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SOLENT LOCAL ENTERPRISE PARTNERSHIP

BASELINE FORECASTS AND THE IMPLICATIONS OF BREXIT

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SOLENT LOCAL ENTERPRISE PARTNERSHIP

Oxford Economics

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January 2017

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1. EXECUTIVE SUMMARY

Solent LEP commissioned Oxford Economics to outline the area's recent economic performance, as well as provide our latest forecasts for the LEP area over the next 20 years. This is in preparation for an update to the LEP's Strategic Economic Plan (SEP).

1.1 BREXIT AND REVISIONS TO GROWTH

Brexit has shifted the economic landscape of the UK economy, bringing uncertainty across a range of issues, not least the position the UK will take with the EU once article 50 has been triggered and the UK formally splits from the EU. In the short-term, Oxford Economics have revised down growth in every year up to 2020, driven by weaker investment and consumption, partially offset by stronger exports.

How the UK performs in the long-term outside of the EU is highly dependent on the trading position it takes with the EU, as well as its stance on migration. However, Oxford Economics does expect the UK to be have a lower level of GDP by the end of the forecast position than it would have if it remained in the EU.

We expect growth and jobs to continue to be driven by service-orientated sectors such as professional, scientific and technical activities; and information and communications. As a result of Brexit we expect lower growth and job creation across most industries, with manufacturing and construction particularly vulnerable.

We have also revised down the growth and jobs forecast for most regions in the UK, including the South East, though it will still grow faster than the UK average, creating an additional 470,000 jobs over the forecast period. The revisions to the South East will be slightly higher than the national average due to its relatively large share in professional, scientific and technical activities; and construction; all sectors that have received larger than average downward revisions.

Recent employment growth in Solent has disappointed, though this is mirrored somewhat by the weaker performance of the region as a whole since 2012. Weaker job growth has been due to underperformance across key sectors such as accommodation and food services; and wholesale and retail trade. In addition, the LEP area has a relatively high share of jobs in declining sectors such as manufacturing; and public administration.

Relatively weak growth in employment has led to slower economic growth, though weaker performance reflects both national and regional weakness. The Solent LEP trails both national and regional productivity levels due to higher concentrations of economic activity in low value sectors. Though relatively strong productivity growth in recent years has seen the Solent almost completely close the productivity gap to the UK average.

1.2 THE OUTLOOK FOR SOLENT TO 2036

Forecasting the likely path of Solent's economy up to 2036 shows that we expect population to grow by an additional 110,000. Weaker rates of net inward migration into the area as a result of the Brexit means that we expect the LEP area's population to grow at a slower pace than previously expected, and will lead to the working age population falling in absolute terms by the end of the forecast period.

We expect employment growth to be flat up to 2020, reflecting regional and national trends, before accelerating from 2020 and growing in-line with the UK as a whole, with just under 50,000 additional jobs by 2036, with administration and support services; professional, scientific and technical activities; and human health and social work activities collectively accounting for almost two-thirds of total growth.

We expect Solent's productivity growth to be in line with that of the UK and the South East over the forecast period. Marginally slower job growth over the forecast period will mean slightly slower GVA growth than the national and regional average. Compared to our previous forecasts presented to Solent LEP in 2015, we expect GVA growth to be significantly slower, though this is mainly explained by slower growth in productivity across the UK as whole, and not reflecting an issue specific to Solent.

1.3 THE IMPLICATIONS OF BREXIT FOR SOLENT

The impact of Brexit on Solent will depend on the deal the Government makes with the EU and other countries, but also on the polices the government implements once separated from the EU. This will generally dictate if the impact of Brexit is 'hard' or 'soft'.

We find that while the EU will continue to be an important market for UK exports, its importance has been in long-term decline, and while tariffs will raise costs, non-tariff barriers are likely to be the biggest impediment to trade over the long-term. We also find that reduced migration into the UK could damage the UK's growth prospects as inward migration tends to involve working age people offering above average skills, and who are net contributors fiscally.

Assessing how these UK wide issues might impact Solent, we note that while a significant proportion of Solent's sectoral specialisms are in manufacturing sub-sectors, UK trade patterns suggest they are likely to face limited risk. While the impact of reduced migration is likely to be felt most in Portsmouth and Southampton.

1.4 FUTURE RESEARCH

To fully understand how Brexit will impact the Solent LEP area, we recommend specific research that establishes, among other things, how reliant local businesses are on inward migration and the impact of regulation on growth. This would involve primary engagement with the local private sector and academia to understand if the issues are of significance to the local economy.

In addition, given the particular challenges the UK economy faces and the subsequent revisions to our baseline forecasts across a range of economic

indicators, now is an appropriate time to refresh the Strategic Economic Plan for the LEP. This would involve agreeing a revised vision of what success looks like for Solent LEP, and what measures to be undertaken to achieve the vision.

2. INTRODUCTION

Oxford Economics produced an assessment of the Solent LEP economy in June 2015. This, in turn, was an update of work completed in 2014, where Oxford Economics developed an economic impact model and an accompanying socio-economic report. The 2014 work was part of the evidence base upon which Solent LEP produced its Strategic Economic Plan in March 2014.

The 2015 report highlighted the strong performance of the Solent economy, with growth in jobs, net migration, and population stronger than forecast in 2014, though productivity growth was slower. As such, we expected Solent to exceed its growth target of 15,500 additional jobs by 2020.

However, since the updated report there has been a series of events in the global and domestic economy that has led to greater uncertainty in future growth. In 2015 the global economy slowed dramatically with weaker growth in the US and China, while emerging economies such as Russia and Brazil fell into heavy recessions.

But of most relevance is the outcome of the referendum on the UK's membership of the EU. The decision has led to a new prime minister and a major cabinet reshuffle, changing the policy landscape dramatically. In addition, the terms of the UK's exit from the EU are still far from being determined, creating uncertainty on issues such as trade and net migration, and which is likely to act as a major deterrent to business investment.

It is timely therefore, that against this backdrop of a changing macroeconomic climate and shift in policy, that Solent LEP look to commission an updated assessment of the LEP economy and in so doing, establish a new baseline outlook for the economy to 2036 which incorporates the likely impact of Brexit. This new work will be used as part of the evidence base to inform the refreshed Strategic Economic Plan in 2017.

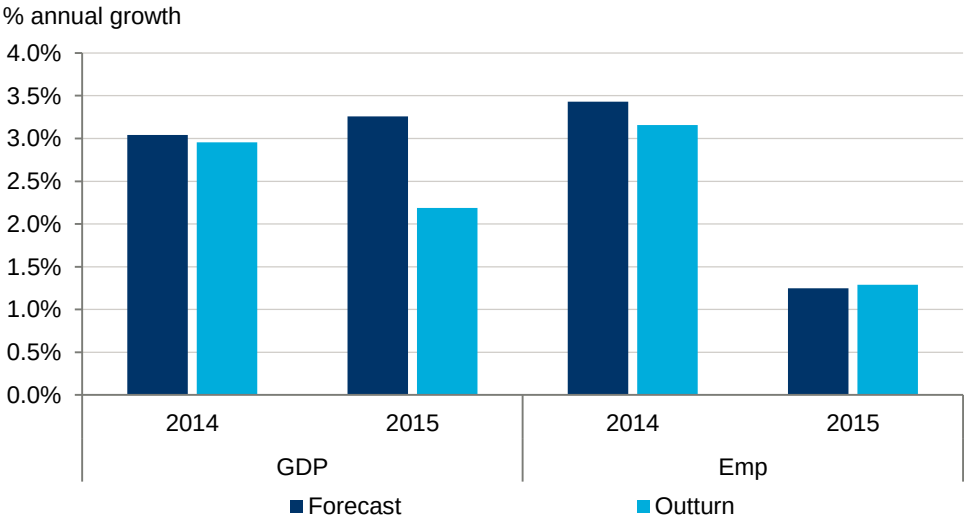
3. MACROECONOMIC OUTLOOK

3.1 UK OVERVIEW

3.1.1 Outturn UK performance

Since our last report, outturn job growth has broadly met expectations, with growth coming in target in 2014 but falling short in 2015. Weak growth in 2015 reflects external factors such as the continued weakness of the Eurozone, and a general slow-down in the global economy that has contributed to the widening of the trade gap. Domestically, slowed investment, ongoing reductions in government spending and inventories contributed to disappointing growth in 2015, in addition to the continued weakness in productivity that has been persistently holding growth down.

Fig. 1. Outturn GDP and employment growth against previous forecasts, 2014 and 2015, UK



Source: Oxford Economics

In terms of jobs, employment growth was driven by professional, scientific and technical activities, adding over 100,000 jobs to the UK labour market and accounting for almost one-quarter of overall growth. Accommodation and food services; and construction also had a strong year, adding over 70,000 jobs each.

3.2 BREXIT

The immediate response to the outcome of the referendum on whether to leave the EU was a strong equity sell-off which soon faded, with world stocks already back to pre-referendum levels.

While headline indicators do not forewarn of impending economic crash, we do nevertheless expect economic uncertainty over the short to medium term as the repercussions of Brexit unfold.

Our new global forecasts see the UK, unsurprisingly, affected most heavily by the economic fall-out. We anticipate the UK will narrowly avoid recession and have slashed our forecasts for GDP growth in 2017 and 2018 to 1.1 percent and 1.4 percent now, from 2.3 percent and 2.2 percent in our forecasts in early 2016.

Four important trends drive the forecasts:

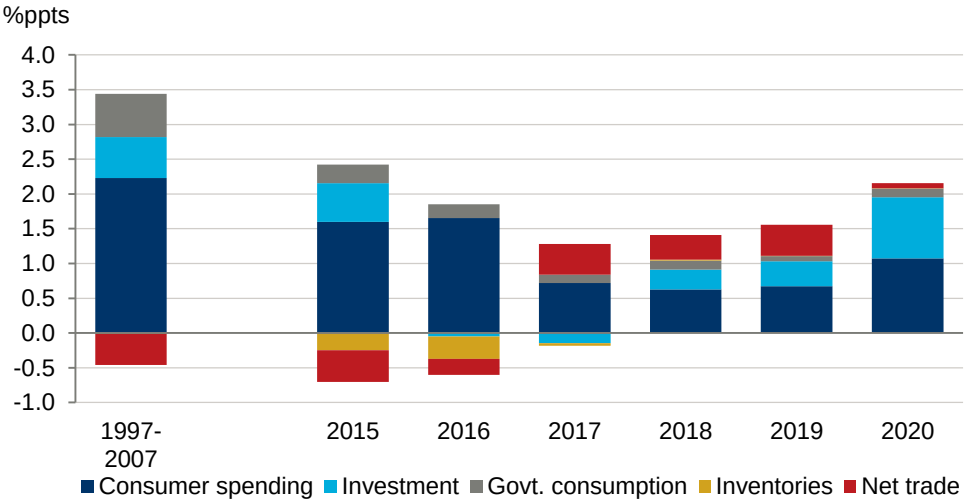
- **Uncertainty is dampening investment.** Business investment had already faltered prior to the referendum as uncertainty weighed on corporate confidence and this is only likely to be amplified now, with some firms set to postpone capital spending plans at least until the UK's future trading relationship with the EU becomes clearer. Consequently, we expect business investment to fall by 2.4 percent this year and a further 3.1 percent in 2017. A significant change against our 'Pre-Brexit' expectations of 1.0 percent growth in 2016 and 7.0 percent in 2017.

- **Higher inflation and a weaker jobs market are squeezing consumers.** Consumer spending has been propelled in the last two years by low inflation and a strong labour market. But weaker corporate confidence is likely to now weigh harder on hiring plans, causing unemployment to rise. Alongside this, the further depreciation of the pound against the dollar (a downward trend that has been in in train since mid-2014) will mean higher import prices, and can be expected to push CPI inflation above 2 percent by early-2017. With household spending power also under pressure from the government's welfare reforms, we expect consumer spending growth to slow from 2.4 percent this year to just 1 percent in both 2017 and 2018.

- **The weaker pound will boost net exports.** Although the euro also remains weak relatively, we nonetheless expect that due to the weaker pound, UK competitiveness will improve, boosting exports and triggering a degree of import substitution. However, the experience of past depreciations, especially the period between 2007 and 2009, leads us to take a relatively conservative view about the extent to which depreciation will support activity. We expect net trade to contribute 0.5 and 0.4 percentage points to GDP growth in 2017 and 2018, respectively.

- **There will be no further austerity in the medium term.** On top of cuts to welfare spending, if plans don't change, tax rises and cuts to departmental spending will see fiscal policy continue to drag on growth prospects over the next few years. The Office for Budget Responsibility had estimated that existing fiscal tightening would exert an average drag of 1 percentage points a year on GDP growth until 2019-2020. The risk of further fiscal tightening is unlikely, as the government has now accepted that it will not achieve the planned budget surplus in 2019-2020. However, if the government were to go further and loosen fiscal policy then this would represent an upside risk to our growth forecast.

Fig. 2. Contributions to GDP growth, 2007-2020, UK



Source: Oxford Economics

3.2.1 The impact of Brexit on UK growth and employment

Comparing our updated GVA growth forecast against that of our last forecast before the referendum in spring 2016 shows that we have revised down growth for the UK as a whole from 2.5 percent per annum to 2.1 percent up to 2036.

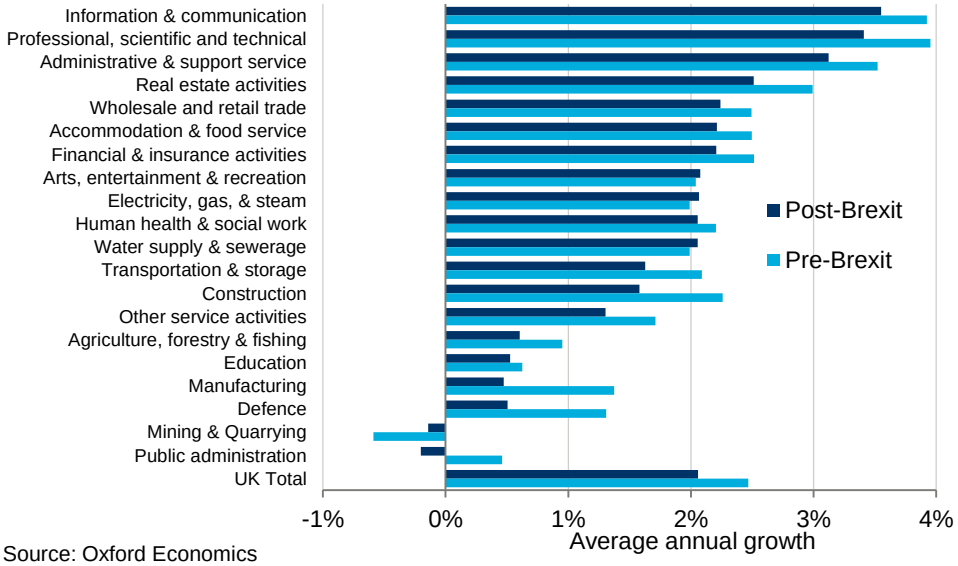
UK growth will remain underpinned by the professional, scientific and technical activities sector, which, despite Brexit, we expect to grow by 3.4 percent annually up to 2036, revised down from 4 percent annual growth from our last forecast before the referendum. While not making the same proportional contribution to overall growth, the information and communications sector is expected to grow marginally faster than professional, scientific and technical activities over the same period at an annual rate of 3.6 percent, again revised down from our forecast in spring 2016. The wholesale and retail; accommodation and food; real estate; and administration and support sectors are all expected to preform above the average of just over 2 percent per annum.

As a result of the referendum we have lowered our growth expectations across most sectors in the economy, with the biggest reductions to the long-term outlooks in construction and manufacturing. And while we expect the weaker pound to provide a short-term boost for manufacturing, we now project it to grow at an annual rate of 0.5 percent, about one-third the pace we expected before the referendum.

The outlook for more consumer-focused sectors in less downbeat, with the wholesale and retail sector and the accommodation and food sector suffering relatively minor downgrades.

However, it is worth noting the significant downside risk for these sectors. A pick-up in inflation may erode household spending power in the near-term and the multipliers from lower economic activity are likely to permanently reduce household incomes in the long-term, relative to our spring forecast.

Fig. 3. Sectoral GVA growth, UK, 2015-2036



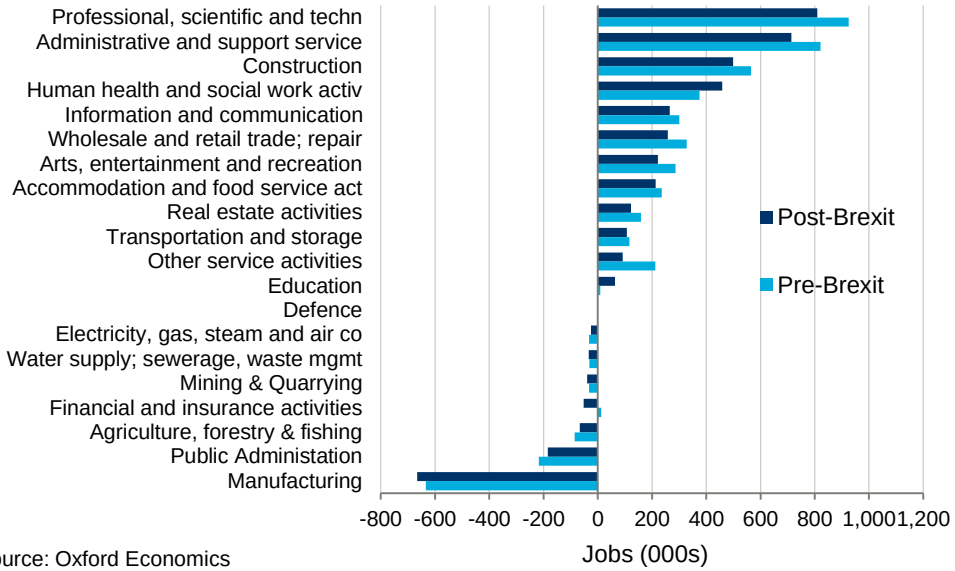
Source: Oxford Economics

In terms of employment growth, we expect there to be an additional 2.8 million jobs in the UK by 2036, growing at annual pace of just under 0.4 percent per annum. Professional, scientific and technical activities will add the most jobs over the forecast period, adding just over 800,000, followed by administration and support services; and construction.

Job losses will heaviest in manufacturing, which continues to see a long-term decline in jobs as the sector moves to more capital-intensive methods of production. Public administration will also see a significant decline in employment, in line with government policy of public sector cuts.

As with GVA, we have revised down our job growth forecast. The level of employment for 2036 is more than half a million jobs less than our pre-Brexit forecast, with the largest revisions in other service activities; professional scientific and technical activities; and administrative and support services.

Fig. 4. Sectoral jobs growth, UK, 2015-2036

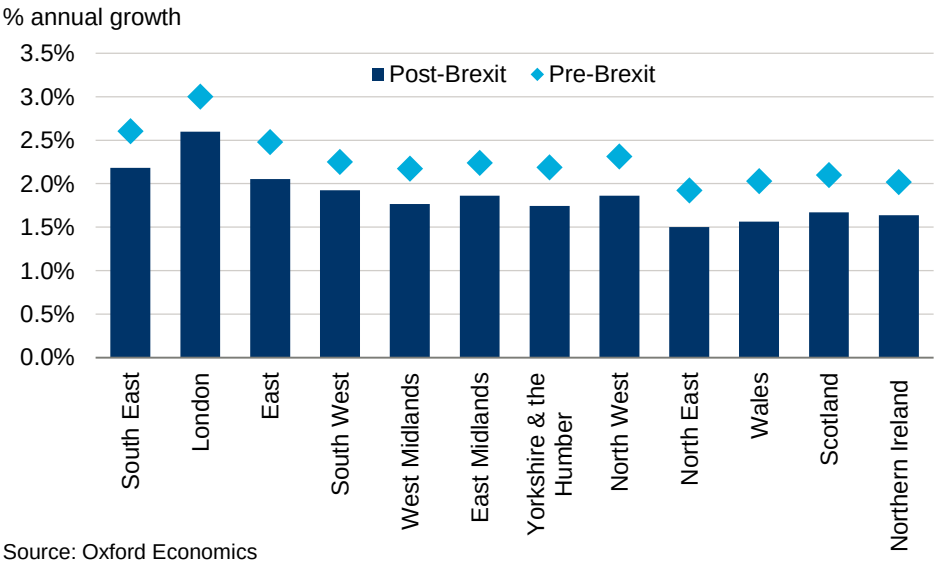


Source: Oxford Economics

3.3 REGIONAL FORECASTS

Given the downward revisions to our UK forecast following the referendum, we have also downgraded our expectations for growth across all 12 UK regions, albeit to varying degrees of severity. The chart below illustrates the gap between our spring GVA forecast and our current view.[1]

Fig. 5. Regional GVA growth, 2015-2036



Source: Oxford Economics

Despite the uncertainty that now shrouds the financial sector in the UK, London remains our fastest growing region over the forecast period. Risks around the financial sector aside, the UK services industries are expected to remain

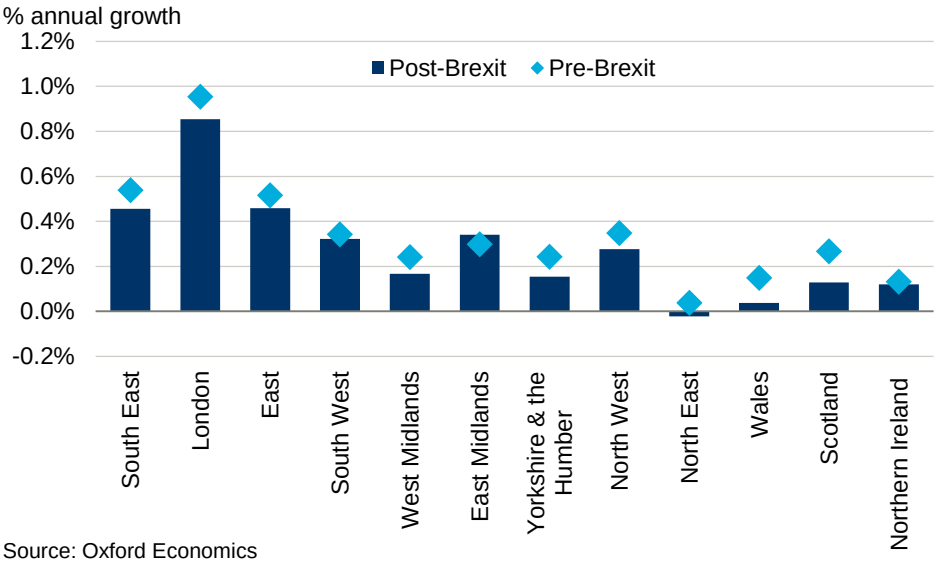
[1] Note that our summer forecasts includes new & revised data as well as changes to the outlook to reflect Brexit, so comparisons with our spring forecasts should not simply be considered as pre and post Brexit.

robust, hence London's strong outlook. Wales has seen the largest downward revision in growth, due to its relatively large share of economic activity in manufacturing; and public administration.

We have also revised down significantly the growth forecast of the South East, which is now expected to grow on average by 2.2 percent per annum, down from 2.6 percent in our pre-Brexit forecast. The revision is above that of the UK as a whole, largely due to the relatively large concentrations of economic activity in construction; and professional, scientific and technical activities that have both received above average revisions. With that said, professional, scientific, and technical activities are still expected to be a major source of growth in the South East economy over the forecast period, along with real estate activities; information and communications; and wholesale and retail trade.

In terms of jobs, we expect growth to be fastest in London, again due to the resilience of the service orientated sectors over the forecast period. Growth will be weakest in the North East, due to its heavy concentration of employment in the manufacturing sector. The sector as a whole is set to struggle in the wake of Brexit as investment falls and UK exports become less appealing to our European neighbours.

Fig. 6. Regional job growth, 2015-2036

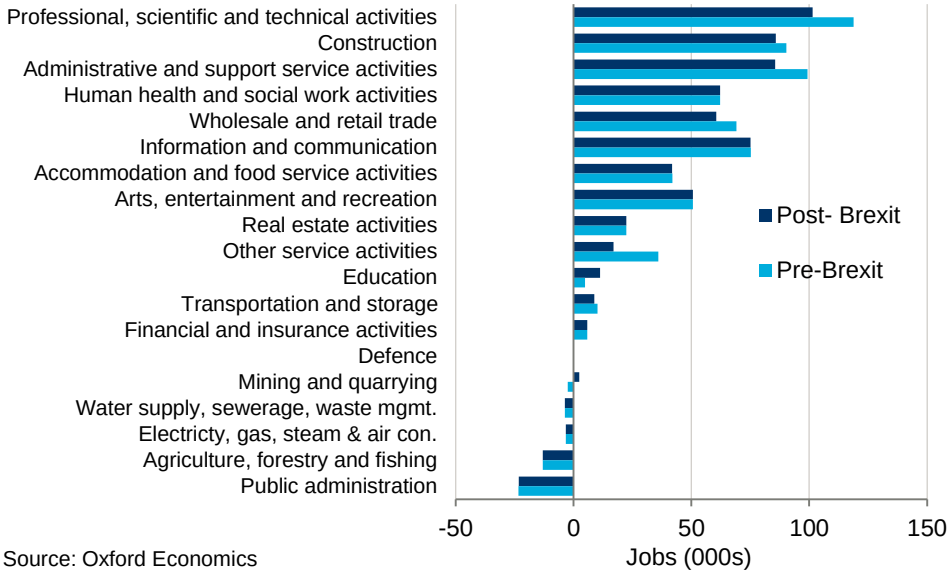


Source: Oxford Economics

Jobs in the South East will grow at a pace of just under 0.5 percent per annum, which is ahead of the UK average and the third fastest growing region over the forecast period, though it slightly down on our pre-Brexit forecast. This pace of growth will add 470,000 additional jobs to the region, lifting the total number of jobs to 5.2 million for the region, though this is still 140,000 jobs less than our pre-Brexit forecast.

Job growth will be driven by professional, scientific and technical activities that will generate an additional 100,000 jobs. However, this sector will also see one of the largest downward revisions, with almost 17,000 less jobs in the sector than we projected in our pre-Brexit forecast. Construction will generate the second largest amount of jobs, with only a small revision in the jobs total.

Fig. 7. Sectoral job growth, South East, 2015-2036



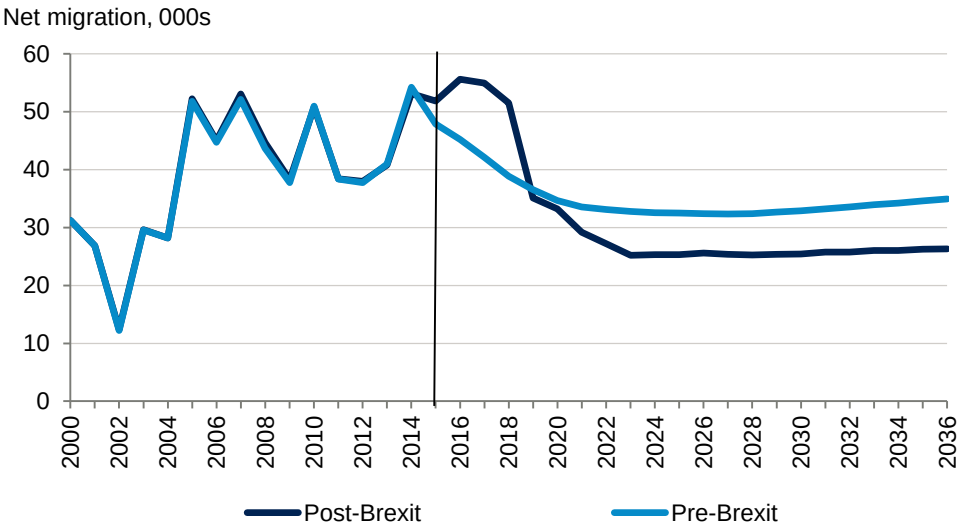
Source: Oxford Economics

As a result of Brexit we have also revised our demographic forecasts to reflect the focus of the 'leave campaign on regaining control of the levels of migration into the UK. Our forecast therefore assumes this comes to pass, at least in the longer term. Our forecast assumes that the government triggers Article 50 within a year of the vote, and that the UK leaves the EU two years afterwards (at the time of writing the Government confirmed that Article 50 would be triggered between January and March 2017). This results in a higher level of migration in the short run as individuals outside the UK take their last opportunity to move to the UK before the freedom of movement between the UK and EU ceases. We assume a higher level of migration in the short run, eventually falling to 90,000 in the longer run.

We expect a similar pattern in the South East, where net migration will rise in the short term from its current level of 52,000 people each year, before falling sharply from 2017 onwards. It will settle at around 26,000 people migrating into the region each year, about 8,000 less than our pre-Brexit level in 2036. Cumulatively, this will reduce the level to about 80,000 fewer people migrating into the region over the forecast period.

Overall, we expect the population of the region to increase by just under 1.1 million people by 2036, where it will reach just over 10 million people. This is about 110,000 less people than in our pre-Brexit forecast, with the reduction in net inward migration accounting for 70 percent of the reduction.

Fig. 8. Net migration, South East, 2000-2036



Source: Oxford Economics

4. SOLENT OUTTURN PERFORMANCE

This section provides a detailed economic assessment of the Solent LEP economy with particular focus on population; employment; sectoral structure; GVA; and productivity. For each economic indicator we will establish Solent's position for the latest full year of data relative to regional and national benchmarks, and how the LEP area has performed relative to our forecast in the 2015 report.

4.1 POPULATION

In 2015 we estimate that there were 1.2 million people in the Solent LEP area, accounting for just under 14 percent of the total population of the South East. Population growth in Solent is in-line with national rates, as is its growth in working age population. However, growth is slightly slower than that of the South East on both measures.

Of the total population, 63 percent were of working age (between 16-64 years) which is a slightly higher proportion than the South East as a whole. This is positive in terms of economic potential for Solent relative to the South East, though the proportion is slightly lower than the national average.

Demographic statistics such as population are not prone to sudden or volatile movements therefore it is unsurprising that our latest population estimates for Solent LEP are very close to our last set of forecasts.

4.2 LABOUR MARKET

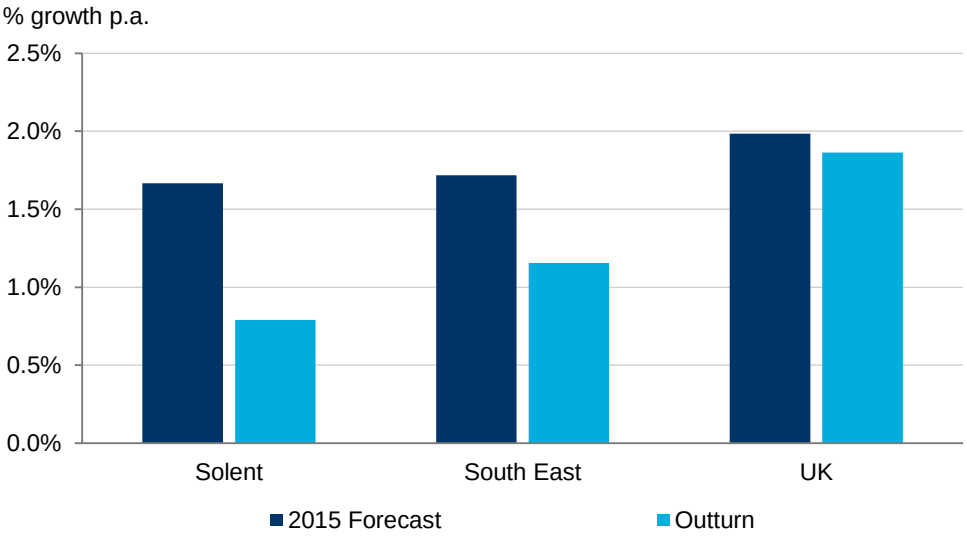
There were just under 608,000 jobs in the Solent LEP area in 2014, accounting for 13 percent of total employment in the South East. We estimate that in 2015 the employment level will be marginally higher, adding 1,000 jobs in total.[2]

Employment growth has been significantly weaker than we had projected in the 2015 report. We expected Solent LEP area to generate over 30,000 additional jobs between 2012 and 2015, equivalent to job growth of just under 2 percent per annum. However, Solent has only been able grow at half that pace at just 0.8 percent, adding just over 14,000 jobs over the period.

Solent was expected to grow in-line with the South East as a whole, but slower than the UK. And while both outturn regional and national growth has been weaker than we expected in our last report, the scale of the shortfall is less than that of Solent.

[2] The last official outturn observation for employment levels at the local level is 2014. We use this data point to produce a robust estimate for employment levels for 2015. At the time of the previous report the last outturn point was 2012, as such the period from 2012 to 2015 becomes the appropriate means of comparison of performance.

Fig. 9. Average annual Job growth in Solent, South East and UK; outturn and 2015 forecast; 2012-2015.



Source: Oxford Economics

Job growth since 2012 has been driven by education; and accommodation and food service activities that have both contributed over 6,000 additional jobs in the Solent LEP area. This is followed by administrative and support service activities which added just under 5,500 jobs, almost three times the amount of jobs we forecast in our last report.

The shortfall in outturn job growth against our forecast was driven by underperformance in a few key sectors:

- **Accommodation and food services** only generated half of the expected jobs, though it was still LEP's strongest growing sectors;
- **Information and communication:** was expected to add just under 7,000 additional jobs, but only produced a quarter of this amount.
- **Wholesale and retail trade** had the second largest amount of job losses, having been forecast to add jobs.

The weaker than expected job creation in these sectors reflect the general underperformance of the same sectors across the South East as a whole, but with the weakness in accommodation and food services having a larger relative bearing on Solent's job growth due to the sector accounting for a larger share of total employment. On the same basis, figure 10 shows that some sectors such as administrative and support services created more jobs than expected, again reflecting relative strength of these sectors across the region. However, this sector accounts for a similar proportion of jobs in Solent as it does for the region as a whole, so there Solent did not see any disproportional benefit from the stronger than expected performance.

Fig. 10. Job growth by sector, 2012-2015; 2015 forecast and outturn; Solent LEP Area

Sector	2015 Forecast	Outturn	Difference
Agriculture, forestry and fishing	250	-500	-750
Mining and quarrying	-150	-150	0
Manufacturing	-8,000	-8,650	-650
Electricity, gas, steam and air con.	-750	-350	400
Water supply; sewerage, waste management	50	600	550
Construction	3,700	4,050	350
Wholesale and retail trade	700	-3,850	-4,550
Transportation and storage	1,100	2,350	1,250
Accommodation and food service activities	11,800	6,300	-5,500
Information and communication	6,850	1,800	-5,050
Financial and insurance activities	350	-750	-1,100
Real estate activities	800	1,000	200
Professional, scientific and technical activities	2,400	800	-1,600
Administrative and support service activities	1,950	5,450	3,500
Public administration	-2,300	-2,050	250
Defence	0	-350	-350
Education	5,200	6,550	1,350
Human health and social work activities	1,900	-1,650	-3,550
Arts, entertainment and recreation	4,250	1,550	-2,700
Other service activities	200	2,150	1,950
Total	**30,250**	**14,250**	**-16,000**

At 60.7 percent, Solent has an employment rate lower than the regional employment rate but higher than the UK. Since 2012, the resident employment rate has increased by three percentage points, a larger increase than the regional and national employment rates. This is due to a fast rate of growth in the number of residents living (though not necessarily working) in the Solent LEP area. The strong increase in the employment rate despite the fact that job growth has been slower than expected points to an increase in the outflow of residents working outside LEP area.

The increase in resident employment since 2012 was slightly stronger than we anticipated in our previous report, with just over 1,100 more LEP residents in employment. However, given the relatively minor level changes compared to the scale of the LEP area's working age population and workforce, means little material difference between our forecasts for the resident employment and unemployment rates.

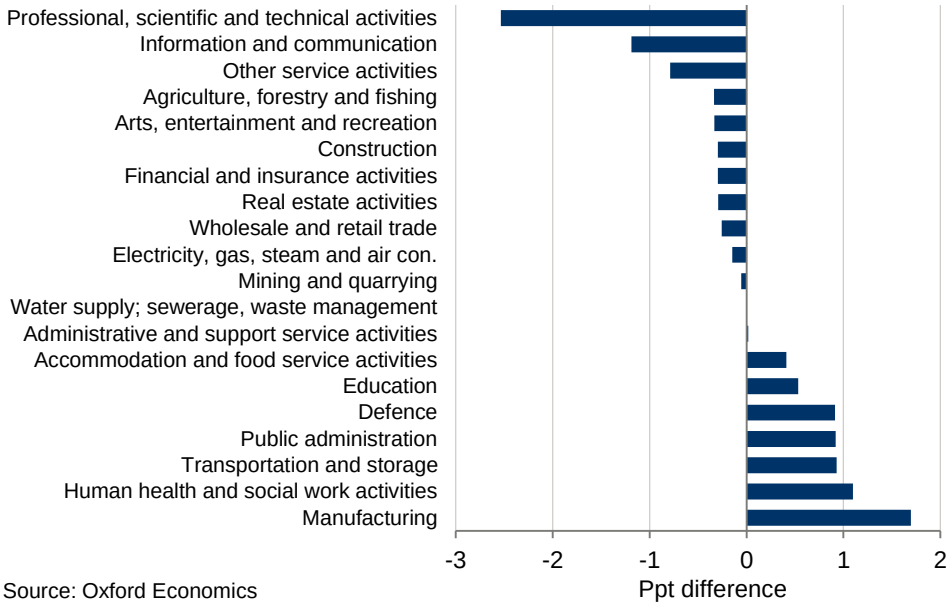
Fig. 11. Outturn employment and unemployment levels and rates against previous forecasts, Solent LEP area

Variable	Solent	
	Forecast	Outturn
Resident Employment (000)	611	616
Unemployment	59	60
% Employment	60.6	60.7
% Unemployment	1.2	1.3

Source: Oxford Economics

The relatively slow job growth in Solent relative to the South East can be explained by assessing the composition of the labour market. This clearly shows that the LEP area has a relatively high share of jobs in low growth sectors. This includes sectors dominated by public sector employment such as education; public administration, and manufacturing where jobs have been in long-term decline. In contrast, there is a relatively small share of employment in fast growing sectors such as professional, scientific and technical activities; and information and communications.

Fig. 12. Composition of employment, Solent relative to the South East, 2015



Source: Oxford Economics

4.3 GVA AND PRODUCTIVITY PERFORMANCE

Gross Value Added is a measure of the economic value of the goods and services produced in an area. In 2015, we estimate that the total value of GVA in Solent stood at £27.8bn, accounting for just under 12 per cent of regional output.

Economic growth disappointed in 2015 relative to our expectations in our previous report, with outturn growth of 1.6 percent against our forecast of growth at twice that pace. But as figure 13 clearly shows, this reflects

disappointing growth at both the regional and national level, with a comparable relative shortfall of outturn and forecast growth.

Fig. 13. Outturn GVA growth against previous forecasts for Solent, South East and UK, 2015

GVA	Forecast	Outturn
Solent	3.0%	1.6%
South East	3.4%	1.8%
UK	3.3%	2.2%
Source: Oxford Economics		

Our last report established that Solent had a significant productivity gap with the South East and the UK as a whole. Economic growth (as measured by GVA) can be driven by growth in jobs and or productivity. However, in the long term, where the economy is assumed to gravitate towards full employment, productivity becomes the key driver of growth. Therefore, low and or slow growing productivity is likely to harm economic competitiveness in the medium to long-term.

We estimate that average productivity stood at £45,645 in 2015, this was over eight percent below the regional average. Growth in productivity was slower than we expected in last year's report, though the relative mark-down was more pronounced at the regional level, with productivity growth in Solent matching the regional average. Therefore, the reason why Solent as a whole had slower GVA growth in 2015 was due to weaker job growth.

Fig. 14. Outturn productivity level and growth against previous forecasts, Solent and South East, 2015

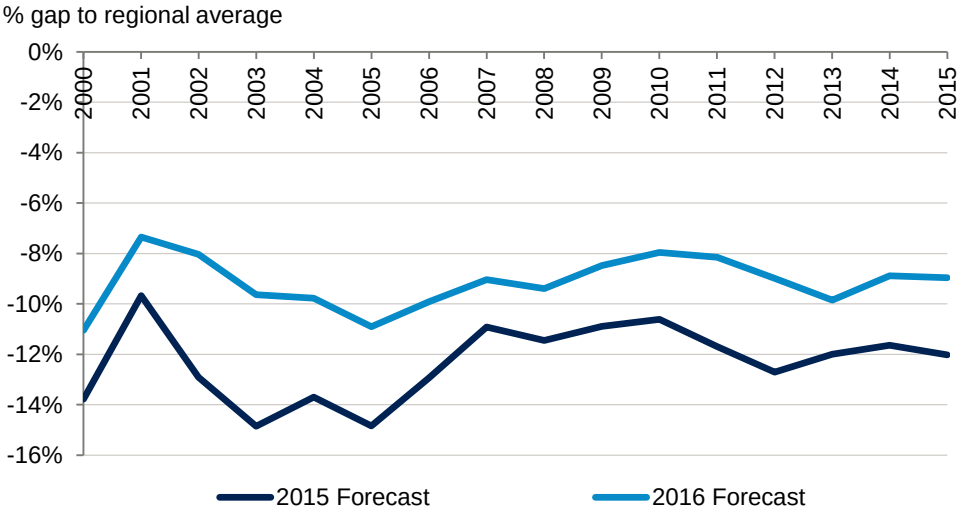
Forecast	Area	Level	Growth
2016 Forecast	Solent	45,350	1.4%
	South East	49,812	1.5%
	Gap	-8.4%	
2015 Forecast	Solent	44,252	1.7%
	South East	50,300	2.1%
	Gap	-12.0%	
Source: Oxford Economics			

Figure 14 also shows that the productivity gap between Solent and the South East as a whole is narrower than our estimate in the 2015 report. This is due to an improvement in the sub-national data made available by the ONS and is explained in detail in the box at the end of the section.

Using the new data, we can produce a back series of productivity estimates for Solent relative to the South East. Figure 15 shows that the new productivity gap estimate follows the same pattern as our previous estimate. While the gap has closed it remains significant at just over eight percent below the South East's productivity level.

The productivity gap to the regional average is explained by the relatively high concentration of jobs in the economy in low productivity sectors such as human health and social work and a lower share of jobs in high value sectors such as financial and insurance activities; and information and communications. By accelerating job growth in high value sectors, the Solent LEP area will be able to close the productivity gap over the medium to long term.

Fig. 15. Revised productivity gap, Solent relative to the South East, 2000-2015

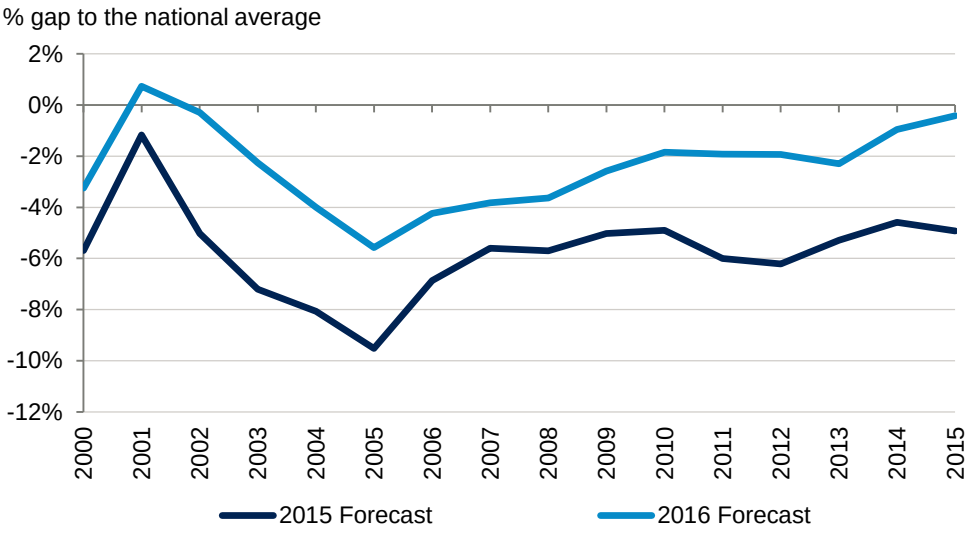


Source: Oxford Economics

Another important finding that emerges from the improvement of official data at the local level is our assessment of where Solent's productivity stands relative to the UK as a whole. While not specifically dealt with in the previous report, the data reveals that Solent had a productivity deficit of around six percent between 2000 and 2015. Our updated data with a more accurate estimate of Solent's GVA shows that the Solent's deficit was smaller than previously thought. We estimate that in 2015, there Solent's productivity level had almost converged to the UK average, with a difference of less than one-half of a percent. Figure 16 also shows that productivity growth in the Solent has outperformed the UK since 2005, where Solent's productivity level was six percent below the UK average.

While Solent's recent productivity performance in almost closing the gap to the UK is positive, it should be tempered by the persistent shortfall in productivity to the South East. And given the well documented failure for productivity to recover in the UK since the financial crisis, the South East should remain the appropriate benchmark.

Fig. 16. Revised productivity gap, Solent relative to the UK, 2000-2015



Source: Oxford Economics

UPDATED ONS LOCAL AREA GVA ESTIMATES

GVA estimates at the local authority level are not published by the ONS but are constructed using NUTS 3 level data published by the ONS. At the time of the 2015 report, we based our Solent GVA estimates upon NUTS 3 estimates for the following areas: Portsmouth; Southampton; Hampshire CC; and Isle of Wight. Therefore, our GVA estimates for East Hampshire, New Forest, Test Valley; Winchester; Eastleigh; Fareham; Gosport; and Havant were constrained to Hampshire CC

For the latest report, ONS now produce GVA estimates for South Hampshire, Central Hampshire and North Hampshire. The availability of more granular geographic data allows us to make more precise estimates of GVA at the local level. So now East Hampshire, New Forest, Test Valley; and Winchester are estimated using official estimates of Central Hampshire; and Eastleigh, Fareham, Gosport and Havant as estimated using the official estimates for South Hampshire.

This allows an improved estimate of the GVA for Solent as a whole.

5. SOLENT BASELINE FORECAST

This section provides a detailed assessment of our latest baseline forecast for the Solent LEP area that fully reflects our post-Brexit view of the likely path of the economy at the national, regional and LEP level. With forecasts of every economic indicator up to 2036, the analysis will compare our forecasts against the performance of the South East and the UK as a whole; and importantly, analyse any change in expected performance against our previous forecast in the 2015 report.

5.1 POPULATION

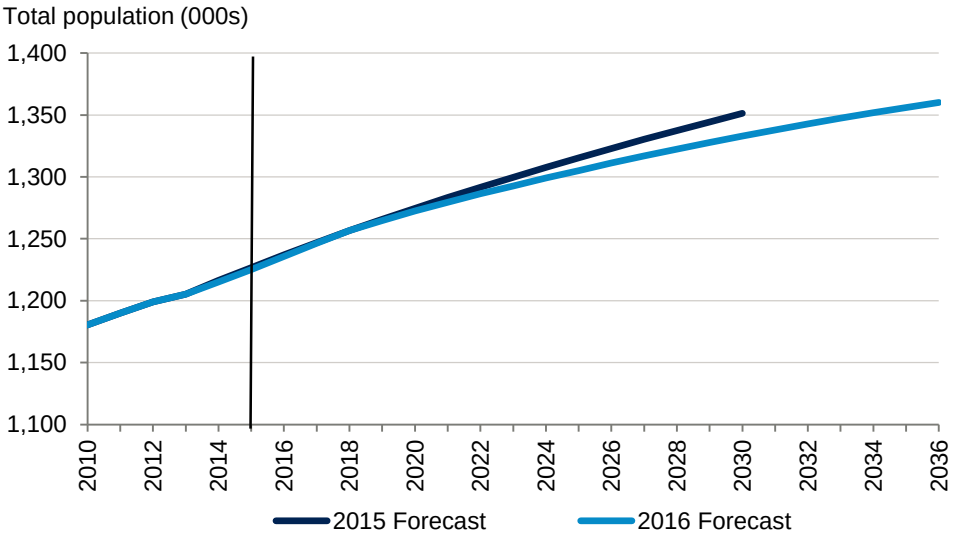
We expect the population of the Solent LEP area to grow by almost 135,000 to 1.36 million people by 2036. This will be a slightly slower pace of growth than the South East as a whole but significantly slower than the growth of the UK. Our projection for slower growth in Solent relative to the South East is due to a more rapidly aging population.

Fig. 17. Population growth for Solent, South East and UK, 2015-2036

Area	Total population		Working age population (16-64)	
	Level (000)	% p.a.	Level (000)	% p.a.
Solent	135	0.5%	-12	-0.1%
South East	1,083	0.5%	22	0.0%
UK	6,873	0.7%	308	0.0%
Source: Oxford Economics				

Comparing our updated, post-Brexit forecast to that provided in last year's report shows that we have revised down our population growth forecast for the Solent LEP area. The change in trajectory will become apparent from around 2020 onwards, where our new expected path on net migration begins to drag the overall population growth rate down from our previous forecast. By 2030, we expect there to be about 20,000 less people living in the LEP area than our previous forecast.

Fig. 18. Population level, pre and post Brexit forecasts, Solent LEP area, 2010-2036

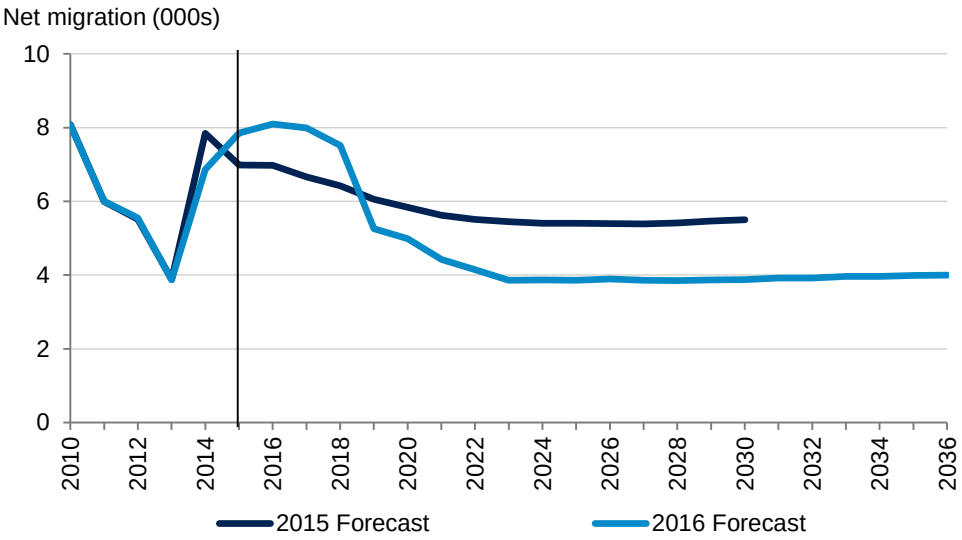


Source: Oxford Economics

A large proportion of the shortfall will be due to a reduction in our projections for the working age people in Solent. Our previous forecast expected the working age population to show modest growth (+11,000) by 2030, however our post Brexit forecast now expects the working age population to have reduced in size by 2030, with 12,000 less working age people than forecast previously. This is in contrast to the South East and the UK that will see slight growth in their working age populations.

The decline in the working age population is driven by our expectation that migration will be significantly lower as a result of Brexit than in our previous forecast. Annual net inward migration will be just under 4,000 people a year, compared to 5,500 a year in our previous forecast. Cumulatively, this results in just over 12,000 less people in the LEP area by 2030, accounting for all of the decline in the working age population in the updated forecast, or two-thirds of the difference in our population forecast.

Fig. 19. Net inward migration, Solent LEP area, 2015-2036



Source: Oxford Economics

The age profile associated with net inward migration tends to be younger than that of the average population (discussed in more detail later in the report) with the amount of net inward migration previously forecast for the area enough to offset a rapidly ageing population.

Our expectation that net inward migration will fall rapidly from 2020 onwards, leaves us expecting a slower growing and ageing population in the Solent LEP area. A smaller working age population is likely to have a negative impact on the Solent area, as all things being equal it reduces the size of the LEP area's pool of labour and therefore reduces the output capacity and growth potential.

5.2 LABOUR MARKET

We expect the pace of growth in Solent to be moderate over the forecast period, with an additional 47,000 jobs by 2036. This will be in-line with the pace of growth across the UK, though slightly slower than the South East.

Fig. 20. Forecast employment levels for Solent, South East and UK, 2015 and 2036

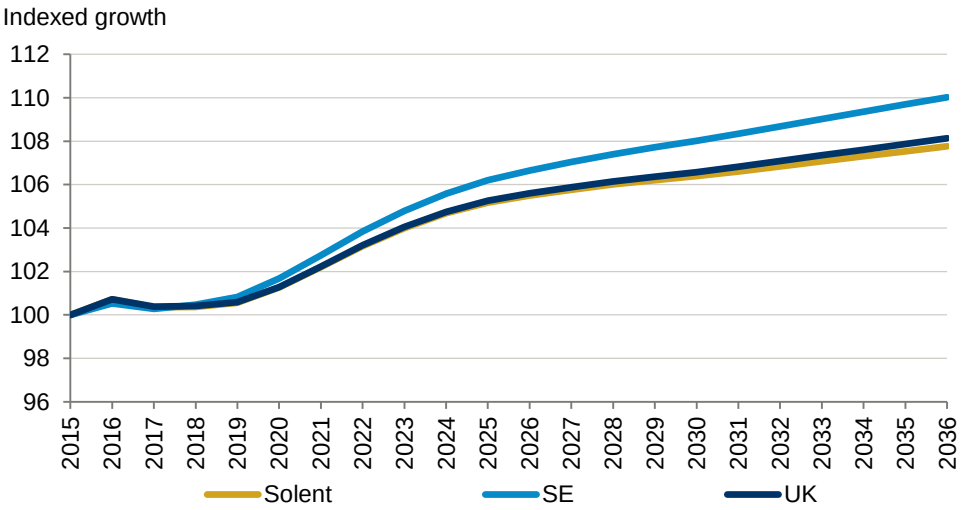
Area	Levels (000s)		Change (000s)	
	2015	2036	Levels	% p.a.
Solent	609	656	47	0.4%
South East	4,692	5,162	471	0.5%
UK	34,182	36,698	2,762	0.4%
Source: Oxford Economics				

Our forecast growth trajectory for the Solent LEP area has very distinct periods, following closely the trends at the national and regional level. We expect employment growth to be flat over the next five years, this is in-line with a general period of uncertainty across the UK. From 2020 onwards, we expect employment growth to accelerate, adding an additional 24,000 jobs, more than

three times the amount of jobs created in the previous five-year period. From 2025 onwards, the pace of growth will moderate, adding another 16,000 jobs up to 2036.

Figure 21 shows that Solent LEP will generate jobs at a similar rate to the UK as a whole, though from 2020 onwards at a slower pace than the South East. The differences in overall job growth can be explained by analysing the composition of job growth in Solent relative to the South East.

Fig. 21. Indexed employment growth, Solent, South East and UK, 2015 to 2036



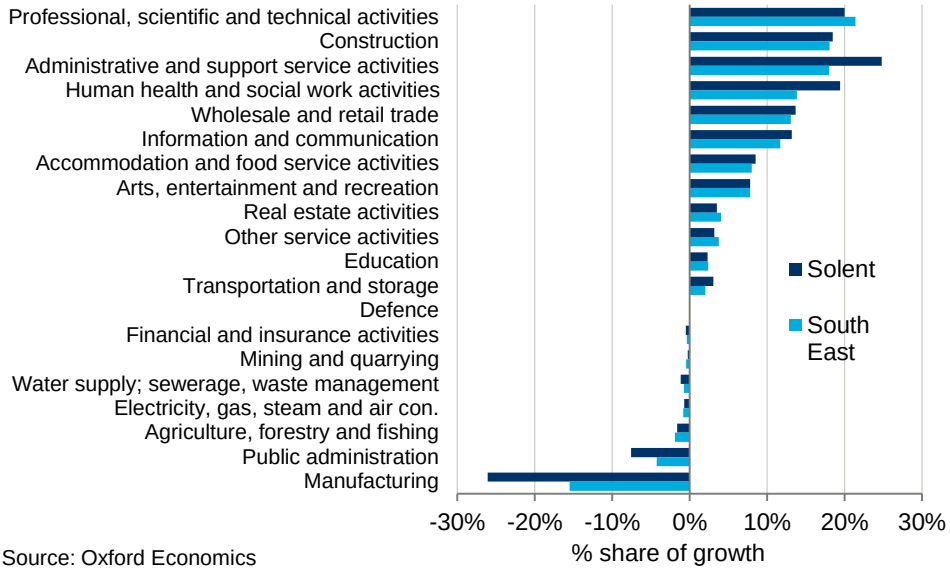
Source: Oxford Economics

Figure 22 shows that Solent had a similar proportion of job growth in high growth sectors such as professional, scientific and technical activities; and construction; the strongest growing sectors in the South East. In fact, in the case of administrative and support service activities; and human health and social work activities; Solent has a significantly higher share of job growth.

It was however manufacturing; and public administration that causes Solent's slower job growth. Not because these sectors fall faster in Solent than in the South East, but because as shown in figure 12, these sectors account for a relatively large proportion of overall jobs; and therefore have a larger drag on employment growth.

The forecast for manufacturing incorporates a number of issues related to the sector, including the long-term structural decline of jobs in the industry and the rationale that the sector continues to shift towards a more capital-intensive mode of production, that boosts productivity and competitiveness, though supports less jobs. Our forecast also expects that the heavy job losses seen in public administration following the financial crisis will continue into the forecast period in line with ongoing cuts to the public sector, though the rate of job losses will slow. Finally, Solent has a relatively high share of jobs in Defence, which we assume remains flat over the forecast period.

Fig. 22. Sectoral share of job growth, Solent relative to South East, 2015-2036

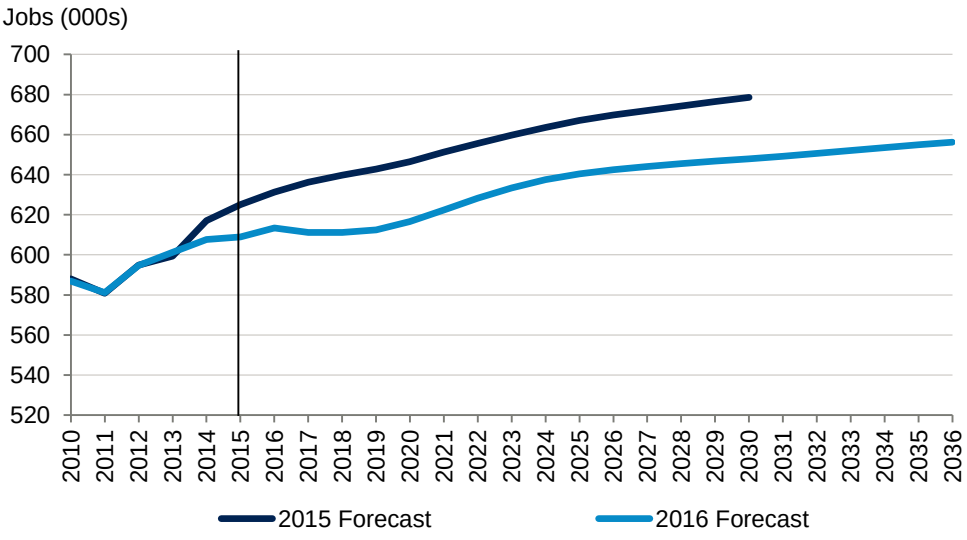


Source: Oxford Economics

We expect job growth to be slightly slower in our revised forecast to 2030, growing on average by 0.4 percent per annum compared to 0.5 percent in last year's forecast. This results in an additional 39,000 jobs by 2030, 14,000 fewer jobs than we expected in our previous forecast.

But while the average pace of growth is only slightly different, the growth trajectory has been revised markedly, particularly in the five year period up to 2020 where we now expect employment growth to be relatively flat with only 8,000 additional jobs, with our pre-Brexit forecast expecting almost three times that amount. This period largely accounts for the total shortfall in job growth in the new forecast, as our new forecast expects job growth to accelerate from 2020 onwards, to grow at the same pace as the previous forecast up to 2030.

Fig. 23. Solent LEP area employment levels, pre and post Brexit forecasts, Solent LEP area, 2010-2036



Source: Oxford Economics

Examining pre and post-Brexit growth forecasts by sector shows that the slower job growth in our latest outlook is driven by weaker growth in administration and support services activities; information and communications; construction; and wholesale and retail trade. Collectively these sectors account for over half of the total reduction in expected job growth up to 2030. Importantly, the largest differences occur in the first five years of the forecast up to 2020.

The new forecasts also mark a shift in the sectors that are driving job growth. While administrative and support service activities continue to be the strongest growing sector albeit with slower growth, professional, scientific, and technical activities; and human health and social work rise in prominence, overtaking construction; and wholesale and retail trade.

Fig. 24. Sectoral employment growth, pre and post Brexit forecasts, Solent LEP area, 2015-2030[3]

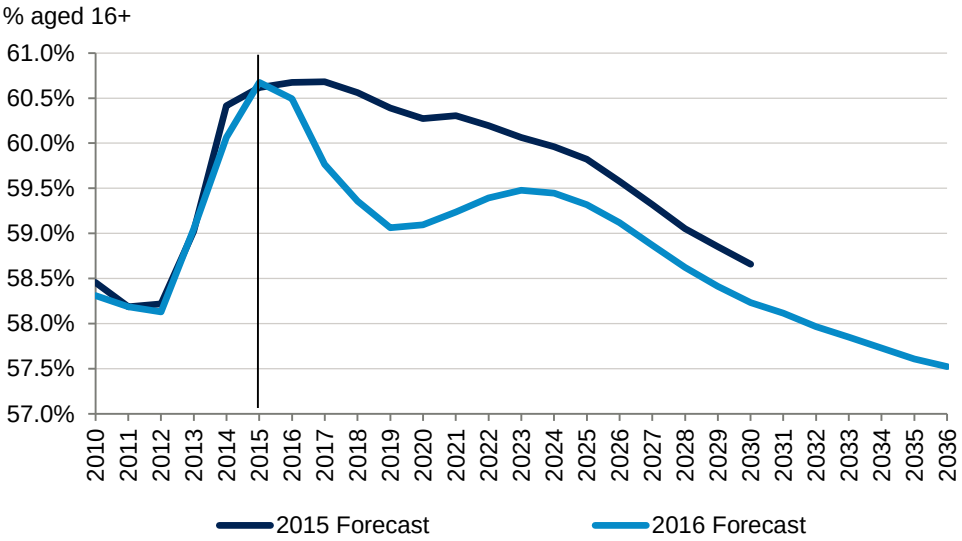
Sector	2015 Forecast	2016 Forecast	Difference
Agriculture, forestry and fishing	-831	-505	326
Mining and quarrying	-81	-88	-7
Manufacturing	-8,654	-8,848	-194
Electricity, gas, steam and air con.	-171	-209	-37
Water supply; sewerage, waste management	-173	-375	-202
Construction	8,207	6,469	-1,738
Wholesale and retail trade	7,595	5,907	-1,688
Transportation and storage	2,960	1,739	-1,222
Accommodation and food service activities	4,714	3,519	-1,195
Information and communication	6,975	4,713	-2,262
Financial and insurance activities	658	-51	-709
Real estate activities	2,146	1,250	-896
Professional, scientific and technical activities	7,504	7,120	-384
Administrative and support service activities	11,169	8,676	-2,493
Public administration	-2,304	-2,906	-602
Defence	0	0	0
Education	828	914	86
Human health and social work activities	6,964	6,787	-177
Arts, entertainment and recreation	4,732	3,207	-1,526
Other service activities	1,234	1,593	359
Total	**53,475**	**38,912**	**-14,562**
Source: Oxford Economics			

The downward revision in job growth will affect the forecast employment rate for Solent LEP area. In the 2015 report, we expected both the employment rate

[3] We assume that total Defence employment remains constant in times of political stability.

to be lower by 2030 as the growth in the adult population outpaces the growth in residents' employment levels. But our revised employment rate falls at a much sharper pace up to 2020 before making a partial recovery up to 2025 before falling at a similar pace as the previous forecast, albeit at slightly lower level. Again, the key driver of the revision is the much slower rate of job growth in the first five years of the forecast that results in slower growth in the employment of those living in the Solent LEP area.

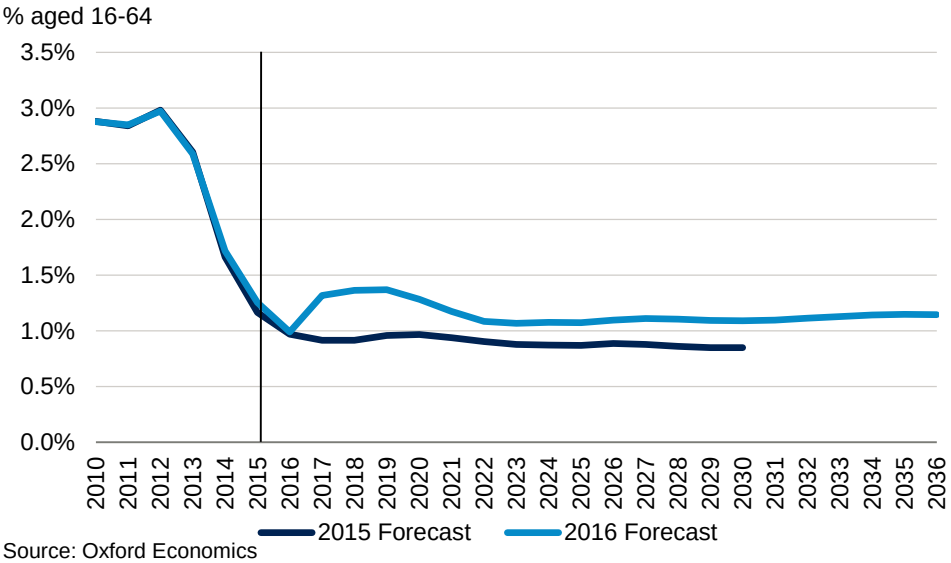
Fig. 25. Resident employment rate, pre and post Brexit forecasts, Solent LEP area, 2010-2036



Source: Oxford Economics

Slower job growth up to 2020 has a similar impact on the unemployment rate, where working age population growth outpaces employment growth, leading to a higher proportion of working age people claiming out-of-work benefits. While the revised unemployment rate falls back towards our previous forecast from 2020 onwards, the slower pace of employment growth is not strong enough to close the gap, leading to a higher unemployment rate over the forecast period.

Fig. 26. Claimant count, pre and post Brexit forecasts, Solent LEP area, 2010-2036



Source: Oxford Economics

5.3 GROWTH AND PRODUCTIVITY

We expect GVA in the Solent LEP area to grow by 2 percent per annum between 2015 and 2036, this is slightly slower than both the South East and the UK as a whole. This will see the value of the goods and services produced in the LEP area increase to £44bn by 2036, accounting for 12 percent of the South East's total GVA.

Total economic output or GVA is the total sum of the productive value of the workforce; therefore, GVA can increase as a result of an increase in the number of jobs, the productivity of workforce, or a combination of both We expect productivity growth in Solent to be in line with both regional and national productivity growth, therefore by extension we expect the slower economic growth due to the slightly slower growth in jobs over the forecast period.[4]

The average productivity in Solent will increase to £67,475 (2013 prices), but given the growth in productivity for Solent broadly matches that of the region and the UK, the productivity gaps as outlined in chapter 2 are expected to remain constant.

[4] Note that the UK has slightly stronger productivity and job growth, with the difference only apparent in to the second decimal place. In addition, the South East's forecast average productivity growth is stronger than Solent's to the second decimal place (1.72% p.a. vs 1.65% p.a.).

Fig. 27. Forecast GVA growth for Solent, South East and UK, 2015 and 2036

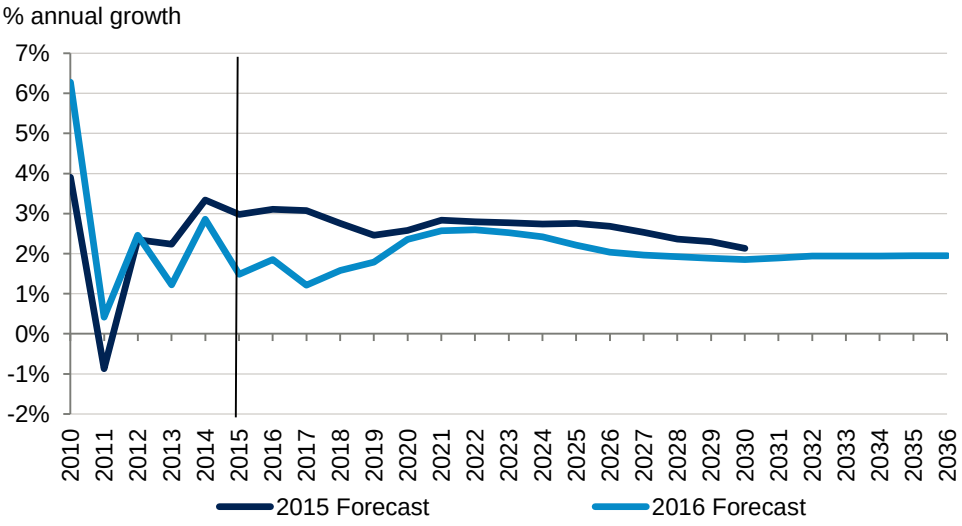
Area	Average growth 2015-2036		
	GVA	Productivity	Jobs
Solent	2.0%	1.6%	0.4%
SE	2.2%	1.7%	0.5%
UK	2.1%	1.7%	0.4%

Source: Oxford Economics

Comparing our updated GVA growth forecast for Solent LEP area to our previous 2015 forecasts shows that we expect slower average growth in the Solent LEP area. Our pre-Brexit forecast expected average annual growth of just under three percent between 2015 and 2030, this has now been revised down to two percent over the same period. Figure 28 shows that growth is set to be significantly weaker in the first few years of the forecast, growing by just 1.9 and 1.2 percent in 2016 and 2017 respectively. This is significantly less than our previous forecast where we expected growth of just over three percent in both years.

We expect growth to accelerate from 2017 to 2022, though not to fully recover to the levels of growth expected in last year's report. Growth is then expected to fall away from our previous forecast, settling at a growth rate of around two percent for the rest of the forecast period.

Fig. 28. GVA growth, pre and post Brexit forecasts, Solent LEP area, 2010-2036



Source: Oxford Economics

As previously outlined, economic growth is the sum of growth in productivity and jobs. Figure 29 shows that slower growth is due to significantly slower productivity growth over the forecast period. The downward revision in GVA due to a relatively large fall in productivity reflects similar patterns across the South East and the UK.

Fig. 29. Pre and post-Brexit forecasts in GVA, productivity and jobs growth, Solent LEP area, 2015- 2030[5]

	Average growth per annum		
Forecast	GVA	Productivity	Jobs
2016	2.0%	1.6%	0.4%
2015	2.7%	2.1%	0.5%

Source: Oxford Economics

[5] Note that the sum of productivity and jobs growth for Solent in 2015 do not sum to GVA growth due to rounding. At 2 decimal points, productivity and job growth was 2.10% and 0.55% per annum, respectively, summing to 2.66% GVA growth.

6. SOLENT AND BREXIT

The impact of Brexit on the UK economy will depend on i) what deals the UK government strikes with the EU and with other countries, and ii) the post-Brexit policies of the UK government.

But there's also a third issue, which is whether Brexit causes UK businesses to 'up-their-game' – most obviously by focusing more on the growing markets of Asia and elsewhere, and less on slower-growing EU markets.

The specific impact on Solent will additionally depend on the region's sectoral structure, its propensity to export, its reliance on the EU as an export market and as a source of inputs into the local supply chain, its dependence on inward migration to fill jobs, and on how companies respond to the challenges and opportunities presented by the vote to leave.

This section provides a discussion of how the trade deal agreed and UK policy can influence overall impacts, and what difference might be made if companies' change their behaviour. We discuss the likely impact on UK trade, investment and sectoral performance before commenting on how this is likely to affect Solent.

6.1 THE DEAL: HARD OR SOFT BREXIT?

Once Article 50 is triggered (expected to be Spring 2017), the UK has two years to agree a deal with the EU. During this period existing arrangements will continue to operate in a "business as usual" fashion.

Crucially, however, EU law means that the negotiations cannot include trade matters, either between the UK and the EU, or even between the UK and other nations. These can only happen after the two years.

While the UK government clearly hopes that in practice this will not apply, so that trade deals can be prepared in advance ready to be triggered at the end of the two years, the responses to date from both the EU itself and from countries outside the EU have been negative (although that itself might be just part of those countries' negotiating tactics).[6]

In terms of the contents of trade deals, there are three dimensions.

First, UK companies currently export goods to EU markets without facing either tariff or non-tariff barriers to trade. In return the UK commits to i) common regulations (close to essential for a single market, since differences in regulations tend to act as non-tariff barriers); ii) free movement of people; iii) EU-wide rules on for example company ownership and on state aid for industry; iv) making a contribution to the EU budget (and receiving payments back).

While UK politicians might wish to keep free access without any of these four conditions, it is very unlikely that the EU would agree. Italy's prime minister

[6] It is also possible that on non-trade matters, such as industrial support, the UK and EU will not be able to agree within the two year period, and that the discussions will drag on for much longer, with temporary provisions being made in the meantime. Again, the threat of this could itself be a negotiating tactic.

recently put the point clearly: it is not realistic for the UK, outside of the EU, to expect a better deal than that which all EU members receive.

So there is a choice to be made, with both sides having a say in what that choice will be. The current stance of the UK government, at least in public, is that control over migration is essential, and the terms of the trade deal take second place.

Second, trade agreements with other countries are currently set multilaterally at the EU level, not the UK level. When the UK leaves the EU, it will have no trade agreements with other countries. If it wishes to have any agreements, the government will need to negotiate them, bilaterally. Opinions differ as to how quick and easy that will be.[7] Where no agreements are made, global agreements come into place. These are known euphemistically as 'Most Favoured Nation' although by definition the terms are usually worse than any bilateral or multilateral agreement would produce. [8]

Third, for both of the above there are two ways forward – a single deal for all products, or case-by-case deals, with different tariffs on different products, and common regulations for some products, but not all. In a sense that already applies within the EU for services, which are not covered by the Single Market, although common regulatory structures are being gradually introduced. In financial services for example, cross-border trading applies for wholesale financial markets (so-called 'passporting'), but generally not for products sold directly to consumers.

While the permutations of possible deals are vast, Figure 30 offers 5 likely candidates.

Fig. 30. What type of trade deal will the UK agree?

	Keep EU regulations	Open EU migration	Contribute to EU budget
European Economic Area	Yes	Yes	Yes
Customs Union	Yes	Probably	Probably not
Free Trade	Some	Maybe	No
Bilateral deals	Some	Probably not	No
Most Favoured Nation	No	No	No

[7] Because of the size of the EU, other countries have an incentive to prioritize it relative to individual countries. Against that, the EU's need to balance the interests of many different states may make it more difficult to strike deals.

[8] Another logical possibility is that the UK unilaterally offers nations completely free trade, whether or not the other party does the same. This was important in the nineteenth century emergence of free trade but is unlikely to be politically acceptable today.

6.2 WHAT DOMESTIC POLICIES MIGHT BE CHOSEN?

The agreements that are struck between the UK government and the EU are only part of the story. If, for example, the UK government gains complete control over migration from the EU, it will have to decide what controls it wishes to put in place. This will be partly a technical matter, but also highly political. In a recent statement the Prime Minster confirmed her commitment to getting migration below 100,000 a year (though has not provided any indication of how).

The same is true for regulations on product standards, and for employment law. We know from recent statements that Government will enshrine EU law into UK law to begin with, so that should give some clarity to businesses in the short term.

The government will also need to decide how to exploit any net savings on the EU budget – whether to cut taxes, or cut borrowing, or spend the savings on other forms of expenditure. All of these have different effects on the economy, both at the UK and at the Solent levels.

Again, there are almost infinite permutations, but we can crudely summarise this into polar opposites: a choice between an **economically liberal** approach, with a high degree of openness towards inward migration, minimal regulation, and tax cuts, versus a **populist** approach with tight controls on inward migration, perhaps tighter regulations including more generous (to employees) employment law, and increased spending on for example health and welfare.

The government has indicated that the process it will follow will be to initially replicate EU laws (and by implication, regulations) in UK laws, so that nothing of substance changes, and then to subsequently legislate for material changes in the usual way. Furthermore, there will be the opportunity for successor UK governments to alter their predecessors' decisions on this, in a way that is not generally possible when such matters are decided at the EU level.

6.3 WHAT OUR MACROECONOMIC MODELS TELL US, FOR THE UK

We have used our macroeconomic models of the UK and global economies to simulate nine different combinations of trade deals and policy responses.[9] The results tell us that, as a result of Brexit **and in the absence of radical changes in company behaviour (see below)**, the UK's GDP will be lower in the long term than it would otherwise be.

There are three main reasons:

- UK trade will probably be lower, and so GDP growth and hence productivity will be lower than it would otherwise be, implying a loss of efficiency.
- Evidence from the past, and from the experience of other countries, suggests that this will more than offset any benefits to growth from, for example, relaxing regulations that directly affect businesses.

[9] The full details are available to subscribers to our Brexit study http://www.oxfordeconomics.com/brexit.

- Slower economic growth has adverse second round effects. It means for example lower tax revenues and higher government spending, more than offsetting the benefits from lower or zero contributions to the EU budget.

Nevertheless, the scale of the impacts varies a lot.

- The best trade outcome involves a liberal policy response, for example some reductions in business regulations and an open attitude towards inward migration. The latter is good for growth partly just because there are more people who can work and spend, but also because the skills mix is likely to be better, since employers have a larger 'pool' from which to draw labour.
- A more challenging trade outcome involves higher government spending, tighter business regulations and strict curbs on migration. This is particularly undesirable if combined with a trade regime in which tariffs are relatively high, both with the EU and with other countries.

In terms of sectoral impact from lower GDP growth, it is likely that anything that's bad for total GDP growth will be bad for the construction sector. And crucially, manufacturing on average gets hit badly, about twice as badly as the economy as a whole, largely because it is on average much more export orientated – so anything that's bad for trade is likely to be bad for manufacturing. Business services are hit harder under scenarios where migration is restricted the most, given they are labour-intensive

The impact on the UK's trade balance also varies from scenario to scenario. Our modelling suggests that generally both imports and exports are likely to be lower. In some cases, imports fall more than exports, and in some cases they fall less. This means that our trade balance might improve as a result of Brexit. However, if trade barriers mean that UK companies and individuals are buying domestic products that are inferior to those they would otherwise have bought from abroad, then there is a loss of efficiency, which in the long term is economically damaging. That is part of the reason why, even in scenarios where the trade balance is better, the GDP growth is worse.

In our modelling we also looked at likely impacts on foreign direct investment. There's plenty of evidence that FDI into the UK is associated with companies wanting to export from the UK, so if exports are weaker then FDI is likely to be weaker too. We found that manufacturing is hard hit, though financial services are too. We discuss the relevance to Solent of this and other outcomes in section 5.10 below.

6.4 WHAT THE MODELS DON'T COVER: BUSINESS RESPONSE

All of the above may seem downbeat, but there is an underlying assumption that companies do not change their behaviour notably, as a result of Brexit. Econometric modelling uses past behaviour to draw statistical inferences about the future. So it does not pick up notable departures in behaviour.

But many of those who argued for Brexit did so on the basis that companies would change their behaviour, in a way that modelling that is based on past behaviour cannot, by definition, be expected to pick-up. If that is correct, then the economic outlook as a result of Brexit could be a lot more favourable.

Figure 31 shows our projections for UK exports, by global regions. Since the world's emerging economies (the green bars) are likely to grow much faster than EU economies (the red and dark blue bars), the balance of UK exports is gradually shifting to the former from the latter. Our modelling shows that shift continuing into the long-term future.

The optimistic view is that Brexit will give an extra 'kick' to this process. Companies will respond to Brexit by really focusing their exports on the world's emerging markets. As a result, the UK will experience trade-led economic growth. If that happens, then instead of the vicious circle in which poor trade performance (due to Brexit) is bad for growth and hence productivity and competitiveness, we get a virtuous circle in which strong trade performance is good for growth and hence productivity, resulting in even better trade performance and, due to higher GDP, better public finances. And so on.

Fig. 31. Long-term export structure, by direction

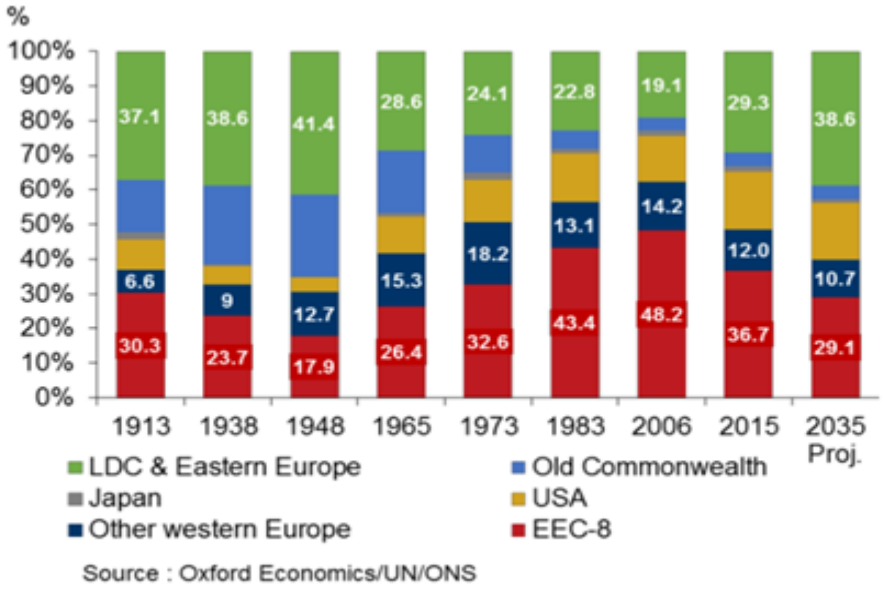


Figure 32 looks at the historical trends in more detail. Official data suggest that in 2015, the 27 other member states accounted for 44 percent of UK exports, compared with 15 percent destined for the US and 6 percent sold to China. Nevertheless, as a share of both total exports and of GDP, the EU's importance to the UK has declined over the last two decades, largely reflecting the relative economic outperformance of non-EU countries versus EU member states. The share of UK exports to the EU was just over 11 percentage points lower in 2015 that it was in 2008. We forecast this trend to continue over the coming decade.

Fig. 32. Top 20 export destinations for the UK

	2008	2015	Difference (pp)
United States	13.6%	14.8%	1.2
Germany	11.1%	10.0%	-1.2
Switzerland	2.9%	7.3%	4.4
China	1.9%	5.9%	4.0
France	7.3%	5.8%	-1.5
Netherlands	7.5%	5.7%	-1.9
Irish Republic	7.2%	5.5%	-1.8
Belgium	5.1%	3.8%	-1.3
Spain	3.9%	2.9%	-1.0
Italy	3.6%	2.8%	-0.9
UAE	1.9%	2.2%	0.4
Hong Kong	1.6%	2.2%	0.6
Saudi Arabia	0.9%	1.8%	0.9
South Korea	0.9%	1.5%	0.6
Sweden	2.0%	1.4%	-0.5
Japan	1.5%	1.4%	-0.1
Singapore	1.1%	1.3%	0.2
India	1.6%	1.3%	-0.3
Canada	1.5%	1.3%	-0.2
Australia	1.7%	1.2%	-0.4
EU	**54.9%**	**43.7%**	**-11.2**
Non-EU	**45.1%**	**56.3%**	**11.2**

Source: HMRC, UK Trade Info

In addition, the headline export numbers are likely to exaggerate the importance of the EU as a market for UK goods and services relative to other parts of the world. There are two reasons for this.

- The first factor is the so-called 'Rotterdam effect'. Exports from the UK to the Netherlands (and hence the EU) are artificially inflated by goods exported from the UK via Rotterdam, a major European and global port, but where the ultimate destination is located elsewhere. A product exported by a UK firm by way of Rotterdam and subsequently shipped on to a non-EU country may be counted as an export to the EU rather than the rest of the world. The data on exports to the Netherlands certainly points to this effect being in play. The value of UK exports of goods per heard to the Netherlands is almost four times the value purchased by the average German citizen, despite the latter country enjoying a very similar level of income per head and geographically being a broadly equivalent distance from the UK.[10]

[10] Admittedly, a proportion of UK goods re-exported from the Netherlands will be sent to other EU countries, so a correction of the Rotterdam effect would only partly reduce the proportion of UK exports going to the EU as a whole. If we assume that one quarter of goods exports recorded as going to the Netherlands are actually destined for non-EU countries, exports to the EU would be reduced by around £6bn in 2014 and the EU's share of total UK exports in that year from 44.8 percent to 43.6 percent. Analysis by the ONS suggests that a proportion of up to 50 percent might be realistic.

- The internationalisation of supply chains provides a second reason. Many UK exports incorporate components that have themselves been imported – and this has been on a rising trend, so that a growing proportion of the gross value of UK exports actually consists of content produced (and hence value accruing) outside the UK. Data from the WTO and OECD show that in 2011 (the latest available year), almost a quarter of the gross value of UK exports to the rest of the EU consisted of foreign value-added. Crucially, this was higher than the estimated share of foreign content in UK exports sold outside the EU. Consequently, on a 'value-added in the UK' basis, the EU accounted for 42 percent of exports in 2011, compared to 47percent on the gross measure.

There are two separate implications here. The first is simply that EU markets are probably less important to UK companies than is commonly supposed. The second is more general. It is true that the introduction of tariffs is an obvious potential barrier to UK trade with the EU, as it will push up the cost (in EU markets) of UK goods, relative to those produced within the remaining EU. Nevertheless, UK companies are probably more successful at selling to countries which set tariffs, and less successful at selling to countries that do not do so, than is commonly supposed. The implication is that UK companies may be better able to cope with life outside the EU than the raw data suggests.

6.5 WHICH MANUFACTURING SECTORS ARE VULNERABLE?

A sector that is particularly vulnerable to Brexit will be one where exports to the EU are larger than exports to the rest of the world, and/or one where sales to the EU constitute a high proportion of total (domestic and foreign) demand, and/or one where EU tariff barriers are high.

The top 10 UK industrial sectors by value of total exports in 2015 collectively accounted for just over 70 percent of UK goods exports in that year. Of these, half sell more to the EU than to the rest of the world, with countries outside the EU a more important market for the other five.

Fig. 33. Value of UK goods exports to EU and RoW in 2015

Sector	Total exports (£bn)	Exports to EU (£bn)	Exports to RoW (£bn)	Exports to RoW: exports to EU
Machinery	42.2	14.8	27.3	1.8
Vehicles	33.2	14.6	18.6	1.3
Chemicals	32.7	21.5	11.2	0.5
Pharmaceuticals	23.5	10.0	13.5	1.4
Oil & fuel	21.5	15.8	5.7	0.4
Electrical equipment	19.1	9.5	9.6	1.0
Food & Beverages	18.2	11.0	7.2	0.7
Aircraft	12.4	6.5	6.0	0.9
Optical equipment	12.1	4.8	7.3	1.5
Plastics	7.8	5.1	2.7	0.5

Source: Oxford Economics

Exports of oil and fuel are most orientated towards the EU market, with member states accounting for 73 percent of overseas sales by this sector in 2015. Conversely, exports of machinery and mechanical appliances were least dependent on the EU, with non-EU counties taking 65 percent of the sector's total exports.

In terms of exports to the EU as a source of total demand, sales to the EU constituted at least one-fifth of demand for eight of the 10 sectors in question, with optical equipment and food and beverages the two exceptions (see Figure 34). The aircraft sector is most dependent upon the EU, with the value of aviation exports to the EU almost as great as sales within the UK and to the rest of the world combined. Aircraft is followed by chemicals and chemical products, (with the EU accounting for 43 percent of total demand) and oil and fuel (a share of 38 percent).

Sales to the EU are of least importance relative to total demand for optical equipment, at 14 percent of the total, and, at the bottom of the league, food and beverages, with the EU accounting for less than 10 percent of demand.

As Figure 34 illustrates, some of the sectors where EU demand is relatively important to the UK are not those where the EU sets high tariffs. For example, although exports of food and beverages would face the highest EU tariffs (an estimated 6.8 percent, weighed by the composition of UK food and beverage exports to the EU), this sector is, for the UK, least dependent upon the EU market.

However, the aircraft and chemicals sectors both look relatively vulnerable given above-average EU tariffs of 3.3 percent and 4.3 percent, respectively, and the 40 percent plus share of total demand accounted for by EU member states. Moreover, in absolute terms, chemicals are the single largest source of UK goods exports to the EU, and the aircraft sector is not far behind.

Fig. 34. Exports to EU as a share of total demand & tariffs

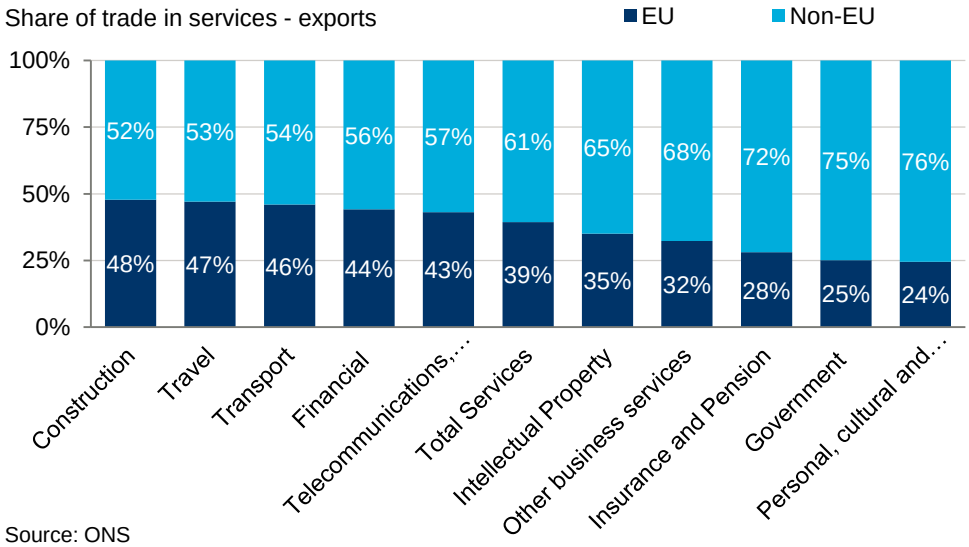
Sector	Exports to EU as a share of total demand (%)	EU Tariff (%)
Aircraft	47.5	3.3
Chemicals	42.7	4.3
Oil & fuel	38.0	0.7
Pharmaceuticals	35.8	0.0
Vehicles	28.3	5.8
Machinery	28.2	1.8
Electrical equipment	22.7	2.8
Plastics	20.6	6.0
Optical equipment	14.1	2.2
Food & Beverages	9.7	6.8

Source: Oxford Economics

6.6 EXPORTS OF SERVICES AND REGULATION

The EU is less important for UK service exports, accounting for 39 percent in 2015. Within the services sector, the EU market is of most importance for exports of construction related services (48 percent), travel (47 percent) and Transport (46 percent). Finance (44 percent) and Telecommunications and IT (43 percent) are also above the average.

Fig. 35. Share of UK service exports to the EU, 2014



Source: ONS

Although many services are not subject to EU regulatory barriers – maritime transport and tourism being examples – regulatory barriers can be very important for the service sector. Service sector firms in certain areas must still satisfy EU harmonisation measures, which could potentially cause UK service providers some inconvenience, post-Brexit.

In addition, to the extent that the EU makes moves towards deepening the single market in services, the UK may lose out from the opportunities any

advances in that direction provide. Difficulties will arise in areas where services are provided directly from offices in the UK, on the basis of home-country regulation. This is likely to apply in particular to financial sector exports to the EU (which account for a tenth of total UK services exports) and exports of other business services, notably legal services, reflecting in part the close links between those and finance. Such companies may have to choose a new EU 'home'.

Nevertheless, the widespread presence of non-EU services firms in EU countries demonstrates that EU membership is not necessary for the provision of service activities. Indeed, a UK-owned company which currently provides services via a local operation in another EU member state (a necessity on practical grounds for many parts of the services sector) and which is regulated by the authorities of that country will be in exactly the same position whether the UK is in, or out, of the EU.

Furthermore, all ten services sub-sectors (as defined by the ONS) sell more to the rest of the world than to the EU, ranging from a ratio of 1.1:1 for Travel and Construction services to 3.1:1 for Personal, cultural and recreational (see Figure 36). So the UK services sector appears to be fairly successful at surmounting barriers to sales in countries where the ease of trade provided by the European Single Market is lacking.

Fig. 36. Value of UK services exports to EU and RoW in 2015

Sector	Total exports (£bn)	Exports to EU (£bn)	Exports to RoW (£bn)	Exports to RoW: exports to EU
Other business services	70.5	22.8	47.7	2.1
Financial	50.8	22.4	28.3	1.3
Travel	29.8	14.0	15.8	1.1
Transport	24.1	11.1	13.0	1.2
Telecommunications, computer and Information	15.9	6.9	9.0	1.3
Insurance and Pension	12.9	3.6	9.3	2.6
Intellectual Property	11.5	4.0	7.5	1.9
Government	2.6	0.7	2.0	3.0
Personal, cultural and recreational	2.5	0.6	1.9	3.1
Construction	1.6	0.8	0.8	1.1
Total Services	**225.5**	**88.9**	**136.6**	**1.5**

Source: ONS

As far as dependence on overseas demand is concerned, the UK service sector is much less export orientated than 'physical' industries. In 2013, overseas sales accounted for 11 percent of total demand for UK services, compared to 41 percent for goods. And with the EU taking only a minority of services exports, it is unsurprising that it accounts for a small share of demand for services – less than 5 percent of the total for the majority of sub-sectors where data on demand is available.

Fig. 37. Service sector exports EU as a share of total demand and non-tariff barriers

Sector	Exports to EU as a share of total demand (%)	EU non-tariff barriers (%)
Financial	10.9	5.5
Telecommunications, computer and Information	5.6	4.4
Other business services	4.8	7.6
Transport	4.8	2.8
Insurance and Pension	3.0	5.6
Personal, cultural and recreational	2.6	1.6
Construction	0.1	1.7

Source: Oxford Economics

Among those, the EU is of most importance for financial services, accounting for just over one-tenth of combined UK and foreign demand. A combination of financial services' high level of exports to the EU (£22.4 bn in 2015), a sizeable surplus in trade with the EU (£19.1 bn in the same year), and relatively high EU non-tariff barriers on imports of financial services, suggests that the financial services sector is particularly vulnerable to Brexit.

On the other hand, the fact that financial companies based in the UK sell 26 percent more to the rest of the world than to the EU is indicative of a sector enjoying a high level of innate competitiveness.

6.7 BREXIT & UK EXPORTS: OVERALL ASSESSMENT

Overall, the EU is and will continue to be a very important market for UK exporters. But it is probably not quite as important as the headline statistics suggest, and it is a market that is likely to continue to decline in relative terms.

Meanwhile, the potential consequences of EU tariffs for UK exporters, post-Brexit, appear to be fairly modest.

However, non-tariff barriers, while likely to be of limited importance immediately post-Brexit, could climb over time. And to the extent that trade intensity falls as a result of new obstacles to trade with the EU, dynamic costs to the UK economy could start to make their presence felt.

Meanwhile, there are sectors which are likely to suffer disproportionately from Brexit. On the goods side, exports of aircraft and chemicals look particularly vulnerable given the importance of the EU market and the existence of relatively high tariff barriers. In the case of services, the financial services sector holds a similar position.

6.8 MIGRATION

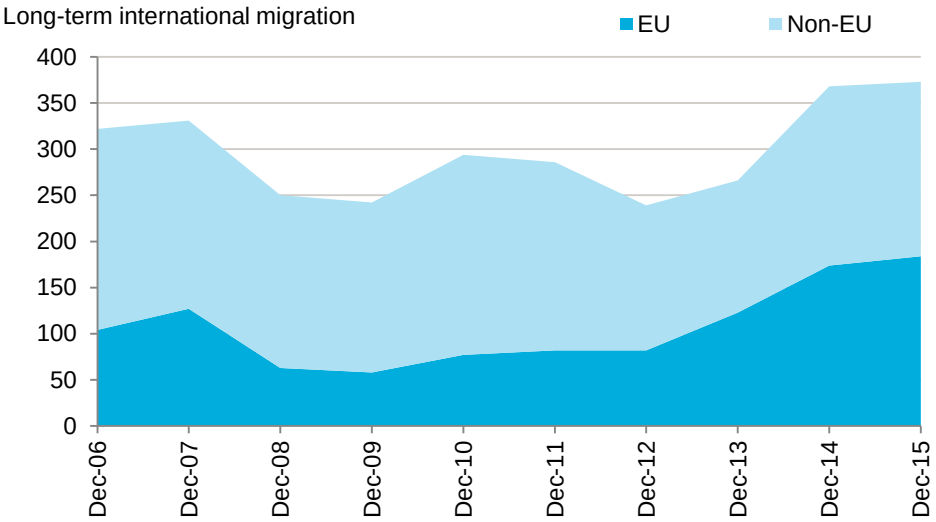
6.8.1 At record levels

The level of net inward migration to the UK has been running at record highs in recent years, with the latest data showing net inflows of 373,000 over the year

to December 2015. Net migration from EU countries was at a record high at 184,000 over the year, some 10,000 higher than the year to December 2014.

As Figure 38 demonstrates, while net inflows from non-EU countries have been relatively stable throughout the past decade, there has been a significant increase in net migration from the EU. For the ten years up to 2004, net inflows from the EU averaged just 15,000 per year; since then the average has been over 100,000 with the figures for recent years being considerably higher still.

Fig. 38. Long-term international net migration to the UK



Source: ONS

The UK is an attractive location because of the wage differentials with many countries across the EU. Indeed, the recent introduction of the National Living Wage may increase the relative attractiveness of the UK as a destination.

The strength of the UK's labour market in comparison with that of other EU countries has also contributed to the boost in net migration. There is a strong relationship between the level of inward migration from the EU and the unemployment rate in the UK versus the rest of the EU. This is likely to explain why net inflows from the EU-14 – the more established core of the EU – have increased so much in recent years.

This notion is corroborated by the International Passenger Survey (IPS) data on the reasons for migration. The number of EU citizens coming to the UK to do a job that they had already secured has risen from 56,000 in 2011 to 96,000 over the year to Q3 2015, while the number coming to look for work increased from 37,000 to 69,000 over the same period.

Other sources suggest that inward migration could be much higher, in particular the number of new National Insurance numbers (NINo) issued. While the IPS suggested that 232,000 people migrated from the EU to the UK in the year to September 2015, statistics from the Department for Work and Pensions reported that 655,000 new NINos were allocated to EU nationals over the same period. Given that a NINo is required by any overseas national in order to work or claim benefits and tax credits in the UK, this could indicate that inward

migration is a lot higher than the IPS data would suggest, although it is possible that a proportion of these NINos are allocated but not actually used.

6.8.2 Labour supply considerations

The most obvious impact of higher levels of net inward migration has been to boost labour supply:

- The bulk of are of working age, with the 2011 census reporting that half of those who had migrated in the previous year were under the age of 25.
- Evidence from the Labour Force Survey suggests that their employment rate is substantially higher than that of the domestic born population. In Q4 2015, the employment rate for those born elsewhere in the EU and living in the UK was 70 percent – well above the equivalent rates for those born in the UK and in non-EU countries (both 60 percent). The figures are particularly high for the newer members of the EU, with the employment rates for those born in the EU-8 and EU-2 countries 81 percent and 80 percent respectively.

The net result has been a 123 percent increase in the number of people working in the UK but born in other EU countries over the 10 years to Q4 2015. As a result, the EU now accounts for 41 percent of all foreign-born workers, up from 31 percent in 2005.

The increase of inward migration has helped to offset the impact of an ageing indigenous population and ensured that growth in labour supply has continued to make a sizeable contribution to potential output growth.

The recent high levels of inward migration have also improved the quality of the stock of labour. A study of Labour Force Survey data by the Migration Observatory found that foreign-born workers tend to be better educated than their UK-born counterparts. And the gap is particularly marked for recently arrived individuals; in 2014, 54 percent of recently-arrived foreign-born men and 58 percent of women had stayed in education until they were at least 21, compared with the equivalent UK figures of 26 percent and 28 percent respectively.

If Brexit were to result in the government pursing policies which reduced met migration into the UK (and we know the Prime Minister is committed to pushing migration below 100,000 per annum), this would impact on the UK and the Solent's growth prospects.

6.8.3 Fiscal contribution

Evidence from the Labour Force Survey suggests that the employment rate associated with inward migration into the UK is higher than average, meaning that high levels of net inward migration is generally seen as a positive for the UK's fiscal position, Furthermore, those from the EU tend to be much less likely to claim working age benefits than those from non-EU countries; the ratio of working age benefit claimants to total employment for those born in the UK is 18 percent but for those born in the EU it is just under 6 percent, with the figures for the newer member countries particularly low (just under 3 percent for the EU-2).

There have been several studies which have aimed to quantify the impact of migration on the UK's fiscal position, with broadly similar results. A 2013 study by the Centre for Research and Analysis of Migration found that between 1995 and 2011, inward migration from the European Economic Area (EEA) contributed 4 percent more to the fiscal system than they received in transfers and benefits, with the net contribution of more recently arrived individuals being higher still. A 2013 OCED study also found a positive fiscal impact, albeit one which was relatively small at +0.46 percent of GDP for the 2007-09 period. On the flip side, this period of high inward migration and strong growth in labour supply has coincided with a period of unprecedentedly weak wage growth. Coincidence does not mean causation and when looking at this period it is difficult to disentangle the impact of net inward migration from that of higher activity rates amongst older people. But most studies have found a link between migration and wages, albeit one which suggests that the impact is typically small. Most recently, a Bank of England working paper found that a 10 percent increase in immigration lowers average wages by around 1percent – a conclusion which is similar to the other studies in this area – although the impact is closer to 2 percent in the semi/unskilled services sector.

6.8.4 Impact on housing

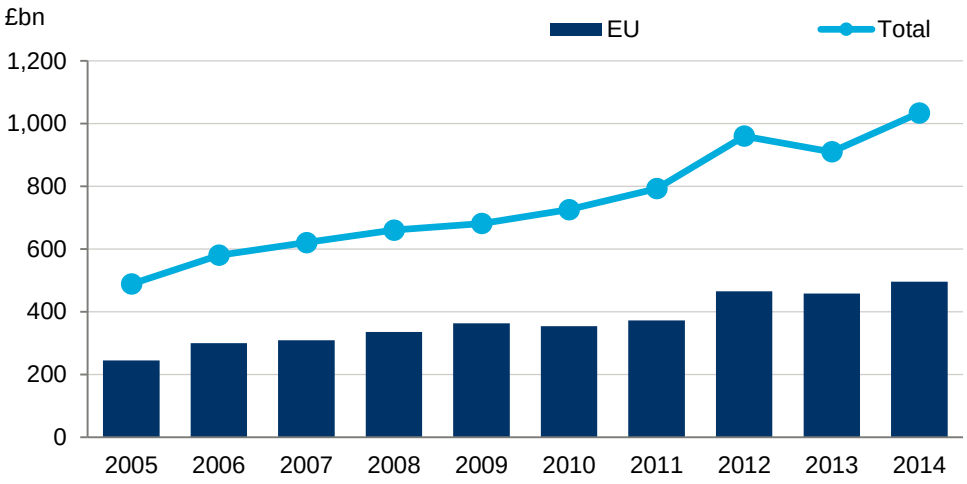
One area where the negative impact of inward migration is clearer cut is with regards to regional housing markets. The ONS mid-year population estimates suggested that in 2014 41 percent of net UK inflows of 260,000 settled in Greater London with a further 13 percent heading to the South East, continuing a well-established pattern.

In general, the areas with the highest inward migration tend to be those areas where there are already shortages of housing and problems with housing affordability. Looking just at the data for 2014, total (international and internal) net inflows into the four southern English regions (Greater London, South East, East of England and South West) were 174,000, some two-thirds of the UK total. Given the ongoing struggle to increase housing supply in the south of England and, in particular, in Greater London, these persistently high inflows are exacerbating existing imbalances and risk further pushing up house prices.

6.9 INVESTMENT

The potential to undermine the UK's attractiveness as a location for Foreign Direct Investment (FDI) is often cited as one of the key risks of 'Brexit'. However how important is the UK's membership of the EU as a magnet for this form of investment? The UK is one of 28 countries in the EU. So if foreign firms are looking for an EU base, they have plenty of countries to choose from. It follows that access to the EU is unlikely to be the only reason why overseas investors invest in the UK – other advantages must be present. This point can be stressed further by noting that, as Figure 39 shows, almost half of the stock of inward investment in the UK is owned by other EU member states (and this has been the case over the last decade).

Fig. 39. FDI inflows to the UK, 2005 to 2014



Source: Oxford Economics

Two factors which are frequently cited as boosting the UK's attractiveness to FDI are the use of the English language and a relatively business-friendly environment, particularly a deregulated labour market. The use of English no doubt plays some role, although this factor is likely to be of less importance in explaining inward investment from countries like the Netherlands, France and Germany (which together account for 29 percent of FDI in the UK), given the widespread proficiency in English among the citizens of those countries, and certainly cannot explain investment by Irish firms (1.3 percent of total UK FDI).

This points to the environment for business being a more important lure. In 2015, the World Bank ranked the UK as the sixth best country in the world for ease of doing business, ahead of every other EU member with the exception of Denmark. According to the World Economic Forum's 2015-16 'Global Competitiveness Report', the UK sat in tenth place out of 140 countries in a measure of global competiveness. And the OECD identifies the UK as having the lowest level of barriers to hiring and firing workers among European countries, and the fourth lowest among all OECD members.

6.10 HOW WILL BREXIT AFFECT SOLENT IN PARTICULAR?

Whether Solent does better or worse than the UK average will depend on a range of factors:

- Its sectoral structure;
- How export oriented Solent is, and the split in terms of EU and non-EU exports;
- Whether Solent businesses 'pivot to the east' more or less aggressively than businesses elsewhere;
- Whether Solent companies typically compete heavily on price, so that higher tariffs hurt them hard, or whether they compete heavily in terms of product design, in which case non-tariff barriers might hit them hard;
- If Solent companies are more or less reliant than the average on inward migration.

6.10.1 Possible impact of trade barriers

Figure 40 illustrates the concentration of jobs in particular sectors in Solent, relative to Great Britain. It shows the top 20 three digit sectors in Solent LEP with the highest employment Location Quotients (LQ). The location quotients compare the share of sectoral employment in Solent to the share in Great Britain[11]. These 20 sectors account for 10.4 percent of total employment in the LEP.

Fig. 40. Top 20 sectoral employment concentrations in Solent compared to Great Britain, 2014

Broad Sector	3 digit-SIC07 sectors	LQ	Employment in 2014
Transportation & Storage	Sea and coastal passenger water transport	18.2	2,287
Manufacturing	Manufacture of computers and peripheral equipment	5.2	662
Manufacturing	Manufacture of medical and dental instruments and supplies	4.6	2,594
Manufacturing	Manufacture of wiring and wiring devices	4.6	951
Manufacturing	Manufacture of optical instruments and photographic equipment	3.8	303
Manufacturing	Manufacture of communication equipment	3.5	879
Transportation & Storage	Freight rail transport	3.5	322
Manufacturing	Repair of fabricated metal products, machinery and equipment	3.2	4,731
Manufacturing	Manufacture of air and spacecraft and related machinery	3.2	4,132
Water supply & sewerage	Remediation activities and other waste management services	3.1	235
Manufacturing	Building of ships and boats	2.5	1,177
Information & communication	Publishing of books, periodicals and other publishing activities	2.5	4,651
Transportation & Storage	Sea and coastal freight water transport	2.3	263
Manufacturing	Manufacture of electronic components and boards	2.3	880
Transportation & Storage	Support activities for transportation	2.1	7,213
Manufacturing	Manufacture of instruments and appliances for measuring, testing and navigation; watches and clocks	2.1	1,833
Manufacturing	Manufacture of weapons and ammunition	2.0	402
Accommodation & food service activities	Holiday and other short stay accommodation	2.0	1,217
Administration & support activities	Organisation of conventions and trade shows	1.9	616
Human Health & social work activities	Other human health activities	1.9	10,815

Significantly, 12 of the sectors above are manufacturing, with five in the manufacture of computer, electronic and optical products sector which have an

[11] All sectors have employment levels of over 200 in 2014.

EU tariff of between 2.2 and 2.8 percent. These five sectors provide over 4,500 jobs in Solent. However, as noted above in Section 5.5, at the national level the optical sector has a low reliance on the EU for final demand. If that is true for Solent, then businesses in these manufacturing sub-sectors are at limited risk following Brexit.

In addition, jobs in the computers and peripheral equipment sector are likely to be associated with IBM's operations, which are mainly 'head-office' type functions which are likely to have a low vulnerability to Brexit (unless IBM opts for a complete relocation, which we judge unlikely) while jobs in the Manufacture of medical and dental instruments and supplies sector are likely to be linked to NHS and other domestic health product markets, with a relatively low exposure to EU markets.

However, the Manufacture of air and spacecraft and related machinery provided over 4,100 jobs in Solent in 2014 and as previously highlighted, aircraft manufacturing has a relatively high dependence on the EU for exports and general demand. Therefore, it could be more vulnerable to Brexit.

Of other sectors, the building of ships is associated with shipbuilding for the Royal Navy, with the ship build facility in the Royal Navy Naval Base decommissioned in 2015 and therefore was not EU orientated, and to high-end small vessels such as yachts, which are likely to be relatively price insensitive, and hence not heavily exposed.

Several other marine and maritime sectors also appear in the table. The issue here is probably not so much threats to existing businesses or jobs, as the possible loss of future opportunities related to the Solent's emerging expertise in advanced marine technologies and businesses. The same remark applies to renewable and low carbon energy, including tidal and offshore wind.

Overall, while we do not think that the bulk of the specialised sectors in figure 40 are overly susceptible to the impact of Brexit in terms of reduced access to markets, the majority of the top 20 do not fall within sectors that we expect to be high either growth or job creators.

The box below deals with sector specialisms in Solent more comprehensively, but in terms of the specialist sectors highlighted above:

- The specialist sectors within **manufacturing** could be vulnerable in that we expect the sector as a whole to be low growth and see **net job losses over the forecast period – this covers 12 specialised sectors that supports 18,000 jobs.**
- 4 of specialised sectors that support 10,000 jobs are in **transport and storage** which we forecast to have weak **GVA and job growth.**
- Publishing of books, periodicals and other publishing activities which supports over 4,500 jobs falls under **information and communications**, a sector which we expect to have both **strong GVA and job growth**.
- Other human health activities, which employs over 10,000 in the Solent economy within the human health and social work activities sector which is expected to see **slightly faster than average growth in both GVA and jobs.**

We must stress that whilst we have forecast employment and GVA growth for detailed sub-sectors in the past, we have not for this project. It is possible that while we forecast manufacturing as a whole to have weak growth in terms of GVA or lose jobs over the forecast period, individual sub-sectors within the broad sector could grow. So this analysis should be taken as indicative of the general movement of a broad sector and the majority of sub-sectors that fall within it, rather than our view on the individual sub-sector we have highlighted as a specialism.

SOLENT'S SPECIALISMS

For Solent to grow rapidly and to continue to make a significant contribution to the economic output of the region and the country as a whole, it needs to concentrate its economic activity into what it does best by developing its specialist sectors. These are services or production sectors that the local area does better or at a lower cost than other areas due to either an endowment of skills and or natural resources. This gives Solent a comparative advantage in the sector, and therefore the incentive to concentrate its economic resources into a certain set of industries for the highest economic return.

Figure 40 gives the 20 sub-sectors in Solent with the highest LQ relative to Great Britain as a whole. A LQ greater than 1 indicates a higher concentration of employment relative to a benchmark geographic area, and can therefore be used to indicate sectors of specialisation, or comparative advantage.

In total, there are 48 sub-sectors spread across 14 broad sectors in which Solent has a LQ greater than 1, and therefore can be considered to have a degree of sector specialty. In total, there are about 193,000 jobs within these sub-sectors, which is 45 percent of total employment in the LEP area.[12]

Figure 41 shows these specialized jobs grouped into the broader sectors, indicating that Solent's largest specialized sectors are within education; and wholesale and retail trade, with around 35,000 jobs in both sectors. Within the education sector, in addition to providing a high standard of education the three universities in Solent make a vital contribution to the LEP's economy. Amongst other activities, they conduct world-leading research; form spin-out companies; and attract foreign students. As private businesses, they contribute £1bn to the economy each year, accounting for around 4 percent of the LEP's total GVA.[13] Other specialised sectors include manufacturing, with over 22,000 specialised jobs; and administration and support activities; information and communications; accommodation and food service activities; and human health and social work activities all with over 15,000 jobs.

With almost 2,400 jobs the defence sector is also a specialist sector in the Solent economy, accounting for almost three times the proportion of total jobs in the LEP area relative to the national average. Total defence spending is projected to increase by 2 per cent each year up to 2020, taking total defence spending up to £38bn.[14] On the current distribution of defence jobs across the UK, it is reasonable to expect that Solent is likely to attract a significant share of the additional spending, and therefore ensure the sector continues to support local growth.

While being specialized means that the industries in the sectors should perform well relative to the same sectors elsewhere in the UK, it is interesting to note if they are in sectors which we assess to be likely to be strong growing areas over the forecast period, as indicated in section 2 (see figure 3).

First, Solent has a fairly strong representation of specialised jobs in both information and communications; and administration and support activities, there is no specialised sectors within professional, scientific and technical activities which is the second fastest growing sector in terms of economic output, and strongest in terms of job creation.

Fig. 41. Solent's specialist sectors, by broad category, 2014

Sector	Jobs
Education	35,840
Wholesale and Retail	34,910
Manufacturing	22,190
Administration and support activities	18,440
Information and communication	16,540
Accommodation and food service activities	16,220
Human Health and social work activities	15,080
Transportation and Storage	12,800
Construction	6,430
Financial and insurance	2,640
Defence	2,380
Arts, Entertainment and Rec.	1,310
Water supply and sewerage	930
Other service activities	370
Source: BRES	

Figure 42 plots the broad growth sectors in Solent in terms of the average growth in jobs and GVA over the forecast period, as well as plotting the UK average of growth in jobs and GVA. Any sector 'north' of the UK indicates sectors in Solent forecast to create jobs faster than the UK average, any sector 'east' of the UK indicates sectors set to have GVA growth faster than average. Therefore, any sector 'north-east' of the UK average, such as administration and support services; and information and communications, are sectors that will add significantly to Solent's economy over the forecast period.

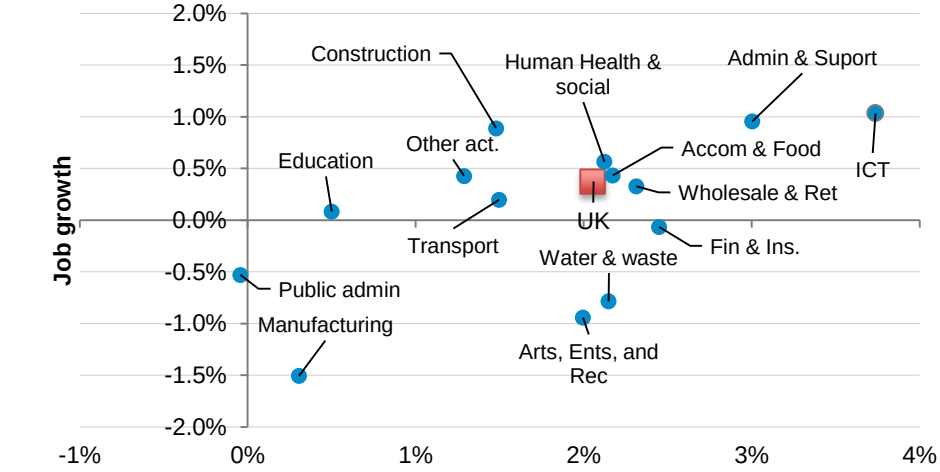
Of the 14 broad categories in which Solent has specialised sectors, only seven will grow faster than the average UK growth as a whole. Therefore, on this basis we can assess that Solent has over 100,000 specialised jobs in specialised and fast growing sectors. However, it must also be recognised that Brexit and its impact on manufacturing may have a relatively large impact on the specialised jobs in the sector.

[12] Appendix A gives the full list of sub-sectors, and number of jobs

[13] Estimate provided by Solent LEP.

[14] Ministry of Defence, Annual report and accounts 2015-2016, 2016. Link here

Fig. 42. Solent's specialised sectors, by broad category, average annual growth rates in GVA and employment, 2015-2036



Source: BRES, Oxford Economics

6.10.2 Possible impact of migration limits

The impact of restricted migration from the EU is likely to be concentrated in specific parts of Solent. Figure 43 shows that Southampton and Portsmouth have experienced above average inward migration when measured per thousand of the resident population. The rank in the figure below fits with the expectation that a large share of those relocating to the UK has secured employment or are searching for employment opportunities and are thus attracted to the largest employment locations.

Fig. 43. Long-Term International Inflow rate per thousand resident population in Solent local authorities, 2015

	Inflow rate per thousand res. pop
Southampton	21.4
Portsmouth	13.7
England	**10.4**
Winchester	7.2
Test Valley	4.3
East Hampshire	3.7
New Forest	3.6
Isle of Wight	3.0
Fareham	2.8
Eastleigh	2.6
Gosport	2.4
Havant	2.1

Source: ONS

7. FURTHER RESEARCH AND REFRESHING THE SEP

7.1 AREAS FOR FUTURE RESEARCH – THE RISKS & OPPORTUNITIES

The analysis above has discussed a number of risks and opportunities facing businesses in Solent LEP. Figure 44 summarises each and provides a broad assessment of the scale and direction of impact, and how likely they are to be realised.

Fig. 44. Risks and opportunities for Solent LEP

Risk	Level of impact	Likelihood
Reduction in migration	High negative	High
Increase in tariffs on UK goods	Low negative	High
Reduction in trade with the EU	Low negative	High
Loss of EU funding for research	High negative	High
A deepening of the single market in services post UK exit	Low negative	Medium
Opportunity	**Level of impact**	**Likelihood**
Reduction in business regulation	Low / medium positive	Medium
Increase in exports to non-EU countries	High positive	Medium
Initial windfall from budget contributions	Low positive	Medium
Investment in infrastructure	Medium positive	Medium

On risks: we think Solent is most exposed to the likelihood of reduced migration and loss of EU funding for research. As discussed throughout the report, hitherto, net migration into Solent had been sufficient to offset the LEP area's ageing population. Our post-Brexit scenario now sees the working age population falling in absolute terms by the end of the forecast period. A shrinking working age population will reduce the productive capacity of Solent. To counter this, the LEP area might require a combination of improved productivity, people working beyond retirement age, higher levels of in-commuting from surrounding areas, and net in-migration from elsewhere within the UK (although the latter may be constrained by house prices in the region).

Another risk is the current uncertainty and possible loss of funding for research. While the government has said that it will safeguard research funding already approved, that nevertheless leaves considerable long-term uncertainty. Consequently, unless the EU funding for research is replaced by direct grants from the UK government or by other benefactors, the quantity and/or quality of research could suffer due to lack of finance.

The main opportunities are assessed to lie around the potential for Solent to develop new markets to trade with outside the EU, though this depends on the ability of businesses in Solent to adapt to new market conditions.

7.2 STRENGTHENING THE INTELLIGENCE BASE

To develop measures to mitigate against risks or to maximise opportunities, the LEP and local stakeholders are likely to need more detailed information. In most cases this will require some form of primary research (e.g. consultations or business surveys). For example:

- it is not clear how dependent businesses in Solent are on foreign workers to take jobs and if this is a particular issue for specific sectors or areas of Solent;
- in addition, it is not clear if manufacturing exports from Solent are price sensitive (and hence vulnerable to tariffs), and again if these are sector specific trends, which could also have spatial implications where specific activity clusters;
- we know already that the EU funds UK and Solent research and we have been told that uncertainty around funding has already had implications for extending research contracts and securing the presence of researchers in Solent. It is not known however how much of Solent's research base (private and public) is reliant on EU funds, and in what areas of research. The research itself could have significant spill over into the economy and hence be more beneficial than perhaps first appearing;
- loosening business regulations has often been cited as an argument for Brexit, however we need to know which regulations local businesses feel restrict their growth and if these change across sectors; and
- if businesses need to maximise opportunities from non-EU export markets, then we need to know if local businesses know how to expand into these markets, or if they don't, whether they know where to turn for support. Linked to this, it is also important to know where support and advise doesn't exist.

Answering the above questions will involve engagement with the local private sector and with academia, before cross referencing to the sectoral employment data in this report and others, that Oxford Economics have provided, to understand if the issues are significant or minor for the local economy and if there are spatial implications.

7.3 REFRESHING THE SEP

The UK and Solent economies have experienced a unique period in economic history from the financial crisis in 2008, to a range of economic headwinds through the recovery, slower than expected productivity growth, to the recent outcome of the referendum to leave the EU. It is therefore a good time to refresh the Strategic Economic Plan (SEP) for the LEP.

Refreshed Vision

We would suggest starting this refresh by agreeing a revised vision with key local stakeholders (including local business, academia and the public sector) on what success would look like. This vision would provide a clear statement for the future of the economy. For example, faster GVA growth might be

considered a success for some, while for others it will be job creation, or perhaps a shift in sectoral structure.

- One suggestion is that the Vision might focus on the **dynamism, flexibility and adaptability** of the Solent economy – the ability of both individuals and employers to adopt new working methods and new technologies, explore new opportunities, and respond to global geo-political change of which Brexit is just one example.
- Another possibility is to focus on the Solent as a **knowledge economy**. This might reference universal pre-school provision, increasing rates of achievement at the school level, rising research ratings for the four universities, increasingly secure funding for the various research facilities in Solent, and the attraction of a growing number of research-intensive companies into the region.
- A third possibility is to emphasise **what is most distinctive about Solent**: its strength in marine and maritime technologies and capabilities, including leisure, shipping, boat-building and ship-building, tidal and wave power, underwater sonics and communications, and so on.

These three are just illustrations: the point is to show Solent responding pro-actively to the challenges that Brexit and other economic drivers present, rather than adopting a passive approach.

Goals & SMART targets

The next step is to develop a short number of goals that if achieved would deliver the overarching vision. The goals tend to be more detailed and descriptive aims for the future of the economy. With the goals established it is then possible to set a series of objectives that are essentially SMART targets. An example could be “by 2026 the productivity gap with the South East will have been closed”. The objectives should be designed to overcome weakness, exploit opportunities, and mitigate against threats.

To avoid developing aspirational targets that are not grounded in reality, the next step is to consider how each will be achieved. This is when the LEP considers what steps can be taken across themes such as:

Skills, unemployment and inactivity; and in particular a) how to marry the skills of local university leavers to the future skill needs of local employers, not least by upgrading the aspirations of the latter; and b) how to identify existing skills in mature workers who might be in danger of becoming redundant, and finding new employers, technologies and markets to exploit and refresh those skills.

- R&D and collaboration; and in particular identify both the partners and the rivals of existing technology-rich universities, establishments and businesses, with a view to attracting those to Solent.
- Business support and entrepreneurship; and in particular looking at sector-specific agencies such as Tech City UK to see if there are equivalent agencies that might be developed, rooted in the Solent economy but with a wider reach, emphasising the notion of Solent as a place that matters.
- Networks, seeking to create new opportunities for local entrepreneurs, researchers, business leaders and young people to meet informally, exchange ideas, keep in touch, and hence engage in 'open innovation'.
- Social inclusion; by for example building links between high technology employers and schools in the more deprived parts of Solent, to raise the aspirations of young people and to offer them pathways to achieve those aspirations.
- Investment in sites and premises; including a focus on micro-sites to meet the needs of start-ups, but with easy entry and exit terms and progression opportunities to larger more 'polished' sites within Solent.
- Promotion of inward investment; with a strong focus on the sectors that make Solent special at the European level.
- Hard infrastructure; possibly with particular attention to the speed and reliability of transport links to the rest of the UK.
- Sectoral and cluster development; obviously in the marine/maritime area, but also looking at Winchester's strength in creative arts and the whole region's strength in leisure, heritage and visitor attraction.
- Business improvement districts; not just in the major cities but in Solent's many towns, supported by a Solent-wide network to exchange ideas and experiences.
- Regeneration; including small-scale schemes with strong community involvement in areas of local deprivation, or areas which are particularly vulnerable to the loss of jobs as a result of macroeconomic and global factors that themselves are beyond Solent's control.

Again, these are suggestions rather than a definite plan. The findings from the areas of further research (noted above) will be important for this stage to ensure support is targeted in the right places.

Once the SEP has been agreed, the LEP can then consider a delivery plan and a means for monitoring progress.

8. CONCLUSION

Brexit will have a significant impact on the landscape of the UK economy. As such, it is our assessment that the UK economy will be smaller, and create less jobs over the forecast period compared to our pre-Brexit outlook.

Solent's economic performance has been weaker than we had projected in our 2015 report. This is mainly due to the underperformance in key sectors such as accommodation and food services; information and communications; and wholesale and retail trade, reflecting the weaker growth in these sectors across the south east as a whole.

Slower job growth, and by extension, slower economic growth relative to both the South East and the UK is largely down to the composition of Solent's economy. With a lower than average share of jobs in high growth sectors such as professional, scientific and technical activities; and information and communication, and more pressingly, a larger than average share of jobs in low growth sectors such manufacturing and public administration, and defence, holding Solent's growth back. By focusing job growth in fast growing sectors, the Solent can realistically raise productivity levels above the UK average in the short-term and look to close the gap to the regional average in the medium to long-term.

Compared to previous forecasts, we expect slower economic and job growth to be largely explained by the composition of the economy, as manufacturing and public administration continue to drag.

We also expect weaker growth in Solent's population, driven primarily by a significant downward shift in the rate of net inward migration. This poses a significant threat to Solent's economy in particular due to a 'natural' population ageing faster than average. Net migration had previously been sufficient to keep the working age population growing, but we now forecast the working age population to fall in absolute terms by the end of the forecast.

While we do expect the UK economy to be affect by Brexit, we do not assess Solent to be overly exposed to the high-level threats, relative to other parts of the UK. While Solent have a significant amount of specialised jobs within the manufacturing sector, we do not anticipate them to be exposed to overly high export tariffs into the EU. In addition, while we expect migration to fall, only Southampton and Portsmouth have a higher inward migration than the national average. Having said that, we do feel that reduced migration could be a major issue for Solent's economy given its ageing population, but also because it reduces the scope of skills available to local employers.

Finally, our outlook is policy neutral and based on current business practices. The EU market has been shrinking in importance in terms of UK trade for more than a decade, and it is plausible that Brexit could be the nudge UK businesses need to further develop growing trading relationships outside the EU. If this comes to pass, then it is clear that we would move away and upwards from our baseline forecasts for the UK, the South East and Solent. But to truly understand the potential impact of Brexit and its risks and opportunities for Solent LEP area, would require further primary research.

APPENDIX A

Employment concentrations with LQ greater than 1, Solent LEP area relative to Great Britain, 2014

Broad Sector	3 digit-SIC07 sectors	LQ	Employment in 2014
Transportation and Storage	501 : Sea and coastal passenger water transport	18.2	2,287
Manufacturing	262 : Manufacture of computers and peripheral equipment	5.2	662
Manufacturing	325 : Manufacture of medical and dental instruments and supplies	4.6	2,594
Manufacturing	273 : Manufacture of wiring and wiring devices	4.6	951
Manufacturing	267 : Manufacture of optical instruments and photographic equipment	3.8	303
Manufacturing	263 : Manufacture of communication equipment	3.5	879
Transportation and Storage	492 : Freight rail transport	3.5	322
Manufacturing	331 : Repair of fabricated metal products, machinery and equipment	3.2	4,731
Manufacturing	303 : Manufacture of air and spacecraft and related machinery	3.2	4,132
Water supply and sewerage	390 : Remediation activities and other waste management services	3.1	235
Manufacturing	301 : Building of ships and boats	2.5	1,177
Information and communication	581 : Publishing of books, periodicals and other publishing activities	2.5	4,651
Transportation and Storage	502 : Sea and coastal freight water transport	2.3	263
Manufacturing	261 : Manufacture of electronic components and boards	2.3	880
Transportation and Storage	522 : Support activities for transportation	2.1	7,213
Manufacturing	265 : Manufacture of instruments and appliances for measuring, testing and navigation; watches and clocks	2.1	1,833
Manufacturing	254 : Manufacture of weapons and ammunition	2.0	402
Accommodation and food service activities	552 : Holiday and other short stay accommodation	2.0	1,217
Administration and support activities	823 : Organisation of conventions and trade shows	1.9	616
Human Health and social work activities	869 : Other human health activities	1.9	10,815
Education	854 : Higher education	1.8	12,960
Financial and insurance	651 : Insurance	1.8	2,639
Manufacturing	139 : Manufacture of other textiles	1.7	1,093
Administration and support activities	822 : Activities of call centres	1.6	2,523
Manufacturing	282 : Manufacture of other general-purpose machinery	1.6	1,587
Other service activites	952 : Repair of personal and household goods	1.5	367
Arts, Entertainment and Rec.	932 : Amusement and recreation activities	1.5	1,312
Water supply and sewerage	360 : Water collection, treatment and supply	1.4	690

Education	855 : Other education	1.4	4,883
Wholesale and Retail	475 : Retail sale of other household equipment in specialised stores	1.4	5,223
Manufacturing	329 : Other manufacturing	1.3	487
Public admin and Defence	842 : Provision of services to the community as a whole	1.3	8,900
Manufacturing	275 : Manufacture of domestic appliances	1.3	221
Administration and support activities	782 : Temporary employment agency activities	1.3	15,300
Accommodation and food service activities	563 : Beverage serving activities	1.3	10,252
Information and communication	620 : Computer programming, consultancy and related activities	1.3	11,887
Manufacturing	274 : Manufacture of electric lighting equipment	1.2	257
Human Health and social work activities	879 : Other residential care activities	1.2	4,262
Education	851 : Pre-primary education	1.2	1,144
Wholesale and Retail	471 : Retail sale in non-specialised stores	1.1	22,459
Accommodation and food service activities	553 : Camping grounds, recreational vehicle parks and trailer parks	1.1	574
Transportation and Storage	531 : Postal activities under universal service obligation	1.1	2,719
Wholesale and Retail	474 : Retail sale of information and communication equipment in specialised stores	1.1	874
Accommodation and food service activities	562 : Event catering and other food service activities	1.1	4,172
Wholesale and Retail	467 : Other specialised wholesale	1.1	4,174
Education	852 : Primary education	1.1	16,856
Construction	432 : Electrical, plumbing and other construction installation activities	1.1	6,429
Wholesale and Retail	476 : Retail sale of cultural and recreation goods in specialised stores	1.1	2,176

Source: BRES

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