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The contribution of alternative finance to business growth

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The contribution of alternative finance to business growth

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SUMMARY

This paper analyses the characteristics and activities of firms that use crowdfunding, using data from the Longitudinal Small Business Survey (LSBS). Our aim is to better understand the role that crowdfunding plays in the business lending market, and potential implications for policymakers. Our key findings are set out below.

Demographics

- Crowdfunded firms are of a similar size and sector make-up compared to other SMEs.
- However, crowdfunded firms are more likely to be structured as companies and less likely to be structured as sole proprietorships, compared to non-crowdfunded firms, and firms in general. The choice of legal structure may be related to the types of finance being sought.
- Crowdfunded firms are slightly less likely "middle-aged" than non-crowdfunded firms. They are slightly more likely to be very young and very old compared to non-crowdfunded firms.
- Crowdfunded firms appear to be less likely to have ethnic minority partners, directors or owners compared to non-crowdfunded firms, although data limitations affect the conclusiveness of this result.

Does crowdfunding fill gaps in the market?

- Crowdfunding is still relatively uncommon compared to other forms of finance. In the LSBS, 1.8% of all firms are using crowdfunding, compared to 42% using bank overdrafts, 40% using credit cards, and 32% using a loan from a bank or building society.
- Crowdfunding appears to be relatively difficult to obtain compared to other sources of finance, based on comparing success rates of applications for different sources of finance.
- It is common for crowdfunded firms to use other sources of finance, particularly overdrafts (61% of crowdfunded firms) and credit cards (51% of crowdfunded firms). Crowdfunded firms are relatively successful in their applications to other sources of finance, with a success rate of 72%,

similar to average success rates in applications for finance across all firms.

- Across both crowdfunded and non-crowdfunded firms, finance is most commonly used for working capital and cashflow. Crowdfunded firms are more likely to use finance for research and development and debt consolidation compared to non-crowdfunded firms. However, this should be interpreted with caution, as for firms that use more than one source of finance, we are not able to directly attribute purpose of finance to different sources.

Is crowdfunding associated with business growth?

- Our analysis is based on the first wave of the LSBS. In future waves, it will be possible to examine performance over time. To gain an indication of whether firms that use crowdfunding are high growth or low growth, we examine factors that previous studies have shown to be linked with business growth. These factors are: innovation, exporting, training, growth ambitions and intentions, and having a business plan.
- We find that crowdfunded firms are more likely to have innovated by introducing new or improved goods in the past three years, compared to non-crowdfunded firms. We find a similar pattern for new or improved services (marginally statistically significant).
- We do not find consistent differences across the other factors.

Conclusions and policy implications

- Our analysis suggests that crowdfunded firms tend to be already well-served by the lending market. In this sense, crowdfunding does not appear to be a solution to structural gaps in financing for SMEs, but rather is more likely to compete with more traditional forms of finance, and potentially provide a complementary source of financing for SMEs that are already able to access finance
- Crowdfunding may be friendly towards specific types of investment, such as research and development spending. Other research suggests that other benefits include speed and ease of access.
- Crowdfunding may be less accessible (or at least perceived to be less

accessible) for certain groups of businesses compared to mainstream lending, in particular, firms that do not have a traditional company structure, and firms that are ethnic minority-owned. Wider research shows that ethnic minority business owners tend to face other disadvantages that reduce access to finance. From a policymaking perspective, this means that initiatives to increase access to finance will continue to be important even as crowdfunding grows. There may be a case for further investigating ethnic minority access to crowdfunding more specifically, and examining whether differences arise at the application stage (which could be driven by differing levels of awareness) or due to different success rates in obtaining funding.

- The analysis in this paper is based on descriptive analysis of cross-sectional data. However, future waves of the LSBS will offer the valuable opportunity to track firms over time to explore whether crowdfunded-raised finance is, on average, put towards more productive investments, and how variable the returns are. Such information will help guide policymakers to understand how well the market is working in assessing the risk and return on investments, particularly important factor given that crowdfunding platforms are used by retail as well as institutional investors.

CONTENTS

1. INTRODUCTION

Why examine alternative finance?

Alternative finance, largely taken to mean equity-based crowdfunding and peer to peer lending, is a small but growing source of finance for small businesses in the UK. It has been estimated that around £2.8 billion of gross lending was facilitated by online platforms in 2015, an increase of 76% on 2014. On a per capita basis, the amount of lending enabled by online platforms in the UK is on par with the US, and much higher than those seen in other European countries.[1]

The emergence of online platforms connecting businesses and potential investors has arguably expanded the financing market, delivering benefits for both sides of the market. It is generally accepted that small and medium sized enterprises (SMEs) face structural funding gaps for both debt and equity.[2] If these new sources of financing help to plug this gap, this could improve business growth and innovation, enabling investments that would not otherwise happen to go ahead.

The main reason for the structural gap in financing for SMEs is asymmetric information between business and lenders, which makes it difficult for the lender to distinguish between low risk and high risk investments.[3] It is not obvious that alternative finance helps to solve the information asymmetry problem, as it does not necessarily entail significantly more information being available to potential investors compared to other loan types. However, alternative finance may still enable expansion of the market for example, by enabling firms to access a different set of investors who may differ from traditional lenders in their risk appetite. There may also be other advantages, such as speed and agility of decision-making, that encourage more small firms to seek finance. Finally, as

[1] British Business Bank, *Small Business Finance Markets,* 2015-16
[2] BIS, *BIS Economics Paper No.16: SME Access to External Finance,* 2012
[3] BIS, *BIS Economics Paper No.16: SME Access to External Finance,* 2012

well as filling a gap in the market, alternative finance may compete with traditional lenders, thereby reducing costs of finance.[4]

Given that much public policy to improve business growth focusses on access to finance, it is important for policymakers to understand how the market for finance is changing, and what this means for where policy should focus in the future. Government has already begun to pay more attention to alternative finance platforms, with the British Business Bank providing funding to Funding Circle, for example. Whilst evidence on the scale of alternative finance has been building,[5] there is relatively little examining the phenomenon from the experiences of businesses themselves, and so much less understanding of how alternative finance is changing the access and terms of funding for small businesses.

Methodology

This paper sets out the results of an analysis of Wave 1 of the Longitudinal Small Business Survey (LSBS).

The LSBS is a telephone survey of 15502 UK small business owners and managers. The Inter Departmental Business Register (IDBR) was used as the sample source for registered businesses, while the Dun & Bradstreet's database was used as the sample source for unregistered businesses with zero employees. The sample stratification targets were set based on size of the enterprise (8 size-by-legal-status categories), sector (14 one digit SIC 2007 categories) and nation (England, Scotland, Wales and Northern Ireland).

We examine how crowdfunded firms differ in their characteristics, uses of finance and on indicators of business growth. We use this analysis to help answer the following questions:

- How do firms that use alternative finance differ from those that do not?

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[4] BIS, "New £40 million investment by British Business Bank to support £450 million of lending to smaller businesses", press release, February 2014

[5] For example, Bryan Zhang, Peter Baeck, Tania Ziegler, Jonathan Bone and Kieran Garvey, *Pushing Boundaries*, Cambridge Centre for Alternative Finance and Nesta, 2016

- To what extent does alternative finance compete with or complement traditional sources of finance?
- Are firms that use alternative finance more or less likely to grow than other firms?
- What does this mean for policymakers? Does the growth of alternative finance change the focus of policy designed to increase access to finance for small businesses?

Our definition of crowdfunding includes:

1. Peer-to-peer lending (online debt-based transactions between individuals/institutions and businesses)
2. Equity-based crowdfunding (online sale of securities to retail and institutional investors)

We group firms into 4 categories as shown below. All firms in the dataset are SMEs (i.e. with less than 250 employees).

1. Crowdfunded firms: businesses that say they are currently using peer-to-peer lending or equity-based crowdfunding. These firms may be using other sources of finance in addition to crowdfunding. The majority of crowdfunded firms in dataset are using P2P debt rather than equity (unweighted sample size of 121, made up of 116 P2P users and 11 equity crowdfunding users. Of this 11, six use P2P as well as equity crowdfunding).[6][7]
2. Non-crowdfunded firms: businesses that say they are currently using finance, but are not using peer-to-peer lending or equity-based crowdfunding (unweighted sample size: 4947)

[6] The structure of the LSBS questionnaire means that users of P2P debt and user of equity crowdfunding have to be defined slightly differently. Our group of crowdfunded firms include firms that say they are currently using peer to peer/crowdfunding platform for debt (from H6AI_2015 in the dataset), and those that say they have obtained equity finance in the last 12 months from peer to peer or crowdfunding organisations (from H5_4_2015 and H7A_2015 in the dataset).

[7] A possible alternative approach could be to exclusively analyse P2P users and exclude those who only use equity crowdfunding, In practical terms, this makes little difference to the results, as of the unweighted 11 that use equity crowdfunding, 6 also use P2P funding. The five firms that use equity crowdfunding exclusively make up 4% of our unweighted sample. When weighting, the difference is even smaller, and these five firms make up only 1% of the weighted sample.

3. Non-finance using firms: businesses that say they are not currently using finance (unweighted sample size: 438)
4. All firms: all firms included in the dataset (unweighted sample size: 5506).[8]

In many parts of this report, we focus on testing whether differences between the categories of firm are statistically significant. In most cases, for numerical variables, *t* tests on the equality of means were performed. For categorical variables, either the Pearson's chi-squared test or the Fisher's exact test were used, depending on whether each category considered had a large enough size.

Our analysis is largely based on descriptive statistics at a point in time. Further fruitful analysis could involve multivariate analysis, and when further waves of the LSBS are published, longitudinal analysis that examines the dynamic link between different factors over time.

Box: representativeness and weighting

The LSBS contains responses from businesses with employees and without employees. However, it over-samples employer businesses, compared to businesses with no employees. The dataset includes weights to make the weighted sample representative of the population. This works by allocating larger weights to businesses with no employees.[9]

We use the weights in our main analysis to ensure that our results are representative. However, the disadvantage of weighting is that particularly when sub-group sample size is relatively small (as is the case for crowdfunded firms), results can be strongly influenced by the inclusion of only a few highly-weighted businesses. In this case, these are businesses with no employees. Any differences we find between groups of firms may therefore be driven by the specific behaviour of a relatively small number of firms. An alternative approach would be to conduct analysis for firms without employees and firms with employees separately, following the approach of the main BIS report on the

[8] Firms which did not report a value for the form of financing currently used were not included.

[9] BIS, *BIS Research Paper 289: Longitudinal small business survey Year 1: SME Employers*, 2016

LSBS.[10] However, this would mean conducting analysis on two sub-groups within our crowdfunded firms, further reducing the sample size for any statistical analysis. In the Annex, we therefore report unweighted results alongside weighted ones, and in the main sections, comment on any significant differences between the two.

Section 2 starts by setting out our results on demographics of firms. Section 3 describes the role that crowdfunding is playing for businesses. Section 4 compares crowdfunded firms against other businesses on a set of indicators of business growth. In these main sections, we focus on highlighting particularly interesting results. Full results and tables are included in the Annex.

2. FIRM DEMOGRAPHICS

In this section, we compare firms along the following demographics: size, sector, type of business and ownership, age of business, ethnicity and gender of business owners and directors.

Size

On average, crowdfunded firms have an average size of 3.2 employees (excluding owners and partners, but including directors), the same as the average size of other finance-using firms. We find no significant difference between crowdfunded firms and firms financed from other sources. Only firms that do not use any finance at all are significantly smaller (1.0). The same pattern applies when the data is unweighted (although average sizes are larger across all groups due to the oversampling of firms with employees).

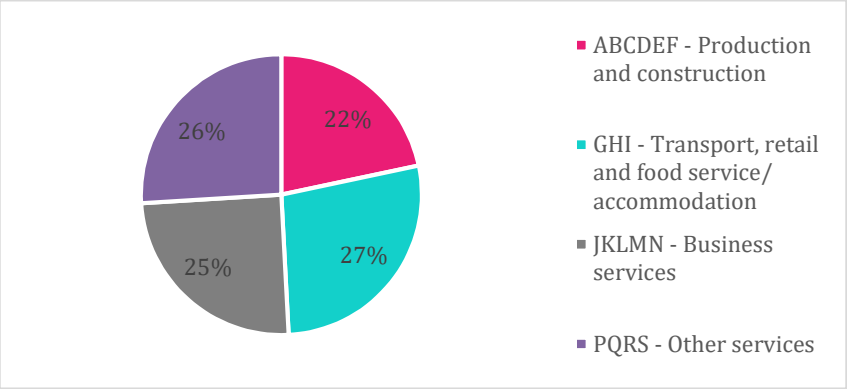
Sectors

Whilst it is possible to break down sectors into 14 categories in the dataset, we combine this into 4 sectors, because of the relatively small sample size of crowdfunded firms. We find that crowdfunded firms are fairly evenly distributed

[10] BIS, *BIS Research Paper 289: Longitudinal small business survey Year 1: SME Employers*, 2016

across these four categories and find no statistically significant differences compared to other firm types.

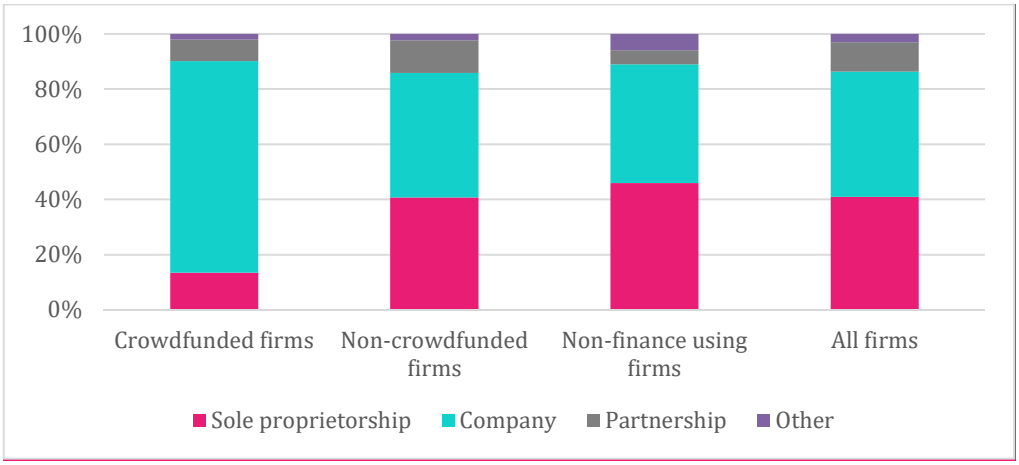
Figure 1: Breakdown of crowdfunded firms by sector



Legal structure

Crowdfunded firms are much more likely to be legally structured as companies, compared to other firms. 77% of them are companies compared to 45% of non-crowdfunded firms, and 43% of non-finance using firms. This difference in legal structure profile is statistically significant. A potential explanatory factor is that setting up as a company confers some benefits in raising finance, and whilst most crowdfunded firms in the dataset are funded through debt, firms seeking equity-based funding will need to be set up as companies.

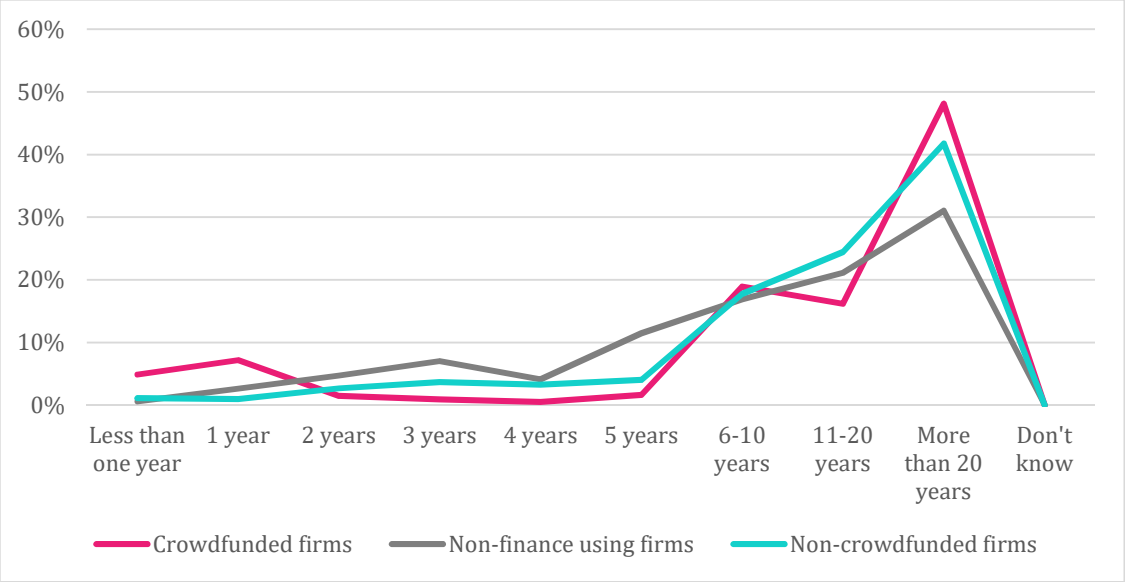
Figure 2: Breakdown of firms by legal structure



Age of firms

Crowdfunded firms are less likely to be "middle-aged" than other firms – with slightly more younger firms, but also slightly more older firms as shown in the chart below. The difference between crowdfunded firms and other firms is statistically significant, although the differences are partly driven by the larger weighting given to a few firms with no employees.

Figure 3: Distribution of age of firms



Gender

56% of crowdfunded firms have at least one female owner, director or partner. This is higher than the percentage for non-crowdfunded firms, however, the difference is not statistically significant. We find no statistically significant differences between crowdfunded and other firms.

Ethnic minority leadership

Crowdfunded firms are less likely than non-crowdfunded firms to have ethnic minority directors, partners or owners. The percentage of crowdfunded firms with at least one minority director or partner is 1%, as compared to 5% for non-crowdfunded firms. The difference is statistically significant in the weighted

analysis, but not the unweighted (although the pattern is similar).

Table 1: Proportion of firms that have at least one minority owner, director or partner

Category	% of firms that have at least a minority owner, director or partner
Crowdfunded firms	1%
Non-crowdfunded firms	5%
Non-finance using firms	8%
All firms	6%

Overall, crowdfunded firms appear more likely to be structured as companies, which suggests that they are better geared up generally for raising finance, for example, as they are able to sell equity. They tend to be either younger or older than other firms, although differences are small.

They are less likely to have minority business owners. This finding is tentative, as it is only significant in our weighted analysis. However, if this is indeed the case for the general population of crowdfunded firms, this would raise potential issues in terms of awareness and/or access. Wider research on other forms of financing suggests that ethnic minority entrepreneurs are less likely to access finance. This can be because some ethnic minority group are less likely to apply, due to perception that they will be turned down.[11] When they do apply, there is also evidence that applicants from some ethnic minority groups are likely to be turned down. There are a range of factors that contribute to this, for example, business owners from some ethnic minority groups tend to be less likely to have collateral, a good credit score and financial track-record and formal savings.[12]

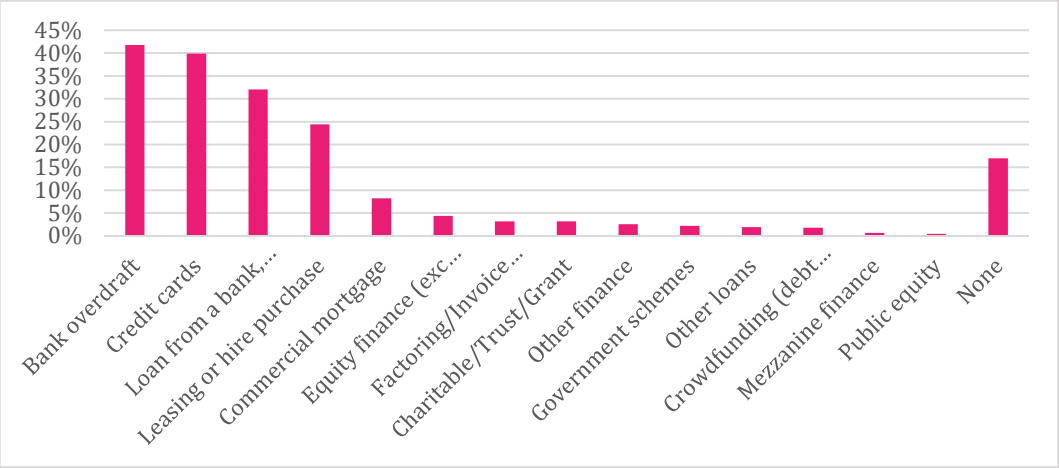
3. DOES CROWDFUNDING FILL GAPS IN THE MARKET?

Although it is growing quickly, crowdfunding is a relatively new form of financing, and as such relatively few firms in the LSBS dataset use it. We find that 1.8% of all firms (weighted, 2.2% unweighted), and 2.2% of firms that are using finance (weighted, 2.4% unweighted) say they are currently using crowdfunding finance.

[11] Stuart Fraser, "Is there Ethnic Discrimination in the UK Market for Small Business Credit?" *International Small Business Journal* 27(5) (2009)
[12] DCLG, *Ethnic Minority business and access to finance*, 2013

This is of a similar magnitude compared to other estimates, for example, Zhang et al estimate that in 2015, 3.9% of new loans lent to SMEs were peer-to-peer.[13] In comparison, other sources of finance continue to be much more important, as shown in the chart below. For example, 42% say they are currently using a bank overdraft, 40% say they are using credit cards, and 32% say they are using a loan from a bank or building society.

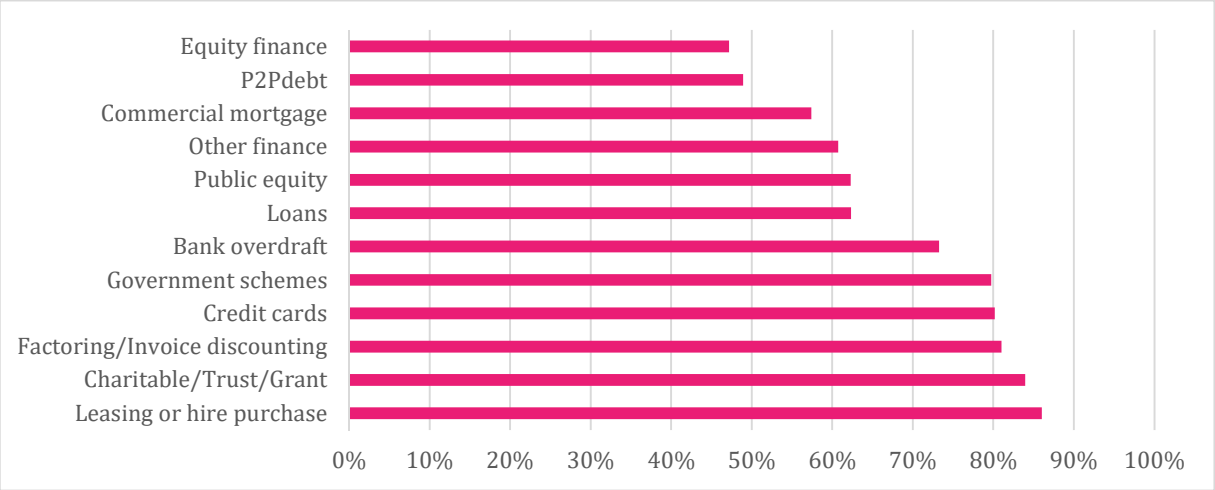
Figure 4: Proportion of firms using different types of finance



The LSBS also allows us to compare applications for finance against finance actually obtained in the 12 months leading up to the survey. This question does not allow equity crowdfunding to be split out from wider equity financing, however, we are able to look at P2P debt crowdfunding. Success rates for obtaining P2P debt are relatively low compared to other forms of finance. This indicates that it is not necessarily easier to obtain crowdfunding compared to other sources of finance. It may be the case that because crowdfunding is newer, more firms are likely to apply, and fewer are discouraged because of past failures to obtain finance. There may be a perception that it is easier to obtain crowdfunding than it really is. Alternatively, it may be the case that higher risk (and potentially more innovative) firms are more likely to apply for this type of financing. This question may merit further investigation, potentially examining the risk profiles of applicants to crowdfunding platforms.

[13] Bryan Zhang, Peter Baeck, Tania Ziegler, Jonathan Bone and Kieran Garvey, *Pushing Boundaries*, Cambridge Centre for Alternative Finance and Nesta, 2016

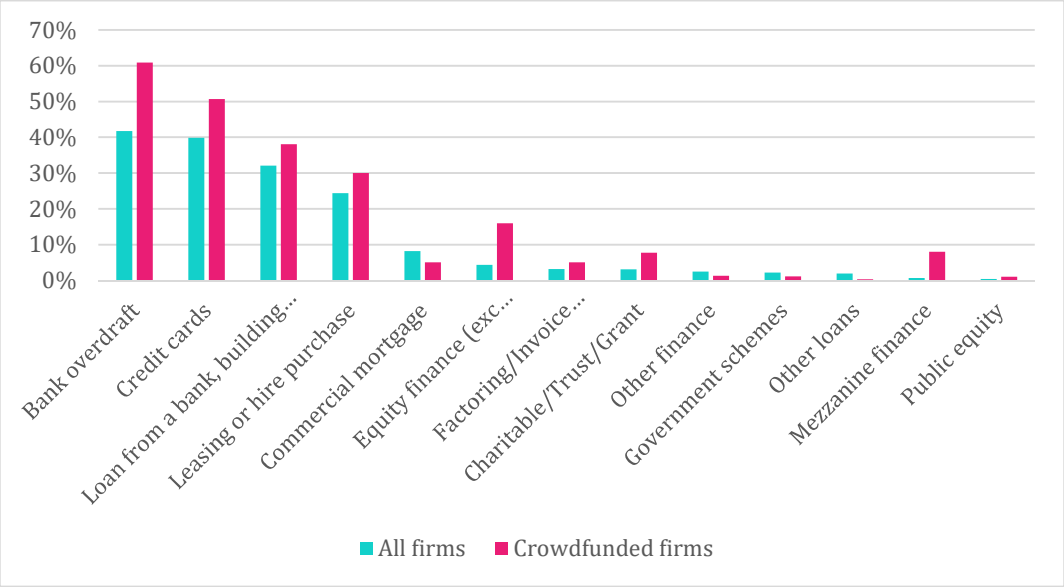
Figure 5: Success rates in obtaining different types of finance in previous 12 months



Note: Only P2P, as cannot separate out equity crowdfunding from rest of equity. Note due to very small sample sizes, other loans and mezzanine finance have been excluded. Success rate is proportion of applications "obtained" divided by the number of applications "obtained", "refused" and "in progress".

It is common for crowdfunding firms to be using other sources of finance alongside crowdfunding. Only 13% (weighted) of crowdfunded firms in our dataset are not using any other form of finance. On average, crowdfunded firms are using 2 other sources of finance in addition to crowdfunding. Bank overdraft (61%) and credit cards (51%) are the most common other forms of finance used, as shown in the chart below. This suggests that it is not the case that crowdfunded firms are unable to access finance from other sources.

Figure 6: Proportion of all firms and crowdfunded firms using different types of finance



Furthermore, crowdfunded firms are more likely to have had a successful application for other forms of finance. There was a weighted total of 103 applications for another source of finance from the crowdfunded firms in our dataset. 72% of these applications were successful. This compares to a general success rate in applying for finance of 71% among all firms. This provides further support to the conclusion that crowdfunded firms are no less likely than other firms to have difficulty accessing the market.

There are some similarities in what crowdfunded and non-crowdfunded firms use financing for, as shown in the table below. Across both categories, just over half say that they use financing for working capital or cashflow. Beyond this, the main statistically significant differences are that crowdfunded firms are more likely to use financing for research and development (marginally significant) and debt consolidation. These results hold across both the weighted and unweighted analyses. They are less likely to use financing to acquire capital equipment, although the difference is not statistically significant.

This could suggest that crowdfunding tends to be used for slightly different purposes compared to other financing. However, it is difficult to draw firm conclusions, as the survey question asks about the purpose of finance raised on the most important occasions that finance was raised by the firm. Theoretically, it

could therefore be that crowdfunding is more likely to be used for R&D, or that crowdfunded firms are more likely to raise money for R&D, but not necessarily from crowdfunding.

Similarly, it could be that crowdfunding is more likely to be used for debt consolidation. If this were the case, this might raise concerns around the risk profile of investments being taken on, especially by potentially less sophisticated retail investors. However, the relatively low success rates of firms seeking to obtain P2P funding, as shown earlier in this section, suggests that investors are in fact, relatively discerning in their investments.

Table 2: Purposes of finance for most important occasion on which finance was raised in the past 12 months, by crowdfunded and non-crowdfunded firms

	Crowdfunded firms	Non-crowdfunded firms
Working capital, cashflow	53%	53%
Buying land or buildings	12%	12%
Improving buildings	8%	7%
Aquiring capital equipment or vehicles	28%	41%
Research and development	**12%**	**4%**
Acquiring intellectual property	1%	1%
Protecting intellectual property	1%	1%
Training/staff development	2%	2%
Buying another business	1%	0%
Marketing	3%	5%
Debt consolidation	**8%**	**2%**
Moving premises	1%	1%
To fund expansion in the UK	10%	6%
To fund expansion overseas	1%	1%
Hiring staff	1%	2%
Start up business	1%	3%
Management buy out/in	1%	1%
Business recovery	1%	2%
Other	27%	10%

Note – firms are able to pick more than one purpose, and the question applies to most important occasion on which firms raised finance in the last 12 months.

The amount of funding raised by crowdfunded firms from all sources is £172,000 on average. This is smaller than the amount raised by non-crowdfunded firms (£233,000), although the difference is not statistically significant.

Overall, the results suggest that crowdfunding is not a significant alternative source for firms that would be otherwise unable to obtain financing. Crowdfunded firms are slightly more likely to be using finance for debt consolidation and R&D, but the data does not tell us whether it is crowdfunding finance specifically, or one of the other sources of finance that is being used for these purposes.

It is not easier to obtain crowdfunded financing than other sources of finance. And firms that do obtain crowdfunding finance appear to be relatively successful in obtaining other sources of finance too. Crowdfunding may therefore play more of a complementary role for firms that are already able to access finance, possibly filling specific funding needs that other finance providers would be less likely to fill. There are also other potential advantages that we are unable to look at in detail using the LSBS dataset, for example, how quick it is to obtain crowdfunding compared to other sources of finance. A question on this topic is asked in the LSBS, but only of equity crowdfunders. However, other research suggests that P2P crowdfunded firms do indeed see speed and ease of use as benefits of using crowdfunding.[14]

It is also possible that crowdfunding increases competition in the lending market. We are unable to look at this in detail here (and the number of responses given to the LSBS question on interest rates is relatively small). Other research suggests that some firms see the opportunity to get a better rate as an important reasons for using P2P crowdfunding.[15]

4. FACTORS ASSOCIATED WITH GROWTH

Our analysis in the previous section suggests that crowdfunding is unlikely to be a source of finance for firms that would otherwise struggle to obtain financing. However, it may still benefit economic growth in two ways. Firstly, firms may find crowdfunding to be a more accessible form of finance for productive projects that other lenders are less willing to lend for. Secondly, if it increases competition in

[14] Peter Baeck, Liam Collins and Bryan Zhang, *Understanding alternative finance*, Nesta and University of Cambridge, 2014
[15] Peter Baeck, Liam Collins and Bryan Zhang, *Understanding alternative finance*, Nesta and University of Cambridge, 2014

the lending market, it may benefit firms generally, by reducing the cost of finance, allowing them to increase investment. Assessing whether this is the case is beyond the scope of this paper, and it is likely to take some time for data that allows this to be assessed to become available.

As future waves of the LSBS are released, it will be possible to look at whether growth rates of crowdfunded firms differ from non-crowdfunded firms. This could help inform the question of whether access to crowdfunding helps funding to be directed towards particularly productive investments that might not otherwise be funded.

To help inform this future analysis, we examine whether firms that are currently using crowdfunding already display characteristics associated with business growth.

Based on a review of existing studies that study the link between different firm characteristics and activities, and growth, we examine the following factors in the LSBS dataset: levels of innovation, exporting behaviour, provision of training, growth ambitions and intentions and having a business plan. These can be broadly grouped into current behaviours, and indicators of future behaviours.

Current behaviours

Levels of innovation

From a theoretical standpoint, innovation should result in firms becoming more competitive, either because they are providing new or improved products and services compared to rival firms, or because innovation in production has allowed them to provide these goods and services at lower cost. A range of studies point to innovation being strongly linked to business growth.

Growth performance of businesses is stronger for firms that have made some form of business improvement compared with those not making improvements (financial investment, exporting, innovation, collaboration, introducing a management team).[16] Process innovation and strength in entering new markets

[16] Allinson, G., Braidford, P., Houston, M., and Stone, I., *BIS research paper number 216: Understanding Growth in Small Businesses*, 2015

are two of the nine most significant factors most strongly associated with growth.[17] Ram et al. found that over a ten year period, the high-growth firms in their sample were one and a half times as likely to make significant changes to their marketing strategies (aimed at developing new products and/or markets) as firms that merely survived and about twice as likely as firms that experienced employment decline during the same period.[18] Finally, more generally, innovation is a key strategic business behaviour associated with higher growth.[19]

There are three questions relating to innovation in the LSBS questionnaire, the first two asking whether firms have introduced any new or improved goods and services in the last three years, and the third asking whether firms have introduced any new or improved processes for producing or supplying goods or services in the last three years.

As shown in the chart below, across all three of these categories, crowdfunded firms are more likely to have innovated compared to other types of firms. 37% of crowdfunded firms say they have introduced a new or improved good, compared to only 23% of non-crowdfunded firms. Half say that they have introduced a new or improved service, compared to only 34% of non-crowdfunded firms. These differences are statistically significant (although in the case of services only marginally so in the weighted analysis, and not at all in the unweighted analysis). The differences between crowdfunded firms and non-crowdfunded firms is not statistically significant for new or improved processes.

The link between crowdfunding and innovation could mean that crowdfunding tends to be a better source of finance for research and development investments. Or it may be that crowdfunded firms are more open to new ways of operating, making them more likely both to innovate, and to explore new ways of raising finance.

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[17] BIS, *Growth special report: Small Business Survey 2012*, 2013
[18] Ram, M., Deakins, D. and Smallbone, D. *Small Firms: Enterprising Futures*, Institute of Small Business Affairs, SAGE Publications Ltd, 1997
[19] Goldman Sachs, *Empowering entrepreneurs, accelerating growth:, Progress Report on the Goldman Sachs 10,000 Small Businesses UK Programme*, 2014

Figure 7: Proportion of firms innovating in the last three years

Exporting behaviour

Exporting means that firms are able to access a larger market than they otherwise would, and so should be conducive to business growth. Exporting is one of the nine most significant factors most strongly associated with growth.[20] Snell and Lau, and Lu and Beamish find a positive association between increased export orientation and small firm growth (although it is possible that the connection is due to firm size rather than firm growth per se).[21] Finally, exporting has been found to be a key strategic business behaviour associated with higher growth.[22]

Our analysis shows that crowdfunded firms are more likely to say that they export compared to non-crowdfunded firms, (24% compared to 14%), and the difference between the two is marginally significant (at the 10% level). The pattern of crowdfunded firms exporting more applies both to goods and services, although

[20] BIS, *Growth special report: Small Business Survey 2012*, 2013
[21] Robin Snell, Agnes Lau, "Exploring Local Competences Salient for Expanding Small Businesses", *Journal of Management Development*, 13(4): 4-15, 1994; Lu, J. W. and Beamish, P. W., The internationalization and performance of SMEs. *Strategic Management Journal*, 22: 565–586, 2001
[22] Goldman Sachs, *Empowering entrepreneurs, accelerating growth:, Progress Report on the Goldman Sachs 10,000 Small Businesses UK Programme*, 2014

differences are not significant in these sub-categories where sample sizes are smaller.

Training

Employee training is associated with growth.[23] Providing formal training is one of the nine most significant factors most strongly associated with growth.[24] Studies of specific training schemes also find benefits. For example, studies show that Government financial support to management training in SMEs can lead to improvements in business performance.[25] Westhead and Storey (1996) though, reviewing the literature, state that the relationship between management training and small businesses performance is weak.[26]

We find no statistically significant differences between crowdfunded and non-crowdfunded firms on this measure.

Future-focussed indicators

Growth ambitions and intentions

Management's motivation for growth is important in changing pace of growth in high-growth SMEs.[27] In its research, BIS finds that 21 per cent of growing businesses show growth ambition, double the rate of non-growing businesses (10 per cent).[28] The 10,000 Small Business UK Programme also finds a positive link.[29] Finally, Smallbone et al. (1995) showed that the high growth respondents

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[23] See, for example, Barringer, B.R., Jones, F.F. and Lewis, P.S.. "A qualitative study of the management practices of rapid-growth firms and how rapid-growth firms mitigate the managerial capacity problem". *Journal of Developmental Entrepreneurship*, 3(2): 97-122, 1998; Barringer, B.R., Jones, F.F. and Neubaum, D.O. "A quantitative content analysis of the characteristics of rapid-growth firms and their founders". *Journal of Business Venturing*, 20(5): 663-687, 2005

[24] BIS, *Growth special report: Small Business Survey 2012*, 2013

[25] Marshall, J.N., Alderman, N., Wong, C. and Thwaites, A. (1993), "The impact of government assisted management training and development on small and medium sized enterprises in Britain", *Environment and Planning*, 11: 331-48, 1993

[26] Westhead, P. and Storey, D., "Management training and small firm performance: why is the link so weak?", *International Small Business Journal*, 14(4): 13-24, 1996

[27] Etienne St-Jean, Pierre-André Julien, and Josée Audet. "Factors associated with growth changes in "gazelles"" *Journal of Enterprising Culture* 16(2): 161-188, 2008

[28] Allinson, G., Braidford, P., Houston, M., and Stone, I., *BIS research paper number 216: Understanding Growth in Small Businesses*, 2015

[29] Goldman Sachs, *Empowering entrepreneurs, accelerating growth:, Progress Report on the Goldman Sachs 10,000 Small Businesses UK Programme*, 2014

in their panel were more than twice as likely to have a growth objective as other firms.[30]

In the LSBS dataset, just over two thirds (67%) of crowdfunded firms say that they plan to grow the sales of their business over the next three years. This is around the same proportion of non-crowdfunded firms. However, crowdfunded firms are more likely to say that they plan to develop their businesses in a range of ways, as shown in the table below. Of these, the difference between crowdfunded firms and non-crowdfunded firms in the proportion planning to invest in capital over the next three years is statistically significant (but only in the weighted analysis).

Table 3: Does your business plan to do any of the following over the next three years?

	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Increase the skills of the workforce	70%	60%	58%	60%
Increase leadership capabilities of managers	46%	35%	34%	35%
Capital investment	59%	42%	44%	43%
Develop and launch new products/services	53%	45%	51%	46%
Introduce new working practices	46%	45%	41%	45%

Business plan

Having a formal business plan and strength in implementing the business plan are two of the nine most significant factors most strongly associated with growth.[31] A number of other studies also suggest that there is a positive

[30] Smallbone, D., Leigh, R. and North, D.. "The characteristics and strategies of high growth SMEs." *International Journal of Entrepreneurial Behaviour & Research*, 1(3):44-62, 1995

[31] BIS, *Growth special report: Small Business Survey 2012*, 2013

relationship.[32] It is unclear whether there is a causal effect, although having a business planning process may help facilitate internal strategic thinking.[33]

We find that 44% of crowdfunded firms have a business plan, compared to 33% of non-crowdfunded firms, however, the difference is not statistically significant.

Overall, there is some evidence that crowdfunded firms are more likely to display characteristics associated with high growth firms compared to other types of business. This is especially the case for innovation, where crowdfunded firms report being more innovative than other businesses. This could mean that crowdfunding helps fill a gap in the market for more innovative projects than other lenders might not finance. However, it may also be that as higher-performing firms, crowdfunded firms are simply more aware of the range of financing options open to them. A potential avenue for future research when future waves of the LSBS are published could be to examine whether innovative firms using crowdfunding grow more quickly than innovative firms not using crowdfunding. This could indicate whether crowdfunding is helping to fund particularly productive investments that might not otherwise happen.

5. CONCLUSIONS

Our analysis of the LSBS suggests that crowdfunded firms tend to be already well-served by the lending market. They are able to obtain finance from a wide range of sources. In this sense, crowdfunding does not appear to be a solution to structural gaps in financing for SMEs. In fact, it may be less accessible (or at least perceived to be less accessible) for certain groups of businesses compared to mainstream lending, in particular, firms that do not have a traditional company structure, and firms that are ethnic minority-owned. The latter in particular could be a reflection of the fact that ethnic minority business owners tend to face other disadvantages that reduce access to finance. From a policymaking perspective, this means that initiatives to increase access to finance will continue to be important even as crowdfunding grows. There may also be a case for further investigating ethnic minority access to crowdfunding more specifically, examining

[32] Burke, A., Fraser, S. & Greene, F. J. "The Multiple Effects of Business Planning on New Venture Performance", *Journal of Management Studies*, 47, 391-415, 2010
[33] For a discussion, see Andy Lockett, James Hayton, Deniz Ucbasaran, Kevin Mole and Gerard P Hodgkinson , *Entrepreneurial leadership, capabilities and growth*, ERC, 2013

whether differences appear at the application stage (which could be driven by differing levels of awareness) or due to different success rates in obtaining funding.

However, that does not mean that crowdfunding does not have benefits. It may act as a complementary source of funding for firms that are already able to access finance. Our results are not conclusive, but crowdfunding may be more friendly towards certain types of investment, for example, research and development that helps increase innovation. It may also increase competition in the market for business lending more generally. And other research suggests that it provides benefits in ease of access and speed compared to other types of lending.

It will be important to track firms over time to explore whether crowdfunded-raised finance is, on average, put towards more productive investments, and how variable the returns are. Such information will help guide policymakers to understand how well the market is working in assessing the risk and return on investments, particularly important factor given that crowdfunding platforms are used by retail as well as institutional investors.

ANNEX

Demographics: detailed results

Firm size

	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Average size	3.232566	1.025215	3.208737	2.842512
95% confidence interval (lower)	2.063154	0.820881	3.003261	2.672036
95% confidence interval (upper)	4.401978	1.229548	3.414213	3.012988
Unweighted				
Average size	27.00826	31.89812	10.83562	30.11515
95% confidence interval (lower)	19.55055	30.66044	8.718631	28.96903
95% confidence interval (upper)	34.46597	33.1358	12.9526	31.26126

T-Test of differences between categories finds that only non-finance using firms are significantly different (at 1% level) from the other using firms across both weighted and unweighted analyses.

Sector

	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Production and construction (ABCDEF)	22%	31%	23%	30%
Transport, retail and food service/ accommodation (GHI)	28%	23%	22%	23%
Business services (JKLMN)	25%	28%	31%	28%
Other services (PQRS)	26%	18%	23%	20%
Unweighted				
Production and construction (ABCDEF)	27%	28%	20%	27%
Transport, retail and food service/ accommodation (GHI)	21%	27%	24%	27%
Business services (JKLMN)	31%	25%	31%	26%
Other services (PQRS)	21%	20%	25%	20%

T-Test of differences between categories finds that only non-finance using firms are significantly different (at 1% level) from financed firms, only in the unweighted analyses.

Legal structure

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Sole proprietorship	14%	41%	46%	41%
Company	77%	45%	43%	45%
Partnership	8%	12%	5%	11%
Other	2%	2%	6%	3%
Unweighted				
Sole proprietorship	2%	11%	19%	11%
Company	83%	74%	64%	73%
Partnership	9%	11%	9%	11%
Other	5%	4%	8%	4%

F-Test of differences between categories finds that crowdfunded firms are significantly different in profile (at 1% level) from non-crowdfunded firms and non-finance using firms for both weighted and unweighted analyses.

Age of firm

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Less than one year	5%	1%	1%	1%
1 year	7%	1%	3%	1%
2 years	1%	3%	5%	3%
3 years	1%	4%	7%	4%
4 years	1%	3%	4%	3%
5 years	2%	4%	12%	5%
6-10 years	19%	18%	17%	18%
11-20 years	16%	24%	21%	24%
More than 20 years	48%	42%	31%	40%
Don't know	0%	0%	0%	0%
Unweighted				
Less than one year	2%	1%	0%	1%
1 year	2%	1%	2%	1%
2 years	1%	2%	3%	2%
3 years	2%	3%	5%	3%
4 years	3%	3%	6%	3%
5 years	3%	3%	8%	3%
6-10 years	15%	12%	18%	12%
11-20 years	17%	17%	15%	17%
More than 20 years	55%	60%	44%	58%
Don't know	0%	0%	0%	0%

In the weighted analysis, the difference in profile of crowdfunded firms compared to non-crowdfunded firms is statistically significant at the 1% level. Differences are not statistically significant in the unweighted analysis.

Gender – Proportion of firms with at least one female owner, director or partner

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted	56%	43%	33%	42%
Unweighted	57%	59%	56%	59%

There are no significant differences between crowdfunded and non-crowdfunded firms.

Ethnicity - Proportion of firms that have at least a minority owner, director or partner

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted	1%	5%	8%	6%
Unweighted	5%	8%	10%	8%

The difference between crowdfunded and non-crowdfunded firms is statistically significant (at the 1% level) in the weighted analysis, but not in the unweighted analysis.

Do crowdfunded firms fill gaps in the market?

Average number of sources of finance used, apart from crowdfunding

	Crowdfunded firms
Weighted	2.25532
Unweighted	2.67769

Proportion of crowdfunded firms using other sources of finance

	Crowdfunded firms
Weighted	
Bank overdraft	61%
Credit cards	51%
Loan from a bank, building society	38%
Leasing or hire purchase	30%
Commercial mortgage	5%
Equity finance (exc crowdfunding)	16%
Factoring/Invoice discounting	5%
Charitable/Trust/Grant	8%
Other finance	1%
Government schemes	1%
Other loans	0%
Mezzanine finance	8%
Public equity	1%
Unweighted	
Bank overdraft	58%
Credit cards	56%
Loan from a bank, building society	41%
Leasing or hire purchase	45%
Commercial mortgage	12%
Equity finance (exc crowdfunding)	20%
Factoring/Invoice discounting	19%
Charitable/Trust/Grant	5%
Other finance	1%
Government schemes	1%
Other loans	2%
Mezzanine finance	4%
Public equity	4%

Success rates of crowdfunded firms versus other firms

	Crowdfunded firms	**All firms**
Weighted	72%	71%
Unweighted	76%	81%

Uses of finance

	Crowdfunded firms	Non-crowdfunded firms
Weighted		
Working capital, cashflow	53%	53%
Buying land or buildings	12%	12%
Improving buildings	8%	7%
Aquiring capital equipment or vehicles	28%	41%
Research and development*	12%	4%
Acquiring intellectual property	1%	1%
Protecting intellectual property	1%	1%
Training/staff development	2%	2%
Buying another business	1%	0%
Marketing	3%	5%
Debt consolidation**	8%	2%
Moving premises	1%	1%
To fund expansion in the UK	10%	6%
To fund expansion overseas	1%	1%
Hiring staff	1%	2%
Start up business	1%	3%
Management buy out/in	1%	1%
Business recovery	1%	2%
Other**	27%	10%
Unweighted		
Working capital, cashflow	53%	52%
Buying land or buildings	14%	15%
Improving buildings	10%	9%
Aquiring capital equipment or vehicles*	35%	45%
Research and development*	6%	3%
Acquiring intellectual property	1%	1%
Protecting intellectual property	1%	0%
Training/staff development	4%	2%
Buying another business*	3%	1%
Marketing	3%	2%
Debt consolidation**	6%	2%
Moving premises	3%	1%
To fund expansion in the UK***	15%	7%
To fund expansion overseas	2%	1%
Hiring staff	1%	2%
Start up business	2%	2%
Management buy out/in	3%	1%
Business recovery	1%	1%
Other	15%	13%

Differences between crowdfunded firms and non-crowdfunded firms are: *significant at 10%; **significant at 5%; ***significant at 1%

Factors associated with growth: detailed results

Levels of innovation

		Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted					
Introduced new/improved good?	Yes	37%	23%	16%	22%
	No	60%	77%	84%	78%
	Don't know	1%	0%	0%	0%
	Refused	1%	0%	0%	0%
Introduced new/improved service?	Yes	50%	34%	41%	35%
	No	50%	66%	59%	65%
	Don't know	0%	0%	0%	0%
	Refused	0%	0%	0%	0%
Introduced new/improved process?	Yes	29%	23%	26%	23%
	No	70%	77%	73%	76%
	Don't know	1%	0%	0%	0%
	Refused	0%	0%	0%	0%
Unweighted					
Introduced new/improved good?	Yes	40%	25%	18%	25%
	No	59%	74%	82%	75%
	Don't know	1%	1%	0%	0%
	Refused	1%	0%	0%	0%
Introduced new/improved service?	Yes	42%	38%	38%	38%
	No	57%	62%	61%	62%
	Don't know	1%	0%	0%	0%
	Refused	0%	0%	0%	0%
Introduced new/improved process?	Yes	33%	30%	27%	30%
	No	66%	69%	72%	69%
	Don't know	1%	1%	0%	1%
	Refused	0%	0%	0%	0%

In the weighted analysis, the difference between crowdfunded firms and non-crowdfunded firms is statistically significant at the 1% level for goods, and at the 10% level for services. For process, the differences are not statistically significant. In the unweighted analysis, it is significant at the 1% level for goods, but not services.

Exporting behaviour

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Yes	24%	14%	10%	13%
No	76%	86%	90%	87%
Unweighted				
Yes	36%	24%	15%	23%
No	64%	76%	85%	77%

In the weighted analysis, the difference between crowdfunded firms and non-crowdfunded firms is statistically significant at the 10% level, and in the unweighted analysis at the 1% level.

Training

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Yes	66%	63%	62%	63%
No	34%	37%	38%	37%
Don't know	0%	0%	0%	0%
Unweighted				
Yes	81%	80%	74%	80%
No	19%	20%	26%	20%
Don't know	0%	0%	0%	0%

No significant differences in the weighted analysis. In the unweighted analysis, only the non-finance using firms are significantly different from finance using firms at the 10% level.

Growth ambitions: Over the next three years, do you aim to grow the sales of your business?

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Yes	67%	66%	73%	67%
No	33%	34%	27%	33%
Non-weighted				
Yes	86%	78%	75%	78%
No	14%	22%	25%	22%

No significant differences in the weighted analysis. Non-finance using firms are different at 5% from finance using firms in the weighted analysis.

Having a business plan

Category	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Yes	44%	33%	33%	33%
No	56%	67%	67%	67%
Unweighted				
Yes	55%	56%	47%	55%
No	44%	43%	52%	44%

No significant differences in the weighted analysis. Differences between non-finance using firms and other firms are statistically significant at the 5% level in the unweighted analysis.

Does your business plan to do any of the following over the next three years?

In the weighted analysis, the difference between crowdfunded firms and non-crowdfunded firms in the proportion planning to invest in capital over the next three years is statistically significant at the 10% level. In the unweighted analysis, this is not the case, but the difference between crowdfunded and non-crowdfunded firms in plans to develop and launch new products and services is significant at the 10% level.

	Crowdfunded firms	Non-crowdfunded firms	Non-finance using firms	All firms
Weighted				
Increase the skills of the workforce	70%	60%	58%	60%
Increase leadership capabilities of managers	46%	35%	34%	35%
Capital investment	59%	42%	44%	43%
Develop and launch new products/services	53%	45%	51%	46%
Introduce new working practices	46%	45%	41%	45%
Unweighted				
Increase the skills of the workforce	81%	79%	69%	78%
Increase leadership capabilities of managers	62%	60%	48%	59%
Capital investment	58%	57%	43%	56%
Develop and launch new products/services	60%	52%	48%	52%
Introduce new working practices	60%	59%	48%	58%

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