

Curb your enthusiasm... What makes SME's over- or under-optimistic about expected growth in turnover?

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Abstract

Our paper explores the extent to which SME owners' expectations of future growth are over- or under-optimistic. Drawing on a final sample of 1193 UK (SMEs), we found that firm characteristics and behaviour determine different levels of optimism. Our findings also suggest that younger firms are more likely to be over-optimistic than older firms. Our evidence suggests that the effect of new opportunities are overestimated (such as launching a product new to the firm or intention to begin exporting). Small owner-managers having full control of their business will be more optimistic. Firm having export intention in the short term are more likely to be over-optimistic compared to those planning to export in the longer term. Surprisingly, the lower level of novelty appears to boost over-optimism, whereas the higher level of novelty is more likely to be under-optimism. Our findings provide potential implications for entrepreneurship education and training in managing expectations.

Key words: Entrepreneurial optimism, expected growth, SMEs, organisational factors

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1. Introduction

Research on entrepreneurs' optimism has attracted substantial academic attention (e.g. Cervellati et al., 2022; Kusumaningrum et al. 2020; Cassar, 2010; Ucbasaran et al., 2010; Cassar and Gibson, 2007). Optimism refers to the entrepreneur's ability to identify, evaluate and exploit opportunities as well as develop core competencies which will depend, in part, on the accuracy of their beliefs regarding the nature of the opportunity (McCann and Vroom, 2013). Most studies agreed that entrepreneurs tend to be over optimistic even if they have experienced limited prior success (Townsend et al., 2018; Bridge, 2018; Cassar and Gibson, 2007; Pinfold, 2001). In other words, the outcome of a future event can be less favourable than the expectation (e.g. Moskowitz and Vissing-Jorgensen, 2002; Pinfold, 2001, Camerer and Lovallo, 1999; Weinstein, 1980). They also tend to over-emphasise the role of their capability and capacity to increase performance (Simon et al., 2000). Previous findings concluded that high levels of optimism can negatively influence the entrepreneur's/ owner-manager's intuitive judgement, which increases the level of risk in their investment decisions (Mazzarol and Reboud, 2011). In some cases, overoptimistic expectations can result in the failure of the business (Jenkins and Mckelvie, 2016; Dawson and Henley, 2013). On the other hand, under-optimism may prevent SMEs from exploiting potential opportunities. The aim of this paper is to explore the extent to which firm characteristics and behaviour are associated with both over-optimistic and under-optimistic expectations of the future.

Expectations of the future are predominantly researched at the individual, rather than organisational level. Examining SMEs provide an opportunity to explore decision-making across individual (sole-employee) to group (partnership, company or solely-owned business with employees) contexts, and across a wide age range of enterprises. Substantial evidence indicates that expectations of the future (and indeed other types of decision) may be influenced by external, potentially irrelevant, factors and hence are unwittingly biased (Kahneman and Tversky, 1973, Kahneman and Lovallo, 1993). These expectations can be driven by either organisational or individual aspects (Hmieleski and Baron, 2009; Cassar, 2010; Do et al., 2018). Such anticipations though, are prone to be optimistic, or over-optimistic. Such over-optimistic expectations have particular implications for entrepreneurship. This may lead to their over-reliance on salient information in forecasting, decision making and planning (Elgebeily et al., 2021; Pinfold, 2001; Busenitz and Barney, 1997). There is also some evidence to suggest that entrepreneurs tend to be overly optimistic regarding market entry (Landier and Thesmar, 2009), although other researchers question this conclusion (e.g. Hogarth and Karelaia, 2012).

Much prior research attention has focussed on entrepreneurs and especially nascent entrepreneurs. Even though organisational characteristics and behaviour were claimed to have some impact on the firm's expected returns in previous studies (Mazzarol and Reboud, 2009; 2011; Do et al., 2014; Do et al., 2018), scarce research looks into the antecedents of the firm's optimism at different degrees (e.g. over-optimism and under-optimism). Therefore, this paper aims to investigate the antecedents of the over-optimism and under-optimism (i.e., the difference of the expected growth in turnover and the actual growth) at the firm level across a wide range of firm ages.

In this paper, we seek to identify the firm characteristics and opportunities which either rein in expectations or are associated with wishful thinking (in terms of expected turnover growth). The paper is organised as follows. Section 2 reviews prior findings relating to the key determinants of entrepreneurs' and SMEs' expectations of the future: firm age, innovation, planning activity and engagement. Our hypotheses are developed in section 2 and the data used

to test them is described in section 3 whilst section 4 contains the results. The paper concludes with discussion and conclusions in sections 5 and 6 respectively.

2. Theoretical Background

2.1 Entrepreneurial optimism and over-optimism

Entrepreneurial optimism can be defined as positive expectations of future outcomes (Hmieleski and Baron, 2009). Individuals may experience different levels of optimism, which directly links to their actual performance (Hmieleski and Baron, 2009). Problems occur when expectations occur when the expected outcome is not matched by reality (over-optimism) Research on human cognition suggests that our decision-making is subject to cognitive biases (Invernizzi et al., 2017; Cassar, 2010; Hmieleski and Baron, 2009). Such biases in decision-making have particular relevance for the study of entrepreneurship. One particular bias which is more prevalent among entrepreneurs than others is overconfidence (e.g. Forbes, 2005). Those experiencing low optimism tend to have lower motivation and focus on negative information, which consequently results in lower performance. In contrast, highly optimistic people tend to set unrealistic goals to target, which often results in failures (Hmieleski and Baron, 2009).

2.2. Antecedents of optimistic expectations

The sections below outline the effects of two broad groups of influences on over-optimism : the nature of the firms (in terms of age and ownership structure) and firms' intentions to pursue new opportunities,. such as introducing new products/services or new processes and export intention. Sections 2.2.1 to 2.2.3 cover the nature / characteristics of the firms whilst sections 2.2.4 and 2.2.5 cover the effect of new opportunities.

2.2.1. Firm ownership

Firm ownership plays a role in influencing the firm's decision making (e.g. Pinfold (2001; Palich and Bagby, 1995). Baron (1998) concluded that both managers and entrepreneurs (or self-employed) may have over-optimistic expectations about the future, because of their more likelihood of being exposed to conditions which make them more susceptible to cognitive biases. However, Baron (1998) argues that entrepreneurs are more likely than other people to encounter situations such as information overload, high uncertainty, strong emotions and time pressure. Hence, entrepreneurs (and particularly nascent entrepreneurs) may be more susceptible to this form of bias, given that their focus is on future plans rather than on past experience. Busenitz and Barney (1997) argue that the link is different: people who are more susceptible to such cognitive biases will tend to self-select into entrepreneurship. Additionally, there was a consensus amongst past studies that individuals are bounded and open to potential influences that may lead them to have biased expectations (Kahneman and Lovallo, 1993; Kahneman and Tversky, 1973). Similarly, individuals generally exhibit overconfidence, in that they overestimate their ability to do well (Larwood and Whit-taker, 1977). Such overconfidence can be in regard to an individual's knowledge, ability to predict the future, or general personal abilities (Hayward, Shepherd, and Griffin, 2006: 162; Kruger and Dun-ning, 1999; Simon and Houghton, 2003). In another empirical study, Palich and Bagby (1995) show that entrepreneurs generally perceive a greater potential for gain than non-entrepreneurs in situations involving high uncertainty. They also revealed greater bias in their perceptions of the risks involved. Similarly, Pinfold (2001) and Landier and Thesmar (2004) agreed that entrepreneurs tend to overestimate their success. This leads to our first hypothesis:

H1: Firms having sole proprietor ownership are more likely to be overoptimistic compared to firms having other types of ownership such as partnership.

2.2.2. Firm age

Prior work on entrepreneurial optimism has tended to focus on nascent entrepreneurs, who are arguably more susceptible to over-optimism. There are, however, reasons to expect optimism to decline with firm age. This could arise from entrepreneurs gaining experience of their industry and market conditions over time. Equally though, it could arise via a form of survivor bias: entrepreneurs with overly optimistic expectations which lead them to riskier decisions will be more likely to exit and their businesses less likely to survive.

There are arguments to the contrary too. It might be assumed that over-optimistic expectations of future performance would be revised in the light of experience. However, evidence from the decision-making literature (e.g. Vermeulen and Curseu, 2010) reveals that this may not be the case. There is also some argument over how far it is possible for entrepreneurs to learn from experience. For example, Storey (2011) argues that success rates for entrepreneurial ventures are driven by a combination of optimism and chance. Westhead and Wright (2011) offer a counterpoint to this 'entrepreneur as gambler' view, arguing that the nature and quantity of entrepreneurial experience and learning play a role in venture performance. Ucbasaran et al. (2010) distinguish between types of prior experience: whether the entrepreneur has experienced a business failure or not and whether the failure was experienced by a serial entrepreneur or a portfolio entrepreneur. Repeat entrepreneurs who had not experienced failure were significantly more likely to be optimistic than novice entrepreneurs. Experiencing failures within a portfolio of businesses significantly reduced optimism, but a sequential failure had no significant effect.

Cassar (2014) explores the effect of industry and start-up experience on entrepreneurs' forecast performance, specifically whether growth from when the business started to the date of the survey exceeded, met or did not meet expectations. Industry experience increased the likelihood that expectations were met or exceeded. However, prior start-up experience by contrast was found to increase the likelihood that growth expectations were not met. It would seem that industry experience broadened entrepreneurs' knowledge whilst prior start-up experience had no such beneficial effect. Prior industry experience would broaden the entrepreneur's knowledge and potentially provide exposure to other ventures' successes or failures. Hence, firms with more business experience are more likely to have lower optimism over future returns (Poblete, 2018). This leads to our hypothesis 2.

H2: Younger firms tend to be overoptimistic about growth in turnover than older firms.

2.2.3. Preparation of business plans

The entrepreneurship literature contains contradictory findings regarding the effect of business planning on SME performance (e.g. Brinkman et al., 2010; Gibson and Cassar, 2005). Brinkman et al.'s (2010) meta-analysis suggests that the positive relationship between planning activities and performance is moderated by factors such as the newness of the firms and attitude towards uncertainty. Gibson and Cassar (2005) argue that SMEs are more likely to introduce planning processes after experiencing a period of growth. Other scholars have found that having a written business planning is associated with firm growth, having controlled entrepreneurial capabilities variables (Richbell, Watts, and Wardle, 2006; Mazzarol et al., 2009; Blackburn, Hart, and Wrainwright, 2013).

The process of planning could act as a form of self-priming, increasing the expectation that the target is met (even if the evidence suggests otherwise). Cassar (2010) concludes that

the act of preparing a plan or projection appears to increase the degree of over-optimism. Moreover, this relationship holds after the effects of gender, education, experience, and availability of inputs are controlled for. Cassar's (2010) study was also limited to nascent entrepreneurs who were re-interviewed in three waves: after approximately one year, three years, and four and a half years. This leaves the effect of longer experience on optimism as an open question.

We distinguish between having an up to date plan and having a plan which is not up to date. The process of keeping a plan up to date implies that planned targets are compared to performance, and that future targets will be evaluated in that light. A plan which is not kept up to date and is not reviewed in the same way and so might not trigger re-evaluation of expectations. Whilst we expect both forms of planning to be associated with over-optimism, we expect the effect to be greater for plans which are not kept up to date. Hence, we propose that:

H3a: Having an up to date written business plan is increases the likelihood of overoptimistic expectations

H3b: Having a written business plan, which is not kept up to date, increases the likelihood of overoptimistic expectations

2.2.4. Innovation

Evidence in prior research suggests that innovation has a significant impact on firm growth (Dosi et al., 1995; Aghion and Howitt, 2005). Consequently, innovative firms are assumed to have higher expectations over their future returns. These can arise from new products increasing market share or new processes improving productivity (Santi and Santoreli, 2017). Evidence shows that firms with higher level of novelty in their products/ service or higher intensity in innovation tend to have higher optimism about the potential outcomes. Different types of innovations are also found to have different impact on firm growth. Firms that develop new products or services will become more competitive in the market, which engenders its market share and profitability. This naturally boosts the confidence in firm growth amongst owner-managers (Yang and Li, 2011). Similarly, Triguero and Córcoles (2014) suggest that process innovation also has a positive effect, but on employment, rather than on sales.

Types of innovation can be differentiated in terms of novelty and type. For example, introducing a new good to market, a new good to the business, a new process to the market and a new process to the business (the categories used by the Longitudinal Small Business Survey, BIS, 2018). Of these, a new good to the market would be the most novel. This novelty enhances a competitive advantage, which gives the greatest reason to expect an increase in sales. A new good to the business, but not to the market, should have a smaller effect, as it does not offer a unique advantage and implies catching up with competitors. Nevertheless, it still would give reasonable grounds to expect sales to grow. Introducing processes which are new to the market or to the business might improve operational efficiency but may not on their own generate increased sales - an association between this form of innovation and over-optimistic expectations would suggest that the novelty of the innovation is given too much weight.. We test for effects of all four types of innovation and hypothesise that:

H4a: Introducing new products to the market increases the probability of over-optimistic expectations

H4b: Introducing new products to the firm increases the probability of over-optimistic expectations

H4c: Introducing new processes to the market increases the likelihood of overoptimistic expectations

H4d: Introducing a new process to the firm increases the likelihood of overoptimistic expectations

If H4c and H4d are supported, it would suggest that expectations are driven more by novelty than by an assessment of the effect on future turnover. Similarly, if H4b is supported it might suggest expectations driven by an element of wishful thinking.

2.2.5. Export intention

Several research has identified the link between export orientation and the entrepreneurs' growth aspirations (Estrin et al., 2022; Knight et al., 2020; Axinn et al., 1995). Firms having international orientation are believed to make more attempts to increase their relevant knowledge compared to domestic firms (e.g. Pittiglio et al., 2009). Moreover, the expectation was also found to be reliant on whether the firm has previous export experience or having export intention (Axinn et al., 1995). According to Estrin et al., (2022), entrepreneurs engaging in activities such as innovation and internationalisation tend to have growth aspirations. This lays the ground for the assumption that firms which have intention to export may have a higher growth expectation. These expectations may be justified or not. As the prospect of entering a new export market becomes closer, the greater the turnover growth potential – and the greater chance for over-optimistic expectations.

H5: Firms having export intention in the short term are more likely to be overoptimism compared to firms having export intention in the longer term

3. Methodology and data

3.1 Sampling

We test our hypotheses using data drawn from the 2018 and 2019 waves of the Longitudinal Small Business Survey (LSBS), undertaken by the UK Government's Department for Business Innovation and Skills. This has the advantage of capturing data from entrepreneurs from a wide range of industry sectors and from across England and Wales. It also allows us to look across firms of different ages, in contrast to previous studies which focussed predominantly on nascent entrepreneurs. However, it also limits the measures available to us to those employed by the survey. The sample was drawn from firms listed on the Inter Departmental Business Register (IDBR) and Dun and Bradstreet's database (for details of the survey design, see BIS, 2018). A stratified sample based on one digit SIC 2007 categories, firm size and legal status and nations of the UK was derived from these two sources resulting in 15,500 computer-aided telephone interviews. The sample consists of 12,273 SMEs including self-employed (25.6%), micro firms¹ (25.9%), small² (19.5%) and medium³ (28.9%). The main sectors investigated include production and construction, transport, retail and food service/ accommodation, business services and others. Large firms (with over 250 employees) are excluded from the sample.

¹ Firms having 1- 10 employees

² Firms having 10-49 employees

³ Firms having 50-249 employees

3.2 Measures

We use data from two waves of the Longitudinal Small Business Survey from 2018 and 2019. Expectations of change in turnover were collected from the 2018 survey and actual turnover growth from the 2019 survey. Our measure of optimism is the reported growth in turnover minus the expected growth, so a positive value indicates an over-optimistic expectation and a negative value indicates an under-optimistic expectation. We use these two waves in preference to more recent waves to exclude the effect of the Covid pandemic. No-one could have predicted the onset of the pandemic and the lockdowns which followed and this would not have been reflected in firms expectations of growth. Using more recent waves would produce over-optimistic expectations which were the result of lockdowns resulting in lower growth, rather than the firms' managers being over-optimistic. Descriptive statistics are given in table 1 below whilst figure 1 shows the histogram.

<Insert Figure 1 about here>

The optimism variable is more peaked than a normally distributed variable, and appears to have long tails (both upper and lower). More than that, the tails appear to display power law like patterns. Treating the values in the tails as outliers and trimming them would entail losing the most interesting cases. Data on expected and actual change in turnover was collected from a total of 1954 SMEs. The optimism value for 97 SMEs lies above the 95th percentile and 193 lie above the 10th, whereas 114 lie below the 5th percentile and 195 lie below the 10th. Such non-normal distributions have been encountered in earlier studies. The assumptions which underpin traditional statistical methods break down when faced with heavy-tailed / power law distributions. Such power laws have been described as “the empirical reality of entrepreneurship” (Crawford, McKelvey and Lichtenstein, 2014:3) and have a long history in research in Finance and in winner-takes-all markets like the film industry (e.g. De Vany and Walls, 1999). Rather than attempt to explain the variation in the optimism measure, we employ a different approach and attempt to classify SMEs into under-optimistic, over-optimistic or neither under- nor-over-optimistic. In doing this we follow a similar approach to that adopted in previous studies which encountered distributions with long tails (e.g. De Vany and Walls, 1999 and Collins, Hand and Snell, 2002).

In the absence of benchmarks for what constitutes highly over- or under-optimistic expectations, we created our categories based on the distribution of the data using the interquartile range to define three groups: under-optimistic (lower than 25th percentile or and optimism value of less than -5), neither under- nor over-optimistic (within interquartile range around the median or between -5 and 5) and over-optimistic (above the 75th percentile or an optimism value of above 5). As a robustness check we created a second ordinal optimism variable with 5 groups of roughly equal size. As the results are consistent across these two measures we report results only for the interquartile range based measure.

Our antecedent and control variables consist of a series of dummy variables. Business planning is measured by two dummy variables. The first takes a value of “1” if the entrepreneur has a written business plan which is kept up to date whilst the second dummy takes a value of “1” if the entrepreneur has a written plan but it is not kept up to date. The base category for both dummy variables is not having a written plan at all. Planning to export in the next 12 months, planning to export further in the future and whether the SME already exports are captured by three dummy variables, with no plans to export acting as the base category. Product innovation and process innovation are captured by a further four dummy variables,

capturing if the SME introduced a new product to the market, a new product to the firm, a new process to the market or a new process to the firm. The firm's ownership structure is captured using three dummy variables: for sole proprietorships, companies and partnerships (with 'other' being the base category).

Age of the firm acts as a proxy for business experience. Whilst entrepreneurs may have gained experience from running previous firms, using firm age will account for accumulated market-specific experience. Firm age is measured using three dummy variables: firm aged 0-5 years, 6-10 years and 11-20 years (with more than 20 years as the base category), as defined by BIS (2016).

Alongside these variables, we employ a number of control variables. The size of the firm is based on the number of employees and is captured by three dummy variables for firms with no employees, micro, and small firms, with medium/large firms being the base category. Region of the UK is captured by a series of dummy variables for eight regions of England and Wales (with London as the base category). Industry sector is measured by three dummy variables: production and construction; transport, retail and food service / accommodation and business services. Although the data was collected from quotas for 14 one digit SIC groups, the published data aggregates these into three groups. We also include whether the firm is women led, to capture the effect of sex-based differences in optimism.

3.3 Analysis

Although our dependent variable is ordinal, we estimate a multinomial logit model. Ordinal regression entails accepting the "parallel lines" assumption that the effect of a change in an independent variable is constant across all categories of the dependent variable (see, e.g. Long, 1997). A multinomial regression model on the other hand allows us to estimate the effects of a change in an independent variable separately for different levels of the dependent variable. In other words, in an ordinal model the nature of the relationship between independent variables and the dependent variable is fixed so a single set of coefficients are estimated; in a multinomial model the relationships can vary, as a vector of coefficients is estimated for each of the categories in the dependent variable. This gives us a more flexible, but less parsimonious, model shown in equation 1.

$$Pr(x_i) = \frac{\exp(x_i\beta_m)}{1 + \sum_{j=1}^J \exp(x_i\beta_j)} \quad (1)$$

In equation 1, J refers to the number of categories in the dependent variable, $Pr(Y_i=m|x_i)$ refers to the probability of belonging to category m of the dependent variable Y , whilst β is a vector of coefficients estimated for each of the m categories of the dependent variable and x is a matrix of explanatory variables. Rather than present the estimated coefficients from the multinomial logit models, we report the effect of a marginal change in each of our independent variables on the probability of belonging to each category of the dependent variable.

4. Results

Excluding cases with missing values for one or more of our independent variables yields a final sample size of 1193 SMEs. The multinomial logit model produced pseudo R squared values of 0.093 (Nagelkerke), 0.106 (Cox and Snell) and 0.047 (McFadden). Marginal effects show how the probability of a respondent firm falling into each of the three categories of the dependent variable changes when the value of an independent variable changes. For example, being a company increases the probability of being over-optimistic (compared to the other ownership category) by 0.04 (or 4%).

As shown in Table 2, the results suggest that sole proprietorships and companies are slightly more likely to be over-optimistic than firms in the “other” category. This only partially supports H1. For sole proprietorships this might be attributed to the absence of other voices acting as a reality check. However, this would not explain why companies were also more likely to be over-optimistic (although there is evidence that managers too tend to be overoptimistic). In contrast to both sole proprietors and companies, partnerships are almost 20% more likely to be accurate in their expectations. This perhaps reflects that one partner can act as a check on another partner. Firm age does seem to influence over-optimism. Being a young firm (aged 0 to 5 years) increases the probability of over-optimism by 11%. Much smaller effects are seen for 6-10 year old firms and 11-20 year old firms. Being 6-10 years old increases the probability of under-optimism by almost 5%. This provides support for H2.

<Insert Table 2 about here>

Prior studies (e.g. Cassar, 2010) found a relationship between planning and optimism which led to H3. Our results suggest that neither having an up to date plan nor having a plan but not keeping it up to date have much effect on under-or over-optimism so neither H3a nor H3b are supported. The innovation variables show an interesting pattern of results. Introducing a new product to the market offers greater potential revenue than introducing a product which is new to the firm (but not to the market). Yet, introducing a new product is associated with being under-optimistic, contrary to H4a. This might suggest that SMEs take a more cautious view of the upside potential of launching a new product. In contrast, launching a product which is new to the firm (but not new to the market) increases the likelihood of an over-optimistic expectation by almost 6% (supporting H4b). Launching a new process should not have as big an effect on expectations of turnover as launching a new product. Yet, launching a new process to the industry increases the likelihood of over-optimistic expectations (supporting H4c). This might suggest that more weight is given to novelty than to the nature of the innovation. Introducing a new process to the firm (H4d) seems to have little influence on over- or under-optimism.

Lastly, planning to export in the next 12 months makes over-optimism slightly more likely (by 4%), suggesting that SMEs overestimate the effect that exports will have on turnover (H5a). However, planning to export further in the future has the opposite effect, making under optimism more likely, again by around 4%.

There are some interesting patterns in the results of our control variables too. Optimism does not vary much according to sector. Size of SMEs does have an effect, with SMEs with no employees tending to be either under optimistic or over optimistic. Micro SMEs are more likely to be under-optimistic. However, region of the UK does have an effect, with SMEs located in the East of England being 16% more likely to be under-optimistic than those based in London. SMEs based in Wales and Northern Ireland are also more likely to be under-optimistic (by 13.5% and 11.6% respectively). This could reflect local economic conditions; Wales and Northern Ireland having lower levels of GDP than elsewhere in the UK (although a similar result is not seen for the North East of England, which has the lowest GDP of any English region). SMEs based in the North West in contrast are 6.8% more likely to be over-optimistic.

5. Discussion and implications

Our investigation suggests how over- (and under-) optimistic SME's expectations of future growth are influenced by their firm characteristics. Some of the results are as expected - for example younger firms being more over-optimistic than older firms. Whilst older firms seem to split into being either over- or under-optimistic, they don't show a strong tendency to either. Overall, the results seem to suggest that firm age brings wisdom. The picture regarding firm size and ownership structure is less clear cut. SMEs with no employees or micro-SMEs tend to be under-optimistic (although being an SME with no employees also makes being over-optimistic slightly more likely). Such smaller SMEs arguably present the decision-maker with fewer opportunities to hear other views. Whilst that could make over-optimistic expectations more likely, the results show the opposite. In contrast, when looking at ownership structure, being either a sole proprietorship or a company increases the likelihood of over-optimistic forecasts (although all three are more likely to have accurate expectations than the base category of "other").

The results suggest that some decisions made by firms seem to lead to over-confident predictions of the future, especially when it comes to evaluating the potential of a new opportunity. A decision to export in the next 12 months, to launch a product which is new to the firm and to introduce a process new to the industry are all associated with being over-optimistic. All of these represent new opportunities for a firm, but it seems these opportunities are overestimated. More than that, there seems to be an element of wishful thinking. By contrast, introducing a new product to the industry (with its potential first mover advantage) makes under-optimistic forecasts more likely. This might suggest that where the innovation is new, and so there is little information to base expectations on, SMEs err on the side of caution. In contrast, rather too much weight seems to be given to competitors' success in launching products which are new to the firm. Prior studies (e.g. Cassar, 2010) have suggested that the process of planning increases optimism. However, the effect of formal planning on firm performance also varies depending on the context within which the business plan is written (Bhide, 2000). Our results suggest that having neither an up to date written plan nor a written plan which is not kept up to date have an effect on the degree of over-or under-optimism.

Theoretically, our findings contribute to provide a deeper insight to the theory of entrepreneurial optimism and organisational view by clarifying key factors influencing the over-optimism and under-optimism of owner-managers/entrepreneurs. Based on the firm characteristics and firm behaviour with regard to innovation and internationalisation such as export intention, our study has identified the extent to which the entrepreneurs' optimism may change. Our study also verifies the extent to which the novelty of innovation affects the overoptimism. Practically, our study provides more insights to owner-managers the extent that organisational factors may influence over-optimism. Overall, our findings highlight that small owner-managers having full control of their business will be more optimistic compared to other organisations (e.g. Cassar and Gibson, 2007). Moreover, the novelty of innovation, type of innovation and the export intention in long or short term should be taken into consideration to avoid over-optimism.

6. Conclusions

Our paper explores the extent to which SME owners' expectations of future growth are over- or under-optimistic. Unlike previous studies focusing on the accuracy of expectations / forecasts of nascent entrepreneurs (McCann and Vroom, 2015), we focus specifically on a cross section of SMEs. This allows us to address the effects of longer-term experience on formation of expectations for the next 12 months, rather than focussing specifically on nascent entrepreneurs or younger firms. Our results suggest that, even after firm age is taken into

account, there is some evidence that expectations of the future appear to be driven, in part, by wishful thinking. Firm age has the largest effect, and the results show that younger firms are more likely to be over-optimistic. In addition, firm having export intention in the next 12 months are more likely to be over-optimistic compared to those who plan to export in the longer term. Surprisingly, regarding product innovation, the lower level of novelty was found to drive the entrepreneurs' over-optimism, whereas the higher level of novelty could lead to under-optimism. This may be attributed to the level of risks involved in the higher novelty innovation investment. The findings have potential implications for entrepreneurship education and training in managing expectations. As such there is scope for further developing decision-making skills into entrepreneurship development programmes.

Future research can look into the over-optimism from multiple views such as the individual view (e.g. the entrepreneur's education, previous entrepreneurship experience and personality), and the macro view (such as the impact of the uncertain environment). A longitudinal study would also be helpful to identify how the optimism change over time and what are the key drivers of over-optimism and under-optimism. This will provide more insights into the decision making process of entrepreneurs/ owner-managers as well as to enable them to reflect to their intention, behaviour and characteristics to have appropriate judgement. Our findings also suggest that expectations of the future are influenced by location. Firms based outside London are significantly less likely to expect substantial growth. Given that this effect is significant for all regions, it seems unlikely to reflect economic differences. It may be that being based in London increases optimism. That may be related to the intensity of business activities and connections, and the infrastructure in the cosmopolitan area. Identifying the mechanisms behind this would be an avenue for future research. Lastly, a longitudinal study would be worthwhile to monitor the extent to which the inside and outside view influence the owner-managers' decision making across their different development phases over time.

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List of Tables and Figures

Table 1. Descriptive statistics for Optimism (expected – actual change in turnover)

Indicator	Statistic
Mean	0.97
Median	0.00
Standard deviation	48.69
Minimum / maximum	-720.00 / 969.00
Interquartile range	10.00
Skewness	4.185
Kurtosis	146.02

Table 2. Changes in predicted probability optimism

Variables	Under optimistic	Neither under nor over optimistic	Over optimistic
<i>Ownership (base = other)</i>			
Sole proprietorship	-0.153	0.112	0.040
Company	-0.172	0.120	0.052
Partnership	-0.209	0.199	0.011
<i>Planning (base = no written plan)</i>			
Plan kept up to date	-0.032	0.015	0.017
Plan not up to date	-0.019	0.039	-0.020
<i>Export intentions (base = no plans to export)</i>			
Plan to export in next 12 months	-0.009	-0.034	0.043
Plan to export further in the future	0.047	-0.060	0.013
Already export	-0.010	-0.014	0.025
<i>Product Innovation (base = none)</i>			
Introduce new product to market	0.077	-0.086	0.009
Introduce new product to firm	-0.032	-0.025	0.057
<i>Process Innovation (base = none)</i>			
Introduce new process to industry	-0.070	0.006	0.064
Introduce new process to the firm	-0.006	0.008	-0.002
<i>Age (base = 20+ years)</i>			
0-5 years	0.022	-0.133	0.111
6 - 10 years	0.048	-0.079	0.031
11 - 20 years	0.027	-0.065	0.038
<i>Control Variables</i>			
<i>Size (base Medium/Large)</i>			
No Employees	0.094	-0.151	0.057
Micro	0.082	-0.074	-0.008
Small	0.038	-0.045	0.007
<i>Sector (base = Other services)</i>			
<i>If org is women led (base = all other categories)</i>			
Women led	0.005	0.028	-0.034
Production and Construction	0.001	0.030	-0.031
Transport, Retail, food service/accommodation	-0.041	0.067	-0.026
Business Services	0.031	-0.004	-0.028
<i>Region (Base = London)</i>			
East Midland	0.017	-0.021	0.005
East of England	0.158	-0.111	-0.047
North East	-0.140	0.205	-0.065
North West	-0.002	-0.065	0.068
South East	0.086	-0.084	-0.002
South West	0.047	-0.034	-0.012
West Midlands	-0.042	0.030	0.013
Yorkshire and Humberside	0.039	-0.032	-0.007
Scotland	0.041	-0.012	-0.029
Wales	0.135	-0.096	-0.039
Northern Ireland	0.116	-0.127	0.012

Figure 1. Histogram for the optimism measure

