

THE IMPACT OF BREXIT ON THE SHEFFIELD CITY REGION – ISSUES & EVIDENCE

**A report from Oxford Economics for Sheffield City Region
Local Economic Partnership**

March 2017

INTRODUCTION

Oxford Economics have been commissioned by Sheffield City Region (SCR) LEP to provide an economic assessment of the key issues and potential implications affecting the city region, following the UK's decision to leave the European Union (EU).

Indeed, the decision made by the public to leave the EU will have a marked impact on growth in the UK, its regions and local areas, including the SCR LEP. This is particularly important for the SCR given its above average share of employment in sectors focused internationally such as manufacturing and logistics.

The exact outcome of Brexit is uncertain and will depend on a mix of the trade deals negotiated and the mix of policies.

With this in mind, the report highlights for key-decision makers where the city region is more exposed and where efforts should be made to inform the national debate for the benefit of businesses and residents in the city region.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY (1)

- Between 2005 and 2015, **employment** in the SCR increased by 20,000.
- Having grown at a faster pace than employment, **growth in GDP** lagged both the UK as a whole and the East Midlands, although it did outpace Yorkshire & Humber.
- **Productivity** in SCR is low across most sectors.
- All this suggests that SCR faces some fundamental **challenges**.
- **Brexit** will make none of those challenges easier, and some harder.
- An important factor is that the region's **exports** are almost certainly biased towards its traditional base in engineering. This includes some world-class companies and facilities, with very important innovative assets in the region. However it is a narrow base, and vulnerable to trade barriers.
- There is also a reliance on the universities sector, which may be vulnerable to Brexit's effect on the supply of skills and student numbers, as curbs on **migration** come into play. It could also be vulnerable if **government funding** for research declines. That mirrors business support, funding and skills concerns, more generally.

EXECUTIVE SUMMARY (2)

- **We forecast that by 2019, employment in Sheffield City Region could be 5,000 lower than it would otherwise be, as a result of Brexit.**
- We do not expect a free trade deal with the EU to be in place by 2019, and therefore **tariff** and **non-tariff trade barriers** impose costs.
- We do not expect the shift to **lighter-touch regulation** nor **tax cuts** to create any major offsetting boost to the UK. We account for a possible **shift in exports to Asia** away from the EU, but the benefits are limited.
- Threats to the region's innovation and research base from **cuts in government funding and/or migration** could pose real problems.
- But much remains uncertain, and the impact on SCR will depend on:
 1. the Brexit deal that is done;
 2. other macroeconomic circumstances;
 3. how SCR's companies and citizens respond to the new challenges;
and
 4. what the LEP and partners can do to promote a 'good' Brexit.

EXECUTIVE SUMMARY (3) – 7 STRATEGIC QUESTIONS

1. Brexit may accelerate **structural change**. How can the LEP and partners maximise opportunities? What should the priorities be?
2. Can the LEP and partners build **'bottom-up' evidence** of companies (e.g. reliance on EU migration and EU markets) and sectors (e.g. manufacturing and higher education) challenged by Brexit, or facing the greatest opportunities?
3. How can they best **provide guidance and support** to local businesses?
4. If UK government prioritises sectors for special treatment, or particular markets for early trade deals, these may not be the ones that matter most to SCR. Do the LEP and partners need to **speak up for sectors and markets** of greatest importance to SCR?
5. Brexit may make it harder to attract inward investment. SCR has advantages: e.g. high-value manufacturing clusters and strength in research and innovation. How can the LEP and partners promote assets? Through **national strategic priorities, or local leadership**?
6. SCR may be particularly affected by **the impact of Brexit on its universities** (e.g. funding and high skilled migration). What can be done?
7. More generally, does the shortfall in **qualifications & skills**, mean extra resources are needed for SCR? Where might they come from? The LEP should understand future skills demand and supply given likely changes to migration.

PART 1
**THE STRENGTHS & WEAKNESSES OF THE CITY
REGION ECONOMY, GOING INTO BREXIT**

GROWTH HAS GENERALLY BEEN BELOW THE NATIONAL AVERAGE

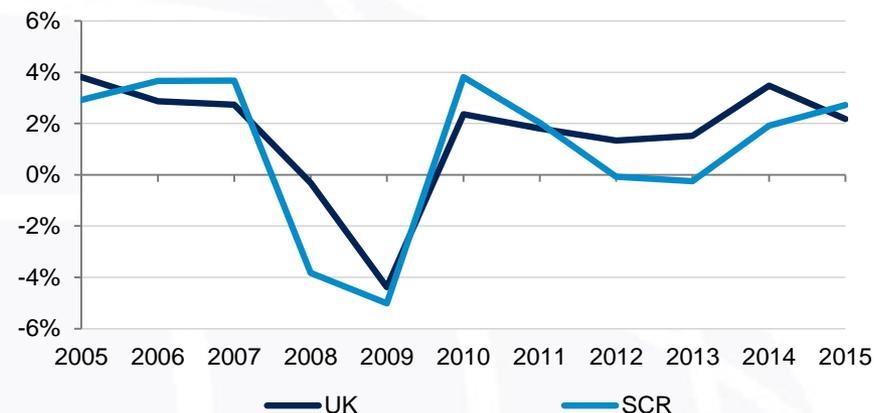
We estimate that, over the decade from 2005 to 2015, growth in gross value added (GVA) in the city region lagged behind growth in the UK and East Midlands. It averaged 0.8% a year compared to 1.3% and 1.1%, respectively. However, SCR grew twice as fast as Yorkshire & Humber (0.4%).

Unfortunately, employment grew more slowly. According to the ONS, jobs growth in SCR averaged 0.2% a year over the same period, a much slower rate than for either the UK (0.8%) or the East Midlands (0.6%), although only slightly slower than Yorkshire and Humber (0.3%). **This translated into an employment increase of 20,000 in the city region.**

Of the increase in GVA, Sheffield and Doncaster accounted for 47%, highlighting their importance to the city region while Bolsover contributed a further 17% of the increase in GVA.

ONS data also suggest that, of the increase in net jobs, Bolsover and Bassetlaw accounted for a major share, offsetting job losses in several larger economies within SCR, including Sheffield and Rotherham. Doncaster also experienced job gains, according to the ONS figures.

Annual GVA growth, SCR and the UK, 2005 to 2015



Source: Oxford Economics

Number and growth in jobs, by local authority, 2005 and 2015

	Levels (000s)		Annual average growth
	2005	2015	
Sheffield	284.8	281.1	-0.1%
Doncaster	129.5	137.4	0.6%
Rotherham	116.9	114.2	-0.2%
Barnsley	86.2	88.3	0.2%
Chesterfield	54.6	56.6	0.4%
Bassetlaw	48.7	55.0	1.2%
Derbyshire Dales	39.7	37.0	-0.7%
Bolsover	25.1	33.9	3.0%
North East Derbyshire	31.1	33.1	0.6%
SCR	816.5	836.5	0.2%

Source: Oxford Economics

THE SECTORAL STRUCTURE IS DIFFERENT TO THE UK AS A WHOLE

The city region has a relatively high share of its GVA in several low growth sectors, including manufacturing and wholesale & retail trade.

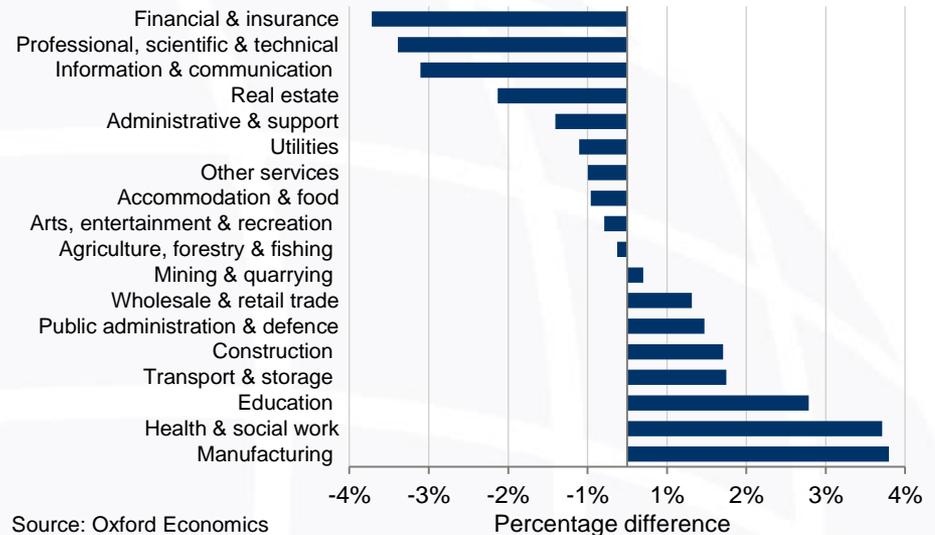
SCR also has a high concentration of GVA and jobs in the education sector, partly reflecting the importance of the universities. In this case, the sector is likely to be of strategic importance, supporting other sectors of the economy.

In 2015, these sectors, together with health & social work, produced 45% of SCR's GVA, compared to 35% in the UK – highlighting the reliance on these sectors for the city region.

Furthermore, sectors associated with high growth potential such as professional, scientific & technical and information & communication, are relatively under-represented in the city region.

Key issues going forward will be whether Brexit makes it easier or hard to reposition the sectoral structure of SCR, and whether Brexit will make it easier or harder to manage the impact of that on SCR residents.

Importance of SCR's sectors to GVA relative to the UK, 2015



EMPLOYMENT HAS BEEN SHIFTING AWAY FROM MANUFACTURING

Between them, growth in output, and the city region's sectoral structure, have major impacts on employment trends in SCR. In particular, manufacturing employment declined in SCR in the decade to 2015, with 1,800 net job losses a year on average.

The downsizing of the city region's manufacturing base was felt across most local areas, with Sheffield, Doncaster and Rotherham the heaviest hit.

Amongst other sectors, wholesale & retail trade lost an average of 1,100 jobs a year.

In contrast, job creation stemmed partly from public services, including health & social work and education, but also from professional, scientific & technical services, which though a small sector in the region saw a sharp rise in employment.

Together these sectors created over 40,000 net new jobs, more than offsetting the job losses in manufacturing and wholesale & retail trade.

Number and growth in jobs in SCR, by sector, 2005 and 2015

	Levels (000s)		Annual average growth
	2005	2015	
Agriculture, forestry & fishing	4.5	5.7	2.3%
Mining & quarrying	3.3	1.8	-5.5%
Manufacturing	110.4	92.3	-1.8%
Utilities	5.6	7.1	2.4%
Construction	58.5	59.5	0.2%
Wholesale & retail trade	143.4	131.9	-0.8%
Transport & storage	38.7	45.2	1.6%
Accommodation & food	48.2	47.2	-0.2%
Information & communication	21.4	19.3	-1.0%
Financial & insurance	20.3	19.0	-0.6%
Real estate	8.0	9.7	1.9%
Professional, scientific & technical	36.6	49.8	3.1%
Administrative & support	58.8	63.6	0.8%
Public administration & defence	36.0	35.7	-0.1%
Education	72.2	82.5	1.3%
Health & social work	107.9	124.8	1.5%
Arts, entertainment & recreation	19.7	21.4	0.8%
Other services	23.1	19.8	-1.5%
Total	816.5	836.5	0.2%

Source: Oxford Economics

BUT OVER THE LAST FIVE YEARS MANUFACTURING HAS GROWN

Despite the long term decline in manufacturing employment in SCR, the sector has recently recorded growth. Job growth in the sector averaged 1% a year between 2010 and 2015. This translated into an increase of 5,300 net jobs in the city region over the same period.

Fabricated metal production experienced the largest growth with 3,000 new jobs over the period. However an additional five manufacturing sub-sectors experienced jobs growth of 1,000 or more.

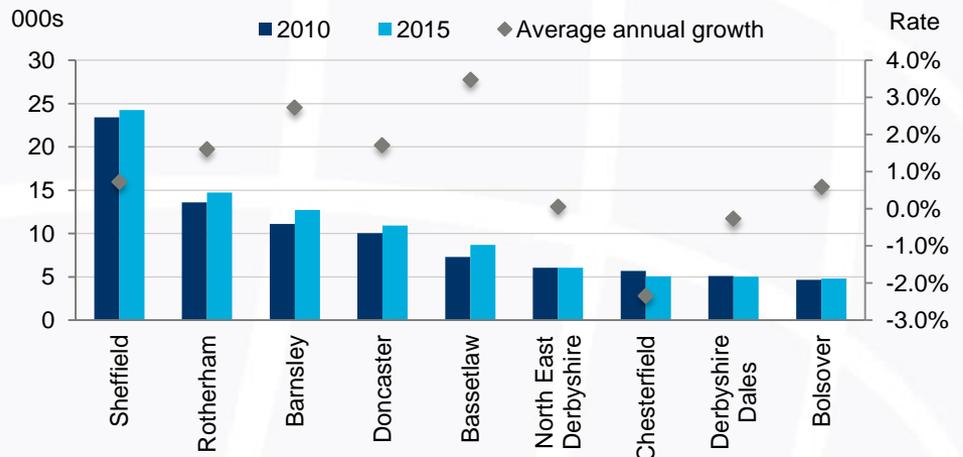
ONS data also suggest that, of the increase in net jobs (5,300), Rotherham and Barnsley accounted for a significant share. Bassetlaw also experienced job gains, which though a relatively small contributor to SCR's manufacturing employment recorded the strongest job growth.

Manufacturing employment in SCR (000s), by industries, 2010 and 2015

Manufacturing industry	2010	2015	Change	Average annual growth
Fabricated metal prod.*	15.0	18.0	3.0	3.7%
Furniture	1.8	3.5	1.8	14.9%
Repair & install. of machinery & equip.	3.5	5.0	1.5	7.4%
Wood & wood, cork, straw & plaiting	2.0	3.0	1.0	8.4%
Basic metals	6.0	7.0	1.0	3.1%
Motor vehicles & trailers	2.5	3.5	1.0	7.0%
Beverages	0.3	0.7	0.5	22.9%
Chemicals & chemical prod.	1.5	1.8	0.3	3.1%
Computer, electronic & optical prod.	2.3	2.5	0.3	2.1%

Source: ONS BRES

Manufacturing employment, by local areas, 2010 and 2015



Source: Oxford Economics

DRIVER OF GROWTH: PRODUCTIVITY

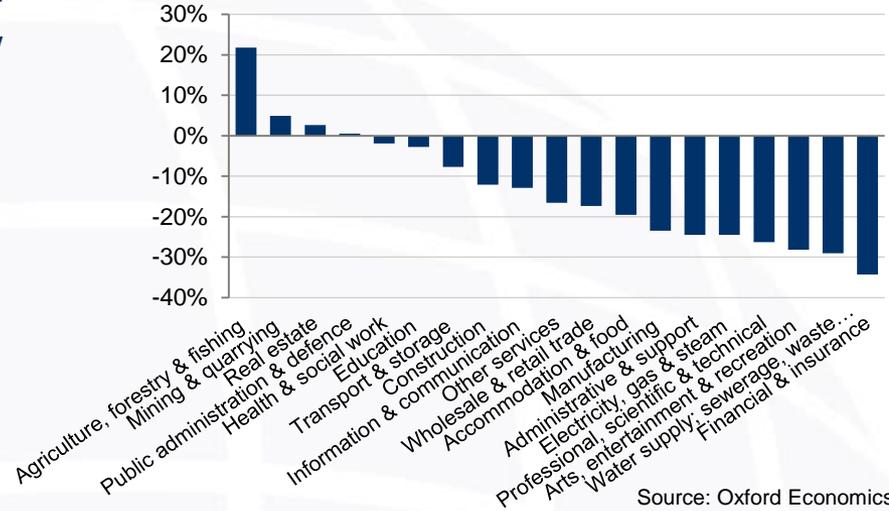
Over the long term, rising productivity is a key driver of growth. We estimate that SCR's productivity grew by 0.6% a year, on average, between 2005 and 2015. This was in line with the UK, slightly faster than the East Midlands (0.5%) and significantly better than Yorkshire & Humber (0.1%).

However, productivity remains consistently below the UK average, with levels around 18% below the national average in the decade to 2015. In high growth sectors, including professional, scientific & technical, productivity levels were 26% below the UK average.

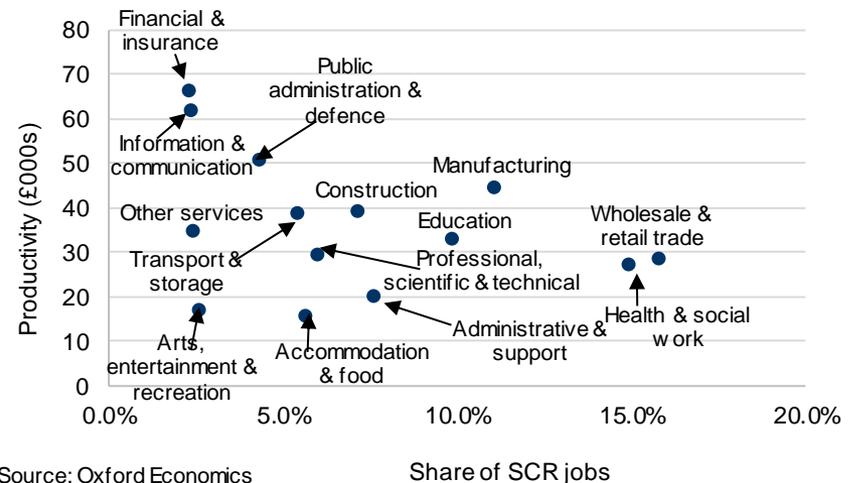
Where productivity has been rising, it has not necessarily translated into rising relative competitiveness, because of similar gains elsewhere. As a result, rising productivity in SCR has mostly not translated into employment growth, at least in the short term. Though mining & quarrying and information & communication experienced the fastest growth in productivity, both with above average productivity levels, these sectors also shed jobs over the period.

The LEP and its partners will want to consider whether Brexit will help to raise productivity in SCR, or make the challenge greater.

SCR's productivity relative to the UK average, by sector, 2015



Productivity and job share in SCR, by sector, 2015



DRIVER OF GROWTH: EXPORTS

Another key driver of growth for the city region is export performance. Iron & steel production are certainly the most important exports to the EU from SCR. That is based on ONS data on a) exports to the EU from the East Midlands and Yorkshire & Humber, and b) SCR's share of employment in the relevant sectors.

By the same reasoning, other important exports are mainly in the engineering sector broadly defined, plus petroleum products and textiles.

In some of these sectors, SCR accounts for a disproportionately high share of UK production (as shown in the bottom half of the table).

However, SCR also has concentration in a number of sectors which do not appear to generate large EU exports—demolition & site preparation being the highest. For these sectors, important issues are whether they may be affected indirectly by Brexit—perhaps because they feed supply chains, or because they export beyond the EU, or they may face more/less competition at home, post-Brexit.

The LEP and its partners may wish to go beyond the top-down evidence provided here, and gain a comprehensive bottom-up understanding of which SCR sectors are most affected by Brexit, whether directly or indirectly.

Top 10 traded products and employment specialisms in SCR

Traded products from SCR to the EU with estimated values, £000s, 3-year average

Rank	Standard International Trade Classification (SITC)	Value
1	Iron & steel	£400,000
2	Non-ferrous metals	£198,000
3	Petroleum; incl. related products & materials	£196,000
4	General industrial machinery, equip. & parts n.e.s	£186,000
5	Manufactures of metal n.e.s.	£151,000
6	Textile yarn, fabrics & made up articles	£129,000
7	Power generating machinery & equip.	£103,000
8	Telecomms, sound recording & reproducing equip.	£91,000
9	Elec. machinery, equip. appliances & elec parts n.e.s	£88,000
10	Non-metallic mineral manufactures n.e.s.	£88,000

Employment specialisms in SCR relative to GB, 2014

Rank	Industry	LQ
1	Demolition & site prep	3.6
2	Manufacture of other food products	3.4
3	Manufacture of glass & glass products	3.1
4	Manufacture of other fabricated metal products	2.9
5	Manufacture of structural metal products	2.0
6	Warehousing & storage	2.0
7	Treatment & coating of metals; machining	1.9
8	Manufacture of plastics products	1.8
9	Technical testing & analysis	1.8
10	Manufacture of wood, cork, straw & plaiting products	1.8

Source: Oxford Economics, ONS and BRES

CONSTRAINT ON GROWTH: INCREASING DEPENDENCY

An important enabler of economic growth is an increase in the population of working age, and hence potentially, an increase in the labour force.

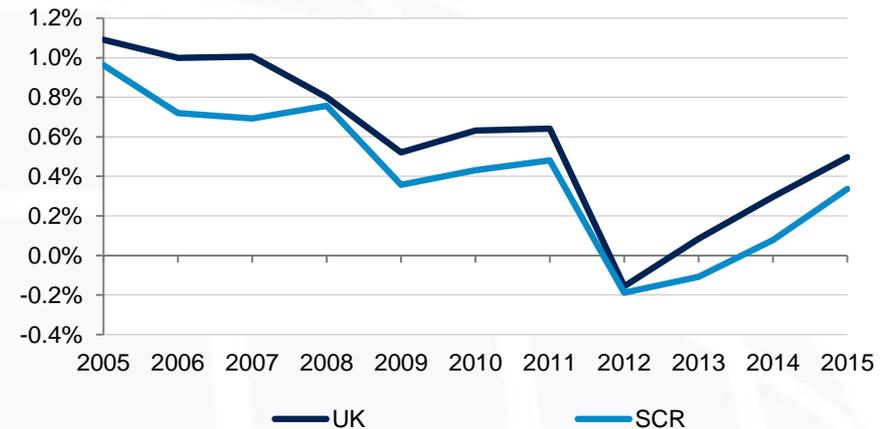
However, this clearly has not been a powerful engine of growth for SCR. Between 2005 and 2015, growth in SCR's working age population averaged 0.4% a year—slightly above Yorkshire and Humber's (0.3%) but slower than for either the UK or the East Midlands (both at 0.5%).

The result is that the working age share of SCR's total population, as elsewhere, is on a downward trend, accounting for 63% of the city region's total population in 2015. This is slightly lower than that for the UK, in line with Yorkshire & Humber and marginally better than the East Midlands.

A smaller share of the population who are of working age also tends to place upward pressure on public services. That increase in dependency may make it harder to finance support for economic development.

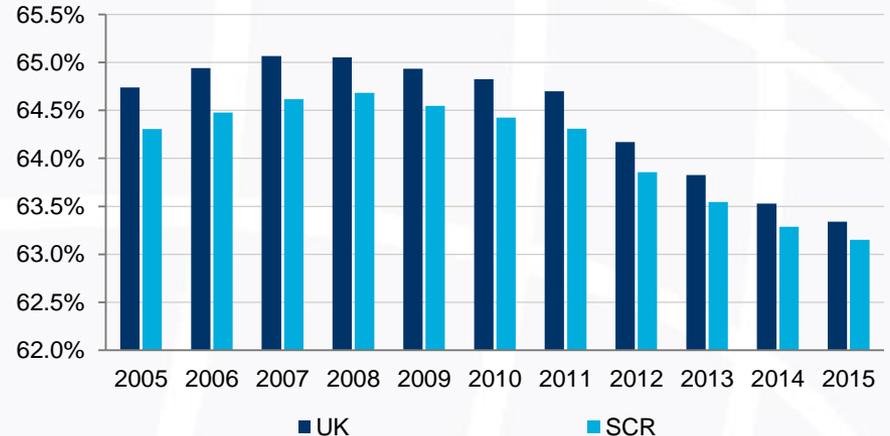
The factors driving the share of the population of working age are demographics, but also migration. Migration flows are therefore a determinant of economic success.

Annual working age population growth, SCR and the UK, 2005 to 2015



Source: Oxford Economics

Working age share of total population, SCR and the UK, 2005 to 2015



Source: Oxford Economics

ADDRESSING THE CONSTRAINT: INWARD MIGRATION

While migration into SCR is potentially an enabler of growth, historically the number of people moving in from the rest of the UK has tended to be roughly offset by the number moving out. According to ONS population estimates, 41,260 people migrated into SCR from the rest of the UK, and 40,830 left the city region to live elsewhere in the UK.

In contrast, inflows of migrants from outside the UK were much higher than those migrating outwards beyond the UK. Most of these (85%) were of working age, thereby adding to the potential workforce.

And we estimate that of the inflow of international migrants, 36% or 4,462 people, came from the EU.

It is possible that this is an under-estimate, since 74% of the National Insurance registrations given to adult overseas nationals entering the city region were to EU nationals. It is likely that overseas students are an important part of the reason.

To the extent that they have remained in the city region (and we have no data on this), migrants from the rest of the EU have therefore been a factor preventing a decline in the city region's potential workforce, and also preventing a sharper decline in the dependency ratio in the region.

Population change and migration in SCR

	SCR
Population 2014	1,832,066
Births	20,511
Deaths	18,739
Migration inflow from rest of UK	41,260
Migration outflow to rest of UK	40,830
Migration inflow from EU	4,462
Migration inflow from rest of the world	8,016
International migration outflow	4,559
Population 2015	1,842,159
Population change	10,093
	UK
Population 2014	64,596,752
Births	775,473
Deaths	603,625
Migration inflow (within the UK)	213,600
Migration outflow (within the UK)	213,591
Migration inflow from EU	263,049
Migration inflow from rest of the world	373,228
International migration outflow	300,642
Population 2015	65,110,034
Population change	513,282

Source: ONS*

DRIVER OF GROWTH: INVESTMENT IN SKILLS

Skills also matter for growth—and increasingly, higher level skills matter disproportionately. Unfortunately, the city region has a lower than average share of its working age population educated to degree level or above.

Just 29% held a NVQ 4+ qualification in 2015, compared with 37% for the UK and 32% and 31% in the East Midlands and Yorkshire & Humber.

On the positive side, the proportion has at least been growing: up nine percentage points since 2005.

SCR also has a higher than average share of its population without any qualifications and, connected to that, an unfavourable claimant count unemployment rate, relative to the UK.

A possible concern is that Brexit may place UK companies under increased competitive pressure (perhaps because of tariffs). The firms best placed to succeed may be those employing more highly skilled people, while workers with low or no qualifications may find it hard to become re-employed. If so, then this problem could be more acute in SCR than in many other parts of the UK.

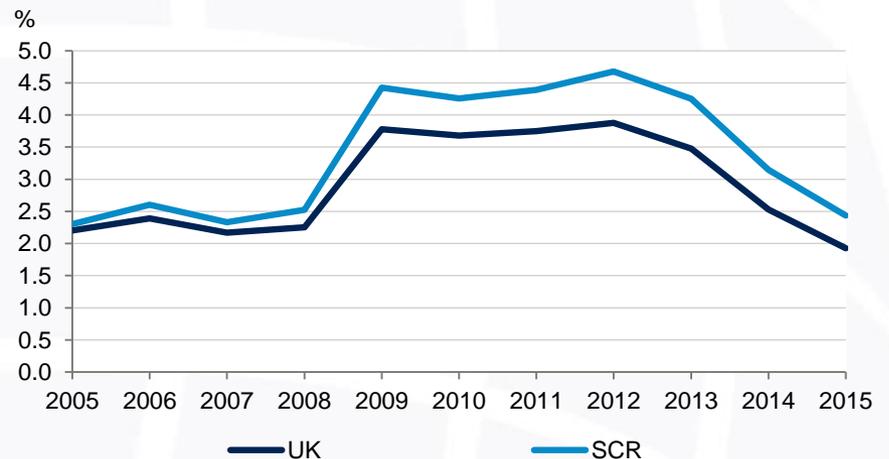
The LEP and its partners will need to consider to what extent they are able to address this heightened challenge.

Percentage of working age population with qualifications, 2015

	NVQ 4+	No qualifications
East Midlands	31.8%	8.0%
Yorkshire & Humber	30.6%	9.8%
SCR	28.7%	9.5%
UK	36.9%	8.8%

Source: ONS, Annual Population Survey

Claimant count unemployment, SCR and the UK, 2005 to 2015



Source: Oxford Economics

ENABLING GROWTH: INVESTMENT IN SCR

Another enabler of growth in the city region is government support. This includes transport and other infrastructure, spending on education and skills, assistance to businesses, and broader spending that has economic benefits including on housing, culture, welfare benefits, and so on.

However, such spending has most impact if it increases private sector investment in the city region, especially foreign direct investment (FDI). There have been major successes to date, such as Boeing and Rolls Royce.

In attracting future investors, the city region's universities are key assets, through their impact on skills and their work with businesses, not least the AMRC and other innovation initiatives.

The region has also won two Regional Growth Deals, with a combined value of £350mn over five years. The SCR Investment Fund, valued at £650mn*, is intended to boost infrastructure spending and support to local businesses.

The Treasury has approved exploratory funding for a mass transit system, while HS2 is another important potential source of growth.

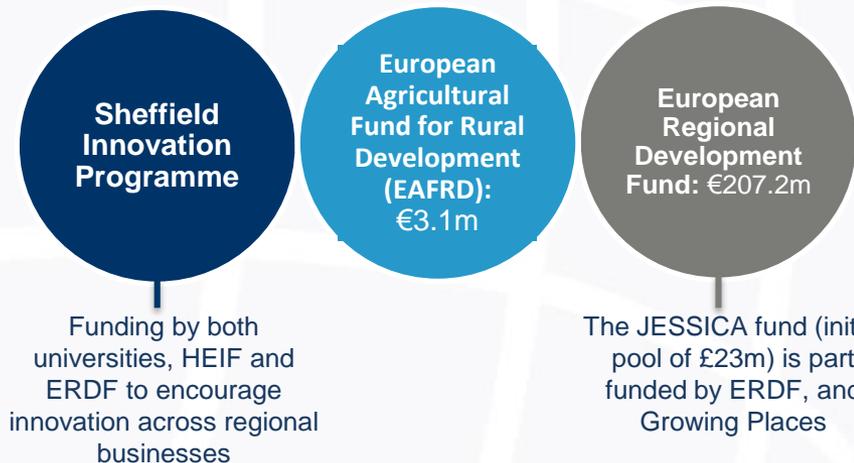
If Brexit impacts on FDI into the UK, there may be a need to sharpen SCR's offer.



- Investment Fund
- Accelerating Housing Delivery
- Sustainable Transport Exemplar
- RGF & Growth Hub
- Skills Capital
- Skills Bank

Growth Deal (part 2): the LEP secured a further £30m in January 2015.

LaunchPad: £4mn project through the SCR Growth Hub, backed by SCR Combined Authority and funds from ERDF.



PART 2
**THE CHANNELS THROUGH WHICH BREXIT WILL
HAVE AN IMPACT ON THE UK**

HOW BREXIT MAY AFFECT THE UK & SCR – 4 MAIN CHANNELS

For the UK economy, Brexit will mean change in four main areas:

- Trade (especially exports);
- Regulations (including labour markets);
- Migration; and
- Government spending (& taxes/borrowing).

Some of this will be negotiated between the UK & the EU, some between the UK & other governments, and some will be a matter for the UK government alone.

For the UK government, there is a choice between:

- **Free-market approach** (open migration, low regulation, free trade with US, China etc, tax cuts);
- **Populist approach** (big cuts to migration, maintain regulation on employment etc, protection for industries in decline, extra welfare spending); and
- **Moderate approach** (targeted migration, complex trade deals, some regulatory reform, support for new industries, maintaining spending plans but with some shifts in focus).

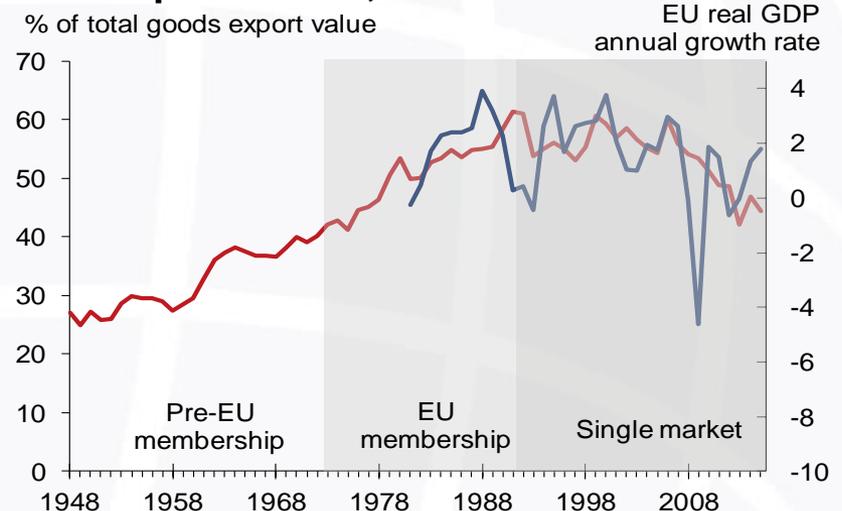
Whatever the outcome, not all parts of the UK will be affected equally. It is therefore important that SCR's interests are taken fully into consideration.

Standing back: what has the EU done for us?

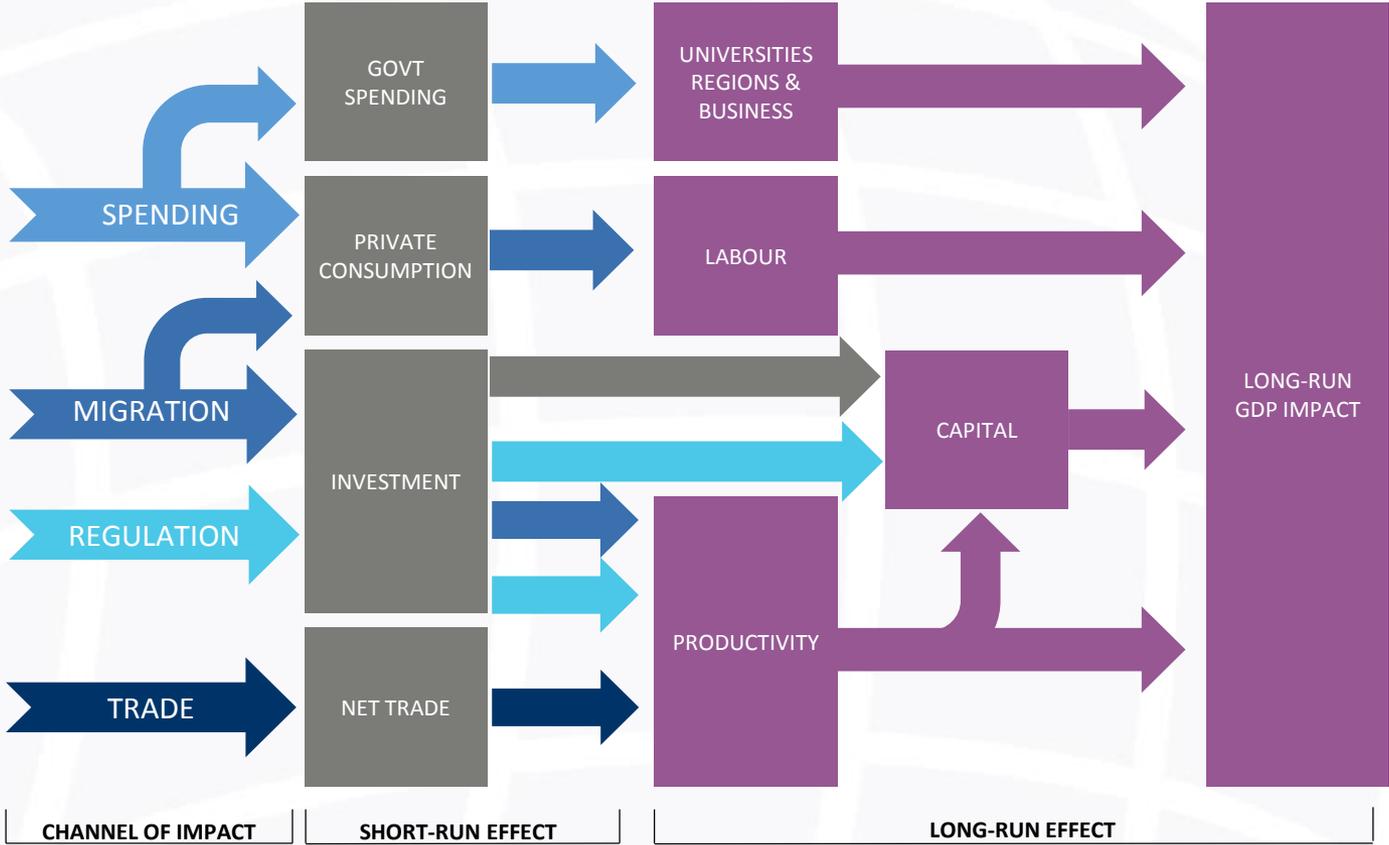
It is useful to note that UK entry into the EEC in 1971 did not produce a big change in our exports. And that since the formation of the Single Market, the UK's trade (in goods) to the EU has stagnated.

But that's partly because a) entry into the EEC was as much a consequence as a cause of our reorientation towards European markets; b) austerity policies in the EU have damaged opportunities since the Single Market was formed.

UK: Exports to EU, 1948-2015



IMPACT OF BREXIT IS COMPLICATED, BOTH SHORT- & LONG-TERM



THE GOVERNMENT'S GOAL: 'FREE TRADE' WITH THE EU

The UK government has said it will seek a free trade agreement (FTA) with the EU. If it succeeds, this will maintain existing trading arrangements: we already have free trade for most manufactured products and some services. So UK companies can sell any products covered by the agreement in any other EU country; and no tariffs are levied on those products.

An FTA would therefore support the growth of the SCR economy. It would foster trade with the EU; it should be simple to negotiate; and it ought to be acceptable to both Remainers and Leavers, as well as the EU itself. Unfortunately, it may not happen.

Risk one: individual EU countries may block the deal, or try to get exceptions for particular industries, as might the UK, causing the talks to break down.

Risk two: the deal may fall down if either side thinks the other is being unreasonable on other issues e.g. the treatment of financial services (which is separate from FTA), or migration, or existing budgetary obligations.

A possible outcome is that no FTA deal will be in place by March 2019. So the UK will temporarily face most favoured nation status (see next slide), with a FTA deal perhaps being struck some years later.

Access to, versus membership of, the Single Market

A free trade agreement would give the UK access to the Single Market without tariffs, but not membership. So we would not be party to EU trade deals with 3rd nations, and would have no say in setting regulations that we would have to enforce. The UK would, however, decide its own migration rules and would not make contributions to the EU budget (unless we chose to, in return for some other gains).



ALTERNATIVE LIKELY OUTCOME: A MFN DEAL WITH THE EU

If the UK cannot agree an FTA by March 2019 and faces most favoured nation (MFN) tariffs levied by the EU, how high will those tariffs be? **The table shows average EU tariffs by sector. SCR top sectors tend towards the middle of the table.**

But note that other border costs, such as customs delays and form-filing, average at 4.4% and so make a big difference.

Several sectors important in SCR will therefore face combined costs in a range from 5% to 10%. That is likely to have an adverse impact.

Responses by SCR companies are likely to include:

- Reposition products to make them higher value-added and so less price-sensitive
- Reduce other costs (labour, raw materials etc)
- Accept significantly lower margins
- Shift production outside the UK
- Shift sales to non-EU markets
- Don't respond at all

A possible outcome is that the short-term impact is adverse, but in time, SCR firms raise their competitiveness/find other markets. **Can the LEP & partners help?**

EU tariffs by product type, plus non-tariff costs

	Av MFN on ECU sales	MFN plus Border Cost
Clothing and textiles	10.1	14.5
Non-alcoholic beverages	9.1	13.5
Automotive	8.0	12.4
Other transport equipment	5.5	9.9
Food products	5.0	9.4
Rubber, plastics and other mineral products	4.9	9.3
Chemicals	3.7	8.1
Alcoholic beverages and tobacco	3.7	8.1
Agriculture	3.2	7.6
ICT and electronics	2.8	7.2
Aerospace	2.7	7.1
Coke products and refining	2.6	7.0
Electrical equipment	2.5	6.9
Metals and metal products	2.0	6.4
Other machinery and equipment	1.9	6.3
Other manufacturing	1.5	5.9
Furniture	1.1	5.5
Ships and boats	0.9	5.3
Wood, paper and printing	0.5	4.9
Pharmaceuticals	0.1	4.5
Other mining activity	0.0	4.4
Oil and gas	0.0	4.4

TRADE DEALS WITH NATIONS OUTSIDE THE EU – OVERVIEW

The government wants to negotiate trade deals directly with non-EU nations. So although it favours a FTA for trade with the EU, it does not want a Customs Union, in which the EU would negotiate trade with other nations on our behalf.

The government can negotiate bilateral deals now, but under EU law it cannot sign them before March 2019. Any agreements struck in the meantime can be torn up. And if deals cannot be agreed instantly on leaving the EU, then as with trade with the EU, the UK reverts to MFN status (see later slide).

This could be a big risk for SCR, as well as for other parts of the UK.

Bargaining power is crucial. Evidence shows that any government's negotiating position is strongest when:

- a) it is not under a lot of domestic pressure to protect industries
- b) nevertheless, it is in no hurry to strike deals.

The present UK position is the reverse: a political desire for 'quick wins' but surprisingly little agitation from threatened sectors.

Should the LEP & partners seek to shift this balance and exert pressure for a deal favourable to the city region?

Copying existing EU trade deals?

As a simplifying measure the UK might seek to copy EU-third country trade deals, at least at first. But both our trading partners and some UK producers might object.

Speed of negotiation

Some commentators believe that the UK can do better deals, faster, than the EU. Others believe the reverse, because of the latter's larger bargaining power. There is evidence that multinational deals do take longer, while the average time for a deal is 28 months – quicker than often claimed.

Rules of origin

Having a FTA but not a full Customs Union may seem like an attractive compromise if it means the UK can negotiate better deals. But there's a catch. If the UK agrees lower tariffs than the EU with certain countries, and then imports semi-manufactures from them, and assembles them for sale in the EU, then from the EU perspective that looks like tariff evasion. To prevent that, checks of product origin are needed. This has a cost, not least in time, and could damage the competitiveness of all UK products sold in the EU, but especially those needing just-in-time delivery.

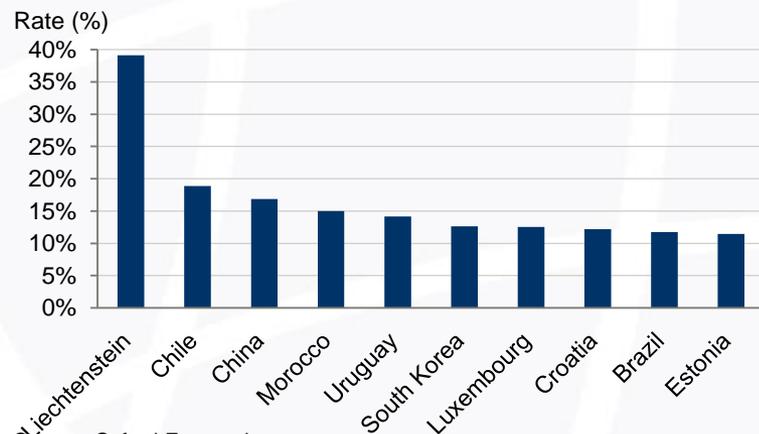
TRADE DEALS WITH NATIONS OUTSIDE THE EU - EXAMPLES

The largest non-EU destination for UK exports is still the **United States**, by a large margin. **China** is 3rd largest behind Switzerland and the 3rd fastest growing behind Liechtenstein and Chile (both small markets).

Amongst other large economies, **South Korea** and **Brazil** have been experiencing fast growth in imports from the UK. So securing trade deals with these may be a UK government priority. But should they be? See boxes.

A key question: will the UK government prioritise deals with markets that are critical to SCR?

Top 10 fastest growing markets for UK exports of goods & services, 2005 to 2014



Source: Oxford Economics

United States: Trump administration wants a quick deal with UK, but is fundamentally protectionist, and may seek to raise not lower tariffs on UK products. Large SCR firms that sell to US (eg. Rolls Royce) often have US plants.

China: Growth slowing but still rapid. FTA might mean increased threat from Chinese exports to UK (eg steel). But China's shift to services may create opportunities in eg engineering consultancy, which are not covered by tariffs. Opportunity for SCR to reposition its offer, by edging towards services where it has an existing manufacturing advantage?

South Korea: Growth averages about 3% a year and economic risks are lower than in most Asian economies. However, recent political scandals and vulnerability to Trump trade policies are reasons for concern.

Brazil: Recovering from period of economic mismanagement, but political risks remain large. Economy declined in 2015 & 2016; we forecast only 2-2 ½% a year GDP growth 2017-26.

MOVING TO UK, RATHER THAN EU, PRODUCT STANDARDS

Regulations matter a lot, partly because they can be deliberate or accidental barriers to trade.

UK companies already have to manufacture to different product standards if they want to sell in different markets (EU, US, etc).

Brexit means another set will be added: the UK's own standards. These will probably start identical to those of the EU, but then drift apart.

There is also a risk that future EU regulations will be written or interpreted in ways that discriminate against the UK. This could mean that a FTA with the EU, though positive for UK trade with the EU, would be less so than the current situation.

The impact of Brexit on competition & productivity

The introduction of specific UK product standards may deter foreign competitors away from UK markets. If so, UK firms that sell domestically may gain from the fall in competition. But there are two risks.

First, if UK product standards are weaker than EU standards, foreign competitors may target the UK market, rather than the EU market.

Second, if there is a dilution of competition, then that will in time have an adverse impact on the efficiency of UK firms. Productivity growth will slow, hurting long-term growth. This is a major reason why most forecasters think Brexit may weaken UK growth in the long-run.

A POSSIBLE MOVE TOWARDS LIGHTER BUSINESS REGULATIONS

Product standards are just one type of regulation. Others include labour market rules, including ones that are not related to the EU such as the minimum wage, as well as employment protection and equal opportunities, and also safety and environmental standards.

The Government has said it has no plans to relax these. But that might change.

Indeed, the Government has indicated that, if it is dissatisfied with the deal offered by the EU, it may seek to implement a 'Singapore' economy with widespread liberalisation. The aim would be to raise the UK's economic growth rate, on the basis that relaxing standards would make it easier for UK firms to do business at home and outside the EU.

However, the EU might retaliate, and further restrict access to UK exports. Its ability to do so would depend on WTO rules, which are highly complex.

On balance it does not currently seem likely that there will be major changes in this area, at least in the near future, and hence no large, direct effect on SCR.

How large is the scope for liberalisation?

The World Bank ranks the UK as the 6th best country in the world for doing business (2015 data).

The OECD says that the UK has the lowest barriers to hiring/firing staff in Europe and the 4th lowest in OECD.

This suggests that excessive regulation may not be a major barrier to UK growth, implying that reducing regulations might not have much impact on economic growth.

THE LIKELY IMPACT OF BREXIT ON INWARD INVESTMENT

Foreign direct investment has many drivers, but the three main ones are:

1. size of the tariff-free market;
2. existence of production/skill clusters; and
3. access to ideas/research.

Of these, the first is unchanged under a FTA, but would be weakened under MFN—radically so. 52% of firms surveyed by EY said, even with only slightly less favourable access to the Single Market, the UK would be a less attractive investment destination after Brexit.

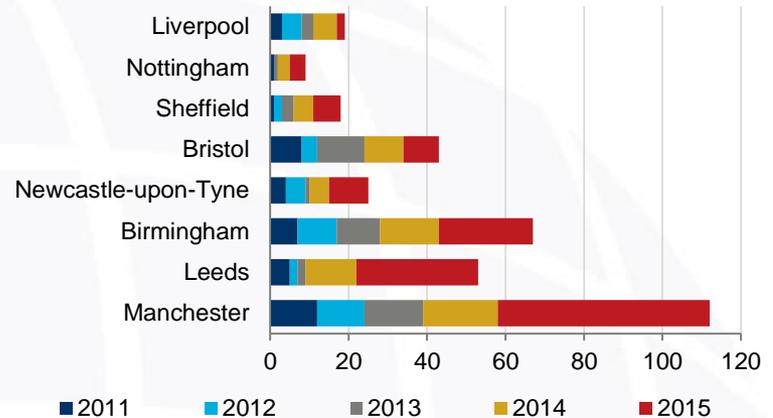
That is why Nissan is assumed to have secured a deal under which the UK government will implicitly cover the cost of any EU tariffs or other barriers.

The 2nd and 3rd factors vary from location to location, so competition within the UK will become more intense.

SCR clearly displays some clustering in advanced manufacturing and a strong research base (the universities; AMRC, etc). But its scale, and recognition in the marketplace, lags some other city regions.

Brexit, therefore, increases the importance of building up SCR as a centre of technological know-how and of clustering.

EY's Global Investment Monitor (GIM), 2016



Source: EY's GIM, 2016

GOVERNMENT SUPPORT FOR INDUSTRY, POST-BREXIT

Business & employment support is currently provided through the European Regional Development Fund (ERDF) and the European Social Fund (ESF). This will end after Brexit. The Government has committed to replace the funding, but not indefinitely, and subject to a review of 'value-for-money'.

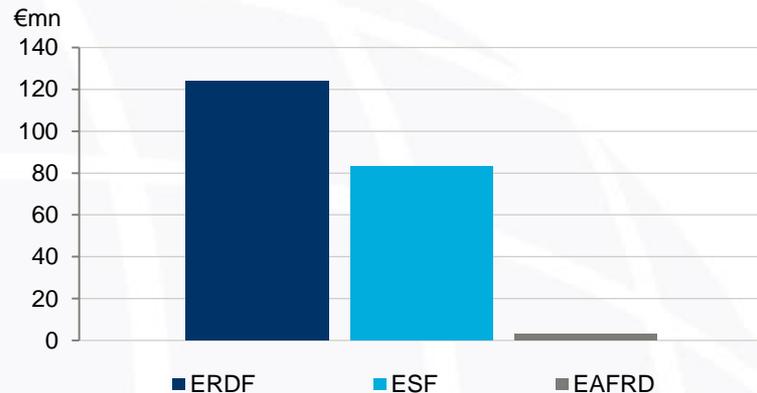
At some point the government may change the rules, or its priorities, or simply the scale of support provided. This might mean replacing the type of support that ERDF/ESF provide with something completely different: perhaps making cuts in corporation tax (already planned) or relaxing labour market regulations (see above).

The Government may also allow/insist on, greater local tax/spend autonomy, so that city regions such as SCR would be expected to play a much bigger role in attracting investors. This could be an opportunity for the city region.

Alternatively, Brexit may increase the scope for UK government support for strategically important industries. Currently, EU and GATT rules limit the scope for such support. GATT rules will still apply going forward, but not EU rules, making it easier to support large companies, for example.

The LEP and partners may therefore face a choice: whether to argue for more autonomy at the city regional level, or for a more strategic national approach to sectors.

Scale of European funding in SCR



Source: SCR European Structural & Investment Fund Strategy, 2014-20

UNIVERSITIES & RESEARCH FUNDING, POST-BREXIT

Brexit may have a major impact on the city region's universities and other research centres. These play an important role in the local economy – as employers, as educators, as drivers of innovation and as reasons why companies locate in SCR.

At the most basic, the Government will no longer have to provide student loans or maintenance funding for EU students. That would save central government money, but it could reduce the fee income of universities, as well as their ability to attract talent.

The UK will also lose automatic access to EU research funding (via Horizon 2020). As a result, the recruitment of top teaching and research staff may be impacted, creating a vicious circle that detrimentally impacts the quality of UK research.

That spiral may be strongly reinforced by the new migration rules (see subsequent slide). 21% of academic staff and 25% of research-only staff are non-UK nationals from the EU.

Again, however, the government has made a short-term commitment to maintain current funding; and it may include continuing participation in Horizon 2020 and Erasmus+ in its Brexit negotiations.

As a city region with a strong university base, the LEP and its partners may want to lobby for stronger support for UK university-led research and teaching.



MIGRATION & LABOUR SUPPLY, POST-BREXIT

More uncertainty surrounds the issue of migration than perhaps any other aspect of Brexit. The Government's White Paper says: 'We will create an immigration system that allows us to control numbers and encourage the brightest and the best to come to this country'. However, there is no guidance as to what the system might be.

We estimate that in 2015 just under 4,500 people migrated from the EU into SCR compared to 41,300 from the rest of the UK, and an overall population increase of 10,100.

It is likely that the majority of EU migrants entered work, and had qualifications at least equal to those of the SCR population. SCR has lower than average shares of its working age population educated to degree-level (NVQ4+). The universities are likely to be prominent amongst the employers of EU migrants.

The LEP may wish to investigate how many employers might be affected by migration cuts and what system for managing or rationing migration they would favour.

Population change and migration in SCR

	SCR
Population 2014	1,832,066
Births	20,511
Deaths	18,739
Migration inflow from rest of UK	41,260
Migration outflow to rest of UK	40,830
Migration inflow from EU	4,462
Migration inflow from rest of the world	8,016
International migration outflow	4,559
Population 2015	1,842,159
Population change	10,093

Source: ONS*

Percentage of working age population with qualifications, 2015

	NVQ 4+	No qualifications
East Midlands	31.8%	8.0%
Yorkshire & Humber	30.6%	9.8%
SCR	28.7%	9.5%
UK	36.9%	8.8%

Source: ONS, Annual Population Survey

OTHER IMPACTS FROM BREXIT

There is a wide range of other possible effects from Brexit. Examples that may be particularly relevant to SCR include:

Euratom. This EU treaty covers laws relating to nuclear power generation and waste management. The NAMRC is an important part of the UK nuclear sector, and an economic asset for SCR.

Transport regulation, including aviation and road haulage. Logistics are important to SCR, and any new regulatory framework needs to allow for easy movement into and out of the EU. Negotiating any new arrangements may therefore have an impact on the city region.

European Space Agency. This is not an EU organisation, but the UK will need to renegotiate its position within various projects. This could affect the opportunities for SCR's research centres.

European Defence Agency. One of the roles of this body is to promote armaments co-operation. Brexit may mean the UK loses access to collaborative defence projects with a potential impact on local employers.

These examples suggest that SCR may be affected in several ways by Brexit, in addition to the main channels.

A divorce settlement?

The EU Commission has reportedly calculated that upon Brexit the UK will owe the EU between €40bn and €60bn in unpaid budget commitments, pension liabilities, loan guarantees and EU spending on UK based projects.

Any such payment would clearly mean a significant adverse impact on all parts of the UK economy, including SCR.

However, if such an obligation does exist there are likely to be partially offsetting deductions for future UK-inbound spending.

PART 3
QUANTIFYING THE POSSIBLE IMPACT OF BREXIT
ON SHEFFIELD CITY REGION

IMPACT OF BREXIT – OUR KEY ASSUMPTIONS

- Theresa May's latest speech confirmed expectations of a hard Brexit, meaning that the UK expects to leave the single market and to repatriate full control of its borders.
- Article 50 is likely to be triggered by the end of March 2017, meaning the UK will leave the EU in early-2019, with a three-year transitional arrangement.
- This will ultimately give way to a free trade agreement that mimics as far as possible the conditions for trade that exist in the EU, i.e. in the tariff structure.
- We also assume that the UK government takes a 'populist' approach in using its new-found policy freedoms, particularly in terms of a relatively aggressive clampdown on the level of immigration.
- UK level impacts feed through to SCR via the channels shown on slide 21.

BREXIT WILL PROBABLY MEAN WEAKER EMPLOYMENT GROWTH

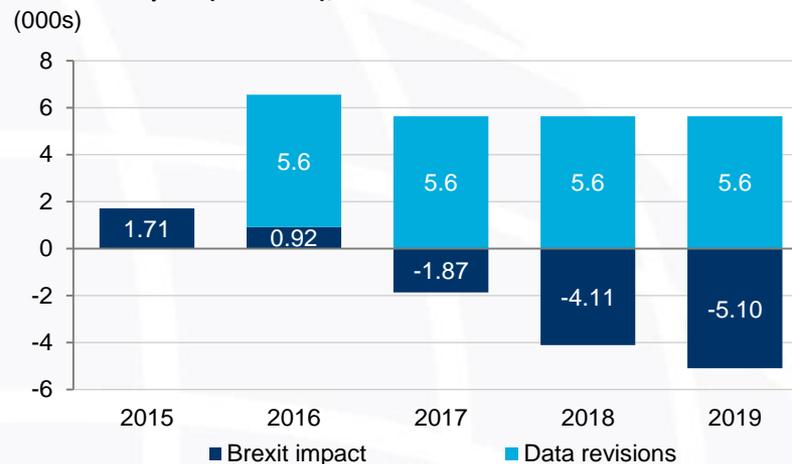
Our forecasts suggest that the impact of Brexit on employment in the city region is likely to be sizeable.

Our latest forecasts, produced since the referendum and taking into account our best estimates of the likely impact of Brexit, suggest that between 2015 and 2019, jobs growth will average 0.3% a year in the city region, or an additional 8,900 jobs. While that is only slightly down on our pre-referendum forecasts (an additional 10,100 jobs), a mix of new and revised data from the ONS have made the recent history look stronger than it previously appeared. This affects the view going forward.

After allowing for that, our central forecast is that Brexit, together with other minor factors is likely to mean just over 5,000 fewer jobs in SCR in 2019 than would otherwise have been the case.

Inevitably, such a forecast involves a larger margin of uncertainty than normal. Furthermore, the latest SCR Quarterly Economic Survey suggests that in Q3 2016 the majority of businesses' recruitment decisions were not affected by the referendum. However, the transmission mechanisms discussed in the previous section of this report all take time to take effect. The impact on employment will build through time. By 2030, the number of jobs will reach 871,000, an increase of 4% from 2015.

Difference between latest and pre-Brexit forecast in SCR, by source of impact (estimate), 2015 to 2019



Source: Oxford Economics

Jobs growth in SCR and comparator areas, 2015 to 2019

	Change in total jobs			
	000s	% p.a	000s	% p.a
	Latest forecast		Pre-Brexit forecast	
Yorkshire & Humber	50	0.5%	35	0.3%
East Midlands	22	0.2%	69	0.7%
UK	663	0.5%	843	0.6%
SCR	8.9	0.3%	10.1	0.3%

Source: Oxford Economics

MANUFACTURING IS EXPOSED, BUT OTHER SECTORS TOO

The employment impact of Brexit will, of course, vary across different sectors.

Those sectors geared towards exporting are at direct risk through possible trade barriers, while sectors with a high reliance on migrant workers may face recruitment difficulties.

But all sectors will be affected by the more general impact on the UK economy, on personal incomes and business investment, and so on. The city region's reliance on the UK economy is greater than its direct reliance on trade and migration.

In numerical terms, the SCR sectors that have the main employment impact by 2019 are likely to be construction and administrative & support. We expect these will continue to grow, but to a lesser extent than in our pre-Brexit forecasts as the impact of Brexit is likely to strain growth in these sectors.

A consequence of this is that in relative terms the city region becomes more dependent on employment growth from other sectors including wholesale & retail trade and professional, scientific & technical.

Sectoral and source of change in jobs (000s), SCR, 2015 to 2019

	Post-Brexit	Pre-Brexit	Estimate: data revision	Estimate: Brexit impact
Agriculture, forestry & fishing	-0.4	0.0	-0.5	0.1
Mining & quarrying	-0.3	-0.3	0.0	0.0
Manufacturing	-1.7	-3.9	2.7	-0.5
Electricity, gas & steam	0.0	0.1	0.0	-0.1
Water supply; sewerage, waste management	0.0	0.0	0.0	0.0
Construction	3.0	3.6	1.5	-2.0
Wholesale & retail trade	3.2	0.9	2.3	0.0
Transport & storage	1.3	2.2	-0.6	-0.3
Accommodation & food	1.1	1.5	-0.3	-0.2
Information & communication	0.9	1.2	0.2	-0.4
Financial & insurance	-0.1	-0.2	0.1	0.0
Real estate	0.4	0.4	0.1	-0.2
Professional, scientific & technical	2.6	3.2	0.4	-1.0
Administrative & support	3.2	5.2	-0.3	-1.7
Public administration & defence	-4.2	-3.3	-0.6	-0.3
Education	0.3	-2.0	2.0	0.2
Health & social work	-2.1	0.3	-2.0	-0.4
Arts, entertainment & recreation	0.6	0.8	0.0	-0.2
Other services	1.2	0.5	1.0	-0.2
Total	8.9	10.1	6.0	-7.2

Source: Oxford Economics

UNDERLYING THOSE: SLOWER GVA & PRODUCTIVITY GROWTH

Underpinning our post-Brexit forecasts for employment are our estimates of the impact of Brexit (and of other factors, although data revisions aside, these are minor) on GVA and productivity growth in the city region.

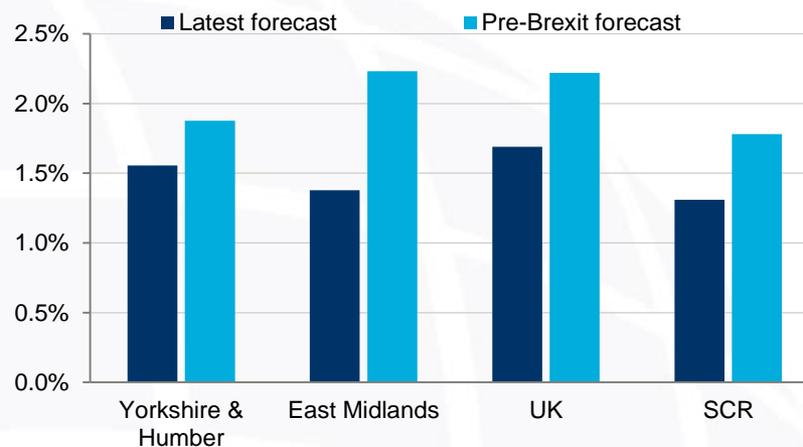
We forecast that over the short term, between 2015 and 2019, the pace of GVA growth will average 1.3% a year. This marks a 0.5 percentage point downgrade from our pre-Brexit forecasts.

This downward revision is similar to that for the UK (from 2.2% to 1.7%), and slightly more than for Yorkshire & Humber (from 1.9% to 1.6%). The East Midlands sees a much larger downward revision (from 2.2% to 1.4%), reflecting a greater downward revision in employment growth.

Lower GVA growth is both a cause and consequence of weaker productivity performance. In relative terms, however, productivity levels in SCR will remain around 18% below the UK average throughout the period.

By 2030 we project that GVA will be 11% lower in the city region compared to our pre-Brexit forecasts.

Average annual GVA growth, 2015 to 2019



Source: Oxford Economics

Percentage point difference in annual growth, latest vs pre-Brexit forecast, 2015 to 2019

	GVA	Productivity	Jobs
Yorkshire & Humber	-0.3%	-0.5%	0.1%
East Midlands	-0.9%	-0.3%	-0.5%
UK	-0.5%	-0.4%	-0.1%
SCR	-0.5%	-0.4%	0.0%

Source: Oxford Economics

NET INWARD MIGRATION TO WEAKEN OVER THE LONG TERM

Brexit will affect the city region’s demographic profile. We forecast that between 2015 and 2019 the population of SCR will grow by 0.6% a year. That marks a slight increase from our pre-Brexit forecasts, but again this partly reflects ONS employment data revisions, together with an increase in inward migration prior to a new regime taking effect.

Population growth in the city region will move broadly in line with Yorkshire & Humber (0.5%), but will be slower than for either the UK or the East Midlands (both at 0.8%).

Over the longer term to 2030, population growth in the city region, as well as its comparator areas, will be slightly slower than we were forecasting prior to the referendum. Net inward migration will ease significantly by the end of the forecast period, down from 8,300 in 2015 to 1,900 in 2030. This fall is much more marked compared to our pre-Brexit forecasts.

A reduction in inward migration will particularly affect the population of working age. Between 2015 and 2030, we expect working age population in SCR to fall by 18,000 compared to 14,000 in our pre-Brexit forecasts—a fall of 4,000 (so slightly less than the fall in employment).

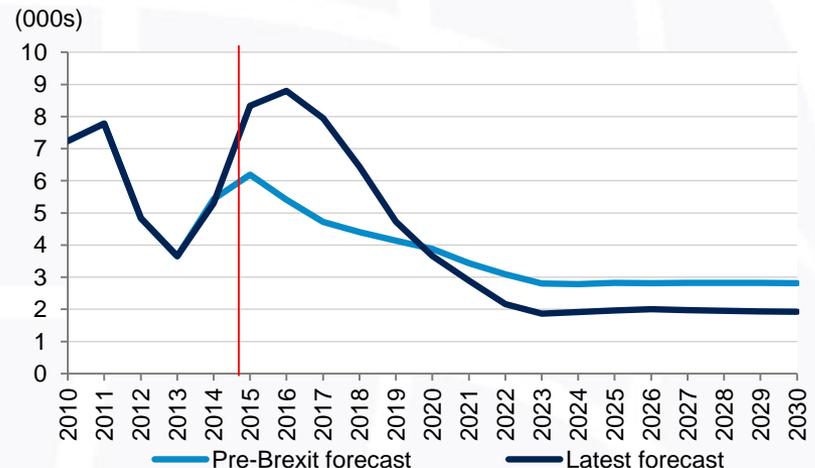
As a result, the share of working age population will continue on its downward trend. By 2030, 59% of the city region’s total population will be of working age, marking a fall of four percentage points from 2015.

Working age population growth, 2015 to 2019

	Change in working age population			
	000s	% p.a	000s	% p.a
	Latest forecast		Pre-Brexit forecast	
Yorkshire & Humber	16	0.1%	2	0.0%
East Midlands	40	0.3%	30	0.3%
UK	592	0.4%	484	0.3%
SCR	7	0.1%	1	0.0%

Source: Oxford Economics

Net inward migration in SCR, 2005 to 2030



Source: Oxford Economics

UNEMPLOYMENT IMPACT LESS MARKED THAN THAT ON JOBS

The impact of Brexit on unemployment will be much less marked than the impact on jobs.

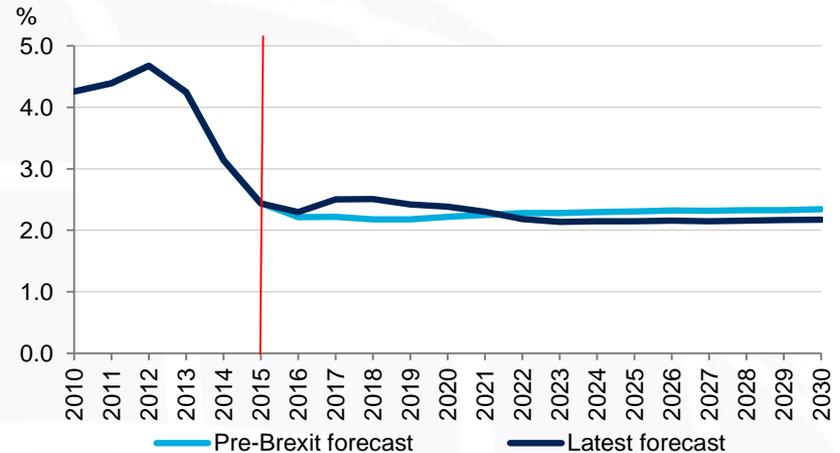
Over the longer term, the claimant count unemployment rate in the city region will remain unfavourable. By 2030, the unemployment rate will ease only slightly from 2.2%—marking a fall of 0.2 percentage points since 2015.

By the end of the forecast period, we expect the unemployment rate will remain above that of the UK, which we expect to ease to 1.8%.

In number terms, this will translate into a gradual reduction in the number of claimants in the city region. Between 2015 and 2030, we expect the number of claimants will fall by 12%, equivalent to 3,400. This compares to a fall of 5% at the UK level.

Given the city region's unfavourable skills profile, together with the outlook on inward migration, the LEP may wish to lobby for extra funding in order to reduce the skills gap, attract and retain skills within the city region.

Claimant count unemployment, SCR, 2010 to 2030



Source: Oxford Economics

CREATING A BETTER OUTCOME THAN IN OUR BASELINE VIEW

Are we too pessimistic?

The impact of Brexit on SCR will depend on:

1. The Brexit deal that is done;
2. Other macroeconomic circumstances (e.g., the growth in the European and global economies);
3. How SCR companies and people respond to the new challenges; and
4. What the LEP and its partners are able to do to promote a 'good' rather than 'bad' Brexit.

However, our forecasting seeks to take all of this into account. We have long-term historical evidence on how companies respond to macroeconomic shocks; on trade performance, inward investment and so on.

There is, for example, clear evidence that trade with near-neighbours (the EU) is much easier to grow than trade with further afield (Asia), as well as evidence on the difference made by the growth rates for those economies (faster for Asia than the EU). Our modelling seeks to take this into account.

However, the future never completely repeats the past. So it is possible that our baseline forecast will prove to be too pessimistic – or too optimistic. **Nothing is inevitable – so there is a role for the LEP and partners in changing the outlook.**



PART 4
KEY CONSIDERATIONS

POSSIBLE IMPLICATIONS OF BREXIT

- Future economic performance of the SCR, relative to the UK average will depend on a range of factors:
 - Its sectoral structure;
 - Its degree of export orientation, and importance of the EU market for exports;
 - Whether local businesses ‘pivot to the east’ more or less than businesses elsewhere in the UK;
 - Whether local companies typically compete heavily on price (in which case higher tariffs will have a proportionately larger impact), or whether they compete heavily in terms of product design and quality (in which case non-tariff barriers might have more implications); and
 - If local companies are more or less reliant than the average on inward migration from the EU.

WHAT DOES THIS MEAN FOR THE LEP? - MANUFACTURING

- We have shown that manufacturing plays a decisive role in the SCR in terms of employment and exports. It has also enjoyed a recent period of employment growth. However there is a real risk that under a MFN scenario, tariffs and border costs could add over 6% to the cost of SCR products being traded in the EU.
- Consequently the LEP should make Government aware of the importance of manufacturing in the SCR, and encourage them to secure as a favourable a trade deal as possible. Indeed the LEP should make Government aware of all the key employment and trading sectors in the local economy.
- Furthermore guidance and support should be offered to local businesses who wish to explore non-EU trade markets, move up the supply chain and compete on quality rather than costs.
- In achieving the later point the LEP may need to better understand future skills demand and supply. This is related to the issue of restrictions on migration. While we have provided estimates of the inflow of EU migrants to the SCR, we have not identified why they have arrived, which sectors they have gained employment in or their skills (though the SCR has a lower share of highly skilled labour which may be currently augmented by migrants). As a result the LEP should seek to understand how reliant local businesses are on migrants and at which skill level.

WHAT DOES THIS MEAN FOR THE LEP? – HIGHER EDUCATION, RESEARCH AND INVESTMENT

- The SCR is reliant on the education sector for employment, and we know the Higher Education sector in particular plays a prominent collaboration and networking role in the local economy. Brexit will lead to a number of risks for local universities:
 - Firstly, there is uncertainty around future research funding (despite the UK Government's short term commitment to continue EU funding); and
 - Secondly restrictions on migration and uncertainty around the ability of labour to move across the EU could notably impact the quality of university staff / researchers.
- As a result, it would be advisable that the SCR lobby Government to make early commitments on research funding and on the adoption of a migration policy that is favourable to highly skilled migrants.
- In addition to the above, Brexit may make it harder to attract inward investment. The SCR has advantages over many locations: high-value manufacturing clusters and strength in research and innovation. The LEP and partners should continue to promote these assets.

WHAT DOES THIS MEAN FOR THE LEP? – STRUCTURAL CHANGE AND INDIVIDUAL BUSINESSES

- Brexit may accelerate the pace of structural change. Given the scale of global trends, structural changes can be a difficult thing to influence. But the LEP should consider where its priorities lie. For example, that adequate skilled people are available to fuel future growth sectors, that those most at risk from the adverse impacts of change are supported and retrained, that there are sufficient commercial property for growth sectors, etc.
- Finally, there are many businesses in the SCR that employ significant volumes of individuals. The LEP and partners should consider building ‘bottom-up’ evidence of companies and sectors challenged by Brexit, or facing the greatest opportunities. It will help inform any lobbying to Government, the future development of policy, the allocation funding and the mapping of skills demand and supply.

All data shown in tables and charts is Oxford Economics' own data, and is copyright © Oxford Economics Ltd, except where otherwise stated and cited in footnotes.

This report is confidential to Sheffield City Region LEP and may not be published or distributed without their prior written permission.

The modeling and results presented here are based on information provided by third parties, upon which Oxford Economics has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

To discuss the report further please contact:
Richard Holt: rholt@oxfordeconomics.com

Oxford Economics
Broadwall House, 21 Broadwall, London, SE1 9PL, UK
Tel: +44 207 803 1400



**Europe, Middle East,
and Africa:**

Global headquarters

Oxford Economics Ltd
Abbey House
121 St Aldates
Oxford, OX1 1HB
UK
Tel: +44 (0)1865 268900

London

Broadwall House
21 Broadwall
London, SE1 9PL
UK
Tel: +44 (0)20 7803 1418

Belfast

Lagan House Sackville Street
Lisburn
County Antrim,
BT27 4AB
UK
Tel: + 44 (0)2892 635400

Paarl

12 Cecilia Street
Paarl 7646
South Africa
Tel: +27(0)21 863-6200

Frankfurt

Mainzer Landstraße 41
60329 Frankfurt am Main
Germany
Tel: +49 69 95 925 280

Paris

3 Square Desaix
75015 Paris
France
Tel: +33 (0)1 78 91 50 52

Milan

Via Cadorna 3
20080 Albairate (MI)
Italy
Tel: +39 02 9406 1054

Dubai

Jumeirah Lake Towers
Dubai,
UAE
Tel: +971 56 396 7998

Americas:

New York

5 Hanover Square, 19th Floor
New York, NY 10004
USA
Tel: +1 (646) 786 1879

Philadelphia

303 West Lancaster Avenue
Suite 2e
Wayne, PA 19087
USA
Tel: +1 (610) 995 9600

Mexico City

Emerson 150, Despacho 802
Col. Polanco, Miguel Hidalgo
México D.F., C.P. 11560
Tel: +52 (55) 52503252

Boston

51 Sawyer Road
Building 2 - Suite 220
Waltham, MA 02453
USA
Tel: +1 (617) 206 6112

Chicago

980 N. Michigan Avenue,
Suite 1412 Chicago
Illinois, IL 60611
USA
Tel: +1 (773) 372-5762

Los Angeles

2500 Broadway, Building F,
Suite F-125
Santa Monica, 90404
USA
Tel: +1 (424) 238-4331

Florida

8201 Peters Road,
Suite 1000
Plantation,
Miami 33324
USA
Tel: +1 (954) 916 5373

Toronto

2425 Matheson Blvd East
8th Floor Mississauga, Ontario
L4W 5K4
Canada
Tel: +1 (905) 361 6573

Asia Pacific:

Singapore

6 Battery Road
#38-05
Singapore 049909
Tel: +65 6850 0110

Hong Kong

30/F, Suite 3112
Entertainment Building
30 Queen's Road Central
Tel: +852 3103 1096

Tokyo

4F Tekko Building
1-8-2 Marunouchi
Tokyo
100-0005
Tel: +81 3 6870 7175

Sydney

Level 56, MLC Centre
19-21 Martin Place
Sydney, NSW
Tel: +61 2 9220 1707

Email:

mailbox@oxfordeconomics.com

Website:

www.oxfordeconomics.com