

Economic Evaluation of Converge

A report to Converge
9th July 2020





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1.

Executive Summary

This document presents an analysis of the economic impact of Converge and its return on investment for funders and stakeholders. It follows a similar study conducted by BiGGAR Economics in 2017.

Participants in Converge from 2011 to 2019 were invited to take part in a web survey to provide data about their companies and views about the programme, to which 56 people responded. We also spoke to 27 participants in one-to-one consultations. They told us about their businesses, plans for the future, and their experience and satisfaction with the programme.

Participants explained that Converge creates routes to impact through nurturing their business proposition, building their skills, introducing them to networks, giving them confidence, and creating exposure for them and their businesses.

There is no doubt that Converge is embedded in the innovation landscape, a key piece in this jigsaw with a distinct offering for academic entrepreneurs.

Businesses that have taken part in Converge **generated £21.5 million Gross Value Added (GVA) and supported 524 jobs** in 2019 in Scotland. Accounting for the role of other areas of support and the extent to which this impact would have happened in the absence of Converge, as well as their wider effects on the economy, it was estimated that the net additional economic impact of businesses supported by Converge amounted to **£11.0 million GVA and 298 jobs** in 2019. This is the impact that can be directly attributed to Converge.

Each £1 invested in Converge from 2011 to 2019 generated **£3.66 GVA** for the Scottish economy in 2019.

Converge participants considered in the study have secured **£103.7 million** of external funding, of which **£41.0 million** could be attributed to Converge. For every £1 of funding for Converge, participants have raised a further **£13.62** in external funding.

The new investment in Impact Challenge and Creative Challenge is focussed more widely than purely economic impacts. In future, Converge could broaden out its impact analysis to consider wider impacts against Scotland's National Performance Framework. This would mean broadening its evaluation framework to include wider measures of impact that fit with Scottish Government and individual funders' strategic objectives. This may help identify best ways to support businesses coming out of Impact and Creative, and indeed, the Converge Challenge, which may not have economic impact as a goal.

2.

Introduction

An economic evaluation founded on participants' perspectives.

Converge is an entrepreneurial development programme which capitalises on the unique intellectual assets of Scotland's higher education system. Its mission is "*to empower the new generation of innovators, creators and world changers to turn their ideas into commercially viable companies to help Scotland thrive*"¹ It does this by providing intensive business training to provide commercial and practical skills, tailored to academic entrepreneurs, networking opportunities, and grant funding.

This document presents an analysis of the economic impact of Converge from 2011 to 2019 and its return on investment for funders and stakeholders. It follows a similar study conducted by BiGGAR Economics in 2017.

The study was centred on the experiences and views of Converge participants, through a web-based survey and a series of one to one consultations. The survey attracted 56 responses and provides quantitative data about the businesses launched through Converge, its role in driving outcomes for participants, and views about people's experiences of being involved. We spoke to 27 people in depth about their experiences, to draw out more detailed feedback about the programme, its influence on businesses, and its influence on the people involved.

The quantitative and qualitative data provided by participants, as well as data from publicly available sources, was used to build an economic model to estimate the economic effects in 2019 from Converge's activities since 2011.

The remainder of this report is structured as follows:

- section three provides a description of Converge, the nature of its four Challenge streams of activity and funding arrangements;
- section four introduces the outcomes for people participating in Converge, including business growth, and reflects on their views about the experience of participating;
- section five explores these themes in more depth, reporting on a series of telephone and web-based interviews with a selection of Converge participants;
- section six describes how the information provided by participants through the survey and interviews has been used to quantify the economic impact of Converge; and
- section seven presents conclusions and recommendations.

¹ Source: Converge <https://www.convergechallenge.com/about-us/>

3.

The Converge Programme

A diversified funding base that supports four different Challenge streams.

Converge is a company creation programme, developing entrepreneurs from within Scotland's higher education institutions (HEIs). It originated in Heriot Watt University in 2011 and has developed into a national programme involving all of Scotland's HEIs (excluding the Open University).

Converge provides the opportunity for staff, students and recent graduates of Scottish universities to access intensive business training tailored to the individual, along with a large network of industry professionals, with winners being awarded cash prizes to support their business.

3.1 Governance and Management

Converge is not a separate legal entity. It is hosted by Heriot Watt University, which is the employer of its management and administrative team. Its Strategic Advisory Board sets the strategic direction of Converge, ensuring a focus on the interests of stakeholders. The Board meets four times a year.

Operational issues are overseen by a Steering Group, which focusses on the annual programme and ensuring close liaison with all higher education institutions.

An independent Chair leads the Strategic Advisory Board, as well providing general support and guidance to the Director.

The programme is delivered by a small team of six (5.2 FTE): the Director; two people to support enterprise outreach; two to support marketing; and one administrator.

3.2 The Challenges

Converge accepts proposals from any industry sector, for products and services at any stage of development, into four separate challenges. The overarching goal is to provide individuals with the commercial skills necessary to bring their ideas to life and run successful and sustainable Scottish businesses.

Applicants need to demonstrate that their enterprise will be able to start trading within 12 months post-competition and headquarters must be retained in Scotland, excluding those applying for Kickstart, which is for very early stage ideas. All candidates receive personalised feedback throughout the process.

Since the programme launched, over 225 companies have been created by Converge Alumni and over 400 academic entrepreneurs have been trained as a result of their involvement in the competition process. It has become a national programme for aspiring academic entrepreneurs in Scotland, attracting 248 applications in 2019 across the four challenges, described below.

3.2.1 Converge Challenge

Converge Challenge was the original product of the 2011 launch. The challenge is intended for but not limited to academic researchers with business ideas that are well developed, have strong intellectual property and significant growth and profit

potential. In 2019, Converge Challenge had a total of 48 applicants, making it the most popular of the advanced streams.

The competition is comprised of four stages lasting over a period of around seven months, with applications opening in January/February and winners announced in September. The stages are as follows:

- stage 1: a panel of university representatives (funders) evaluate the proposed ideas and select up to 30 to progress to the next stage;
- stage 2: chosen applicants attend a 3-day training programme and deliver an elevator pitch to a panel of industry experts;
- stage 3: a full business plan, financial forecast and minute-long video presentation is to be submitted by the approx. 30 semi-finalists;
- stage 4: finalists are selected and deliver their final pitch to a panel of investors and industry experts. The winner and runner up are announced at the annual Awards celebration, usually held in September.

Throughout the process, applicants are judged on their business' competitive advantage, growth and market potential, and expected team and resources. Additionally, business plans should exhibit evidence of product/service validation, consumer research and anticipated entry into the marketplace.

Converge Challenge provides winners with the highest cash reward of all challenges run by Converge. First prize in the competition awards the winner £71,000 to grow and run their company, comprised of £50,000 in cash and £21,000 in-kind support.

The runner-up of the Converge Challenge is awarded £29,000 (£20,000 in cash and £9,000 in-kind support). Up to 2018, finalists who did not place for a cash prize still benefited from continued support from the converge team for twelve months post-final and all semi-finalists profit from the intensive business training and bespoke advice they receive during the process.

3.2.2 Converge Creative Challenge

Converge Creative Challenge is the newest category to the programme and is intended for academic entrepreneurs in Scotland's creative industries. The process and criteria of the competition are similar to the Converge Challenge and the winner is awarded £20,000 cash and £21,000 in kind support. Second place provides £10,000 cash and £9,000 in kind support, and again all semi-finalists benefit from intensive business training and advice they receive throughout the process. In 2019, 43 entrepreneurs applied for the challenge, of which 12 were then selected for training.

3.2.3 Converge Impact Challenge

Converge Impact Challenge is designed for aspiring and early stage entrepreneurs seeking to achieve a social or environmental goal. Again, the competition process is the same as the other streams of the challenge and the winner receives £20,000 in cash and £9,000 in kind support (£10,000 and £6,000 respectively for second place).

Applicants are additionally judged on the sustainability of their businesses' impact. In 2019 the challenge received 45 applications and selected 15 of these to progress through the competition. Until 2018, this challenge was known as the Social Enterprise Challenge, which was only open to new and future social enterprises. Since 2019, this category has been open to all types of mission-led businesses.

3.2.4 Converge Kickstart Challenge

The Kickstart challenge is designed for new and future enterprises at a very early stage of development with the premise that this will be its first step towards

commercialisation. The process is slightly different from the other challenges and is designed to test the robustness of the business idea, provide training and support, and prepare candidates for the more advanced challenges. Included in the process is a two-day intensive business training session and a business masterclasses where a network of partners attend to assist those involved in the programme.

A five-page business case is then submitted alongside a minute-long video presentation. Selected finalists then go on to present live at the Kickstart awards ceremony where the winner is chosen. First prize for this process is £10,000 (intended to help progress the business idea) in addition to allowing the winner to fast-track to the semi-final of any of the more advanced Converge challenges – winners can also choose to defer this fast-track to a later year if they so choose. Applicants in this process are judged on their development plan, proposed business model, understanding of the market requirements and viability of the enterprise.

In 2019, the Kickstart Challenge attracted 139 applicants, making it the most popular stream of the converge challenges. Of the applicants, 33 were selected for training.

3.3 Funding

Converge is funded by a range of sources including universities, the Scottish Funding Council, Creative Scotland and sponsorship from commercial partners. Funding received in 2019 (£706,500) was spent on Converge operations, including providing prizes to challenge winners, staff costs, marketing and training.

3.3.1 University Funding

Universities accounted for 41% of the total income received by Converge in 2019. Since the previous economic evaluation in 2017, the list of universities funding the programme has grown and now includes all Scottish universities, except for the Open University. The contribution varies between the universities according to their size and in 2019 the largest contributors, giving £25,000 each, were:

- University of Edinburgh;
- University of Strathclyde;
- University of Glasgow;
- Heriot-Watt University;
- University of St Andrews;
- University of Dundee;
- University of Aberdeen; and
- University of Stirling.

Also contributing £10,000 each towards the programme in 2019 were:

- University of the Highlands & Islands;
- Robert Gordon University;
- University of the West of Scotland;
- Glasgow Caledonian University;
- SRUC;
- University of Edinburgh Napier;
- Abertay University; and
- Queen Margaret University.

Additionally, Glasgow School of Art and Royal Conservatoire of Scotland both contributed £5,000 each in 2019.

University contributions have continued to rise in scale over the years and so too has the level of in-kind support each University provides, including assisting candidates in applying for the programme and providing staff and resources to run and promote the Converge programme.

3.3.2 Scottish Funding Council

In 2019, Scottish Funding Council (SFC) was the largest contributor to Converge, providing over £343,000. Whilst the SFC still accounts for the largest single source of funding, it no longer represents the majority source, because of an expansion in funders pursued by the Converge team over the last three years.

3.3.3 Sponsorship

Corporate sponsorship has increased and in 2019 amounted to £56,000, though commercial sponsors changed in 2020. A network of partners contributed to Converge's income, including:

- Social Investment Scotland;
- Morton Ward;
- MBM Commercial;
- The Royal Bank of Scotland
- Talent Spark;
- Murgitroyd;
- Fearsome; and
- Scott Moncrieff.

These businesses also provided specialised in-kind support to programme participants and winners in relation to areas such as intellectual property, finances, tax, accountancy, recruitment etc. Together these contributions from private and third sector partners enable participants in the challenge to benefit from expert advice and training as well as the financial support provided to the programme.

4.

Participant Feedback

Participants told us about the businesses launched and their experiences of Converge.

Participants in Converge were invited to take part in a web survey to provide data about their companies and views about the programme. They told us about their businesses, plans for the future, and their experience and satisfaction with the programme.

4.1 Survey Sample

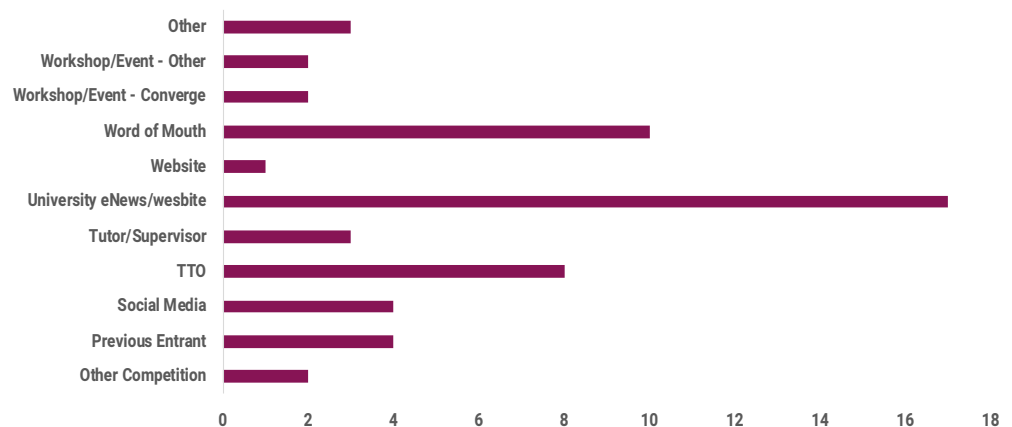
The total population participating in Converge since 2011 is 424 people, of which 217 people (52% of the population) were invited to respond to the web survey about their experiences and the influence of Converge on their business idea. Of these, 56 people responded, 26%, which represents a good response rate.

Of the 56 people responding to the survey, 28 (50%) had participated in the Converge programme in 2019.

4.2 Initial Engagement with Converge

The most common source of finding out about Converge was through University eNews/websites, cited by 30% (17) of respondents. Word of mouth was the second most common source with 18% of respondents (10) stating this response.

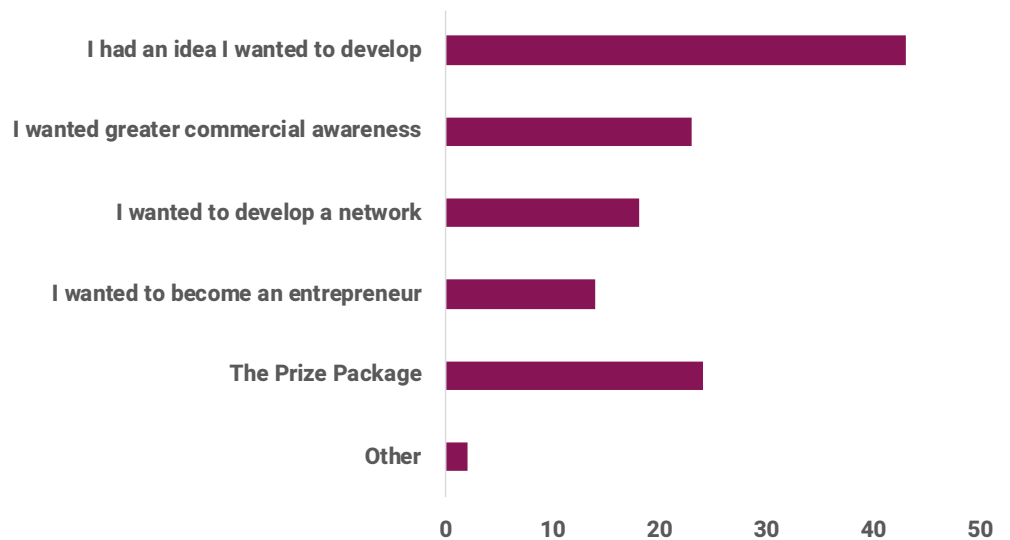
Figure 4-1 'Where did you find out about Converge?'



Source: Web Survey, n=56

When asked about the reason for participating in Converge, 77% of respondents said that they participated because they had an idea they wanted to develop. The prize package was another important driver for programme participation with 43% of participants stating this as a reason for getting involved. A desire to increase commercial awareness (41%), develop a network (32%) and become an entrepreneur (25%) were also drivers of participation.

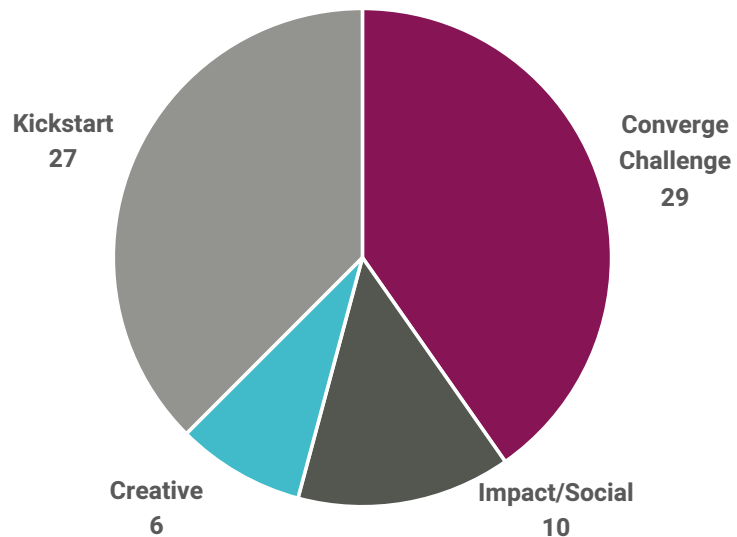
Figure 4-2 Motivation for Participating in Converge



Source: Web Survey, n=56 *respondents were allowed to choose more than one option

The Converge Challenge attracted most participants in the sample, with 29 having taken part in this stream. The Kickstart Challenge was the second most participated in challenge with 27 responses. A further 10 respondents took part in Impact Challenge and 6 in Creative Challenge.

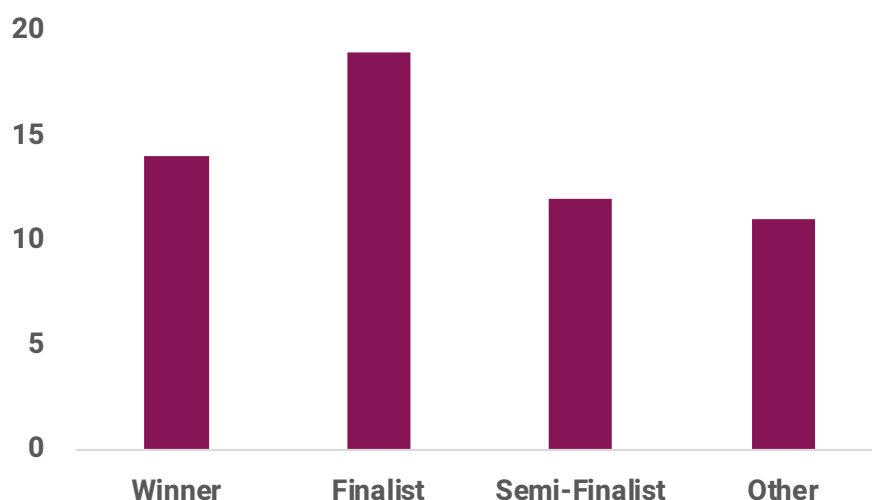
Figure 4-3 Sample Participation - Stream of Converge



Source: Web Survey, n=56 * respondents were allowed to choose more than one option

Of those who had responded 25% (14) respondents had won the competition, 34% (19) were finalists and 21% (12) had made it to the semi-final.

Figure 4-4 Outcome of Participation in Challenge

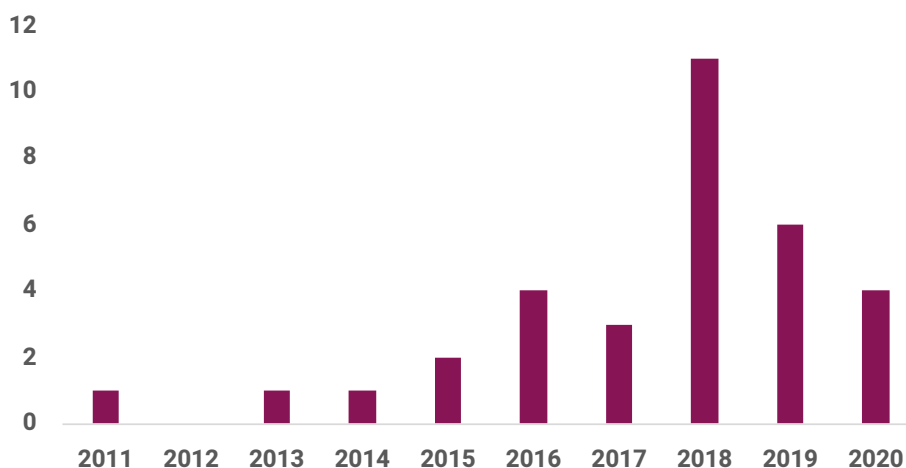


Source: Web Survey, n=56

4.3 Business Profiles

Since taking part in the Converge Challenges, 82% survey participants had started their own business (32)². A third (11) of the businesses had started in 2018, and 18% (6) in 2019.

Figure 4-5 Year of Business Incorporation

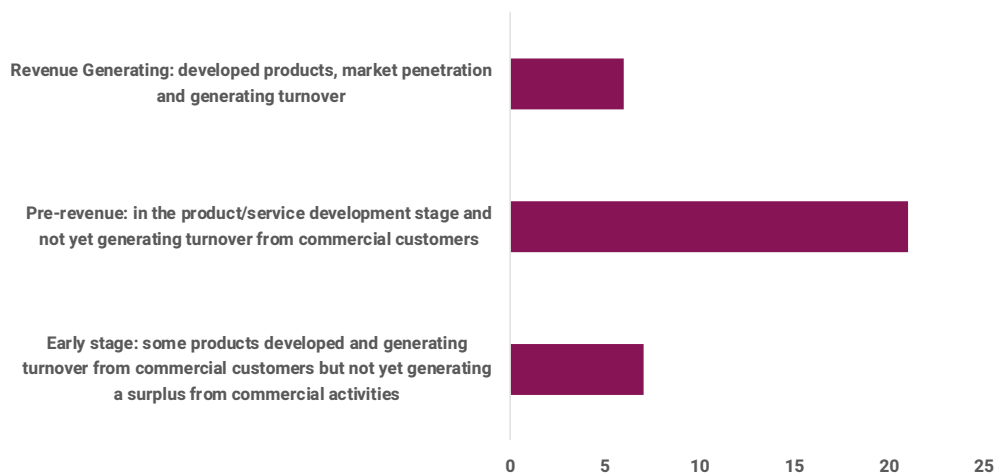


Source: Web Survey, n=34

When asked about the current status of their business, 62% of respondents (21) stated that their business was at the pre-revenue stage: in the process of development and not yet generating commercial turnover. This was followed by 21% (7) stating the business was in its early stage and 17% (6) operating a business which is generating revenue. This is not surprising given that the majority of survey respondents were from 2019.

² This excludes Kickstart

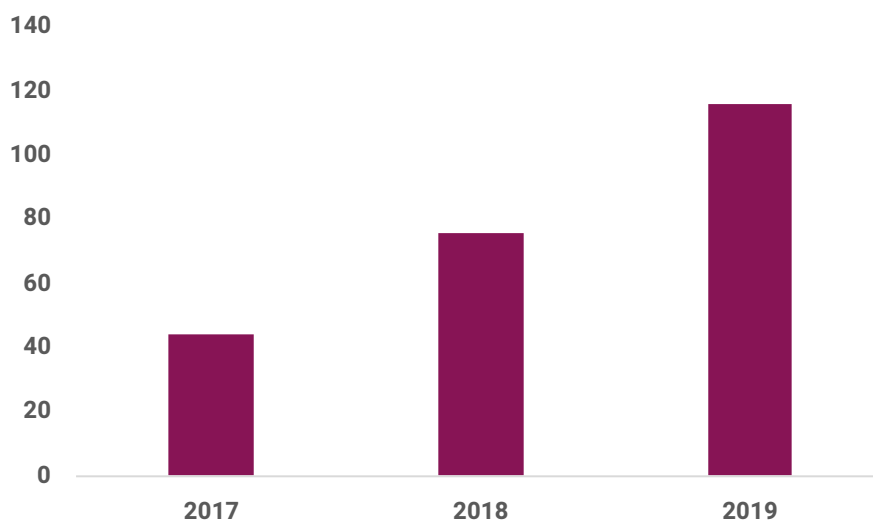
Figure 4-6 Current Stage of Business



Source: Web Survey, n=34

We asked participants about the jobs created in their businesses over the last three years. Converge businesses surveyed had a total of 116 FTE employees in 2019, 76 in 2018 and 44 in 2017.

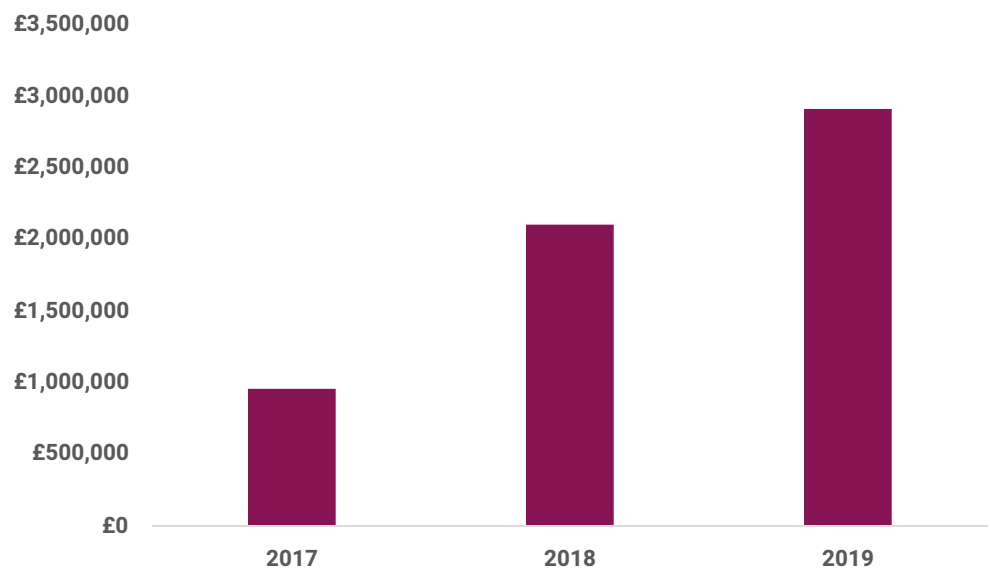
Figure 4-7 Total number of FTE employees



Source: Web Survey, n=32

Respondents were also asked to provide turnover figures for their business over the past three years, and 26 provided data for this question. Combining responses shows that in 2019, these businesses generated a total of £2,915,676. In 2018 this total was £2,099,296 and in 2017, £953,350.

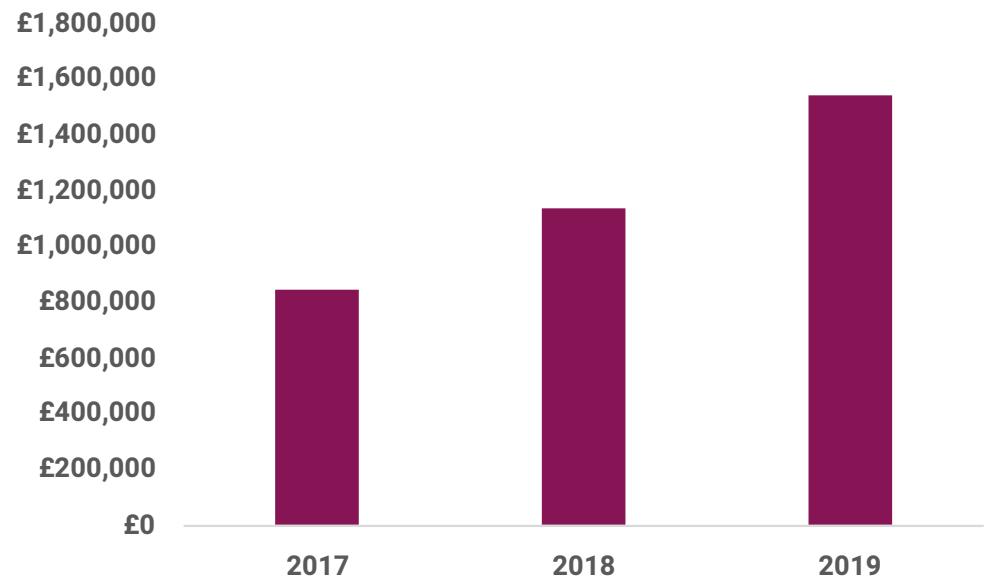
Figure 4-8 Total turnover generated per year



Source: Web Survey, n=26

In addition, 21 respondents provided information about employment costs. In 2019, the combined staff costs for businesses was £1,540,900. In 2018 this combined figure was £1,136,500 and in 2017, £847,500.

Figure 4-9 Total staff costs paid per year



Source: Web Survey, n=21

4.4 Investment

Of 34 people responding to a question about investment, 24% (8) stated they had raised equity investment, and 76% (26) had not. Again, this is a reflection of the early stage of the surveyed companies, given that most of them participated in the last 2 years. Respondents had raised £18.3 million in equity investments from a range of investors including EOS, Kelvin Capital and a number of Scottish initiatives, such as the Scottish Investment Bank and Scottish Enterprise.

A total of 34 respondents had received non-equity investment, and these businesses had received a total of £7.3 million from the sources listed in Table 4-1 (excludes Converge).

Table 4-1 Total Non-Equity Funding Received per Source

Source	Amount
Scottish Enterprise	£3,447,000
Innovate UK	£1,824,000
Scottish EDGE	£580,000
Other	£568,000
Commercial Loan	£500,000
RSE Fellowship	£305,000
Royal Academy of Engineering Fellowship	£60,000
Innovation Vouchers	£15,000
Total	7,299,000

Source: Web Survey, n=34

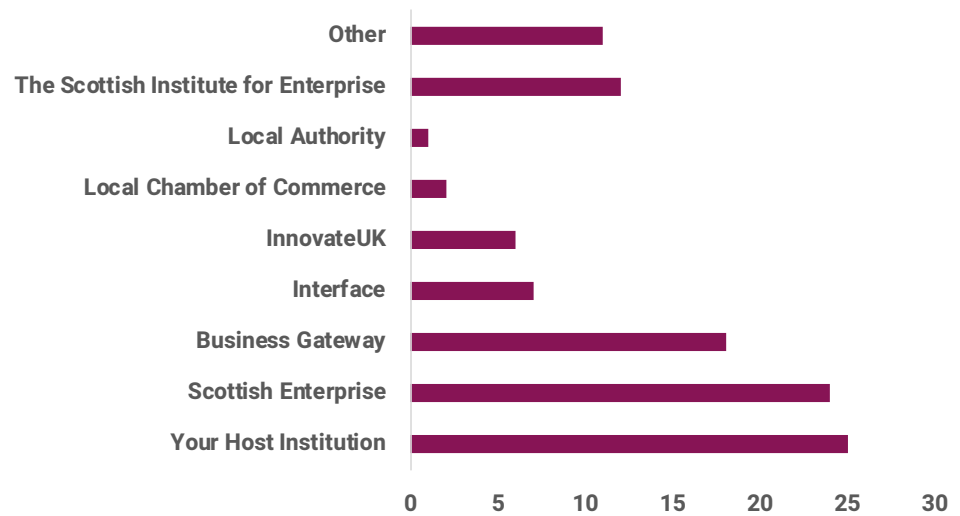
Respondents were asked to provide details of the 'other' sources of non-equity funding included in the table above. Several sources of small to medium sized grants were identified, including universities, the National Lottery, UnLtd Foundation Scotland and the Robertson Trust, as well as other undisclosed commercial sources.

4.5 Other Support Received

Respondents were asked to select the additional sources of support they have received which enabled their business to progress, besides Converge.

Host institutions were reported as having supported businesses by 25 respondents, closely followed by Scottish Enterprise (24). Local authority and Local Chamber of Commerce support were least reported as sources of advice and support, with only three responses.

Figure 4-10 'Did you receive any advice from the following sources when starting up your business?'



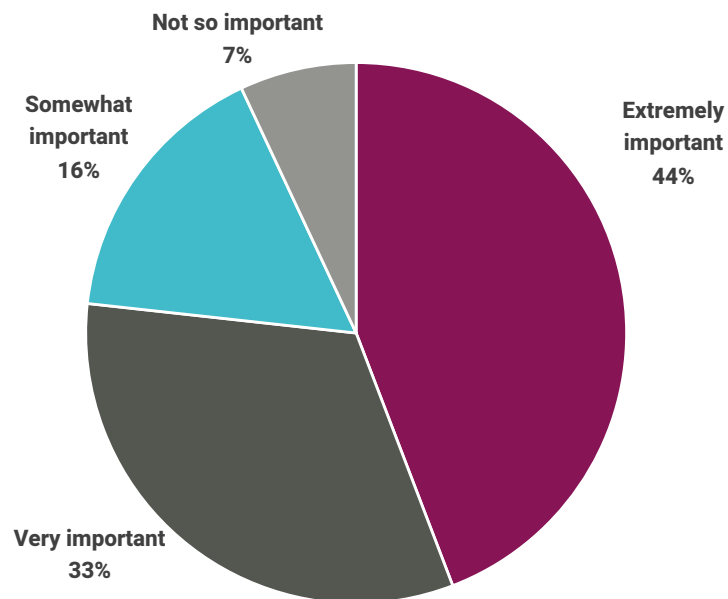
Source: Web Survey, n=56 *respondents were allowed to choose more than one option

'Other' sources of support were listed by individual participants as:

- Royal Society of Edinburgh;
- Cultural Enterprise Office;
- Royal Bank of Scotland Accelerator in Glasgow;
- Biocity Accelerator Programme;
- Firstport, and lots of third sector organisations and support agencies;
- RBS PowerUp;
- Local and International business mentors;
- Talent Spark; and
- Glasgow Social Enterprise Network.

Survey participants were invited to rate the importance of the additional sources of support they received. Over three quarters of respondents stated that the support was either extremely important (44%) or very important (33%).

Figure 4-11 Importance of support received



Source: Web Survey, n=43

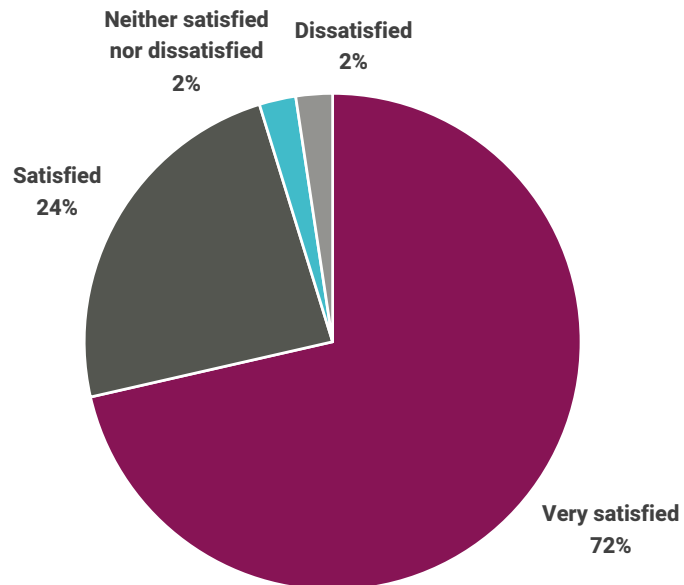
Survey respondents were invited to provide additional comments about the importance of other support they have received. Reflecting the support providers listed in Figure 4.11 above, the role of universities, Scottish Enterprise (High Growth Spinout Programme (HGSP)) and the Royal Society of Edinburgh are all highlighted in the comments, along with research councils. Most businesses have received support from a range of sources, highlighting the importance of a joined-up approach.

4.6 Converge Experience

4.6.1 Overall Satisfaction

A total of 44 responses were made regarding the overall satisfaction with the Converge experience. Over 90% were either very satisfied or satisfied, with 68% (30) reporting that they were very satisfied and 23% (10) were satisfied. Only one person was dissatisfied with their experience. They commented that this was because they felt the training was focussed on creating profit, while they were creating a social enterprise not focussed on profit.

Figure 4-12 'Overall, how satisfied are you with your experience of Converge?



Source: Web Survey, n=44

The survey asked participants to answer an open-ended question about what they thought the single biggest benefit was of participating in the Converge programme. The diversity of responses is remarkable, suggesting the programme can provide something different for each person. Responses highlight the quality of training and the catalysing effect of Converge, and networking:

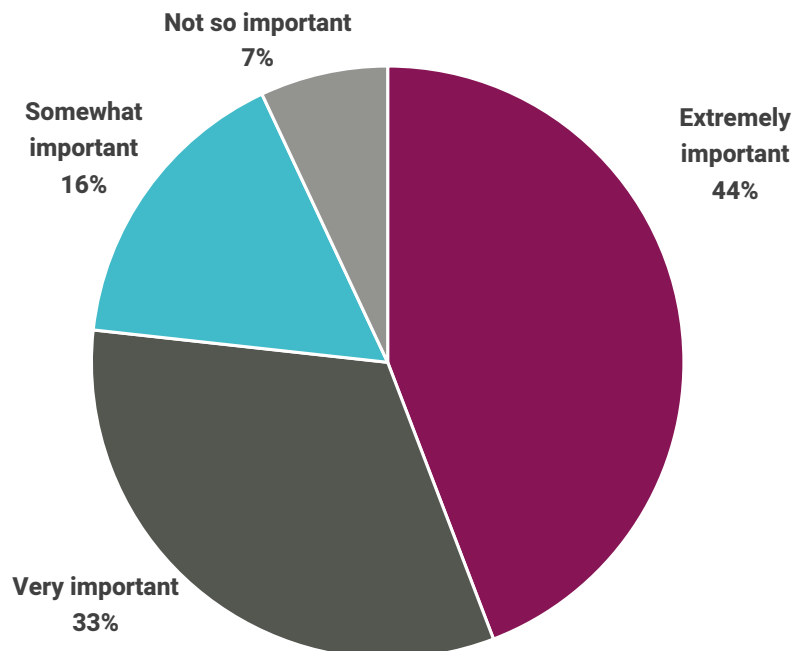
- “Springboard to incorporating the company and taking the idea forward via the RSE Fellowship;
- In kind and cash support has immensely helped develop the product further and sustain the business;
- Challenged to think commercially coming out of University environment;
- Confidence boost – going through the competitive process and being successful helped me realise I could create a viable business;
- Support and training to develop the business idea has been brilliant. Winning the runner-up prize has given us credibility and visibility;
- The training. Meeting the mentors and industry experts. Meeting other aspirant entrepreneurs. Pitch training is fantastic!;
- Being part of an engaging and supportive community;
- The learning experience. Meeting new people and networking;
- Breadth of entrepreneurial training and opportunities and the network;
- The prize is great, but there is so much value in the training, networking and everything that follows for the alumni;
- Winning was the catalyst to incorporating the company but the networking and the learning about how to start and grow a business was invaluable;
- The training that was provided was instrumental as a new entrepreneur;
- Network development;
- Networks and expertise;
- Feedback on the practical aspects of starting a business in the Scottish context;
- Business awareness. The short modules on each business topic were ideal to get the relevant information across in a short time;
- Access to expertise – and also meeting people in the same situation;
- The excellent help we got to refine our business plan and as a finalist the extra ongoing support package;
- Independent advice from experienced advisors;

- Exposure;
- The confidence and credibility of being a participant and winner;
- Validation of the business plan in its early stages prior to reaching out for official engagement with investors, and the PR for winning;
- supporting initial stages of business growth particularly building a robust business plan and better understanding commercials/ boards/ company requirements.”

4.6.2 Relative Importance of Support Received from Converge

A total 16 (38%) of respondents stated that the support received from Converge was extremely important. A further 15 (36%) stated that it was very important and only 3 (7%) stated that the support was not so important compared to other sources.

Figure 4-13 Importance of support received from Converge relative to other sources



Source: Web Survey, n=42

Survey participants were also asked for any additional comments they had regarding how important the support received from Converge had been. The comments cover issues about skills, investment and networks:

- “Useful when starting the business up. Early funding from other sources has been most critical;
- This has been hugely important. It has helped me to refine my business idea, introduce me to valuable connections and build the company’s profile;
- It got the business started!;
- The training helped me realise the TRL [technology readiness level] of my idea and what were the necessary next steps. I was also made aware of various funding schemes to support my business and how to look for investors;
- It’s been the first money we ever received and therefore really helped us to move forward;
- Converge was a very important step moving from academia into the commercial space;
- I met our design consultancy and accountant during the workshops;

-
-
- The support and help I received from Converge Team was tremendous, helped me to move the proposition forward. The feedback I received from the panel was helpful to understand investors. The training was very useful and the support package after final was absolutely game changing; and
 - Important and useful information and great contacts made. Also generated more awareness in the commercial sphere, which is difficult to initially get into.”

A total of 19 survey respondents took part in Kickstart, of which 42% (8) said that it had a major impact on their decision to proceed with their business and 47% (9) stated that it had had some impact.

Additional comments made regarding the impact of Kickstart were as follows:

- “It helped us channel and focus our thoughts;
- The fact that the business idea was acknowledged gave me the confidence to push ahead;
- The general support from the team, the network, and the training have all already had an impact on my business development.”

4.6.3 Recommendations to others

When asked if they would recommend the Converge programme to others, 95% (40) of the 42 respondents to this question stated that they would and only 5% (2) said that they would not.

5.

Converge Role and Influence

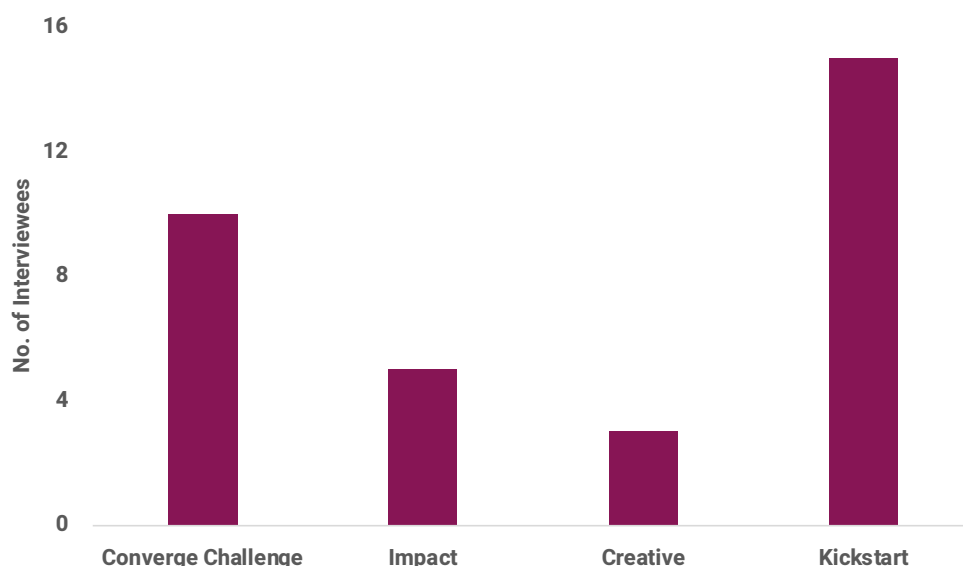
In depth discussions with Converge participants explored the role and influence of the programme.

The web survey asked respondents if they were willing to be contacted for a short follow-up discussion by phone and as a result, 29 of the 56 respondents indicated that they were. Ultimately, interviews were carried out with 27 participants from the Converge and Kickstart programmes, representing 48% of the initial survey sample. In itself, this high level of willingness to commit time to giving feedback is an endorsement of the value of the programme to those taking part. The themes that emerged during the follow-up discussions are summarised in this section.

5.1 Interview Sample

Of the 27 participants in the follow-up survey, 56% (15) had taken part in the Kickstart Programme and 67% (10) had taken part in Converge. Five participants had taken part in both Kickstart and Converge programmes.

Figure 5-1: Follow-Up Participants by Programme*



Source: Converge Participant Follow-Up Survey, n=27. *Multiple answers were allowed

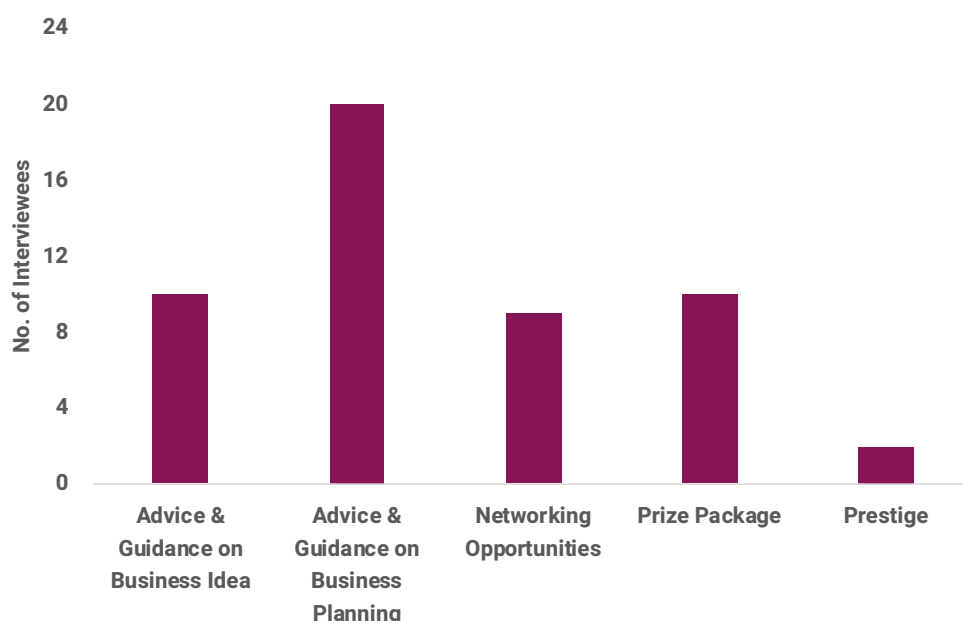
Three-fifths of the businesses (16) described their business as pre-revenue, and 37% (10) were operational and one business had not progressed.

5.2 Appeal

The most appealing feature of Converge is the advice and guidance it offers to participants in the business planning process: almost 3 in every 4 participants

highlighted this as the main reason they applied. The programme has a very strong and positive reputation in this field.

Figure 5-2: What appealed to you most about Converge initially?



Source: Converge Participant Follow-Up Survey, n=27. *Multiple answers were allowed

Around 2 in every 5 participants also referred to the advice and guidance with the business concept, the networking opportunities and the prize package as the initial appeal, supporting the feedback to the web survey (Section 4.2). In some cases, participants were drawn to the programme by the appeal of the prize money and came to realise with hindsight that the training they received on the business planning process was much more beneficial to them longer term.

Most, if not all, participants are academics or recent graduates with little direct experience of running their own business and it is in this gap that the Converge programme has its true value. It helps to draw out the entrepreneur from the academic and it does so in a relatively short space of time.

5.3 Additionality

As a programme designed to support early stage business ideas, Converge can play a major role in getting businesses off the ground and making them more viable than would otherwise have been the case.

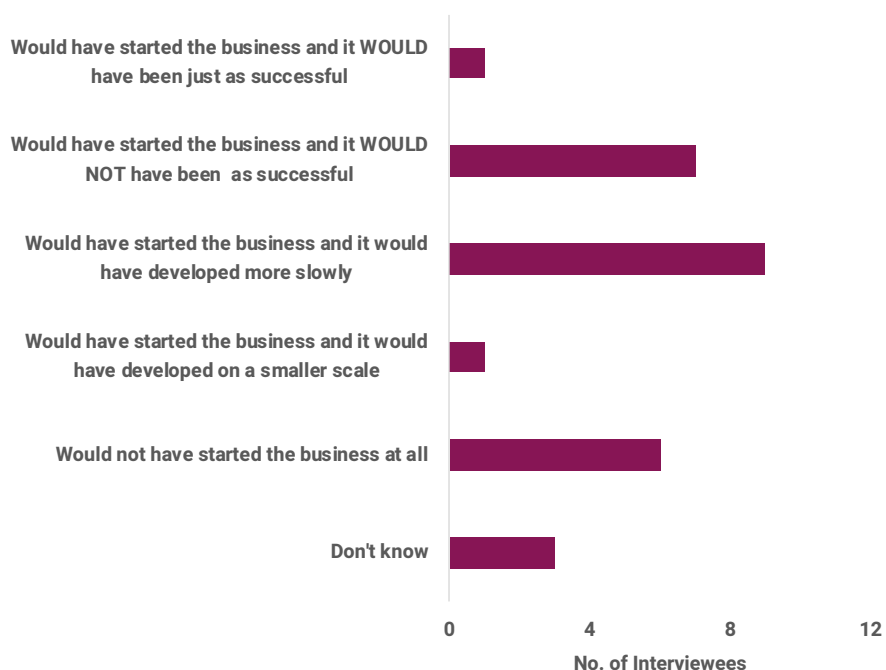
“Taking part in Converge sowed the seeds of what happened next which has changed my life. It's the best thing I've done in my career. The PR it created allowed the business to grow very quickly by drawing in significant investment.”

Dave Hughes, Novosound, Winner,

2017

Participants were asked to identify the role that the Converge programme had on the creation of their business and for 85% of participants this was reported to be positive. They mainly felt that the business would have developed more slowly, less successfully, or on a smaller scale had they not taken part in Converge. Almost 1 in 4 business owners felt they would not have started up their business at all without having taken part in the programme.

Figure 5-3: What would have happened had you NOT taken part in Converge?



Source: Converge Participant Follow-Up Survey, n=27.

Three participants were unable to say what would have happened had they not taken part and just one participant claimed that taking part in Converge made no difference to their business at all.

5.4 Influence on Business

During the programme, the Converge team works intensively with academic staff and students to immerse them in the world of an entrepreneur. For many this is a previously unconsidered career direction and taking part in the programme gives them confidence in both their business idea and, crucially, in themselves to make it work.

The influence that the programme has on those that take part has several strands:

- **business confidence** – many participants commented that having skilled people look at their business idea and validate it gave them a huge sense of confidence and a belief that their business could be viable;
- **self-confidence** – participants in the course are learning a new skillset which, for most, is far removed from their specialist field. The transition is not an automatic one and to have an intermediary stage where they can refine their approach is a welcome and valuable experience. Many participants referred to the one-minute pitch they had to deliver during the course as one of the hardest but most

worthwhile things they had ever done up to that point in their career and something which they have used again in other settings;

- **business planning** – the process of working on a business plan requires deep thinking on the part of the participants which is crucial at the time and also when taking the idea to potential investors to move the business forwards. For many participants, the guidance and feedback given during the course results in a business plan that they have used again and again to explain their business confidently to potential investors and other collaborators. Other participants commented that the process of business planning made them a lot more realistic about their current position and their plans for progression;
- **calibre of participants** – for a lot of participants, hearing the business ideas that were being brought forward by others on the course was a motivational, and often humbling, experience;
- **networking** – many academics work alone or in small groups to build their idea and having the support of a network of other entrepreneurs who are experiencing similar issues can be powerful as they shape and form their businesses. Some reported that it was through recommendations made at networking events that they identified contacts for the legal, financial and investment expertise they needed;
- **prestige** – Converge is a prestigious award and winning it makes the business visible, helping it to establish credibility and draw in other investment. For winners it can be a catalyst to their business, taking it on to a new level; and
- **calibre of trainers** – many participants are particularly impressed by the calibre of the trainers delivering the course, commenting that their feedback was especially useful and something that they have internalised in their approach to business planning and pitching in other settings. The support that they give to participants at the new and vulnerable early stage and throughout the initial phases of their business is welcome and valued.

“The team at Converge was excellent, they are very supportive and really want you to do well”. *Rebecca Pick,*
Pick Protection, Kickstart & Converge Winner, 2014 & 2015

5.5 Personal Influence

When asked if their experience at Converge had an influence on them personally, the respondents repeatedly highlighted the boost it gave to their confidence. For the majority this resulted in better pitches when they approached other investors and when applying for funding from other organisations.

The prestige of having done well at Converge, the business planning skills they learned and the experience it gave them in pitching to a wider audience all proved to be invaluable and many participants reported that they used the same business plan and pitch that they prepared on the Converge course when approaching others, with many successful outcomes.

Other personal influences reported by participants were:

- a greater **motivation** to build themselves as an entrepreneur, encouraged by the wide network of people they encountered on the course;
- a sense of **validation** in what they were doing;
- **deep thinking** about what their goals were and a **realistic** appreciation of what it would take to get there;

- becoming more **self-aware** of how they came across to other people;
- feeling **supported** in a relatively small and sometimes isolated working environment; and
- a **life-changing** experience that led them down an entirely different path from the academic one they had envisaged.

5.6 High Value Jobs

Participants were asked if their participation in Converge had led to them create high value jobs with annual salaries of £25,000 or more. Seven (26%) out of 27 participants had achieved this already while a further seven had not and 12 (44%) stated that they would potentially achieve this in future.

As a programme that is designed to support early stage business ideas this is a good result. Many businesses created with support from the programme typically recruit people with graduate backgrounds in science, technology, medical research and other fields. These are all areas that support higher rates of pay that sit well above average earnings.

5.7 Suggested Improvements

The vast majority of participants are extremely happy with Converge as it currently stands and the suggestions they proposed were for minor improvements rather than radical changes.

Overall, the participants felt that the breadth, structure, timing and management of the programme are excellent and that it is very well-run. The alumni events are also well received. Crucially, most participants in Converge would recommend it to others in a similar situation which is a high endorsement of the overall value of the programme.

6.

Economic Impact

This section quantifies the economic impact attributable to Converge in 2019.

6.1 Methodology and Approach

The quantifiable economic impacts of Converge are reported using two widely accepted measures of economic impact:

- **Gross Valued Added (GVA)** is a measure of the monetary value that an organisation adds to the economy through its operations; and
- **Employment** is measured in terms of headcount jobs supported.

6.1.1 Gross Direct Effects

The starting point for the analysis was to estimate the total value of economic activity in 2019 associated with the businesses that have been supported by Converge since 2011.

The direct economic impact of an organisation is given by an organisation's direct GVA and the number of people it employs.

The direct GVA of an organisation is equivalent to the sum of its employment costs and operating profit (excluding loss). Where this was not available, but data on turnover was, the direct GVA was estimated by applying turnover/GVA ratios for the sector in which the company is based, and where only employment data was available direct GVA was estimated by applying staff costs/employee, or in a small number of cases GVA/employee³, to the number of staff employed.

6.1.2 Deadweight

When assessing the economic contribution of a project or initiative such as Converge, it is best practice to take account of what might have happened anyway, known as the deadweight. In the case of Converge this means considering the level of growth that might have been achieved by the businesses supported by the Converge if the project did not exist. The survey responses provided by the businesses involved in the Challenge provide a means to take account of this and this is discussed in further detail in Section 6.2.2. In addition, the responses recorded as part of the 2017 survey provide additional data as a basis for deadweight assumptions.

Further adjustments were made to take account of policy decay, that is the expectation that as time passes, businesses will attribute less importance to the assistance provided by Converge at the business planning stage and more to other factors, including additional support received from other sources. It was assumed that after 3 years the importance attributed to Converge would diminish, reducing by a tenth every year.

6.1.3 Displacement

Displacement is when a business supported by a programme reduces economic activity in another company within the study area. As the businesses taking part in Converge tend to be producing innovative new products and services and / or are

³ ONS (2019), Annual Business Survey 2018 Provisional Results

aimed at global markets it was assumed that the level of displacement would be minimal.

6.1.4 Substitution

Substitution is the extent to which those assisted may have been diverted from other activities that could have also generated impacts or from other similar support programmes. As there are few similar programmes in Scotland that offer the kind of support provided by the Converge Challenge, the level of substitution was assumed to be minimal.

6.1.5 Leakage

Leakage is the extent to which the impacts of a programme occur outside of the study area, i.e. Scotland. The analysis found that almost all of the companies are based in Scotland, without significant overseas employment, and adjustments were made to account for the small number of companies that are based either wholly or in part overseas.

6.1.6 Multiplier Effects

In addition to the direct economic activity generated, each of the companies supported by Converge will also generate multiplier effects elsewhere in the economy.

The indirect impact captures the contribution made by an organisation through spending within its supply chain, which supports employment and contributes to value added within supplier organisations.

Type 1 multipliers capture the total direct and indirect GVA and employment effects generated by £1 of turnover. Thus, to estimate only the indirect contributions, the Type 1 multiplier is subtracted by 1 and multiplied by the direct GVA and direct employment.

In addition to purchasing supplies, businesses also need to employ staff to transform these inputs into their final products and pay them salaries and wages. The induced impact of an organisation captures its contribution to economic activity arising from its workforce spending their wages and salaries in the economy.

Type 2 multipliers capture the total GVA and employment impacts arising from £1 of turnover. Thus, in order to single out the induced contribution, it is necessary to subtract the Type 1 multiplier from the Type 2 multiplier and then multiply what is left by the direct GVA and employment contributions.

The Type 1 and Type 2 multipliers used in the analysis are sourced from the 2016 Scottish Government Input-Output Tables (latest available data at time of writing).

6.2 Economic Impact, 2019

This section quantifies the economic impact of businesses supported by Converge in 2019.

6.2.1 Gross Direct Impact

As part of the survey carried out by BiGGAR Economics, participants in Converge were asked to provide information about the employment, turnover, staff costs and operating profit that their businesses generated in 2019. There were 23 companies that provided data that was included in the analysis.

Due to General Data Protection Regulation (GDPR) restrictions, not all of the companies that have been assisted by Converge were invited to respond to the survey. In particular, many of those assisted in the earlier years of the programme were not surveyed. The survey was supplemented by publicly available data on companies, for example from Companies House and company websites. Overall, there were 231 companies considered, of which 116 generated a net economic impact.

It was estimated that the businesses that have taken part in Converge since its founding generated £21.5 million GVA and supported 524 jobs in 2019 in Scotland.

Table 6-1 Gross Direct Economic Impact, 2019

	Scotland
GVA (£m)	21.5
Employment (Jobs)	524

Source: BIGGAR Economics Analysis

6.2.2 Net Additional Direct Impact

In order to assess to what extent Converge's support was additional, survey respondents were asked how important Converge was to their business.

Nearly two fifths (38%) of businesses that responded to this question thought that the support received from Converge was very important to establishing and growing their business. Due to the high level of importance it was assumed that Converge had a major impact on these businesses, and therefore that 50% of the impact generated by these businesses could be attributed to the support that they had received from the Converge Challenge. Following this approach, it was possible to attribute deadweight based on how important businesses considered the support from Converge to be (i.e. important, fairly important, etc.). This approach was also used in the 2017 report, which also been used to inform the assumptions on deadweight.

Taking all the responses into consideration, and including the survey that was undertaken in 2017, it was estimated that on average 40% of the impact realised by businesses could be attributed to Converge.

The responses provided to this question in the most recent survey are summarised in Table 6-2.

Table 6-2 Importance of Converge Support for Businesses

Importance of Converge	No. of Responses	Attributable Impact*
Very Important	16	50%
Important	15	40%
Fairly Important	8	30%
Slightly Important	2	20%
Not at all Important	1	0%

Source: Converge Survey. *BiGGAR Economics Assumption

As discussed in Section 6.1.2, an assumption was then made to account for policy decay, which is the diminishing impact of Converge on companies that have been established for longer. It was assumed that after 3 years the importance attributed to Converge would diminish, reducing by a tenth every year.

Deadweight assumptions were then applied to the direct impact estimated in Table 6-1. In this way it was estimated that the direct economic impact attributable to Converge in 2019 was £7.1 million GVA and 181 jobs in Scotland.

Table 6-3 Net Direct Economic Impact, 2019

	Scotland
GVA (£m)	7.1
Employment (Jobs)	181

Source: BIGGAR Economics Analysis

The multiplier impacts associated with the support provided through Converge were then estimated by applying appropriate multipliers to the net additional direct effect. This process is described below.

6.2.3 Multiplier Impacts – Indirect Impacts (Supply Chain Impacts)

Companies supported by Converge will also generate economic impact in the supply chain through their expenditure on goods and services. This was estimated by applying the industry relevant Type 1 GVA and employment multipliers, which capture the supplier effect, to the additional direct impact of each company.

In this way it was estimated that companies that have taken part in Converge could generate an additional £1.9 million in the Scottish supply chain, supporting 69 jobs in 2019 alone.

Table 6-4 Indirect (Supply Chain) Economic Impact, 2019

	Scotland
GVA (£m)	1.9
Employment (Jobs)	69

Source: BIGGAR Economics Analysis

6.2.4 Multiplier Impacts – Induced Impacts (Staff Spending Impacts)

The individuals who have taken up the new jobs created within these businesses will spend some of their income within Scotland, which will generate additional economic impacts. This effect, known as the income effect, is captured by subtracting Type 2 multipliers, which capture income and supplier effects, from Type 1 multipliers, which capture supplier impacts only, and then multiplying the product by the direct GVA.

In this way it was estimated that the induced (staff spending) impacts associated with Converge generated an economic impact of £2.0 million and 48 jobs in Scotland.

Table 6-5 Induced (Staff Spending) Economic Impact, 2019

	Scotland
GVA (£m)	2.0
Employment (Jobs)	48

Source: BIGGAR Economics Analysis

6.2.5 Net Additional Impact

The net additional economic impact of businesses supported by Converge amounted to £11.0 million GVA and 298 jobs in 2019. This is the impact that can be directly attributed to Converge and is summarised in Table 6-6.

Table 6-6 Net Additional Economic Impact, 2019

	Scotland
GVA (£m)	
Direct Impact	7.1
Indirect Impact	1.9
Induced Impact	2.0
Total	11.0
Employment	
Direct Impact	181
Indirect Impact	69
Induced Impact	48
Total	298

Source: BIGGAR Economics Analysis

6.3 Funding

This section summarises the amount of external funding secured by participants in the Converge Challenge.

6.3.1 Total Funding Secured

The value of funding secured was sourced from survey responses as well as data collected by the Converge team and updated by BiGGAR Economics. This indicates that £103.7 million of external funding was secured by Converge participants, of which around 69% of was equity funding and the remaining 31% non-equity funding. Table 6-7 below summarises the funding secured by Converge participants by year.

Table 6-7 Total Funding Secured by Converge Participants (£m)

Year	Non-Equity Funding	Equity Funding	Total Funding
2011	5.5	2.9	8.4
2012	1.9	3.4	5.3
2013	2.3	0.1	2.4
2014	3.7	35.9	39.6
2015	6.3	9.2	15.5
2016	1.3	5.9	7.3
2017	7.2	13.6	20.8
2018	1.9	0.9	2.8
2019	1.6	0.0	1.7
Total	31.7	72.0	103.7

Source: BIGGAR Economics Analysis of Survey Responses and Converge Alumni Data⁴

6.3.2 Added Value of Converge

Most of the businesses supported by Converge will also have received support from other agencies. For this reason, it would be unreasonable to attribute all the additional funding leveraged by these businesses entirely to Converge.

To assess the added value of the support provided by Converge, the deadweight assumptions described in Table 6-2 were applied to the value of funding leveraged in by each business.

It was estimated that £41.0 million of the £103.7 million total funding that Converge participants have leveraged could be attributed to Converge.

Table 6-8 Leveraged Funding Attributable to Converge (£m)

Year	Total Funding Attributable to Converge
Total	41.0

Source: BIGGAR Economics Analysis

6.4 Costs and Benefits

6.4.1 2019 Economic Impact

The analysis for this study (Section 6.2), has found that businesses supported by Converge generated a net additional £11.0 million GVA for the Scottish economy in 2019 and supported 298 jobs.

This implies that each £1 of SFC funding invested to date generated £6.43 GVA for the Scottish economy and each £1 invested by universities has generated £8.51 GVA for the Scottish economy.

⁴ Funding raised by an early Converge Challenge participant who subsequently moved abroad and raise money there has been removed

Overall this implies that each £1 invested in Converge has generated £3.66 GVA for the Scottish economy in 2019.

Table 6-9 Cost Benefit Ratios, Current Economic Impact

	Ratio
GVA in 2019/£1 university investment	£8.51
GVA in 2019/£1 SFC investment	£6.43
GVA in 2019/£1 total investment	£3.66

Source: BIGGAR Economics Analysis

6.4.2 Funding Leveraged

The support provided by Converge has enabled businesses to leverage additional funding of £41.0 million. This implies that every £1 of funding that university partners have contributed to Converge has enabled businesses to leverage a further £31.64 in funding. Similarly, every £1 of funding provided by the SFC has enabled businesses to secure a further £23.90 in funding.

Overall, every £1 invested in Converge to date (by the SFC, universities and sponsors) has enabled the businesses supported by the programme to generate a further £13.62 in funding. These ratios are summarised below.

Table 6-10 Cost Benefit Ratios, Funding Leveraged

	Ratio
Funding leveraged/£1 university investment	£31.64
Funding leveraged/£1 SFC investment	£23.90
Funding leveraged/£1 total investment	£13.62

Source: BIGGAR Economics Analysis

7.

Conclusion

A very positive evaluation with clear routes to impact.

This economic evaluation is founded on the experiences, views and data provided by participants. They described a clear influence on company creation and growth, along with personal benefits in developing the skills and attributes of entrepreneurs.

Participants explained that Converge creates routes to impact through nurturing their business proposition, building their skills, introducing them to networks, giving them confidence, creating exposure for them and their businesses.

The analysis and findings of the study are based on a web survey, with a series of positive consultations. This programme has added value to participants and has left a strong impression.

Figure 7-1 'Choose 3 words that best describe your Converge experience'



Source: Web Survey

Converge participants receive support from many different sources and its relative importance in Scotland's innovation landscape has been explored. Converge is ranked as extremely or very important in this context. So are the other areas of support, suggesting the importance of the wide range of intervention available. One of the most important other areas of support to these academic entrepreneurs is their University. Support from Scottish Enterprise is frequently cited, and RSE and other programmes of support are also important. There is no doubt that Converge is

embedded in the innovation landscape, a key piece in this jigsaw with a distinct offering for academic entrepreneurs.

Businesses that have taken part in Converge **generated £21.5 million GVA and supported 524 jobs** in 2019 in Scotland. Accounting for the role of other areas of support and the extent to which this impact would have happened in the absence of Converge, as well as their wider effects on the economy, it was estimated that the net additional economic impact of businesses supported by Converge amounted to **£11.0 million GVA and 298 jobs** in 2019. This is the impact that can be directly attributed to the Converge Challenge.

Each £1 invested in Converge from 2011 to 2019 generated **£3.66 GVA** for the Scottish economy in 2019.

Converge participants considered in the study have secured **£103.7 million** of external funding, of which **£41.0 million** could be directly attributed to Converge. For every £1 of funding for Converge, participants have raised a further **£13.62** in external funding.

Converge's investment in Kickstart is focussed on producing longer term benefits, with very early stage support being provided. We would expect businesses that have received support through Kickstart to make faster progress than those that haven't, however it is too early in the lifecycle of this stream to tell. It would be helpful for Converge's evaluation framework to include some measures of this impact, to support future evaluations.

Finally, the new investment in Impact Challenge and Creative Challenge is focussed more widely than purely economic impacts. This was reflected by one of the participants, who raised concern about the focus on profit, when their business was focussed on other outcomes.

This raises an interesting point about the role of economic impact assessment in programmes that deliver outcomes which are fundamental to sustainable and inclusive economic growth, which are not easily reflected in GVA and employment figures. This is addressed by Scottish Government's National Performance Framework, and in other national measurement indices across the UK and the world. HM Treasury's Green Book has placed social value in a central position, with a review anticipated to make this more prominent. The Office for National Statistics has created a Well-Being Dashboard⁵ and the OECD and UN have a wealth of resources to help nations focus their economic policies on well-being. This is because it is now an accepted fact that GVA and employment alone are not enough to deliver economic success.

Scotland's National Performance Framework explicitly includes 'increased well-being' as part of its purpose and combines measurement of how well Scotland is doing in economic terms with a broader range of well-being measures. These indicators incorporate a wide range of different types of data—from social attitudes and perceptions to economic and environmental statistics—in order to paint a picture of Scotland's performance.⁶

⁵ See ONS:

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuresofnationalwellbeingdashboard/2018-04-25>

⁶ Scottish Government, 'Scotland's Wellbeing—Delivering the National Outcomes', May 2019, https://nationalperformance.gov.scot/sites/default/files/documents/NPF_Scotland%27s_Wellbeing_May2019.pdf

Scotland's National Performance Framework is summarised in the figure below. It aims to:

- create a more successful country;
- give opportunities to all people living in Scotland;
- increase the wellbeing of people living in Scotland;
- create sustainable and inclusive growth; and
- reduce inequalities and give equal importance to economic, environmental and social progress.

Figure 7-2: National Performance Framework



Source: Scottish Government (May 2019), Scotland's Well-being – Delivering the National Outcomes

This raised a question about the extent to which standard GVA and employment impacts should be a key measure of success and impact for Converge, which now contributes to social and cultural aspects of the country's well-being agenda through Impact Challenge and Creative Challenge.

In future, Converge could broaden out its impact analysis to consider wider impacts against Scotland's National Performance Framework. This would mean broadening its evaluation framework to include wider measures of impact that fit with Scottish Government and individual funders' strategic objectives. This may help identify best ways to support businesses coming out of the Impact and Creative Challenges, and indeed, the Converge Challenge, which may not have economic impact as a goal.

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