



## LONGITUDINAL SMALL BUSINESS SURVEY LONGITUDINAL ANALYSIS: SMALL – MEDIUM ENTERPRISES INTERVIEWED IN 2015, 2016 AND 2017

### Summary

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#### Small – Medium Enterprises (SMEs) achieving continuous growth

- Of the SMEs in the panel with more than 10 employees, nearly one in ten were able to sustain growth in employment in all three years of the survey.
- Predicting which businesses will sustain growth in employment over the three years is not possible with any degree of success. Prior growth in employment was only weakly correlated with subsequent growth in 2017. Indeed, the proportion of businesses experiencing job growth in 2017 which had declining employment growth in 2016 (22 per cent) was marginally larger than the proportion of businesses which experienced continuous growth (21 per cent). Larger businesses in terms of employment were more likely to grow continuously in the subsequent years, as were businesses involved in innovation activity (in some models).

#### High growth firms (OECD definition<sup>i</sup>)

- Eight per cent of firms in the longitudinal sample of the LSBS would be classified as high-growth on both the turnover and employment definitions.
- There are some business behaviours that have a positive effect on the chances of being a high growth firm:

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<sup>i</sup> The OECD definition of a high growth firm requires that a firm is more than three years old, that it has initial employment of 10 or more employees, and that it achieves average growth of either employment or turnover of 20 per cent pa for three consecutive years.

- Businesses that have innovated products or processes were 13-16 per cent more likely to achieve subsequent high growth, as were businesses which used external finance;
- Use of business support increases the probability of high growth (in turnover) by 14 per cent;
- Businesses providing staff training are 31-45 per cent more likely to subsequently achieve high growth.

### **Smaller high growth firms (fewer than ten employees)**

- Around 1 per cent of the whole longitudinal sample fall into the group of smaller high growth firms over the 2015-17 period, and around 2 per cent of firms with fewer than ten employees in 2015. Higher initial employment and innovation activity had a significant positive effect on the probability of high growth, whereas export activity in 2015 had a negative effect.

### **Fulfilling growth expectations**

- In 2015, just under half of SMEs that expected to increase their employment over the next twelve months actually did so, and one in ten of those that expected to increase employment actually experienced a fall. There were more significant regional variations with 70 per cent of businesses achieving their anticipated growth in Scotland compared to only 29 per cent in the West Midlands.
- In 2016, a similar proportion expected to grow their employment over the next year, but only around a third experienced jobs growth in the next year.

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# 1. Introducing the LSBS Longitudinal Sample

## 1.1 Introduction

1. In this report we provide an overview of data drawn from the first three years of the Longitudinal Small Business Survey (LSBS). In keeping with the overall objective of the LSBS – to explore the causal influences on small business growth and performance – we examine both key trends in the data and the relationship between business growth and some of its antecedents. In particular, we explore whether businesses that expressed significant growth ambition in the initial year of the survey (2015) went on to achieve that ambition. And, we briefly consider the causal drivers of sustained and high growth.
2. For the purposes of the analysis in this report it is important to bear in mind that in each table we are considering the responses of the 4,165 businesses which replied to all three years of the survey which form a balanced panel. Nonetheless, LSBS is designed to be representative of the SME population and each cross-sectional survey is weighted to provide representative results. More than 15,000 businesses participated in the first year of the survey and fewer than 7,000 in waves two and three. Ensuring representativeness in each year is more difficult when considering the type of longitudinal sample used here as it would require different weights were applied to each observation in each year. This approach is feasible but may distort any year-on-year comparisons in the behaviour or performance of our balanced panel of businesses. Therefore we have adopted a procedure of weighting the balanced panel to be representative of the SME population in 2015 and retaining those weights for 2016 and 2017. Year-on-year changes in behaviour or performance observed therefore reflect differences in businesses' responses rather than any change in weighting.
3. Table 1-1 below presents key performance indicators for the panel sample of businesses, i.e. those that responded consecutively in all three LSBS waves, compared with the non-panel sample, i.e. businesses that were interviewed in the first year but not in the third (they or may not have been interviewed in the second year). Panel firms are seen to differ from non-panel firms in a number of respects. Panel firms are significantly more likely to be aiming to grow their firm, be exporting, innovating and accessing business support and external finance, and less likely to be women-owned.

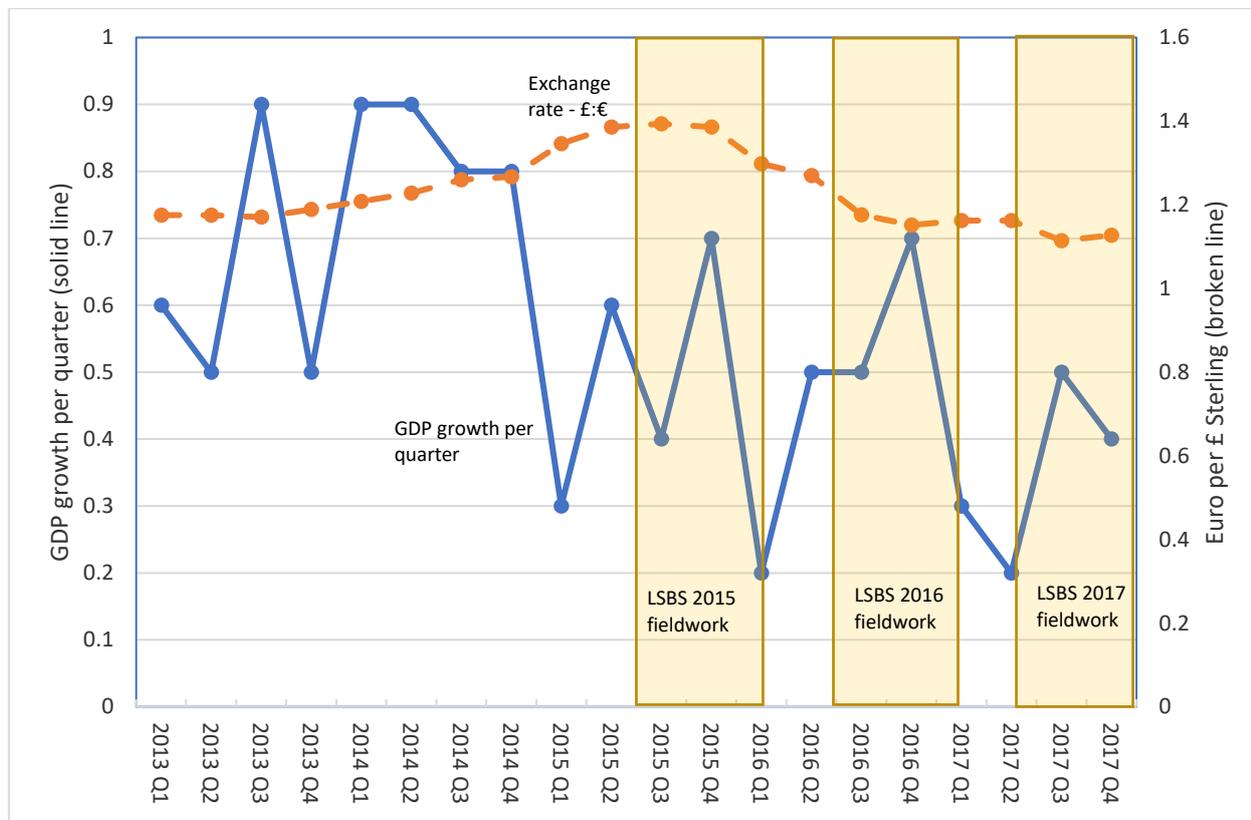
**Table 1-1: Key differences between the Panel and the overall SME population**

	<b>Non-panel businesses</b>	<b>Businesses in the longitudinal panel</b>
<b>Percentages</b>	<b>N=11,336</b>	<b>N=4,165</b>
Aiming to grow turnover (3 years)	67.7***	72.7
Women-owned firm	23.4***	19.8
BAME-owned firm	5.1	4.0
Exporting firm	20.4***	24.5
Innovating firm	41.6***	48.0
Accessing business support	34.2***	41.6
Accessing external finance	18.6***	20.7
Providing training	73.9***	77.1

**Notes:** Comparison relates to firms inside and outside the longitudinal panel in 2015. \*\*\* indicates significant difference between the panel and non-panel businesses at the 1 per cent level. Observations are unweighted.

4. Businesses belonging to the LSBS panel sample are most interesting as we can see how their attitudes and behaviours have changed over the three-year period. The group is special, however, both in terms of their survival and their willingness to respond to repeated requests for information. Their survival may mean that our respondent businesses are in some sense 'stronger' than the average business. It is more difficult a priori to know how any response bias is likely to work in influencing businesses' responses. In any case the panel sample offers valuable insights as to how businesses respond to changes in a dynamic economic setting.
5. One other aspect of the LSBS is also worth noting. The survey is undertaken in the latter half of each year with the majority of responses collected in quarter 4. Macroeconomic conditions and the political environment at the time of each survey may influence businesses' responses, particularly influencing indicators of ambition or anticipated growth. The 2015 survey was carried out following the 2015 General Election when Sterling was particularly strong against the Euro, although GDP growth was weaker than in the previous year. The 2016 survey followed the EU referendum in June 2016 and the weakening of the Sterling-Euro exchange rate in the later months of the year. The 2017 LSBS survey took place in a period of uncertainty about the period after EU exit and in the context of weakening national growth (Figure 1-1).

**Figure 1-1: Timing of the LSBS fieldwork, UK GDP growth rates, and the Sterling to Euro exchange rate**



**Source:** ONS Quarterly GDP growth (IHYQ) and Sterling : Euro exchange rate.

6. Other firm-specific aspects of our sample of longitudinal businesses are, as expected, more stable particularly related to the ownership background of the businesses. Overall, 19.8 per cent of our longitudinal sample of companies are women-owned, however, this proportion varies significantly by sector: nearly 40 per cent of ‘other services’ businesses are women-owned compared to only 8.8 per cent of businesses in Production and Construction.
7. One other aspect of the longitudinal sample is worth noting in considering whether year-on-year differences are due to the maturing process in the respondent businesses. In 2015 60% of the businesses in the longitudinal sample had been established for more than 20 years and only three per cent were less than 3 years old.

## 1.2 Structure of the report

8. The LSBS contains a wide range of data on SME characteristics and performance and this report provides a selective overview of the movement and interaction of some of the key indicators. Each table is based on the longitudinal sample, i.e. the same group of businesses, and therefore provides an indication of changing strategy and performance among that group of businesses. The report is organised as follows:

9. Section 2 focuses on a range of variables which previous research studies have linked to business growth and productivity including exporting, innovation and training. How do these change in the years of the longitudinal sample?
10. Section 3 focuses on growth and expected growth. What proportion of SMEs anticipate growth? Is this ambition realised? How do the factors considered in Section 2 influence whether businesses are able to sustain growth from year to year? How do the growth drivers influence high growth?
11. Section 4 focusses on predicting future high-growth episodes.
12. Section 5 focuses on businesses' medium-term growth ambition, barriers to growth and related strategies.
13. Section 6 contains detailed tables related to Sections 2 and 4.

# 2 Trends in the drivers of SME growth

## 2.1 Introduction

14. In this section we examine an informed set of antecedents of SME growth exploiting the rich information provided by the LSBS. Specifically, we delve into key aspects of SMEs' path to growth such as export and innovation performance, external finance acquisition, business support and employee training. The three-year window available for observing the 4,165 UK SMEs which comprise the LSBS balanced panel offers interesting insights as to their behaviour and short-term discount and adjustment reflexes.

## 2.2 Innovation

15. The LSBS asks businesses a series of questions about their innovation activity – the introduction of new or improved goods, services and processes. The questions, aligned with the UK Innovation Survey<sup>2</sup> and the OECD Oslo Manual<sup>3</sup>, ask about businesses' innovation activity in the three-year period prior to the survey. For all businesses the proportion of product/service innovators fell sharply between 2015 and 2016 and then remained stable (Figure 2-1). Twenty one per cent of SMEs in the sample innovated processes in 2015, with this proportion falling to 17 per cent by 2017. These trends are consistent with the overall trend for all SMEs<sup>4</sup>.

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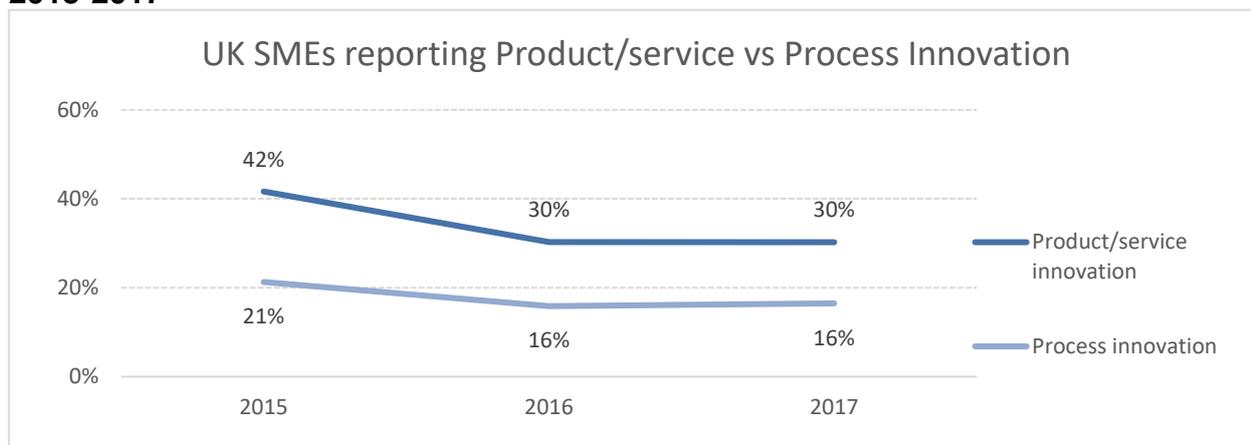
<sup>2</sup> <https://www.gov.uk/government/collections/community-innovation-survey>

<sup>3</sup> <http://www.oecd.org/sti/inno/oslomanualguidelinesforcollectingandinterpretinginnovationdata3rdedition.htm>

<sup>4</sup> See LSBS Employers Report 2017, p. 12. Available at:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/710553/LSBS\\_2017\\_cross-sectional\\_SME\\_Employer\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710553/LSBS_2017_cross-sectional_SME_Employer_report.pdf) .

**Figure 2-1: Proportion of Product/service and/or process innovators over the period 2015-2017**

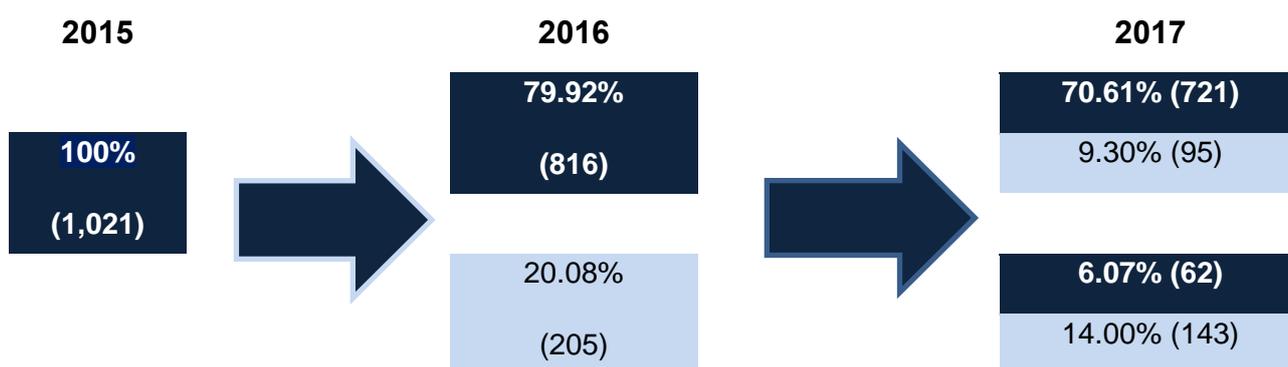


## 2.3 Exporting

16. Less than 15 per cent of UK SMEs in the panel reported exporting activities each year and the proportion has declined marginally from 14 per cent of businesses in 2015 to roughly 13 per cent in 2016 and 2017. These proportions are slightly lower than those among all SMEs with employees although the time trend is similar<sup>5</sup>.

17. Figure 2-2 below shows that the majority of UK SMEs that reported exports in 2015 (1,021) persisted in exporting both in 2016 and 2017. It is perhaps interesting to note that of 205 businesses (20 per cent) that ceased their exporting activities in 2016 almost a quarter resumed again in 2017. Complementary to exporting activities, imports of UK SMEs present an interesting pattern of change (Figure 2.3).

**Figure 2-2: Export persistence for the period 2015-2017.**



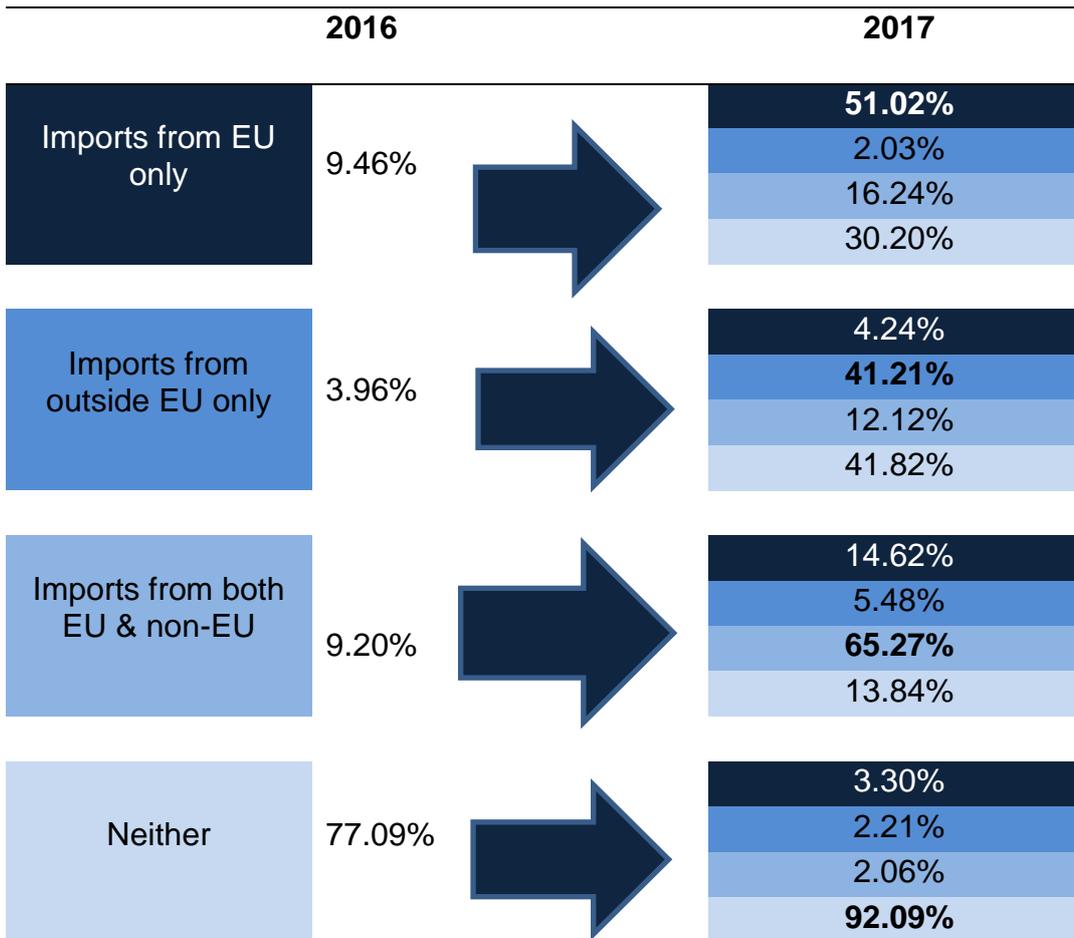
**Key:** Dark blue boxes indicate businesses continuing to export. Light blue indicates non-exporting.

<sup>5</sup> See LSBS Employers Report 2017, p. 7. Available at:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/710553/LSBS\\_2017\\_cross-sectional\\_SME\\_Employer\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710553/LSBS_2017_cross-sectional_SME_Employer_report.pdf).

18. More than three quarters of UK SMEs reported no imports in 2016 (Figure 2-3) and nine out of ten of those continued to report no imports in 2017. Secondly, out of 394 businesses which reported imports exclusively from EU countries in 2016, only half of them continued to import goods and services from the EU, while 16 per cent of them diversified and sought additional markets outside the EU. This ‘import diversification strategy’ becomes even more prominent as 66 per cent of businesses continued to pursue imports from all over the world within the two-year period.

**Figure 2-3: Imports persistence for the period 2016-2017**



**Key:** Dark blue boxes relate to imports from the EU only; mid-dark to imports from outside the EU only; mid-light to imports from the EU and externally; and light blue no imports.

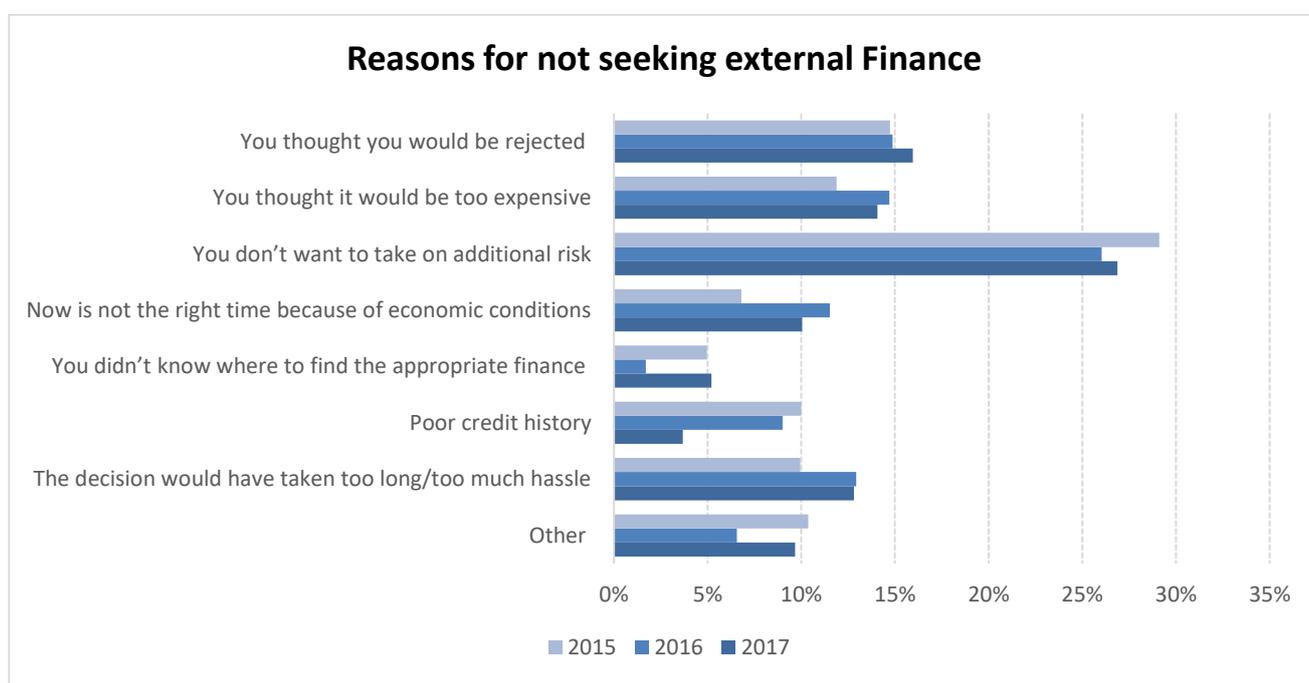
## 2.4 External finance

19. External finance – whether debt or equity – has often been linked to business growth and performance. In the LSBS respondents are asked whether they have sought external finance in the 12 months prior to the survey. A continuous decreasing trend exists from 2015 until 2017 and specifically 14 per cent of businesses in the longitudinal panel sought external finance in 2015, falling to 9 per cent by 2017. The decline in the proportion of SMEs seeking external finance was consistent across each broad sector and size-band. While this decreasing trend could be viewed in the light of business expectations regarding their prospective growth, one must also take into

account other factors such as the uncertainty and market volatility, the opportunity cost of internal funding -closely related to business opportunities- and the possible quantitative restrictions in the supply of the external capital.

20. Figure 2-4 shows the reasons which businesses gave for not seeking external finance. The relative significance, or the ranking, of factors remain relatively stable throughout the period 2015-2017. Factors related to uncertainty and risk remain the most important factor that drive businesses' decision not to seek external finance. Nonetheless, the fear of rejection remains the second most important factor, while the anticipated cost and the required time and effort of the process seem to be equally important.

**Figure 2-4: Main Reasons for not seeking external finance**



## 2.5 Business support

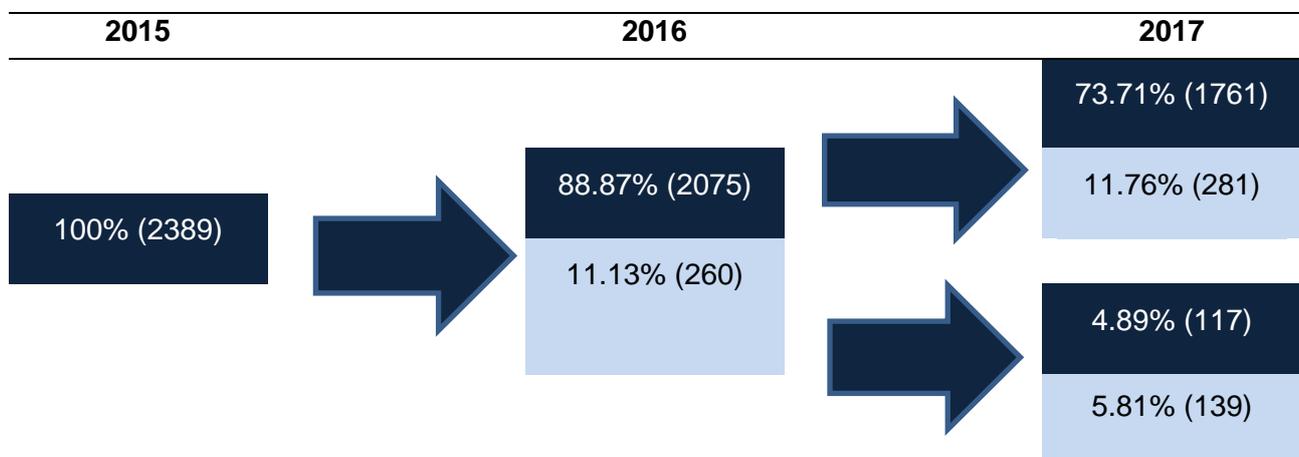
21. Another important theme in LSBS is business support. Respondents are asked whether in the last 12 months they have sought 'external advice or information on matters affecting their business' more than a 'casual conversation'. Twenty eight per cent of the longitudinal sample sought business support in 2015 and this proportion fell to around 20 per cent in 2016 and 2017. The proportion of SMEs seeking external support was consistently highest in the business services sector and among larger SMEs. This downward trend in the proportion of businesses seeking external support in the longitudinal sample mirrors the wider trend among SME employers<sup>6</sup>.

<sup>6</sup> See LSBS Employers Report 2017, p. 29. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/710553/LSBS\\_2017\\_cross-sectional\\_SME\\_Employer\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710553/LSBS_2017_cross-sectional_SME_Employer_report.pdf)

## 2.6 Training

22. Employee training is considered an important driver of productivity growth and subsequent business growth. Despite a continuously decreasing trend, a large proportion of UK SMEs in the sample participated in on/off the job training of their employees. In total, 60 per cent of SMEs with employees (in 2015) in the longitudinal sample (2,389 businesses) reported providing on or off the job training for their employees in 2015. This activity is strongly persistent with 73 per cent of businesses that originally reported engaged in either on or off the job training continued to pursue such activities in 2017 (Figure 2-5).

**Figure 2-5: Training investment commitment for the period 2015-2017**



**Key:** Dark blue boxes indicate businesses continuing to provide training. Light blue indicates a firm not providing training.

# 3 Growth and expected growth

## 3.1 Introduction

23. A key theme in the LSBS is business growth, measured by employment and sales. In this section we profile the growth performance of our longitudinal sample of businesses over the period 2015 - 2017, consider how their growth expectations have changed and finally, consider whether they actually achieved their growth expectations.

24. One of the strengths of the longitudinal data available as part of the LSBS is the ability to compare businesses' aspirations or expectations of growth with subsequent outcomes. However, as noted earlier, it is important to acknowledge that this is an analysis based on a highly balanced panel of respondents and may be subject to biases either due to survival and non-survival and/or patterns of non-response.

## 3.2 Profiling SME growth

25. The LSBS asks questions about current levels of employment and turnover and whether these have changed over the year prior to the survey. We consider each measure in turn. Detailed tables are included in Section 6.

26. The vast majority of businesses in our longitudinal sample report no change in employment each year (Table 6-1). Between 2015 and 2016, seven per cent reported a decline in employment levels, compared with 16 per cent between 2016 and 2017.

27. LSBS asks a similar question relating to businesses' turnover growth over the year prior to the survey and again asks businesses to indicate whether their sales have increased, decreased or remained the same. Overall, the proportion of businesses suggesting that their sales have increased has remained relatively stable over the period 2015 (33 per cent) to 2017 (32 per cent). This stability is also evident across business sectors. Unlike employment we also see no significant increase in the proportion of businesses suggesting a decline in sales. This too remained stable throughout the three years: 19 per cent in 2015, 20 per cent in 2017.

28. It is notable that while the vast majority of businesses reported stable employment a large proportion reported either increased or decreased sales (Table 6-2). This pattern is also evident by size-band (Table 6-3). The proportion of businesses reporting employment growth is higher for larger businesses, and the pattern is essentially similar for sales growth too (Table 6-4).

29. The proportion of businesses reporting employment growth decreased overall between 2016 and 2017 (Table 6-5). Regional disparities in the proportion of growing businesses are substantial however - the proportion of businesses reporting growth in 2017 was twice as high in the West Midlands as in Yorkshire and Humberside. Although, there is less regional disparity or change between years in turnover growth. Again, the proportion of businesses reporting turnover growth differs significantly between regions, twice as high in the North East as in the North West in 2017.

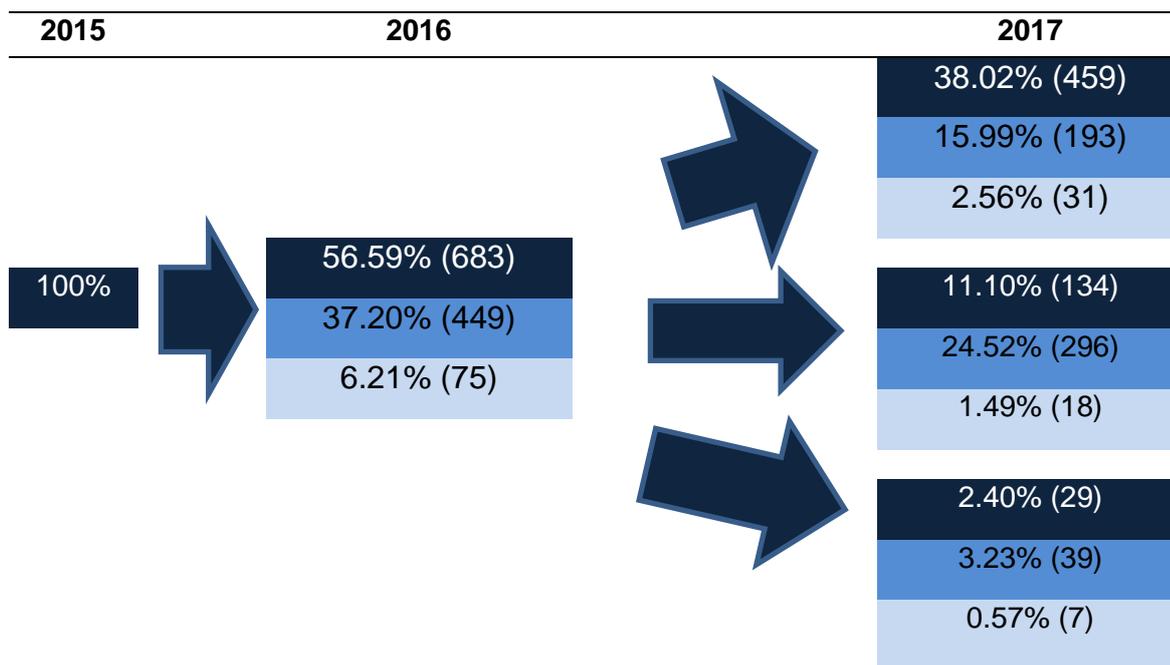
### 3.3 Expected growth over the next year

30. The LSBS survey also asks businesses about their expected growth<sup>7</sup> over the next 12 months. The vast majority of longitudinal respondents anticipated no change in their employment over the next year. Around one in six businesses anticipated an increase in job numbers, a figure which remained broadly consistent from 2015 to 2017. A larger proportion of respondents anticipated both increases and decreases in sales in the 2015, 2016, and 2017 periods. Again, these proportions remain broadly similar across the three years (Table 6-6 and Table 6-7).
31. Disaggregating the group of longitudinal respondents by employment size provides further insight into anticipated growth. In each year, the proportion of businesses anticipating employment growth increases with employment size (Table 6-8). There is no clear trend between years. One element of the anticipated growth which is of particular interest is anticipated employment growth by those who are currently self-employed. In 2015 14 per cent of the self-employed anticipated an increase in employment over the next 12 months. This proportion declined slightly in 2016 to 12 per cent and slightly further in 2017 to eight per cent. This marks a slight slowing down in the extent of the anticipated transition from self-employment to employer status.
32. Figure 3-1 adopts an evolutionary perspective of UK businesses' employment growth ambition. More specifically, out of 1,207 businesses which reported an ambition to grow in terms of employment in 2015, only 38 per cent continued to persistently hold this ambition in 2017. Cumulatively however, more than 50 per cent of UK SMEs which had originally expressed expectations to grow (i.e. in 2015) in employment size continued to have expectations of increasing their employment levels in 2017. In contrast, the levels of UK businesses anticipating a decrease in their levels of employment remain consistently low. Specifically, less than five per cent of businesses that expected to increase their employment size in 2015 had changed their expectations to the opposite direction in 2017.

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<sup>7</sup> The response to this question inevitably reflects the respondent's own assessment as well as the broader context within which the firm operates.

**Figure 3-1: One-year growth ambition (employment) for the period 2015-2017**



**Key:** Dark blue boxes indicate businesses continuing to expect growth in employment in the coming year. Light blue indicates businesses expecting employment to fall and mid blue indicates those expecting no change in employment

33. In terms of turnover growth, we see a slight decrease in the proportion of businesses anticipating growth over the period of 2015 to 2017 (Table 6-9). Those who are self-employed are less likely to anticipate sales growth than employers. And, as with employment, the proportion of businesses anticipating an increase in sales is higher in larger firm size-bands. This pattern is evident in each year of the survey.

34. By region we also see considerable variation in the proportion of longitudinal respondents anticipating employment and turnover growth (Table 6-10). It is notable that in terms of anticipated employment growth there is a sharp fall in the proportions of businesses anticipating growth in a number of regions, particularly those with above average expectations in 2016 (e.g. London, the North East). There is a less marked change in the proportion of businesses anticipating growth in turnover which remains broadly stable across the three years for each region.

### 3.4 From expected to achieved growth in employment

35. One of the most significant benefits of having longitudinal data such as that in the LSBS is being able to track firm growth through time. Here, we consider whether businesses in the longitudinal sample that anticipated employment and turnover growth over the next year were able to achieve these ambitions. This comparison relates to discussions in the research literature on the over-optimism of business owners and entrepreneurs.

36. One note of caution is relevant in considering these results. Overall, the subset of businesses in the longitudinal sample that anticipated growth over the next 12 months is only around 600 businesses. Breaking this sample down further, e.g. by region,

reduces sample sizes suggesting a degree of caution is necessary in interpreting regional differences.

37. In 2015, 17 per cent of all businesses in the longitudinal sample anticipated employment growth over the next twelve months. Slightly less than half of these businesses realised this expectation. In fact, in 2015, around one in ten businesses that anticipated anticipating growth in employment actually experienced a fall over the next year. In 2015 the proportion of businesses achieving their anticipated growth was highest in transport, retail, food services, and business services. There were more significant regional variations with 70 per cent of businesses achieving their anticipated growth in Scotland compared to only 29 per cent in the West Midlands (Table 6-11).
38. In 2016 one in six businesses in the longitudinal sample were anticipating employment growth. Of these only around a third (35 per cent) experienced jobs growth in the next year. Sectoral variations in the proportion of businesses achieving their growth expectations were very similar to those in 2015 and again there was more substantial regional variation. More than half of all businesses in the longitudinal sample in the North West achieved their growth expectations compared to less than one in six in Northern Ireland (Table 6-12).
39. Aggregate percentages of businesses that anticipated and achieved growth in turnover are reported in Table 3-1. Around a third of businesses anticipated turnover growth over the next 12 months in both 2015 and 2016 and around half of those businesses actually went on to grow their sales over the next 12 months.

**Table 3-1: Actual turnover growth in businesses that expected to grow turnover in the next year (% businesses that expected growth in turnover over the next year)**

Year	Proportion whose turnover declined	Proportion whose turnover did not change	Proportion whose turnover increased
2015	15.03%	36.36%	48.60%
2016	14.64%	31.93%	53.43%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

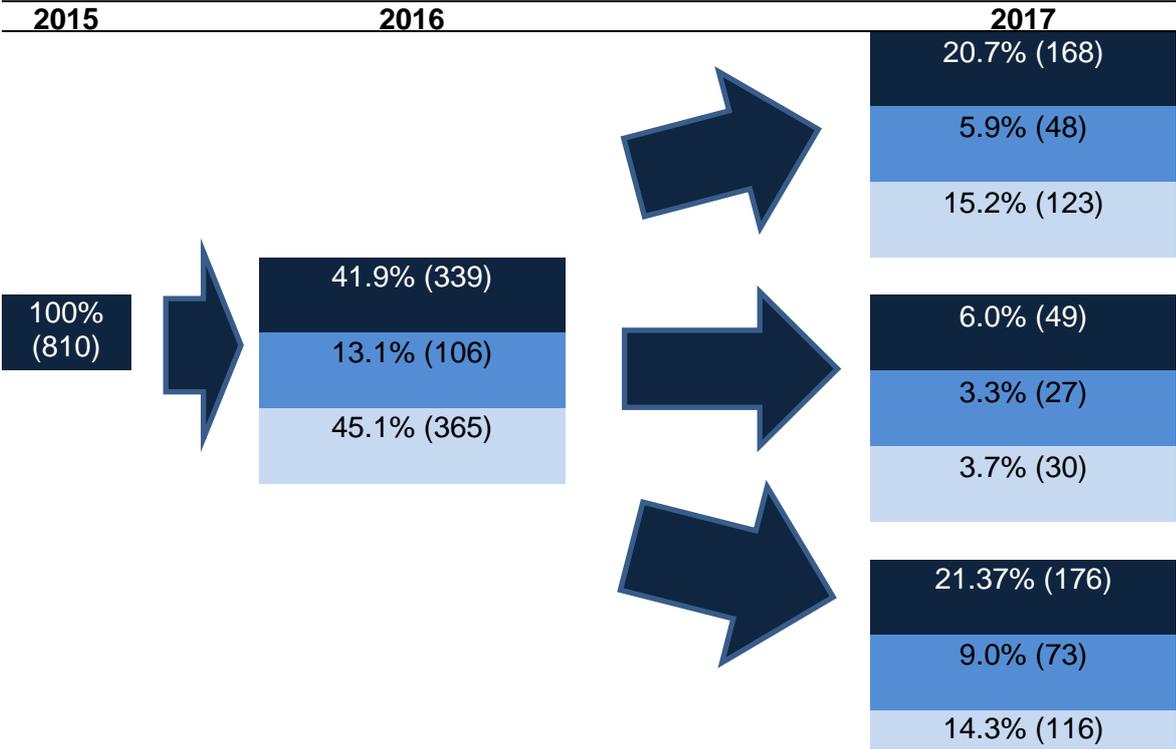
### 3.5 Achieving continuous growth

40. Other longitudinal datasets such as the Business Structure Database provide detailed information on the growth histories of individual businesses. LSBS also allows us to consider what proportion of businesses are able to sustain growth in either employment or turnover and also to compare the characteristics of businesses in each group. Here we focus on the group of businesses in the longitudinal sample with 10 or more employees and their record of sustained job growth. Figure 3-2 illustrates the continuity of growth over the three years of the LSBS survey for the 810 businesses which exhibited growth in the year before the 2015 survey. Of these just over 40% also experienced growth in jobs in 2016, while 21 per cent continued to experience job

growth in 2017. This group of businesses represents only 9 per cent of the total number of businesses with more than 10 employees in the whole longitudinal sample.

41. It is also notable that the probability of experiencing growth in jobs in 2017 is only weakly related to prior growth. Indeed, the proportion of businesses experiencing job growth in 2017 which had declining employment growth in 2016 (just over 21 per cent) was marginally larger than the proportion of businesses which experienced continuous growth (just under 21 per cent).

**Figure 3-2: Employment growth trajectories of businesses in the longitudinal LSBS sample**



**Key:** Dark blue boxes indicate businesses continuing to grow employment in each year. Light blue indicates employment declines and mid blue no change in employment.

# 4 Predicting future consistent or high growth episodes

## 4.1 Identifying businesses that sustain business growth over three years

42. One area of obvious interest is whether there are firm characteristics or strategies which mark out the group of businesses which were able to grow in every year that they were surveyed (referred to as 'consistent growth' in this report). We can examine this using a series of simple statistical models<sup>8</sup> (Table 6-13). In our analysis, we compare this group of businesses (with ten or more employees) with two alternative comparator groups. First, we compare these businesses against those businesses which also achieved growth in 2015 but not continuous growth in future years, as in Figure 3-1. Second, we compare them against a wider comparator group of all businesses (with 10 employees or more) which did not achieve consistent growth irrespective of whether they achieved growth in 2015. This second comparator group is broader and includes businesses which did not grow their employment in 2015. A range of the variables discussed in Section 2 have been linked to business growth in previous studies (such as exporting and innovation activities). In each case, we include a selection of these as potential explanatory variables. We estimate two variants of each model including weighted and unweighted estimates. Models also control for sectoral and regional variations.
43. The models suggest a weak link between these potential predictors of growth and sustainable growth outcomes (they are uniformly weak with few significant variables). This reflects the difficulty of the 'picking the winners' problem noted elsewhere in academic literature (Table 6-13).

## 4.2 Understanding high growth – the OECD definition

44. The OECD definition of a high growth firm requires that a firm is more than three years old, that it has initial employment of 10 or more employees, and that it achieves average growth of either employment or turnover of 20 per cent per annum for three consecutive years.
45. Eight per cent of businesses in the longitudinal sample of the LSBS would be classified as high-growth on both the turnover and employment definitions. However, the correlation between the two measures is relatively weak - only around a quarter of firms that are high growth using the turnover definition are also high growth firms using the employment definition. As with the earlier analysis of sustained growth it is also

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<sup>8</sup> Probit models with the dependent variable of whether or not the business achieved continuous growth. A probit model is a type of regression model which analyses the relationship between a dependent variable and one or more independent variables (or 'predictors'), in which the dependent variable can take only two values.

interesting to consider which firm characteristics in 2015 are associated with subsequent high growth.

46. Table 4-1 summarises the characteristics of high-growth and other firms in the longitudinal sample. Table 6-14 reports some simple probit models to link these factors to subsequent high growth.

47. Whether using the employment or turnover definition of high growth firm, the analysis yields similar results. High growth firms are more active across a range of activities including exporting, innovating, training and using business support.

48. A number of these factors are also predictive of subsequent high growth:

- a. Innovating businesses are 13-16 per cent more likely to achieve subsequent high growth, as are those which use external finance;
- b. Firms providing staff training are 31-45 per cent more likely to subsequently achieve high growth;
- c. We find no significant effect of either family-ownership or BAME ownership on the probability of achieving high growth.

**Table 4-1: Characteristics of high-growth and non-high-growth firms**

	Employment definition		Turnover definition	
	Non-high growth	High-growth	Non-high growth	High-growth
Employment level in 2015	21.2	28.9	20.1	41.1
Exporting firm 2015	24.3	27.5	24.5	24.7
Innovator 2015	47.1	58.0	47.0	59.5
Women-owned business	19.7	20.8	19.4	24.5
BAME owners or directors	3.8	6.0	3.8	7.0
Business support use 2015	40.6	53.2	40.7	52.8
External finance use 2015	19.8	31.5	20.1	27.2
Provided staff training	75.6	89.1	75.6	89.3

**Notes:** Based on longitudinal respondents' sample with more than 10 employees. **Source:** LSBS 2015, 2016 and 2017.

### 4.3 Smaller high growth firms (fewer than ten employees)

49. The OECD definition omits a range of businesses from the calculation focussing only on those with ten or more employees. In terms of employment this means the minimum required growth in employment for a business to count as a high growth enterprise is eight employees – just greater than the effect of compound growth of 20 per cent per annum over three years. Some smaller firms (fewer than ten employees, also known as micro businesses) may also grow by this amount, and so we have also considered these businesses in our analysis. Around one per cent of the whole longitudinal sample fall into the group of smaller high growth firms over the period of 2015 - 2017, and around two per cent of firms with initial employment less than ten.

50.

51. Table 6-15 examines those variables which might help to predict high growth among micro-businesses. It shows that initial employment level and innovation or exporting activity prove the only significant predictors of high growth in micro-businesses.

# 5 Ambition and future growth plans

## 5.1 Introduction

52. Alongside the retrospective questions, the LSBS also includes forward-looking questions on businesses' growth ambitions and strategic intentions over the next three years. These indicators – discussed in this section – provide an indication of levels of optimism about future growth among the balanced panel of respondents. Note that in this section we consider growth ambitions and strategic intent over the coming three years. This differs from the previous section, where we analysed actual and anticipated growth over a period of one year.

## 5.2 Sales growth ambition

53. LSBS includes a question on whether businesses aim to grow their sales over the next three years. Overall, levels of growth ambition have declined in the panel of businesses over three years - 58 per cent of businesses aimed to grow in 2015 compared to 47 per cent in 2017. This trend is consistent across broad sectors, regions and employment size-bands.

54. Respondents that indicate they are aiming to grow their sales over the next three years are then asked by how much. The results are summarised in Table 5-1. Around one in five businesses envisaged modest growth of between one and nine per cent over three years. A slightly smaller percentage envisaged more than doubling their turnover. The profile of growth ambition is rather similar through time.

**Table 5-1: The percentage that businesses planned to grow their sales by (only businesses that planned to grow their sales in the next three years)**

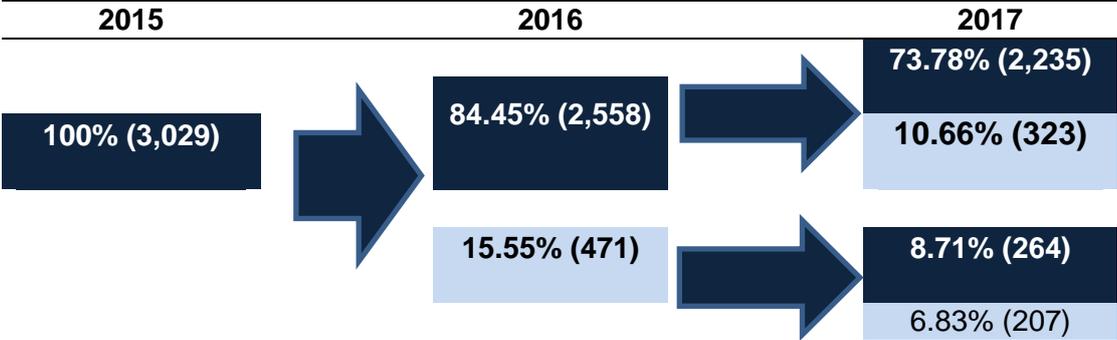
Size of growth in sales	Percentage of businesses each year		
	2015	2016	2017
1-9%	16.43%	19.24%	15.32%
10-24%	33.87%	39.39%	38.67%
25-49%	19.33%	17.35%	15.22%
50-74%	9.40%	9.40%	12.17%
75-99%	1.86%	0.93%	1.18%
100% or more	13.91%	9.76%	11.09%
Don't know	5.04%	3.68%	6.17%
All businesses	100.00%	100.00%	100.00%

**Notes and Sources:** Based on longitudinal respondents' sample who indicated an aim to grow sales over the next three years (N=2,718 to 3,029). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

55. To elaborate further, Figure 5-1 presents the evolution of UK SMEs growth ambition for the period 2015-2017. More specifically, at the beginning of the observation period, 3,029 businesses reported that they aimed to grow their sales within three years' time.

Over the period 2016-2017 this percentage remained very high - more than 80 per cent of businesses remained ambitious in terms of their future turnover growth. This is perhaps an indication that UK SMEs have remained confident that the UK economy will continue to offer opportunities and favourable conditions for businesses to grow.

**Figure 5-1: Three-year evolution of ambitions to grow turnover for the period 2015-2017**



**Key:** Dark blue boxes indicate businesses continuing to have an ambition to grow the firm’s turnover over the next three years. Light blue indicates no growth ambition for the next three years.

# 6 Detailed tables

## 6.1 Characteristics of the panel

**Table 6-1: Employment growth over the previous year: By sector**

	Decreased	Stayed the same	Increased
	<b>2016</b>		
Production and construction (ABCDEF)	6.58%	73.43%	19.99%
Transport, retail and food service (GHI)	12.02%	59.17%	28.80%
Business services (JKLMN)	8.06%	65.71%	26.24%
Other services (PQRS)	3.64%	77.74%	18.62%
All businesses	7.38%	69.29%	23.32%
	<b>2017</b>		
Production and construction (ABCDEF)	13.88%	64.09%	22.03%
Transport, retail and food service (GHI)	20.18%	53.39%	26.42%
Business services (JKLMN)	19.84%	61.55%	18.62%
Other services (PQRS)	8.38%	74.78%	16.84%
All businesses	15.72%	63.75%	20.53%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-2: Turnover growth over the previous year: By sector**

	Decreased	Stayed the same	Increased
	<b>2015</b>		
Production and construction (ABCDEF)	19.42%	48.08%	32.49%
Transport, retail and food service (GHI)	20.41%	47.20%	32.39%
Business services (JKLMN)	18.42%	47.19%	34.38%
Other services (PQRS)	18.20%	51.21%	30.60%
All businesses	18.99%	48.35%	32.66%
	<b>2016</b>		
Production and construction (ABCDEF)	19.18%	51.31%	29.51%
Transport, retail and food service (GHI)	21.13%	45.25%	33.61%
Business services (JKLMN)	19.60%	46.12%	34.29%
Other services (PQRS)	20.71%	50.72%	28.57%
All businesses	20.02%	48.38%	31.60%
	<b>2017</b>		
Production and construction (ABCDEF)	14.92%	54.00%	31.08%
Transport, retail and food service (GHI)	21.67%	47.24%	31.10%
Business services (JKLMN)	23.32%	42.91%	33.77%

Other services (PQRS)	20.63%	50.29%	29.08%
All businesses	20.19%	48.29%	31.51%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-3: Employment growth over the previous year: By size-band**

	Decreased	Stayed the same	Increased
<b>2016</b>			
Self-employed	0.00%	81.26%	18.74%
Micro (1 – 9)	28.72%	34.74%	36.54%
Small (10 – 49)	36.94%	19.92%	43.15%
Medium (50 – 249)	46.62%	14.34%	39.04%
All businesses	7.38%	69.29%	23.32%
<b>2017</b>			
Self-employed	10.30%	72.79%	16.91%
Micro (1 – 9)	31.44%	38.60%	29.96%
Small (10 – 49)	38.66%	22.47%	38.87%
Medium (50 – 249)	35.77%	15.72%	48.52%
All businesses	15.72%	63.75%	20.53%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-4: Turnover growth over the previous year: By size-band**

	Decreased	Stayed the same	Increased
<b>2015</b>			
Self-employed	19.95%	49.50%	30.55%
Micro (1 – 9)	16.34%	45.94%	37.72%
Small (10 – 49)	14.52%	40.62%	44.86%
Medium (50 – 249)	12.43%	30.48%	57.09%
All businesses	18.99%	48.35%	32.66%
<b>2016</b>			
Self-employed	20.20%	49.85%	29.95%
Micro (1 – 9)	19.84%	44.39%	35.77%
Small (10 – 49)	17.78%	41.91%	40.31%
Medium (50 – 249)	16.66%	34.29%	49.05%
All businesses	20.02%	48.38%	31.60%
<b>2017</b>			
Self-employed	20.58%	49.81%	29.61%
Micro (1 – 9)	19.62%	43.95%	36.43%
Small (10 – 49)	16.31%	42.97%	40.72%

Medium (50 – 249)	13.99%	34.14%	51.87%
All businesses	20.19%	48.29%	31.51%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-5: Percentage of businesses reporting employment and turnover increases: By region**

	Percentage of businesses reporting employment growth		Percentage of businesses reporting turnover growth		
	2016	2017	2015	2016	2017
East Midlands	19.38%	10.70%	34.24%	35.58%	35.50%
East of England	19.83%	22.48%	39.47%	32.58%	39.86%
London	27.98%	21.91%	33.73%	28.38%	34.48%
North East	31.50%	29.04%	15.88%	38.16%	43.00%
North West	20.97%	25.53%	28.13%	21.03%	22.08%
South East	26.79%	18.00%	31.07%	31.61%	30.82%
South West	23.82%	15.25%	35.39%	37.06%	33.85%
West Midlands	16.94%	33.88%	38.51%	32.79%	26.70%
Yorkshire & the Humber	17.10%	14.09%	30.02%	30.65%	23.24%
Scotland	27.49%	29.71%	28.63%	32.16%	32.60%
Wales	21.39%	20.39%	27.89%	22.95%	22.82%
Northern Ireland	31.50%	12.64%	37.41%	38.50%	35.95%
<b>All businesses</b>	<b>23.32%</b>	<b>20.53%</b>	<b>32.66%</b>	<b>31.60%</b>	<b>31.51%</b>

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-6: Percentage of businesses expecting employment increases or decreases: By sector**

	Decrease	Stay the same	Increase
	<b>2015</b>		
Production and construction (ABCDEF)	2.24%	82.16%	15.60%
Transport, retail and food service (GHI)	3.69%	77.16%	19.15%
Business services (JKLMN)	1.95%	80.51%	17.54%
Other services (PQRS)	0.62%	83.60%	15.79%
All businesses	6.06%	64.64%	29.30%
	<b>2016</b>		
Production and construction (ABCDEF)	3.63%	77.58%	18.80%
Transport, retail and food service (GHI)	6.77%	77.09%	16.14%
Business services (JKLMN)	4.75%	78.65%	16.59%

Other services (PQRS)	3.50%	84.98%	11.52%
All businesses	6.77%	65.23%	20.00%
<b>2017</b>			
Production and construction (ABCDEF)	7.91%	77.76%	14.33%
Transport, retail and food service (GHI)	6.95%	79.61%	13.44%
Business services (JKLMN)	6.14%	81.02%	12.83%
Other services (PQRS)	7.13%	85.47%	7.39%
All businesses	6.67%	67.69%	25.64%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-7: Percentage of businesses expecting turnover increases or decreases: By sector**

	Decrease	Stay the same	Increase
<b>2015</b>			
Production and construction (ABCDEF)	14.50%	50.45%	35.05%
Transport, retail and food service (GHI)	7.58%	48.59%	43.83%
Business services (JKLMN)	9.01%	45.93%	45.06%
Other services (PQRS)	8.57%	58.28%	33.15%
All businesses	10.09%	50.37%	39.53%
<b>2016</b>			
Production and construction (ABCDEF)	12.36%	57.80%	29.84%
Transport, retail and food service (GHI)	10.38%	52.05%	37.57%
Business services (JKLMN)	12.16%	49.05%	38.78%
Other services (PQRS)	12.66%	65.14%	22.20%
All businesses	12.00%	55.49%	32.50%
<b>2017</b>			
Production and construction (ABCDEF)	13.20%	56.36%	30.44%
Transport, retail and food service (GHI)	12.65%	55.56%	31.79%
Business services (JKLMN)	17.01%	45.05%	37.94%
Other services (PQRS)	15.98%	58.85%	25.16%
All businesses	14.97%	53.06%	31.96%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-8: Percentage of businesses expecting employment increases or decreases: By size-band**

	Decrease	Stayed the same	Increase
<b>2015</b>			
Self-employed	0.00%	86.47%	13.53%

Micro (1 – 9)	8.62%	66.04%	25.34%
Small (10 – 49)	7.31%	56.83%	35.86%
Medium (50 – 249)	7.51%	46.38%	46.11%
All businesses	6.06%	64.64%	29.30%
<b>2016</b>			
Self-employed	3.50%	84.36%	12.14%
Micro (1 – 9)	7.89%	65.93%	26.18%
Small (10 – 49)	7.40%	58.85%	33.74%
Medium (50 – 249)	7.29%	49.72%	42.99%
All businesses	6.77%	65.23%	20.00%
<b>2017</b>			
Self-employed	6.75%	85.30%	7.95%
Micro (1 – 9)	8.05%	68.94%	23.01%
Small (10 – 49)	5.92%	60.96%	33.12%
Medium (50 – 249)	7.39%	51.74%	40.87%
All businesses	6.67%	67.69%	25.64%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-9: Percentage of businesses expecting turnover increases: By size-band**

	Decrease	Stay the same	Increase
<b>2015</b>			
Self-employed	10.79%	51.84%	37.36%
Micro (1 – 9)	7.96%	46.78%	45.25%
Small (10 – 49)	7.70%	43.01%	49.29%
Medium (50 – 249)	7.19%	33.38%	59.44%
All businesses	8.84%	44.18%	46.98%
<b>2016</b>			
Self-employed	13.02%	57.75%	29.23%
Micro (1 – 9)	8.73%	49.82%	41.45%
Small (10 – 49)	9.48%	42.61%	47.90%
Medium (50 – 249)	8.60%	40.20%	51.21%
All businesses	10.28%	47.64%	42.08%
<b>2017</b>			
Self-employed	16.13%	54.51%	29.36%
Micro (1 – 9)	11.92%	49.22%	38.86%
Small (10 – 49)	8.93%	47.92%	43.15%
Medium (50 – 249)	8.92%	33.12%	57.97%
All businesses	11.72%	46.50%	41.78%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-10: Percentage of businesses anticipating employment and turnover increases: By region**

	Percentage of businesses anticipating growth in employment			Percentage of businesses anticipating growth in turnover		
	2015	2016	2017	2015	2016	2017
East Midlands	12.45%	10.26%	12.64%	32.93%	27.90%	23.30%
East of England	19.40%	20.00%	15.05%	43.54%	35.60%	37.60%
London	19.84%	20.70%	13.13%	42.49%	37.40%	40.50%
North East	19.54%	25.01%	12.44%	39.84%	45.90%	38.10%
North West	18.54%	21.69%	15.56%	43.36%	29.30%	26.40%
South East	12.81%	15.54%	11.40%	37.61%	30.40%	27.50%
South West	16.74%	9.74%	12.89%	35.22%	32.70%	32.70%
West Midlands	21.07%	17.32%	14.82%	39.72%	32.70%	40.00%
Yorkshire & the Humber	12.18%	12.29%	6.35%	42.26%	27.00%	31.40%
Scotland	22.34%	16.83%	7.94%	41.03%	31.90%	29.40%
Wales	17.39%	8.79%	7.93%	42.66%	28.60%	30.50%
Northern Ireland	20.86%	15.80%	9.41%	37.29%	49.40%	33.30%
<b>All businesses</b>	<b>16.92%</b>	<b>15.92%</b>	<b>12.09%</b>	<b>39.50%</b>	<b>32.50%</b>	<b>31.90%</b>

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-11: From anticipated employment growth to outcomes: 2015 to 2016**

	Expected Growth 2015	Growth outcomes		
		Employment Declined	Employment Stable	Employment Increased
Production and construction (ABCDEF)	15.6%	8.51%	43.97%	47.51%
Transport, retail and food service (GHI)	19.15%	11.25%	35.59%	53.17%
Business services (JKLMN)	17.54%	12.84%	37.04%	50.12%
Other services (PQRS)	15.79%	3.95%	57.34%	38.71%
All businesses	16.93%	9.58%	42.73%	47.69%
East Midlands	12.45%	13.85%	46.79%	39.36%

East of England	19.4%	7.10%	62.29%	37.71%
London	19.84%	10.79%	33.77%	55.44%
North East	19.54%	1.93%	61.7%	36.37%
North West	18.54%	6.67%	32.84%	60.49%
South East	12.81%	13.19%	35.04%	51.78%
South West	16.74%	6.14%	51.44%	42.42%
West Midlands	21.07%	9.63%	61.44%	28.92%
Yorkshire & the Humber	12.18%	16.15%	33.40%	50.46%
Scotland	22.34%	9.92%	20.15%	69.93%
Wales	17.39%	3.56%	56.68%	39.77%
Northern Ireland	20.86%	13.96%	45.08%	40.96%
All businesses	16.93%	9.58%	42.73%	47.69%
Self-employed	13.53%	0.00%	56.16%	43.84%
Micro (1 – 9)	25.34%	21.73%	24.66%	53.61%
Small (10 – 49)	35.86%	30.09%	15.04%	54.87%
Medium (50 – 249)	46.11%	41.10%	11.81%	47.09%
All businesses	16.93%	9.58%	42.73%	47.69%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

**Table 6-12: From anticipated employment growth to outcomes: 2016 to 2017**

	Expected Growth 2015	Growth outcomes		
		Employment Declined	Employment Stable	Employment Increased
Production and construction (ABCDEF)	18.80%	16.85%	45.81%	37.34%
Transport, retail and food service (GHI)	16.14%	19.23%	35.42%	45.35%
Business services (JKLMN)	16.59%	16.52%	51.59%	31.88%
Other services (PQRS)	11.52%	22.80%	51.05%	26.15%
All businesses	15.93%	18.16%	46.73%	35.11%
East Midlands	10.26%	20.45%	55.18%	24.33%
East of England	20.00%	15.99%	47.22%	36.79%
London	20.70%	25.20%	31.14%	44.65%
North East	25.01%	12.91%	52.30%	34.78%
North West	21.69%	4.76%	43.15%	52.08%
South East	15.54%	25.74%	54.98%	19.28%
South West	9.74%	23.24%	31.04%	45.72%
West Midlands	15.39%	18.68%	55.26%	26.06%

Yorkshire & the Humber	12.29%	14.26%	46.33%	39.41%
Scotland	16.83%	11.18%	50.40%	38.41%
Wales	8.79%	21.92%	54.14%	23.94%
Northern Ireland	15.80%	19.15%	63.90%	16.95%
All businesses	15.93%	18.16%	46.73%	35.11%
Self-employed	12.14%	11.27%	61.23%	27.50%
Micro (1 – 9)	26.18%	27.21%	29.96%	42.82%
Small (10 – 49)	33.74%	29.38%	16.71%	53.91%
Medium (50 – 249)	42.99%	25.92%	15.91%	58.17%
All businesses	15.93%	18.16%	46.73%	35.11%

**Notes and Sources:** Based on longitudinal respondents' sample (N=4,165). Responses are weighted to give representative results. Source: LSBS 2015, 2016 and 2017.

## 6.2 Detailed tables for statistical models

**Table 6-13: Predicting the probability of sustained growth**

Baseline group:	Businesses increasing employment in 2015	All businesses other than those growing consistently	Businesses increasing employment in 2015	All businesses other than those growing consistently
	Unweighted	Unweighted	Weighted	Weighted
Employment 2015	0.005*** (0.001)	0.004*** (0.001)	0.005*** (0.001)	0.003** (0.001)
Exporting firm 2015	0.093 (0.136)	0.096 (0.115)	0.028 (0.154)	0.069 (0.130)
Innovator 2015	0.121 (0.128)	0.205* (0.105)	0.209 (0.149)	0.299** (0.121)
Women-owned business	0.21 (0.162)	0.064 (0.130)	-0.026 (0.188)	-0.071 (0.149)
BAME owners or directors	-0.079 (0.263)	0.076 (0.231)	-0.180 (0.340)	0.026 (0.289)
Business support use 2015	-0.024 (0.125)	0.005 (0.103)	-0.006 (0.138)	0.025 (0.113)
External finance use 2015	0.041 (0.132)	0.100 (0.111)	-0.152 (0.156)	-0.008 (0.130)

Provided staff training	0.274 (0.238)	0.294 (0.197)	0.292 (0.235)	0.271 (0.195)
No of observations	<b>597</b>	<b>1299</b>	<b>597</b>	<b>1299</b>
Chi2	39.382***	57.680***	47.910***	79.639***
R <sup>2</sup>	0.065	0.071	0.071	0.079
BIC	714.959	921.045	704.651	818.092

**Notes:** Based on longitudinal respondents' sample with more than 10 employees. Marginal effects are reported. SE's in brackets. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1% level respectively. Models include sectoral and regional controls. **Source:** LSBS 2015, 2016 and 2017.

**Table 6-14: Predicting the probability of high growth (OECD definition)**

	Employment definition	Turnover definition	Employment definition	Turnover definition
	Unweighted	Unweighted	Weighted	Weighted
Employment 2015	-0.001 (0.001)	0.003*** (0.001)	0.005*** (0.002)	0.008*** (0.003)
Exporting firm 2015	0.01 (0.085)	-0.071 (0.090)	0.133 (0.085)	0.113 (0.089)
Innovator 2015	0.162** (0.076)	0.098 (0.079)	0.131* (0.077)	0.084 (0.077)
Women-owned business	0.024 (0.094)	0.093 (0.095)	0.036 (0.096)	0.065 (0.092)
BAME owners or directors	0.016 (0.174)	0.036 (0.176)	0.051 (0.188)	0.171 (0.185)
Business support use 2015	0.056 (0.075)	0.139* (0.078)	0.073 (0.075)	0.137* (0.078)
External finance use 2015	0.170** (0.084)	0.009 (0.090)	0.183** (0.086)	-0.033 (0.097)
Provided staff training	0.451*** (0.103)	0.313*** (0.106)	0.512*** (0.092)	0.378*** (0.093)
No of observations	2262	2262	2262	2262
Chi <sup>2</sup>	60.082	78.235	87.885	74.64
R <sup>2</sup>	0.04	0.056	0.074	0.091
BIC	1609.226	1497.585	733.881	689.517

**Notes:** Based on longitudinal respondents' sample with more than 10 employees. Marginal effects are reported. SE's in brackets. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1% level respectively. Models include sectoral and regional controls. **Source:** LSBS 2015, 2016 and 2017.

**Table 6-15: Predicting high growth among micro-businesses: employment definition**

	Unweighted	Unweighted
Employment 2015	0.062**	0.090***
	(0.031)	(0.030)
Exporting firm 2015	-0.206	-0.431**
	(0.202)	(0.191)
Innovator 2015	0.372**	0.502**
	(0.172)	(0.206)
Women-owned business	0.104	0.246
	(0.207)	(0.209)
BAME owners or directors	-0.188	0.091
	(0.464)	(0.417)
Business support use 2015	0.227	0.107
	(0.174)	(0.182)
External finance use 2015	0.108	-0.132
	(0.200)	(0.220)
Provided staff training	0.16	-0.067
	(0.187)	(0.192)
No of observations	1022	1022
Chi2	22.535	64.265
R^2	0.077	0.118
BIC	421.416	320.875

**Notes:** Based on longitudinal respondents' sample with less than 10 employees. Marginal effects are reported. SE's in brackets. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1% level respectively. Models include sectoral and regional controls. **Source:** LSBS 2015, 2016 and 2017.



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