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**BUSINESS GROWTH, ACCESS TO
FINANCE, AND PERFORMANCE
OUTCOMES IN THE RECESSION**

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1 Introduction

The Study

The purpose of this study is to assess, and quantify, the impacts of the financial crisis and subsequent global economic recession on the growth and performance of UK SME employers. In addition, it considers how the problems in the banking sector have affected the supply of finance to the SME sector, and whether this has, in turn, depressed business performance and investment. The study also considers whether or not the impact of the recession has been more serious for particular types of entrepreneurs and businesses. Conclusions are drawn which may provide a basis for future policy development to support the SME sector in periods of economic instability.

The next section describes the data sources for this study and the survey method from which the data is derived.

Data

This study is intended to analyse existing data from two previous survey sources which cover information on SME employers in the pre-recession and recessionary periods, respectively.

The pre-recession data is derived from Annual Small Business Survey (ASBS) in 2007/08. The ASBS survey has been conducted on an annual basis¹ since 2003 and the 2007/08 survey involved a large-scale telephone survey conducted by IFF Research Ltd between November 2007 and March 2008 to monitor key trends in the characteristics and perceptions of small business owners and managers. The main purpose of the survey is to gauge the needs and concerns of small businesses and identify the barriers that prevent them from fulfilling their potential. A total of 9,362 SMEs (businesses with fewer than 250 employees) were interviewed using a stratified random sample selection method evenly across thirteen regions in the UK and the samples were randomly drawn across all commercial sectors of the economy.

A sample of the SMEs entering the 2007/08 ASBS were re-contacted in a series of 'Business Barometer' surveys to determine how well or badly they have performed in the previous year, and to assess their levels of business confidence going forward. On average 500 SMEs were re-surveyed using questions similar to the 2007/08 ASBS in each of the seven 'Business Barometer waves', starting from December 2008 to February 2010 with intervals of two to three months. The survey period

¹ After 2008 the survey will be conducted biennially.

coincides the latest financial crisis therefore gives us the opportunity to investigate how business attitudes and access to finance by UK SME change pre- and post-recession.

The 'matching' of 2007/08 ASBS and 'Business Barometer' surveys yield a dataset of 3,506 SME employers, which means there is no loss of data from the barometer surveys. Excluding missing values only reduces the sample size by a very small amount. It is also possible that a firm is defined as an SME in earlier surveys but grew to a larger firm with more than 250 employees and we have removed these firms to restrict our analysis on SME employers only. The Business Barometer surveys are also weighted to account for attrition due to survival in the sample.

This report has three substantive, and linked, chapters which cover issues surrounding;

- Growth performance
- Access to finance
- Performance outcomes

In terms of methodology, the report uses descriptive (univariate) statistics to describe general patterns in the movement of key variables over time. A particular focus here is in comparing the pre-recession and within recession data. This descriptive analysis is then supplemented by multivariate (regression based) analysis to isolate key differences the determinants of growth, access to finance and performance by personal characteristics and firm level characteristics. In addition the effects of the recession are isolated as it unfolded from September 2008.

2 Growth performance

Summary

- 4 in 10 SMEs had experienced a fall in employment in the recession
- Job losses peaked during the middle period of the recession
- Twice the number of SMEs experienced a fall in turnover during the recession than before the recession
- Increasing numbers of SMEs are now focused on growth as the economy emerges from recession
- The recession has not diminished the desire of SMEs to seek growth in the future
- Growth ambitions are highest amongst medium-sized firms, those that export, and those with a positive commitment to training

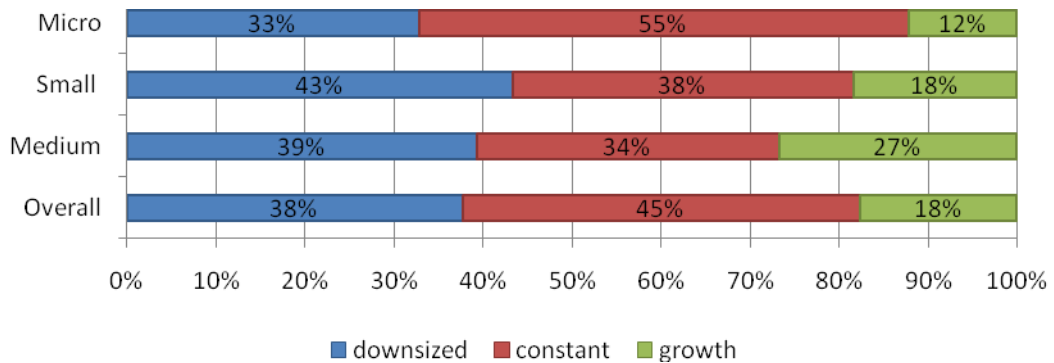
2.1 This section explores the extent to which SME employers had grown over the previous 12 months, in terms of employment and turnover and reports their ambitions for future growth.

Growth in the past 12 months

2.2 The Barometer surveys explored the extent to which SME employers had experienced growth or decline in the previous 12 months in terms of both employment and turnover.

2.3 When surveyed during the recession, in aggregate, less than one in five SME employers (18 per cent) reported employment growth in the previous 12 months. Note that this period may cover time pre-recession but where economic conditions were deteriorating – throughout this is taken to be the same as ‘during recession’ while 45 per cent said their employment level had stayed the same. 38 per cent reported a decline in employment. Figure 2.1 describes the variation in employment growth by size class, and shows that during the recession medium-sized businesses were more likely to have experienced employment growth, with 27 per cent of medium-sized businesses growing compared to 12 per cent of micro-sized businesses. However, in small and medium-sized firms, the proportion of firms experiencing growth in employment has declined from pre-recession levels when 39 per cent of medium-sized firms and 30 per cent of small firms grew their employment size. This contrasts with micro firms who were more likely to grow their employment during the recession than before the recession when only 8 per cent grew their employment.

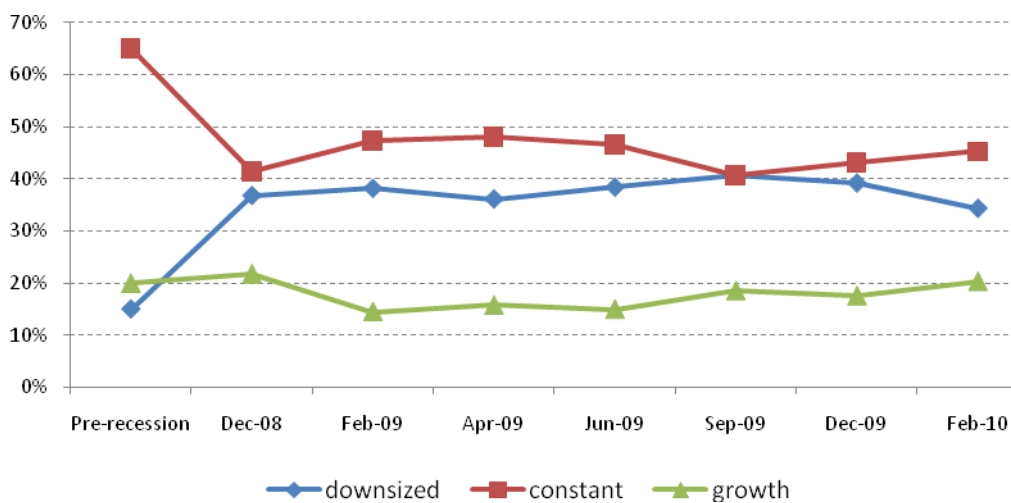
Figure 2.1: Aggregate employment change in past 12 months during recession by firm size class



Base: All SME employers (weighted data); unweighted N=3,506.

- 2.4 There is evidence that employment growth has slowed down during the recession, when the proportion of firms growing in employment was 18 per cent overall. But the difference compared to the pre-recession figure of 20 per cent is quite small suggesting that the SME sector has been fairly strong during the recession.
- 2.5 Figure 2.2 shows the employment growth before and during the recession (though as noted above, some of the earlier barometer surveys ask about growth in a time period which was not strictly during the recession). Employment growth is more prevalent at the beginning and end of the recession, where 22 and 20 percent of SMEs experienced growth. This compares to only 15 per cent in February 2009 and June 2009. The proportion of SMEs experiencing a decline in employment was highest in September 2009 at 41 per cent.

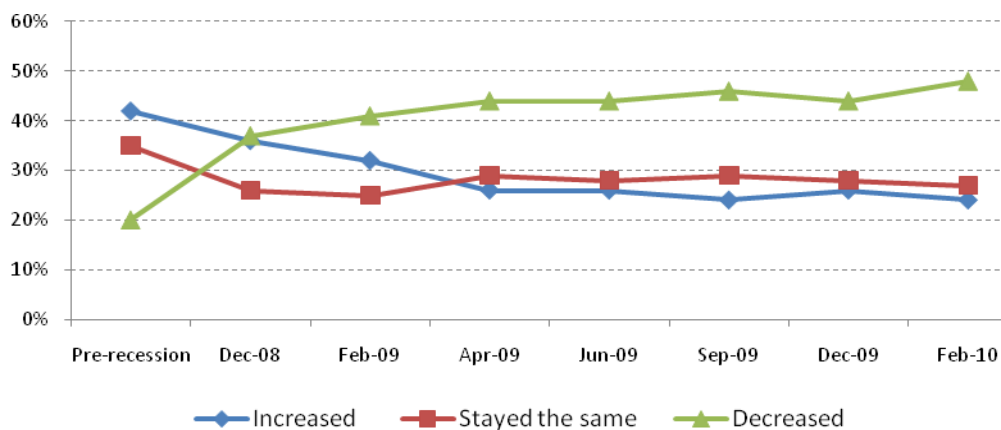
Figure 2.2: Pre-and-within recession employment change in past 12 months



Base: All SME employers (weighted data); unweighted N=3,506.

- 2.6 More SMEs had experienced turnover growth than employment growth during the recession. Overall, 28 per cent of SMEs had increased their turnover during the recession 27 per cent had maintained their turnover, and 43 per cent had experienced a fall in turnover. The share of SMEs growing their turnover in the recession is much lower than in the pre-recessionary period (28 per cent compared to 42 per cent). More than twice as many SMEs reported a fall in turnover compared to the pre-recessionary period (43 per cent compared to 20 per cent).
- 2.7 Figure 2.3 (Appendix A) shows turnover change before and during the recession. The general pattern shows that the proportion of SMEs experiencing turnover growth declined as the recession progressed. But the most striking finding was that the proportion of SMEs experiencing a decline in turnover increased from a pre-recessionary figure of 20 per cent to a figure of 48 per cent in February 2010.

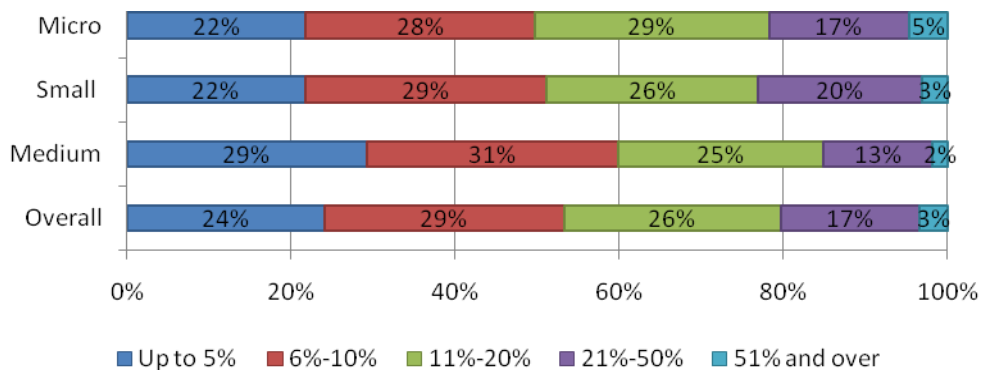
Figure 2.3: Pre-and-within recession turnover change in past 12 months



Base: All SME employers (weighted data); unweighted N=3,506.

- 2.8 As with employment change, medium-sized firms were more likely to have increased their turnover during the recession (37 per cent) than small (26 per cent) and micro-firms (24 per cent).
- 2.9 For businesses reporting an increase in turnover over the past year, one in five SMEs experienced an increase of more than 20 per cent. Figure 2.4 shows the scale of turnover growth by SME size class (micro, small and medium). It can be seen that micro- and small-sized businesses are more likely to experience substantial turnover growth than medium-sized businesses.

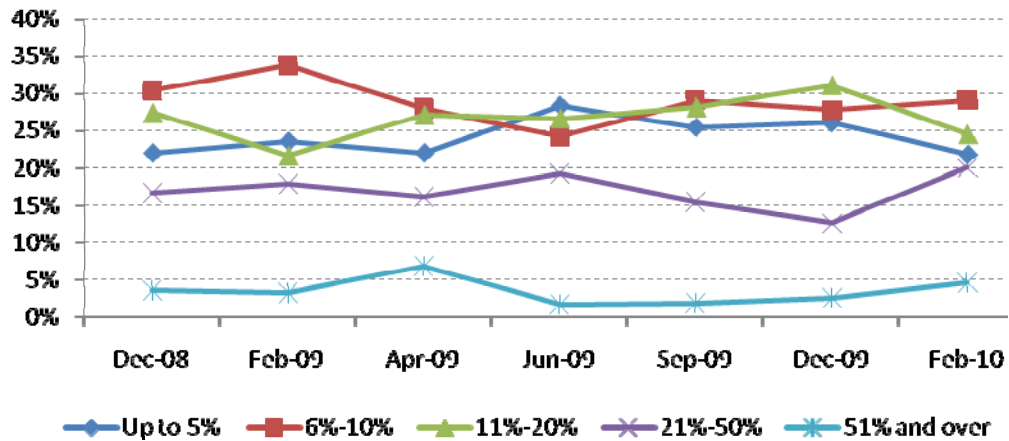
Figure 2.4: Aggregate turnover increases in past year during the recession by firm size class



Base: SME employers reporting turnover increase in the past 12 months (weighted data); unweighted N=972.

2.10 The prevalence of high turnover growth (in excess of 20 per cent) was highest in April 2009 and February 2010 where 23 and 25 percent of employers reported turnover increases above 20 per cent. This is illustrated in Figure 2.5.

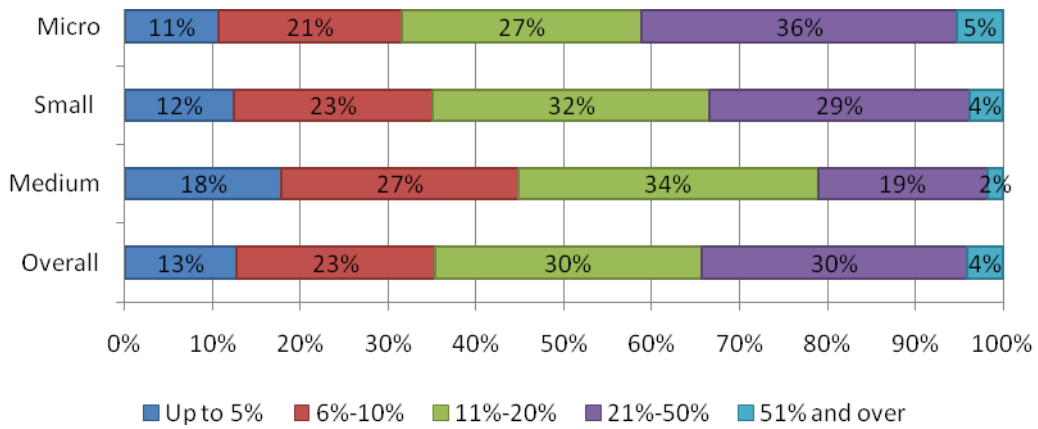
Figure 2.5: Within recession turnover growth rates



Base: SME employers reporting turnover increase in the past 12 months (weighted data); unweighted N=972.

2.11 For businesses reporting decreased turnover, over a third of SMEs (34 per cent) experienced a decrease of more than 20 per cent. Figure 2.6 shows the scale of turnover decreases across SME size classes. Although micro- and small-firms are more likely to experience large turnover increases, they are also more likely to experience large declines in turnover. This suggests that volatility in performance is higher in micro and small firms compared to medium-sized firms.

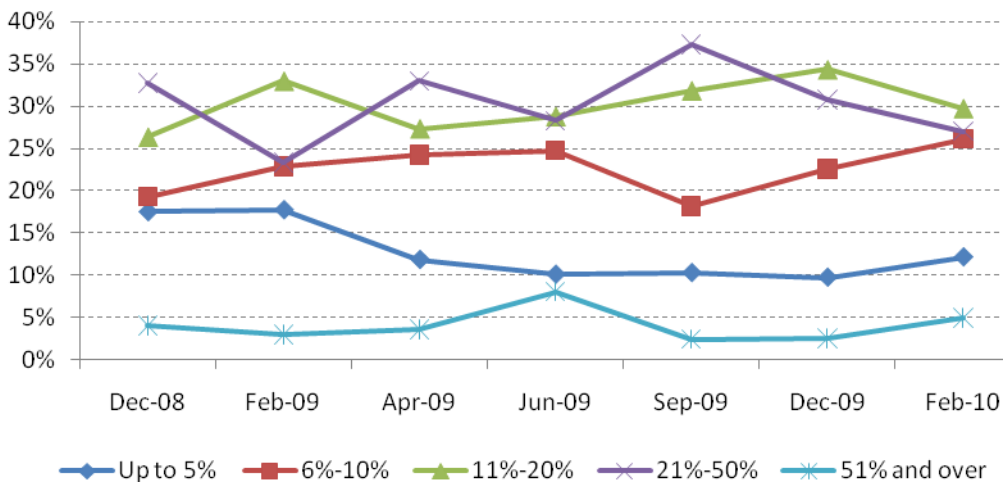
Figure 2.6: Aggregate turnover decreases in past year during the recession by firm size class



Base: SME employers reporting turnover decrease in the past 12 months (weighted data); unweighted N=1,523.

2.12 Fig 2.7 shows that as the economy entered recession the impact on turnover was quite modest initially in terms of scale of decline. The most dramatic decreases in turnover tended to occur during the middle period of the recession.

Figure 2.7: Within recession rates of decline in turnover



Base: SME employers reporting turnover decrease in the past 12 months (weighted data); unweighted N=1,523.

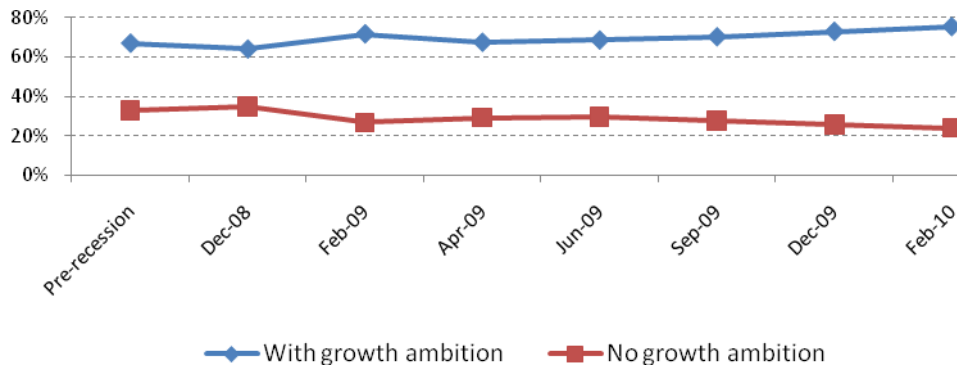
Growth ambitions

2.13 As well as exploring recent actual performance, the surveys sought to understand the future growth aspirations of SMEs going forward. To assess growth intentions, the survey asked SMEs whether or not they aimed to grow their firms over the next two to three years.

2.14 Before and during the recession, the likelihood of having a growth aspiration increased with the size of business. 61 per cent of micro firms were aiming to grow compared to 74 per cent of small firms and 83 per cent

2.15 Growth ambitions generally increase over time during the recessionary period. Figure 2.8 shows that the percentage of employers reporting growth ambitions increased from 64 per cent in December 2008 to 75 per cent in February 2010.

Figure 2.8: Pre-and-within recession growth ambitions



Base: All SME employers (weighted data); unweighted N=3,506.

- 2.16 In aggregate during the recession 7 per cent of SMEs anticipated either closing down (3 per cent) or transferring ownership (4 per cent) of their businesses in the next 12 months. SMEs appears to be more optimistic about their business prospects than in the pre-recessionary period, when eight per cent anticipated closing down and 19 percent anticipated transferring ownership.
- 2.17 During the recession, the smaller the size of firm, the more likely it was to anticipate closure or ownership transfer (Appendix B). Nine per cent of micro firms anticipated sale or closure, compared to seven per cent of small firms and three per cent of medium-sized firms. As the recession progressed, fewer firms anticipated closure or ownership transfer (Figure 2.9).

Figure 2.9: Pre-and-within recession anticipation of closure or ownership transfer

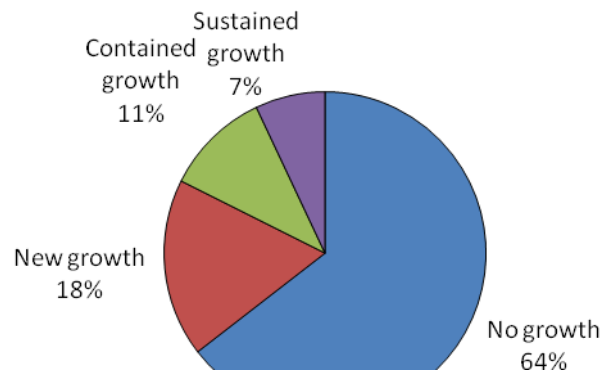


Base: All SME employers (weighted data); unweighted N=3,506.

Growth trajectories

- 2.18 By combining measures of past employment growth and ambitions for future growth, it is possible to define four types of SMEs that capture past and future growth dynamics. These are:
- **Sustained growth** – those with more employees than they had 12 months previously and who also anticipated increasing staff numbers in the next year.
 - **Contained growth** – those with more employees than they had 12 months previously but who did not anticipate increasing staff numbers in the next year.
 - **New-growth** – those that had not experienced employment growth in the previous 12 months, but who anticipated growth during the next year.
 - **No growth** - The remainder of firms recorded no growth historically and have no intention to grow in the future.
- 2.19 Around two thirds of businesses (64 per cent) fell into the ‘no growth’ category. **New-growth** businesses made up 18 per cent of all SMEs. **Contained growth** firms comprised 11 per cent of all SMEs, and **sustained growth** firms made up seven per cent of all SMEs (Figure 2.10). These are similar proportions to those recorded in the pre-recessionary period.

Figure 2.10: Aggregate within recession employment growth trajectories

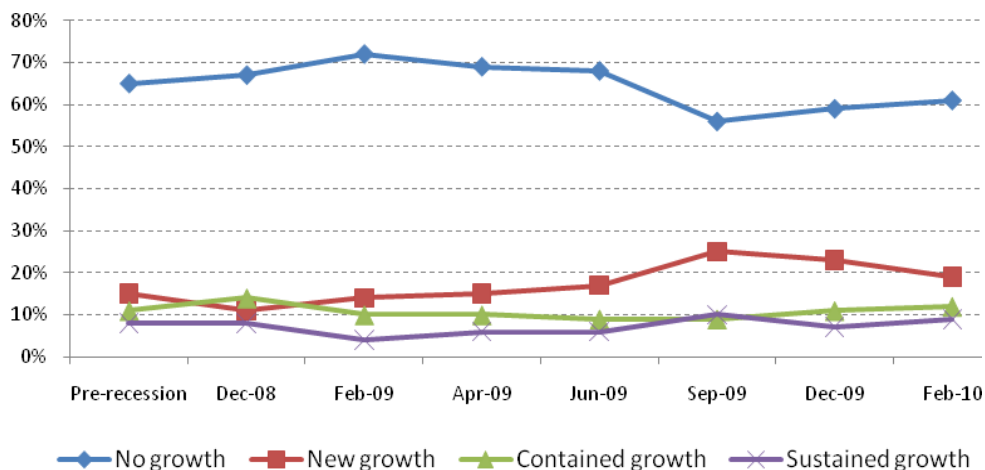


Base: All SME employers (weighted data); unweighted N=3,506.

2.20 During the recession, the larger the size of firm, the more likely they are to fall into the **sustained growth** category. The proportion with **sustained growth** increases from 4 per cent amongst micro firms, to 7 per cent of small firms and 13 per cent of medium-sized firms.

2.21 Fig 2.11 shows that early in the recession the proportion of SMEs in the **no growth** category increase from its pre-recession figure of 65 per cent (Appendix C). But this dampening down of growth trajectories tailed off within six months of the recession, and subsequently fell below pre-recession levels. This pattern was mirrored by a large increase in the proportion of SMEs with **new growth** trajectories from June 2009 onwards.

Figure 2.11: Pre-and-within recession employment growth trajectories



Base: All SME employers (weighted data); unweighted N=3,505.

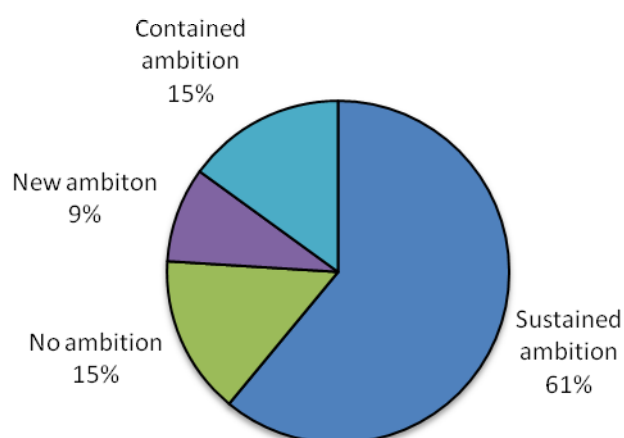
2.22 We also define four categories based on growth orientations (whether or not the business aimed to grow over the next two to three years) pre- and post-recession. This is defined in Table 1.1.

Table 2.1: Growth orientation trajectory definitions

	Growth orientation in recession	
Growth orientation pre-recession	Sustained ambition (Yes, Yes)	Contained ambition (Yes, No)
	New ambition (No, Yes)	No ambition (No, No)

2.23 Around one in seven SMEs reported **no ambition** in terms of growth (Figure 2.12). More than 60 per cent of firms had a **sustained ambition**. 15 per cent of SMEs had **contained ambition** and 9 per cent had **new ambition**.

Figure 2.12: Aggregate within recession growth orientation trajectories

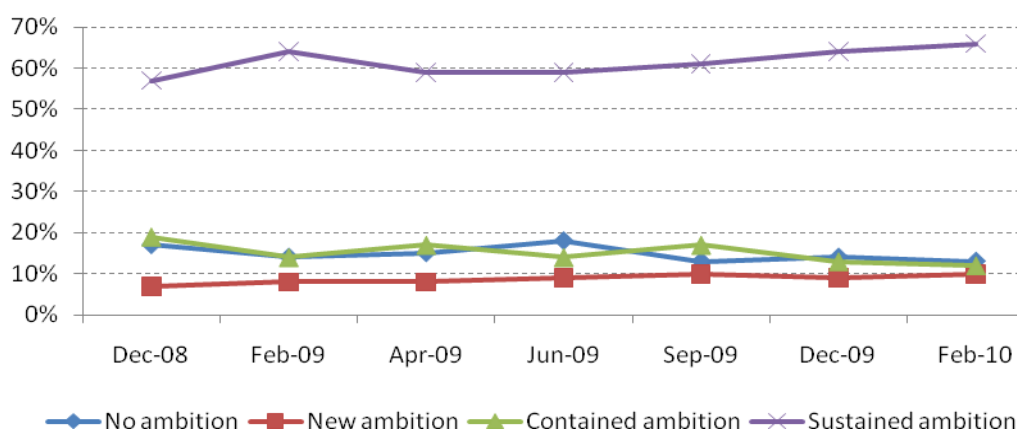


Base: All SME employers (weighted data); unweighted N=3,506.

2.24 The incidence of **sustained ambition** increases with size of firm. 51 per cent of micro firms exhibited **sustained ambition**, compared to 65 per cent of small firms and 77 per cent of medium-sized firms.

2.25 Fig 2.13 shows that at the beginning of the recession SMEs were more modest in respect of their growth ambitions (Appendix D). But as time progressed, they generally became more confident and ambitious about future growth.

Figure 2.13: Within recession growth ambitions



Base: All SME employers (weighted data); unweighted N=3,506.

Econometric Analysis on Growth Orientations

- 2.26 The start point was to econometrically model the ambition to seek growth defined by the ambition to seek growth in the next 2 or 3 years. As the dependent variable of interest is binary, the most appropriate method is a probit model with growth orientation coded 1 if the firm has a growth orientation or zero otherwise. For ease of interpretation, we will report the marginal effects models thus highlighting any significant increase (decrease) in the probability that a firm with a specific characteristic will be more (less) likely to be growth orientated. On the right-hand side of our models we will include a set of common firm characteristics (e.g age, size, sector, region) and a set of core characteristics of the firms owners (e.g gender, experience, ethnicity etc). In addition we will include a set of potentially important variables such as whether or not a firm exports, its level of innovation (product, service and/or process), attitude to training, willingness to seek advice etc and other indicators of firm, product and market characteristics. This information uses the Barometer surveys covering the recessionary period.
- 2.27 On average, using the pooled data set for all recessionary time periods, and compared to micro-sized businesses, small- and medium-sized businesses are 14 and 22 per cent more likely to have a growth orientation than micro businesses. Older businesses are also less likely to have a growth orientation. Businesses that are six to twenty years old are 7 per cent less likely to be growth orientated than firms less than five years old. Businesses in the construction sector are 12 per cent less likely to have a growth orientation, and businesses in Wales are 7 per cent less likely to seek growth.
- 2.28 Compared to December 2008, firms in general were more likely to have a growth orientation. February 2010 was when firms were most likely to seek growth (8 per cent more likely).
- 2.29 Women-led and ethnic minority-led businesses show no difference in growth ambitions compared to male-led and non-ethnic-led businesses. It was also the case that experienced employers (i.e. those with prior

- 2.30 Firms exporting outside the UK are 18 per cent more ambitious in terms of future growth than domestic focused businesses. Innovating firms, and those that funded training, were both more likely to be growth orientated. Growth orientations were unaffected by willingness to seek advice.

Pre-recession and within recession models of growth

- 2.31 Separate models were estimated for the pre-recession period and the within recession period to help establish whether or not the core determinants of growth orientation remain the same given different macroeconomic environments (Appendix F). The variables we used to predict pre-recession growth orientations are matched variables from 2007/08 Annual Small Business Survey.
- 2.32 The results, in terms of the general relationships between entrepreneur and firm characteristics and growth, are very similar to post-recession estimates. Larger firms are more likely, and older firms are less likely, to be growth oriented. However, firms from the South West are 7 per cent more likely to have a growth orientation prior to the recession. Similarly, employer characteristics (gender, experience, ethnicity) had no influence on growth ambitions. Exporting, innovation and training all helped to increase the growth orientation of a business but the scale of this influence was smaller in the pre-recession period. However, willingness to seek advice is an important indicator of firms seeking growth in the pre-recession period. Here this increased the likelihood of growth seeking by 4 per cent.

Modelling growth orientation trajectories

- 2.33 Estimating the determinants of growth orientation trajectories allows an examination of the dynamics of targeting SMEs when making decisions on growth. Using the four growth orientation trajectories previously defined, a multinomial logit model is estimated which allows for multiple responses in the dependent variable, where there is no logical ordering in the responses. This method requires that a base or reference category is chosen, and in this case the most obvious choice is the '**no ambition**' category.
- 2.34 On average and compared to businesses fall into the '**no ambition**' category, larger sized businesses are more likely to be growth orientated. Small businesses are three times as likely to and medium-sized businesses seven times more likely to have sustained growth ambition. Compared to young firms (up to five years old), firms that are six to twenty years old are 60 per cent less likely to have a sustained growth orientation. Firms more than twenty years old are 50 per cent less likely to report new growth ambitions.
- 2.35 Sector does not predict growth orientation. However there some regional differences are present. Firms in the West Midlands are 50 per cent less likely to have new growth ambitions; and businesses in the South West and Yorkshire and the Humber are both 70 per cent more likely to have contained growth ambitions. Further, businesses operating in the South West 50 per cent more likely to exhibit a sustained growth orientation.

Within recession growth orientation trajectories

- 2.36 When looking at growth orientation trajectories for firms within the recessionary period, in general firms are more likely to exhibit sustained growth orientations later in the recession than at the onset of the recession.
- 2.37 Ethnic minority-led firms are 90 per cent more likely to have new growth ambitions in the recession than non-ethnic owned firms and women-led businesses are 40 per cent more likely to have contained growth orientations than male owned firms.
- 2.38 Firms that exported, undertook innovation and funded training were more likely (190 per cent, 60 per cent, and 120 per cent, respectively) to exhibit new growth ambitions. These characteristics play an even more important role for firms with sustained growth orientations. On average firms that exported were 270 per cent more likely to fall into this category and those that undertook innovation and funded training were more likely to have sustained growth ambitions (150 per cent and 160 per cent more likely respectively). Interestingly, firms that were aware of the government's measures to help businesses through the economic downturn were on average 50 per cent more likely to have sustained growth ambitions. Firms that increased their turnover in the last 12 months were 30 per cent more likely to have new growth ambitions even if they showed no growth orientation previously.

3 Access to Finance

Summary

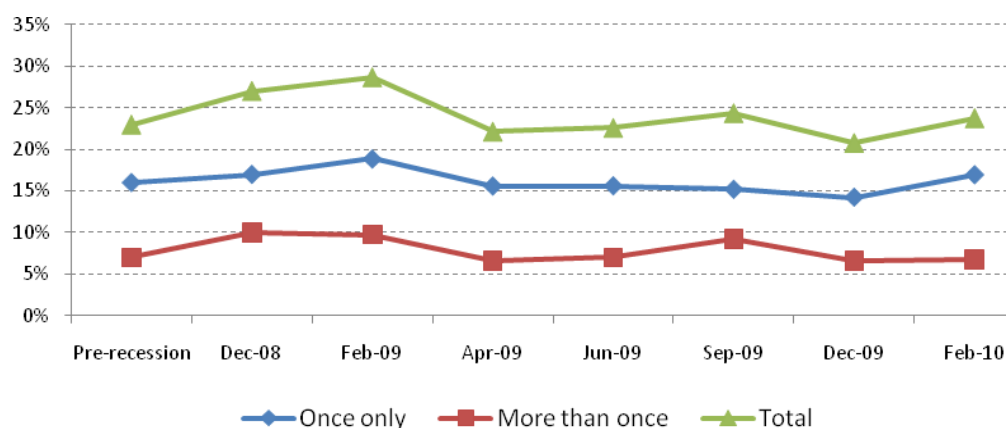
- Demand for finance, in general, only diminished by 8 percentage points during the recession, and is particularly high amongst medium-sized businesses
- But the supply of finance has diminished significantly, and even those who were successful in securing funding found the process and outcomes more difficult and onerous
- Lack of access to finance led to SMEs delaying or cancelling investment projects
- 63 per cent of SMEs who sought finance prior to the recession made no further applications for funding during the recession
- The evidence suggests that in periods of economic growth banks use a much richer set of indicators (see Appendix G) when making their financing decisions, but during recessions their primary focus is on easily verifiable characteristics such as firm size
- Using SME population statistics for the UK², it is estimated that the number of credit rationed SMEs (those who applied for finance but couldn't get it) peaked in February 2009 at 119,000 firms. By February 2010 the comparable estimate is 73,000 firms.

Within recession demand for finance

- 3.1 Just under a quarter (24 per cent) of SMEs had tried to obtain finance for their business in the previous 12 months. One in six (16 per cent) had tried to obtain finance once, and 8 per cent tried more than once.
- 3.2 The larger the business the more likely it was to have tried to obtain finance during the recession. Three out of ten (30 per cent) of medium-sized firms had tried to obtain finance, compared to 26 per cent of small, and 20 per cent of micro firms. The proportion of SMEs seeking finance has fallen across all size classes of firm from its pre-recession levels.
- 3.3 In general, fewer firms sought finance as the recession continued. Figure 3.1 shows the percentage of firms seeking finance during the recession. The proportion of firms seeking finance was highest in February 2009 at 29 per cent, with 19 per cent trying to obtain finance once and 10 per cent trying to obtain finance more than once. It was lowest in December 2009 with only 21 per cent of firms seeking finance, and 14 per cent trying to obtain finance once and 7 per cent trying to obtain finance more than once.

² Only SME with employees are included and the total population is 1,220,070 firms.

Figure 3.1: Pre- and within-recession percentage of SMEs seeking finance



Base: All SME employers (weighted data); unweighted N=3,506. Don't know and/or refused to answer = 1 per cent.

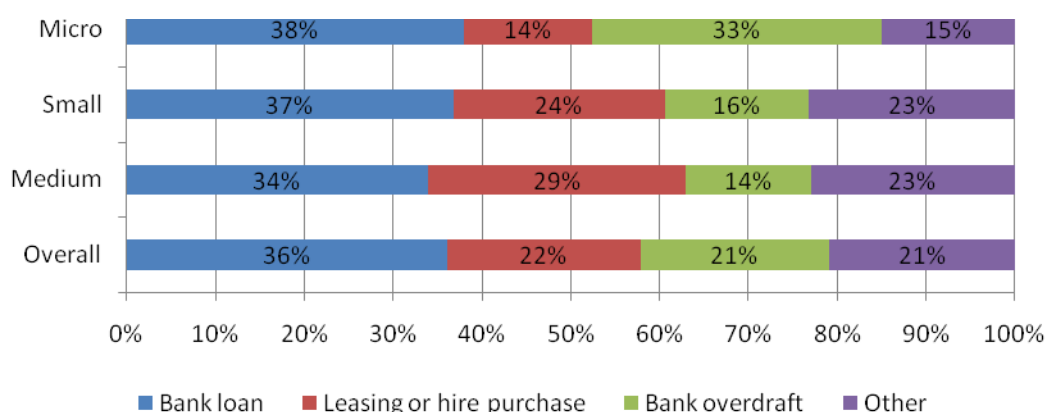
3.4 The main reasons given by SME employers for attempting to obtain finance were:

- working capital/cash flow, 38 per cent of those seeking finance (43 per cent in the pre-recession period)
- acquiring capital equipment or vehicles, 30 per cent (26 per cent in the pre-recession period)
- buying land or buildings, 10 per cent (10 per cent in the pre-recession period)
- Improving buildings, 5 per cent (8 per cent in the pre-recession period)

Types of finance sought

- 3.5 The most commonly sought types of finance are the same during the recession as in the pre-recession period. The most common types of finance sought were bank loans (36 per cent compared to 44 per cent in the pre-recession period), leasing or higher purchase (22 per cent compared to 10 per cent in the pre-recession period) and bank overdrafts (21 per cent compared to 26 per cent in the pre-recession period).
- 3.6 Different size classes of SMEs had different preferences over types of finance, as shown in Figure 2.2. Micro firms were more likely to choose bank loans (38 per cent) or bank overdrafts (34 per cent). Medium-sized firms were more likely (29 per cent) to seek leasing or hire purchase.

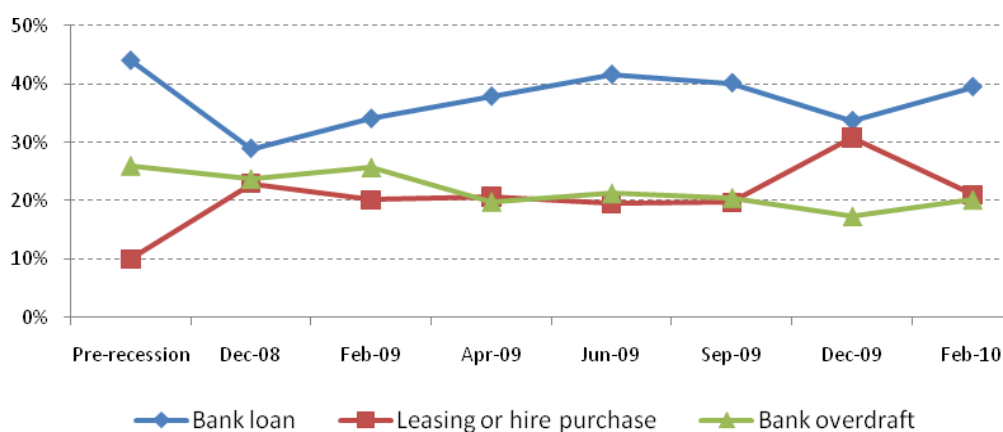
Figure 3.2: Aggregate within recession types of finance sought by SME size class



Base: All SME employers tried to obtain finance in the past 6 months (weighted data); unweighted N = 848.

3.7 Bank loans were the favoured choice of SME finance in the pre-recession period but the demand for bank loans fell significantly at the start of the recession. However, by June 2009 demand had recovered to just below their pre-recession levels. In contrast, demand for bank overdrafts were maintained at their pre-recession levels until February 2009, after which demand fell by around 5 per cent. Leasing and hire purchase experienced a significant increase in demand immediately after the economy entered recession and demand remained at a high level throughout the recession.

Figure 3.3: Pre- and within-recession types of finance sought

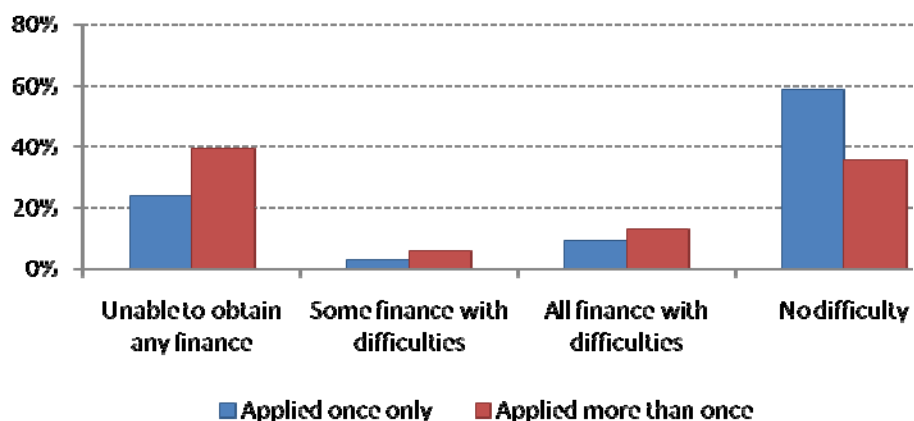


Base: All SME employers tried to obtain finance in the past 6 months (weighted data); unweighted N = 848.

Within recession difficulties in obtaining finance

3.8 51 per cent of SMEs who sought finance had no difficulties in doing so from the first source they approached during the recession. This is lower than the pre-recession figure of 73 per cent. Just over 15 per cent of SMEs obtained finance but with some difficulties, with 11 per cent (or 72 per cent of those who obtained finance but with some difficulty) obtaining all the finance they sought but with difficulty, and 4 per cent obtaining some, but

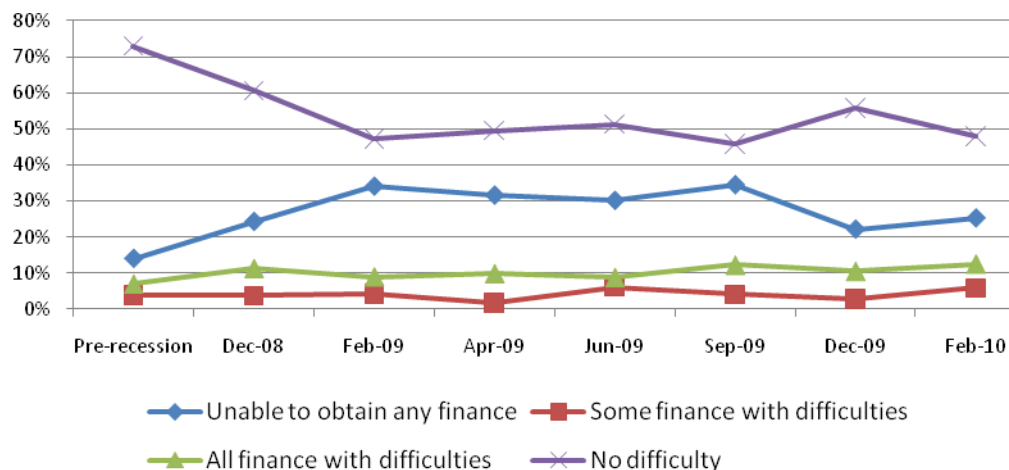
Figure 3.4: Aggregate difficulties obtaining finance by the number of attempts



Base: SME employers tried to obtain finance in the past 6 months (weighted data); unweighted N = 845.

3.9 There was substantial variation across the recession in terms of the relative difficulty in obtaining finance, as shown in Figure 3.5. For example, in the pre-recession period 72 per cent of applicants had no difficulty obtaining finance. This figure fell to 51 per cent, on average, during the recession. Equally, only 15 per cent of finance applications were absolutely turned down in the pre-recession period compared to an average of 29 per cent during the recession. Between February 2009 and September 2009 refusal rates were relatively high and stable. Only in the later stages of the recession did refusal rates decline, but remain above their pre-recession levels to date.

Figure 3.5: Pre-and-within recession difficulties in obtaining finance



Base: SME employers tried to obtain finance in the past 6 months (weighted data); unweighted N = 845.

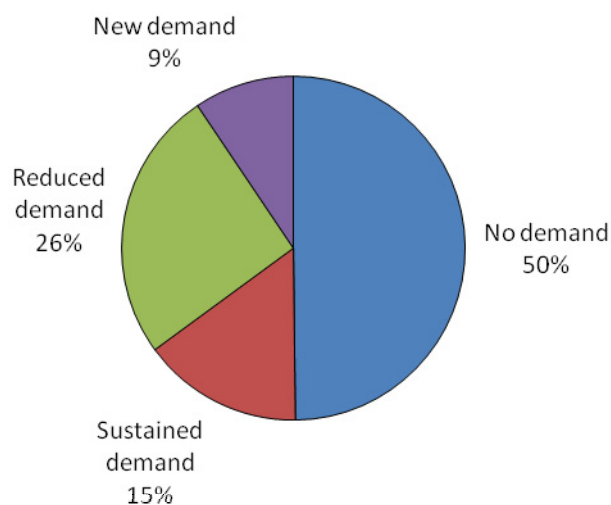
- 3.10 Women-led and MEG-led businesses were more likely to experience difficulties in obtaining finance; 36 per cent of women-led and 32 per cent of MEG-led firms (compared to 30 per cent overall) had problems raising finance (either unable to raise any finance at all, or could raise some but only with difficulty). 20 per cent of SMEs indicated that being unable to access the finance they needed would defer their business plans (but eventually would go ahead). A further 20 per cent said their business would get into serious financial difficulties without the required finance and 15 per cent said they would have to drop plans completely without essential finance.
- 3.11 The most commonly quoted reason for not trying to obtain finance was that the finance would not be needed (85 per cent). Three per cent of employers said they did not seek finance because they thought they would be rejected and further 2 per cent did not do so because they thought additional finance would be too expensive. Another 4 per cent of firms had no intention of seeking finance because of the additional risk associated with new finance.

Pre-and-within recession dynamics of demand for external finance

- 3.12 It is possible to define the dynamics of firms seeking external finance using a four-cell matrix, namely firms who sought finance in time period 1 (pre-recession) and subsequently sort finance in time period 2 (within-recession; defined as the 'sustained demand' category); firms who sought finance in time period 1 but not in time period 2 (defined as the 'reduced demand' category); firms who did not seek finance in time period one but sought finance in time period 2 (defined as the 'new demand' category) and finally firms who did not seek finance in either of the period (defined as the 'no demand' category). Figure 3.6 shows the percentage distribution across the four categories. It can be seen that half of all firms never sought finance in either time period. 26 per cent of firms that sought finance previously chose not to seek any finance in the recession period and only 15 per cent of the businesses sought finance in both periods (pre-and within recession).³

³ It is important to note that in the pre-recession period the survey question refers to the 'last 12 months' and in the Business Barometer Surveys the survey question refers to the 'last 6 months'.

Figure 3.6: Dynamics of firms seeking finance



Base: All SME employers (weighted data); unweighted N = 3,403.

Pre-and-within recession dynamics of the demand and supply of finance

3.13 However, the time dynamics of the demand for, and supply of, finance are complex. On further examination of the data we observed three common types of dynamics⁴, defined as:

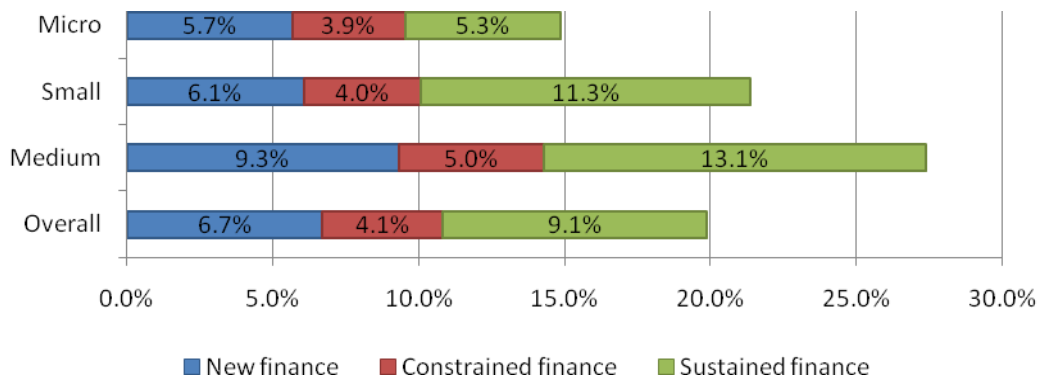
- **Sustained finance:** businesses which sought and received finance in the pre-recession period (time period 1) and subsequently sought and received finance during the recession (time period 2).
- **Constrained finance:** those who sought and received finance in the pre-recession period (time period 1) but sought and were refused finance during the recession (time period 2). This is a particularly interesting group as they were unconstrained but then become finance constrained in the recession.
- **New finance:** firms who did not seek finance prior to the recession (time period 1) but sought and got finance in the recession (time period 2).

3.14 Half of all SMEs never applied for external finance either before, or during, the recession. Nearly one in ten (9 per cent) sought and secured (at least some of the) finance in both periods. Four per cent sought and received finance prior to the recession, but were refused finance during the recession. Seven percent of SMEs sought finance for the first time during the recession.

3.15 Firm size is associated with the dynamics of firms seeking and securing finance (Figure 3.7). Medium-sized firms were more likely (13 per cent) to receive the finance they sought in both pre-recession and recessionary periods than small- and micro firms (11 and 5 per cent, respectively), although they are also slightly more likely to become finance constrained in the recession (5 per cent, compared to 4 per cent for other size classes).

⁴ For businesses who sought finance in at least one of the two periods.

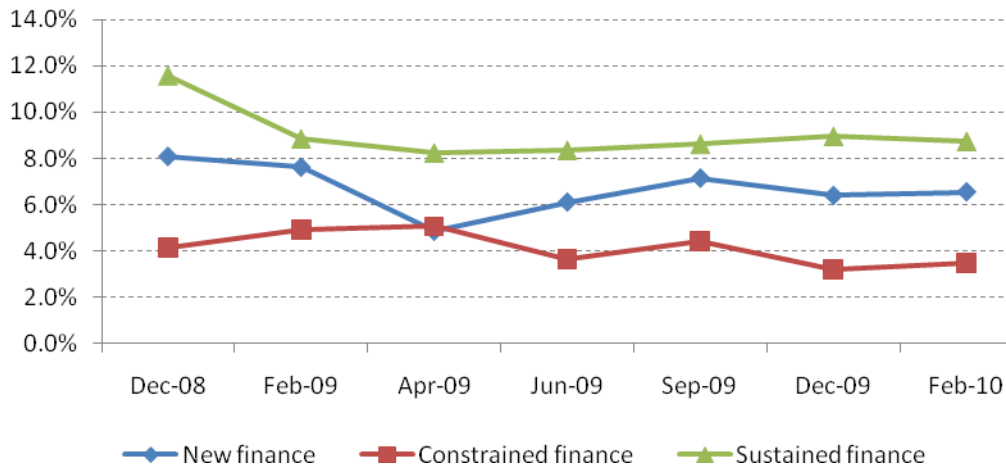
Figure 3.7: Within recession dynamics of firms seeking and securing finance by SME size class



Base: All SME employers (weighted data); unweighted N = 3,337.

3.16 From Fig 3.8, the proportion of SMEs seeking finance continually declined from its pre-recession levels and remained fairly stable during the recession at 8 per cent of all SMEs. The extent of financial constraints on firms seeking finance during the recession remained remarkably stable at around 4 per cent. The proportion of SMEs seeking new finance fell in the early stages of the recession, but recovered quite quickly after April 2009.

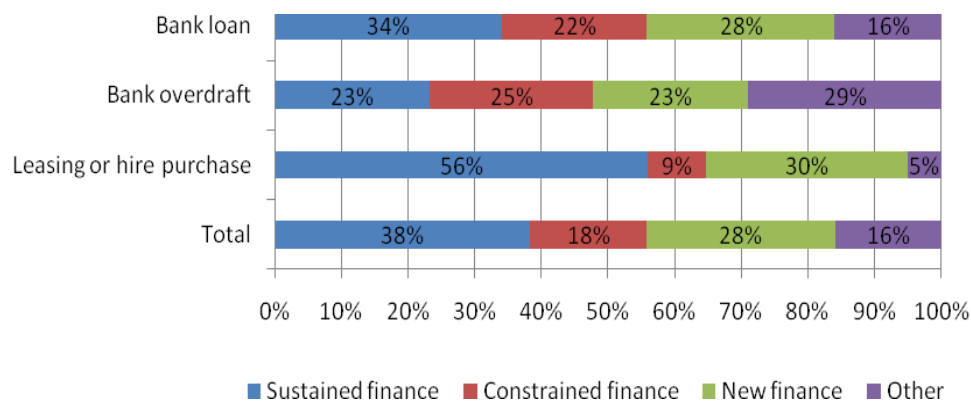
Figure 3.8: Within recession dynamics of firms seeking and securing finance



Base: All SME employers that sought finance during the recession(weighted data); unweighted N = 785.

3.17 It is also the case that firms that sought finance had more than one potential source. Figure 3.9 illustrates the dynamics of firms seeking and securing finance for the 3 most commonly sought sources of external finance (bank loans, bank overdrafts and leasing or hire purchase). 56 per cent of the firms that sought leasing or hire purchase have received at least some of the finance in both pre-and-within recession periods, compared to only 34 per cent and 23 per cent that applied for bank loans and bank overdrafts, respectively. Firms using leasing and hire purchase were also the least likely (9 per cent) to become financially constrained in the recession whilst one in four firms seeking bank overdrafts did not receive the finance required during the recession.

Figure 3.9: Aggregate within recession dynamics of firms seeking and securing finance by source of finance



Base: All SME employers that sought finance in during the recession(weighted data); unweighted N = 785.

Regression analysis on the demand for finance

- 3.18 As with growth orientations, the dependent variable of interest is binary in the first instance as firms either sought finance or not (i.e the *demand* for finance). Again, the basic method was to estimate a binary probit or logit model with a common set of variables identified previously (age, size, industry, etc.) on the right-hand side to seek to explain this decision to seek external finance (Appendix G). As before, marginal effects are reported. Firstly, the empirical findings for the within-recession model are discussed.
- 3.19 On average, larger firms are more likely to seek finance than smaller-sized firms. In particular, medium-sized and small firms are 14 and 8 per cent, more likely to have sought external finance (compared to micro businesses). More established firms are less likely to seek external finance, controlling for other factors. Firms more than 20 years old are 6 per cent less likely to have sought finance than young firms (<5 years old). There are no regional differences in the likelihood of seeking finance.
- 3.20 In general, the demand for finance decreases as the recession progressed.
- 3.21 Women-led businesses were 5 per cent less likely to seek external finance during the recession and MEG-led businesses were 7 per cent more likely to seek external finance. The experience of the entrepreneur plays no role in determining whether the business sought external finance or not.
- 3.22 SMEs who previously sought general advice and information on running their businesses were 7 per cent more likely to seek external finance than those who did not. Other variables such as exporting, innovation and funding staff training did not affect the firms' decision to seek external finance.
- 3.23 In general, the key factors influencing pre-recession demand for finance are similar to those during the recession. Small- and medium-sized firms were both 15 per cent more likely to seek external finance than micro firms.

- 3.24 However, regional disparities in the demand for finance were more marked in the pre-recession period when firms located in the North West, South West and Scotland were more likely to seek external finance than those in other regions.
- 3.25 Women-led firms were less likely to seek finance before the recession, but the scale of this difference narrowed during the recession.
- 3.26 MEG-led firms were more likely to have sought external finance in both time periods.

Regression analysis on the supply of finance

- 3.27 Firm size class was the single most powerful determinant of the supply of finance, with medium-sized firms being 19 per cent more likely to obtain finance and small firms 12 per cent more likely than micro firms.
- 3.28 The general pattern of the supply of finance during the recession was a 'U' shape with the lowest levels of supply occurring between February 2009 and June 2009.
- 3.29 The evidence suggests that in periods of economic growth banks use a much richer set of indicators when making their financing decisions, but during recessions their primary focus is on easily verifiable characteristics such as firm size (see significant factors pre-recession and within recession in Appendix G).

4 Performance Outcomes

Summary

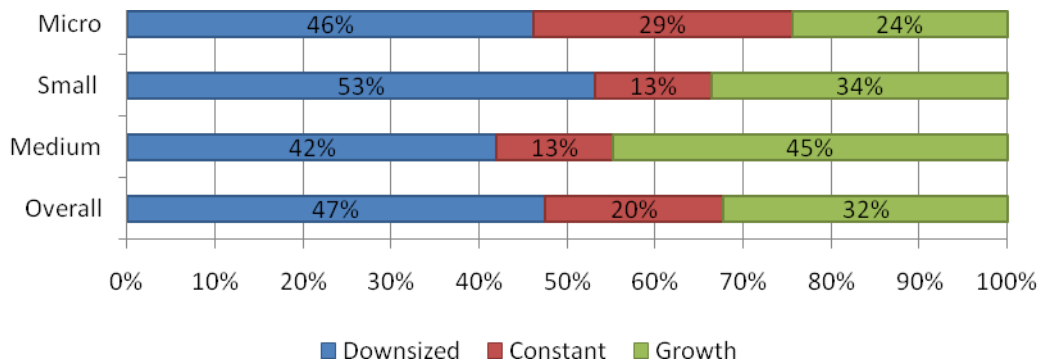
- On average, each SME lost 1.5-2.0 jobs during the recession, although most SMEs managed to maintain both turnover and employment at their pre-recession levels
- Job losses peaked during the middle period of the recession
- SME who managed to achieve job growth during the recession were more likely to be those seeking capital for the first time
- SMEs with a sustained growth ambition were most likely to achieve turnover growth
- Medium-sized businesses fared best in the recession in terms of employment
- SMEs who subsequently experienced a fall in turnover (averaging £120,000) tended to have higher loan application failure rates prior to this decline in turnover. It appears that the majority of SMEs are realistic about the (lack) of growth potential in the economy, and have revised their expectations accordingly

- 4.1 This section examines the determinants of actual SME growth, as measured by employment and turnover, in the recession as compared to pre-recession periods.

Pre-and-within recession employment change

- 4.2 The average employment decrease was 1.5 employees from the pre-recession period, and the median change in employment is zero. This suggests that a significant proportion of SMEs experienced a decline in employment in the recession. More specifically, less than one in three (32 per cent) businesses reported employment growth during the recession. 20 per cent of SMEs maintained employment at its pre-recession level and 47 per cent of SMEs reported a decline in employment.
- 4.3 The distribution of employment growth by SME size is presented in Figure 4.1. Here it is observed that larger businesses were more likely to have experienced employment growth in a recessionary environment. 45 per cent of medium-sized businesses have grown their employee numbers, with only 34 per cent of small-sized and 24 per cent of micro-sized businesses reporting growth.

Figure 4.1: Within recession employment change* by firm size class

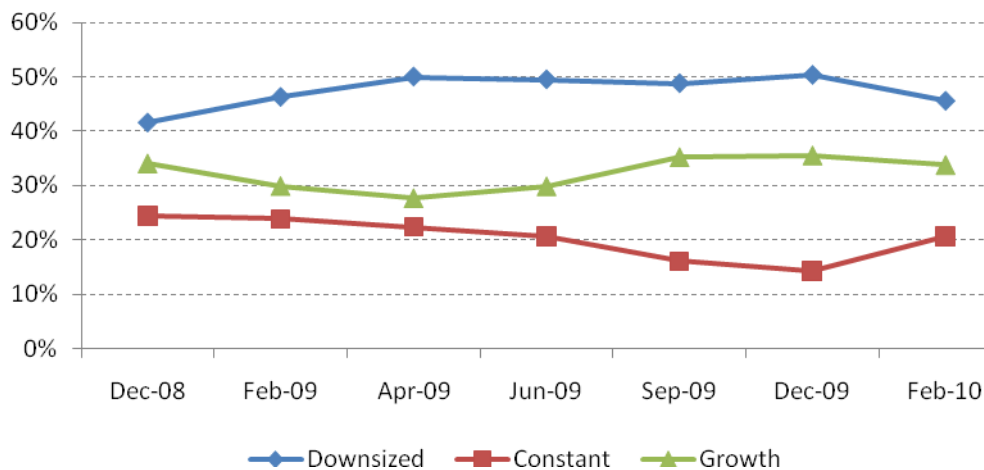


* Employment change calculated as the difference between 2007/08 ASBS and the Business Barometer surveys. Base: All SME employers (weighted data); unweighted N=3,474.

4.4 Measured by headcount, the average employment change for micro businesses is a decrease of 2 people. Average employment in small firms decreased by 5 employees and in medium-sized firm's employment actually increased by 2.5 employees.

4.5 It was also the case that employment growth was more prevalent at the very beginning and very end of the recessionary period. Overall, 32 per cent of SMEs increased their employment size during the recession. In contrast, 47 per cent of SMEs had a decrease in employment during the recession. The detailed distribution of employment change during the recession is illustrated in Figure 4.2.

Figure 4.2: Within recession employment change*



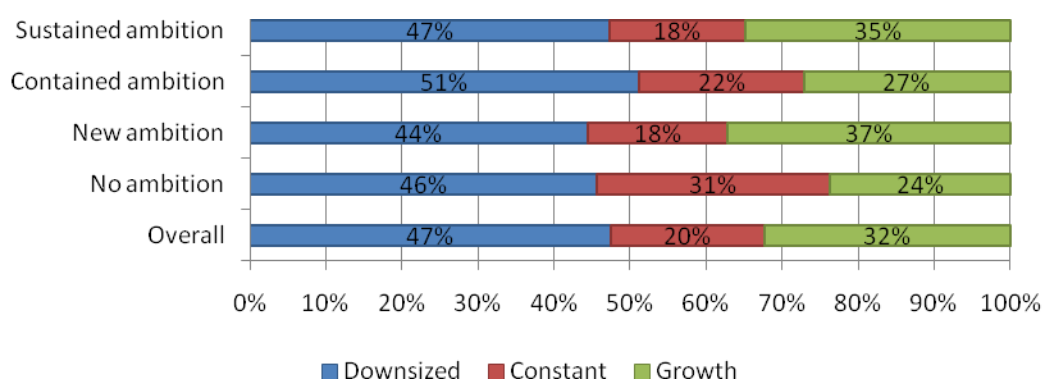
* Employment change calculated as the difference between 2007/08 ASBS and the Business Barometers surveys. Base: All SME employers (weighted data); unweighted N=3,474.

Within recession growth orientations and employment change

4.6 The main focus of this section is to explore the extent to which growth orientations and access to finance affected the performance of SMEs during the recession. Using the four categories of growth orientations

4.7 As illustrated in Figure 4.3, half of all SMEs with contained ambitions (growth oriented pre-recession but no growth ambition during the recession) reported a decrease in employment whilst only 44 per cent of firms with new growth ambitions reported a decrease. Interestingly, firms with no growth ambitions in either period are most the likely to exhibit no employment growth.

Figure 4.3: Employment change* by growth orientations



* Employment change calculated as the difference between 2007/08 ASBS and the recent 'Business Barometers' survey

Base: All SME employers (weighted data); unweighted N=3,474.

4.8 Since the average employment size has declined by 1.5 employees, it is not surprising that a decrease in employment size was observed across all four categories of growth orientations. Firms with new or sustained ambitions reported a smaller employment decrease, on average 1 employee. Firms with no ambition or contained ambitions experienced a larger drop in employment and the average decrease in employment for both categories was around 2.5 employees.

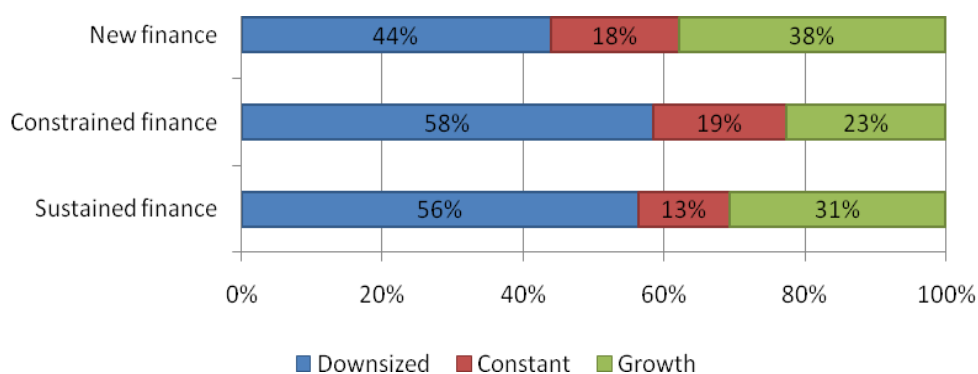
Within recession access to finance and employment change

4.9 Figure 4.4 shows the relationship between employment and access to external finance, as measured by the dynamics of firms seeking and securing finance in both pre-recession and recessionary periods⁵. Firms who had no need for external finance before the recession but started to seek and then secured finance during the recession ('new finance') are most likely to have sustained growth in employment size (38 per cent),

⁵ We exclude businesses who sought finance but were refused in period 1 and subsequently sought (either succeeded or failed) finance in period 2 from the 9 categories of access-to-finance dynamics defined in Section 2 because the number of those firms is too small (only 1 per cent of the total sample, or 40 out of 3,310 SMEs) to draw any definitive conclusions.

compared to less than one in four (23 per cent) businesses that were unconstrained (sought and secured finance) initially but became financially constrained (sought but were refused finance) in the recession ('constrained finance'). The latter are also most likely to have recorded a decrease in employment (58 per cent) and the former the least likely to report a decrease in employment (44 per cent).

Figure 4.4: Within recession employment change* and access-to-finance

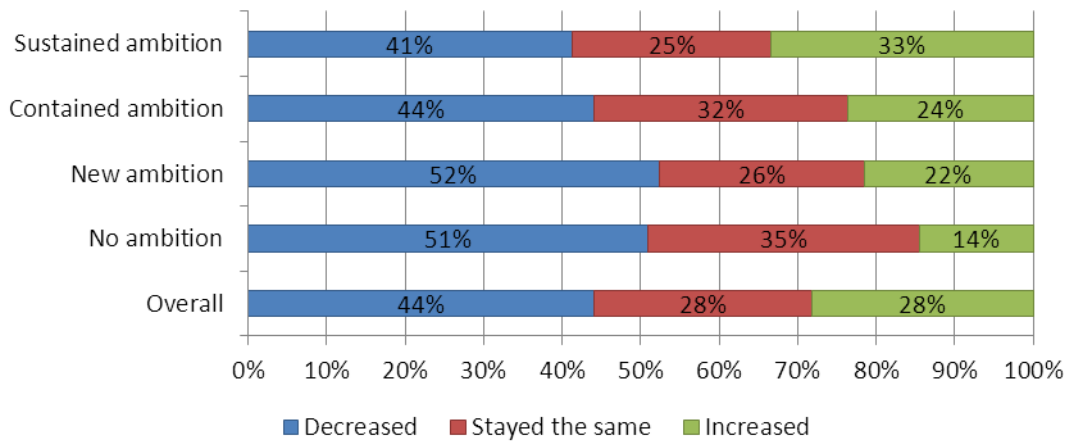


* Employment change calculated as the difference between 2007/08 ASBS and the Business Barometer surveys
 Base: All SME employers (weighted data); unweighted N=3,310.

Within recession turnover change

- 4.10 Due to the absence of continuous turnover data for both ASBS and Barometer surveys, the growth of turnover is calculated as the midpoint of the banded turnover given by survey respondents divided by 1 plus the 12-month rate of change in turnover. Therefore unlike employment change, turnover change only depicts the annual change of turnover for a subset of the full sample of SMEs.
- 4.11 On average SME turnover decreased by £120,000 and the median turnover change was zero. Overall, 28 per cent of SMEs had increased turnover, while 27 per cent reported it had stayed the same, and 43 per cent had experienced a decline in turnover.
- 4.12 The pattern of turnover growth during the recession and the size class of SMEs is discussed in detail in Section 2 (Table 2.1, Figure 2.3 to Figure 2.6). Here relationships between growth orientations and access to finance and their impact on turnover during the recession are considered.
- 4.13 As shown in Figure 4.5, there is a monotonic relationship between growth orientation and change in turnover. This might suggest that firms are being realistic about their potential for growth. 33 per cent of firms with sustained ambitions reported increased turnover over the last 12 months, whilst 14 per cent of employers with no growth ambitions in either period reported increased turnover. 34 per cent of no growth firms have observed stalled turnover growth and 50 per cent of those firms' turnover decreased over the past 12 months. Firms with sustained ambitions are least likely (41 per cent) to have reported a decline in turnover. Over half of SMEs who exhibited new growth ambitions in the recession actually experienced a drop in turnover over the last year.

Figure 4.5: Within recession change in turnover* by growth orientations



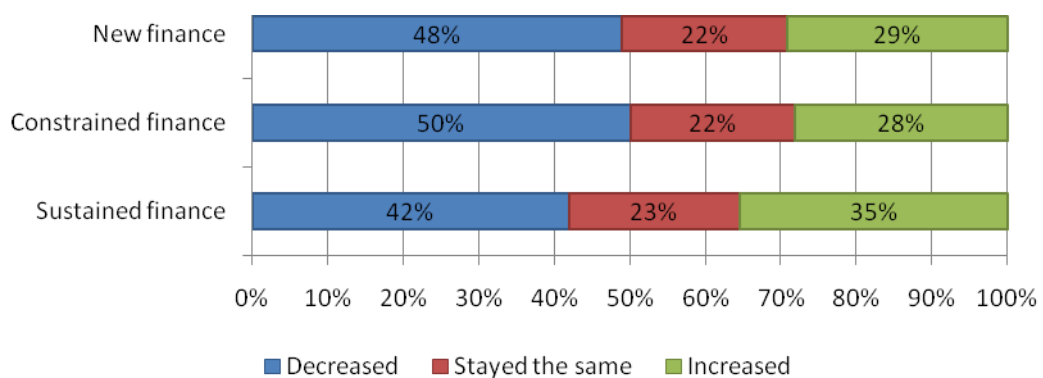
* 12-month turnover change.

Base: All SME employers (weighted data); unweighted N=3,506.

4.14 Businesses with sustained ambitions suffered the least from falling turnover with an average drop in turnover of £100,000. Businesses with no or contained ambitions, saw an average turnover decrease of £140,000 and businesses with new ambitions experienced the largest turnover downturn with an average decrease of £190,000.

4.15 Figure 4.6 shows that over one in three businesses with sustained finance had achieved increased turnover. Fewer businesses with new or constrained finance reported increased turnover and more of them said their turnover decrease over the past year. More than half of employers becoming financially constrained during the recession experienced reduced turnover.

Figure 4.6: Within recession change in turnover* by access-to-finance dynamics



* 12-month turnover change.

Base: All SME employers (weighted data); unweighted N=3,337.

Regression analysis on SME recessionary performance outcomes

- 4.16 For employment and turnover change, the performance variables under consideration are continuous and can be estimated using an OLS specification (Appendix H). Where appropriate, growth variables can be derived to help establish the dynamics of performance over time. Alongside the previously identified core set of firm, ownership, product and market characteristic variables, growth orientations and access to finance variables are added to all performance models. This will help establish whether or not firms seeking growth were more (less) able to achieve it in a recessionary environment and the extent of under-performance if this was identified. Equally, the analysis will be able to identify whether or not problems with access to finance constrained growth, and if so, the extent to which this occurred. The important feature of this level of multivariate analysis is that the individual effects are isolated when controlling for the effects of other personal and firm-level characteristics.
- 4.17 Consistent with the preliminary observations, larger-sized SMEs are more likely to experience increases in employment size (or, 'smaller' employment decreases given the negative change in employee numbers during the recession). Compared to micro-firms, on average, medium-sized firms had grown their employment size by five employees and small firms reduced their employment by three. The age of the business and the time of the survey (barometer waves) had no effect on SME employment growth in the recession.
- 4.18 Growth orientations had no explicit independent effect on employment growth. However, financial constraints in the recession have a significantly negative effect on employment growth. Businesses who sought and received finance before the recession but sought and were refused finance in the subsequent recessionary period reported lower employment growth than other firms. The average under-performance for those firms is four employees.
- 4.19 Businesses that introduced new or improved products, services and/or processes in the past 12 months had better employment growth performance. On average they out-performed other firms in terms of employment growth by three employees.
- 4.20 Both size and age are significantly associated with turnover growth. Although the average growth of turnover across all firms during the recession is negative, medium-sized businesses and small businesses out-performed micro businesses in terms of turnover growth. Firms more than 20 years old out-performed firms aged 5 to 20 years in terms of annual turnover growth by £40,000. Again, however, they under-performed compared to young firms up to 5 years old.
- 4.21 Controlling for other factors, the middle of the recession was when firms observed the greatest decline in turnover. Here, the average decline was around £100,000. This contrasts with December 2008 when firms recorded their highest turnover growth in the recession, with an average of £80,000 more turnover.
- 4.22 Controlling for other factors, having a sustained growth orientation is critical to achieving higher growth in turnover during the recession. On average

- 4.23 Our analysis suggests that it is not being able to access the finance required in a recessionary environment that substantially drags down turnover performance. Firms that only had a new demand for external finance during the recession but were refused this finance reported an average of £120,000 lower turnover. Other than this recession constrained group, financing behaviour did not appear to affect turnover performance during the recession.
- 4.24 The experience of SME employers had a positive effect in terms of achieving higher turnover growth. Businesses with experienced employers, on average, out-performed inexperienced employers by £120,000 in terms of turnover. SMEs exporting goods outside the UK also out-performed non-exporting SMEs in turnover growth by £60,000.

Appendix A: Change in turnover in last year (Fig 2.3)

	2007/08 ASBS %	Barometer Overall %	WAVE1 %	WAVE2 %	WAVE3 %	WAVE4 %	WAVE5 %	WAVE6 %	WAVE7 %
Increased	42	28	36	32	26	26	24	26	24
Stayed the same	35	27	26	25	29	28	29	28	27
Decreased	20	43	37	41	44	44	46	44	48
Unsure/unwilling	3	1	1	1	2	2	1	2	1

Base: All SME employers (weighted data); unweighted N=3,506.

Appendix B: Business prospect in the next 12 months (Fig 2.9)

	2007/08 ASBS %	Barometer Overall %	WAVE1 %	WAVE2 %	WAVE3 %	WAVE4 %	WAVE5 %	WAVE6 %	WAVE7 %
Closure	8	3	5	2	5	3	2	3	3
Transfer of ownership	19	4	5	4	3	6	2	4	3

Base: All SME employers (weighted data); unweighted N=3,506.

Appendix C: Employment growth trajectories by barometer waves (2.11)

	Barometer Overall %	WAVE1 %	WAVE2 %	WAVE3 %	WAVE4 %	WAVE5 %	WAVE6 %	WAVE7 %
No growth	65	67	72	69	68	56	59	61
New growth	18	11	14	15	17	25	23	19
Contained growth	11	14	10	10	9	9	11	12
Sustained growth	7	8	4	6	6	10	7	9

Base: All SME employers (weighted data); unweighted N=3,505.

Appendix D: Growth orientation trajectories by barometer waves (Fig 2.13)

	Barometer Overall %	WAVE1 %	WAVE2 %	WAVE3 %	WAVE4 %	WAVE5 %	WAVE6 %	WAVE7 %
No ambition	15	17	14	15	18	13	14	13
New ambition	9	7	8	8	9	10	9	10
Contained ambition	15	19	14	17	14	17	13	12
Sustained ambition	62	57	64	59	59	61	64	66

Base: All SME employers (weighted data); unweighted N=3,506.

Appendix E: Variable Definitions

Group	Variable Name	Definition
Firm-level risk indicators		
Size	<i>SMALL</i>	= 1 if firm has 10 to 49 employees; 0 otherwise
	<i>MEDIUM</i>	= 1 if firm has 50 to 249 employees; 0 otherwise
Age	<i>11TO20</i>	= 1 if firm has been trading for 10 to 20 years; 0 otherwise
	<i>20MORE</i>	= 1 if firm has been trading for more than 20 years; 0 otherwise
Owner characteristics		
Gender	<i>WLED</i>	= 1 if firm is a women-led business; 0 otherwise
Ethnicity	<i>MLED</i>	= 1 if firm is a MEG-led business; 0 otherwise
Prior experience	<i>EXP</i>	= 1 if employer has previously set up a business, charity or been self-employed; 0 otherwise
Growth orientations	<i>SA</i>	= 1 if firm has sustained growth ambition (defined in Table 2); 0 otherwise
	<i>CA</i>	= 1 if firm has contained growth ambition (defined in Table 2); 0 otherwise
	<i>NEWA</i>	= 1 if firm has new growth ambition (defined in Table 2); 0 otherwise
Access to finance	<i>SF</i>	= 1 for 'sustained finance' category defined in Section 3.2; 0 otherwise
	<i>CF</i>	= 1 for 'contained finance' category defined in Section 3.2; 0 otherwise
	<i>NEWF</i>	= 1 for 'new finance' category defined in Section 3.2; 0 otherwise

Appendix F: Summary Regression Results: Growth Orientations

Group	Variable Name	Within-recession Growth Orientation Trajectories				
		Pre-recession Growth Orientation	Within-recession Growth Orientation	New Ambition	Constrained Ambition	Sustained Ambition
		(1)	(2)	(3)	(4)	(5)
Firm-level risk indicators						
Size	<i>SMALL</i>	0.10***	0.14***	2.00***	2.12***	3.12***
	<i>MEDIUM</i>	0.19***	0.22***	2.30***	2.86***	7.04***
Age	<i>11TO20</i>	-0.13***	-0.07**	0.71	0.42***	0.39***
	<i>20MORE</i>	-0.20***	-0.16***	0.53*	0.30***	0.19***
Owner characteristics						
Gender	<i>WLED</i>	0.00	-0.03	1.11	1.42*	1.05
Ethnicity	<i>MLED</i>	0.02	0.05	1.92*	1.34	1.46
Prior experience	<i>EXP</i>	0.05	0.03	1.44	1.61	1.61
Time indicators (Barometer Surveys)						
	<i>Feb 2009</i>	—	0.08***	1.30	0.85	1.42*
	<i>April 2009</i>	—	0.05*	1.31	1.07	1.33
	<i>June 2009</i>	—	0.06**	1.32	0.77	1.19
	<i>Sep 2009</i>	—	0.07**	1.71*	1.20	1.47**
	<i>Dec 2009</i>	—	0.08***	1.47	0.89	1.38*
	<i>Feb 2010</i>	—	0.11*	1.30	0.58	1.72***

Note: In model (1) and (2), coefficient estimates are reported as marginal effects to illustrate the direct effect of explanatory variables on the dependent variables and in models (3) to (5), coefficient estimates are reported as 'relative risk ratios (as exponentials of the original logarithm coefficient estimates) again to show the marginal effects of independent variables. Both transformations do not alter the statistical inference or the estimation method of the models. *, **, *** stand for 10%, 5% and 1% significance levels, respectively.

Appendix G: Summary Regression Results: Pre- and Within-recession Demand and Supply of Finance

Group	Variable Name	Pre-recession			Within-recession		
		Demand	Supply		Demand	Supply	
		Coeff.	Coeff.	dy/dx	Coeff.	Coeff.	dy/dx
Firm-level risk indicators							
Size	<i>SMALL</i>	0.301***	0.183	0.070	0.182***	0.385***	0.120
	<i>MEDIUM</i>	0.316***	0.457***	0.170	0.401***	0.590***	0.194
Age	<i>11TO20</i>	-0.147**	-0.035	-0.013	-0.003	0.093	0.038
	<i>20MORE</i>	-0.038	0.185	0.069	-0.182*	0.168	0.053
Performance	<i>SALES_UP</i>	0.078	0.077	0.029		-0.052	-0.017
	<i>SALES_DOW</i>						
	<i>N</i>				0.090*		
					(0.052)		
Owner characteristics							
Gender	<i>WLED</i>	-0.199**	-0.269**	-0.100	-0.168*	-0.123	-0.039
Ethnicity Prior experience	<i>MLED</i>	0.263**	-0.033	-0.012	0.169	0.185	0.059
	<i>EXP</i>	0.124**	0.035	0.013	-0.012	0.100	0.032
Time indicators							
	<i>Feb 2009</i>				-0.006	-0.285	-0.116
	<i>April 2009</i>				-0.238**	-0.393**	-0.155
	<i>June 2009</i>				-0.198**	-0.225	-0.086
	<i>Sep 2009</i>				-0.149	-0.341**	-0.137
	<i>Dec 2009</i>				-0.290***	-0.120	-0.045
	<i>Feb 2010</i>				-0.191	-0.257	-0.091

Note: This table reports the probit regression results first for the probability of businesses seeking external finance and then the probability of successfully accessing finance conditional on the firm seeking finance. Marginal effects of the coefficient estimates for the conditional supply equations are also reported to illustrate the direct effect of explanatory variables on the dependent variables. This does not alter the statistical inference or the estimation method of the model. *, **, *** stand for 10%, 5% and 1% significance levels, respectively.

Appendix H: Summary Regression Results: Within-recession Performance Outcomes

Group	Variable Name	Employment Change	Turnover Change (£'000)
Firm-level risk indicators			
Size	<i>SMALL</i>	-2.73***	162.44***
	<i>MEDIUM</i>	4.96***	116.18***
Age	<i>11TO20</i>	-0.98	-87.21**
	<i>20MORE</i>	-1.74	-46.70
Owner characteristics			
Gender	<i>WLED</i>	0.35	-0.03
Ethnicity	<i>MLED</i>	-0.04	0.05
Prior experience	<i>EXP</i>	0.17	0.03
Growth	<i>NG</i>	1.73	-10.39
	<i>CG</i>	-0.02	38.23
	<i>SG</i>	0.55	92.60***
Access to finance	<i>NF</i>	-1.10	-31.81
	<i>CF</i>	-4.20**	-36.81
	<i>SF</i>	-1.85	23.41
Time indicators (Barometer Surveys)			
	<i>Feb 2009</i>	-1.40	-63.05
	<i>April 2009</i>	-0.90	-67.44*
	<i>June 2009</i>	-0.77	-105.15***
	<i>Sep 2009</i>	-1.00	-110.15***
	<i>Dec 2009</i>	0.76	-53.06
	<i>Feb 2010</i>	-0.77	-227.10***

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