What are they and what do they aim to do?

Accelerators and incubators are business support programmes that provide packages of support to young firms to help them grow. Widely used in the tech sector, they are now increasingly applied in other industries. We distinguish accelerators from incubators based on the definition provided by the Harvard Business Review (summarised in Table 1 of the Annex). This toolkit is concerned with accelerators. A companion toolkit considers incubators.

Incubators typically use non-competitive entry and comparatively ‘light-touch’ support, typically targeting start-ups aged 1-5 years. Typically, incubators are either non-profit or run as managed workspaces where firms have rolling contracts and pay rent, usually staying for between one and five years. Accelerators use competitive entry and a range of intensive support, typically targeting start-ups aged 3-6 months for a period of up to a year, although often for much less time. Accelerators may be non-profit, although they are more often operated by venture capital firms who take equity stakes in participating companies. The application process for accelerators is typically competitive and only a few firms are accepted into each cohort. For instance, YCombinator, a top US accelerator, has two application seasons per year and accepts just two or three per cent of the several thousand firms that typically apply each year. After being accepted, firms participate in the accelerator for three to six months. During their time in the accelerator, firms are typically provided with an on-site work place. Additionally, founders receive business skills training in the form of seminars, as well intensive mentorship from members of established firms (in contrast to the light touch support provided in incubators).
How effective are they?

We found ten evaluations that met our evidence standards. This sections summarises the findings from these studies. The Annex provides more detail.

The available evidence suggests that accelerators may increase participating firm employment. Three studies find that accelerators have a positive effect on employment. Two further studies also report positive effects, but they consider support from both accelerators and incubators and are unable to distinguish between the two kinds of support. One of these two studies also looks at firm sales, finding a positive effect. Again the study is unable to distinguish between accelerators and incubators.

Five studies consider the impact of accelerators on firm survival: findings are positive in one study, mixed in one study (positive for women and minorities), zero in one study and negative in the other two studies. Taken at face value, this suggests that accelerators may sometimes be bad for firm survival. An alternative – and more plausible – explanation is that accelerators help participants to quickly gauge the quality of their ideas (e.g. via investor / peer feedback on demo days) and encourage those with weak propositions to quit early, rather than continuing until they fail ‘naturally’.

Five studies consider the impact of accelerators on firms receiving subsequent external funding (e.g. from angel investors or venture capital firms). Four find positive effects, while one finds no effect. One study which considers the impact of two prominent private sector accelerators, finds that length of time spent in an accelerator is negatively associated with the chances of receiving funding.

It is harder to draw firm conclusions on how different accelerator characteristics contribute to these findings. For example, we find no clear differences in employment, survival or funding outcomes when comparing public and private sector-run programmes. However, for funding, one US study finds that for private sector-run programmes, quality matters – “top” accelerators had positive effects while all others did not.

We find clearer differences across types of incubator and accelerator support: these may impact on firm survival. One study which compares the effectiveness of different types of incubator and accelerator support on firm survival, finds that more specialised programmes (focusing on a single sector) are more conducive to firm survival than generalist programmes. Networking events are associated with lower likelihood of survival, while putting on training has no effect on survival. These effects vary across locations.

Two further studies also look at the impact of accelerator location on firm outcomes. One finds that locating in regions with dense entrepreneurial networks (i.e. have more early stage investors and meetups) and high property values is conducive to employment and funding. Another similarly finds that accelerated firms are more likely to obtain funding from local investors. Ultimately, accelerators benefit from locating in areas with a dense entrepreneurial ecosystem.

Are accelerators cost effective?

Only three of the ten studies provide any cost effectiveness information. Information from these studies allows us to come up with some indication of cost effectiveness. Rough estimates suggest just the grant elements of the programmes (ignoring the cost of space, mentoring, etc.) could cost around £65,000 to ensure an assisted firm is still surviving after three years, and around £30,000 per additional employee. These effects do not take into account other costs of the programmes nor potential displacement.

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1 “Top” US accelerators include: 500 Startups, Dreamit, Excelerate Labs, Techstars, and Y Combinator
effects where assisted firms might displace activity of unassisted firms.

**Things to consider**

- **If accelerators ‘kill’ participating firms, is that a bad thing?** In many cases programmes help firms survive, but we also found some evidence the other way. It’s plausible that this is down to programme managers helping founders identify weak ideas and kill them, allowing entrepreneurs to develop new ideas.

- **What type of support should accelerators provide?** In addition to funding, accelerators often provide firms with intensive mentorship, networking, and co-working space. There is limited evidence on which of these have the largest effect on firm outcomes, so providers should experiment to see what configuration of these works best for them.

- **Should accelerators have a minimum or maximum tenancy?** We found no strong evidence either way.

- **Should accelerators be left to the private sector?** We found no strong evidence either way. Policymakers should consider whether there is any substantive market failure in accelerator provision in their area.

- **Should accelerators require equity for funding?** We didn’t find any studies that make a direct comparison between accelerators that require equity and those that don’t. Providers could usefully test the specific impact of taking equity stakes in participants.

- **What is the value-added of accelerators vs. angel / VC investment?** We found clear evidence that firms who participate in accelerators are more likely to pick up external funding from angels and/or VC firms at a later date.

- **Where should accelerators be located?** Accelerators seem to be most effective in regions with rich entrepreneurial ecosystems, and in richer regions.

- **What is the value added of accelerator vs. incubator business models?** We didn’t find any studies that directly compare the two approaches.
Annex: Evidence on accelerators

Accelerators and incubators are business support programmes that provide packages of support to young firms to help them grow. Widely used in the tech sector, they are now increasingly applied in other industries. We distinguish accelerators from incubators based on the definition provided by the Harvard Business Review (summarised in Table 1). This toolkit is concerned with accelerators. A companion toolkit considers incubators.

The application process for accelerators is competitive and only a select few firms are accepted into each accelerator cohort. For instance, YCombinator, a top US accelerator, has two application seasons per year and accepts just two or three per cent of the several thousand firms that typically apply each year. After being accepted, firms participate in the accelerator for three to six months. While many accelerators take equity stakes in participating firms, some operate on a non-profit basis. During their time in the accelerator, firms are typically provided with co-working space. Additionally, founders receive business skills training in the form of seminars, as well as intensive mentorship from members of established firms. For instance, the UK’s most prominent private sector accelerator, Seedcamp, provides firms with business skills workshops (e.g. in product development), monitors progress and goal achievement, and organises trips to visit established companies abroad.

Table 1: Definition of accelerators and incubators

<table>
<thead>
<tr>
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<th>Accelerators</th>
<th>Incubators</th>
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<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>3 to 6 months</td>
<td>1 to 5 years</td>
</tr>
<tr>
<td><strong>Cohorts</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Business model</strong></td>
<td>Investment; can also be non profit</td>
<td>Rent; non profit</td>
</tr>
<tr>
<td><strong>Selection</strong></td>
<td>Competitive; cyclical</td>
<td>Non-competitive</td>
</tr>
<tr>
<td><strong>Venture stage</strong></td>
<td>Early</td>
<td>Early or late</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td>Seminars</td>
<td>Ad hoc; human resources or legal support</td>
</tr>
<tr>
<td><strong>Mentorship</strong></td>
<td>Intense; by self and others</td>
<td>Minimal; tactical</td>
</tr>
<tr>
<td><strong>Venture location</strong></td>
<td>On-site</td>
<td>On-site</td>
</tr>
</tbody>
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How secure is the evidence?

This toolkit summarises the available evidence on the effect of accelerator policies for firms that have spent time in an accelerator (i.e. ex-post impact studies). This toolkit does not consider evidence based on qualitative or case study methods. Instead, we focus on evaluations that identify effects that can be attributed, with some degree of certainty, to the support provided.

We looked for evidence on the effect of accelerators on a range of outcomes including survival, revenue, employment, and funding.

We focused on evidence from the OECD, in English. We considered any study that provided before-and-after or cross-sectional evidence controlling for differences between supported and unsupported areas or firms. We also included more robust studies that compared changes to areas or firms with a...
Throughout the toolkit, we’ve placed greater emphasis on studies with stronger methods.

Using these criteria, we found ten studies that looked at the effects of accelerators and that met our minimum evidence standards. Nine of these studies (101, 103, 104, 105, 106, 179, 180, 202, 235) consider the overall impact of accelerators. One study (204) examines how outcomes depend on the type of support. Three of the studies (202, 204, 235) are not able to distinguish between accelerators and incubators.

Eight studies consider accelerators in the US, while one focuses on Chile, and one focuses on Canada. No studies evaluating UK policies met the evidence standards for inclusion in this toolkit. Two of the ten studies compare participating firms to firms that were close to being selected for participation (SMS 4); one compares changes in outcomes for ‘treated’ firms against a control group (SMS3), and the remaining seven compare ‘treated’ firms with a control group for a single point in time (SMS 2).

The evidence

The available evidence suggests that accelerators may increase participating firm employment. Three studies find that accelerators have a positive effect on employment. Two further studies also report positive effects, but they consider support from both accelerators and incubators and are unable to distinguish between the two kinds of support.

Study 179 (SMS 4 – firm) evaluates the impact of the MassChallenge accelerator programme on employment. MassChallenge is a private non-profit accelerator in Boston that receives funding through corporate partnerships and government grants. It admits 128 start-up firms each year, providing them with office space, educational development, and mentoring for four months. At the end of the programme, a subset of firms received between $25,000 and $150,000 in grants. In order to be accepted to the accelerator, firms are judged by a panel that attributes scores according to firm potential. Accordingly, the study compares firms that were just above the score acceptance threshold to firms that were just below. The study looks at whether the firm employs more than 15 people and finds that participating in the accelerator programme increases the likelihood of doing so.

Study 105 (SMS 4 - firm) evaluates the impact of the Start Up Chile (SUC) programme on firm survival. SUC is a competitive government programme that provides start-up firms with equity-free capital and visa sponsorship. Two months into the accelerator, firms pitched their idea to a panel of judges. The top ranking firms have received further mentorship. At both the preliminary stage and the pitch stage, in order to choose participants, firms were attributed a numerical score. Therefore, the study compares firms that are just above the eligibility cut-off to firms that are just below. Using a cross-sectional dataset for the 2010 to 2013 cohorts, the study looks at the effect of being accepted to the second stage of support (i.e. mentorship) on employment measured by the number of employees listed on LinkedIn. The study finds that mentorship increases the number of employees by 31.4.

Study 103 (SMS 2 - firm) considers the relationship between accelerators and employment in the United States. The study exploits a cross-sectional dataset of firms from the 2011 and 2012 cohorts of three different accelerators. Firms that were accepted to the accelerators are compared to firms that applied but were not accepted. In this case, acceptance to the accelerator is represented by a dummy variable. For three of the four cohorts, participating in an accelerator is associated with an increase in employment of 17.1 per cent, 20.9 per cent, and 68 per cent respectively.

See the Maryland Scientific Methods Scale (SMS) http://www.whatworksgrowth.org/resources/the-scientific-maryland-scale/.

2
Study 202 (SMS 2 – firm) evaluates the relationship between incubators and accelerators and employment in the United States. The study use the National Business Incubator Association’s list, which also includes accelerators according to our definition. For this reason, it is not possible to disentangle the effects of accelerators specifically. The study considers 2,043 supported firms, as well as a control group of observably similar firms. The study finds that incubated or accelerated firms have five more employees than non-incubated or accelerated firms.

Study 235 (SMS 2 - firm) evaluates the relationship between incubators and accelerators and employment in the United States. The study also uses the National Business Incubator Association’s list so includes accelerators according to our definition. Again, for this reason, it is not possible to disentangle the effects of accelerators. The study considers firms that participated in university-sponsored incubators or accelerators from 1989 to 2012. The comparison group is comprised of firms that are observably similar to those that were incubated or accelerated. The study finds that incubated or accelerated firms have four more employees than non-incubated or accelerated firms.

One of these two studies also looks at firm sales, finding a positive effect. Again the study is unable to distinguish between accelerators and incubators.

Study 235 (SMS 2 - firm) also evaluates the relationship between incubators or accelerators and firm revenue in the United States. Again, the study is unable to disentangle the effects of accelerators incubators. The study looks at the difference between sales revenue two years after graduation and before incubator or accelerator participation. The study finds that incubated or accelerated firms have £350,110 more sales revenue than non-incubated or accelerated firms.

Five studies consider the impact of accelerators on firm survival: findings are positive in one study, mixed in one study (positive for women and minorities), zero in one study and negative in the other two studies. Taken at face value, this suggests that accelerators may sometimes be bad for firm survival. An alternative – and more plausible – explanation is that accelerators help participants to quickly gauge the quality of their ideas (e.g. via investor / peer feedback on demo days) and encourage those with weak propositions to quit early.

Study 105 (SMS 4 - firm) evaluates the impact of the Start Up Chile (SUC) programme on firm survival. As noted above, firms are admitted to the accelerator, and within this cohort, the firms with the highest potential are selected for further mentorship. Using a cross-sectional dataset for the 2010 to 2013 cohorts, the study looks at the effect of acceptance and of additional mentoring. Firm survival is captured in three different ways by looking at whether firms were listed on AngelList, Crunchbase or Linkedin. The study finds that being accepted to the accelerator increases the likelihood of being listed on AngelList by 48.9 percentage points, but not on the likelihood of being listed on Crunchbase or Linkedin. Mentorship has no effect.

Study 103 (SMS 2 - firm) considers the relationship between accelerators and firm survival in the United States. The study exploits a cross-sectional dataset of firms from the 2011 and 2012 cohorts of three different accelerators. Firms that were accepted to the accelerators are compared to firms that applied but were not accepted. The study finds that accelerator participation increases the likelihood of survival by between 18 and 33.2 per cent.

Study 104 (SMS 2 – firm) evaluates the relationship between accelerators and firm survival in the United States. The study considers a cross-sectional dataset of firms that were accepted to the YCombinator
and TechStars accelerators between 2005 and 2011. Firms that received funding from a large angel investment group, but did not participate in an accelerator, are used as a control group. The study finds that accelerators are associated with a reduction in the amount of time until the firm is ‘terminated’, both in the short run (120-500 days after being admitted to the accelerator) and in the longer term (at least 500 days after admission). The study notes that this may be due to the fact that accelerators feature “demo days” in which start-ups present their idea to investors. If a firm does not guarantee investment on this day, its likelihood of success is limited. Ultimately, this speeds up the process through which firms fail, but also, through which they are acquired (see below).

Study 106 (SMS 2 – firm) evaluates the relationship between accelerators and firm survival in the United States. The study considers a cross-sectional dataset of firms supported by 13 different accelerators. The control group is obtained by matching accelerator firms to similar firms that did not receive support. Accordingly, accelerator exposure is represented by a dummy variable. The study considers survival in two ways: (1) whether the firm eventually closed down; (2) the number of days from the firm’s start date to the firm’s closing date. The study finds that being in an accelerator increases the likelihood of closing down and decreases the time until closing down compared with control firms. These results imply that accelerators are negatively associated with firm survival. The study notes that this is likely due to the fact that accelerators more accurately gauge the quality of the company, so that founders close down unproductive firms which might otherwise continue until they fail ‘naturally’.

Study 180 (SMS 3 – entrepreneurs) examines the impact of the Next 36 programme on the likelihood that minority and non-minority participants continue to work in the start-up sector. Next 36 is a programme that provides entrepreneurs and very early start-ups with up to $60,000 in funding, intensive training and mentoring support for a period of eight months. It is a highly selective programme admitting only 36 candidates to each annual cohort. The study compares outcomes for programme participants to outcomes for individuals who made it to the last stage of the process but who were eventually not accepted. This ensures that treatment and control group were relatively similar, and further observational differences (e.g. prior experience, judge scores on interview) were controlled for in the regression analysis. The study finds that in the short term, both minority (either female or non-Caucasian) and non-minority participants benefited from the programme in terms of the likelihood that they stay in the start-up sector. The short term impact for minorities (10 percentage points) is smaller than that for non-minorities (23pp). However, in the long term, only minorities group has benefited (20pp) compared with the control group. The study suggests that programme participation simply acts to expedite benefits (e.g. networks, capital) that the non-minority group would eventually capture without having participated. Conversely, for minorities there are benefits in the long-run but they take time to materialise perhaps reflecting the additional barriers to penetrating an industry dominated by non-minorities. The study finds that the size of the long term benefits for minorities is enough to offset the negative relationship between minority status and subsequent start up activity.

Five studies consider the impact of accelerators on firms receiving subsequent external funding (e.g. from angel investors or venture capital firms). Four find positive effects, while one finds no effect.
Study 179 (SMS 4 – firm) evaluates the impact of the MassChallenge accelerator programme on venture capital funding. The study considers two aspects of venture capital: (1) whether the firm received more than $500,000 funding; (2) the dollar amount of venture capital funding. The study finds that accelerator participation increases the likelihood of obtaining over $500,000, as well as increases the amount of funding.

Study 105 (SMS 4 - firm) evaluates the impact of the Start Up Chile (SUC) programme on firm funding. As noted above, firms are admitted to the accelerator, and within this cohort, the firms with the highest potential are selected for further mentorship. Using the 2010 to 2013 cohorts, the study looks at the effect on amount of capital raised, as listed on the website AngelList. The study finds that neither acceptance nor mentoring had any effect on funding.

Study 101 (SMS 3 – regional) evaluates the impact of accelerators on venture capital investment in metropolitan areas (MSAs) within the United States. Using a dataset of venture capital activity over 2005 to 2012, the study finds that having an active accelerator within an MSA increases the number of venture capital deals by 2.0, the number of early stage investors by 1.9, and the amount of funds invested by 4,800 per cent.

Study 103 (SMS 2 – firm) considers the relationship between accelerators and venture capital funding in the United States. The study finds that accelerators are positively associated with the amount of venture capital funding raised. For the four cohorts under consideration, accelerator exposure is associated with an increase of venture capital funding by 28 per cent, 66 per cent, 72 per cent, and 152 per cent. The study also finds that accelerators are on average associated with the time taken until firms receive their first round of venture capital. Further, it finds that the “top” programmes, such as 500 Startups, Dreamit Ventures, Excelerate Labs, TechStars, and YCombinator are associated with faster initial financing, but that others, Seedcamp and Angelpad are not associated with financing speed, while Launchbox Digital is associated with slower financing.

Study 104 (SMS 2 - firm) analyses the relationship between accelerators and venture capital funding in the United States. Participation in the YCombinator and TechStars accelerators has positive effects on both VC acquisition and time to first round funding.

Study 106 (SMS 2 – firm) evaluates the relationship between accelerators and venture capital funding in the United States. Venture capital funding is captured in five different ways: (1) total funding in millions of dollars; (2) number of days from firm start to receiving $100,000 funding; (3) number of days from firm start to receiving one million dollars; (4) probability of being acquired; (5) number of days until acquisition. The study finds that accelerators are not associated with the likelihood of being acquired, nor with the number of days until a firm is acquired. However, it finds that accelerator firms receive $5 million less in funding, and take 50 more days to achieve $100,000, and 106 more days to achieve one million. This implies that accelerator participation is negatively associated with firms’ ability to obtain funding. The study states that this negative relationship may be due to a selection effect. Founders with the best ideas will apply for accelerator programmes since they do not want to give away any ownership. Given that this study is SMS 2, this hypothesis is likely. Furthermore, the study considers firms from 13 different accelerators, rather than simply considering the most selective accelerators.

One study which considers the impact of two prominent private sector accelerators, finds that length of time spent in an accelerator is negatively associated with the chances of receiving funding.
Study 104 (SMS 2 – firm) evaluates the relationship between length of time spent in an accelerator and firm survival and funding in the United States. The study considers a cross-sectional dataset of firms that were accepted to the YCombinator and TechStars accelerators between 2005 and 2011. Firms that received funding from a large angel investment group, but did not participate in an accelerator, are used as a control group. The study looks at length of time spent in the accelerator (up to 120 days, between 120 and 500 days, firm survival (measured by the number of months from the date of receiving accelerator funding until the date the firm stopped operating) and funding (firm was acquired or time of the first round of VC funding). The study finds that staying longer than 120 days decreases the likelihood of survival, acquisition, and ability to attract funding.

It is harder to draw firm conclusions on how different accelerator characteristics contribute to these findings. For example, we find no clear differences in employment, survival or funding outcomes when comparing public and private sector-run programmes. However, for funding, one US study finds that for private sector-run programmes, quality matters – “top” accelerators had positive effects while all others did not.

Study 105 (SMS 4 - firm) evaluates the impact of the Start Up Chile (SUC) programme on firm employment, survival, and funding. SUC is a public sector programme that operates on a non-profit basis, providing firms with equity-free grants. The study finds that the programme has a positive effect on employment, but no effect on survival or funding.

Study 179 (SMS 4 – firm) evaluates the impact of the MassChallenge accelerator programme on employment and funding. MassChallenge is a private sector, non-profit programme that provides participants with equity-free grants. The study finds that the programme has a positive effect on both employment and funding.

Study 103 (SMS 2 – firm) considers the relationship between accelerators and firm employment, survival, and funding. In this case, private sector, for-profit accelerators that provide support in exchange for equity are considered. The study finds that these accelerators had a positive effect on employment and survival. However, with respect to funding, the study finds that only the more selective accelerators (i.e. 500 Startups, Dreamit, Excelerate Labs, Techstars, and Y Combinator) had positive effects on funding, while the overall sample had no effect.

Study 104 (SMS 2 - firm) analyses the relationship between accelerators and venture capital funding in the United States. In particular, it considers outcomes for firms that have participated in YCombinator and TechStars – two private, for-profit accelerators that provide firms with support in exchange for equity. The study finds that the accelerators are associated with a lower likelihood of survival, but a higher likelihood of obtaining funding.

Study 106 (SMS 2 – firm) evaluates the relationship between accelerators and firm survival and funding in the United States. The study considers several private sector, for-profit accelerators. It finds that accelerated firms are less likely to survive and attract funding.
We find clearer differences across types of incubator and accelerator support: these may impact on firm survival. One study which compares the effectiveness of different types of incubator and accelerator support on firm survival, finds that more specialised programmes (focusing on a single sector) are more conducive to firm survival than generalist programmes. Networking events are associated with lower likelihood of survival, while putting on training has no effect on survival. These effects vary across locations.

Study 204 (SMS 2 – firm) evaluates the relationship between different types of incubator and accelerator support and firm survival in the United States. As noted, the study considers incubators and accelerators simultaneously, so it is hard to disentangle specific incubator vs. accelerator effects. The study considers all firms that belonged to a university accelerator or incubator at any point between 1994 and 2007. Three different types of incubator and accelerator support are considered: (1) if the incubator hosted networking events and conferences; (2) if the incubator or accelerator only hosted firms in a particular sector; (3) if the incubator provided direct support in the form of educational training. The study finds that firms that participated in incubators or accelerators providing networking events were less likely to survive than firms in programmes without this form of support. On the other hand, firms that participated in incubators or accelerators that only hosted firms in a particular sector were more likely to survive than firms in non-specialised programmes. Direct support was found to have no effect. The study also considers whether these effects change according to the competitiveness of the incubator’s location (as measured by the number of firms operating in the same industry within the firm’s founding county). It finds that networking events and training initiatives are associated with a positive effect on firm survival in competitive counties, while hosting only firms from certain sectors is associated with a negative impact on firm survival in competitive counties.

Two further studies also look at the impact of accelerator location on firm outcomes. One finds that locating in regions with dense entrepreneurial networks (i.e. have more early stage investors and meetups) and high property values is conducive to employment and funding. Another similarly finds that accelerated firms are more likely to obtain funding from local investors. Ultimately, accelerators benefit from locating in areas with a dense entrepreneurial ecosystem.

Study 179 (SMS 4 – firm) evaluates the impact of accelerator location on employment and funding. The study evaluates the impact of the MassChallenge programme according to the firm’s founding region. Specifically, it finds that firms from regions that have entrepreneurship meet-ups and more early stage investors have better employment and funding outcomes. Furthermore, firms from areas with higher property prices are more likely to obtain funding. Conversely, firms from regions with high R&D investment are less likely to obtain funding.

Study 101 (SMS 3 – regional) evaluates the impact of accelerator location on funding in the United States. Using a dataset of venture capital activity over 2005 to 2012, the study finds that firms are more likely to obtain funding from local (within 300 miles) investors.
Cost effectiveness

Only three of the six studies (105, 106, 179) provide any cost effectiveness information. They tell us that whilst accelerators have positive effects, they come at significant cost. Very rough estimates suggest that just the grant elements of the programmes (ignoring the cost of space, mentoring, etc.) could cost more than £60,000 to ensure an assisted firm is still surviving after three years, and £20,000 per additional employee hired by assisted firms. These effects do not take into account potential displacement effects where assisted firms might displace activity of unassisted firms.

The StartUp Chile programme (105) provides firms with work visas, co-working space, and mentorship. It also provides firms with £32,120 equity-free capital in two instalments, with the second instalment being conditional on the firm achieving certain milestones. Given that the programme increases the likelihood of firm survival by 48.9 percentage points, this suggests StartUp Chile has assured survival at a cost of £65,685 per firm. However, this is a lower bound estimate that does not include the cost of non-grant expenses such as mentorship, co-working space, and programme administration. Furthermore, it is worth noting that this impact on firm survival is short-term, as the study’s data spanned only 2010 to 2013. This also doesn’t account for potential displacement effects, if the survival of a supported firm came at the expense of the failure of a non-supported applicant. (In the case of Start-Up Chile, firms were typically recruited from outside the country, so displacement effects may be less directly relevant)

The MassChallenge programme (179) provides firms with office space, mentorship, and non-equity grants. These grants range from £20,070 to £120,210. The programme increased the likelihood of a firm hiring over 15 employees by 31.3 per cent. Assuming that the average grant is £70,140 (the middle of this range) this suggests each £224,089 of expenditure should lead one firm to hire than 15 employees with certainty. It is not clear from the study what kind of increase in employees takes firms from one group into the other. Assuming a required increase in 7.5 employees (assuming firms are evenly distributed in the 0-15 employees range), then this would equate to a cost of around £29,878 per additional employee. This value is a lower bound since it does not include the non-grant costs of work space, mentorship, and administration. Further, it does not account for displacement, where employees hired by assisted firms might have otherwise been hired by unassisted firms.

Study 106 considers the impact of thirteen private sector accelerators. On average, these programmes last 14 weeks and cost £16,697 per firm. Given that the study finds a negative impact of accelerators, the programmes are clearly not cost-effective (unless the findings can be explained by a selection effect as suggested by the authors).

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3 USD to GBP converted as per Financial Times rate for 30/11/2016
4 That is 32,120/0.489
### Annex: Evidence Reviewed

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<thead>
<tr>
<th>Ref No.</th>
<th>Reference</th>
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<tbody>
<tr>
<td>179</td>
<td>Sloan, M. I. T. (2015). Startup Accelerators and Ecosystems: Complements or Substitutes?.</td>
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