Appeal by Persimmon Homes Ltd and BPT Ltd
Land to the East of Bell Lane, Kesgrave
PINS ref APP/J3530/W/16/3160194

Technical Note: Economic Activity Rates
by Cristina Howick on behalf of the local planning authority

August 2017

Introduction

1   This note provides additional evidence to supplement my rebuttal proof on behalf of the local planning authority (July 2017), on the matter of economic activity rates. At para 5.50 of that rebuttal proof I note that it makes no sense to take future jobs (labour demand) from a forecasting model, such as EEFM or Experian, and then use activity rates from another source to calculate the population and housing required to fill those jobs. That is because the job numbers in each forecast already incorporate view of future activity rates, for the UK as a whole. If such national activity rates were lower than those expected by the forecasters, their predicted job demand would also be lower, both for the UK and for each local authority area.

2   In this technical note I illustrate this by example, using the Experian forecast that was also used in the SHMA. The SHMA shows Experian's standard scenario, which is based on the forecaster's own view of future UK activity rates. For the purpose of this note I have commissioned from Experian an alternative scenario, which tests the impact on housing need of expecting lower activity rates than assumed in Experian's standard (or baseline) forecast.

The alternative scenario

3   In the alternative scenario, Experian has replaced its baseline assumption on future UK activity rates with the rates forecast by the Office of Budget Responsibility (OBR) in the 2017 Fiscal Sustainability Report. These OBR rates are the only available official view of future economic activity, and they are lower than Experian's. (The appendix to this note gives more detail on these differences.)

4   In the forecasting model, as in real life, change in activity rates for individual local areas broadly parallels national change, because local and national change are driven by the same factors, such as the continuing rise in State Pension ages and life expectancies. These factors cause people to retire later, although local activity rates are also driven by the local balance of labour demand and supply, which is why they do not parallel national rates exactly).

5   The charts and table below compare the alternative scenario, based on OBR activity rates, with the Experian baseline. Both sets of activity rates are provided by gender and detailed age group; this is how they have been applied in the model, using the age and gender profile

shown in the 2014-based sub-national population projection (SNPP 2014), which underpins the CLG 2014 household projection. All other inputs and relationships in the alternative scenario are the same as in Experian's baseline (standard) forecast. As well as the plan period, the charts show historical data since 2004.

Figure 1 Economic activity rates, ages 16-64, %
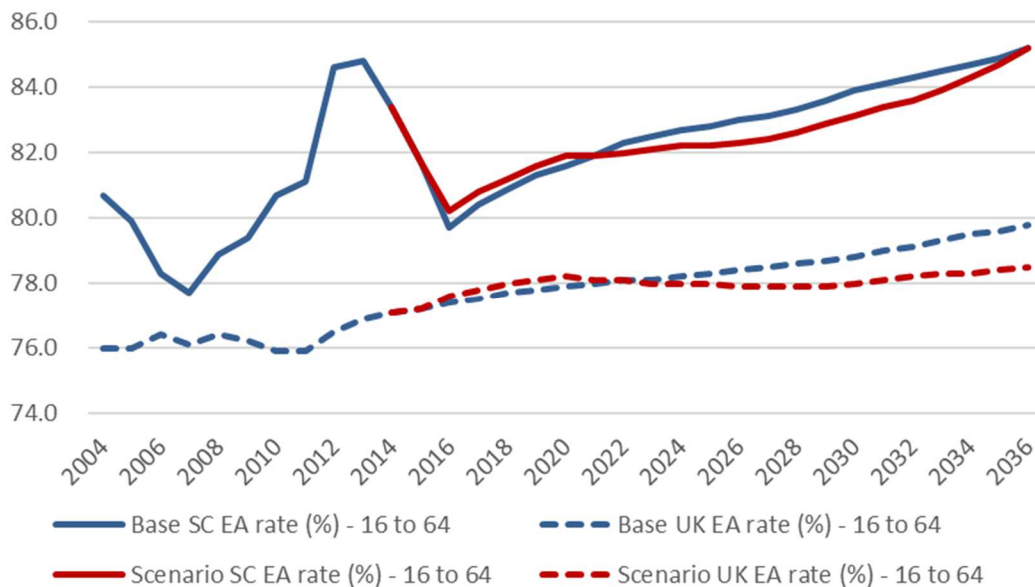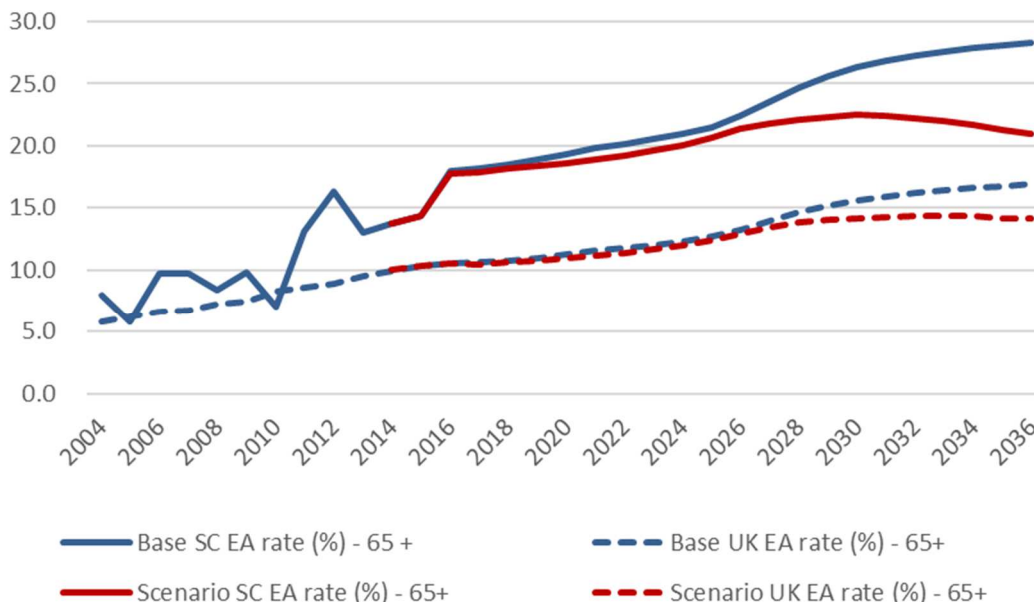

Figure 2 Economic activity rates, ages 65+, %

6   For people aged 16-64, Experian and OBR take similar views of future UK activity rates. Both expect UK rates to be virtually unchanged over the plan period, with growth of 3.5% (Experian) and 1.8% (OBR). For Suffolk Coastal, in terms of absolute levels activity rates are

higher, but the forecast change in rates parallels the UK trend. For this age group, the Experian baseline and alternative (OBR) scenarios show identical change in activity rates from 2014 to 2036 (although the trajectory in intermediate years is not exactly the same).

7   Thus, applying the OBR view of future activity rates makes no difference to the size of labour supply that would result from population change in line with SNPP 2014 for Suffolk Coastal. With regard to this age group, Experian and OBR forecast the same labour supply.

8   By contrast, as regards the 65+ age group the two forecasts are quite different. For the UK as a whole, both Experian and OBR expect rising activity rates in this age group, as people retire later. But Experian predicts a larger increase – 70.7% over the plan period, against 42.0% for OBR. In both scenarios Suffolk Coastal starts from a higher activity rate than the UK, and also shows faster growth. The main reason for this faster growth is that the over-65s in the district are younger than in the UK: a higher proportion are in the 65-69 group, who are at the forefront of postponed retirement as State Pension ages rise towards 68 (Table 2).

Table 1 Labour market scenarios compared

Area	Variable Thousands unless otherwise stated	2014	2036 baseline	2036 scenario	Scenario less baseline
Suffolk Coastal	Labour Force	64	68	64	-4
Suffolk Coastal	Labour Force - 16 to 64	59	53	53	0
Suffolk Coastal	Labour Force - 65 Plus	4	14	11	-4
Suffolk Coastal	Population - 16 Plus	104	113	113	0
Suffolk Coastal	Population - 16 to 64	71	63	63	0
Suffolk Coastal	Population - 65 Plus	32	51	51	0
Suffolk Coastal	Total Population	125	133	133	0
Suffolk Coastal	Economic Activity Rate (%) - 16+	61.6	59.8	56.5	-3.3
Suffolk Coastal	Economic Activity Rate (%) - 16 to 64	83.4	85.2	85.2	0.0
Suffolk Coastal	Economic Activity Rate (%) - 65+	13.7	28.3	21.0	-7.3
Suffolk Coastal	Workforce Jobs	59	68	65	-3
Suffolk Coastal	Jobs Demand	59	68	65	-3
Suffolk Coastal	Excess Jobs	0	0	0	0
Suffolk Coastal	FTE jobs	45	53	50	-3
Suffolk Coastal	Workplace based employment	55	61	58	-3
Suffolk Coastal	Residence based employment	62	66	62	-3
Suffolk Coastal	Unemployment	2	2	2	0
Suffolk Coastal	Net commuting balance (inflow)	-7	-5	-4	1
Suffolk Coastal	Unemployment Rate	3	3	3	0
UK	Economic Activity Rate (%) - 16+	62.5	61.4	59.8	-1.6
UK	Economic Activity Rate (%) - 16 to 64	77.1	79.8	78.5	-1.3
UK	Economic Activity Rate (%) - 65+	9.9	16.9	14.2	-2.7

Source: Experian, OBR, PBA

Table 2 Proportion of total population in selected age groups 2036

Age group	Proportion Suffollk Coastal	Proportion UK
65-69	8%	6%
70-74	8%	6%
75-79	7%	5%
80-84	6%	3%
85-89	5%	3%
90+	4%	2%
Total 65+	38%	24%

Source: SNPP 2014

9   As both the 65+ population and the activity rate of that population rise, both scenarios show considerable growth in the district's 65+ labour force. Table 1 above shows that in the Experian baseline this growth in 65+ labour supply over the plan period is 10 thousand. In the alternative (OBR) the growth is 6 thousand – so there are 4 thousand fewer people in the labour force. In proportional terms this is a small, around 5% of the resident labour force.

10   In summary, the OBR takes a more pessimistic view of future activity rates than Experian, but only for the 65+ age group. If the OBR is right, the model predicts that the district's workforce at 2036 will be lower by 4 thousand (5%) than if Experian is right. But if OBR is right about future activity rates job demand in the district will also be lower, because with lower national rates the whole UK economy will be smaller.

11   As shown in Table 1, applying OBR activity rates reduces the demand for additional jobs by 3 thousand – close to the reduction in labour supply of 4 thousand. The labour market remains in balance, as the small gap of 700 between demand and supply is closed by small reductions in unemployment and out-commuting (the gap, and the balancing adjustments, are insignificant, well within the margin of error).

12   As explained in the SHMA, the Experian local forecasting model compares local labour demand with supply, to determine whether the SNPP 2014 population would provide enough labour to meet demand. If the answer is positive, the model shows 'excess jobs', or 'unfilled jobs' – indicating that job growth will be constrained by lack of labour. For Suffolk Coastal district:

- As discussed in the SHMA and shown in Table 1, the Experian baseline shows no such unfilled jobs – indicating that the official demographic projection will provide enough or more than enough workers to fill the jobs on offer.
- The alternative scenario, also shown in the table, does not show any unfilled jobs either. This predicts that, if OBR is correct in its more pessimistic view of future activity rates, SNPP 2014 will still provide enough or more than enough workers to meet demand.

13   The housing need assessed in the SHMA is 15% above the official demographic projections, due to the market signals uplift. Therefore, if housing is provided to meet that assessed need the evidence suggests that the resulting labour supply will be more than enough to meet demand, whether Experian or OBR are right about future activity rates.

Conclusion

14   The Pegasus report (para 5.16 and 5.39 onwards) maintains that the SHMA is based on over-optimistic expectations regarding future activity rates, and this results in a too-low housing needs figure. Through the alternative scenario we have tested the impact of the economic activity rates forecast by the Office of Budget Responsibility, which is the only view of future activity rates available from an official body. The OBR is more pessimistic than Experian about future activity rates, though only for the 65+ age group. The modelling predicts that, if housing is provided in line with the official demographic projections, the resulting labour supply will be enough or more than enough to meet demand - whether Experian or OBR are right about future activity rates. Therefore, there is no justification for a 'future jobs' uplift to the demographic projections. If housing is provided in line with the need of 460 dpa assessed in the SHMA, it will provide more than enough labour to meet demand over the period 2014-36.

Appendix

Experian activity rate comparison

Comparison between Experian and OBR Participation Rate Projections

by Callum Cartwright & Sunil Joshi

July 2017

We compare the methodologies used by the Office for Budget Responsibility and Experian in deriving participation rate projections, and assess the results.

Introduction

As part of their January 2017 Fiscal Sustainability Report (FSR), the Office for Budget Responsibility (OBR) published updated participation rate projections to 2066 by gender and five-year age band. As in 2015, following the release of the previous FSR, we will compare and evaluate the latest OBR projections with our own, with particular focus on what has changed since 2015.

- We will compare Experian's most recent projections with those of the OBR;

- We will explain Experian's projections; and

- We will offer an assessment of OBR's projections.

Comparison

Firstly, Experian's projections have a different purpose to those in the FSR. The purpose of the FSR paper is to "…assess the long-term sustainability of the public finances". Experian's projections are intended to produce a realistic forecast for the labour market in order to drive our macro, regional and local forecasts.

Secondly, Experian's horizon reaches out to 2040[1] whereas the FSR projects as far as 2066.

In Appendix A, we set out Experian and the FSR's projections of activity rates for people aged 16-64 and 65+, as well as the overall participation rate for the population aged 16+.

Experian's projection for participation rates for those aged 16-64 reaches 80.3% by 2037, compared with the FSR projection of 78.6% by 2037. Meanwhile, for those aged 65+, the FSR forecast reaches 14.1% and Experian's rises to 17.7% by 2037. When comparing the latest FSR projections with the previous edition, the forecasted participation rate for those aged 16-64 is now two percentage points higher by the end of the forecast period. Over the same period, Experian projections have generally remained stable relative to the previous set of forecasts, with an increase of less than one percentage point from old to new. In addition, the FSR projections

[1] The initial forecasts contained in this report reach out to 2037, but it has been deemed necessary to extend this to 2040 in some cases.

for those aged 65+ plus have changed from 13.7% for 2035 previously to 14.1% for 2037, with Experian's projections similarly shifting from 16.7% for 2035 previously to 17.7% for 2037. The main cause of this increase in the case of our own forecasts is our incorporation of the recently announced State Pension age increase to 68 between 2037 and 2039, as outlined in Appendix B below.

Age Band	Previous forecast end points (2035)		Latest forecast end points (2037)	
	OBR	Experian	OBR	Experian
16-64	76.5%	79.6%	78.6%	80.3%
65+	13.7%	16.7%	14.1%	17.7%
16+	58.3%	61.4%	59.7%	62.0%

Source: Experian, OBR

Both Experian and the FSR's 16+ participation rates decline throughout the forecast due to the aging of the population. The FSR projections fall more sharply than Experian's, due mostly to the different 16-64 participation rates. Experian's projection declines to 62% in 2037, while the FSR's falls to 59.7%.

In each case, the OBR's projections have shifted towards our own throughout the forecast period.

Experian's Projections

The full rationale for Experian's projections is set out in Appendix B below, which takes into account the 2014 national population projections and more recent data on participation rates by age and gender.

In summary, Experian projects forward activity rates for each age and gender group taking into account:

- Announced changes to public policy (in particular the change in State Pension Age (SPA));

- Expected changes in the participation of females in older age groups as evidenced by today's participation rates of younger cohorts (who will age into those older groups);

- Expected changes in behaviour connected with improved longevity and health; changes to patterns of work (allowing older people to continue working under more flexible arrangements); and changes in the industrial composition of the economy (especially the shift to services.)

These activity rates are applied to the population projections to produce activity rates for the 16-64, 65+ and 16+ age groups. The full breakdown by age and gender is set out in the note.

Assessment of the OBR's approach

The model used in the FSR is based on a cohort approach. The key distinction between this and Experian's approach is that Experian's starting point for the behaviour of an age-gender group is the behaviour of the same group today. FSR on the other hand, takes as its starting point the current behaviour of the people who will age into that age-gender group in the future.

The consequence for this approach is that if a younger cohort today has – for some reason – a reduced participation rate, this reduction in activity rates will be perpetuated throughout its life-cycle. This means that reduced participation rates in a younger age group today will lead to a permanent decrease in comparison to older generations.

This trend was particularly prominent in the supplementary tables to the FSR 2015 (published 05/11/2015), especially for males. Although participation rates differ consistently between age bands throughout the forecast, the 2015 FSR model forecast a permanent decrease in the activity rate of the cohort that was aged 25-29 in the medium term.

The effect is still apparent in the supplementary data of the FSR 2017 (published 17/01/2017), with staggered declines of approximately two per cent over a 12-year period for males aged 40-44, 45-49 and 50-54, but the trend is far less pronounced this time. The new history available since the FSR 2015 is presumably a key factor in the OBR's revised forecasts, with participations rates of 91.08% and 90.47% for males aged 25-29 in 2015 and 2016 respectively turning out as 91.5% and 91.7%. The higher turnout for these figures, among other factors, has evidently reduced the extent to which the 'cohort effect' is carried forward over time. The result of these revisions is that the OBR's forecasted participation rates for males aged 25-54 are higher than they were previously. The same effect is similarly diminished for females of the same 25-54 age groups, resulting in an upward shift in all of the forecasts.

The permanent decline in participation rates in each age band arising from the cohort approach still leads to a slight decline in the participation rate for all people aged 16-64 over the next ten years (Chart 1 in Appendix A), albeit by a significantly smaller margin compared with the 2015 forecasts. In the FSR, the 16-64 participation rate now reaches at 78.05% in 2020 before falling to its lowest value of 77.79% in 2028. This 0.26 percentage point decrease compares with a fall of 0.92 percentage points in the 2015 forecasts (between 2017 and 2028). By 2037, Experian's projection is only 1.8 percentage points higher than that of the FSR, compared with the previously estimated difference of 3.1 percentage points by 2035. The overall 16+ activity rate from the FSR falls by 3 percentage points over the 20 year forecast period (compared with 4 percentage points previously), while Experian's is still set to decline by less than one percentage point.

Conclusion

While the magnitude of the 'cohort effect' has been reduced, it is still evident in the OBR's forecasts. The changes made in the current FSR projections have shifted their forecasts closer to the Experian baseline. The Experian participation rate projections have remained stable, with the same assumptions applied and when incorporating the latest data points, there have been minimal changes. As such, we consider these projections credible and given the FSR projections have updated their view to be closer aligned to our outcomes, we will continue to adopt Experian own projections in our forecasting models.
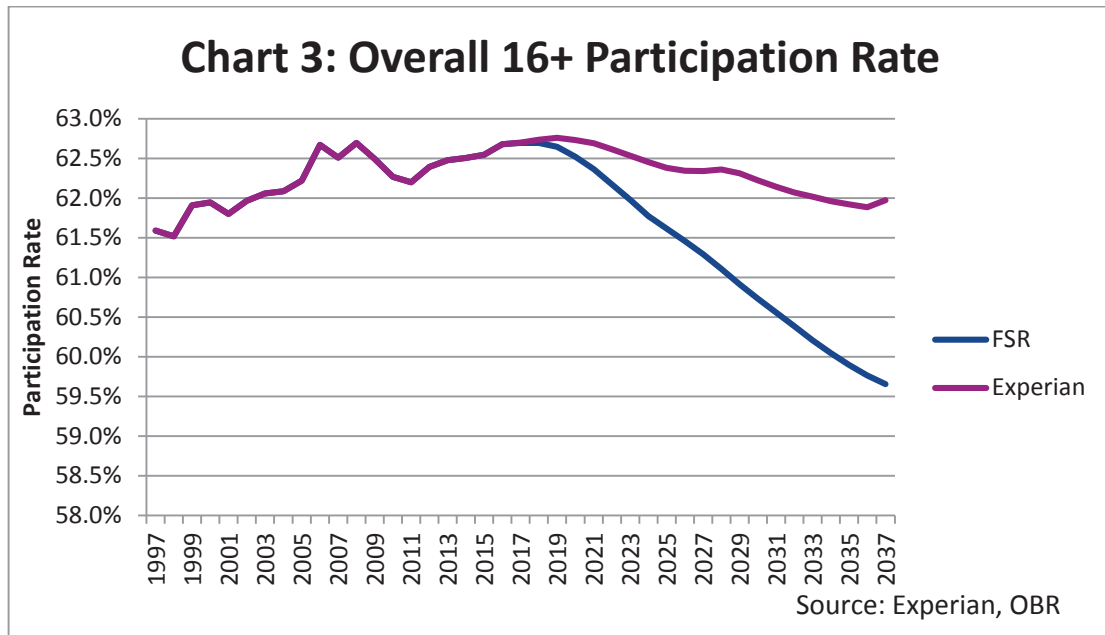
Appendix A

The following charts apply the growth rates of participation rates by age and gender to Experian's participation rate history. Both Experian and the FSR's grouped participation rates are calculated by using the ONS 2014-based National Population Projections.

Chart 1: 16-64 Participation Rates

Source: Experian, OBR
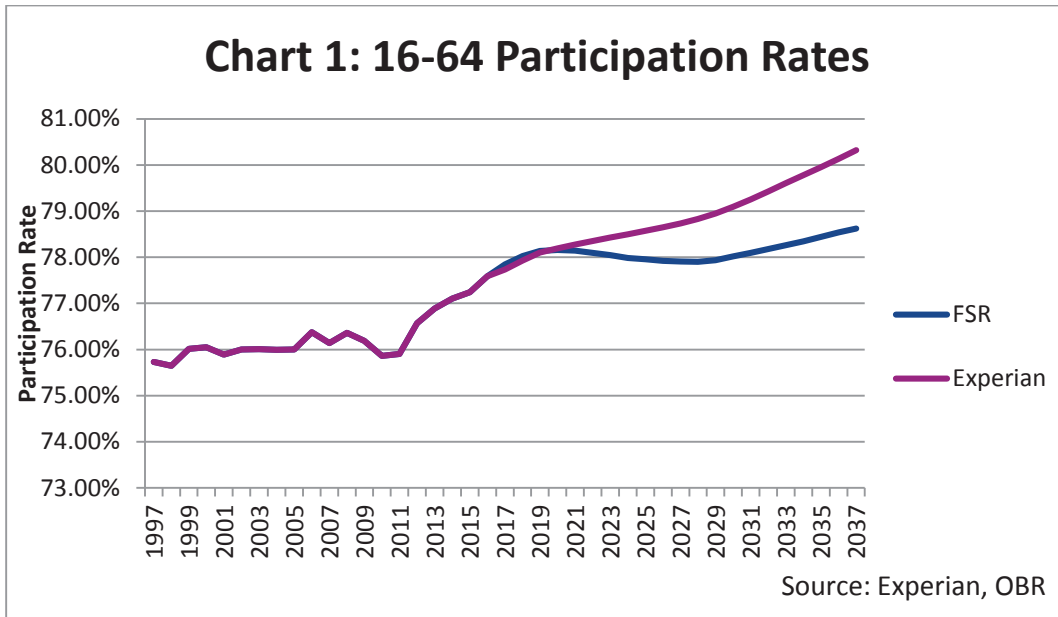
When calculating the participation rates for those aged 16-19 for both genders, Experian has attempted to fill in the FSR participation rates for period 2009-2021, which are not provided in the supplementary tables. The proportion of the working age population aged 16-64 averages 7.4% over the 2017-2037 forecast period.

Chart 2: 65+ Participation Rates

Source: Experian, OBR
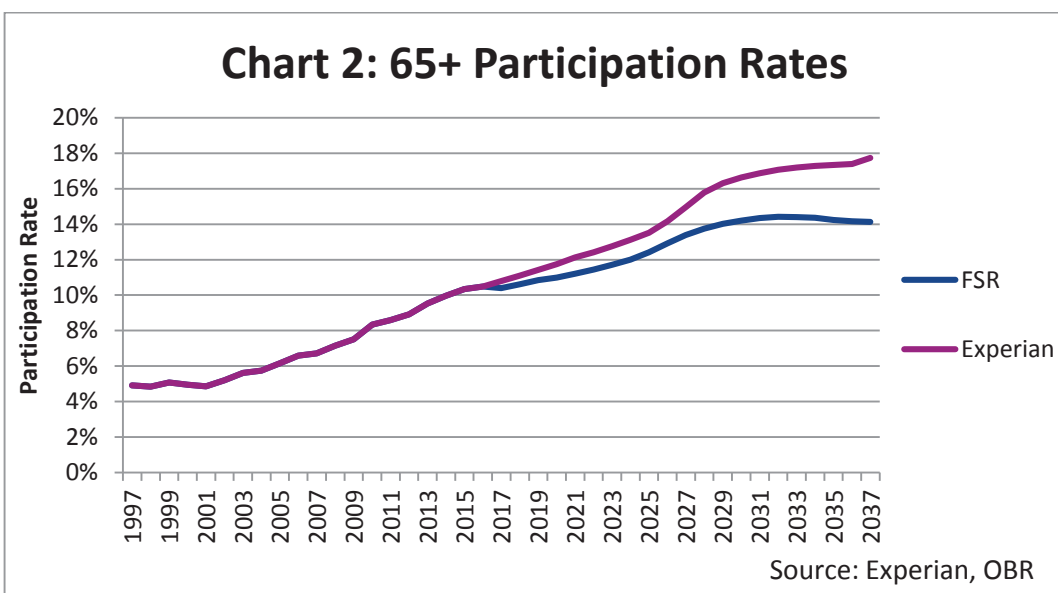
The OBR does not provide projections for participation rates for those aged 90+. Experian assumes that there is no participation by those aged 90+.

**Chart 3: Overall 16+ Participation Rate**

Source: Experian, OBR

Appendix B

In 2037, there will be nearly 18 million people in the UK aged over 65; this contrasts with around 12m in 2017. Moreover, they will make up nearly a quarter of the entire population compared with around 18% in 2017. This change in the age-composition of the population will have a significant economic impact. Older workers will make an increasing proportion of the potential labour force. In this note, we consider the impact of different labour force participation rates for older workers and explain the participation assumptions we will use in our UK suite of models in future.

It will be convenient at this point to set out some key definitions:

- Participation Rates / Activity Rates: the proportion of the population either in employment or searching for employment.
- Working Age Population: the population above the age of 15 but below the current state retirement age for their gender.
- Subnational Population Projections: population projections set out by the Office of National Statistics using 2014 mid-year population estimates.
- Labour Force Survey: survey of the employment patterns of the UK population. It provides official measures of employment and unemployment.

Over the last few years, the ageing of the population has begun to markedly change the demographic profile of the UK. According to the 2014 Subnational Population Projections, the proportion of the population aged 16 and over that was older than 65 remained at around 20% between 1997 and 2010. However, baby boomers entering retirement has caused this ratio to increase rapidly from 2011. Longer life expectancy will sustain the rising proportion, projected to reach 30% by 2040.

Ratio of Pop 65+ to Pop 16-64

Source: Experian
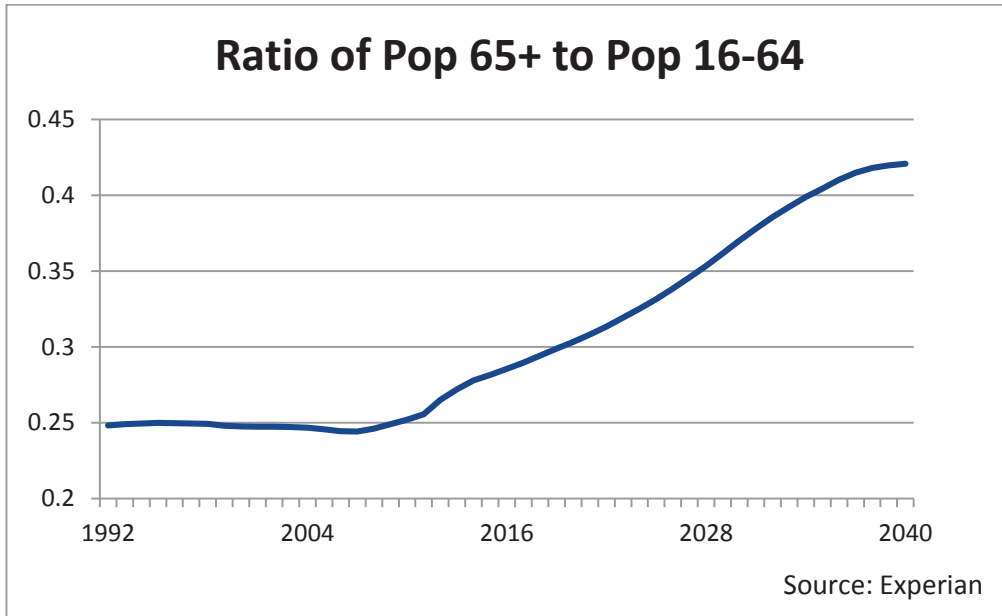
The impact of the ageing population can be seen in the participation rate chart below. The counterfactual (the blue line) is based on the assumption that older people will have the same participation rate in the future as they have in 2017. The overall participation rate for the population aged 16+ falls dramatically as older people – who have lower participation rates – make up an increasing part of the population. Such a scenario would lead to very slow labour force growth, growing at an annual average rate of only 0.19%. This would seriously limit the economic growth potential of the UK.

Counterfactual vs Forecast Participation Rate, 16+

UK Participation Rate (Counterfactual)

UK Participation Rate

Source: Experian
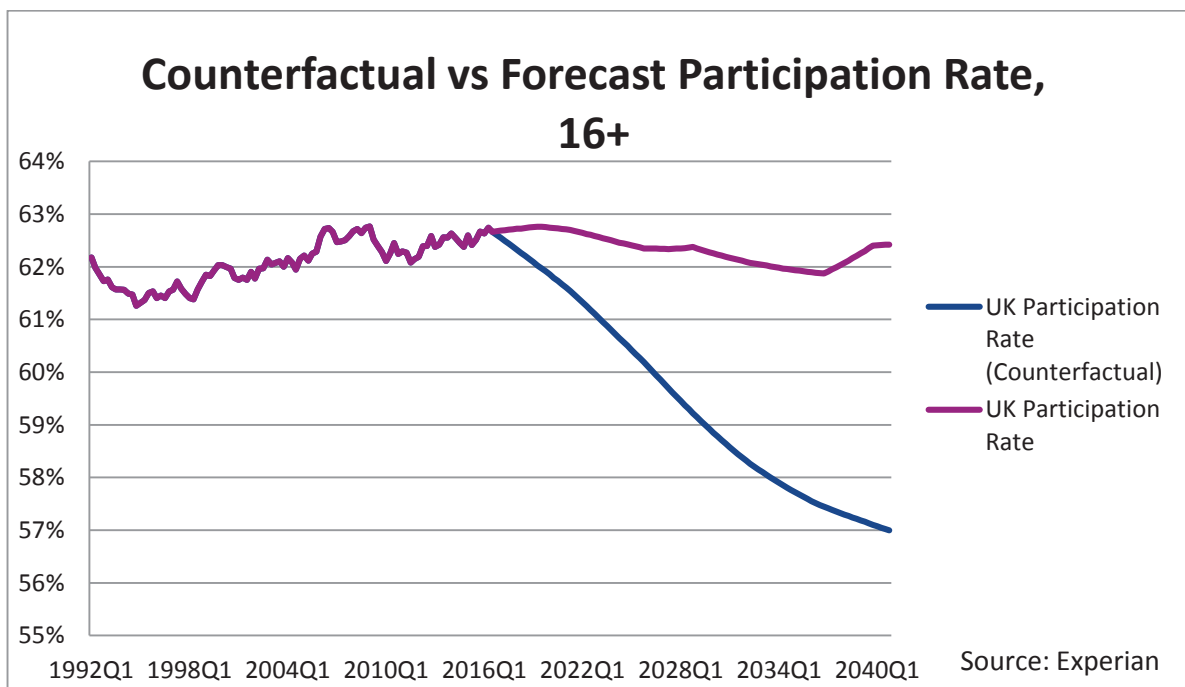
Based on our analysis of LFS economic activity rates by 5-year age bands below, we instead forecast that the overall UK participation rate will fall to just below 63% by 2040. The labour force is 5% larger than in the counterfactual scenario by the end of the forecast, reaching over 38 million people by 2040.
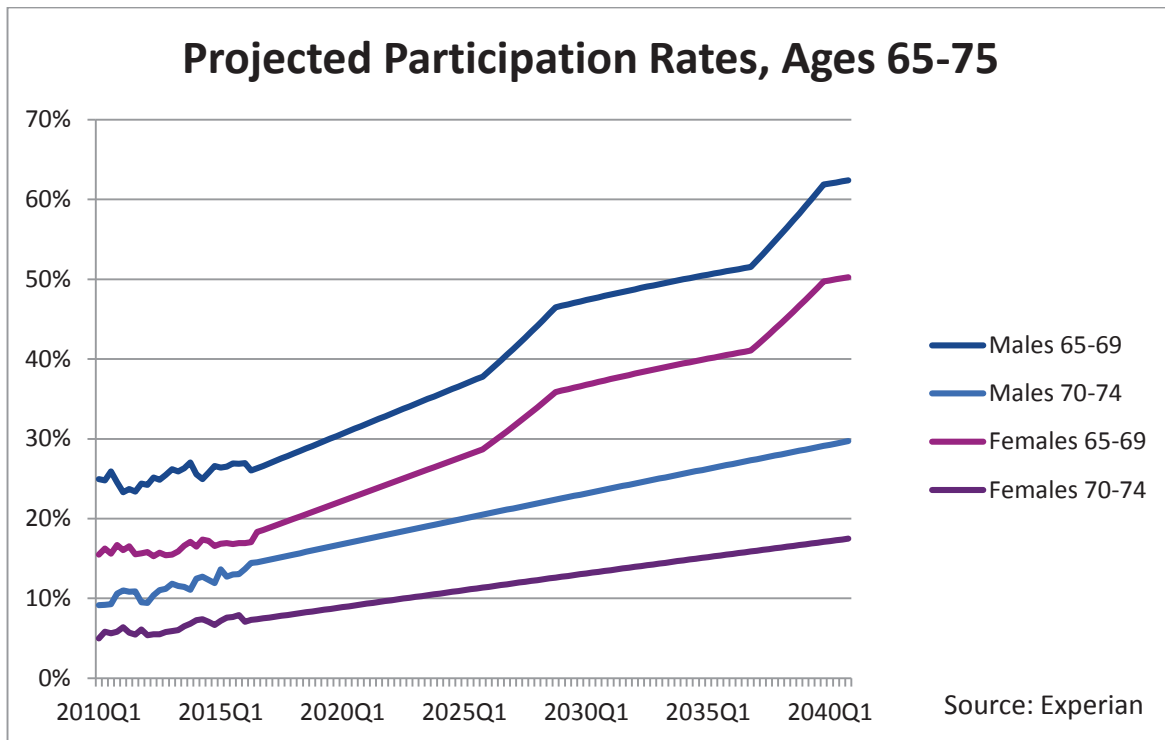
We expect to see increasing participation rates across all older bands for both men and women. As the UK economy becomes increasingly service-oriented, older people are inclined to continue working. Improving health standards also mean that people are able to participate in the labour force for longer and need to build up enough savings ahead of longer retirements. The option to receive pensions as a lump sum may even leave people needing to return to the labour force at a later stage should they fail to adequately manage their finances.
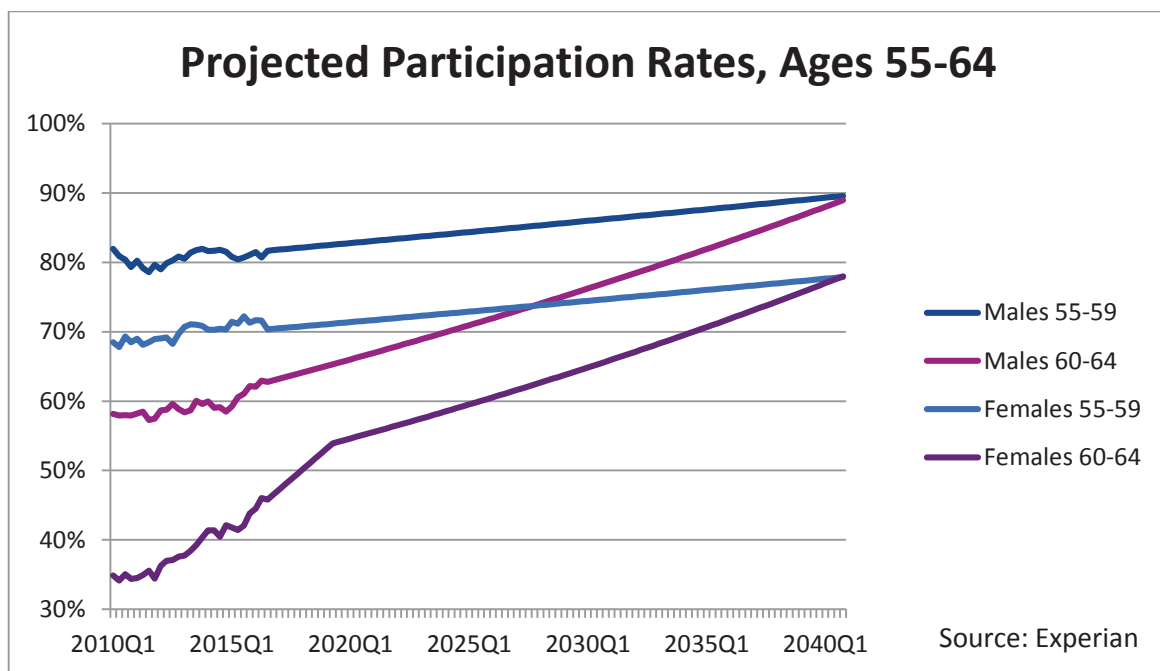
Policy changes have also begun to influence participation rates. The default retirement age has already been phased out and the State Pension Age (SPA) is gradually being increased. The SPA for women began to increase from 60 to 65 in 2010. An increase in the female participation rate for those aged 60-65 can be seen in the historical LFS data from around 2011. We have forecast that the rate will grow such that the gender gap in this age band approaches the corresponding gap for the 55-59 age band. The female participation rate also grows because cohorts displace one another over time and women born in later generations have had a higher propensity to work. As the SPA for both genders reaches 67 by 2028 and health standards improve, we see fewer people leaving the labour force between the ages of 60-64. The impact of the SPA policy changes can also be seen on the 65-69 age band.

Under the current law, the State Pension age is due to increase to 68 between 2044 and 2046. Following a recent review, however, the government announced plans to bring this timetable forward. The State Pension age is now set to increase to 68 between 2037 and 2039. The policy change was announced as of July 2017, after the release of the OBR's forecasts, but before the publication of this report. As such, we have incorporated

this change into our forecasts for the 65-69 year age groups, as seen below, but it does not currently feature in the OBR's projections.

Projected Participation Rates, Ages 65-75

Males 65-69
Males 70-74
Females 65-69
Females 70-74

Source: Experian

Our participation rates grow such that, by the end of the forecast, the rate for each age band by gender approaches that of the age band below at the beginning of the forecast.

There is ageing within the 65-plus population group. For example, the population older than 90 will more than triple by 2040. We forecast that the overall 65-plus participation rate will increase to 19% by 2040, with growth rates fluctuating mainly due to policy changes and population growth across age bands.

65+ Participation Rate

Source: Experian
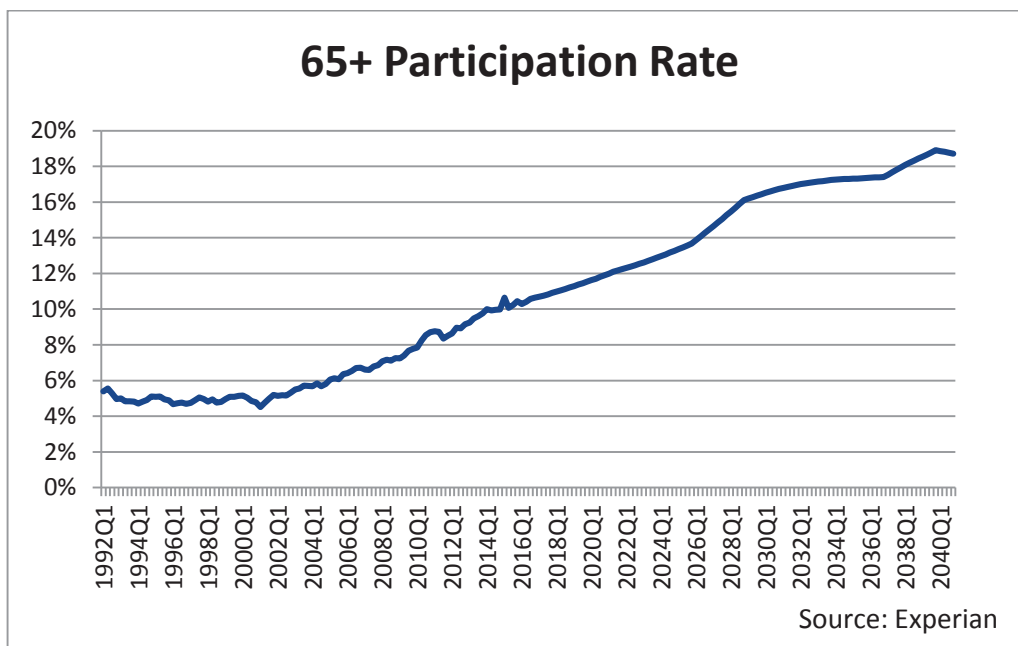
The increase in the activity rate of those aged 16 to 64 is due largely to the growing participation rate of those aged 55-59 and 60-64. It also accounts for policies designed to encourage more people to take part in the labour force.

16-64 Participation Rate

Source: Experian
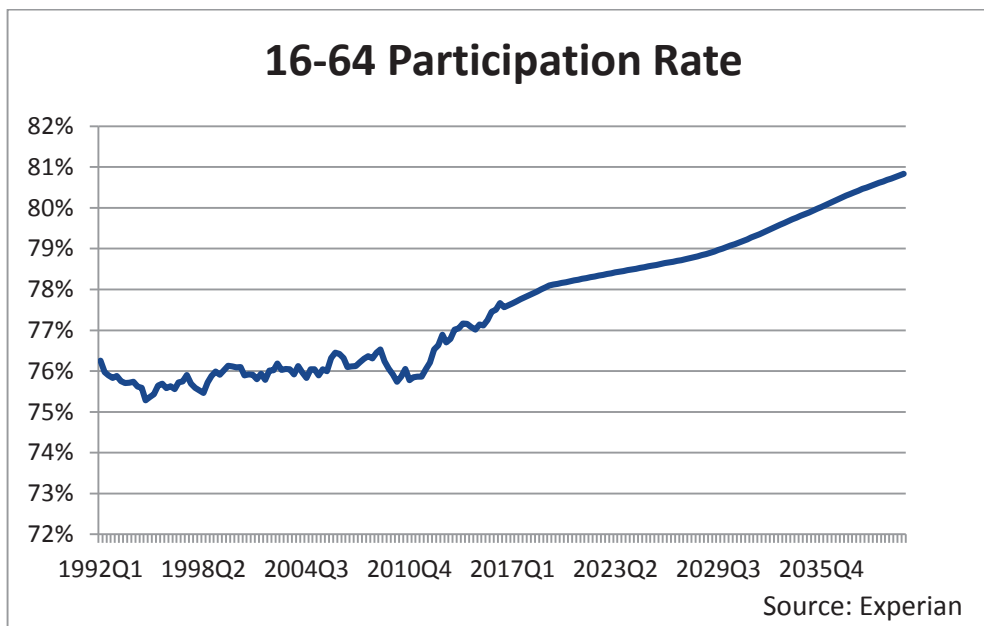
We can apply this analysis to the regional and local level as well. The impact on our regional forecasts is that Greater London is the only area without a consistently falling participation rate between 2017 and 2037. Greater London has the youngest population of the UK regions. By 2037 only 24% of the population in London will be 65 or over, while all other regions will see this proportion rise to above 40%.

Overall Participation Rate (%) by Region	2017Q1	2022Q1	2027Q1	2032Q1	2037Q1
UK	62.7	62.4	61.9	61.6	61.5
East Midlands	61.3	60.8	60.2	59.7	59.5
East of England	63.4	63.2	62.8	62.7	62.6
Greater London	68.6	68.7	68.6	68.7	68.6
North East	59.5	58.9	58.0	57.5	57.3
Northern Ireland	59.0	58.3	57.5	56.8	56.2
North West	61.4	61.0	60.4	60.0	59.8
Scotland	61.0	60.6	59.9	59.4	59.1
South East	64.1	63.7	63.2	62.9	62.7
South West	62.5	62.1	61.6	61.3	61.2
Wales	59.5	59.1	58.5	58.2	58.1
West Midlands	60.2	60.0	59.6	59.5	59.4
Yorkshire and The Humber	61.6	61.2	60.6	60.2	60.0

Source: Experian