The past has a funny habit of repeating itself. As the third industrial revolution took hold in the 1970s, we expected to see a dramatic improvement in productivity. But, as the US economist Robert Solow quipped at the time: “you see the computer age everywhere but in the productivity statistics”.

Of course, it can take years for economic benefits to become apparent. Yet, as the fourth industrial revolution starts to take off now, we face a similar paradox. Productivity remains a significant challenge to Scotland and the UK as a whole, with the Office for Budget Responsibility last month downgrading its forecasts for the next four years. Combined with ongoing economic fragility, political uncertainty, and an aging workforce, it’s evident that this week’s Scottish Budget comes at a profoundly important time for Scotland – a fact reflected throughout this latest Economic Commentary from the Fraser of Allander Institute.

The question is, what can the Scottish Government do to help solve the productivity conundrum and help the economy to grow?

Investment in technology, education, skills, and infrastructure are good places to start. The Edinburgh City Region Deal, announced earlier this year, was a major step in the right direction.

Within the £1.1 billion package are pledges to create one of the world’s leading data innovation centres, train 100,000 data scientists, as well as set up a regional skills development programme – all of which should help boost productivity.

We may also see more initiatives such as the Scottish Government’s launch of a £4 million fund to attract the world’s brightest entrepreneurs to Scotland and help them develop their ideas for businesses.

This should add to the sense of confidence and purpose we saw from our community of entrepreneurs at this year’s Entrepreneurial Scotland Awards in November, an event Deloitte were proud to sponsor once again.

More initiatives like these are likely to follow in the years ahead. But, whatever happens, the Scottish Government has the task of setting the right balance of policies which can tackle the challenges we face. Unlike Solow’s witticism suggests, looking beyond the immediate horizon is likely to be part of the answer.

John Macintosh
Tax Partner
Deloitte
December 2017
# Economic Commentary

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For regular analysis on the Scottish economy and public finances please see our blog

www.fraserofallander.org
This week’s Scottish Budget (14.12.17) comes at a crucial time for Scotland's economy. With Brexit uncertainty continuing to cast a shadow, plus a gloomier outlook for UK productivity, the Budget provides an important opportunity for the Scottish Government to set out their plans to support the Scottish economy.

The Budget will also mark the first time that we will have forecasts from the new Scottish Fiscal Commission (SFC). The SFC will provide an independent assessment of the outlook for the economy, devolved taxes and social security. They will do so against a backdrop of ongoing economic fragility. Growth in Scotland slowed to just 0.1% over the 3-months to June. Over the year, growth has been around 1/3 that of the UK. In contrast, employment continues to be close to a record high – at least since the Labour Force Survey started in 1992. The downside has been further falls in productivity.

The latest leading indicators suggest that the economy is continuing to grow, albeit at a relatively slow pace. The Scottish FAI/RBS Scottish Business Monitor for Q3 2017 showed both a rise in business and new orders. Our latest survey of activity in the oil and gas sector shows a further pick-up in optimism, although conditions remain challenging.

With this backdrop, it is vital that the Budget sets out a clear vision for how the government will help take advantage of the significant economic opportunities we know will exist in the future – whether that is boosting entrepreneurship and innovation, supporting the development and use of new technologies or tapping in to growing international markets.

With economic uncertainty likely to remain a dominant feature for the foreseeable future, focussing on where government can make a difference in the long-term is vital. But with the Scottish block grant for day-to-day spending falling in real-terms over the next two years (at least), and the Scottish Fiscal Commission likely to forecast weaker devolved tax revenues than had been expected this time last year, the Finance Secretary will be forced to take some big decisions, not just on how to balance the budget and support growth, but to deliver on key manifesto commitments. The likely squeeze on unprotected budgets – such as non-ring fenced local government – looks stark. The outlook for capital is much healthier. And the near £1bn of financial transactions announced in the Autumn Budget provides an opportunity to be innovative.

On balance, the combination of over two years of weak growth, a projected decline in Scotland’s working age population, and ongoing challenges in the oil and gas sector, mean that Scotland will do well to match UK growth over the next few years. That being said, we forecast that the Scottish economy will continue to grow over our forecast period (2018, 2019 and 2020). Our latest forecasts are for growth of 1.2% in 2018, 1.4% in 2019 and 1.4% in 2020. How this weak outlook will impact on the Scottish budget depends, in part, on how the key determinants of income tax – employment and wages – are affected in the short-run. It is not inconceivable that weaker revenue forecasts from the Scottish Fiscal Commission could offset, at least in part, some of any tax hike proposed by the Scottish Government.

Fraser of Allander Institute
December 2017
FAI forecast: Scottish GVA growth

<table>
<thead>
<tr>
<th>Year</th>
<th>GVA</th>
<th>Production</th>
<th>Construction</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>1.2</td>
<td>1.4</td>
<td>0.7</td>
<td>1.2</td>
</tr>
<tr>
<td>2019</td>
<td>1.4</td>
<td>1.6</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>2020</td>
<td>1.4</td>
<td>1.2</td>
<td>0.5</td>
<td>1.5</td>
</tr>
</tbody>
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Growth set to continue to 2020 but to remain fragile and below trend

Scottish growth (%)

Scottish economy grew just +0.5% over the past year - a third of UK rate

Scottish productivity

Productivity has declined for seven consecutive quarters

Scottish Government resource budget

Resource budget to be squeezed by over £350m in real terms by 19-20
December’s Scottish Budget comes at a crucial time. Growth remains below trend and Brexit continues to create uncertainty. The political focus will no doubt be on any proposed changes to income tax. But with rising demand for public services and tight resources a wider debate is needed about the sustainability of key spending priorities and how to boost economic growth in Scotland.

Introduction

The Scottish economy grew by just 0.1% in the second quarter of 2017. Annual growth has risen to 0.5%, but is still well below trend and a third of the rate in the UK. (Chart 1)

Conditions remain challenging, but most surveys point to growth – albeit modest – next year. In contrast, the labour market continues to hold up well, with employment close to a record high. (Table 1)

However with limited growth in the wider economy, Scottish productivity has slipped. Output per hour – the key measure of labour productivity – is down by around 4% since 2015. (Chart 2)

Weak productivity has been a feature of the UK economy since the financial crisis.

The UK Government’s Industrial Strategy is an attempt to tackle this with targeted industry support and investment in R&D and new technologies.

The Scottish Government has an opportunity to set out its vision for the economy in the Budget. Following a speech in August when the First Minister signalled a new approach, businesses will be looking carefully at the detail of the Budget, particularly if – as now seems certain – taxes will increase for many.

With devolved finances continuing to be squeezed and expensive manifesto commitments to be paid for in health and education, one-year sticking plasters in the form of tax rises can only help for so long. A strategy for managing demand, prioritising where money is spent and growing the economy is now needed more than ever.
The global economy

This time last year, the outlook for the global economy was very different.

The Euro Area was struggling and there were fears for the stability of some emerging economies – including China. At the same time, the UK was confounding expectations of a post-EU referendum slowdown and was on track to be one of the fastest growing economies in the G7.

Fast forward and we now have a weaker UK economy with higher inflation and lower growth. (Chart 3).

In contrast, global growth is projected to be over 3.5% this year, rising to 3.75% in 2018 – the fastest rate since 2010. (Table 2).

Europe is more buoyant, with confidence at its highest since the financial crisis. (Chart 4)

Two points are worth reflecting upon.

Firstly, it can be easy for the short-term outlook to dominate debates and day-to-day activities. No matter the immediate outlook, for businesses, focussing on the long-term and strategies for value and growth is key.

Secondly, there are opportunities for Scotland to tap into renewed global optimism (particularly in emerging economies). We currently export 60% more to Ireland than we do to China and as much to Luxembourg as to India – so there is scope to do much better. (Chart 5)
Developing new markets is crucial, particularly when UK domestic demand is weak and Brexit poses a challenge to established trade links. Leaving the EU undoubtedly represents the greatest change for our economy in a generation. Alongside trade relations, it will undoubtedly have an impact on sources of future investment and the supply of workers. At the same time, future economic and financial policy could look quite different. There remains significant uncertainty about the costs and benefits of Brexit. Much will depend upon how policymakers react, both within and outwith the UK.

Key points of policy to be agreed include:

1. The terms of (Br)exit
2. The transition to any new arrangement
3. The long-term economic, political and social relationship between the UK and the EU

Significant progress has been made on part 1 - with a deal on finances, EU citizens and the Irish border. However, the scale of the task in ensuring a ‘smooth’ exit from the EU remains challenging. For example, around 135,000 jobs in Scotland are estimated to be supported by demand from EU exports, both directly and through the spill-over effects into the wider economy. (Table 3)

Careful prioritisation of sector needs will be important in any trade deal. The priorities for Scotland and the UK may not necessarily align – with many of the most important sectors for Scotland less significant at the UK level. (Table 4)

As always, the outlook for Scotland will depend, in part, upon the outlook for global oil prices. The latest FAI assessment of the industry suggests that optimism continues to recover. (Chart 6).

This reflects, in part, the action taken to reduce costs, improve production efficiency and diversify to help support long-term sustainability.

**Table 3: Scottish employment supported by external demand, 2014 Q3 2016 to Q2 2017**

<table>
<thead>
<tr>
<th></th>
<th>EU exports</th>
<th>Non-EU exports</th>
<th>rUK exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>80,300</td>
<td>115,500</td>
<td>337,300</td>
</tr>
<tr>
<td>Indirect</td>
<td>33,000</td>
<td>49,700</td>
<td>144,200</td>
</tr>
<tr>
<td>Induced</td>
<td>21,100</td>
<td>30,500</td>
<td>82,700</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>134,400</strong></td>
<td><strong>195,700</strong></td>
<td><strong>564,200</strong></td>
</tr>
</tbody>
</table>

**Source:** Fraser of Allander

**Table 4: Top 10 Scottish goods exports to EU – by value and rank**

<table>
<thead>
<tr>
<th>Growth Sector</th>
<th>Scotland</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum &amp; related</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Beverages</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Fish &amp; crustaceans</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>General machinery</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Electronic machinery</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Miscellaneous goods</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Chemicals and products</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Gas, natural &amp; manufactured</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>Power generating machinery</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Medicinal &amp; pharma</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

**Source:** HMRC Regional Trade Statistics

**Chart 6: Latest FAI/AGCC Oil and Gas Survey: Autumn 2017 – rising optimism amongst firms in the UKCS**

**Source:** FAI - AGCC 27 Oil and Gas Survey
The price of oil has risen steadily over the past six months – helping to support profitability across the oil and gas sector. (Chart 7).

This has been helped by sharp reductions in costs. The UK Oil and Gas Authority estimate that average unit costs in the North Sea have fallen by a third from £18 per barrel in 2014 to £12 per barrel in 2016.

For Scotland’s wider economy this is a double-edged sword. On the one hand, ensuring the sustainability of the oil and gas sector is clearly a positive, but in the short-term, these reductions in spend – including on wages and salaries – are having a major impact on the economy of the North East.

Looking forward, the outlook for investment – whilst more positive than 12 months ago – continues to remain weak. Only eight appraisal wells were spudded in 2016 (the lowest since 1971) and overall investment is down nearly 50% on 2014 levels. (Chart 8).

The Chancellor’s announcement in the Budget on historical tax reliefs provides a further new initiative to try and help prolong the longevity of the sector.

The UK economy

Overall UK growth has slowed in 2017, with annual growth of just 1.5% (below trend of >2%).

That being said, quarterly growth picked up over the summer (Jul – Sep) to 0.4%. This was faster than the 0.3% growth recorded in each quarter of the first half of the year. (Chart 9).

Back in March, the OBR predicted growth of 2.0% in 2017. Short of a much larger than expected pick-up in Q4 – close to 0.8% – this is now unlikely. The OBR’s latest forecast is for growth of just 1.5% in 2017.

A key driver of this slower growth has been weaker construction sector output (which had been a strong driver of growth since 2013) and higher than anticipated inflation weakening consumer demand. (Chart 10).
As Chart 11 highlights, consumer spending had been the key driver of growth in 2015 and 2016.

NB: The volatility between Gross Capital Formation and net trade reflects a technical issue regarding the trading of precious metals on the London Bullion market. The UK’s non-gold trade position was broadly constant over this period.

The slowdown in consumer spending during 2017 reflects the ongoing squeeze on real wages and household budgets. (Chart 12)

After recovering during 2015 and 2016, the fall in the pound and spike in import prices has meant that real earnings are falling once more.

The IFS believe that average real earnings are on course to be £1,400 a year lower in 2021 than was forecast in 2016. They also believe that it will be well into the next decade before earnings return to their pre-financial crisis levels.

CPI inflation is now 3%. Within that, food and non-alcoholic drink inflation is now 4.1%, the highest since 2013. This alongside rising fuel and transport costs are driving the increase in overall inflation. (Chart 13)

Such increases are all the more challenging for those on lower incomes as such purchases make up a larger proportion of day-to-day spending.

The expectation is that price pressures will start to ease in the months ahead, although – even with the recent increase in interest rates – inflation is on track to be above target for the next 3 years.
Despite these pressures, current indicators of day-to-day economic activity continue to show resilience.

The closely watched UK Purchasing Managers Index (PMI) for services, manufacturing and construction, all show businesses reporting growth. As with the official statistics, construction is the weakest. (Chart 14)

In contrast however, measures of underlying confidence amongst businesses remains fragile. The latest CBI confidence indicators have once again turned negative – reflecting current perceptions of the Brexit negotiations. (Chart 15)

The ZEW Economic Sentiment Index for the UK also declined further in December.

This suggests that whilst businesses are ‘getting on with the job’, they remain nervous about the outlook. If this fragility in confidence was to take a further blow, then it may not take much for it to have an impact on the real economy.

One area where weak confidence is showing up in terms of actual activity is investment. Business investment has been treading water in the UK for the best part of two years. (Chart 16)

This is clearly a concern as investment is believed to be one of the most important drivers of long-term productivity and competitiveness.

Some of the weakness in investment will undoubtedly reflect Brexit-driven uncertainties weighing on confidence.

But it also appears to be part of a longer-term trend. Tackling this track record of weak private sector investment – remember investment in the UK has been lower than in many other countries for a number of years – will be crucial.

This is one motivation behind the UK Government’s industrial strategy and the Scottish Government’s plans for a National Investment Bank.
This low level of investment – coupled with a tight labour market – has led policymakers (including the Bank of England), to believe that even modest growth will erode the remaining spare capacity in the economy. If this was to happen, the pressure on inflation will become even more acute.

For example despite recent weak rates of growth, UK manufacturing is operating at its highest level of capacity utilisation since 2007. (Chart 17)

We can see similar constraints in the labour market. Chart 18 shows a range of measures of labour capacity. Data to the left of the vertical axis (negative points relative to the mean) indicate lower-than-average spare capacity (and vice versa).

As the chart highlights, most measures of spare capacity point to labour market tightening over the year. Whilst some indicators – e.g. the number of part-time workers – suggest that there remains some capacity that could be called on, capacity constraints are clearly beginning to bite.

Most economists believe that the UK is close to operating at, or above, capacity. This is demonstrated by the near zero ‘output gap’ – the difference between actual and potential output – forecast by the OBR and others. (Chart 19)

It is the potential for this to lead to higher inflation, coupled with rising indebtedness, that lay behind the Bank of England’s decision to increase interest rates (and signal a rise to 1% by 2020) (Chart 20)
The UK economic outlook

Operating at close to – or above – capacity would normally suggest that the UK economy was in good health.

In contrast, most forecasts predict weak growth over the next few years.

The OBR’s forecasts are for growth of just 1.4% and 1.3% for 2018 and 2019 respectively. (Chart 21). Indeed the OBR has wiped off £60bn from their UK GDP forecasts for the next 5 years since their previous forecast in March.

Whilst the OBR are slightly more downbeat than the Bank of England, most independent forecasters share the view that (even assuming a smooth Brexit), UK growth will be fragile over the next few years. (Table 5)

Weaker growth across the board is predicted with consumption particularly constrained relative to historical levels in 2018 and 2019. (Chart 22)

The key driver of these downbeat forecasts is the UK’s much weaker outlook for productivity.

In recent years, UK productivity growth has been much lower than prior to the financial crisis. This ‘puzzle’ was largely seen as a temporary phenomenon but the OBR have revised this assessment and now believe it to be something more long-term. (Chart 23)
Huge uncertainty exists over the outlook for productivity across advanced economies. Some economists are pessimistic, believing that we have entered an era of weak productivity growth. It is hard however, to reconcile this with the opportunities that exist from automation and the growth of the digital economy.

As always, the reality is likely to lie somewhere in-between. Legacy effects from the financial crisis (e.g. a mis-functioning banking system) and a cycle of labour hoarding and weak investment, are all still likely to be having some impact and should recede over time.

That being said, it is clear that the UK faces a considerable long-term productivity challenge. More needs to be done – not just to grow high productivity sectors but – to turn around the long-tail of less productive firms and sectors that make up a large proportion of the UK economy. (Chart 24)

Improving levels of investment, R&D, skills and innovation are important. But so is boosting business efficiency, like better management and process innovation. The Bank of England estimates that a third of UK companies have seen no growth in productivity this century.

The UK Autumn Budget

This gloomier outlook has – once again – led the OBR to revise up its public sector borrowing forecasts.

Despite this year's borrowing being lower than expected, the OBR now predict higher borrowing across the forecast horizon. (Chart 25)

Even before the measures announced in the Budget, the UK Government was expected to borrow over £30bn more by 2021-22 than it planned back in March. Recall that this comes on the back of an additional £100bn of borrowing added this time last year. The reason for this failure to make inroads in the deficit has been the weak performance of tax revenues in recent years. (Chart 26)
UK public sector net debt is forecast to stabilise at around 80% of GDP. (Chart 27)

It is the levels of indebtedness that the Chancellor is arguably most interested in both from an economic and political perspective.

Despite UK debt to GDP doubling since the financial crisis, the cost of servicing these debt obligations has remained broadly constant in real terms. This is because although the stock of debt has increased, the interest rates on gilts has fallen to near record low levels.

But should the outlook for government borrowing charges change, either because interest rates rise to combat inflation or investors become nervous about the UK’s prospects outside the EU, then the costs of servicing the debt will rise.

The UK Budget’s implications for Scotland

The UK Budget contained a number of measures with implications for Scotland – including further tax breaks for the North Sea.

There were also Barnett consequentials of £2bn over the period 2017-18 to 2020-21. £1.6bn – or just over 80% – was in the form of capital spending. (Chart 28)

Resource spending is expenditure which covers day-to-day services on things like pay and resources for schools and hospitals. This was boosted by around £350m over 2017-18 to 2019-20.

However, the Scottish Government’s resource block grant remains on track to fall in real terms over the course of this parliament. (Chart 29)

This will take spending back to near 2006-07 levels. It should be noted though that Scotland’s population has grown since then, making the relative squeeze that bit more intense. (Chart 30)

The outlook for capital spending is more positive. (Chart 31)
Of the £1.6bn capital uplift, the majority of this was in financial transactions – of around £1.1bn.

Financial transactions are becomingly increasingly common. Whilst they cannot be used to support day-to-day spending or to fund traditional capital building programmes, they support new investment through the provision of government-backed loans and equity to the private sector.

Whilst it is true that financial transactions are different to traditional public sector spending, if used wisely they are an important instrument available to government. Indeed the Scottish Government has made extensive use of them in the past – e.g. via ‘help to buy’ initiatives.

One area the government may find them particularly helpful is to consider how they might be used to support the creation of the Scottish Government’s proposed Scottish National Investment Bank.

Even excluding financial transactions, the Scottish Government’s traditional capital budget is on track to increase 6% in 2018/19. And the Scottish Government can now also borrow to support further capital investment. Use of these borrowing powers in full in 2018/19 could take capital spending back to levels not seen since the historic high of 2010/11.

Taken altogether, the Scottish Government’s total block grant (resource and capital but excluding financial transactions) is on track to increase by around 1% between 2016-17 and 2019-20.

**Recent Scottish Economy Data**

The latest figures show growth in the Scottish economy of just 0.1% for the 3-months to July.

The downturn was driven by another sharp fall in construction sector activity. In contrast, the all-important services sector had relatively robust growth.

Such weak overall results are hugely disappointing. (Chart 32)
The results for Q2 came on the back of strong growth for the first three months of 2017 (initially +0.8% but now revised to +0.6%).

When the Q1 results were first posted in July, this led some to argue that the economy was in more robust health than we – and others – believed to be the case.

But as we have pointed out, much of the bounce-back was driven by temporary factors concentrated in a small number of sectors. Just three industries in manufacturing – with a combined value of just 6% of the Scottish economy – contributed around half the net growth during Q1. (Chart 33)

It was a near certainty therefore, that growth would slip back in the subsequent quarter.

As we have said on a number of occasions, it is important not to get too carried away with one quarter’s set of results (be they positive or negative).

The Scottish series can be volatile, so focussing on longer-term trends is more relevant. And on this basis, there is no escaping that Scottish growth has been weak. In five of the past six quarters, Scottish growth has been just 0.1% or lower and GDP per capita has been broadly flat since 2015. (Chart 34)

One bright-spot in the most recent quarterly results is the strong growth in services – with growth of 0.7% over the 3-month period to June.

In most instances, strong growth in services would be sufficient to power faster growth given that it accounts for 75% of the Scottish economy.

But this was offset by declining activity in the construction sector – for the sixth consecutive quarter – and activity in the production sector slipping back.

As Chart 35 highlights, over the past two years, both production and construction have dragged down overall growth in the Scottish economy.
Over the course of the year, the Scottish economy has grown 0.5% - around a quarter of trend growth. Unfortunately, this is part of an increasingly consistent story. Like many other advanced economies, the Scottish economy has been stuck in a cycle of relatively weak growth.

Between 1999 and 2006, reported growth in GDP per head averaged 2.3% per annum. After the financial crisis of 2007 – 2009, annual reported growth has averaged just 0.8%. (Chart 36)

The Scottish Parliament’s Economy, Jobs and Fair Work Committee has launched an inquiry into Scotland’s economic performance since 2007. On many key indicators, such as productivity, participation and economic inequality, limited progress has been made in closing the gap with the top performing countries.

For example back in 2007, the Scottish Government set a target to close the growth gap with the UK by 2011. But in the 42 quarters since the start of 2007, the annual growth differential between Scotland and the UK has only been in Scotland’s favour on 12 occasions. (Chart 37).

The growth gap with the UK over time is narrower when looking at GDP per head. Much faster population growth at the UK level has been a key reason why overall UK growth has been stronger.

It is possible to examine the key components of growth over time. (Table 6)

Taking the latest decade we have full data for – 2006 to 2016 – productivity grew at a faster rate in Scotland than in the UK as a whole. In contrast, for both population and key labour market indicators, the UK economy has out-performed Scotland.
Drivers of growth

With the exception of gross fixed capital formation – i.e. investment – the core expenditure components of GDP increased in cash terms over the second quarter of 2017.

Private consumption was again the main contributor – as it has been since 2015. (Chart 38)

Net trade made a positive contribution for the second quarter. Whilst this is a modelled series, and should be viewed with caution, this appears to be driven by two factors.

Firstly, an improvement in the international trade balance. Secondly, activity in Scotland which supports the North Sea – i.e. the supply chain such as engineering and services for offshore workers – is (oddly in our view) counted as a rUK export. As the downturn has eased so our notional trade position with rUK has improved. (Chart 39)

Like the UK, consumption growth has eased in recent times. This is unsurprising given the squeeze on household incomes.

Consumers have been compensating for weak growth in employee income by lowering their savings. (Chart 40) The savings ratio has fallen further in 2017 – from 11% in 2015 to 6.4% now.

At the same time, the amount of unsecured borrowing has increased. (Chart 41)
The fall in capital formation was once again driven by weak levels of business investment.

As Chart 42 highlights, business investment has fallen by 14.8% over the year and by nearly 25% in two years.

Note too, that the figures are in current prices (i.e. unadjusted for inflation), so in reality the scale of the weakness in investment is even starker.

How does this square with recent statistics which showed that the number of businesses in Scotland was at a record high? As at March 2017, there were an estimated 365,600 private sector enterprises - an increase of 3.1% on 2016.

But 78% of the increase was in unregistered businesses, with a further 19% registered but having no employees. Unregistered firms tend to be small (primarily self-employed).

As Chart 43 highlights this is part of a longer-term trend, with a sharp increase in un-registered firms.

It would appear that much of the recent pick-up in business activity has not been in more traditional forms of business, but in self-employment and employees setting themselves up as consultants.

Since 2010 nearly 80% of the net growth in firms with 0-49 employees has been in the professional, administrative and information sectors – where consultancy growth has been high. (Chart 44).

It is also interesting that the vast majority of the growth in larger businesses since 2010 (50+ employees) – has been in firms owned outwith Scotland. (Table 7)
As previously highlighted in Chart 35, there is significant variation in sector performance in the most recent growth statistics for Scotland.

Within manufacturing, most sectors witnessed a decline, although food and drink grew by 1%.

Construction continued to act as a drag on overall growth. Activity was down 3.5% over the quarter and 5.5% annually. (Chart 45)

The decline in construction has been driven by a sharp fall in infrastructure spending from record highs in 2015 (when a series of major public projects were being constructed).

As highlighted above, the one bright spot has been the strength of the services sector – which grew +0.7% over the quarter and by 1.3% over the year. (Chart 46)

With the exception of retail and accommodation & food, all major sectors grew over the year, with professional services making the greatest contribution. (Chart 46)

Such ‘professional-and related’ services, including finance, real estate etc., have grown strongly in recent times – outpacing growth in the wider economy. (Chart 47)

Retail sales were flat during the third quarter of 2017 and grew just 0.6% over the year, providing further evidence of weak consumer confidence. (Chart 48)
The Scottish labour market

The labour market in Scotland continues to provide impressive headline indicators – employment is 75.2% whilst unemployment remains low at 4.0%. (Chart 49)

Over the year to September, employment has increased by 46,000. At the same time, unemployment has fallen by around 20,000.

On both, Scotland is slightly better than the UK – although as we have indicated, with confidence intervals of +/1.3% & +/-0.7%-points surrounding these estimates, care needs to be taken when interpreting small differences in headline numbers.

As Chart 50 shows, the recent growth in employment has been driven by rising self-employment. This is consistent with the trends on business formation outlined above.

Regional variations continue across Scotland. Chart 51 shows relative performance by local authority between 2008 & 2013 (the peak of Scottish unemployment) and 2008 and 2017.

Local authorities in the top right have been the most resilient, with higher employment in both 2013 & 2017 compared to 2008. Authorities in the top left initially saw employment fall between 2008 and 2013 but have since recovered. Those in the bottom left still have employment levels below 2008 levels.

The Scottish labour market

The labour market in Scotland continues to provide impressive headline indicators – employment is 75.2% whilst unemployment remains low at 4.0%. (Chart 49)

Over the year to September, employment has increased by 46,000. At the same time, unemployment has fallen by around 20,000.

On both, Scotland is slightly better than the UK – although as we have indicated, with confidence intervals of +/1.3% & +/-0.7%-points surrounding these estimates, care needs to be taken when interpreting small differences in headline numbers.

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Regional variations continue across Scotland. Chart 51 shows relative performance by local authority between 2008 & 2013 (the peak of Scottish unemployment) and 2008 and 2017.

Local authorities in the top right have been the most resilient, with higher employment in both 2013 & 2017 compared to 2008. Authorities in the top left initially saw employment fall between 2008 and 2013 but have since recovered. Those in the bottom left still have employment levels below 2008 levels.
Chart 52 shows the evolution of youth employment and unemployment. Youth unemployment in Scotland is around its record low but the youth employment rate remains below its 2007-08 level.

The latest figures on earnings – which cover the period up to March 2017 – show that household budgets continue to be squeezed. (Chart 53)

With inflation at 3%, real earnings have once again turned negative, meaning that workers are seeing the purchasing power of their pay eroded.

As Chart 54 shows, earnings growth has not been uniform across incomes. While the fastest income growth has been seen among the 10% of the labour force with the lowest weekly earnings, this earnings growth is still barely above the rate of inflation. For all but the bottom 10%, real earnings have declined.

**Productivity**

Strong labour market outcomes are clearly welcome. Whilst there are concerns about the quality and nature of some of the work created, the overall trend has – on the whole – been positive.

That being said, this is only one dimension of the wider health of the economy.

With relatively weak economic growth, more people in work implies that the average contribution of each person to national output is either growing very slowly or falling.

Much has been written recently about the UK’s (and by implication Scotland’s) productivity performance. In the long run it is key to boosting earnings and growing the tax base.

The latest figures show that productivity in Scotland as measured by output per hour (the preferred measure) was down 2.2% over the year.

Productivity growth has now been negative for seven consecutive quarters. (Chart 55)

As with Scottish GDP data, one reason for this is the downturn in oil and gas spilling over onto the onshore economy.
This is a concern as many of the sectors in the North Sea supply chain – e.g. in advanced engineering – are highly productive.

Scotland had been catching up with the UK (until 2015). (Chart 56)

Much of this ‘catch-up’ appears to have not come from strong Scottish-specific productivity per se but because the UK has created jobs at a much faster rate and hence softening productivity growth. Why does this have an impact on productivity measures?

Productivity is the ratio of output to labour input. If the number of people working is increasing faster than the growth in output (either due to population growth or higher participation), the contribution of each worker (or hour worked) will fall. Hence, a country creating fewer jobs, could see its relative productivity ‘improve’.

Chart 57 shows productivity on the basis that Scotland had matched the growth in UK jobs and hours worked since 2007 – and compares this to the actual output per job/per hour Scottish series.

As can be seen, had Scotland matched UK growth in jobs (Scottish OPJ (UK)) or hours worked (Scottish OPH (UK)) – for the same level of output growth, Scottish productivity would have been much weaker.

Therefore, whether or not the form of ‘catching-up’ that we have seen with UK productivity is a good thing is open to debate.

At least in the short-run, there can sometimes be a trade-off between greater productivity and better labour market outcomes (i.e. more jobs).

However you choose to view it, one thing that is clear is the importance of looking beyond the headline employment indicators to think about wider labour market issues like productivity, earnings and job quality.
Current economic conditions

The emerging economic data over the autumn has been – in the main – relatively positive.

The FAI-RBS Business Monitor for Q3 2017 showed a slight increase in the net balance of firms reporting new business but a slight easing (albeit still positive) in repeat business. (Chart 58)

The gap between the Scottish Purchasing Managers Index (PMI) and the equivalent for the UK had been narrowing a little in recent months. But November’s PMI for Scotland fell to just 50.2 - the lowest value since March. (Chart 59).

As highlighted previously in Chart 42, low levels of business investment has been an unwelcome feature of recent times and shows little sign of changing.

The latest Scottish Business Monitor reports that more businesses are planning on cutting back investment over the next six months than there are planning to increase it. And this is despite turnover prospects improving. (Chart 60).

A similar result is found in the latest Scottish Chambers of Commerce survey. (Chart 61). Here the percentage of firms engaging in investment has tended to have been lower in both 2017 and 2016 than in 2015. Unsurprisingly, the tourism sector – on the back of a strong 2016 and 2017 is more positive.
Levels of consumer confidence remain weak. The GfK consumer confidence indicator for Scotland declined further in November to its lowest level in 2 years – and is now well below the UK (Chart 62).

A similar story emerges in the Scottish Government’s consumer sentiment measure. In this, Scottish households are asked of their expectations for the next 12 months for both the economy and household finances. Their expectations for the economy remain negative – and are at their lowest since the series began in 2013. Their perception of the outlook for household finances has also weakened. (Chart 63)

Overall, households at the lower end of the income distribution appear to be less confident about the future than better off households. The GfK indicator of consumer confidence has typically been more negative for those earning less than £25,000 for the past two years. (Chart 64)

Whilst households appear pessimistic about the outlook, the demand for labour remains strong. (Chart 65) The Bank of Scotland’s labour market barometer – which captures various measures of activity in the Scottish jobs market such as demand for new staff etc. – continues to perform well-above its long-term average.

This suggests that the disconnect between a resilient labour market and a weaker economic outlook is likely to continue for some time yet.
As in the past, we report a central forecast but also uncertainty bands that set out a likely range within which we predict Scottish economic growth will lie.

This December issue includes our first estimates of growth for 2020.

We have revised down slightly our forecasts for 2018 and 2019 in the light of a weaker UK outlook and a failure of investment or consumer confidence to pick-up in Scotland.

However, our overall assessment is broadly unchanged. We believe that the Scottish economy will grow next year and the year after, but predict that such growth will remain below trend.

Our revised forecast is for growth of 1.2% in 2018, 1.4% in 2019 and 1.4% in 2020. (Table 8, Chart 66)

Our last forecast for 2017 of 1.2% growth – made in September – is on track to be slightly over optimistic based upon the latest figures published for this year thus far.

Our ‘nowcasts’ suggests growth of around 0.38% and 0.35% for Q3 and Q4 in 2017 (Table 9).

The combination of these nowcasts alongside the revision to Q1 data (from 0.8% to 0.6%) and the weak growth of 0.1% in Q2, means that annual growth for 2017 is currently heading to be 0.8% on a 4Q-on-4Q basis (and 1.4% comparing the final quarter of 2017 with the same period in 2016).

Should this occur, this will take Scotland’s average growth rate over the past decade to just 0.7%. It cannot be overemphasised how deeply disappointing this is. The fact that this poor performance is not the focus of more attention remains hugely surprising.

The scale of our revisions for 2018 and 2019 are -0.16 and -0.30 percentage points respectively (Table 10).

As in recent years, services should make the greatest contribution to overall growth, however in absolute terms, growth in production is forecast to be slightly higher. (Chart 67)
Weak earnings will mean that household spending – and the industries it supports (e.g. retail) – will continue to be under pressure well into 2018.

However building on recent growth, professional and business services are placed to do better. Tourist facing businesses have had a strong 2017 and this should continue (particularly if Sterling stays competitive).

We expect the outlook for manufacturing to be slightly more positive, particularly as optimism in the North Sea supply chain continues to improve.

The construction sector should start to see more positive growth over the next couple of years. The increase in investment announced by the UK Government should help reverse recent falls in infrastructure spending.

The greatest drag on growth is likely to be weak business investment as Brexit uncertainty continues to put-off firms from expanding.

Our latest forecasts for Scotland put us slightly behind the Bank of England’s forecast for the UK economy but ahead of the OBR’s UK forecast.

 Whilst we do not forecast the UK economy directly, on balance, we believe that Scotland will do well to match forecasted UK growth over the next few years. (Table 11)

There are a number of reasons for this.

Firstly, the downturn in oil and gas is clearly a structural rather than cyclical challenge. Going forward investment, wages and supply-chain activity will undoubtedly be smaller than in the past.

Secondly, Scotland’s 16-64 population is projected to grow more slowly (and then decline). This is in contrast to the UK as a whole. (Chart 68) Note however, to the extent that the pension age continues to rise, this will initially dampen any effect of population ageing in Scotland.

Thirdly, there is little evidence to suggest that Scotland will significantly outperform the UK in terms of productivity over the next few years.

Table 11: Forecast UK GDP growth (%) 2018 to 2020

<table>
<thead>
<tr>
<th>Source: HM Treasury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of England</td>
</tr>
<tr>
<td>OBR</td>
</tr>
<tr>
<td>NIESR</td>
</tr>
<tr>
<td>European Commission</td>
</tr>
<tr>
<td>IMF</td>
</tr>
<tr>
<td>ITEM Club</td>
</tr>
</tbody>
</table>

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Thirdly, there is little evidence to suggest that Scotland will significantly outperform the UK in terms of productivity over the next few years.
Indeed given recent trends, and the downturn in one of Scotland’s most productive sectors – the oil and gas supply chain – the outlook for Scotland could be weaker.

Clearly there remains much uncertainty over such forecasts, but our expectation is that productivity will start to pick-up in the coming years (albeit it will continue to remain poor by historical standards).

Chart 69 shows alternative productivity forecasts under two different scenarios. A ‘low’ scenario assumes that productivity performs broadly as it has done since 2008. The ‘high’ scenario assumes that productivity returns to 2% growth by 2020. In the ‘low productivity’ case, growth remains weak and stuck below 1% over the forecast horizon – growing just 0.5% in 2018 and 0.9% in 2019 and 2020. In the ‘high productivity’ scenario, whilst growth remains below trend it starts to pick-up and approaches 2.1% by 2020. (Chart 70)

Faced with this outlook, and a decade of growth less than 1% a year, it is vital that the Scottish Government use the Budget to come forward with clear practical policy actions to support business, attract investment and boost productivity. Strategies, action plans and ambitions around inclusive growth will only take us so far.

The Scottish Fiscal Commission (SFC) will publish its first economic and fiscal forecasts alongside the Scottish Budget. A number of points are worth noting.

Based on recent evidence we see no reason to think that they will be anything but cautious in their assessment of the Scottish economy.

Furthermore, weak GDP forecasts will undoubtedly have an impact on expected Scottish revenues (prior to any policy decisions).

But as David Eiser’s article in this Commentary points out, changes in aggregate measures of economic performance (such as GDP), at least in the short-run, might not be perfectly correlated with changes in tax revenues.
For example for income tax, what matters most is the outlook for wages and employment.

And here there are reasons to be slightly more optimistic on Scotland’s relative performance (at least in the short-term).

On earnings, whilst weak Scottish incomes have tended to keep pace with those in the UK as a whole. (Chart 71). A similar picture emerges in terms of labour market indicators. Our latest forecast is for Scottish unemployment to broadly track that of the UK. (Table 12)

Of course, should Scotland’s economy grow more slowly than the UK over time, then the potential risks to devolved budgets are more serious. Even small percentage point differences in tax revenues amount to hundreds of millions of pounds in lost revenues, even over a short number of years.

This is why we believe that this Budget should be judged for what it says about the economy just as much as it will about Scottish taxation and spend.

### Table 12: FAI labour market forecast to 2020

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee jobs</td>
<td>2,462,900</td>
<td>2,488,850</td>
<td>2,526,500</td>
</tr>
<tr>
<td>% employee job</td>
<td>+0.9%</td>
<td>+1.1%</td>
<td>+1.5%</td>
</tr>
<tr>
<td>growth over year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ILO unemployment</td>
<td>120,350</td>
<td>114,650</td>
<td>116,300</td>
</tr>
<tr>
<td>Bank of England - UK</td>
<td>4.3%</td>
<td>4.4%</td>
<td>4.6%</td>
</tr>
<tr>
<td>OBR - UK</td>
<td>4.2%</td>
<td>4.2%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Rate (%)</td>
<td>4.5</td>
<td>4.2</td>
<td>4.2</td>
</tr>
</tbody>
</table>

*Source: Fraser of Allander Institute*

Notes:

- Absolute numbers are rounded to the nearest 50.
- 1. Rate calculated as total ILO unemployment divided by total of economically active population aged 16 and over.
Policy Context

The Cabinet Secretary for Finance, Derek Mackay, will publish the Scottish Budget on 14th December. As we set out in our Scotland’s Budget: 2017 report in September, this will be a tough settlement.

After a small increase in 2017/18, the Scottish resource block grant will fall by just under 1% in real terms next year. This will bring the cumulative real terms fall in the block grant since 2010/11 to almost 7%.

At the same time, the budget comes at a time of heightened economic uncertainty and weak growth.

Meeting spending demands whilst maintaining economic competitiveness requires a careful balance.

It is also worth remembering that Mr Mackay is required to gain the support of one or more party in the Scottish Parliament.

So what are the key policy issues to look for?

The government’s spending priorities

Since 1999, successive administrations have chosen to prioritise health spending. In this parliamentary term, the Scottish Government has committed to increase spending on health by £500 million more than inflation.

This might sound generous but it is likely to be sufficient just to keep up with population and demographic trends.

The government hopes that savings can be made by moving to more ‘preventative’ and ‘joined-up’ models of service provision - for example, in health and social care. But wider reforms continue to prove difficult to implement and, even then, will only deliver savings in the long-term.

With health protected, other areas of the budget are required to pick-up the burden.

Non-health spending has declined by 10% in real terms since 2010/11. But the population has also been growing. As a result, in per capita terms, non-health spending has declined by 13%, and is on course to fall by almost a fifth by the end of the decade.

A consequence of the increasing prevalence of one-year (as opposed to multi-year) budgets is that the scale of these changes over time – and the relative shift of spending priorities – has gone relatively unnoticed.

In looking to this week’s budget and beyond, there are some additional areas that are also likely to be ‘protected’.

This includes commitments to protect police spending, expand childcare, and tackle inequalities in educational attainment. On top of this, the government has a number of politically symbolic policies to deliver (like free prescriptions, free university tuition, concessionary travel etc.); a pay rise for public sector workers; borrowing commitments (of around £1 billion); and a new social security agency to establish.

‘Non-protected’ areas are therefore in line for a challenging budget settlement.

Protecting some services over others is part of the job of government, but there is also a need for strategic choices within unprotected areas.

Tax increases cannot free policymakers from making difficult choices

The pressures on spending means that the government has been quite open about its aspirations to raise revenues through income tax.

The government has advocated the concept of a ‘social contract’, i.e. access to a range of publicly provided services, including various flagship universal services, funded by higher taxation.

But a policy to increase tax rates clearly carries risks, both politically and economically.

Even a relatively ‘bold’ policy on income tax (e.g. one that adds a penny to all tax rates but protects those earning below the national median income) is likely to raise not much more than £300 million.
This could help to offset this year’s budget cut. However, with consolidation of funding from Westminster likely to continue into the next decade, it will only be a short-term fix.

Of course any proposals to increase tax rates will generate a debate about the potential effects on incentives to work, business competitiveness and Scotland’s attractiveness as a place for investment.

In reality, little is known with certainty about the potential economic impacts of changing tax rates within the context of devolution. In the short run, much will depend upon the aggregate net impact of reduced household incomes but higher government spending.

But over the long run, of greater concern to the government could be the impact of higher taxes on business sentiment and Scotland’s perceived competitiveness relative to the rest of the UK.

If there is one area where the government may be more likely to consider tax cuts, it is in relation to Land and Buildings Transaction Tax. There had been calls to align LBTT rates closer to those in England (properties in Scotland pay higher tax on transactions over £333,000). It may also face pressure to mimic the UK Government’s Stamp Duty tax cut for first time buyers.

The risk is that, with the price structure of housing significantly different in Scotland compared to England, replicating the English structure will imply much reduced revenues and would impose a system of rates less relevant to the Scottish market. In the longer term, most economists would argue that a more fundamental restructuring of land and property taxation, encompassing not just LBTT but also business rates and council tax, makes more sense.

Ironically the delay to the devolution of Air Passenger Duty (scheduled for 2018) may alleviate some immediate budget pressures, given the Scottish Government’s commitment to reduce rates.

The importance of growth

The economic backdrop to the Budget will be shaped by the first ever forecasts from the Scottish Fiscal Commission (SFC) for both the Scottish economy and devolved revenues. It is likely that the SFC will be downbeat about the immediate prospects for both.

The fragile economy is of course a significant issue for the public finances. A faster growing economy generates larger revenues, while a weaker one generates less.

But whilst it is harder in practice for government to stimulate the economy than is often supposed, both the Scottish and UK governments are certainly not powerless to support growth over the medium term.

With disappointing economic data for two years now, the Scottish Government will need to articulate how it will support the economy. So where can the budget make a difference?

Taxation: One area that businesses will look for clarity is over the government’s long term vision for taxation. If taxes rise, businesses will demand a convincing equivalent to the ‘social contract’: i.e. demonstrable improvements in skills, digital connectivity and infrastructure. Action plans and strategies will not be sufficient.

Spending priorities: The First Minister has said that the government is willing to look at how to ‘make the most of the money we already spend’ on supporting the economy – around £2bn per annum. That is a significant amount of money – but does it have an equivalent impact? Enhancing the quality of further and higher education, supporting enterprise and skills, boosting R&D and innovation, delivering a workable National Investment Bank are just some of the areas where concrete action could make a difference.

Capital investment and borrowing: As a result of UK Government decisions, the Scottish Government’s capital budget is to increase over the next few years. Combined with new borrowing powers, investment could return to levels not seen since 2010/11. In the current economic climate, there is a case for utilising the borrowing powers in full,
but where and how effectively the money is spent is just as important.

Financial Transactions: At the same time, the government now has £1bn of ‘Financial Transactions’ at its disposal. In theory these could be used to lend to businesses – on generous terms – to support investment in anything from commercial property to R&D. Many would argue that investment in these sorts of projects has the potential to generate a greater economic return than if it were simply used to support borrowing for the residential property market.

The importance of a longer term perspective

The major budgetary and wider policy challenges that Scotland faces cannot be addressed on a year-by-year basis. Implicitly policymakers recognise this.

They are increasingly adopting longer-term targets for policy interventions (the latest is the target to eliminate child poverty by 2030, now enshrined in the Child Poverty (Scotland) Bill).

But despite this recognition of the importance of a longer-term vision, budget planning remains remarkably short-sighted. Unfortunately, another one year budget is likely - at best a two year budget - following single year budgets in 2016/17 and 2017/18.

The short-term perspective means we lose sight both of where we are coming from, but also how long-term challenges can best be addressed.

Part of this reflects the political reality of a minority government. But this cannot be used as an excuse to avoid taking a more strategic approach to the Budget.

Conclusions

In September we discussed how the Scottish Government had set out a new vision for supporting growth and its willingness to change the emphasis of its approach to economic policy.

The Budget offers the first test of the level of the government’s ambition.
A world leading business school on your doorstep

As part of a leading technological University and Scotland's number one business school, we understand the importance of global thinking.

Our Department of Economics is home to the Fraser of Allander Institute, one of Scotland's leading independent economic research institute.

The institute is offering a one day CPD course, “Understanding the Scottish Economy”, which is being held at the business school on 26th April 2018. The course is designed for professionals in the private, public and third sectors who are interested in gaining an understanding of the economy and its impact on their organisation.

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