more usual hours of work, this form of participation may fall back, and could potentially do so quite quickly. It's also possible that as the recovery progresses a lot of part-time workers should be able to get full-time jobs, although as Yellen points out, the ongoing shift in employment away from goods production and towards services, a sector which typically uses a greater portion of part-time workers, may well boost the share of part-time jobs in the longer term.

From the fiscal policy perspective one key question is how much of the government's budget deficit can be expected to narrow automatically as the economy recovers, and how quickly? Labour market developments clearly matter here, given the importance of income tax and national insurance contributions paid by workers in total government receipts and the direct links between labour market developments and welfare payments, including those to the working poor.

Reduced hours of work and earnings of primary earners have certainly reduced income tax receipts and the shortfall generated has not been offset by increased employment given that the new jobs have been disproportionately concentrated in low paid, part-time work. As the OBR have pointed out, this kind of employment-driven growth generates less in tax receipts because a given amount of labour income split between more people attracts a larger number of tax-free personal allowances, reducing the effective tax rate, see OBR (2014). In this sense both the level and composition of labour income have become less favourable for public finances². Indeed, this could well become more acute if there are further increases in the value of tax free allowances as some (political parties) propose.

Successive OBR forecasts have assumed that recovery will broadly generate a return to pre-crisis norms, with relatively modest revisions made to potential output. When outturns have disappointed, their successive forecasts have broadly rolled forward the expected recovery and have made relatively modest revisions to potential output. It would be more informative if forecast ranges were provided, and

² These issues have been discussed at length in recent weeks, see for example Cadman (2014), Houlder (2014) and Barrett and Giles (2014).

if implications of alternative speeds of recovery and alternative trajectories for potential output were discussed. For now, the OBR's central forecasts do not appear to have taken on board the rather different characteristics of the most recent changes in the composition of employment, leaving them overoptimistic on income tax receipts and surprised by the continuing weakness in overall earnings growth. Nonetheless, in its own recently published analysis of their forecast errors the OBR concludes that the biggest factors explaining the persistent errors in forecasts of income tax revenues have been weak earnings growth reflecting low productivity, along with lower dividend and interest income, OBR (2014). At the very least it would be helpful to see the implications of alternative scenarios discussed – admitting the possibility that the labour market may not recover to pre-crisis norms.

In order for tax receipts to recover the OBR stress that the gap between actual and potential output needs to close and productivity needs to recover. It admits that considerable uncertainty remains in relation to how much productivity will recover as demand conditions improve and how much the shortfall in tax receipts reflects structural weakness that will not come back. Alongside errors in forecast income tax revenues it has been a challenge to for the OBR to accurately forecast welfare payments. The main sources of errors that they've identified relate to housing benefits, tax credits, state pensions and job seekers allowance. The main theme being that in the post-crisis period a greater number of the working poor have been entitled to claim benefits and tax credits than before. Again, it is clear that a return to pre-crisis norms will only follow increases in productivity and wages.

A second key question repeatedly asked of fiscal policymakers is can and should UK wide fiscal policy do more to support the recovery?

A prominent policy of the UK Government has been to increase in the personal income tax allowance, at the same time as reducing expenditure across non-protected departments, and this is planned to continue. More specifically, the personal allowance has been increased in successive budgets by more than inflation, from £6,475 in 2010-11 to £10,000 by 2014-15 and will rise further on current plans, to £10,500 in 2015-16. There are some positive impacts of this policy: it takes some additional families on low incomes out of paying income tax and alongside welfare reforms further strengthens work incentives especially for some low earners. However, this is a policy that all tax payers benefit from, and while this may make it popular with voters in general, more targeted policies may be more effective in helping those with the lowest incomes/earnings. Those with the lowest incomes don't benefit at all directly and are in fact could be worse off if the Government's approach to funding tax giveaway involves reductions in welfare payments and public service provision. Other policy levers are available to the UK Government.

Commentators including the International Monetary Fund (IMF) and the UK's Institute for Fiscal Studies (IFS) have pointed out that there are a number of other potential interventions that would have been better targeted at strengthening the labour market. The IMF has gone further in setting out a list of "job-friendly" policies in their latest Fiscal Monitor, IMF (2014a), top among them are suggestions for targeted cuts in employer social security contributions (NICs), increased focus on growth enhancing public services; improving access to finance and training; safeguarding social needs by protecting social expenditure; and improving infrastructure, especially in the areas of transport, energy, and housing. The

IMF explains that this can be done at relatively low financing cost at present, with costs quickly offset by both short and long-term benefits. In conclusion, the IMF argue that the *composition of fiscal policy* can and should do more to support the recovery.

From the perspective of monetary policymakers the challenge is to understand the implications of labour market developments for inflation³. In the current low inflation environment key questions are: i) what degree of slack remains in the economy and ii) how far can monetary policy help to reduce this slack without boosting inflation above its target?

UK monetary policy has maintained a highly accommodative stance since the crisis. Continuing this stance has helped to offset some of the adverse impact of reductions in government spending and is likely to continue to do so, provided that inflation is expected to remain below target.

At present, and on balance, the majority of the Bank of England's Monetary Policy Committee (MPC), as well as external commentators including the IMF, believe monetary policy should continue to support the recovery as it has to date. Crucial to their assessment is evidence from the range of indicators that the Bank of England uses to assess how much spare capacity or "economic slack" remains. As noted at the outset, headline figures on the unemployment rate, employment growth and participation rates are currently less informative than they were in the past, and this has been recognised by the MPC when making judgements. In this regard it is perhaps surprising that the Bank of England referred to a specific employment rate when forward guidance was introduced, as did the Federal Open Market Committee in the United States. Nevertheless, the Bank has recognised the importance of indicators of underemployment and (still muted) wage growth in its policy decision making.

Of course, policy decisions are sometimes based on finely balanced judgements. Members of the MPC are acutely aware that changes in monetary policy can only be expected to operate with a lag. On the one hand it is desirable that the MPC anticipate labour market pressures by raising the Bank Rate in advance of any inflationary response, on the other hand if the Bank Rate is increased too far ahead of any prospective pickup in wage growth and/or other emerging inflationary pressures there is a risk of increasing the vulnerability of highly indebted households.

Minutes of the September 2014 meeting of the MPC (the most recent available at the time of writing) indicate that there are some signs that labour market slack is diminishing, see Bank of England (2014b). In particular job-to-job flows and voluntary resignations, which fell markedly during the crisis, are beginning to rise again. This shift seems indicative of improving confidence, and may in part reflect individuals finding work in roles that better match their skills and desired working hours. Likewise the minutes record growing evidence that some individuals who became self-employed in response to temporarily depressed demand for labour may be switching back into employment. The MPC expect these developments to reduce underemployment, while boosting measured productivity and earnings, while having only a modest impact on wage settlements and unit labour costs.

³ Note that we focus here on policy within the remit of the UK's Monetary Policy Committee and don't, for reasons of space, include discussion of related policy in relation to financial stability objectives.

Nonetheless, considerable uncertainty remains as to the extent of these ongoing developments, and how quickly they will take effect. The views of two MPC members are that it is possible that the dislocation that has held back wage growth and productivity is now being corrected quite rapidly. The most sceptical on whether underemployment will in fact translate into increased labour supply as recovery progresses is external MPC member Martin Weale, see Weale (2014a,b,c). He's pointed out that people whose partners lose jobs or face a significant drop in their earnings may well say that they would like to work longer, but that once the economy recovers and their partners' earnings are restored the implied extent of the increase in desired labour supply may not materialise. He has set out his doubts on the validity of inferences from survey information on underemployment and has concluded that, at best, a very substantial margin of uncertainty remains. Weale's own view is that underemployment statistics overstate the underlying amount of spare capacity and he has cautioned that the stated intention of raising Bank Rate gradually implies that the first rise needs to come sooner than would otherwise be the case. At present, his view that Bank Rate should rise soon is not shared by the majority of the MPC, who still see muted inflation pressures from wage growth over the next year to 18 months and it looks unlikely that they all share the view that Martin Weale expressed in a speech in October 2014 that the "best indicator" of future wage pressures wage pressures "is the rate at which unemployment is falling" Weale (2014c). It is therefore clear that changes in the labour market are central to the time path and strength of monetary policy decisions in the UK at present.

Quality of jobs and zero-hours contracts

Another area of concern for policymakers lies in the quality of jobs being created; this is partly reflected in the nature of contracts. A great deal of recent attention has focused on the growing prevalence of so-called zero-hours contracts, described as a type of contract used by employers whereby workers have no guaranteed hours and agree to be potentially available for work (see for example Pyper and McGuinness (2014), Chandler(2014) and Freeman (2014).

Awareness of the use of such contracts has been heightened in the post-crisis labour market. While it's fair to say that there are severe limitations to the available data in this area, the ONS undertook the first survey of businesses to obtain an employer-based estimate of the number of employee contracts that did not guarantee a minimum number of hours, but which provided work in the survey reference period in January 2014 (covering the fortnight beginning 20 January 2014). A second such survey took place in September 2014 and results will be reported at the end of the year. This supplements employee based information collected through the Labour Force Survey.

For employers, zero-hours contracts offer a means of flexibility to respond to uncertain and fluctuating demand. Flexibility is also welcomed by some kinds of workers, for example students and some pensioners⁴. However, for workers who would prefer more secure work, but aren't able to find other openings, contracts with no guaranteed hours are a key source of financial insecurity and are not likely to be conducive to career development and progression. Welfare benefits available to the working poor can ease the strain somewhat, but don't actively help workers who are unhappy with their hours. Zero-

⁴ Students need to fit paid work around their other commitments, so having the ability to turn down work around exam times etc. is important. Pensioners who are seeking a little extra income may be able to live with the uncertainty of not having guaranteed hours.

hours contracts can create significant financial insecurity for employees, uncertainty around entitlements to benefits and the new auto-enrolment system for workplace contributions, high workplace stress, and lack of opportunities for career progression. As the recovery strengthens, some workers may be able to renegotiate their contracts or find permanent jobs, but zero-hours contracts are likely to remain a feature of the labour market.

Several consultations on the use of zero-hours contracts have reported during the past year. Vince Cable, Secretary of State for Business Innovation and Skills, led on the UK Government consultation which ran from December 2013 until March 2014, and reported in June 2014. The main outcome was the announcement of the Government's intention to ban the use of exclusivity clauses which seek to prevent individuals on zero-hours contracts from working for another employer, even when no work is guaranteed. The use of such clauses undermines choice and flexibility for the individuals concerned, and seeks to prevent them from finding alternative ways to increase their earnings. The proposal to ban exclusivity clauses is now a provision in the Small Business, Enterprise and Employment Bill, currently being considered by the UK Parliament.

An additional issue, and where there is currently some confusion, is whether those people who are currently unemployed and refuse a zero-hours contract will face benefit sanctions. Although Vince Cable has tried to give reassurances in this regard, Minister for Employment Ester McVey has not ruled out imposing sanctions on those failing to accept a zero-hours contract, without good reason, under the new system of Universal Credit, see Pyper and McGuinness (2014).

In April 2014 the Labour party published its own consultation in Pickavance (2014). This made a number of recommendations in addition to banning exclusivity clauses: i) that employers should be prevented from requiring zero-hours workers to be available for work; ii) that zero-hours workers who in practice work regular hours should, after a specified period, have a right to a contract with fixed minimum hours; and iii) that zero-hours workers should have a right to compensation when shifts are cancelled at short notice.

Policy changes have also been proposed in Scotland, and may well have an impact relatively soon. While employment policy is a reserved power of the UK Government, the Scottish Government is seeking to influence the types of employment contract that firms tendering for Government work use via its procurement procedures⁵. New Scottish legislation is expected to be in place towards the end of 2015.

So far we have concentrated on the actual versus desired hours dimension of underemployment, but two further dimensions are also important and potentially have even greater implications for the future productive potential of the economy and for the persistence or elimination of sub-optimal outcomes. These dimensions relate to geography and skills.

Geographical and skills dimensions to underemployment

The geographical dimension of underemployment is sometimes referred to as geographical mismatch and stems from the fact that jobs are often located where poorer people cannot afford to live. The skills

⁵ See the Procurement Reform (Scotland) Act 2014, which was passed by the Parliament on 13th May 2014 and received Royal Assent on 17th June 2014.

dimension of underemployment refers to workers who are in jobs that don't fully utilise their skills or qualifications. One of the clearest examples of the skills dimension of underemployment is the prevalence of a proportion of recent graduates working in non-graduate jobs⁶.

The policy prescriptions that have been advanced to reduce geographical underemployment include i) area based policies aimed at incentivising companies to locate/expand in areas of high unemployment and ii) helping workers move to, or commute to, areas with lots of jobs. There are many examples of past policies that fall into the first category including Regional Selective Assistance, Enterprise Zones, European Union Structural Funds, and industrial cluster policies. However, for a range of reasons, evaluations of such policies tend to conclude that they have not generated the hoped for outcomes, see for example Lawless et al. (2011) and Neumark and Simpson (2014).

The objective of helping workers move to areas with lots of jobs has motivated policy prescriptions of liberalising planning laws, removing zoning restrictions and incentivising provision of cheaper housing, all of which can be expected to have impact albeit with varying time lags. The objective of helping workers to commute to areas with job vacancies recognises that a lack of affordable and efficient public transport can constitute a barrier that makes it harder for people to access appropriate work. Some powerful recent evidence comes from a US study of job search among nearly 250,000 Americans in nine cities in the Midwest who lost their jobs during mass lay-offs at the start of the crisis.

Their engagement with the labour market was tracked over a six year period and findings suggest that the typical American city dweller can access just 30% of available jobs in their city within 90 minutes using public transport, see Andersson et al. (2014). Spending money on transport infrastructure to improve job accessibility is consistent with the IMF's call for a well-designed fiscal stimulus discussed earlier. Indeed, in England, the economic case put forward for HS2, and now HS3, stresses the intention to create a network of cities that are more accessible to workers by cutting journey times. However there's been vocal debate on how large the potential employment effects of such initiatives really are, with critics focusing on the need to help those in areas of social deprivation outside cities to access available jobs, rather than improved city to city links, see for example Overman (2012).

Initiatives to improve the accessibility of low skilled workers to existing vacancies need not involve massive infrastructure investment of the scale of HS2 or HS3. In fact, researchers looking at the US data have suggested that the amount of money involved could be relatively small: simply buying buses and having them pick up workers in lower-income, outer neighbourhoods and then running them from those places — not stopping along the way — all the way into commercial centres can greatly increase the accessibility of jobs to low-income workers, see Andersson et al. (2014). We believe that serious consideration should be given by UK and devolved policy makers to an assessment of geographic mismatch and what steps can be taken to improve accessibility of vacancies, particularly for low skilled workers.

Returning now to skills mismatch, much of the focus of policy has been on improving education to work transitions. For example, a number of specific policies were recommended by the Commission for

⁶ Considerable media attention focused on an ONS report from November 2013 which found that 47 per cent of those who completed a degree in the past five years were working in non-graduate jobs (predominantly in roles such as sales assistants and care workers) in April to June 2013 as compared to 39 per cent in 2008, see Office of National Statistics (2013).

Developing Scotland's Young Workforce, chaired by Sir Ian Wood which reported in June 2014, Scottish Government (2014). The recommendations can be broadly described as encouraging a closer relationship between schools and industry; a better tailoring of college level education to the needs of employers; improvements in the modern apprentice scheme and work to encourage employers to hire young people. While undoubtedly important, policy needs to recognise that those currently in education and transitioning into the labour market represent only one dimension to the skill match issue. As we have emphasised above, seeking to increase outflows from underemployment is critical if the workers are to achieve their potential and if the economy's growth potential is to be restored.

In some ways the challenge faced by policy makers here is similar to that posed by youth unemployment and long-term unemployment. So discussion of interventions that seek to improve incentives for firms to take on younger workers, for example by targeting a reduction in non-wage labour costs via a reduction in employers' national insurance contributions; taking actions that improve SME's access to graduate labour markets and to better match those firms with vacancies to access a suitably qualified pool of applicants are all relevant. Reports prepared for the Department of Business Innovation and Skills and by the Small Business Federation have made important contributions here, see Sear et al. (2012) and Federation of Small Businesses (2009). The focus particularly on small businesses is warranted because a considerable proportion of the new jobs created during both the recession and the on-going recovery are in successful small businesses that are innovative and are drivers of growth in the economy as a whole, see Department for Business Innovation and Skills (2013).

However, in this article we have emphasised that it is important to have a clear focus on improving labour market outcomes for as many as possible of those currently in a situation of *underemployment*. If policymakers, commentators and agencies such as Job Centres are too focused on headline employment, participation rates and unemployment rates there is a real danger that poor outcomes will persist. Ironically, where in-work benefits and tax credits make underemployment more bearable this may erode incentives for workers to keep looking for better employment matches during recovery and may result in them staying underemployed for longer. In the absence of other interventions, there should be real concern that polarization within the labour market will persist and recovery in fiscal balances will be delayed. In our view, failure to take policy action to tackle underemployment in all its guises is a recipe for greater polarization in the labour market and a continuation of productivity growth that does not fulfil its potential.

Conclusions

In conclusion, after previous recessions policymakers focused on getting people back into work and avoiding lasting negative impacts from long-term unemployment. This time, the fact that a higher proportion of the working age population has retained engagement with the labour market has been a positive achievement. Nevertheless, as we argued that there is a need to upgrade the nature of some of this engagement as the recovery progresses in order to address underemployment and the persistence of associated bad outcomes for individuals, for fiscal balances and for the productive potential of the economy as a whole.

In particular some workers are in jobs that don't fully utilise their skills; have limited prospects for advancement and/or their jobs fail to provide the hours of employment desired. These workers, and

others, may face barriers in accessing available vacancies that better suit their abilities and requirements as a result of geographical mismatch. We have argued that there is a clear need for policies that facilitate transitions out of poorly matched jobs to reducing the risk of sustained polarization of labour market outcomes and underperformance of the economy as a whole.

In our view the most promising policies to improve the strength of the labour market include policies to i) improve transport infrastructure, helping people commute to access suitable jobs; ii) help people relocate to access jobs; iii) help SMEs with vacancies to achieve better matches of workers to jobs; and iv) remove exclusivity clauses in zero hours contracts and for the Government to show leadership in incentivising improved contractual arrangements via its own procurement rules. While it is feasible for zero-hours contracts to play an important role in a well-functioning labour market, it is clear that the growth in these contracts in recent years does not reflect a robust and well-functioning labour market – and indeed may undermine the strength of the economy as we continue to emerge from the Great Recession.

The success or failure of policies to improve labour market outcomes will have profound implications for both fiscal and monetary policy. For the reasons outlined earlier, there are important interactions between welfare policy and the feasibility of attaining sustainable fiscal balances in the future. If unchecked, the persistence of each of the elements of underemployment we have highlighted will contribute to stagnation of median incomes and be reflected in persistently lower tax receipts and higher spending on in-work benefits. And importantly, from the monetary policy perspective, the prospects for wage pressure from these groups is likely to remain muted until significant inroads are made into eroding remaining labour market slack in the economy and returning hourly productivity back toward pre-crisis norms.

References

- Andersson, Fredrik, John Haltiwanger, Mark Kutzbach, Henry Pollakowski, and Daniel Weinberg (2014) “Job Displacement and the Duration of Joblessness: The Role of Spatial Mismatch” NBER Working Paper No. 20066, April <http://www.nber.org/papers/w20066>
- Bank of England (2014b) Minutes of the MPC Meeting 3 and 4 September, released on 17th September. <http://www.bankofengland.co.uk/publications/minutes/Documents/mpc/pdf/2014/mpc1409.pdf>
- Barnett, Alina, Sandra Batten, Adrian Chiu, Jeremy Franklin and María Sebastián-Barriel (2014) “The UK Productivity Puzzle” Bank of England Quarterly Bulletin, Volume 54 No. 2 <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q201.pdf>
- Barrett, Claer and Chris Giles (2014) “UK government to miss income tax targets, warns OBR” Financial Times, October 13.
- Cadman, Emily (2014) “UK shortfall in tax receipts adds to problem of cutting the deficit” Financial Times, October 21.
- Chandler, Mark (2014) “People in employment reporting a zero-hours contract”, Office of National Statistics, August, http://www.ons.gov.uk/ons/dcp171766_373757.pdf
- Department for Business Innovation and Skills (2013) “SMEs: The Key Enablers of Business Success and the Economic Rationale for Government Intervention” BIS Analysis Paper No. 2, December https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266304/bis-13-1320-smes-key-enablers-of-business-success.pdf
- Federation of Small Businesses (2009) “Small Business Solutions: Graduate Employment Scheme” <http://www.fsb.org.uk/policy/assets/graduate%20employment%20scheme.pdf>

Freeman, David (2014) "Guidance Note: Contracts that do not guarantee a minimum number of hours" Part of Labour Market Guidance, Guide to Labour Market Statistics Release, ONS, June, http://www.ons.gov.uk/ons/dcp171766_368482.pdf

Houlder, Vanessa (2014) "Raising personal tax allowance costs more than expected, says OBR" Financial Times, October 16.

International Monetary Fund (2014b) "Is It Time for an Infrastructure Push? The Macroeconomic Effects of Public Investment", Chapter 3 in IMF World Economic Outlook, October.

International Monetary Fund(2014a) "Can fiscal policies do more for jobs", Chapter 2 in IMF Fiscal Monitor, October. <http://www.imf.org/external/pubs/ft/fm/2014/02/fmindex.htm>

Lawless, Paul, Henry G. Overman and Peter Tyler (2011) "Strategies for Underperforming Places" SERC Working Paper 6, February. <http://www.spatial-economics.ac.uk/textonly/serc/publications/download/sercpp006.pdf>

Neumark, David and Helen Simpson (2014) "Place Based Policies" Oxford University Centre for Business Taxation Working Paper 1410, August. http://www.sbs.ox.ac.uk/sites/default/files/Business_Taxation/Docs/Publications/Working_Papers/series-14/WP1410.pdf

Office of Budget Responsibility (2014) Forecast evaluation report, October. http://budgetresponsibility.org.uk/wordpress/docs/Forecast_evaluation_report_2014_dn4H.pdf

Office of National Statistics (2013) "Graduates in the UK Labour Market" November. http://www.ons.gov.uk/ons/dcp171776_337841.pdf

Office of National Statistics (2014) "Self-employed workers in the UK – 2014" August. http://www.ons.gov.uk/ons/dcp171776_374941.pdf

Overman, Henry (2012) "HS2: assessing the costs and benefits" Centre Piece, Winter. <http://cep.lse.ac.uk/pubs/download/cp361.pdf>

Pickavance, Norman (2014) "Zeroed Out: The place of zero-hours contracts in a fair and productive economy", April. http://www.yourbritain.org.uk/uploads/editor/files/ZHCs_report_final_FINAL_240414.pdf

Pyper, Douglas and Feargal McGuinness (2014) "Zero-hours contracts" Standard Note 06533 House of Commons Library. <http://www.parliament.uk/business/publications/research/briefing-papers/SN06533/zerohours-contracts>

Scottish Government (2014) "Education Working For All!" Final report from the Commission for Developing Scotland's Young Workforce, June. <http://www.scotland.gov.uk/Resource/0045/00451746.pdf>

Scottish Parliament (2013) "Underemployment in Scotland" Economy, Energy and Tourism Committee 6th Report, 2013 (Session 4), April. http://www.scottish.parliament.uk/S4_EconomyEnergyandTourismCommittee/Reports/eeR-13-06w.pdf

Sear, Leigh, Tracy Scurry, Janine Swail and Simon Down (2012) "Graduate Recruitment to SMEs: Final Report Prepared Department for Business, Innovation and Skills", November. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/68936/bis-13-546-graduate-recruitment-to-smes.pdf

Weale, Martin (2014a) "Slack and the labour market", transcript of speech delivered in March, Bank of England. <http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech716.pdf>

Weale, Martin (2014b) "Spare Capacity and Inflation" transcript of speech delivered in June Bank of England. <http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech737.pdf>

Weale, Martin (2014c) "What to do when we don't know: policy-making when spare capacity is uncertain" transcript of speech delivered in October, Bank of England. <http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech762.pdf>

Wikes, Giles (2014) "Tax cuts are exactly what the UK doesn't need" Financial Times, 1st October.

Yellen, Janet (2014) "Labor Market Dynamics and Monetary Policy" Speech delivered the Federal Reserve Bank of Kansas City's Economic Symposium at Jackson Hole, August 22. <http://www.federalreserve.gov/newsevents/speech/yellen20140822a.htm>

Author details

Professor Julia Darby
Department of Economics
University of Strathclyde Business School
julia.darby@strath.ac.uk

Stuart McIntyre
Department of Economics
University of Strathclyde Business School
s.mcintyre@strath.ac.uk