University of Strathclyde Business School

Fraser of Allander Institute & Scottish Centre for Employment Research

Scottish Labour Market Trends

Vol 2 No 2

The Fraser of Allander Institute (FAI) is a leading economic research institute with over 40 years of experience researching, analysing and commentating on the Scottish economy. The FAI undertakes a unique blend of cutting-edge academic research alongside applied commissioned economic consultancy in partnership with business, local and national government and the third sector.

The Scottish Centre for Employment Research (SCER) has an international reputation for high quality research and knowledge exchange on work and employment. SCER works collaboratively with academic, policy and practitioner stakeholders to generate high impact research that delivers shared benefit. The Centre has particular expertise in supporting workplace innovation, job quality and fair work, key priorities for Scotland.

Labour Market Trends is jointly produced by the FAI and SCER and aims to shed light on key developments in Scotland's labour market. Alongside a summary of recent trends and the outlook, the report also highlights longer trend developments and areas for discussion.

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Summary

Key Labour Market Indicators: Oct-Dec 2017

	Employment (16-64)	Unemployment (16+)	Inactivity (16-64)
Scotland	74.3	4.5	22.1
England	75.6	4.3	20.9
Wales	68.7	5.0	23.4
N. Ireland	72.7	3.9	28.4

Source: ONS, Labour Force Survey

Over the past couple of years Scotland's labour market has performed much better than the data for economic growth might suggest. Unemployment remains relatively low by historical standards and there are 10,000 fewer people unemployed in Scotland than this time last year.

Nevertheless, the labour market data released last month show something of a fall-back in Scotland's labour market performance over the final 3 months of 2017. Employment fell by 20,000 whilst unemployment rose by 14,000. The fall in Scotland's employment rate over the quarter contrasts with the UK as a whole where employment rose.

It is possible that these data represent the first indication that weak economic growth in Scotland is beginning to feed through to the labour market.

But given the volatility in the Scottish series, it is too early to tell whether this increase in unemployment is a one-off or the beginning of a trend. The data over the coming months will tell us more about the direction of travel.

The big challenge to the Scottish economy remains weak productivity. The latest data for Scotland released last month provide no sign of improvements in productivity growth.

In a recent blog we showed that Scotland's relatively better productivity performance than the UK in recent years – despite weaker economic growth in Scotland – was the consequence of relatively weaker growth in the number of jobs and hours worked than the UK as a whole.

With weak economic growth and a relatively robust labour market, Scotland's productivity growth is on track to remain relatively sluggish. Of course, Scotland is not alone in suffering from poor productivity growth. It is a challenge facing the UK and many other advanced economies.

Brexit aside, boosting productivity is the single most critical economic challenge facing policymakers in Scotland and in the UK. Without faster productivity growth, wages are likely to continue to be squeezed.

Later in this report, in an article by Stuart McIntyre, some of the key metrics on productivity growth are reviewed for Scotland, as well as some for the UK as a whole. The aim is to illustrate 'what we know', as a means to illustrate what we need to know more about.

A number of underlying causes of productivity weakness have been suggested. While some of these have been well rehearsed, this article provides a brief overview of the key elements of these arguments.

Fraser of Allander Institute &
Scottish Centre for Employment Research

March 2018

Overview and Analysis

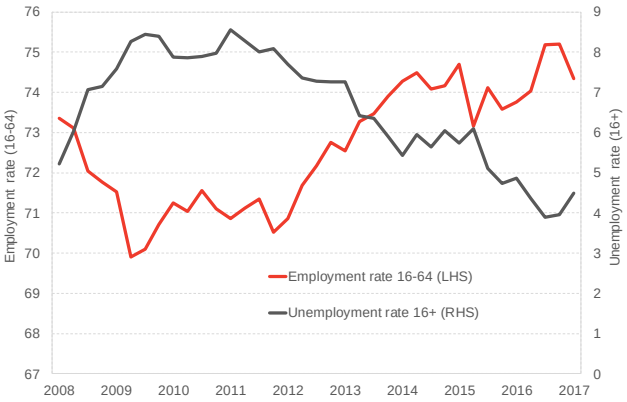
While headline indicators of Scotland's labour market remain strong, the latest data show a relatively sharp quarterly increase in the unemployment rate from 4% to 4.5%. While the unemployment rate remains low by historical standard, this increase may be the first indication that the weak output growth experienced over the past couple of years is feeding through to labour market outcomes.

Table 1: Labour market indicators, Oct-Dec 2017

	Employment (16-64)	Unemployment (16+)	Inactivity (16-64)
Scotland	74.3%	4.5%	22.1%
Quarterly Change	-0.8	0.5	0.5
Annual Change	0.6	-0.4	-0.3
UK	75.2%	4.4%	21.3%
Quarterly Change	0.2	0.1	-0.3
Annual Change	0.6	-0.4	-0.3

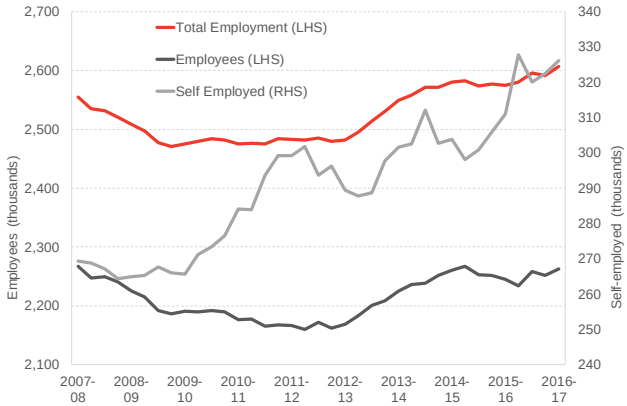
Source: ONS, Labour Force Survey (LFS)

Chart 1: Scottish employment & unemployment rate



Source: ONS, LFS

Chart 2: Scottish employment & self-employment



Source: ONS, LFS

Introduction

The unemployment rate increased to 4.5% from 4% in the final three months of 2017. This comes after a sustained period of falling unemployment in Scotland. Indeed, despite this 0.5%-point increase, the unemployment rate has still fallen 0.4%-points over the past year.

This substantial reduction in unemployment has taken place against a backdrop of weak growth in the Scottish economy. The increase in unemployment this quarter may – in principle – be the first signs that recent weak economic growth is feeding through to the labour market.

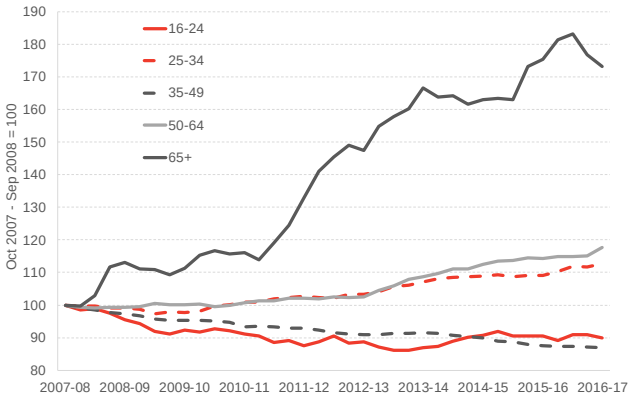
But it is far too early to tell at this stage.

Headline employment in Scotland remains high, and above its pre-financial crisis rate, with 74.3% of those 16-64 in employment. This is down 0.8% points this quarter but remains up 0.6% points over the year.

There are 26,000 more people in employment now than two years ago. 23,000 of that increase is in self-employment.

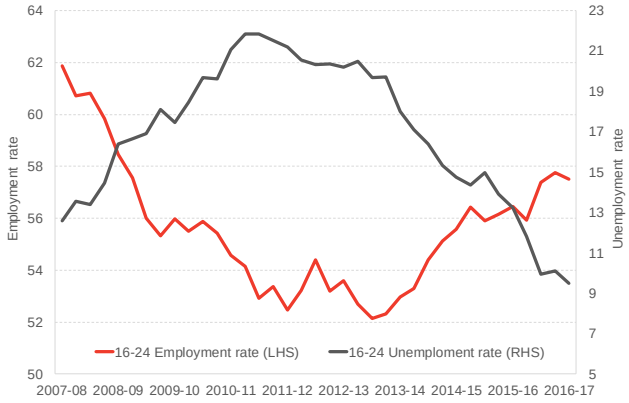
Such growth throws up a number of interesting questions around the nature of self-employment. How much of this growth reflects a positive choice by people to set up and develop their own business, and how much is the consequence of businesses unwilling to hire workers directly but contract individuals on a self-employment basis?

Chart 3: Employment rates by age



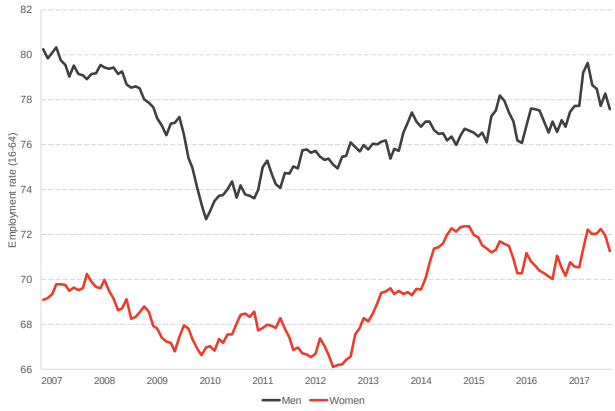
Source: ONS, LFS

Chart 4: Youth (16-24) employment and unemployment



Source: ONS, APS

Chart 5: Employment rates by gender



Source: ONS, APS

Labour market outcomes by age and gender

As we have highlighted in previous Labour Market Trends, outcomes vary considerably across different groups.

Attention typically focusses on those younger people engaged in the labour market and the extent to which they are unemployed. There are a number of reasons for this, not least that weak labour market and lack of skills/training engagement at an early stage can have scarring effects.

In Scotland, the youth unemployment rate is around its historic low. While this is to be welcomed, it is worth noting that the youth employment rate is still substantially below its pre-financial crisis level.

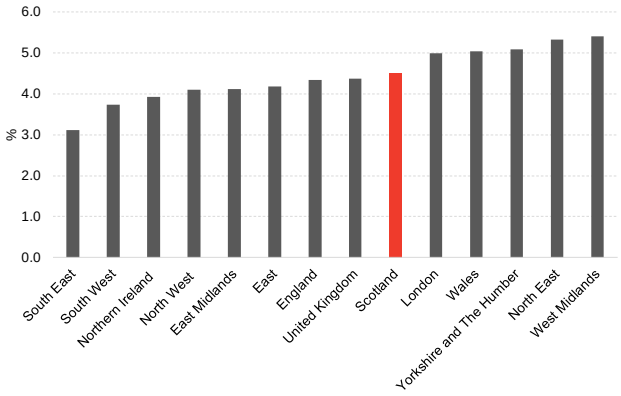
This is driven by an increase in economic inactivity.

People can be inactive for a range of reasons, 'good' (e.g. being in education) and 'bad' (e.g. long-term sick). While the published data do not enable us to examine the reason why there are more 16-24 year olds economically inactive, the data for the economy as a whole show a substantial increase in those who are economically inactive as a result of being students. This suggests the rise in inactivity for young people is because more are now entering education or training.

One of the other important trends in recent years has been improvements in the employment rate of women

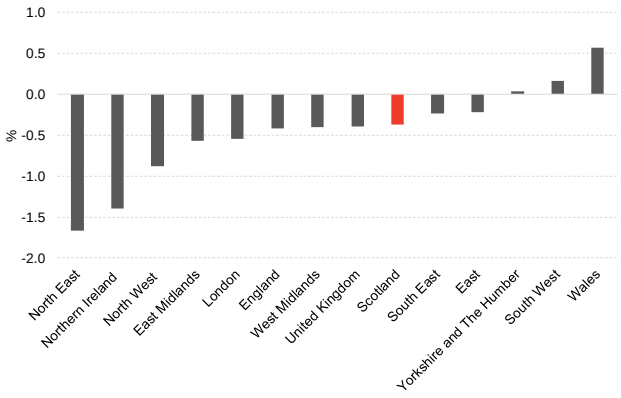
The gender gap in employment rates has closed from over 10% points in 2007 to just over 6% points today. This is driven by improvements in the female employment rate and the male employment rate still being below its 2007/08 level.

Chart 6: Unemployment rate by different parts of the UK



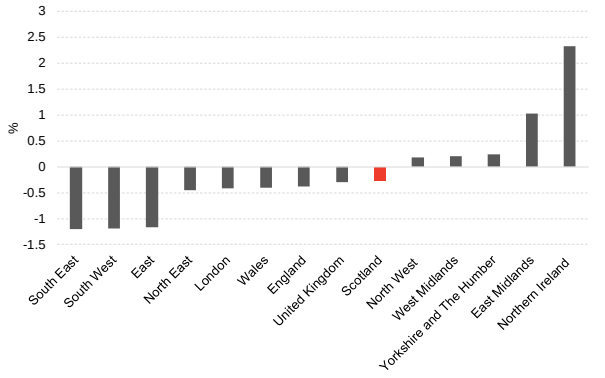
Source: ONS, LFS

Chart 7: Annual change in unemployment rate across UK



Source: ONS, LFS

Chart 8: Annual change in inactivity rate across UK



Source: ONS, LFS

Differential economic performance across the UK is of interest. There have been a range of high profile policy initiatives, such as the 'Northern Powerhouse' and city-region deals, aimed at closing the gap in regional economic performance.

Unemployment in almost all regions is now lower than it was a decade ago (the exceptions being Wales and the South West). The range of unemployment rates across regions is now 5.4% (West Midlands) – 3.1% (South East), narrower than a decade ago when the range was 6.8% (London) – 3.6% (South West).

This convergence in unemployment rates is clearer when we look at changes over the past year. There have been substantial falls in the unemployment rate across the North East and North West of England, and Northern Ireland, with more modest falls in unemployment across most other regions.

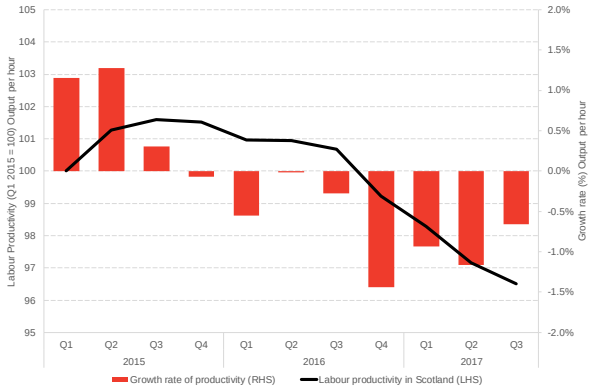
At times during the past year Scotland has not only outperformed the UK in terms of falling unemployment, it has been among those parts of the UK with the lowest unemployment rates. The latest data have eroded Scotland's position in this ranking somewhat.

In a similar way to our discussion of changes in youth unemployment, when there is a substantial fall in the unemployment rate it is important to examine what those who were previously unemployed are now doing. Are they in employment or are they economically inactive?

After a period of rising inactivity through 2016, 2017 saw Scotland's rate of economic inactivity decline slightly, with the fall in unemployment coinciding with an increase in employment. This is not true of all parts of the UK.

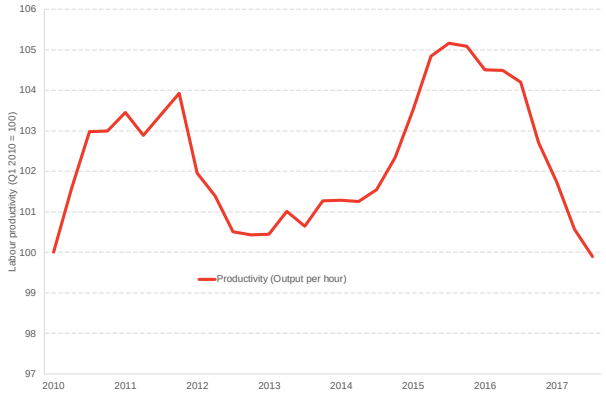
This is particularly obvious in the case of Northern Ireland which now has one of the lowest unemployment rates but has seen its economic inactivity rate increase by over 2% points.

Chart 9: Scottish GVA per hour



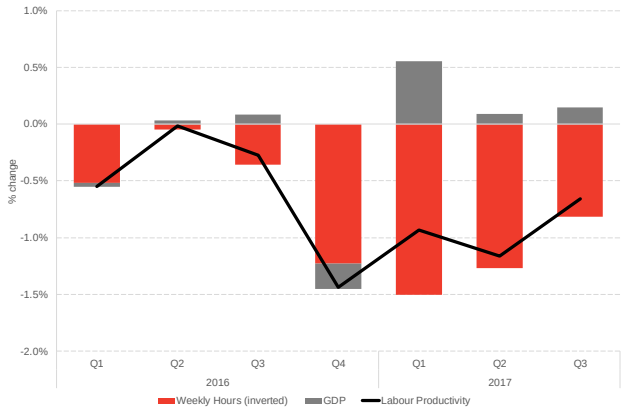
Source: ONS, Scottish Government

Chart 10: Scottish GVA per hour, 2010-2017



Source: ONS, APS

Chart 11: Scottish hours worked, GDP and labour productivity



Source: ONS, APS

Productivity

The latest figures released last month show that labour productivity – as measured by output per hour – fell by 0.7% during the three months Jul-Sep 2017.

This was 8th quarter in a row of falling productivity in Scotland.

On this measure, productivity in Scotland is back at 2010 levels.

Labour productivity measures how well output is fairing relative to changes in how much labour is being used to produce that output. If we are able to produce more for the same number of hours worked then we are more productive. On the other hand, if we are working harder but not producing much more, then our productivity will fall.

As has been well documented, economic growth in Scotland has been weak now for the best part of two and a half years. In the 10 quarters since the start of 2015, Scottish GDP has risen by just over 1%. We would normally expect growth to be double that in 12 months (or 4 quarters).

Against this however, the Scottish labour market has held up much better.

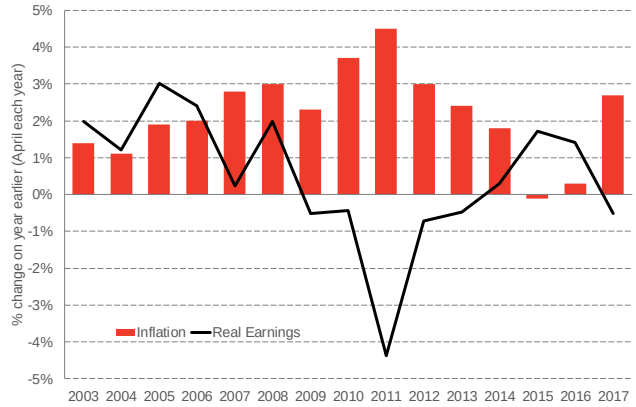
Chart 11 compares growth in the economy with the growth (inverted) in hours worked.

As an illustration, in Q3 2017, the number of hours being worked in the economy increased by 0.8%, but this outstripped the growth of 0.2% in Scottish GDP.

As a result, productivity fell by 0.7%.

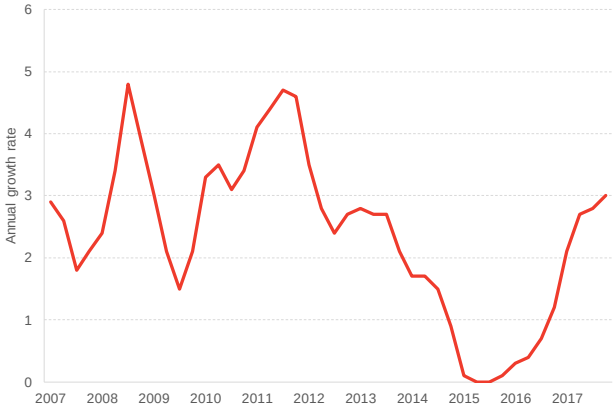
With such weak productivity growth, it is unsurprising that wages have continued to remain squeezed.

Chart 12: Median real earnings in Scotland and UK CPI inflation



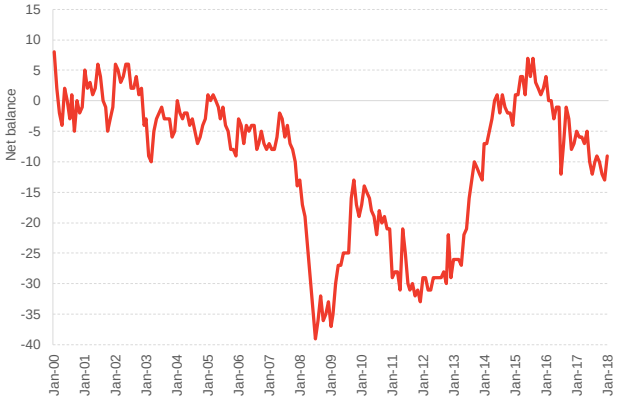
Source: ONS, ASHE

Chart 13: Consumer price index



Source: ONS

Chart 14: Consumer confidence in Scotland



Source: GfK

Earnings and consumer confidence

On top of weak productivity growth acting as a break on nominal wage growth, inflation has remained high.

UK inflation currently sits at 3%, having increased sharply after the EU Referendum vote in 2016.

This is leading to weak real earnings growth, eroding the purchasing power of people's pay packets.

Since the financial crisis, it has only been in periods of very low inflation in which earnings have grown in real terms.

This underlines the importance of boosting productivity growth in Scotland. If workers in Scotland in 2017 are only as productive as they were in 2010, it is little surprise that earnings growth has been so poor.

It would appear that, with weak earnings growth and fragile economic growth, consumers in Scotland are relatively downbeat in their assessment of the outlook for the economy and their own financial situation.

Weakness in consumer confidence has important implications for economic activity with consumers potentially holding off on larger purchases, perhaps paying off debt instead of spending money, and generally reducing their levels of expenditure. This in turn reduces the level of economic activity further.

Another sign that households are struggling financially is the decline witnessed in the household saving rate.

The household saving rate has been lower - relative to the same quarter the previous year - in each of the last 8 quarters. This suggests that those households which can, are dis-saving to maintain consumption levels in the face of weak earnings growth and higher inflation.

Labour Market Insights

In this quarter's edition we include an article from Stuart McIntyre looking at some key issues around economic productivity, what do we know and what do we need to know more about?

Introduction

The review of the data on Scotland's labour market earlier in this report serves to illustrate the importance of improving productivity.

This short article seeks to review in a little more detail the range of data we have on productivity in Scotland, what it tells us, and what it doesn't tell us. There is a large academic literature on determinants of productivity growth. This article will not be able to review this whole literature, but instead will try to give a sense of the key issues and arguments with suggestions for further reading for those interested in a more detailed explanation.

What is labour productivity and how is it measured?

Very simply, labour productivity refers to how much output is produced per unit of labour (measured in terms of jobs or hours worked). This differentiates it from other measures of productivity such as capital productivity (output produced per unit of capital used) or total factor productivity (TFP) (which refers to the portion of output produced which isn't attributable to labour or capital inputs) which we can think of as the contribution to output of 'production technologies'.

Labour productivity is usually calculated as gross domestic product divided by the number of jobs or number of hours worked. This can be readily calculated and reported and is intended to be internationally comparable.

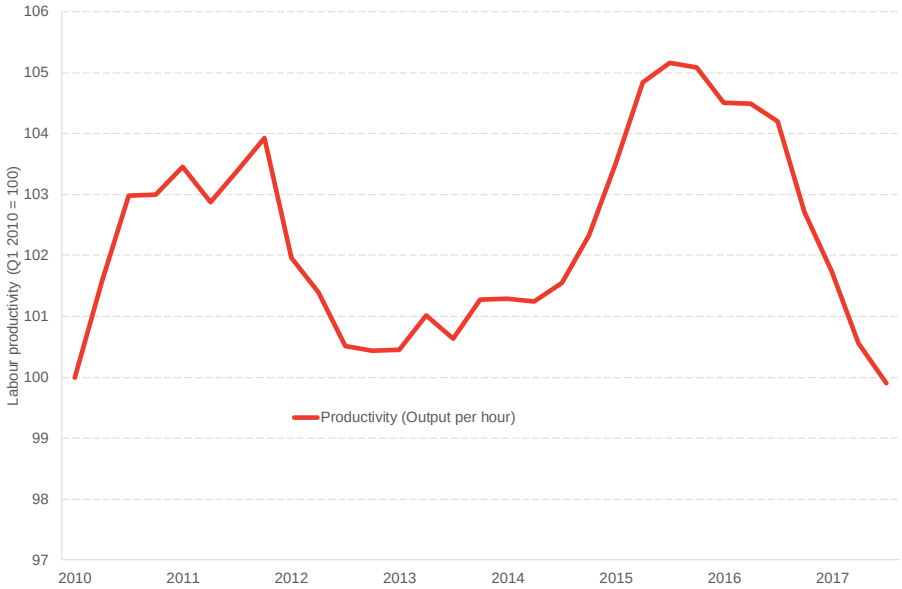
The economics of this are very simple. If we are producing more output per hour worked or per job, we are becoming more productive. This in turn should be translated into higher wages and greater (in aggregate) economic prosperity.

If we are also becoming more productive *relative* to our international competitors this means that we are improving our competitiveness leading to further improvements in aggregate economic prosperity.

What then do we know about the UK and Scotland's labour productivity performance?

What do we know from the data?

Labour productivity growth in Scotland (as well as other parts of the UK) has been poor for some time. The chart below shows Scottish labour productivity since 2010, illustrating that Scotland is - on this measure - as productive now as it was in 2010.

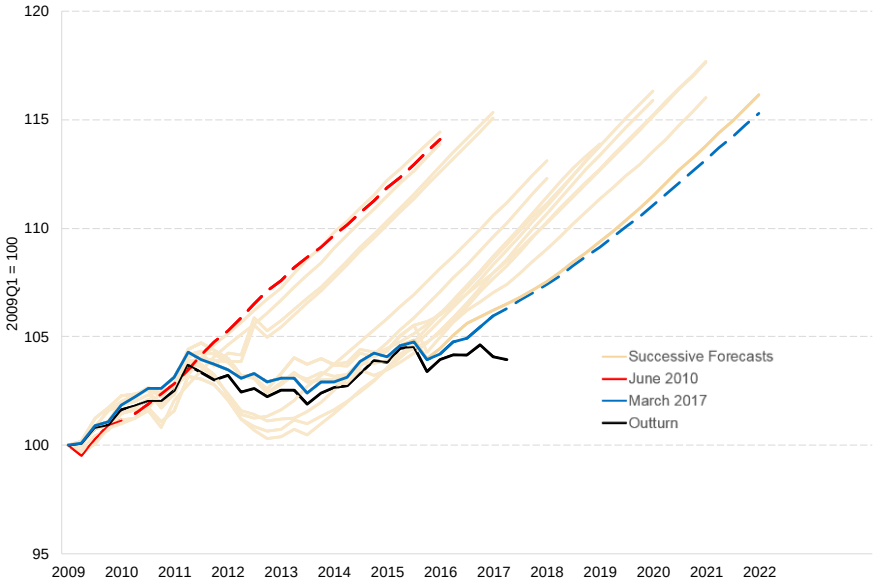


While much has been made of Scotland catching up with the UK in labour productivity in recent years, as we showed[1] the driver of this convergence between the UK and Scotland is not a much faster rate of output growth (per capita), but instead the fact that the growth in hours and jobs in Scotland has been less than the growth in hours and jobs at the UK level.

Moreover, catching up with the UK is not much of an achievement in itself. UK productivity performance has been exceptionally weak too, with the OBR admitting last year that the UK's productivity problem is structural.

This is illustrated in the chart below by the slope of the most recent forecast for productivity growth becoming flatter than every previous forecast from the OBR and flatter than the pre-crisis average.

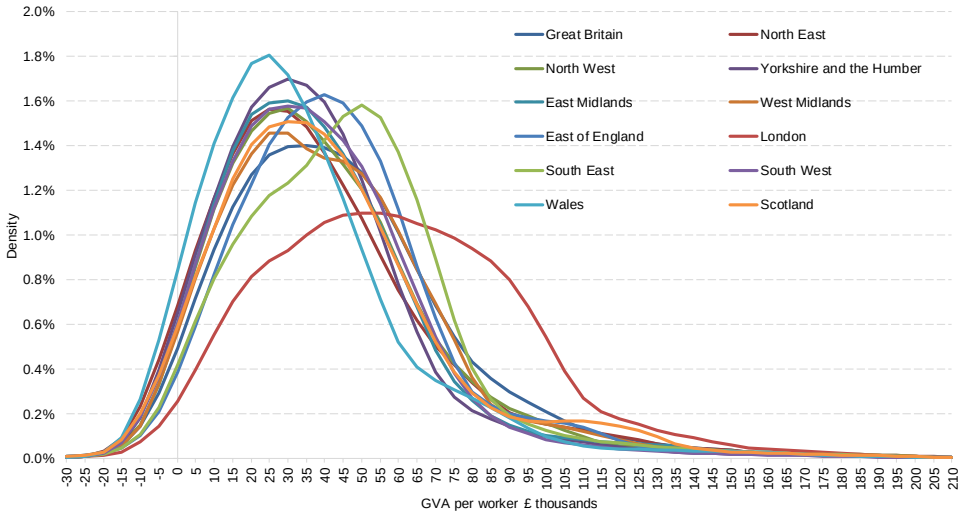
[1] https://fraserofallander.org/2017/11/27/unpicking-scotlands-recent-productivity-performance-relative-to-the-uk-is-it-all-that-it-seems/



Much of the recent research into understanding the UK's weak productivity performance has focussed, rightly, on understanding what is happening at the level of individual firms.

Headline estimates of productivity aggregate over the diverse firms in the economy, and while this summary measure can be useful, when tracing the drivers of productivity performance, we really need to know what is happening at a micro level.

One simple way to understand the range of firm level productivity performance is to look at the distribution of productivity across firms. Helpfully last year the ONS produced a distribution of firm level productivity for 2014 by region and by city-region which also included some sectoral detail. These distributions for the regions and nations of the UK are shown in the charts below.



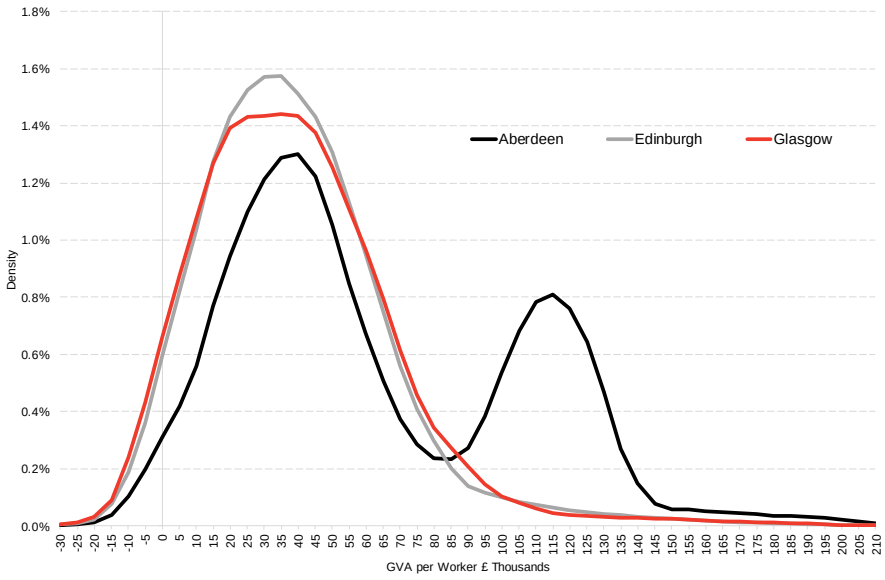
These data show how much of an outlier in labour productivity terms London is. It has a lower density of low productivity firms than any other part of the UK and has a higher proportion of high productivity firms.

What is also interesting is that labour productivity in many parts of the UK has a rather similar distribution. Across all parts of the UK, there is a rather substantial number of low productivity firms, but also a rather long tail of high productivity (or 'frontier') firms.

This serves to illustrate that while aggregate productivity may be disappointingly low and productivity growth disappointingly weak, this masks the distribution of experiences at the firm level. It is not all firms that have low levels of productivity, but there is a substantial number across all parts of the UK.

Within Scotland, the ONS data also provide a snapshot of the distribution of firm productivity in 2014 for three 'city-regions'.

This underlines the unique nature of the economy of the North East of Scotland as a result of the activities of the Oil & Gas sector. These data also highlight some subtle differences between the economies of Glasgow and Edinburgh with Glasgow having a slightly greater share of firms in the upper tail of the distribution than Edinburgh.



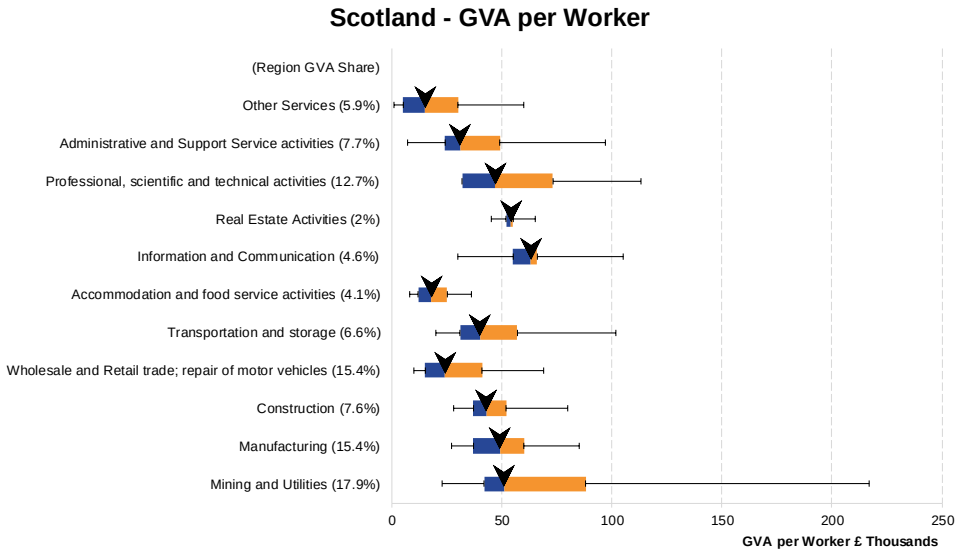
While these data are valuable as a snapshot, ONS have not produced similar distributions of firm productivity for the years before and after to enable us to see how the distribution of firm level productivity is changing over time.

For example, it would be useful to know whether the gap between the most productive and the least productive firms is widening or closing. It would also be useful to examine the extent

to which firms are moving around within this distribution over time, or whether the ranking of firms is broadly stable over time.

We also know, thanks to work by the ONS, something about firm level productivity by sector in Scotland.

The chart below highlights productivity differences across sectors in the Scottish economy.



These data show how important the Mining and Utilities sector was to the Scottish economy in 2014, underlining how critical the oil price slump has been in explaining recent economic experience.

Median productivity in some sectors (such as Accommodation and food services) is much lower than in other sectors (such as Information and communications). We can also see that in some sectors GVA per worker is rather similar across firms (e.g. Real Estate Activities) but much more varied in others (such as Mining and utilities).

Beyond these data, we know little about the distribution of firm level productivity in Scotland. In particular, we know little about how firm level productivity has evolved over time. However, as a result of work by the Bank of England[2], we know that around one in three firms in the UK as a whole haven't seen their productivity improve this century.

At the same time the Bank of England showed that the heart of the UK's 'productivity puzzle' has not been a failure to innovate – as sometimes suggested – rather it is a failure to diffuse technological innovation across the economy. Simply put, the UK has some highly productive firms (in the jargon, 'frontier firms'). Yet at the same time average productivity growth has

[2] https://www.bankofengland.co.uk/-/media/boe/files/speech/2017/productivity-puzzles.pdf?la=en&hash=708C7CFD5E8417000655BA4AA0E0E873D98A18DE

been disappointing. This remains one of the main policy issues in this area – how can we encourage greater diffusion in innovation between firms?

In a speech last year Andy Haldane of the Bank of England suggested that frontier firms might be paired up with less productive firms to help them improve their productivity. The benefit to the frontier firms – assuming that they are paired with a company that they currently work with – is the opportunity to develop a more effective supply chain.

Another issue in improving firm productivity is whether those firms who are not seeing the improvements in productivity being realised by other firms, are aware that they are lagging behind? This was identified by the Mayfield Commission who recommended the creation of a means (perhaps through an app) to help firms benchmark themselves against others in their sector/region to try to raise awareness of lagging productivity.

The Bank of England also examined firm level productivity across regions, industry, exporting status, foreign ownership, innovation, size and firm leverage. While not going through all of these results, this showed some interesting features.

Firstly, London, the South East and Scotland (in this order) have fewer very unproductive firms than other regions. The most productive region (London) is 75% more productive than the least productive region (North East). Information and communication firms and professional, scientific and technical firms have fewer unproductive firms, but the Bank of England illustrated the differences within sectors are also marked. Meanwhile Wholesale and Retail trade firms have a higher share of lower productivity firms. Exporting firms tend to be more productive, similarly for foreign owned firms, and medium and large firms. Firms which do not innovate and firms which are highly leveraged tend to have lower productivity.

What else do we know?

There has been a large literature on global productivity challenges since the financial crisis.

Economists have proposed a range of explanations from low levels of investment, banks' willingness to lend to businesses, greater employment among older workers, and labour hording by firms. While these may help us understand some of the observed weakens in UK productivity, collectively they fall far short of a full explanation.

Two alternative partial explanations have gained some traction in recent years.

Firstly, explanations based on understanding firm level dynamics – in particular differences in management practice – largely based around the work of Bloom, Van Reenan and colleagues. Secondly issues around the measurement of activity in the economy, in particular in relation to the measurement of digital activities. There has been recent work in this area

by Diane Coyle[3]. While not reviewing these areas in detail a few points are worth making about each of these explanations.

Firstly, the work of Bloom, Van Reenan and colleagues has illustrated that a substantial amount of the variation in firm level productivity is the result of differences in management practice. By management practice, these authors mean employee monitoring, goal setting and the use of incentives[4]. In essence, this literature is arguing that management practice is another form of production technology[5].

Using data for Germany, Bloom & Van Reenan[6] showed that there is a high correlation between evaluation scores of management practice and productivity. Building on this, in more recent work they have shown that around a third of this correlation is the result of better performing firms being better at recruiting high performing workers implementing better management practice (in particular through pay policy). In combination they show that these effects drive a substantial portion of the between firm differences in productivity that we observe. This makes understanding differences in management practices between high and low productivity firms essential.

But there are also important *within* firm differences in productivity across different plants. In another paper[7], using data for the USA, it has been shown that there are substantial differences in management practice within firms across different manufacturing plants. Indeed 40% of the variation in management practices is found to relate plants within the same firm. In turn this variation in management practice is found to account for a similar proportion of differences in productivity (20%) as research and development activity. Thus, it is not just differences in the productivity of leading and lagging firms which needs to be considered, but potential differences in practice driving productivity differences across plants within the same firm.

Secondly, there is an ongoing debate in the academic literature about the extent to which mismeasurement, particularly of digital services, is contributing to the weakness of productivity growth.

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[3] 'Do-it-yourself digital: the production boundary and the productivity puzzle' Diane Coyle, 2017, https://www.escoe.ac.uk/wp-content/uploads/2017/10/ESCoE-DP-2017-01.pdf

[4] Bender, S., Bloom, N., Card, D., Van Reenen, J., & Wolter, S. (2018). Management practices, workforce selection, and productivity. Journal of Labor Economics, 36(S1), S371-S409., https://www.econstor.eu/bitstream/10419/146154/1/858747510.pdf

[5] Bloom, N., Sadun, R., & Van Reenen, J. (2016). *Management as a Technology?* (No. w22327). National Bureau of Economic Research.

[6] Bloom, N., & Van Reenen, J. (2007). Measuring and explaining management practices across firms and countries. *The Quarterly Journal of Economics*, *122*(4), 1351-1408.

[7] Bloom, N., Brynjolfsson, E., Foster, L., Jarmin, R. S., Patnaik, M., Saporta-Eksten, I., & Van Reenen, J. (2017). *What drives differences in management?* (No. w23300). National Bureau of Economic Research.

A recent paper[8] examined this issue in the UK and found that the current price deflator used for telecommunication services was overestimating the price of telecommunication services and that in fact the price of telecommunications output could have fallen by between 35-90 percentage points more than the current deflator suggests. In which case, the real terms growth of activity in this sector will have been much faster, and in turn productivity improved far more, than originally thought. Measuring productivity in services is exceptionally difficult. For example, how do you measure greater productivity in public services? If the justice system is locking up more people in prison is that a 'better outcome'?

This is a developing literature and much work is being done to better understand the degree of mismeasurement in prices and its implications for the measurement of productivity.

There are also a number of academic papers on productivity in Scotland[9]. Some interesting results from this literature include a finding that new plant start-ups and foreign owned plants contributed to lower TFP growth over the period 1997-2012.

This result stands in contrast to much of the literature which finds that foreign owned plants tend to be more productive (including a paper by the same authors showing that foreign owned plants in Great Britain have higher TFP, albeit also finding that foreign ownership was the least important determinant of productivity growth[10]). In other work these authors have found that weak TFP growth over the period 2008-2012 was 'primarily a service sector and small-plant phenomenon'[11]. Overall though, there is a significant amount more work to do to understand the firm level determinants of productivity growth in Scotland.

What don't we know?

As a consequence of research by academics, statistical agencies, central banks and governments, we know a lot about productivity measurement and the determinants of productivity. But in this section we identify a few key issues which we feel would improve our practical understanding of productivity generally, and within Scotland.

Probably the biggest thing that can be done to improve our understanding of firm level productivity is to have a research database (using existing data) produced which enables firm

8 'A Comparison of Approaches to Deflating Telecoms Services Output' Abdirahman, M., Coyle, D., Heys, R., & Stewart, W. (2017), https://www.escoe.ac.uk/wp-content/uploads/2017/02/ESCoE-DP-2017-04.pdf

9 'The sources of the Scotland–Rest of the UK productivity gap: implications for policy', Richard Harris & John Moffat, Regional Studies Vol. 51, Issue. 9, 2017; Harris, R. and Moffat, J. (2014) 'Lower productivity in Scotland, 1997-2012: implications post-2016.', Working Paper. Durham University.

10 'Plant-level determinants of total factor productivity in Great Britain, 1997–2008,' Harris, R. & Moffat, J. Journal of Productivity Analysis (2015) 44: 1

11 Richard Harris, John Moffat; The UK productivity puzzle, 2008–2012: evidence using plant-level estimates of total factor productivity, Oxford Economic Papers, Volume 69, Issue 3, 1 July 2017, Pages 529–549

performance over time to be tracked and productivity to be examined regularly across the characteristics of the firm.

This requires an investment of time and resources by key partners, but this is the bare minimum commitment that we should have to analysing productivity challenges seriously in Scotland. In addition to enabling us to better understand what is actually happening across firms, and to target policy interventions appropriately, it also opens up the opportunity to evaluate the impact of existing and candidate interventions to boost productivity. At the moment, a range of policies claim to be helping to improve productivity but because we do not evaluate these policies (or produce the data to do so) we simply do not know.

Given the important role of productivity in achieving economic goals and priorities, it is simply too important not to evaluate whether economic development resources are being well spent.

A recent paper in the academic literature[12] provides a template for such an evaluation in the context of effort by the Danish government to help Danish companies to improve their export performance. Such effort is costly to the Government, and as the study showed, the impact of this initiative on Danish GDP operated exclusively through its impact on smaller firms. Investing government resources in helping large companies to internationalise did not generate a net positive return to the Danish economy. This provides the evidence base to divert resources into helping smaller Danish companies to internationalise instead.

In Scotland, it is possible to argue that policy often suffers from an aching attachment to stasis and policy development by anecdote. The toolkit exists to be much more robust and thorough in our understanding of the impact of government intervention on targeted outcomes. It is beyond time for a rethinking of our approach.

12 Munch, J., & Schaur, G. (2018). The effect of export promotion on firm-level performance. American Economic Journal: Economic Policy, 10(1), 357-87.

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