

Evaluation of Mentoring Programmes

Report to Be the Business



SQW

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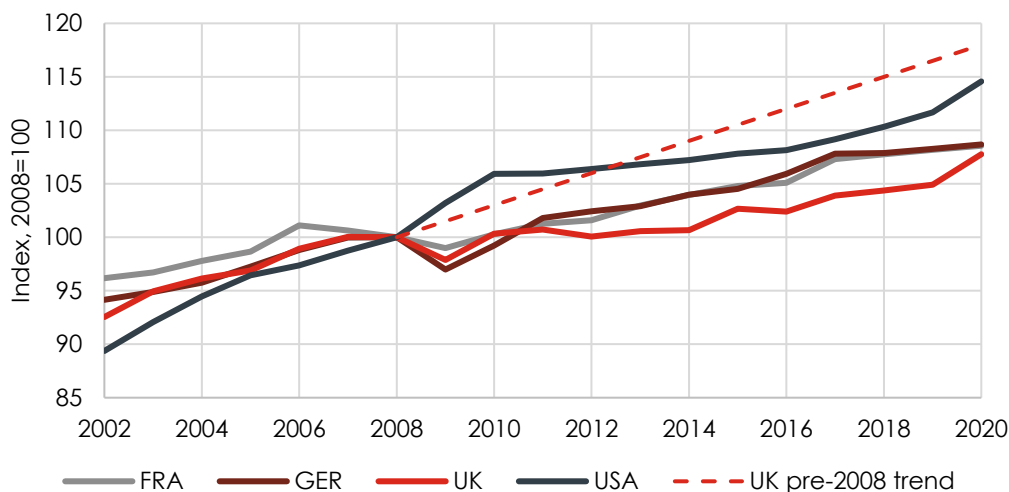
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1. Introduction

- 1.1** Slow productivity growth continues to be one of the pertinent problems in the UK economy. Since the Global Financial Crisis in 2008, UK productivity growth remains below the pre-crisis trend forecast. It also lags behind other advanced economies (Figure 1-1:). France, Germany and the US have consistently reported higher productivity than the UK. It is often argued that there is a 'long tail' of UK firms that are underperforming and acting as a drag on the rest of the economy.¹ Addressing this is crucial as higher productivity can contribute to higher wages and better living standards. Economy-wide improvements to business productivity are estimated to boost the UK's aggregate productivity by around 13%, creating over £100 billion in economic value each year.²
- 1.2** The economic literature identifies ways to improve business productivity. For example, Bloom et al. (2019)³ highlight the positive link between structured management and leadership (M&L) practices and higher levels of productivity. Specifically, organisations that continuously monitor their processes, set comprehensive targets, and pay close attention to the performance of their workforce tend to perform better than those that do not.⁴ Forth and Bryson (2019) estimate that for UK SMEs, adoption of two or three modern M&L practices is associated with a c. 5.5% higher productivity growth over three years.⁵

Figure 1-1:UK labour productivity growth before and after 2008



Source: SQW analysis of OECD data

¹ UK Government (2017) [Industrial Strategy - Building a Britain fit for the future](#)

² CBI (2017) [From Ostrich to Magpie: Increasing Business Take-Up of Proven Ideas and Technologies](#)

³ Bloom, N., Brynjolfsson, E., Foster, L., Jarmin, R., Patnaik, M., Saporta-Eksten, I. and Van Reenen, J., 2019. What drives differences in management practices? *American Economic Review*, 109(5), pp.1648-83.

⁴ Bloom, N., Sadun, R. and Van Reenen, J., (2016) *Management as a Technology?* (No. w22327). National Bureau of Economic Research.

⁵ Forth, J. and Bryson, A., 2019. Management practices and SME performance. *Scottish Journal of Political Economy*, 66(4), pp.527-558.

Be the Business and Mentoring Programmes

- 1.4** Be the Business (BtB) is a business-led initiative that aims to build a movement to raise productivity by developing the management and leadership (M&L) capabilities of SMEs. This is through encouraging the adoption of best-practice management techniques and digital technologies across a range of programmes and activities for SMEs. Within this context, BtB introduced their programmes **Mentoring for Growth (MfG)** and **Rapid Response Mentoring (RRM)**.
- 1.5** MfG is a large-scale mentoring programme which seeks to connect SME leaders (mentees) with business leaders from top-tier firms (mentors). The mentoring aims to improve the M&L capabilities of individuals and, as a result, improve firm-level performance and productivity. The mentoring relationships supported by MfG last up to 12 months. The Growth Company was supporting delivery since the start of the programme and became the main delivery partner for cohorts 1, 2 and 3.⁶

Table 1-1: MfG cohort timings

Cohort	Start date period (first meeting between mentor and mentee)
Pilot	February 2018 to October 2018
Cohort 1	April 2018 to June 2019
Cohort 2	November 2019 to March 2020
Cohort 3	April 2020 to March 2021

Source: BtB

- 1.6** Programme mentors were provided by ‘top-tier’ organisations many of which are part of the Productivity Leadership Group (Figure 1-2:).

Figure 1-2: Examples of organisations providing mentors



Source: Monitoring data, BtB

⁶ <https://www.growthco.uk/>. The programme is ongoing and BtB took over management of all mentoring relationships that continued past June 2021.

- 1.8** RRM is a shorter mentoring scheme (up to 12 weeks) that was launched in response to the challenges of the Covid-19 pandemic.⁷ This programme seeks to raise the M&L capabilities of SMEs – improving their ability to deal with uncertainty while navigating through unpredictable environments. In turn, these improved M&L capabilities are intended to increase firm-level resilience to adverse shocks, helping SMEs both to deal with the effects of Covid-19 and to be better prepared for the future.
- 1.9** RRM draws on the longer MfG programme mentoring scheme. Whilst both programmes aim to improve M&L practices, MfG is focused on increasing productivity whereas RRM seeks to raise the levels of flexibility and resilience within firms. The delivery model for RRM is based on that of MfG.

Evaluation purpose

1.10 SQW, supported by Belmana and Qa Research, was commissioned by BtB to undertake an impact evaluation of the mentoring programmes. The evaluation was expected to test how MfG delivered against its objectives and to provide previously unavailable evidence of RRM's impacts on business performance. This report builds on our previous evaluations of mentoring programmes supported by BtB (2019 - 2021).⁸

1.11 The research focused on:

- the most recent MfG cohort (cohort 3), which covers mentoring relationships, initiated between April 2020 and June 2021
- outcomes and impacts experienced by individual mentees and their organisations as the primary beneficiaries of the programme
- the effects for individual mentors and their organisations where there was evidence of these, while recognising that generating benefits for mentor organisations was not the primary purpose of the programme
- programme-level outcomes – a scaled-up programme with a pool of good quality, pro-bono mentors with the right skills and capabilities to provide high-quality mentoring
- the differences in the effects of mentoring for various sub-groups of beneficiaries, such as companies from different regions, sectors and those that participated in mentoring programmes run by BtB multiple times.

⁷ Also known as the Rapid Response Cohort (RRC).

⁸ SQW completed three separate reports for BtB: Process Evaluation of MfG in 2019/20; Interim Impact Evaluation of MfG and Rapid Response mentoring, both in 2020/21. Quasi-experimental evidence of RRM's impacts on employment and turnover of beneficiaries was previously unavailable due to lags in administrative data.

Structure of the report

1.13 The report is structured as follows:

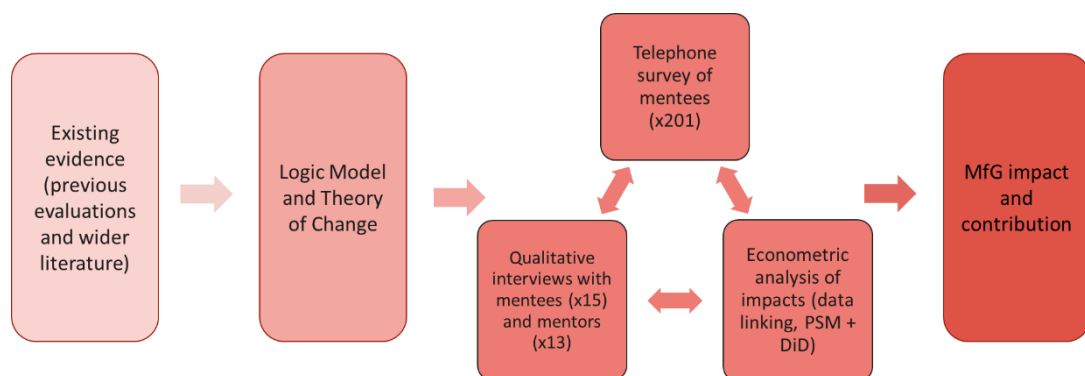
- Section 2 outlines the evaluation approach and research methods
- Section 3 sets out the programme logic model, theory of change, and profile of programme participants
- Section 4 presents the evidence of the outcomes and impacts of mentoring on mentees and mentors
- Section 5 presents the findings from the econometric analysis of impacts on mentee businesses against comparator groups
- Section 6 presents the evaluation conclusions.

1.14 Further detail on the econometric analysis is appended to the report.

2. Approach and methods

- 2.1 This impact evaluation followed the same methodology as the earlier evaluations of MfG and RRM: mixed methods that combined a theory-based approach – contribution analysis – with quasi-experimental techniques.** This tested the extent to which outcomes and impacts occurred as a result of the mentoring (in line with the refined logic model and theory of change), whilst considering other factors which may have contributed to these benefits. The research included qualitative and quantitative methods: an analysis of monitoring data, business surveys, data-linking and econometric analysis, and in-depth interviews with mentees and mentors.
- 2.2** During the evaluation, the logic model and theory of change behind the MfG programme were tested through the lens of contribution analysis. According to Befani and Mayne (2014)⁹, contribution analysis *“aims to define the links between each element of a logic model, and test and refine these theoretical links between the programme and the expected impacts. It provides a framework for analysing not just whether the programme has had an impact, but how that impact materialised and whether any particular element of the programme or contextual factors were crucial to the impact.”*
- 2.3** Using contribution analysis is particularly appropriate for mentoring interventions given the prevalence of other factors, alongside the mentoring activities, which may also contribute to the outcomes reported (e.g., business strategy, new management team, economic environment, market opportunities, policy developments).
- 2.4 Error! Reference source not found.** sets out the different research components used to undertake the evaluation.

Figure 2-1: Approach to the evaluation



Source: SQW

⁹ Befani, B. and Mayne, J., 2014. Process tracing and contribution analysis: A combined approach to generative causal inference for impact evaluation. *IDS bulletin*, 45(6), pp.17-36.

Quantitative data collection

- 2.5** Following a review of the logic model and theory of change, we analysed the baseline monitoring data on mentees and mentors for cohort 3. We conducted a data-linking exercise to the Business Structure Database (BSD) using Companies House Registration numbers (CRNs), and selected comparison groups for the quasi-experimental analysis. The quasi-experimental analysis covered all MfG beneficiaries that were identified in the BSD, including those that participated in earlier cohorts. This allowed us to double the available sample size, benefit from associated gains in statistical power (which enabled sub-group analyses), and investigate the persistence of effects over time.
- 2.6** A quantitative business survey was designed by SQW and undertaken by Qa with 201 mentee businesses. This 20-minute telephone interview aimed to collect evidence on the effects of mentoring on business performance and productivity, while recognising the value of mentees' time through research participation. One of the main reasons the evaluation focussed on cohort 3 was to minimise the burden on mentees surveyed during previous evaluations. However, as we discuss in more detail in sections 4 and 5, the survey included 35 cohort 3 participants from businesses that had participated in earlier cohorts of MfG.

Qualitative data collection

- 2.7** We undertook qualitative interviews with 15 mentors and 13 mentees (the mentee sample was selected through the business survey). These interviews aimed to further understand how benefits came about for mentors and mentees.

Key challenges and considerations

- 2.8** Mentoring is a highly personalised approach to supporting personal and business development. This leads to particular issues/ challenges in undertaking the evaluation. These are set out below.
- Mentee firms participating in the programme are diverse. The firms vary by sector, region, size, stage of development and issues of immediate concern. As a result, there is a large variation in routes and timescales to achieving outcomes and impacts.
 - When selecting appropriate comparator businesses to estimate the net impact of the programme, the evaluation considered, to the extent possible, the variation in observable characteristics across the beneficiaries.
 - The evaluation considered intermediate and longer-term outcomes (in line with the Logic Model). Outcomes such as improved knowledge and skills and awareness of best M&L practices, as well as their adoption, can reflect the influence of mentoring sooner than changes in business performance (employment, turnover, productivity), which may take longer to follow.

- Attribution of effects to the programme is challenging due to the nature of mentoring as a type of support. Other factors (both internal and external to mentee business) may play an important role in achieving positive outcomes, with mentoring ‘unlocking’ or enabling the change.
 - A statistical matching technique (Propensity Score Matching, PSM) was employed to minimise *selection bias* i.e., to address the fact that SME leaders that seek mentoring (and their companies) may be systematically different from the rest of the business population. For example, they may be more motivated which could be reflected in their pre-mentoring growth trajectory. In other words, we benchmarked the progress of beneficiaries against the most similar businesses we could identify.
- The effect mentoring has on the productivity of SMEs is of utmost interest. However, our ability to observe the true impact is limited by available imperfect measures. The concept of ‘productivity’ is often understood differently by businesses and policymakers (e.g., businesses may think of profitability rather than output per worker of hour worked).
 - The evaluation, therefore, investigated self-reported and self-defined productivity effects as well as the changes in turnover per worker. Administrative data on the latter, as well as data on employment and turnover, is available in the BSD.
- The Covid-19 pandemic introduced additional ‘noise’ into data on productivity, which was already known to be affected by a lower consistency in turnover observed among SMEs, relative to large companies. Specifically, the productivity figures available through BSD were directly affected by businesses’ decision on whether to use the Coronavirus Job Retention Scheme (as effectively they had fewer working staff with no recorded reduction in employment).
 - Given the data on output per hour worked is not recorded in the BSD, the evaluation took extra steps in an attempt to disentangle the impacts of mentoring and Covid through statistical modelling: we introduced additional control variables and considered a sub-sample of pre-pandemic years.

2.9 The remainder of the report presents the evaluation findings and conclusions.

3. Programme profile

- 3.1** This section sets out the MfG programme logic model and theory of change: how programme inputs and activities translate into expected benefits for mentees and mentors. It also profiles MfG participants based on monitoring data, the beneficiary survey and data-linking to BSD.

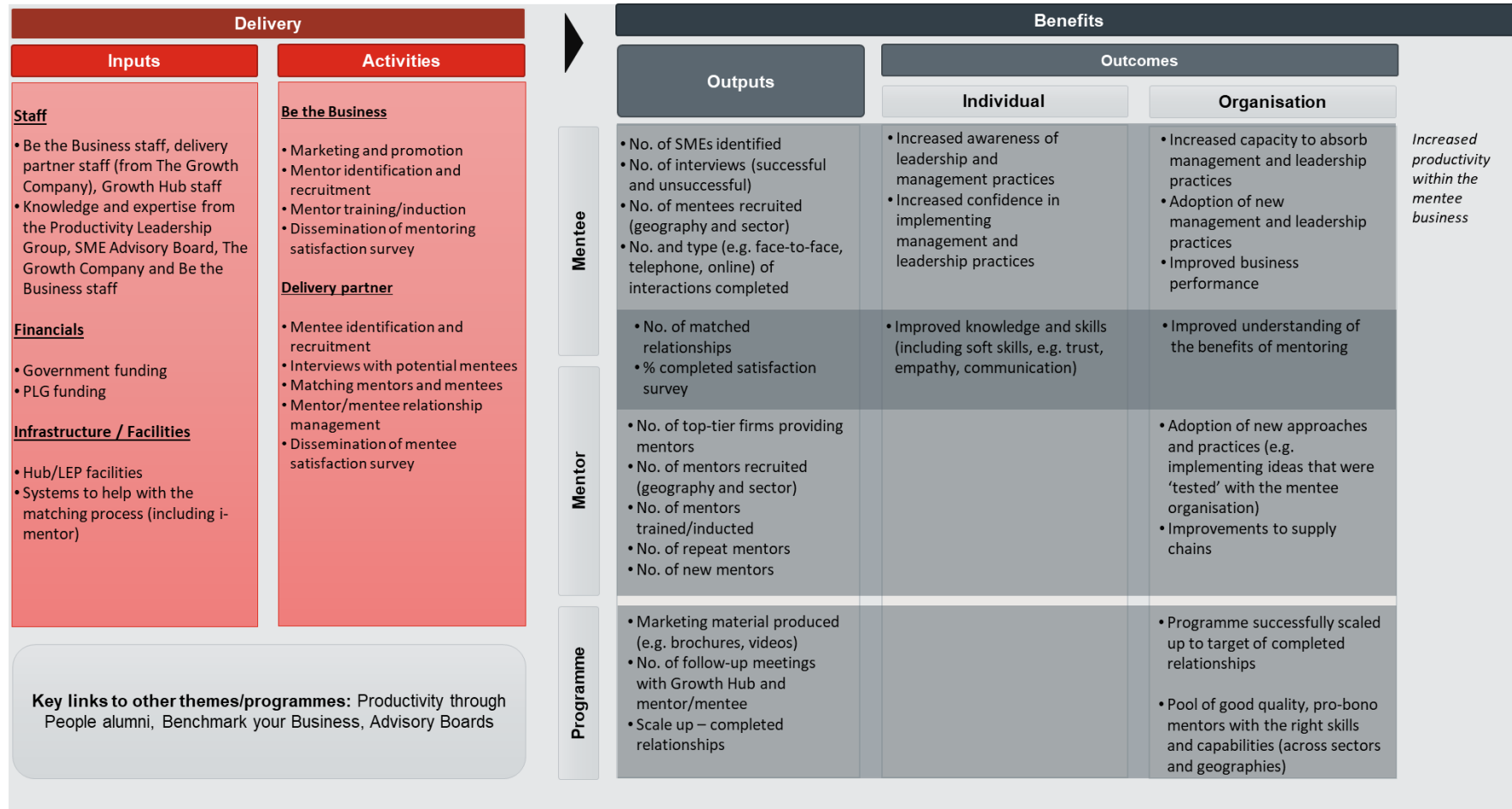
Logic model and theory of change

- 3.2** The logic model is summarised in Figure 3-1: below. The programme inputs include: staff from BtB and The Growth Company (national delivery organisation for cohorts in scope), and knowledge and expertise from the PLG and the SME Advisory Board. There is financial support for the programme from BEIS and other corporate partners. Facilities and systems are used to manage the relationships, including i-mentor¹⁰ and Chronus. The activities include marketing and promotion, recruitment and matching of mentees and mentors, management of paired mentoring relationships, and satisfaction surveys.
- 3.3** These activities are expected to lead to outputs for both mentees (primary beneficiaries) and mentors. For example, the number of SMEs recruited; the number and type of interactions between mentees and mentors; the number of top-tier firms providing mentors; the number of mentors trained/inducted; the number of repeat and new mentors. There are also programme-level outputs such as marketing material produced.
- 3.4** These outputs are expected to lead to outcomes for the individual mentees, including: increased awareness of management and leadership practices; improved knowledge and skills (including soft skills, such as trust, empathy, and communication); and expanded professional networks. The individual effects are expected to translate into outcomes for their organisations through, for example, the adoption of management and leadership practices; improved understanding of the benefits of mentoring; and improved business performance. In the longer term, the range of outcomes, in particular, the adoption of management and leadership practices, are expected to increase productivity within the mentee business. For the individual mentor, the programme is expected to mainly lead to improved knowledge and skills, and an improved understanding of the benefits of mentoring. Measurable impacts for their organisation are not expected.
- 3.5** In addition, there are programme-level outcomes: a successful scaled-up programme, and a pool of good quality, pro-bono mentors with the right skills and capabilities (across sectors and geographies). In the longer term, all the outcomes and impacts described above are intended to make the programme sustainable and replicable and ensure the effects can diffuse through the economy.

¹⁰ i-mentor, a management information system, was developed by the Growth Company and used to monitor the mentoring relationships they managed. Unlike Chronus, which was developed later, i-mentor was not owned by BtB.

- 3.6** The theory of change described above rests on key assumptions about the programme's delivery and effects which are summarised in Table 3-1: after the logic model graphic.

Figure 3-1: MfG Logic Model



Source: SQW

Table 3-1: Key assumptions behind the theory of change

Strategy (Context/ Rationale)	Delivery	Effects
<ul style="list-style-type: none"> SMEs do not know where or how to access management and leadership expertise from top-tier firms and/or find the cost prohibitive 	<ul style="list-style-type: none"> There is a sufficient supply of high-quality mentors and demand from mentees 	<ul style="list-style-type: none"> The programme can attract and retain high-quality mentors
<ul style="list-style-type: none"> SMEs lack skills, resources, and absorptive capacity in adopting management and leadership practices 	<ul style="list-style-type: none"> The teams at BtB and The Growth Company are sufficient to manage the operational demand and scale-up 	<ul style="list-style-type: none"> Mentors from top-tier companies are high quality
<ul style="list-style-type: none"> There are no other tailored, pro-bono SME support schemes for improving management and leadership and ultimately productivity 	<ul style="list-style-type: none"> There is marketing, evaluation and central coordination support for the programme at BtB 	<ul style="list-style-type: none"> It is possible to transfer and apply learnings from large corporations to SMEs
	<ul style="list-style-type: none"> Partnerships are effective and with the right organisations (including delivery providers and PLC/PLG relationships) 	<ul style="list-style-type: none"> The programme can engage SMEs that are not aware of the leadership and management expertise found in top-tier firms, and/or do not know where to go or how to access this expertise
	<ul style="list-style-type: none"> The programme has a scalable operating model and infrastructure 	<ul style="list-style-type: none"> The improved knowledge and skills translate into organisational-level productivity (and other) benefits
	<ul style="list-style-type: none"> The programme has mechanisms in place to share knowledge and experience between mentors to maximise benefits 	

Alternative/complementary explanations:

(1) Mentee businesses access support from other sources including other programmes that improve productivity

(2) Internal business strategies and plans (existing and new) influence outcomes and impacts

(3) External economic conditions influence outcomes and impacts.

Profile of programme participants

3.8 In January 2022 SQW received from BtB and analysed the most recent monitoring data on mentoring relationships. This included data-linking to the BSD and benchmarking against the

wider business population. Even though the focus of this evaluation was on cohort 3 of MfG, we compared the data to information on earlier cohorts. This allowed us to confirm that there were no substantial changes to the composition of the programme and therefore the econometric analysis could leverage the larger sample size by considering mentee companies across all cohorts.

- 3.9** Overall, 547 mentees from 470 SMEs were matched to a mentor between March 2020 and April 2021. These figures suggest a growing demand for the programme, considering the earlier cohorts supported fewer relationships (335 mentees across 242 businesses) over a longer period (February 2018 – March 2020).
- 3.10** The total number of mentee SMEs supported by the pilot and cohorts 1-3 of MfG was 671 (41 of the 470 cohort 3 mentee businesses had participated in one of the earlier MfG cohorts).¹¹ 542 mentee companies were successfully identified in the BSD and used for benchmarking against the wider business population and econometric analysis.¹² In gross terms, since enrolling on BtB's mentoring programmes,¹³ these 542 beneficiaries created c. 500 jobs and generated c. £240m in turnover. Not all of these can be attributed to mentoring, however.
- 3.11** Compared to the wider business population, MfG firms were more likely to: a) be high-tech and in manufacturing; b) have received Innovate UK funding and hold patents; c) trigger Beahurst tracking;¹⁴ and d) have used Covid-19 support (Table 3-2:). The comparison was based on the last full financial year before receiving mentoring.
- 3.12** Before receiving mentoring, on average, MfG beneficiaries appeared to be less productive than the rest of the business population. Given that more of them were in high-tech and knowledge-intensive sectors and have triggered Beahurst tracking, this indicated that MfG support was sought by companies on a steep growth trajectory (we provide further evidence of this in section 5). If unaccounted for, this pre-existing trend could skew the evaluation results. This finding highlighted the importance of using PSM to identify comparable businesses before commencing the econometric analysis of net impacts.
- 3.13** Geographically, MfG was skewed towards the North-West with approximately one-third of mentees being based there (Table 3-3:). In terms of the industry profile, the programme covers a wide range of sectors. Figure 3-2: presents a sectoral split based on self-reported monitoring data for cohort 3. It provides a more nuanced picture of the programme compared to primary SIC 2007 codes since SME leaders were able to select multiple categories. Over time, MfG has been attracting an increasing number of service-oriented companies. This could be driven by the pandemic (with service businesses having a longer 'down-time' period and reaching out for mentoring support) but may equally be reflecting the widening of BtB's reach.

¹¹ Further 56 of cohort 3 companies participated in RRM. This means that c. 20% of cohort 3 have received repeated mentoring support. We report the results of our analysis of the effects of repeated support in section 5.

¹² Not all beneficiaries were found in the BSD. This is possibly due to some of them not meeting the criteria for inclusion into the database (for example, being registered for PAYE), or due to incorrect CRNs. The data-linking was successful for 575 businesses, however some had to be excluded from the analysis since PSM required at least two years of pre-mentoring data to match the pre-support trends.

¹³ For the first time, if the business participated in mentoring more than once.

¹⁴ [Beahurst](#) tracks high-growth companies in the UK.

Table 3-2: MfG beneficiaries vs the wider business population (all cohorts)

	Characteristic	MfG (mean, n=542)	Wider BSD ¹⁵ (mean, n=1,395,085)
Business performance	Employment	37.4	28.9
	Baseline real turnover ¹⁶	4144.2	4211.2
	Real productivity (£k per worker)	125.2	181.9
Industry classification	Low pay ¹⁷	20%	28%
	High-tech ¹⁸	24%	15%
	Manufacturing	21%	1%
	High Knowledge Intensity services ¹⁹	10%	9%
Innovation	Innovate UK project before MfG	7%	1%
	Patent holder	8%	2%
	Tracked by Beauhurst	16%	6%
	Used the Coronavirus Job Retention Scheme	60%	25%

Source: Belmana

Table 3-3: Mentee businesses by geography (all cohorts, n=542)

Region	Number of businesses	%
North West	171	32%
West Midlands	95	18%
London	60	11%
East of England	53	10%
South East	49	9%
Yorkshire & the Humber	37	7%
East Midlands	29	5%
North East	20	4%
South West	22	4%
Northern Ireland	<10	.
Scotland	<10	.
Wales	<10	.

Note: Exact counts lower than 10 were suppressed in line with ONS data security policy.

Source: Belmana

¹⁵ The descriptive statistics relate to a random sample of SMEs drawn from the wider BSD and used for the analysis. The BSD was 'trimmed' to reduce processing times.

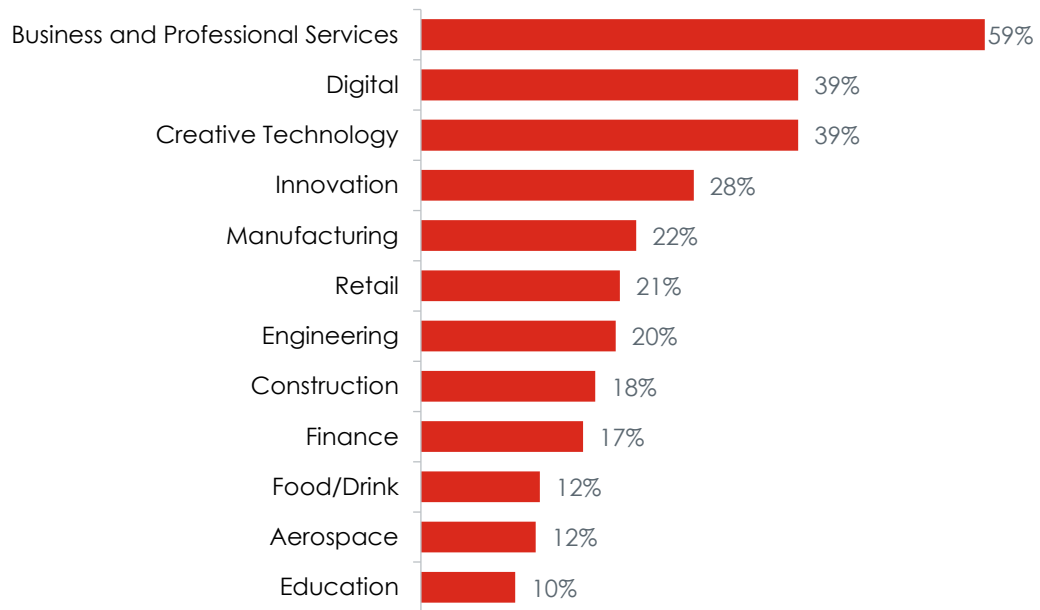
¹⁶ Real turnover (£th.) calculated using sector specific deflators and expressed in thousands of pounds, 2020 was the base year.

¹⁷ As defined in the Government evidence to the Low Pay Commission on the economic effects of the National Minimum Wage, 2011.

¹⁸ Following Hecker, D. (1999) "High-technology employment: A broader view." Monthly Labor Review 122(6): 18.

¹⁹ Knowledge intensive (KI) sectors as identified by Eurostat using indicators of skills mix.

Figure 3-2: Sectoral profile of mentee businesses (cohort 3, n=470)



Source: SQW analysis of monitoring data

3.14 Table 3-4: shows the top five challenges faced by mentees before joining the programme. Mentees' focus was on enabling the growth of their businesses. However, the potential for growth and productivity improvements was seen in delivering high-quality services and better use of technology – more than 60% of mentees identified those factors (

3.15). 55% considered individual employee development as key, while little attention was given to building high-performing teams and developing workforce behaviours (mentioned only by c. 5% of mentees). This suggests that MfG beneficiaries had room for improvement in their M&L practices, especially in the area of teamworking.

Table 3-4: Challenges faced by mentee SMEs (cohort 3, n=470)

Challenge	Average rating out of ten	%
Strategic objectives	6.5	82%
Traditional vs digital marketing	6.2	60%
Employee performance management	5.7	60%
Leadership and management	5.7	71%
Marketplace competition	5.6	63%

Source: SQW analysis of monitoring data

Table 3-5: Mentees' views on business development and productivity improvement before MfG (most and least common responses).

The vision	% identified
High-quality service	66%
Building a brand position	63%
Streamlining processes	60%
Better use of technology	60%
Employee development	55%
Removing barriers to change	51%
Building high-performing teams	4%
Developing workplace behaviours	4%

Source: SQW analysis of monitoring data

4. Primary research findings

Summary

- MfG activities were found to have translated into key individual-level outcomes: improved knowledge and skills, including awareness of modern M&L practices, and improved confidence in M&L abilities (both reported by 73% of mentees).
- For over half of the mentees (54%), the MfG programme has led to the adoption of new M&L practices within their organisation. Importantly, new practices were often adopted in multiple areas. Common combinations included: target setting and performance monitoring; target-setting and leadership; and performance monitoring and operations management.
- Over half of mentees experienced or expect to achieve an increase in turnover and employment because of MfG. For 57% of mentee respondents participation in the programme increased their productivity and a further 11% expected productivity to improve in the future.
- Both individual and organisation-level outcomes contributed to productivity improvements – they provide ‘parallel’ routes to productivity impacts that result in quicker improvements compared to if the process was necessarily linear (i.e., individual outcomes translating into organisational-level change that in turn improves productivity).
- Mentors experienced a range of benefits including developing a better understanding of SMEs, maintaining and using professional skills, and making use of networking opportunities at Be the Business events.
- As expected, there were limited benefits for the mentor organisation. A few examples include improved relationships with supply chain SMEs, and the ability to demonstrate to external stakeholders their engagement with SMEs.
- The additionality of MfG is fairly strong, especially considering the nature of mentoring as a form of support. For mentees (and to a lesser extent, for mentors) it plays an important role in enabling and leading to benefits, sometimes indirectly, by contributing alongside other factors.
- 87% of mentee businesses reported some form of additionality. Of these, 75% indicated partial additionality and 12% full additionality. Timing additionality was the strongest with benefits being accelerated by up to three years.

4.1 This section presents evaluation findings from primary research – a survey of mentees and in-depth interviews with both mentees and mentors. Specifically, it provides results on:

- Individual-level outcomes for mentees, including increased awareness of M&L practices and improvements in skills and confidence to implement those M&L practices
- Organisational-level outcomes for the mentees' businesses, including the adoption of new-to-business M&L practices, improvements to business performance and productivity
- Individual and organisation-level benefits for mentors include a better understanding of SMEs and changes to the ways large companies deal with smaller firms from their supply chains
- Additionality and contribution of MfG to achieved benefits.

Outcomes and impacts on Mentees

Survey sample

4.2 As we highlighted above, the fieldwork for this evaluation focused on mentees from cohort 3. This was done to minimise the survey burden on mentees that have participated in previous evaluations.

4.3 Figure 4-1: illustrates the achieved response rate.

Figure 4-1: Survey sample at a glance



Source: SQW

4.5 The research team successfully achieved the target number of responses (201). However, 82 mentees (41%) reported that their relationship 'did not take off the ground' i.e., either they had only a few interactions with their mentor or went through the initial set-up stages but did not progress further. Of these:

- 65% suggested they were too busy, or their circumstances changed
- 20% cited Covid-19 as the reason for not taking the relationship further
- 20% referred to various communication issues at the start of the programme
- 18% mentioned that mentor was not a good match.

- 4.6** Analysis of monitoring data did not reveal any common patterns that would suggest that mentoring relationships tend to be short for any particular type of business. A decision was taken not to exclude these businesses from the econometric analysis (results from which are presented in section 5). There were three main reasons for this: a) even a short interaction with the programme may have a positive effect; b) since the survey did not cover the whole programme population we did not have comparable information on the status of the relationships for all mentees, and excluding this sub-group could bias the results; c) there was evidence that some mentees may have used the opportunity to ‘softly decline’ participating in the survey by saying their relationship did not progress.
- 4.7** We carried out additional analysis to investigate whether the programme’s impact on mentees that reported a ‘short’ experience was any different compared to other beneficiaries. The results suggested that ‘short’ relationships had a lower impact on employment but not turnover growth. This finding suggests that even a short interaction with the programme (for example, when the relationship does not progress beyond the first few meetings due to a lack of capacity on the mentee’s side or a change in circumstances) could be beneficial, though not to the same extent as the ‘full’ experience. Importantly, the estimates for the ‘full’ mentoring relationships obtained during this additional analysis were in line with the baseline results presented in the following section.
- 4.8** We did not find any evidence of structural problems in delivery that would lead to relationships failing to start, and it should be accepted that some will not go forward due to various reasons, including a mismatch in personalities between the mentor and mentee. Going forward, BtB have instigated a new process on the Chronus platform (current MI system) that includes sending out a follow-up survey approximately a month after the start of the relationship to check its status, and, if needed, offering mentees to be re-matched.
- 4.9** In the remainder of this section, unless specified otherwise, when we refer to the survey findings, all percentages are given relative to the 119 confirmed ‘full’ mentoring relationships covered by the survey. We estimate the survey’s margin of error to be eight percentage points. In other words, if 50% of respondents report a benefit, we can be 95% confident that the true proportion that we would have observed if we had surveyed everyone in cohort 3 lies between 42% and 58%.
- 4.10** In presenting the survey evidence, we wish to highlight the following points:
- A substantial proportion of those surveyed have a mentoring relationship that is still ongoing (38 relationships, 32%). The findings might not reflect the entirety of outcomes and impacts these mentees will achieve.
 - The quality of the matching and nature of the mentoring activities undertaken influenced the effects achieved and the subsequent attribution to the programme.
 - Mentees were not asked to provide any quantitative estimates on the influence mentoring had on business performance (e.g., employment, turnover), but did provide the direction

of change (higher or lower). These effects were quantified through the means of econometric analysis described in section 5.

Individual-level mentee outcomes

4.11 The most common reason for participating in MfG was personal development (55%), followed by seeking an external sounding board (43%). Almost all mentees achieved this goal through mentoring. Table 4-1: below shows the percentages of mentees who experienced or expect to experience improved knowledge and skills, and increased confidence in M&L abilities, as a result of MfG.

Table 4-1: In terms of your personal development, which of the following have you achieved or are expecting to achieve as a result of participating in the mentoring programme?

	Achieved	Expected to achieve	Not achieved and not expected
Improved knowledge and skills	73%	8%	18%
Increased confidence in M&L abilities	73%	12%	15%

Source: SQW

4.12 Mentees tend to improve ‘softer skills’ related to better implementation of management practices. There was a noticeable ‘drop off’ in reported improvements in more ‘technical’ aspects such as product development, finance, and marketing. This likely reflects the scope which the relationships had, typically focusing on high-level business strategy rather than operations.

Figure 4-2: Reported skills improvements by type



Source: SQW

- 4.13** The programme also had a strong positive effect on people's confidence. The average score out of ten for increased confidence was over seven, with over a third of people rating their increase in confidence at eight or above.

Mentee's experience: learning new approaches and building up confidence

The mentee was looking for someone who would be able to assess their business choices. For example, they were often questioning themselves on making business decisions and felt that a mentor would be able to help with expert input but also with building their confidence in taking these decisions. They also had a challenge with an employee and were questioning their approach to the situation.

The mentee explained the situation to their mentor with examples and received both feedback on their approach to date (which was direct and balanced) and advice on how to take the issue forward (to take it up with HR director). The mentor's advice helped resolve the situation and the feedback on the mentee's actions was invaluable in building their confidence in their own management and leadership capabilities. (Mentee interview 1, 2022)

- 4.14** Evidence from the qualitative research also provided insights into how this increased confidence would then lead to changes in business practices. For example, one interviewee gave an example of how their mentoring relationship gave them the confidence to expand their organisation into new market areas and diversify their income streams. This allowed the mentee to hire people to carry out the day-to-day operations, which gave them the space to evolve their leadership role into one that had a greater strategic focus.

Organisation-level

- 4.15** For over half of the mentees (54%), the MfG programme has led to the adoption of new M&L practices within their organisation. A sizeable minority (35%) said that no practices were adopted, and they do not expect to do so in the future. However, we note this proportion has decreased compared to the interim report (45%).
- 4.16** The area with the highest rate of adoption of new practices was leadership, followed by operations management and target setting, then performance monitoring (see Figure 4-3:).

Figure 4-3: Adoption of M&L practices in the organisation



Source: SQW

4.18 Importantly, new practices were often adopted in groups, and therefore the scale of change within businesses initiated by the mentoring was greater than it may seem from adoption figures for individual types of practices. Specifically, 80% of those who reported using new M&L practices adopted more than one. The most common combinations (each reported by more than one-fifth of respondents) included:

- target setting and performance monitoring
- target-setting and leadership
- performance monitoring and operations management.

4.19 The adoption of new M&L practices is mainly related to expanding the business but also to dealing with difficult scenarios. For example, one consultee described how the adoption of these practices allowed them to manage the 'scaling down' and recalibration of their business operations following the end of the furlough scheme.

Business performance

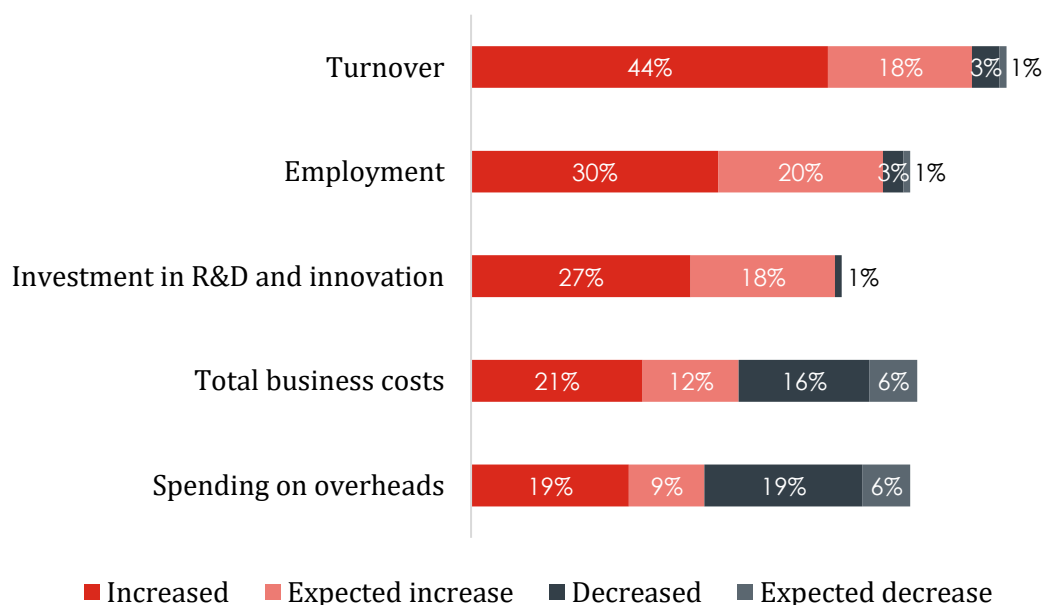
4.20 Participation in the programme has led to an increase in turnover, employment or R&D investment for over half of businesses (55%):

- approximately two-fifths of respondents indicated increased turnover
- just under one-third reported increased employment
- over a quarter reported increased investment in R&D and innovation (see Figure 4-4:).

4.21 In most cases, these three benefits were experienced in combination rather than on their own. The most frequent combination was increased employment and turnover (22%) followed by increased turnover and investment in R&D (17%). In addition, mentees expected increased employment, turnover and R&D investment over the next two years (around 20% each).

4.22 Respondents were evenly split in reporting increases in business costs and overheads. Both increases and decreases in business spending can be seen as a positive change for the companies depending on their business situation. In fact, a further investigation revealed that a majority of those who reported an increase in costs, as well as those who reported a reduction in them, also experienced a boost in productivity (we discuss the productivity effects in more detail in the following subsection). This implies that rather than having a one-directional effect, the mentoring helped mentees to adjust the scale of their business following their needs and goals.

Figure 4-4: In terms of the benefits to your organisation, to date, what has been the effect of participation in the programme on the following?



Source: SQW

Mentee's experience: improved communication skills and acquired knowledge boost turnover

The mentee was a board member with different expertise from other members and worked with their mentor on how to best present information on how the business could improve.

Their mentor was able to bridge the knowledge gap between operations and finance for the mentee. The mentor had a broad experience and knowledge/skills base, with some academic experience as well operations from across different industries. They were able to highlight what information to provide, its quality, regularity and type.

The mentee was able to convince other board members of the need to invest more in employment, stores, and vehicles to position the organisation for growth. Being able to talk this through with their mentor beforehand helped refine the arguments. These activities, when implemented, then helped to increase the turnover of the company. (Mentee interview 2, 2022)

Productivity

4.23 For most mentee respondents (57%), participation in the programme has increased their productivity with further improvements expected in the future (11%). These results refer to self-defined measures of productivity. The most common definitions used by mentees included:

- Output per worker (62%)
- Improved profit (34%)
- Improved turnover (32%)
- Working at speed (19%).

4.24 Even though the majority of mentees included productivity in terms similar to those used by policymakers (turnover per employee) in their responses, it is notable that often it was combined with an alternative understanding and that almost 40% of respondents did not consider output per worker to be a productivity measure. This diversity of views inevitably contributes to the challenge of measuring impacts on productivity.

4.25 Evidence from the in-depth interviews highlighted the variety of routes to productivity impacts, which was to be expected given the bespoke nature of mentoring support and the diversity of supported SMEs. Importantly, the evidence suggests that both individual-level benefits reported above, as well as adoption of M&L practices at the organisational level, led to productivity improvements. The route to impact does not need to be linear (e.g., increased awareness of best-practice and improved communication skills lead to the adoption of modern M&L practices that in turn result in growing productivity). **Both short-term**

individual and organisational outcomes enable the productivity benefits. This can be a parallel process that results in quicker impacts.

4.26 For example, several mentees reported that improving their communications skills allowed them to extract the relevant information from their clients more effectively and make their colleagues think about ‘the right things,’ boosting the productivity of their business. In one case a mentee reported that their mentor helped them to realise that certain things they considered ‘to come naturally’ were in fact good negotiation practices. Focussing on consciously implementing them as well as sharing these ‘tips’ with colleagues led to productivity improvements.

4.27 Below are three examples of specific M&L practices that helped to boost productivity and were introduced because of MfG:

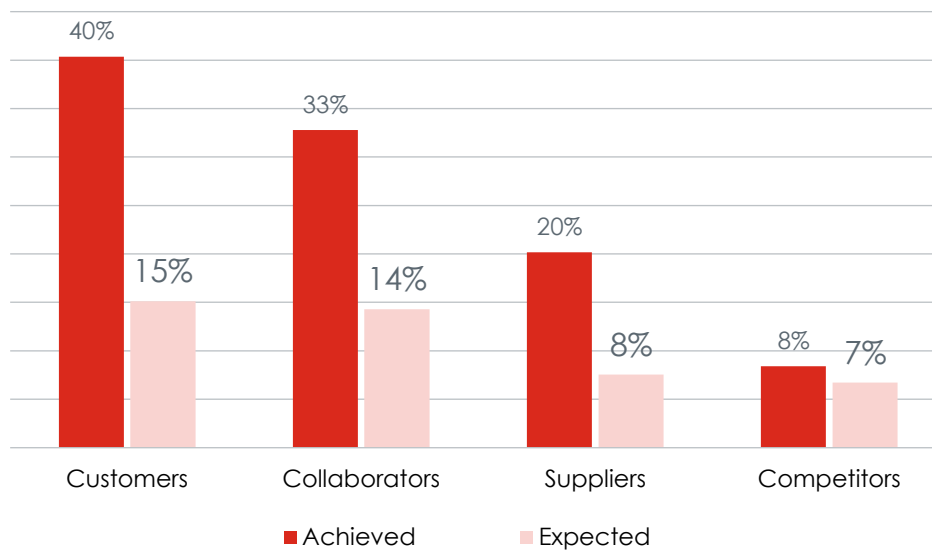
- **Target setting** – specifying explicit goals, setting realistic deadlines and creating a culture of accountability motivated employees to work more efficiently
- **A strategic approach to fundraising** – shifting focus towards seeking long-term partnerships and steady sources of income instead of relying on attracting short-term contracts (something the business was successful in) improved long-term financial position and allowed delivery of a larger number of social value commitments (which was considered by a mentee as a measure of productivity for their business)
- **Team-based decision-making processes** – making changes to the way the information underpinning important business decisions was gathered and discussed, and how actions were agreed on led to better performance and productivity.

4.28 One mentee suggested that mentoring was particularly successful in helping them understand which M&L practices were critical for a growing family-owned business with limited resources and capacity. This resulted in them introducing only the necessary additional systems and processes instead of attempting to copy as many practices of large companies as they could. Since they were spending fewer resources, they considered the business to be more productive than it would have been without MfG.

Wider benefits

4.29 Figure 4-5: presents the survey results about the wider benefits to customers, collaborators, suppliers and competitors of MfG beneficiaries.

Figure 4-5: Who else benefited from your participation in MfG?



Source: SQW

- 4.30** During the in-depth interviews, mentees reported that customers had benefited from mentees' improved knowledge of how to deliver a better consumer experience, and their ability to develop superior products through improved innovation processes.
- 4.31** Suppliers and collaborators were stated to have benefited from mentees' improving appreciation of the value of their supply chain, integration into mentee's wider team, new processes that ensured timely invoicing and 'brave conversations' about the suitability of solutions for clients.
- 4.32** Mentees suggested that their employees benefited from the introduction of new workplace practices such as protected time for team training and development, as well as from the mentees' improved management and leadership abilities (in terms of organisation and giving/receiving feedback).
- 4.33** Mentees rated their perception of the programme on a scale of zero to 10 i.e., how likely they were to recommend MfG to other potential mentees. **Error! Reference source not found.** presents the breakdown of their responses. Based on these data, we calculated a Net Promoter Score (NPS) of 48, therefore suggesting that the mentees' view of the programme is very positive.²⁰ Half of the in-depth interview participants indicated that the outcomes they achieved met or exceeded their expectations, and half stayed in touch with their mentor after the end of the formal mentoring period. Examples of 'continued' relationships included

²⁰ The Net Promoter Score is a widely used market research metric. It is based on responses to a question asking consumers how likely they are to recommend a certain product or service. It is calculated by subtracting the proportion of individuals who scored 0-6 from the proportion of those who scored nine or ten.

maintaining infrequent contact for advice or mentors joining the mentee's business governance structure (e.g., Board Chair).

Table 4-2: How likely are you to recommend BtB mentoring programmes to other potential mentees?

Rating	Number of respondents	% respondents
0	2	2%
1	1	1%
2	0	0%
3	3	3%
4	2	2%
5	4	3%
6	3	3%
7	7	6%
8	23	19%
9	13	11%
10	60	50%

Source: Mentee survey n=119

4.34 In the mentees' view, the three main elements that make relationships successful are: mentors' expertise (66%), good personality match (61%) and flexibility of the programme (44%). 78% of respondents indicated that the level of intensity of support was at their preferred level.

4.35 Mentees identified three main areas for programme improvements: programme promotion and access; the matching process; and guidance and support.

- **Programme promotion and access** – the programme promotion could emphasise the benefits of building personal connections and widen the access to less senior managers in SMEs. One challenge for the programme to consider is how to reach potential mentees who do not 'network.'
- **Matching process** – mentees would like more transparency around mentor skills and what they can offer, as well as more clarity on the process for raising any experiences of mismatch.
- **Guidance and support** – more advice would be appreciated on how to start the mentoring relationship, including guidance for new mentors to ensure they are ready to engage. More information could be provided on self-care to support the mental health of mentors and mentees.

Outcomes and impacts on mentors

Individual-level benefits

- 4.36 Improved knowledge and understanding were the most frequent benefit identified by mentors interviewed.** They had learned more about: different industries and sectors (than those in which they worked); different regional economic and industrial contexts and business needs; and how SMEs operate.
- 4.37** There were several examples of other benefits reported by mentors, which although may not be representative of common experiences, offered an insight into the variety of ways mentors had benefited from participating. These included: satisfaction from providing help and having an impact (as reported by their mentee); maintaining and using professional skills; gaining voluntary mentoring experience; and networking opportunities at Be the Business events.

Business benefits for mentors

- 4.38** Benefits at the business level for mentors are rare. Half of the interviewed mentors (7/13) reported no benefits to their business. A further two mentors were not employed or self-employed during their mentoring experience. It is important to note that the lack of business benefits was not considered a negative outcome by mentors as they did not see those as a motivation to participate in the programme.
- 4.39** Nevertheless, a few mentors reported organisational benefits in the form of better-informed employer practices. These benefits were a result of mentors' improved knowledge and understanding, which helped them to: inform policy development within their organisation related to SMEs; inform business advice to SMEs; and improve wider understanding of the context SMEs operate in.

Mentor's experience: changing internal processes to increase supply chain resilience

Learning about how smaller businesses operate in similar ways even though their challenges may be different has been a significant business benefit for one mentor's employer.

Understanding the challenges that SMEs face, for example, vulnerabilities to delayed invoice payments has directly helped to improve interactions with SMEs within their supply chain.

They have changed the way they deal with these businesses as a result of this improved understanding, to ensure that their contracts and agreements reflected the needs of smaller businesses. (Mentor interview 1, 2022)

4.40 One mentor highlighted that an unanticipated outcome of the programme was that the mentoring experience helped their business by providing case studies which they could use to illustrate SME experiences to stakeholders.

Further perceptions and suggested improvements

4.41 Most mentors continue to stay in touch with their mentees after the formal mentoring period ends. Ten of the 13 mentors reported that their relationship with their mentee had continued in a variety of forms. In some cases, the existing mentoring relationship continued, and in other instances, relationships were maintained through quarterly meetings or on an ad-hoc basis whenever mentees faced new challenges.

4.42 One consideration for the future development of the programme is the impact that continuing relationships may have on the available mentor pool. If mentors are choosing to continue engaging with their current mentee, they may have limited capacity to support new mentees. This may have implications for the number of mentors the programme needs to target for recruitment. This will always be a challenge for any programme where building personal connections is encouraged. Maintaining the supply of new mentors will be key for BtB's programmes.

4.43 Mentors identified three main areas for programme improvements: promotion; mentor engagement; and the matching process.

- **Promotion** – the promotion could be targeted more at businesses that are at specific growth stages and have clear needs. Linked to this, mentors thought mentees needed to be more aware of the level of commitment needed to initiate business change. Mentors expressed the view that the programme promotion needed to be used as a tool to recruit mentors as much as mentees, rather than relying on professional connections.
- **Mentor engagement** – mentors would like more opportunities to learn about other mentoring relationships, meet and network with other mentors and have clear guidance available for new mentors.
- **Matching process** – mentors would like more engagement with the matching team so that the teams know more about the mentors' style and expertise. A different approach to matching was suggested based on problem-solving with mentors responding to a list of asks where they thought they could contribute effectively. Where there were many similar requests for support, one idea was to run workshops where several mentors could share their ideas with a group of mentees.

Additionality and contribution

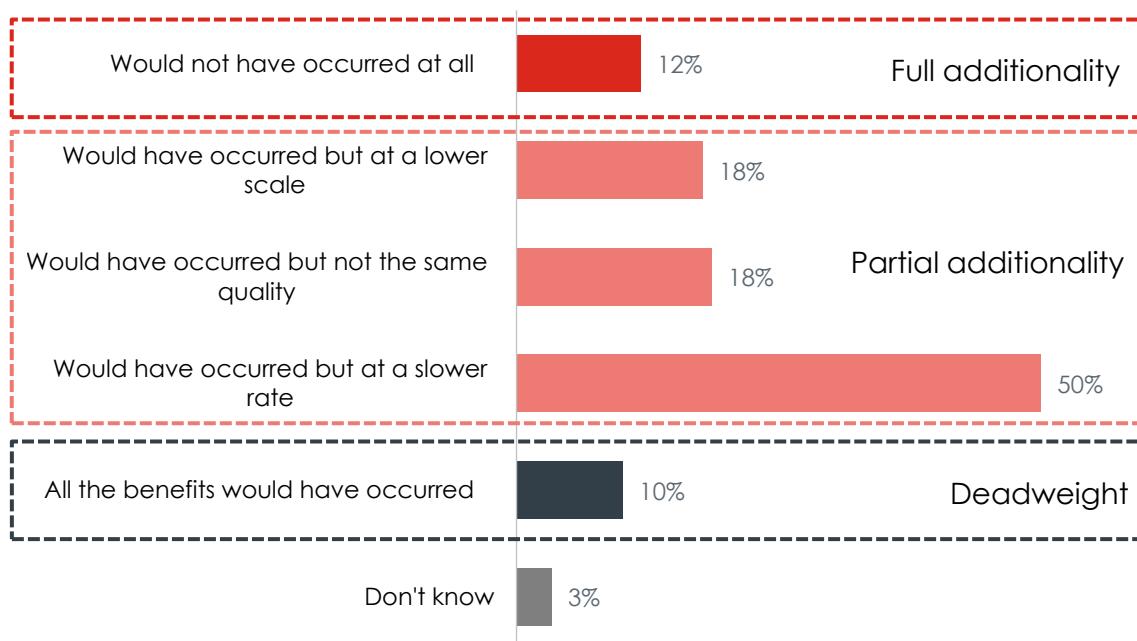
4.44 This sub-section considers the extent to which the benefits reported by mentees and mentors are additional i.e., what would have happened without MfG (counterfactual) based on data

collected via primary research. It also identifies other factors which may have influenced the benefits and the relative contribution of MfG.

Additionality of benefits

- 4.45 Overall, 87% of mentee businesses reported some form of additionality (full and partial).** The majority of businesses (75%) reported that without MfG, benefits would have taken longer to achieve, been of lower scale, or lower quality. The most common form of additionality related to timing: benefits were realised more quickly than would otherwise have been the case.
- 4.46** Of the businesses that reported that benefits would have occurred later, most expected a delay of up to one year (47%), between one and three years (29%), or could not estimate how much longer (22%). Among those that expected benefits to be of a lower scale, most (52%) expected to have only achieved less than half of the benefits without MfG.
- 4.47** A minority of mentees (12%) thought that they would have not realised any of the benefits without the programme. Encouragingly, the ‘deadweight’ of MfG was very low. Only 10% of businesses thought they would have realised all of the same benefits anyway.

Figure 4-6: Additionality of MfG (n=119)



Source: Mentee survey

- 4.48** For **mentors**, we assessed the additionality of the benefits through our qualitative interviews. Out of the 13 mentors interviewed: seven (54%) suggested that the benefits would have occurred regardless of the programme but at a lower scale, slower rate, or not at the same quality; five (38%) mentors reported deadweight (all the benefits would have occurred without the programme); one (8%) attributed all of their benefits to the programme.

Contribution

4.49 Alongside additionality, we also consider the ‘contribution’ of MfG to achieved benefits, relative to other factors (both internal and external to mentee businesses). Table 4-3: identifies other contributing factors that mentees reported during the survey. The three most commonly cited ones were support from other programmes and Covid-19 (both 13%), as well as pre-existing business plans and strategy (12%). Almost a third of mentees (32%) suggested that MfG was more or as important as other factors in realising the benefits while another 30% did not identify any other factors.

Table 4-3: What other factors outside of MfG may have contributed to the outcomes you and your organisation have achieved? (n=119)

	Contributing factor	Number of businesses	%
Internal factors	Pre-existing or new business plan/strategy implemented	14	12%
	Existing internal training programmes	13	11%
	New senior management team/business leadership in place	11	9%
	Strong team performance	6	5%
	Another team member also receiving mentoring from this programme	2	2%
External factors	Support from other external programmes	16	13%
	Covid-19	15	13%
	Other funders or organisations	11	9%
	Market demand and external sector and economic conditions	11	9%
	Technology changes and developments	6	5%
	Government policy changes	1	1%
Other	No other factors	36	30%
	Other	7	6%
	Don't know	3	3%

Source: SQW

4.50 Mentors’ perception of MfG’s contribution was mixed: five out of 13 mentors we interviewed identified a contribution of the programme to their benefits. One reported the programme was critical relative to other factors, two mentors stated that the programme was important and contributed alongside other factors. Two mentors thought that the programme contributed to outcomes but was less important relative to other factors (e.g., internal changes already underway within their organisation; additional mentoring experience).

4.51 Overall, our interpretation of the primary research evidence is that MfG’s additionality is fairly strong, especially considering the nature of mentoring as a form of support. It makes an important contribution in enabling benefits to occur. The contribution of MfG

to the benefits is more substantial for mentees than mentors, as can be expected from a programme designed to enable the dissemination of knowledge and experience from larger corporations to SMEs.

5. Econometric analysis of impacts

Summary

- We estimated the net impact of MfG on business performance – employment, turnover, and productivity – against a counterfactual group of similar companies from the wider business population.
- Our analysis suggests that MfG has had a statistically significant positive impact on the employment and turnover growth of participant businesses. These effects are relatively quick to be realised, with MfG beneficiaries demonstrating c. 7% higher employment growth and c. 12% higher turnover growth relative to similar unsupported companies during mentoring.
- At this point, we could not confirm a statistically significant impact on productivity, measured as turnover per employee. However, we note that MfG beneficiaries did not experience a ‘dip’ in productivity despite being on a steep growth trajectory in terms of employment.
- There was no evidence of any differences in the effectiveness of MfG across different regions and sectors. Covid-19 was also found to have had no statistically significant effect on MfG’s impacts.
- The results are consistent with findings from the primary research and reinforce MfG’s additionality.

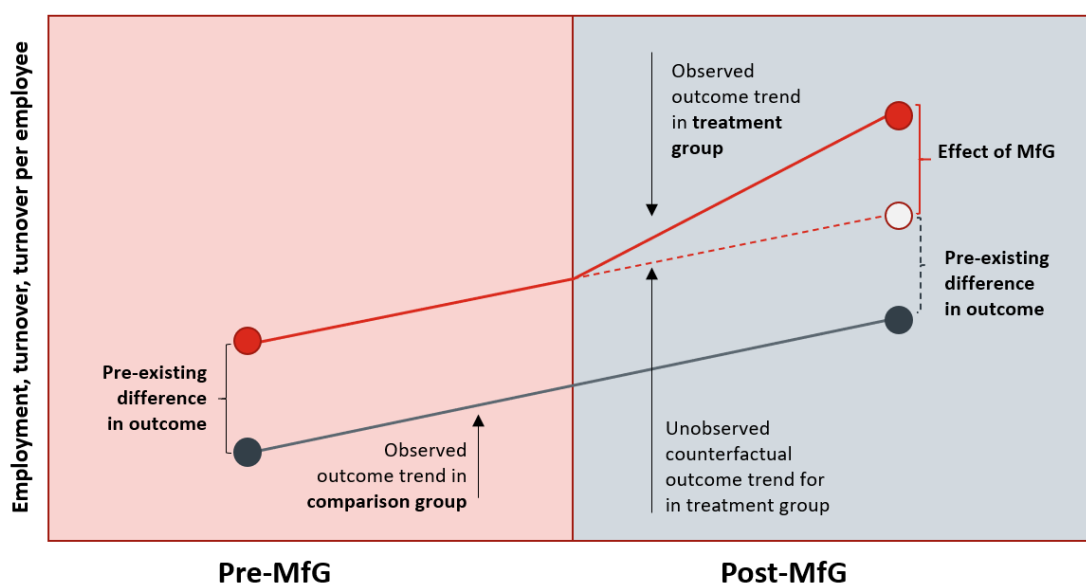
Approach to econometric analysis of net impacts

5.1 To estimate the net effects of MfG on business performance and productivity of beneficiaries, we followed a quasi-experimental approach – difference-in-difference (DiD) estimation.²¹ This method compares the changes in outcomes over time between MfG beneficiaries (the treatment group) and a group of SMEs that were not enrolled in MfG (the comparison group). It estimates the net effect of MfG support, as only the growth that is observed in the treatment group *beyond* what is demonstrated by the comparison group is attributed to the programme. **Error! Reference source not found.** illustrates this principle. DiD analysis corresponds to level three on The Maryland Scientific Methods Scale (SMS) providing robust evidence of MfG’s impacts.²²

²¹ A quasi-experimental approach attempts to establish a cause-and-effect relationship in environments where a scientific experiment with random assignment of treatment is not feasible.

²² This scale was first introduced in Farrington *et al.* (2003). It ranks evaluation methods on a scale from one to five with higher numbers indicating more robust methods. Randomised control trials are typically placed at level five, while a cross sectional comparison of treated and untreated groups, or before and after comparison of the treated only, with no additional controls is normally scored as one. A guide to the up-to-date version of the scale is available at <https://whatworksgrowth.org/>

Figure 5-1: Difference-in-difference approach



Source: SQW

- 5.3** Central to DiD analysis is an assumption that in the absence of MfG, supported and unsupported businesses would have followed the same trajectory. If this assumption is violated, then the analysis may under- or over-estimate the effect of support by wrongly attributing the effects of pre-existing group differences to the programme. For example, if MfG beneficiaries grew quicker than the rest of the economy before the programme, a comparison against the whole business population will overestimate the effect of MfG support.
- 5.4** We used Propensity Score Matching (PSM) to identify comparison groups of companies with similar observable characteristics to the treated group to limit the influence of selection bias (the fact that beneficiaries may be systematically different from the rest of the business population). PSM seeks to create a comparison group consisting of businesses that were as likely to be supported by MfG as the actual beneficiaries. This imitates a ‘random’ allocation that could have been achieved during a randomised control trial, improving the chances that the parallel-trends assumption is satisfied. Further detail on the implementation of PSM including statistical outputs from matching models are presented in Annex A:

Comparison groups

- 5.5** The main source of data used to identify suitable comparison groups for our analysis was the ONS Business Structure Database (BSD). The BSD draws a snapshot each year from IDBR, which contains information on all businesses registered for VAT and/or PAYE income tax. It also provides consistent high-quality data on business characteristics including business age, turnover, employment, sector and survival. Additional data sources included the database of Innovate UK funding and the Beauhurst database, which tracks high-growth

companies in the UK. These datasets provided additional indicators that allowed us to improve the similarity between the comparison group and MfG businesses.

- 5.6** We identified a total sample of 542 MfG businesses in the BSD database for the counterfactual impact analysis (we discussed how these companies compared to the wider business population in section 3, Table 3-2:). **For the PSM and DiD analyses, we re-casted the dataset in terms of the time relative to when the mentoring was delivered.** Reordering the data in this way allowed the analysis to identify the effects of MfG in a particular year since support rather than a specific calendar year.
- 5.7** One of the challenges of this approach is determining the most appropriate ‘before’ and ‘after’ periods for beneficiaries. Each release of BSD covers a financial year, reflecting turnover generated by businesses from April to March and providing an estimate for employment in the middle of the financial year. Mentoring relationships have no predetermined start date and support was often received over two financial years. To ensure a ‘clean’ baseline for supported businesses, we defined the ‘before’ period, or period ‘t,’ as the last full financial year before the programme. The following year was then defined as the first ‘post-treatment’ year (period ‘t+1’) as mentoring would begin that year and immediate benefits could start to materialise. For unsupported companies, the ‘t’ was selected during the matching. In other words, the matching procedure identified not only SMEs similar to MfG beneficiaries, but also the year in which they were the most alike.
- 5.8 It is important to note that PSM is only able to match businesses on observable characteristics**, i.e., characteristics that are recorded in the datasets available. Differences in important unobservable characteristics may remain. For example, the propensity to seek support, the business’ management style, and its growth ambitions are all unobservable and likely to be correlated with both the business’ success over time, as well as its likelihood to apply for MfG. Therefore, to ensure the robustness of results, it was important to consider multiple complementary comparison groups.
- 5.9** After considering five alternative specifications of matching models and carrying out graphical and formal statistical tests to determine whether obtained comparison groups were likely to satisfy the parallel trends assumption, we selected two groups for our econometric analysis (further detail on this selection process can be found in Annex A:).
- **Comparison group 1** was created by matching on the following six characteristics: a) business size; b) employment; c) employment growth trajectory; d) an indicator of any previous Innovate UK funding; e) Beahurst tracking; and f) region.
 - **Comparison group 2** considered these six variables and an additional indicator of whether a business claimed through the Coronavirus Job Retention Scheme.

5.10 Error! Reference source not found. presents summary statistics on these two comparison groups.

Table 5-1: Snapshot of MfG businesses and matched comparison groups

Variable	Mean MfG (n = 542)	Mean Group 1 (n = 542)	Mean Group 2 (n = 542)
Business size			
Employment	37.4	36.7	59.2
Real turnover	4144.2	4916.2	9695.8
Real productivity	125.2	155.9	151.3
Industry classification			
Low pay	20%	33%	32%
High-tech	24%	18%	17%
Manufacturing	21%	11%	12%
Other characteristics			
IUK project before	7%	7%	7%
Patent holder	8%	4%	3%
Beauhurst Tracked	16%	16%	16%
Coronavirus Job Retention Scheme	60%	42%	64%

Source: Belmana

5.11 Compared to the wider BSD, the selected comparison groups are much more similar to MfG businesses in most of the characteristics considered (i.e., the differences between the groups are substantially smaller than between MfG beneficiaries and all businesses in BSD as shown in Table 3-2:). Importantly, our analysis also showed that, unlike the wider business population, both comparison groups had comparable growth trajectories to MfG businesses in the two years before treatment (Figure 5-2: and Figure 5-3: **shows turnover growth before and after MfG** for supported businesses, the two matched comparison groups, and the wider BSD population).

5.12 Figure 5-3:).

5.13 It is worth noting that for both groups, some differences remain particularly in those characteristics that were not used in the matching. For example, group 2 gives a better match than group 1 in terms of participation in the Coronavirus Job Retention Scheme. However, group 1 is more similar in business size and turnover. This once again highlights the importance of considering both groups when interpreting the results.

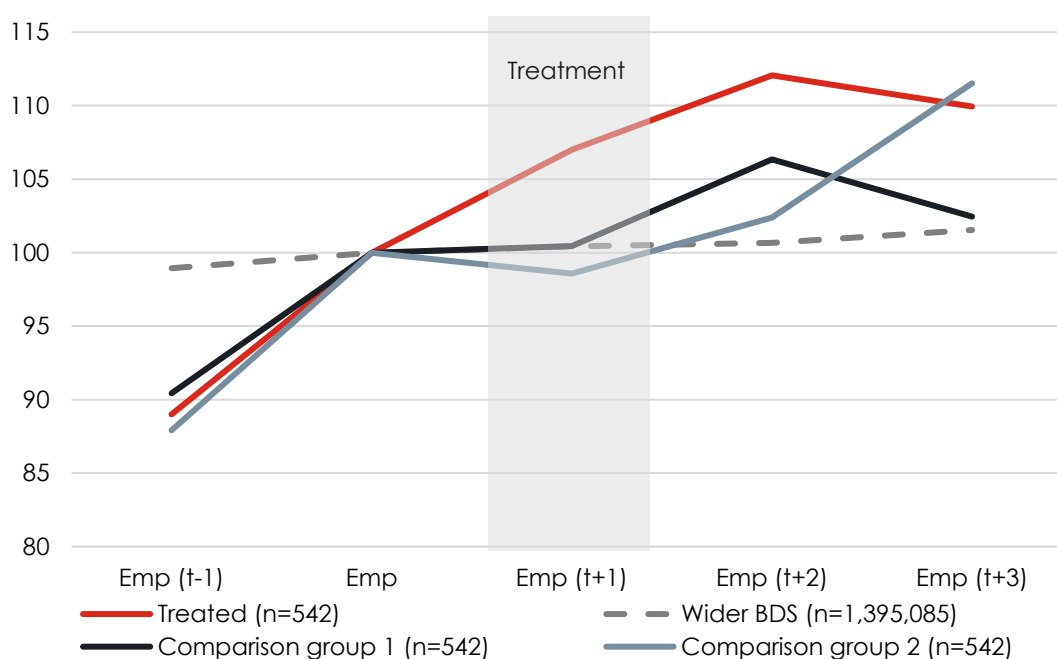
Net impacts on business performance

5.14 MfG has had a statistically significant positive impact on the employment and turnover growth of participant businesses.²³ MfG companies have grown more than comparison businesses in both employment (against groups 1 and 2) and turnover (against group 2). This growth occurs within the year of support and the first year after completing the mentoring relationship. We also highlight the following results:

- the growth in employment associated with MfG participation does not lead to a reduction in productivity
- the effect of MfG on employment and turnover growth is consistent across sectors and regions within the UK
- we found no evidence that Covid-19 had affected the degree to which MfG impacted beneficiaries' growth.

5.15 Figure 5-2: graphically illustrates the growth of employment before and after MfG for supported businesses, the two matched comparison groups, and the wider BSD population.

Figure 5-2: Employment growth of MfG businesses and selected comparisons (index, year before support =100)



Source: Belmana

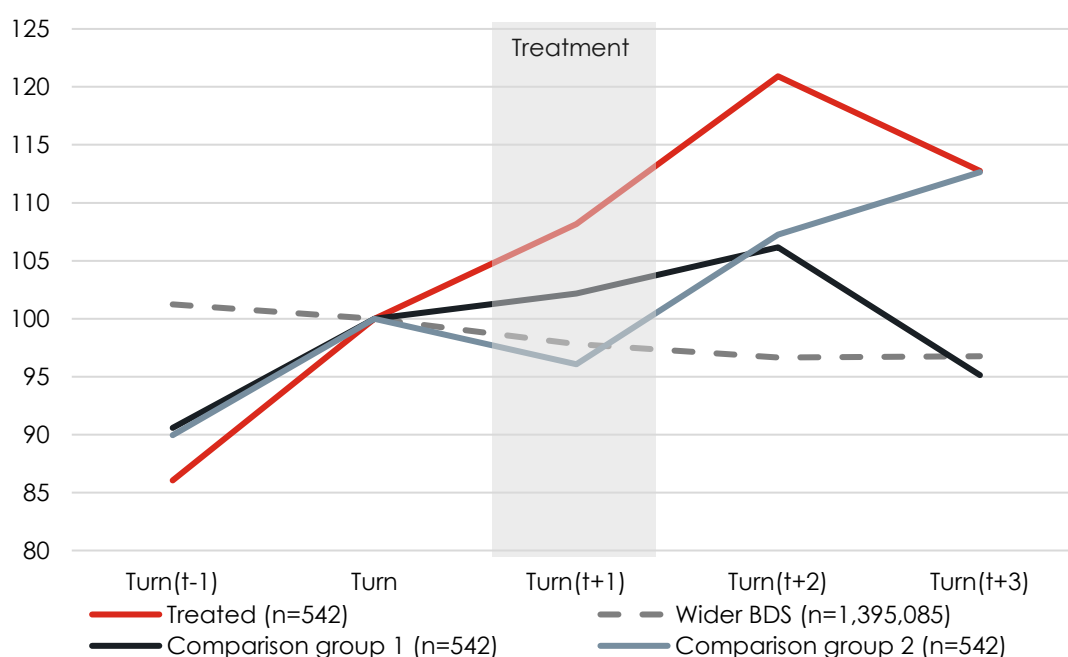
²³ When a relationship is “statistically significant,” the link between engagement and the outcome is strong enough that it is unlikely to be due to chance. To be “statistically significant at the X% level” means that if the programme and evaluation were repeated multiple times and there were no association between the explanatory variable of interest (MfG participation) and an outcome (increased employment, etc.) we would wrongly conclude that the relationship is present no more than X% of the times. Often the 5% level is taken as the threshold for statistical significance. However, given the nature of MfG support we consider results statistically significant at the 10% level to be of policy significance.

5.16 Treatment of MfG is associated with 6.5% additional growth in employment in the treatment year, compared with businesses from comparison group 1 (8.4% compared with group 2). The graph shows that a difference in employment growth between MfG businesses and the comparison groups persists in the year following the support. However, this is only statistically significant for group 2 and not group 1. This result is consistent with the survey findings on additionality reported in section 4, the benefits were commonly reported to have been accelerated by one to three years.

5.17 It is important to note that the sample size for the effect of MfG in the year after support (t+2) and later is considerably lower than for the year of support (197 firms had data on t+2, 83 on t+3) as a significant proportion of MfG relationships started in the most recent financial year (2020/21) and no BSD data is available beyond. Whether the effect is not statistically significant in t+3 due to the lower sample size or because the mentoring's effect is more pronounced earlier on remains an open question until more data becomes available.

5.18 Figure 5-3: shows turnover growth before and after MfG for supported businesses, the two matched comparison groups, and the wider BSD population.

Figure 5-3: Turnover growth of MfG businesses and selected comparisons (index, year before support =100)



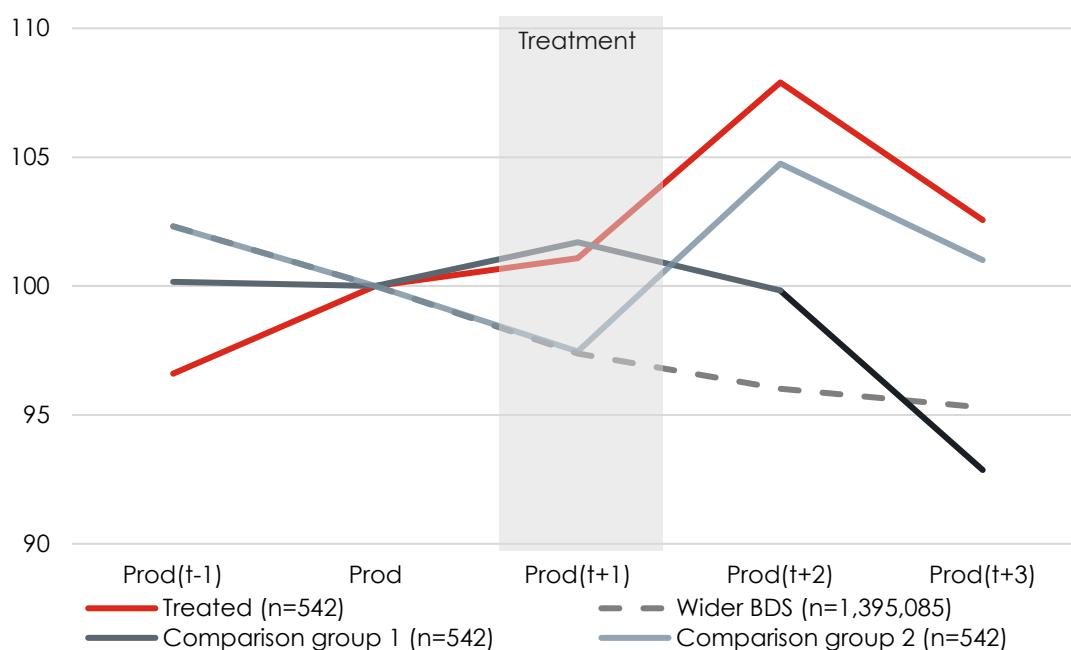
Source: Belmana

5.19 When compared to group 2, MfG beneficiaries demonstrate a 12.1% of additional growth in turnover in the treatment year and 13.7% in the year after (relative to the pre-treatment levels, not cumulatively). The estimates for the effects are smaller and not statistically significant when group 1 is considered.

5.20 We highlight that on average MfG businesses demonstrate much stronger growth than the wider business population and were on an upward trajectory before starting on the programme. We also note that both comparison groups experienced a 'slow down' in growth following the year they were matched on, which was much less prominent among the beneficiaries. These observations reinforce the findings from the mentee survey and interviews about MfG's contribution. Not all of the growth can be attributed to the programme, the mentoring works alongside other (pre-existing) factors, but importantly it enables the businesses to build upon the foundation they already have and to overcome challenges associated with expansion quicker than they would have been able to in the absence of MfG.

5.21 Error! Reference source not found. **shows the path of labour productivity (measured by the ratio of turnover to employment) before and after MfG for supported businesses, the two matched comparison groups, and the wider BSD population.**

Figure 5-4: Productivity growth of MfG businesses and selected comparisons (index, year before support =100)



Source: Belmana

5.22 At this stage, our analysis did not confirm a statistically significant relationship between MfG and productivity. Although treated businesses demonstrate an upward trend in productivity (unlike the wide business population) and are on par or better than the comparison groups in terms of the average productivity levels, the evidence is not strong enough to unambiguously attribute these effects to MfG. There are two likely reasons for this, as follows:

- There are known measurement issues with the productivity proxy as the ratio of turnover over employment. SME data on turnover and employment is 'noisy' and volatile.

Especially when the analysis concerns innovative and fast-growing SMEs, as when such a business is hiring additional workers, there may be a time lag before these workers become fully productive and generate turnover. From this perspective, we note that **MfG beneficiaries did not experience a temporary 'dip' in productivity despite being on a steep growth trajectory in terms of their employment.**

- Covid-19 and the Coronavirus Job Retention Scheme introduced additional disturbances into the productivity data as businesses effectively had fewer available staff without a formal reduction in employment. **It is important that the average productivity of MfG beneficiaries was not lower than that of businesses in comparison group 1, which were using the job retention scheme less actively.** It is possible that if the data on output per hour worked had been available, then the findings could have been different.

Results of sub-group analysis

5.23 As part of the econometric analysis, we also considered whether the impact of MfG on businesses changed during Covid-19 or was affected by the region or sector of business.

5.24 **We found no statistically significant differences in the impact of mentoring on beneficiaries in different sectors or regions.** Although MfG businesses show a higher concentration in certain regions (e.g., West Midlands) and sectors (high-tech and manufacturing) there is no evidence to suggest that mentoring is more effective for them.

5.25 This is encouraging, confirming the general nature of mentoring as an approach. It also suggests a stronger external validity of the results and gives us confidence that **as the programme keeps scaling up, the observed positive effects are unlikely to disappear due to 'different' businesses taking part.**

5.26 To isolate the effect of Covid-19 on MfG, we used three separate approaches: We first re-estimated the models without data from Covid-affected years for mentees treated before Covid-19. Then we compared the impacts across affected and unaffected cohorts, i.e., across those businesses that were affected by Covid-19 during mentoring and those who were not. Finally, we checked whether the impacts for those who claimed the Coronavirus Job Retention scheme differed from those who did not. **We found no evidence to suggest that Covid-19 had any statistically significant effect on the impact of MfG on beneficiaries** using any of these approaches.

5.27 Finally, we considered whether there is a difference in the effectiveness of MfG support for firms that have received repeated mentoring support. Out of the 542 MfG beneficiaries identified in the BSD for econometric analysis, 22% (or 117 businesses) participated in mentoring more than once (e.g., twice in MfG or in RRM and MfG). The results suggest that during the first instance of the mentoring support, those businesses demonstrated a 6.5% lower employment growth than the rest of the beneficiaries (i.e., they grew in line with the

comparison groups). There were no statistically significant differences in the year following support.²⁴

- 5.28** There are several potential explanations for why this might be the case. Qualitative evidence suggests that some of the most successful mentoring relationships continue beyond the end of the formal mentoring period (12 months). Therefore, it is possible that there is selection bias and slower-growing companies self-select into a second mentoring relationship. However, there is also evidence that companies that benefited from the programme would like to participate again with a different mentor. Perhaps, mentoring results in these companies changing the way they approach business development, focussing on efficiency rather than growth. We see this finding as neither positive nor negative from the evaluation point of view.
- 5.29** Whether repeated mentoring should be offered and encouraged is likely to be highly dependent on individual circumstances. The evidence collected during this evaluation did not allow us to identify any consistent patterns that would suggest in which cases repeated support would be the most beneficial. Further qualitative investigation could fill this gap.
- 5.30** **In summary, our econometric analysis suggests that MfG support has had a statistically significant positive net impact on the business performance of its beneficiaries. The results are consistent with the findings from primary research and reinforce the additionality and contribution of MfG.**

²⁴ The second instance of support was commonly observed in the year after the first one (MfG+MfG) or even in the same year (RRM+MfG).

6. Conclusions

- 6.1** Consistent with the research findings from our interim evaluations in 2020 and 2021, this evaluation found that BtB's mentoring programmes have a positive impact on participating mentees and their businesses. This is irrespective of business size, location and sector.
- 6.2** The bespoke nature of mentoring, along with the particular needs and ambitions of each SME, means that there are various ways in which benefits have occurred. The matching of mentees and mentors and the quality of the mentoring relationships have been key; in most cases, the 'chemistry' between the participants has been critical for success. The mentoring relationships are often nuanced in how they develop.
- 6.3** It is clear from the evaluation evidence that the mentoring support has led to improved knowledge and skills for individual mentees and the adoption of new management and leadership practices by their businesses. The programme is both educational and practical. This is important because it has helped to maximise the impact for businesses in terms of additional employment and turnover.
- 6.4** Furthermore, most mentee SMEs have increased their productivity (or expect to do so in the near future) as a result of participating in the programme. This mainly refers to self-defined measures of productivity, for example, improved profit, working at speed/efficiency, and output per worker. The statistical evidence for productivity improvements is limited. In our view, this is partly due to measurement issues – the available productivity proxy (turnover per employee) does not take into account the variation in hours worked and may mask the efficiency gains. This is supported by the finding that mentee businesses have not experienced a 'dip' in their output per worker despite being on a steep growth trajectory in terms of employment.
- 6.5** The impacts of mentoring on participating SMEs have been relatively quick to come through. The additional employment and turnover have been typically achieved in the same year in which mentoring took place and in the year after the formal relationship came to an end.
- 6.6** With regards to mentors, they also report individual benefits such as a better understanding of the 'SME world.' Although not the focus of the programme, there is some evidence of benefits to mentor organisations such as the adoption of new practices that reflect the needs of SMEs and improved relationships with their supply chains.
- 6.7** Finally, we consider the programme has done well in moving from a pilot to a scale-up, attracting high-quality pro-bono mentors with the relevant skills and capabilities. Moving forward, it will be important to consider the capacity implications of successful relationships continuing beyond the 12 months.

Annex A: Further detail on econometric analysis

- A.1** As part of this evaluation, we carried out a quasi-experimental analysis of the programme's impact. We used a difference-in-differences approach to estimate the impact of MfG on business performance, net of what would have been achieved without the programme. This involved comparing the outcomes observed among beneficiaries to those observed among comparison groups drawn from the wider business population represented in the Business Structure Database using a statistical matching technique – Propensity Score Matching.
- A.2** This annex provides additional detail on the methodology and results of this analysis, including an assessment of the robustness and quality of the comparison groups. It also presents the results of testing the representativeness of the survey sample and evidence of the impacts of RRM on the business performance of its beneficiaries, which was unavailable during the RRM evaluation due to lags in data.
- A.3** Table A-1: shows the result of χ^2 tests of proportions of the survey sample in relation to four characteristics of mentee businesses available in the monitoring data. The results suggested that the survey sample was representative of the population of the programme, both including and excluding those respondents that reported their relationship to be short. We found no further patterns in monitoring or wider secondary data that would suggest that mentoring relationships were not 'taking off the ground' for any particular type of business.

Table A-1: results of χ^2 tests on the survey sample (p-values)

	Surveyed, excluding short relationships (n=119)	Full survey
Size of firm	0.857	0.4135
Family-owned	0.236	0.186
Firm previously mentored (MfG or RRM)	0.600	0.366
Firm age	0.303	0.127

Source: SQW.

- A.4** Table A-2: sets out the steps which were carried out to conduct PSM and the subsequent impact assessment using DiD:

Table A-2: Steps in implementing PSM and DiD analysis

Step	Description
Step 1	Profiling of beneficiaries against the wider business population
Step 2	Estimation of propensity scores
Step 3	Formation of alternative comparison groups
Step 4	Quality assessment of comparison groups
Step 5	Comparison group selection
Step 6	DiD analysis

Source: SQW

6.8 Below we discuss each of the steps in more detail.

Propensity score matching

- A.5** Propensity score matching (PSM) is used to identify comparable unsupported businesses. The matching process involves building a selection model that seeks to approximate the MfG recruitment, application and selection processes, but in a simplified quantitative model. If the model is robust, then it can be used to identify unsupported businesses that look – in terms of the modelled characteristics – very similar to the MfG beneficiaries.
- A.6** The procedure generates a propensity score for each of the supported and unsupported businesses that reflects the probability this business could be a beneficiary of the programme, based on its characteristics.²⁵ For each of the supported businesses, the nearest unsupported business in terms of the score is then identified. Next, these ‘matched’ companies are selected for the comparison sample as, based on their observable characteristics, they are as likely to receive support as the beneficiaries themselves. Since there is no ‘treatment’ year for unsupported companies, the matching procedure was set up to identify not only the comparison businesses but also the year in which they and beneficiaries were alike the most.
- A.7** The modelling uses variables available about the wider business population and beneficiaries before MfG support. The variables used for the analysis were derived from the BSD linked to several additional datasets. To account for the variation by industry without using categories that are too ‘fine’ (i.e., contain only a few companies in them), specific Standard Industrial Classification (SIC 2007) codes were reviewed and defined as relating to highly knowledge-intensive industries and high-tech manufacturing. Using the BSD panel nature (i.e., that it tracks businesses over time), pre-support employment or turnover trends were estimated and added to the dataset for analysis together with geographical proxies, age, employment and turnover size categories. Additional characteristics linked to BSD from external datasets included:
- **Innovate UK funding.** Innovate UK reports all incidences of Innovate UK support since 2004, providing business details, grant amounts, start dates, end dates, product information and collaborators. Whether a business received support in the past may reveal motivational characteristics, such as the business’ motivation to grow and actively seek support to achieve this goal.
 - **Beauhurst tracking.** The commercial dataset provided by Beauhurst is one focused on the UK’s fast-growing businesses. Thus, being tracked by Beauhurst can be a proxy for high-potential businesses.
 - **Published Patents.** The Intellectual Property Office datasets are snapshots of patent/SPC applications received and subsequently published by the IPO. This dataset is then linked to businesses’ enterprise reference numbers through matching company names.

²⁵ Of course, we know that supported companies are part of the programme, however some of them may have certain characteristics that are more common among other beneficiaries than the others.

- **Coronavirus Job Retention Scheme claims.** HMRC publishes a dataset covering all Coronavirus Job Retention Scheme claims submitted by employers from the start of the scheme up to 31 August 2021. It includes statistics on the claims themselves and the jobs supported. Claiming this scheme can be used as a proxy of having been negatively affected by the Covid-19 shock.

A.8 A probit model was used to obtain propensity scores. The dependent variable takes a value of one for those in receipt of support and zero for the unsupported businesses. The BSD was trimmed by taking a 2% random sample of small businesses to reduce processing times.

A.9 Table A-3: presents the estimates of five different selection models we considered. Positive estimates indicate that a variable increases the chance of participation in MfG. Selection tends to target smaller businesses with strong past performance and pre-support employment growth. The regional aspects – especially whether the business is in London or the southeast – correlate negatively with selection and submitting a claim through the Coronavirus Job Retention Scheme makes selection more likely.

Table A-3: Probit estimation of treatment probability

Variables	Model 1	Model 2 (selected group 1)	Model 3	Model 4 (selected group 2)	Model5
Turnover Categories					
£0-100,000	-0.22		-0.22		-0.05
£101,000- 500,000	-0.03		0.03		0.18
£501,000- 1,000,000	0.17		0.36**		0.47***
£1-5 million	0.32**		0.55***		0.62***
£5-10 million	0.36***		0.51***		0.56***
£10-50 million	0.23*		0.33**		0.35**
Employment Categories					
0-3 employees	0.11	-0.08			
3-9 employees	0.49***	0.56***			
10-49 employees	0.46***	0.60***			
50-249 employees	0.15	0.27***			
Sectors and other characteristics					
High KI services	0.10**		0.14***		
High tech manufacturing	0.11		0.23**		
Scale-Up	0.14***		0.31***		

London / Southeast	-0.23***	-0.22***	-0.25***	-0.22***	-0.22***
Beauhurst Tracked	0.12***		0.19***	0.17***	0.12***
IUK project before	0.29***	0.34***		0.35***	0.27***
Local units	-0.00	0.00	-0.00	-0.00	
Coronavirus Job Retention Scheme				0.44***	0.30***
High-tech					0.19***
1yr lagged difference log emp		0.09***	0.08***	0.12***	0.11***
Annals					
2016	-0.99***	-0.97***	-0.96***	-0.92***	-0.96***
2017	-0.48***	-0.45***	-0.46***	-0.43***	-0.45***
2018	-0.36***	-0.34***	-0.34***	-0.33***	-0.34***
Constant	-3.38***	-3.21***	-3.28***	-3.28***	-3.56***
Adjusted R-squared	0.12	0.10	0.10	0.09	0.12
Observations	3,309,131	1,395,085	1,395,085	1,395,085	1,395,085

*** significant at the 1% level; ** at 5%; * at 1%. Standard errors are robust.

Source: Belmana

Identifying a preferred comparison

A.10 The choice of the preferred model relates to two broad tests and this subsection provides evidence on each. First, we tested the ‘balance’ that the model yields, i.e., whether after the matching the counterfactuals are on average similar to the MfG businesses. Second, we compared past trends in the different sets of businesses.

A.11 **Error! Reference source not found.** shows summary statistics for the supported businesses, the wider business population (i.e., before matching,) and the comparison models (i.e., after matching):

Table A-4: Summary statistics, MfG and comparison groups

Variable	MfG (n=542)	Wider BSD (n=1.4m)	Model 1 (n=542)	Model 2 (n=542) selected group 1	Model 3 (n=542)	Model 4 (n=542) selected group 2	Model 5 (n=542)
Business size							
Employment	37.4	28.9	42.3	36.7	45.4	59.2	47.0

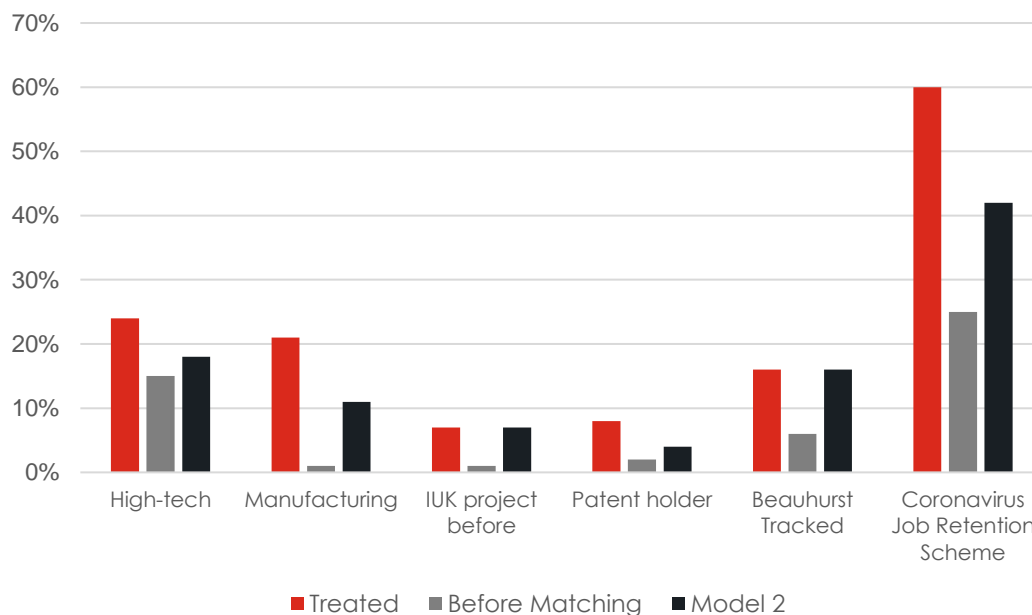
Variable	MFG (n=542)	Wider BSD (n=1.4m)	Model 1 (n=542)	Model 2 (n=542) selected group 1	Model 3 (n=542)	Model 4 (n=542) selected group 2	Model 5 (n=542)
Real turnover	4144.2	4211.2	6501.3	4916.2	4553.3	9695.8	4761.8
Real productivity	125.2	181.9	153.7	155.9	224.3	151.3	230.6
Industry classification							
Low pay	20%	28%	30%	33%	32%	32%	29%
High-tech	24%	15%	17%	18%	16%	17%	22%
Manufacturing	21%	1%	11%	11%	8%	12%	15%
High tech manufacturing	1%	0%	1%	1%	1%	1%	2%
High KI services	10%	9%	11%	10%	9%	9%	6%
High-medium tech manufacturing	6%	2%	3%	3%	3%	5%	6%
Innovation proxies							
IUK project before	7%	1%	7%	7%	4%	7%	6%
Patent holder	8%	2%	6%	4%	3%	3%	5%
Beauhurst Tracked	16%	6%	16%	16%	17%	16%	16%
Coronavirus impact							
Coronavirus Job Retention Scheme	60%	25%	38%	42%	40%	64%	65%
Business demographics							
Local units	2.0	1.8	2.1	2.0	2.0	2.3	2.3
Years of activity	15.8	12.4	16.4	16.7	16.8	16.4	17.6
London/SE	20%	36%	21%	20%	21%	20%	22%
Previous growth							
Lagged employment growth	12%	1%	3%	10%	11%	13%	12%
Lagged Turnover growth	15%	-1%	8%	10%	14%	11%	9%
Lagged productivity growth	3%	-2%	6%	0%	4%	-2%	-3%
Note: Summary statistics calculated for the base year using BSD data and other public datasets. Real turnover is calculated using sector-specific deflators and expressed in thousands of pounds.							

Source: Belmana

A.12 PSM selects businesses which look similar in the characteristics introduced in the probit models. A further robustness check for these models is to consider whether the businesses are similar in other characteristics not included in the probit models. Using Model 2 Figure A-1: shows how matching adjusts for observable characteristics by selecting businesses that are more similar to the treated group. Thus, the comparison groups reflect the characteristics of the group of treated businesses.

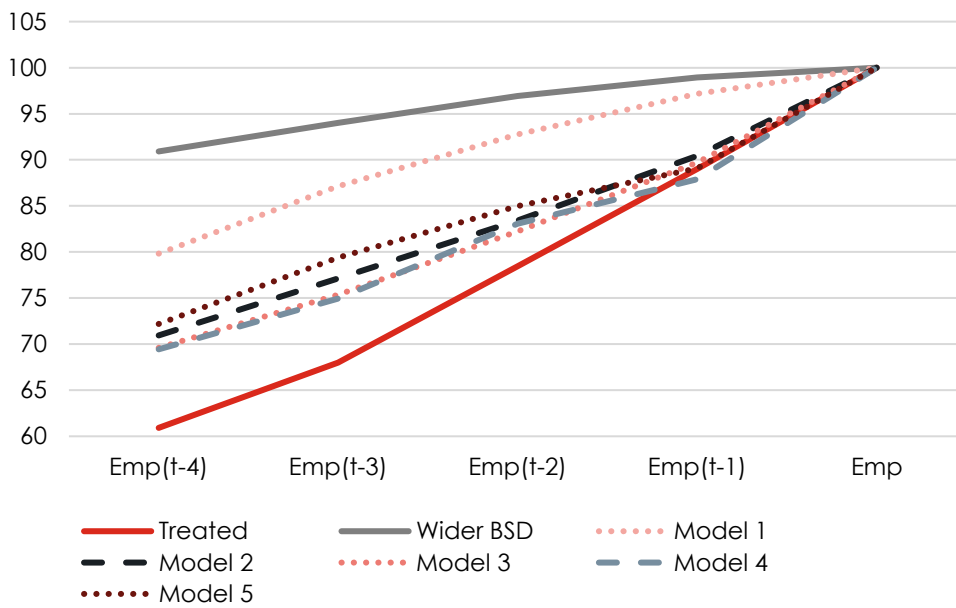
A.13 Out of all models considered, Model 2 most closely matches the supported businesses in terms of sectoral and business demographics. Model 2 is selected from this criterion especially as it manages to adjust for innovation proxies as well as business size and previous growth, factors which are likely to be significant in determining employment and turnover growth. Model 4 was selected as an alternative complementary comparison since it closely matches the proportion of businesses that claimed to use the Coronavirus Job Retention Scheme.

Figure A-1: Robustness check for PSM quality of the match



Source: Belmana

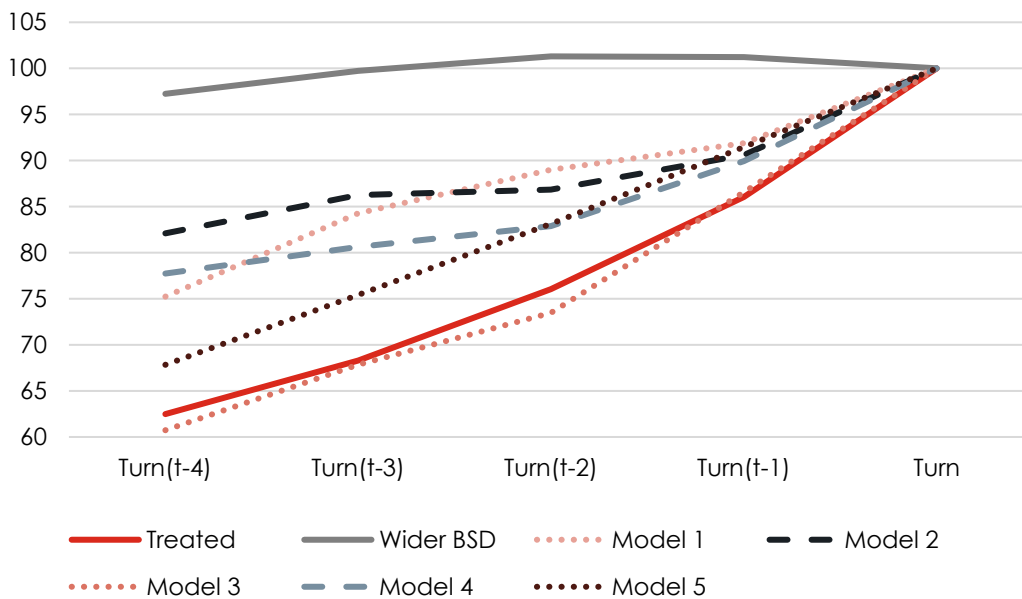
Figure A-2: Pre-treatment trends in employment



Source: Belmana

A.14 Figure A-2: shows that most models, with exception of Model 1, manage to closely follow pre-support employment trends up to three years before support. Employment growth is closely matched for two years before support by Models 2 and 4. All comparison groups reflect that the set of comparable businesses grow faster than the wider business population in the years leading up to support.

Figure A-3: Pre-treatment trends in turnover (index, t=100)



Source: Belmana

A.15 Figure A-3: shows turnover growth in the years leading to support. This shows that the supported businesses were already on a high turnover growth path compared to the wider business population. The comparison groups also experience higher turnover growth in the years before support which indicates that matching is selecting similar businesses. Model 3 tracks past turnover growth closely up to four years before support. Models 2 and 4 still reflect the high turnover growth in previous years, but to a smaller extent.²⁶ On the balance of carried out tests, Models 2 and 4 were deemed to provide the most appropriate comparison. We emphasise that this choice was made before carrying out any impact analysis.

Difference-in-differences analysis

A.16 The DiD analysis summarised in the main section of the report was implemented by:

- first, calculating the differences in outcomes over time at the individual business level (outcome measures were expressed in logarithms to allow interpretation of obtained results as percentage changes)
- then implementing a t-test with robust standard errors to test whether the average changes in outcome measures observed among beneficiaries were statistically significantly different from the average changes in outcome measures observed in the comparison groups.

A.17 Table A-5: summarises the results of the DiD analysis:

Table A-5: Impacts of MfG estimated with DiD analysis

	MfG beneficiaries Growth against baseline year (t)	Difference in growth Comparison group 1 (DiD estimate)	Difference in growth Comparison group 2 (DiD estimate)
Employment			
Year of support (t+1)	7.0%	6.5% (2.47**)	8.4% (3.76***)
The year following support (t+2)	12.1%	5.7% (0.95)	9.7% (2.02**)
Two years after support (t+3)	9.9%	7.5% (0.49)	-0.4% (1.54)
Turnover			
Year of support (t+1)	8.2%	6.0% (1.38)	12.1% (3.40***)
The year following support (t+2)	20.9%	14.8% (1.25)	13.7% (1.70*)
Two years after support (t+3)	12.8%	16.8% (1.02)	-0.7% (0.58)

²⁶ Given the volatility in turnover typical for SMEs, putting an excessive amount of weight on past turnover growth may increase the risk of capturing businesses that have been performing 'beyond their potential' in the short-run. If that happens, and those businesses revert to their 'normal path' in the post-matching periods, there is a risk of overestimating the effect of the programme.

	MfG beneficiaries Growth against baseline year (t)	Difference in growth Comparison group 1 (DiD estimate)	Difference in growth Comparison group 2 (DiD estimate)
Productivity			
Year of support (t+1)	1.1%	-0.6% (0.11)	3.6% (1.28)
The year following support (t+2)	7.9%	8.1% (0.93)	3.1% (0.38)
Two years after support (t+3)	2.6%	9.7% (0.71)	1.6% (0.04)

Note: Significance levels are 1% (***), 5% (**) and 10% (*); t-statistics in parenthesis use robust standard errors. The difference-in-differences is treated minus control.

Source: Belmana

A.18 Note that fewer beneficiaries had data on the years following the support: only 197 firms had data on t+2 and 83 on t+3. Therefore, the estimates in the later years are affected not only by the potential change in the effect size over time but also by the smaller sample.

A.19 Results of comparing MfG beneficiaries against the alternative group suggest that the employment growth in supported businesses is greater than that seen in comparator firms and that this difference is statistically significant for both employment and turnover but not for the ratio of the two (a productivity proxy).

Sub-group analysis

A.20 We carried out further statistical analysis to investigate whether the treatment effect of the mentoring varied across businesses from different sectors and regions and whether it was affected by Covid-19. For this additional analysis, we used a regression-based implementation of DiD. We used several separate regression specifications that reflected the groups we were considering, but all of them had the following general form:

$$\Delta Y_i = \alpha + \beta MfG_i + \gamma(MfG_i \times S_i) + \theta X_i + \varepsilon_i,$$

- ΔY_i – stands for the change in the outcome of interest (employment, turnover) over time for company i ²⁷
- MfG_i – takes the value of one for beneficiaries and zero otherwise
- S_i – takes the value of one when business i falls into a sub-group of interest (e.g., it is from a particular sector or region) and is zero otherwise
- X_i – is a vector of additional control variables, these included the observable characteristics used for PSM

²⁷ In our reporting we focus on employment and turnover. The productivity proxy is the ratio of the two and any differences in sub-group impacts on productivity would be determined by whether there were any sub-group differences in employment and turnover.

- ε_i – in an error term
- β and γ are the coefficients of interest. β captures the average effect from the mentoring while γ reflects the subgroup variation in the effect.

The impact of Covid-19

A.21 To estimate the effect of Covid-19 may have had on MfG's impact on beneficiaries, we undertook three separate pieces of analysis:

- First, we considered a **smaller cohort of businesses who received their support before the Covid-affected years** (i.e., before 2020) and compared the impact of MfG for these beneficiaries to the overall impact of the programme
- Second, we included a **sub-group control variable for the Covid-19 pandemic in our DiD regressions**
- Finally, we used the **Coronavirus Job Retention Scheme (CJRS) as a proxy for the level of impact of Covid-19 on businesses**.

A.22 Cohort of businesses supported pre-Covid: of the businesses identified in the BSD, 197 received their support in the three financial years 2017-18 to 2019-20. We repeated the econometric analysis for this subgroup of MfG businesses to test the robustness of the results and check whether businesses who received their support before Covid-19 benefitted more, equally, or less from the programme.

A.23 It is important to note that this analysis considers all data on businesses supported pre-Covid. This means that the estimate of the effect in treatment year is clear from Covid's impact. However, later years were affected. The parallel trends assumption is key here – it is assumed that in the absence of mentoring, Covid-19 would have had the same effect on supported businesses as on comparator companies. Comparing the results to the baseline findings can shed light on the effectiveness of mentoring delivered in 'normal times' vs during the pandemic. It may also highlight the difference in longevity of the effects depending on the circumstances in which the mentoring was delivered.

A.24 Table A-6: presents the findings of the DiD analysis of the impact of MfG on employment and turnover for this subgroup of beneficiaries. To identify the comparison groups, we followed the same matching procedure outlined above but used our reduced sample of businesses.

A.25 Compared to the two chosen comparison groups of similar businesses, the supported businesses experience higher employment growth, in the years following support. The supported businesses grew by 9% in employment in the year of support compared to 6% in the comparison group 1 and a 3% decrease in employment in group 2 (note that Table A-6: presents the estimated difference in average growth rates between beneficiaries and comparator businesses).

A.26 In terms of turnover growth, in the year of support, the treated businesses grew almost identically to the comparison groups considered. However, in the year following support

treated businesses grew faster than both comparison groups with an increase of 21% compared to the 10% for comparison group 1.

Table A-6: Impacts of MfG for pre-Covid-19 sample (n=197)

	MfG beneficiaries Growth against baseline year (t)	Difference in growth Comparison group 1 (DiD estimate)	Difference in growth Comparison group 2 (DiD estimate)
Employment			
Year of support (t+1)	9.0%	2.8% (0.50)	12.0% (2.24**)
The year following support (t+2)	12.1%	4.1% (0.43)	19.9% (1.72*)
Two years after support (t+3)	7.1%	-0.7% (0.72)	11.8% (1.33)
Turnover			
Year of support (t+1)	8.1%	-0.5% (0.12)	-0.3% (0.04)
The year following support (t+2)	20.9%	11.1% (1.72*)	16.0% (1.72*)
Two years after support (t+3)	11.9%	18.6% (0.48)	15.3% (0.05)

Note: Significance levels are 1% (***) , 5% (**) and 10% (*); t-statistics in parenthesis use robust standard errors. The difference-in-differences is treated minus control.

Source: Belmana

A.27 These findings show comparable effects of MfG on businesses as the overall results using the whole sample of 542 businesses. This suggests that the businesses treated in 2020/21 perform as well or even outperform the businesses of previous cohorts (when compared to the relevant comparison groups), which implies that Covid-19 is unlikely to have had a negative impact on the benefits of the MfG programme on treated businesses.

A.28 Controlling for Covid in a regression framework: Table A-7: shows the difference in DiD estimates for those businesses that were impacted by Covid-19 in a given year relative to the mentoring and those who were not. The presented coefficients do not indicate whether MfG was effective, but rather how much more (or less) effective it was during Covid-19. As our results are statistically insignificant there is no evidence that the effect of MfG was any different during the Covid-19 pandemic.

A.29 The main difference between this approach and the one reported above is that instead of looking at all available data on companies supported before the pandemic we look at the data on all companies during a particular year relative to when they received mentoring. Specifically, we considered two data groups – the year of support and the following year. Within each of these two groups, some mentees were affected by the pandemic, and some were not. The difference in outcomes between them provides an estimate for the impact of Covid-19.

Table A-7: Impact of MfG by Covid-19 and non-Covid-19 cohorts

	Proportion of sample Covid-19	Difference in impact on employment	Difference in impact on turnover
Year after support (n=197)			
Cohort impacted by Covid	58%	-.081 (-.80)	-.223 (-1.19)
Year of support (n=542)			
Cohort impacted by Covid	64%	.010 (.15)	.023 (.24)

Note: The results reported are for the difference in log outcome for comparison group 1. Significance levels are 1% (***), 5% (**) and 10% (*); t-statistics are in parenthesis using robust standard errors

Source: Belmana

A.30 CJRS: Finally, we used whether a business claimed through the Coronavirus Job Retention Scheme as a proxy measure for how affected a business was by the Covid-19 epidemic. Again, the coefficients do not indicate whether MfG was effective, but rather how much more (or less) effective it was for firms who claimed through CJRS. Since the findings are statistically insignificant, there is no evidence to suggest whether MfG was more or less beneficial for these firms compared to the rest of the sample.

Table A-8: Impact of MfG by whether business claimed through CJRS

	Proportion of sample CJRS	Difference in impact on employment	Difference in impact on turnover
Claimed through CJRS	60%	-.021 (-.80)	-.049 (-.87)

Note: The results reported are for the difference in log outcome for comparison group 1. Significance levels are 1% (***), 5% (**) and 10% (*); t-statistics are in parenthesis using robust standard errors

Source: Belmana

Regional and sectoral effects

A.31 As part of the analysis of the impact of MfG on supported businesses, we considered whether the effect differs by region and sector of the business. Table A-9: shows the results of including control variables capturing the regional differences in treatment effects (the results are reported only for sub-groups with more than 50 observations). The interpretation of the difference estimated is relative to the business being located in East Midlands. The results show that none of the regions have statistically significant differences in how effective MfG support was for businesses within the region.

Table A-9: Regional differences in MfG's impact

	Proportion of sample in the region	Difference in impact on employment	Difference in impact on turnover
East of England	9.8%	.052 (.06)	.035 (.22)
London and South East	11.1%	.077 (.60)	-.051 (-.28)
North West	31.6%	-.004 (-.04)	-.460 (-1.51)
South East	9.0%	-.272 (-.26)	-.120 (-.69)
West Midlands	17.5%	.015 (.16)	-.048 (-.30)

Note: The results reported are for the difference in log outcome for comparison group 1. Significance levels are 1% (***), 5% (**) and 10% (*); T-statistics are in parenthesis using robust standard errors

Source: Belmana

A.32 Error! Reference source not found. outlines the results of the DiD regression capturing sectoral variation. This analysis considers three broad sector groups: low-pay, manufacturing and high-tech. These are sector groups where the MfG businesses were most prevalent. Similarly, to the regional analysis, the findings are not statistically significant for any of the sector groups considered, implying that none of the sectors experienced significant differences in the effectiveness of MfG support.

Table A-10: Sectoral differences in MfG's impact

	Proportion of sample in the sector	Difference in impact on employment	Difference in impact on turnover
Low pay	20%	.002 (.06)	.010 (.20)
High-tech	24%	.002 (.07)	-.007 (-.11)
Manufacturing	21%	-.008 (-.27)	-.021 (-.28)

Note: The results reported are for the difference in log outcome for comparison group 1. Significance levels are 1% (***), 5% (**) and 10% (*); T-statistics are in parenthesis using robust standard errors

Source: Belmana

The effect of repeated support

A.33 Error! Reference source not found. presents the result for businesses that sought repeated mentoring (either repeated mentoring from MfG or a combination of RRM and MfG). It is important to note that their baseline was defined as the year before the first instance of support.

Table A-11: Difference in the effect of MfG on businesses that sought repeated mentoring

	Proportion of sample	Difference in impact on employment	Difference in impact on turnover
Year of support (t+1)	22%	-0.065 (2.29**)	.020 (-.34)
The year following support (t+2)	22%	-0.016 (.26)	-.007 (0.75)

Note: The results reported are for the difference in log outcome for comparison group 1. Significance levels are 1% (***), 5% (**) and 10% (*); t-statistics are in parenthesis using robust standard errors

Source: Belmana

A.34 The results suggest that businesses that later enrolled for another round of mentoring experienced lower growth in employment during the relationship compared to other beneficiaries. The difference between the two sub-groups did not persist in later years. There was no evidence of any statistically significant differences in effects on turnover or productivity. As we discuss in the main body of the report, qualitative evidence suggests that repeated support tends to happen both when the first relationship is somewhat less successful and when mentees report it as having been beneficial (and perhaps more focussed on efficiency than growth).

Short mentoring relationships

A.35 During the mentee survey, 82 respondents suggested that their relationship either had not started or was short. SMEs that reported this were still included in the analysis of impacts. This was done for two reasons: a) we followed the ‘intention to treat’ argument – the intention to participate in mentoring may have had some effect even if the relationship did not proceed past the initial stages; b) since the survey did not cover all programme participants we would not be able to exclude everyone who may have had a similar experience and as a result, we could bias the results (especially considering we did not identify and patterns that would suggest that the mentoring relationships tend to be short for particular types of businesses).

A.36 However, for robustness purposes, we carried out additional checks. Specifically, we estimated MfG’s impacts by treating those who suggested their relationship ‘had not taken off the ground’ as a separate sub-group. The results obtained relative to comparison group 1 are presented in Table A-12. We observe no statistically significant differences in the impact on turnover between the groups and the estimate of MfG’s impact on other beneficiaries is in line with the results from our main specifications reported earlier.

A.37 The effect of MfG on employment is found to be lower for businesses which suggested that their relationship either had not started or was short, relative to other MfG beneficiaries. This may indicate that the even a short interaction with the programme has some effect on SMEs, though it is not as substantial as it could be if they continued with the programme. There is no statistically significant difference in impact on employment for businesses, which

confirmed the relationship when they were surveyed. This further supports the validity of earlier findings.

Table A-12: Difference in the effect of MfG on businesses that reported a short mentoring relationship when surveyed

	Proportion of sample	Difference in impact on employment	Difference in impact on turnover
Short relationship	13%	-.074 (2.33**)	.014 (0.26)
Confirmed relationship	18%	.004 (0.11)	0.002 (0.01)

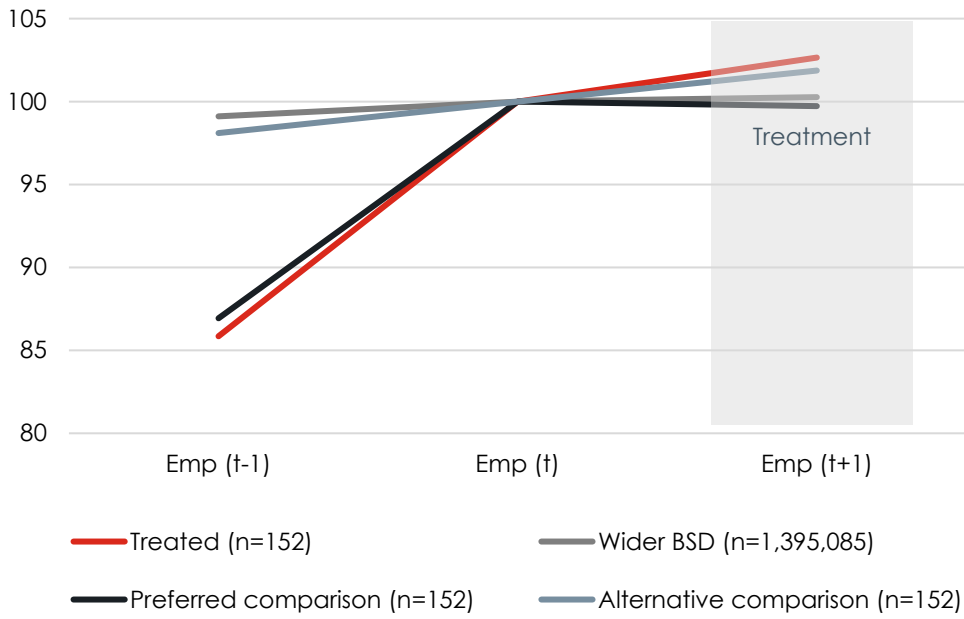
Note: The results reported are for the difference in log outcome for comparison group 1. Significance levels are 1% (***), 5% (**) and 10% (*); t-statistics are in parenthesis using robust standard errors

Source: Belmana

Impacts of Rapid Response Mentoring on business performance

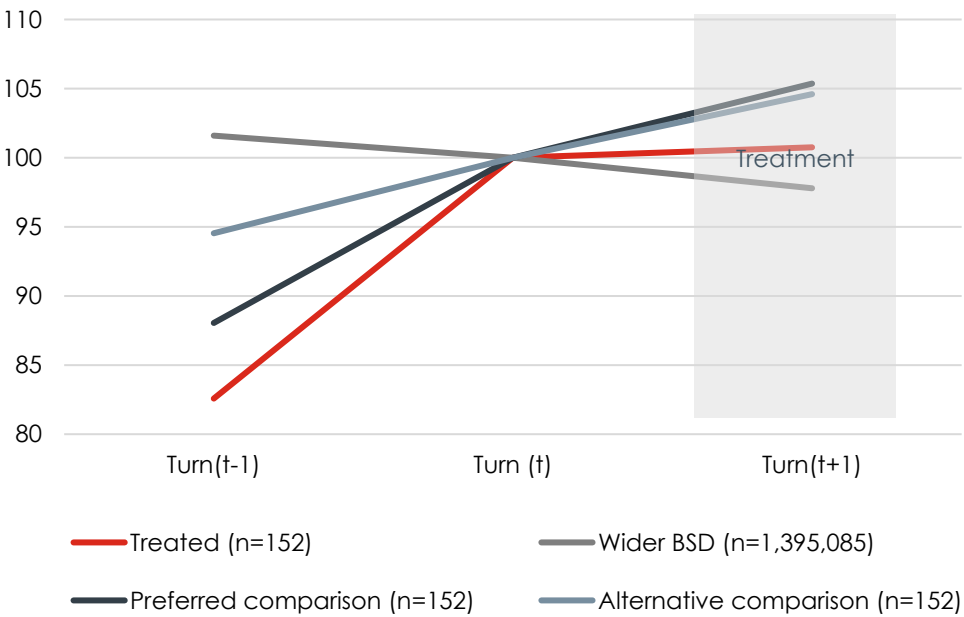
- A.38** At the time of RRM evaluation, the latest available release of BSD did not contain data on the business performance of the beneficiaries during treatment, only in the baseline year (2019/20). At the time, in addition to collecting evidence through a survey preliminary data-linking and matching work was carried out – the beneficiaries were identified in the BSD and comparison groups were formed following the same PSM approach outlined above allowing to benchmark the beneficiaries against the wider business population as well as similar unsupported companies.
- A.39** This work has been updated during this evaluation, following the release of data on the business performance of beneficiaries in the year when they received mentoring. **Error! Reference source not found., Error! Reference source not found.** and Table A-13: summarise the findings.

Figure A-4: Employment of RRM comparison SMEs (index, year before support =100)



Source: Belmana

Figure A-5: Turnover of RRM comparison SMEs (index, year before support =100)



Source: Belmana

Table A-13: Impact of RRM on business performance of beneficiaries (n=152)

	Difference in growth Comparison group 1 (DiD estimate)	Difference in growth Comparison group 2 (DiD estimate)
Employment		
Year of support (t+1)	0.029 (0.72)	0.08 (0.43)
Turnover		
Year of support (t+1)	-0.046 (1.55)	-0.038 (1.41)

Note: Significance levels are 1% (***), 5% (**) and 10% (*); t-statistics in parenthesis using robust standard errors.

Source: Belmana

A.40 Even though the beneficiaries outperform the wider business population, the evidence does not identify a link between RRM support and business performance (their performance was in line with that of comparator SMEs). However, there are two important points we note in this context: First, the focus of RRM was on increasing the flexibility and resilience of beneficiaries rather than on immediately improving their business performance. Second, a subset of RRM beneficiaries (41) participated in MfG and therefore were part of the sample used to identify MfG impact. The results of that analysis suggest that mentoring has had a positive effect on their business performance, and part of that effect could be attributed to RRM.

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