SOUTH-EAST ENGLAND
GRADUATE SKILLS MIS-MATCH

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Executive Summary

The challenges of the Graduate Professional Attraction and Retention

How often are reminded of this by various government and other institutional reports? The UK Commission for Employability Skills (UKCES) in their extensive report looking at young people suggested that school, college and university leavers have most of the core skills, but just lack experience (UKCES 2018). Other national and sector reports talk frequently about the importance of attracting and retaining young talent and its criticality to the future success of the UK’s economy (Swinney and Maire Williams 2016). Addressing the issues of graduates moving away from the various regions to go to cities, and then a significant majority of these fresh graduates heading straight for the bright lights of the capital.

In the south-east of England the challenges for Micro- and Small-Enterprises (M&SEs) is even larger, with London accounting for almost 22 per cent of all new graduate opportunities (Swinney and Maire Williams 2016).

In the M&SE sector, especially those requiring STEM-skilled graduate professional staff, the issues of attraction and retention are particularly challenging. This preliminary research study explores some of the patterns in graduate recruitment amongst micro- and small-enterprises utilizing graduates as a means to enhancing their professional staff’s stem skills gaps.
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Section A – Overview

A.1 Micro- and Small-Enterprise’s (M&SE’s) skills needs in the South-east of England

Small business Britain faces its toughest challenge in 2019 and beyond, the latest FSB business confidence index has faced its third quarter of negative confidence in the economy and small businesses confidence (FSB 2019). Clearly there is a link between business confidence in the M&SE sector and entrepreneurial activity, in the latest Global Entrepreneurship Monitor report, the entrepreneurial activity rate in the UK has fallen from its previous level in 2017 (GEM 2018, 2019). The TEA rate of 7.9 per cent in the UK compares favourably to France (6.1 per cent) and Germany (5.0 per cent) but is considerably lower than that of the US (15.6 per cent).

This dip in entrepreneurial activity is reflected in the UK’s business births and death rates, in the period 2016-2017, birth rates fell to 382,000 from 414,000 in the previous year. Number of UK business deaths increased from 288,000 to 357,000 between 2016-17, a higher death rate of 12.2% (Office for National Statistics 2018).

Another barometer of the health of Small Business Britain is the annual Longitudinal Small Business Survey (LSBS) undertaken for the Department for Business, Energy and Industrial
Strategy (BEIS) (Department for Business Energy & Industrial Strategy 2018a). Of the SMEs in 2017-18, over 64 per cent had constant employment, with just 22 per cent increasing employment over that period. In this same period over 20 per cent of the surveyed business were exporting. The highest exports were in the STEM-skilled sectors with manufacturing & advanced engineering (40 per cent), information, communications and technology (39 per cent), and professional, financial and technical services (30 per cent).

Employers’ acknowledge the increase in the supply of graduates with more diverse social backgrounds and skills levels (Department for Business Innovation & Skills 2015). This research still shows some overall concerns by graduate employers:

1. Specific skills shortages - those employers focusing on STEM-skilled graduates acknowledge a general decrease in the shortages of high-quality applicants;
2. Too many graduates applicants - of lower qualities, and with too specific subject backgrounds;
3. For micro- and small-enterprises low visibility - often these enterprises found it difficult to be visible to both the universities and graduates transitioning into the workplace.

### A.2 Leading and managing technology and innovation

In 1999 Peter Drucker issued the challenge to businesses to ‘Innovate or Die’ (Drucker 1999), in 2019 the challenge comes from the CBI-Oracle partnership to large enterprises, ‘It’s do or die. Digital transformation is the process of using digital technologies to radically re-organise their business so it can deliver a seamless and efficient customer experiences (CBI 2019). Over the last decade more than 40% of the previous FTSE 100 businesses are no longer here, conclusion is that they were not able to adapt to changes.

There are two issues that are paramount in the area of technology & innovation, the first is that around digital transformation. The second is around businesses’ motivation and skills around adopting these new technologies, being new to the world and/or new to the sector. Research on enterprises’ challenges in making this digital transformation provide value lessons to both large and small enterprises alike (CBI 2019), most of these focus on:

- **Legacy systems** built up over the years can be both an asset and a serious constraint for change. These multiple inter-connected processes/systems are embedded into the daily operations. To change these is both difficult and time-consuming;
- **Faster competition** - large enterprises are competing against new startups, in London alone last year there were 4,752 new tech startups (City A.M. 2019). The UK is ranked number one for ‘unicorn’ startup enterprises valued at more than $1 billion, with over 13 unicorns with a combined value of $23 billion, making up more than 37% of all unicorn companies across Europe;
- **This digital transformation** comes with a higher risk of cyber-attacks. The businesses' higher profile assures them of particular targeting by cyber criminals, looking at companies with large amounts of data, the proper measures need to be taken.

Figure A.2.1. above shows some of the challenges facing enterprises in engaging in this Digital Transformation evolution (European Commission 2018). What we see is the important links between the objective to engage in digital transformation and the subsequent investment needed, the ability to develop the digital skills of the workforce, providing appropriate leadership and management to transform, and an effective entrepreneurial culture.
Technology provides a leading impetus in both driving the competitiveness and productivity of UK manufacturing and advanced engineering, and also helping to drive goods/service innovation (Foresight 2013). Primary or underpinning technologies will unlock the ability of enterprises to find new ways of enhancing their goods/service deliverables, and in improving processes (Ibis). Secondary or contingent technologies, such as the internet, the internet of things, robotics, cloud computing, and many other digital areas will make use of these primary technologies to facilitate customization and delivery of more innovative goods/services (European Commission 2018). During the period 2014-16 over 50 per cent of UK enterprises were innovation active, a slight decline on the previous period 2012-2014 (Department for Business Energy & Industrial Strategy 2018b). Suggesting that enterprises are keen to adapt and use these technologies to innovate their goods/service offerings.

In the area of R&D, the UK government is committed to raise investment in R&D to 2.4 per cent of GDP by 2027, there are some economists who consider this to be too timid (Isabelle Roland 2018). In this HBPS study over 45 per cent of enterprises invest 4 per cent or more of their turnover in research and development activities (Department for Business Energy & Industrial Strategy 2018a). The purpose of this to increase the number of new products, services and processes introduced by SME employers, recognizing the significance of this in driving competitiveness, improved productivity and overall growth (Department for Business Energy & Industrial Strategy 2018a), see figure A.2.2 below.
Nationally, UK enterprises are primarily focusing on the following areas (Department for Business Energy & Industrial Strategy 2018b):

- Process innovation (25 per cent);
- Changes in market concepts and strategies (30 per cent);
- Introduction of new to the market goods (36 per cent);
- Introduction of new methods to organize work (38 per cent);
- Introduction of new business practices (51 per cent);

In the micro- and small-enterprise (M&SE) sector, two predominant factors influence their investment and engagement in technology and innovation, internal and external enablers. Unlike large enterprises the evidence for heavy investment in research and design, intellectual property management, workforce diversity and employee engagement is naturally weaker. However, M&SEs openness to engaging with external partners shows a strong positive link to both innovation activity, and overall export performance (Love and Roper 2013).

**A.3 The challenges for our South-east of England Micro- and Small Enterprises**

Significant research carried out by the department of business, innovation and skills and its successor BEIS has shown that recruitment of graduates by Micro and Small Enterprises (M&SEs) enhances both their skills levels and performance (Department for Business Innovation & Skills 2013). Yet these early research studies suggested no conclusive evidence supporting the benefits and the difficulties that M&SEs experience in recruiting graduates to address some of their professional staff’s skills gaps. It is for this reason we have conducted this initial study to help provide more evidence, and to suggest further research areas for an ongoing series of studies to be conducted here in the south east of England.
Section B – Main Survey Findings

B.1 Business respondent sample – sector and business size

1. Our business sample was drawn entirely from Micro- and Small-Enterprise (M&SE) that had or are considering recruiting STEM skilled graduates and/or had recruited professional graduate employees (in first five years of graduation).

![Figure B.1.1 Split of Business Respondents across Sectors and Business Size](image-url)
B.2 M&SE Workforce skills gaps

2. For the micro-enterprise sector, over 32 per cent still had concerns around their professional staff’s digital skills and expressed that these were having a medium, or more, impact on their current business performance. Other technical and practical skills having a medium, or more, impact on their current business performance were: solving complex problems (25 per cent); knowledge of the businesses’ products and services (25 per cent), and more specialist skills/knowledge of the role (23 per cent), see figure 2.2.1 below.

Figure 2.2.1 M&SE’s existing professional staff’s skills gaps

3. Small enterprises registered a slightly higher incident of professional staff skills gaps to micro-enterprises in our survey. For technical and practical skills and their medium, or more, impact on their current business performance they ranked these thus: Digital skills 34 per cent, solving
complex problems (34 per cent), knowledge of their products and services (33 per cent), and knowledge of how the business works (30 per cent). In the area of people and personal skills having a medium, or more, impact on current business performance then small enterprises’ ranked them: lacking sales skills (38 per cent), managing and motivating other staff (42 per cent), and customer handling skills (38 per cent), see figure 2.2.2 below.

**Figure B.2.2 Small-enterprises’ existing professional staff’s skills gaps**

4. Micro-enterprises have limited resources and this does have an effect on their professional staff’s skills gap, and the reasons for them. Micro-enterprises’ ranked the following reasons associated with their professional staff’s skills gaps, and that had a medium, or more, impact on their current business performance thus: inability to recruit professional staff with the requisite skills (33 per cent), professional staff only partly trained (32 per cent), professional staff new to role (29 per cent)**, and the introduction of new technology (28 per cent), see figure B.3.1 below.

**Figure B.3.1 Reasons for micro-enterprises’ professional staff skills gaps**
5. Small enterprises top three reasons for their professional staff skills gaps, and that constituted a medium, or more, impact on their current businesses’ performance were: Unable to recruit suitable professional staff with the relevant skills (37 per cent), professional staff are new to the role (36 per cent), and the introduction of new technology (30 per cent), see figure B.3.2 below.
B.4 M&SEs Graduate recruitment

6. Nearly sixty-two per cent of small-enterprises had recruited graduates straight from college and university in the last 36 months, and over 48 per cent of these small businesses are looking to recruit graduates from colleges/universities in the next 12 months. Significantly, micro-enterprises showed a lower graduate recruitment level of thirty-four per cent for the last 36 months, and only 33 per cent were likely to recruit graduates straight from college/university, see figure B.4.1 below.
7. **Construction and the built environment sector had the highest level of graduate recruitment from colleges and universities, both in the last 36 months and the next 12 months, see B.4.2 below.**

![Graduate Recruitment by Sectors, Last 36 Months and Next 12 Months](image)

8. **Micro- and small-enterprises main reasons for not recruiting graduates in the last 3 years?** The top four reasons were: no current demands for graduate roles (37 per cent & 43 per cent small and micro-enterprises respectively), like to grow own professional staff (26 per cent & 18 per
cent), perceived lack of practical experience (16 per cent & 18 per cent), and difficulty in finding the right graduates with relevant experience (12 per cent & 13 per cent), see figure B.4.3 below.

B.4.3 THE REASONS FOR NOT RECRUITING GRADUATES (COLLEGE AND UNIVERSITY LEAVERS)

9. Micro-enterprises when asked how else are they were filling their professional staff vacancies and its effectiveness (average and above), gave the following top options: recruiting more experienced professionals with 5 or more years’ experience (43 per cent), increasing mentoring and coaching of existing staff (41 per cent), increased learning and development budgets (34 per cent), and specific training around basic and advanced digital skills (41 per cent), see figure B.4.4 below.
10. Small-enterprises’ most effective methods used to fill their professional staff vacancies/skills gaps were: recruitment of external professional staff with 5 or more years of experience (48 per cent), increasing mentoring and coaching of their existing staff (59 per cent), increased staff training on the basic and advanced digital skills (57 per cent), and increased learning and development activities (38 per cent), see figure B.4.5 below.
B.5  Other approaches of addressing the professional staff skills gaps

11. Micro-enterprises ranked the following as the most effective means of addressing professional staff skills shortages: increasing training activities (38 per cent), increasing the number of performance reviews (35 per cent), re-allocating some task to other professional staff (29 per cent), and more supervision of professional staff (28 per cent), see figure B.5.1 below.
Small-enterprises top four effective internal actions to address their professional staff’s skills shortages are: increasing staff training activities (69 per cent), more staff performance review (65 per cent), more supervision of their staff (58 per cent), and implementing mentoring and coaching schemes (49 per cent), see figure B.5.2 below.
**B.6 Main reasons for upskilling M&SEs’ existing workforce**

13. Micro-enterprises principal reasons for upskilling their professional staff, and the impact on business performance were: introduction of new technology (58 per cent), development of new products and services (58 per cent), increasing competitive pressure (46 per cent), and introduction of new working practices (40 per cent), see figure B.6.1 below.
Small enterprises principal reason for upskilling their professional staff, and the impact on business performance, were: increasing competitive pressures (67 per cent), development of new products and services (57 per cent), introduction of new working practices (54 per cent), and introduction of new technology or equipment (52 per cent), see figure B.6.2 below.
B.7 What do you perceive are the real challenges/opportunities of recruiting college and university graduates

15. Micro-enterprises’ challenges associated with recruiting graduates to address their professional staff skills shortages were ranked based on their perception of risk: having limited knowledge of the business and customer markets (71 per cent), being less independent and needing more hand-holding (65 per cent), less proficient in core skills (67 per cent), and the standard of written work. For these same micro-businesses they perceived the opportunities from recruiting a graduates and its likely impact on their business being average and above were: having a good personality (71 per cent), being ambitious (71 per cent), having a strong work ethos (67 per cent), and having good communication skills (58 per cent), see figure B.7.1 below.
Small enterprises considering recruitment of a graduate to address its professional staff skills shortages, the challenges and risks of this: being less independent and needing more hand-holding (67 per cent), having less proficient core skills (67 per cent), the standard of written communications (60 per cent), and limited knowledge of the business and customer segments (61 per cent). Small enterprises perceived the opportunities of recruiting a graduate to address its current professional skills shortages, and its value to the business: having good communications skills (38 per cent), having relevant degree (46 per cent), having a strong work ethos (25 per cent), being ambitious (25 per cent), and having a good personality (25 per cent).
communication skills (70 per cent), having a strong work ethos (68 per cent), having a good personality (60 per cent), and being ambitious (554 per cent), see figure B.7.2 below.

**Figure B.7.2** Small enterprises perception of the challenges and opportunities of recruiting a graduate.
**B.8 What competencies do you really value from recruited graduates?**

17. Micro-enterprises’ top four attributes/traits most valued (medium value and above) of recruited graduates were: critical thinking (92 per cent), being a team player (92 per cent), effective communications skills (92 per cent), and the technical knowledge (88 per cent), see figure B.8.1 below.

**Figure B.8.1 Micro-enterprises’ perception of the value of recruited graduates to their business**

18. Small-enterprises’ top four attributes/traits most valued (medium-value and above) from recruited graduates were: being a team player (92 per cent), being a critical thinker (89 per
cent), effective communications skills (89 per cent), numeracy and analytical skills (85 per cent), and being decisive (85 per cent), see figure B.8.2 below.

**Figure B.8.2** Small-enterprises’ perception of the value of recruited graduates to their business

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**B.9 What actions do M&SEs take to improve graduate recruitment, and retain the graduates they have?**

19. Micro-enterprises are particularly challenged in both recruiting and then retaining STEM-skilled graduates, the top actions (average and above effectiveness) to improve both of these were: increase salaries of key professional staff (52 per cent), provide improved recruit incentives
and T&C’s (39 per cent), other enhanced career opportunities (39 per cent), and increase overall graduate recruitment spend (30 per cent), see figure B.9.1 below.

**Figure B.9.1 Micro-enterprises’ actions to recruit and retain graduates, and its overall effectiveness**

20. Small-enterprises’ challenges are similar to those of micro-enterprises, the top actions (average and above effectiveness) to improve both their recruitment and retention of graduates were: offer enhanced career opportunities (66 per cent), increase salaries of key professional staff (65 per cent), provide more recruit incentives and enhanced T&C’s (55 per cent), and adopt new recruit methods (40 per cent), see figure B.9.2 below.
**B.10 What priority do you place on the challenges of graduate professional staff retention and mobility**

21. Micro-enterprises’ challenge of retaining and dealing with mobility of their graduate professional staff is key, they rank the following their top 4: recruiting graduates with specific skills to address short-term needs (55 per cent), continuing concerns about attracting and retaining the graduate talent in their workforces (42 per cent), general concerns of the inability to recruit relevantly qualified graduates (33 per cent), and the increasing need to recruit graduates from outside of the region (31 per cent), see figure B.10.1 below.
22. Small-enterprises’ challenge of retaining and dealing with mobility of their graduate professional staff is key; they rank the following their top 4: to recruit graduates with specific skills to address short-term skills gaps (64 per cent), general concerns about attracting and retaining graduates in their professional staff (43 per cent), having to recruit graduates from outside of the region (42 per cent), and looking at recruiting graduates with lower socio-economic backgrounds to improve retention (40 per cent), see figure B.10.2 below.
**B.11 What is the significance of the skills mismatch between recent graduates and your short- to medium-term professional skills needs?**

23. Micro-enterprises have experienced an increasing skills mismatch between recent graduate skills and their professional staff’s skills needs. Their top four concerns and significance of these to their short- and medium skills needs are: lack of job specific skills (40 per cent), job-specific knowledge (40 per cent), core employability skills (38 per cent), and problem-solving skills (41 per cent), see figure B.11.1 below:
Small-enterprises have experienced an increasing skills mismatch between recent graduate skills and their skills needs. Their top four concerns and significance of these to their short- and medium skills needs are: Problem-solving skills (50 per cent), planning and organizational skills (50 per cent), job-specific skills (44 per cent), and job-specific knowledge (44 per cent), see figure B.11.2 below.
B.12 What are the main business intention of micro- and small-enterprises

25. Micro-enterprises’ main focus in the next three years is on: introducing new working practices to improve productivity (50 per cent), increasing the professional staff skills to improve productivity (40 per cent), increase the businesses overall leadership capability to improve productivity (40 per cent), and selling to overseas markets to increase turnover (45 per cent), see figure B.12.1 below.
26. Small-enterprises’ main focus in the next three years is: introducing new working practices to improve productivity (46 per cent), increasing the professional staff skills to improve productivity (41 per cent), increase the businesses overall leadership capability to improve...
productivity (39 per cent), and selling to overseas markets to increase turnover (43 per cent), see figure B.12.2 below.

**Figure B.12.2 Small-enterprises’ main focus in the next three years**

- **Improving productivity**: 22%, 36%, 43%
- **Growth**: 31%, 23%, 25%
- **Increasing turnover**: 35%, 39%
- **Introducing new working practices**: 27%
- **Capital investment (PNAT, premises, etc.)**: 27%, 34%, 39%
- **Increasing leadership capability of your professional staff**: 33%, 27%
- **Introducing new working practices**: 32%, 41%
Section C – Summary of Findings

The increasing demands for our STEM-skilled sectors to, over the next five years, recruit more people with higher skills to just keep up with the demand and future trends, suggests that skills shortages will continue into the future (Royal Academy of Engineering 2017). The pipeline of young people pursuing STEM qualifications and skills is only slowly improving, leading to an increase in the overall STEM hard-to-fill vacancies for engineering, science and hi-tech businesses in the UK.

The following section summarises the main points of the study’s findings, adding some overall observations and conclusions.

C.1 Increasingly M&SEs recognition of Developing Talent in-house

Nationally, enterprises small to large enterprises recognize that investment in developing and progressing their workforce will help their existing and future skills shortages (CBI 2017). With the increasing number of skills-shortage vacancies in 2017, compared to 20165, of 8 per cent, and the high-level of hard-to-fill vacancies to vacancies remaining stable at 22 per cent, the situation is not easing (Department of Education 2018).

In the SEEGMM survey we see evidence of this in Micro & Small Enterprises’ (M&SEs) increasing recruitment of graduates to fill its professional staff skills shortages, see figure C.1.1 below.

![Figure C.1.1 Micro and Small Enterprises’ (M&SEs) Recruitment of College/University Graduates](image)

Future investment in the existing professional staff is evidenced by increases in staff training, national surveys show that four out of five businesses are either maintaining or increasing their training budgets (CBI 2017).
C.2 What do these Micro and Small Enterprises (M&SEs) Want?

When employers were asked the reason for them not recruiting college and university graduates (fresh leavers) then the predominant reason was the lack of current demand for young graduates, forty-three per cent in small firms and 37 per cent in micro firms.

![Figure C.2.1 What are the main reasons for these M&SEs to not-recruit college/university graduates?](image)

For those M&SEs who had not recruited college and university graduates over the last 36 months, the SEEGMM survey explored how else were these firms managing their talent skills needs. The majority of M&SEs had found it most effective to increase professional staff training on basic and advanced skills, recruiting more experienced professional staff with over 5 years practical experience, and using mentoring and coaching by more experienced staff. Least effective was to put these early starters on HE sector training courses (degree apprenticeships), see figure C.2.2 below.
C.3 What are questions that remain unanswered?

It is important to understand the challenges that M&SEs face when attempting to recruit from the over ¾ million graduates, both 1st and 2nd degrees, who exit our higher education institutions every year. The cities are a massive draw to both students studying and then remaining to take up more attractive jobs after graduation, this is good for those enterprises in the cities, but does present challenges for those enterprises in the rural areas. This report has highlighted the overall challenges, but further research is needed to look at specific challenges for these enterprises when competing against the draw of our capital, accounting for over 19 per cent of all graduate jobs.
We would suggest therefore that further studies be conducted in the following areas:

- Understand more fully the perceived value of graduate recruitment to address M&SEs’ professional staff skills gaps?
- The areas of support that all institutions involved in graduate transition can make to help M&SEs achieve further success in graduate recruitment?
- A better understanding of the benefits and costs for M&SEs in developing an effective graduates recruitment strategy?
Bibliography


