How SBA's Affiliation Rules for Venture-Backed Firms Will Limit the Effectiveness of the Paycheck Protection Program

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The failure of small venture-backed businesses to qualify for Paycheck Protection Loans could cost more than 275,000 jobs this year directly and more 1 million jobs in total, including indirect losses. The Trump administration should waive the Small Business Administration's "affiliation rule" in this crisis to prevent these mass layoffs and furloughs.

KEY TAKEAWAYS

- A key part of the $2.2 trillion economic relief package for the COVID-19 pandemic is the $370 billion Paycheck Protection Program operated by the Small Business Administration (SBA) to tide over small businesses during the crisis and limit layoffs.
- SBA regulations governing small businesses with affiliates will preclude some small firms from receiving this aid, including many that are supported by venture capital funding, which will put good jobs at risk.
- ITIF estimates that, absent access to the Paycheck Protection Program, venture- and angel-backed firms will lay off approximately 279,000 more workers than they would otherwise.
- Indirect effects would bring the total number of job losses to more than 1 million across all 50 states.
- At the end of ten years, because of the additional closures of these normally high-growth firms, there will be 703,000 fewer workers in venture- and angel-backed firms.

OVERVIEW

To stem the economic bleeding that COVID-19-induced social distancing has caused, Congress expeditiously applied a tourniquet in the form of a $2.2 trillion relief package. A key part of that package is $370 billion for the Paycheck Protection Program operated by the Small Business Administration (SBA), the bulk of which is dedicated for low-interest and forgivable bank loans. This funding will provide a needed lifeline to hundreds of thousands of small businesses across the nation that are suffering direct or indirect declines in business due to the pandemic.

Unfortunately, existing SBA regulations governing small businesses with affiliates will mean that some small firms, including many that are supported by venture capital funding, will either be excluded from needed funding, or will have to go through a time-consuming and uncertain process to get special approval on a case-by-case basis, during which time they likely will be forced to lay off workers.

ITIF estimates that without access to this critical emergency funding venture- and angel-backed firms in the United States will lay off approximately 279,000 more workers than they would otherwise. Indirect losses will bring the total figure to more than 1 million jobs lost (1,046,000). These losses will occur in all 50 states. And at the end of 10 years, because of the additional closures of these normally high-growth firms, there will be 703,000 fewer workers in venture- and angel-backed firms.

THE SBA AFFILIATE RULE IS COMPLICATED FOR VENTURE-BACKED FIRMS

The SBA affiliate rule was intended to prevent large firms from establishing closely tied affiliates in order to qualify for federal small business programs, including loans. While well-intentioned, this rule has the unintended consequence of sweeping in many legitimate small businesses, depending on the structure of their equity-capital funding. For example, under SBA rules, a 10 percent venture-backed startup can be defined as a large business if more than 50 percent of its equity comes from a venture capital firm whose portfolio companies collectively employ more than 500 workers. This never made sense in normal economic times, given how critical these firms are to U.S. job growth, innovation, and competitiveness. And it makes even less sense now, in the midst of possibly the worst economic crisis the nation has faced since the Great Depression. Not waiving the rule would preclude, or at best delay, needed financial assistance for as many as 83,000 firms, which would lead to unnecessary layoffs of bankruptcies.

It is possible that Congress or the administration could come up with additional measures in the near future that might address the challenge venture-backed firms are facing. But because these firms are small, they are making critical business decisions now and are likely to lay workers off quite soon if they believe that future revenue growth will be limited. Knowing that they are eligible for the Paycheck Protection Program will give them the breathing room they need to avoid making such drastic job cuts. However, SBA's affiliate rule is extremely complex, describing multiple scenarios for business arrangements that it covers, which will lead many firms to assume they are not eligible for the Paycheck Protection Program.[1] As one small business advocate testified before Congress, "One would think that SBA publishes a clear set of rules for affiliation so that contractors would know what they can and cannot do with respect to business relationships between small prime contractors and their large business subcontractors. That is not the case."[2]

Some might argue that the SBA has the authority to manually review the affiliation arrangement for each venture-backed company that applies for aid and make exceptions. But again, when the banks and SBA are processing 50 to 100 times more loan applications than normal and hoping to provide same-day approval, the reality is that venture-backed companies will face significant uncertainty as to whether they would qualify, and when they do qualify, they could face significant delays in receiving funding.

Finally, the affiliation rule will impact not just venture-backed firms, but also many angel capital-backed firms. In addition, according to the Kauffman Foundation, over 13 percent of all new companies are financed by friends and family other than the owner(s).[3] It is possible that any company with multiple equity owners—whether friends and family or professional investors—could be turned down for a paycheck-protection loan if the traditional affiliation rule is strictly applied.

Therefore, **the Trump administration should waive the "affiliation rule" as it implements the congressional relief package so that all small firms can get the help they need during this crises.**

VENTURE- AND ANGEL-BACKED FIRMS CONTRIBUTE DISPROPORTIONATE VALUE TO THE U.S. ECONOMY

Venture- and angel-backed firms are growth engines on steroids. Over the last 40 years, venture-backed companies produced $3 trillion in annual revenues and 11 percent of the country's private-sector jobs.[4] Most of these firms get VC support early on. In fact, 57 percent of VC-funded firms receive their initial funding within their first year as an employer business.[5] A recent economic analysis finds that for the same dollar invested in R&D, a VC-backed firm produces a return nine time greater than that of a non-VC-backed firm.[6] One study found that the absence of venture capital funding would lower GDP growth rates by 28 percent. [7]

Wage growth among technology-based start-ups has been higher than U.S. wage growth overall (20 percent versus 3 percent).[8] Research also shows that venture-backed firms expand productivity faster than similar non-VC-backed firms.[9]

Finally, virtually all venture- and angle-backed firms are designed to grow and add jobs. Indeed, venture-backed firms expand employment significantly faster than other firms. One study found that from 2006 to 2008, all venture-backed firms (large and small) added workers 8 times faster than non-venture-backed firms (1.6 percent per year versus 0.2 percent).[10] Another study found that the probably of a startup receiving venture funding is nearly 200 times greater for firms that experience employment growth in the top quintile of all startups compared to those in the bottom quintile.[11] And when matching firms to control for the effect of venture capital funding, VC-funded firms expanded employment more than twice as fast as similar, but non-VC-funded firms after 10 years.[12]

Economists Scott Stern, Christian Catalini, and Jorge Guzman find that innovation-driven companies, including VC-backed firms, represent over half of all fast-growing small firms (in terms of employment), even though they represent less than 4 percent of small firms. Stern and colleagues also found that venture-backed startups are 452 times more likely to have an IPO or other significant growth outcome than non-VC-backed startups.[13] And when they controlled for venture capital funding, comparing similar firms, they found that venture-backed firms were 6.9 times more likely to achieve an IPO or acquisition.

Finally, it is important to note that while many venture capital investments are in high-tech industries in technology hubs like Austin, Boston, New York City, Research Triangle, and Silicon Valley, there are venture- and angel-backed startups in all 50 states and the District of Columbia. (See figure 1.) Moreover, this funding goes to a wide array of sectors, including manufacturing, agriculture, and energy. For example, many venture capitalists have invested in "ag-tech" startups focused on bringing innovation to farming and farmers.[14]

Figure 1: Jobs and potential job losses in venture- and angel-backed companies, by state

State	Total Venture and Angel-Backed Jobs	Estimated Jobs Lost Without Change in Affiliate Rule
Alabama	5,019	732
Alaska	717	105
Arizona	20,959	3,057
Arkansas	4,743	692
California	691,543	100,863
Colorado	48,261	7,039
Connecticut	13,017	1,899
Delaware	10,424	1,520
District of Columbia	17,043	2,486
Florida	57,969	8,455
Georgia	32,542	4,746
Hawaii	1,986	290
Idaho	3,420	499
Illinois	54,825	7,996
Indiana	10,866	1,585
Iowa	3,585	523
Kansas	3,695	539
Kentucky	6,619	965
Louisiana	4,137	603
Maine	2,813	410
Maryland	22,173	3,234
Massachusetts	108,822	15,872
Michigan	18,477	2,695
Minnesota	14,947	2,180
Mississippi	1,048	153
Missouri	15,664	2,285
Montana	1,765	257
Nebraska	4,082	595
Nevada	11,914	1,738
New Hampshire	3,916	571

State	Total Venture and Angel-Backed Jobs	Estimated Jobs Lost Without Change in Affiliate Rule
New Jersey	21,621	3,153
New Mexico	3,585	523
New York	223,602	32,613
North Carolina	27,468	4,006
North Dakota	772	113
Ohio	25,592	3,733
Oklahoma	3,144	459
Oregon	17,374	2,534
Pennsylvania	38,609	5,631
Rhode Island	2,537	370
South Carolina	7,115	1,038
South Dakota	607	88
Tennessee	17,429	2,542
Texas	95,254	13,893
Utah	19,415	2,832
Vermont	1,820	265
Virginia	28,736	4,191
Washington	54,549	7,956
West Virginia	552	80
Wisconsin	13,293	1,939
Wyoming	1,655	241

HOW THE SBA'S AFFILIATION RULE COULD IMPACT JOBS

ITIF estimated the potential impact of the affiliation rule on jobs in venture- and angel-backed firms. First, we estimated the number of venture- and angel-capital backed startups that would qualify for SBA support if the affiliation rule were waived. Next, we estimated the number of jobs these companies currently support, directly and indirectly. Finally, we estimated layoffs that would occur in the short and long-term if these firms cannot qualify for the Paycheck Protection Program.

Estimating the number of small venture-backed firms: According to data from Crunchbase, there are 33,595 venture-backed companies with fewer than 500 employees.[15] However, the Crunchbase database does not appear to include all venture-backed firms. One study estimated that from 2010 to 2012 its database contained approximately 85 percent of VC investments.[16] More recently, Crunchbase in 2019 listed 6,505 firms receiving venture funding, while the National Venture Capital Association and Pitchbook identified 10,430 firms.[17] As such, we increase the Crunchbase numbers by 25 percent. Doing so, we estimate there are 44,790 venture-backed firms in the United States with fewer than 500 employees.

Angel capital providers also fund startups.[18] The University of New Hampshire Center for Venture Research estimated that angel capital investors in 2018 invested a total of $23 billion in 66,110 firms.[19] Because angel capital is usually in lower dollar amounts than venture capital, and it comes in earlier stages, we assume that all of this went to firms smaller than 500 employees.[20]

Estimating employment: The Crunchbase dataset lists the number of firms by employment size class (e.g., 1-10). Taking midpoint estimates of each class, ITIF estimated that venture-backed companies with fewer than 500 workers employed 1,005,370 workers before the current crisis hit.[21] Adjusting that figure for all venture capital-funded firms brings the number to 1,340,500 workers.

The Center for Venture Research estimates that angel investors supported the creation of 251,200 new jobs in the United States in 2018 (the latest year available). Angel investors supported the creation of similar numbers in prior years (e.g., 209,300 in 2017, 263,950 in 2016, and 270,200 in 2015). But these are estimates of jobs created in individual years, not the total number of jobs in all angel-backed firms in 2020, a number that is difficult to estimate without more data. ITIF assumes that not all jobs created in prior years are still in existence, so we take the sum of the last four years only, which equals 994,000 jobs. However, we assume that 10 percent of these companies have grown to over 500 workers. Also, some firms receive both angel and venture capital. One study estimated this share at 42 percent.[22] So we discount the number of jobs supported by angel capital by this amount. This suggests 519,000 net additional angel-backed jobs.

Together, the total number of U.S. jobs in venture- and angel-backed enterprises with fewer than 500 employees stood at approximately 1,859,000 million at the beginning of 2020. In addition, most venture- and angel-backed jobs are in traded sectors (where output can be provided by foreign firms), and they pay higher wages and have higher value-added per employee than other jobs, so they have much higher multipliers than traditional "mom and pop" businesses that serve local markets. Using a multiplier of 2.75, this means that small venture- and angel-backed firms directly and indirectly support a total of 5 million jobs (5,113,000).[23]

The Crunchbase dataset also allows venture-backed firms to be identified by state. We assume that the additional venture-backed firms not in this data set are distributed proportionately. And in the absence of state data for angel-backed employment we assume the same distribution for those. Table 1 shows direct venture and angel-backed jobs per state.

Estimating the number of jobs lost in the short term with and without a change in the affiliate rule: It is not possible to know what share of jobs will be lost in U.S. venture- and angel-backed firms in the current economic crisis. As discussed below, some firms will go out of business. However, many more firms will likely cut their workforce to slow their cash "burn rate." The National Venture Capital Association conducted a survey of a cross-section of its members during the week of March 23rd to learn more about how the economic downturn was affecting VC-backed companies. Among the results: One firm with an active portfolio of 140 primarily early stage companies around the country estimated that between 50 to 75 percent of firms will see layoffs. A life sciences investor estimated that half of their portfolio companies are considering layoffs. An investor with 80 portfolio companies (all but one outside California) estimated that these companies will collectively lay off 25 percent of their employees. *Business Insider* has reported on a number of venture-backed firms that have already laid off workers. It reported that, "Andreessen Horowitz-backed Wonderschool laid off 75 percent of staff."[24] Airbnb-backed Zeus Living laid off 30 percent of its staff as the coronavirus began to upend travel and hospitality startups.[25] And days after laying off 20 percent of its workforce, Brookfield-backed Convene furloughed more than half of its remaining employees.[26]

With the caveat that is impossible to know how many workers will be laid off in the end, we estimate that, in the absence of support from the Paycheck Protection Program, 25 percent of workers at venture- and angel-backed small firms will be laid off. We also assume that, even with a change in the affiliate rule to encourage these firms to avail themselves of the loans, there would still be employment loss, though significantly less—an estimated 10 percent, total. This means that, absent waiving the affiliation rule, venture- and angel-backed firms in the United States will lay off approximately 279,000 more workers than they would with the change. Adding in indirect job losses, that amounts to more 1 million jobs (1,045,000). Table 1 lists direct job-loss estimates by state.

Estimating the number of VC-backed firms that could go out of business: Many young firms, venture-backed or not, fail, especially before they reach their 10th year. However, severe economic contractions increase the rate of failures.[27] ITIF analyzed data covering all technology-based startups, including VC-backed ones, and found that startups launched in 2009 (in the midst of Great Recession) had a five-year survival rate of 47 percent. In contrast, firms launched a year later (once recovery had started) had a five-year survival rate of approximately 57 percent. It is certainly possible that the current economic contraction will be significantly worse for companies than the 2009 recession. However, we conservatively estimate that, without a change in the affiliation rule, the rate of closures of venture-backed firms after five years will be 10 percent higher than it would be with a change in the rule.

This means that there will be longer-term employment impacts from firms that otherwise would have stayed in business and grown. These long-term impacts will be much more severe than closures from "Main Street" businesses. As Akcigit, Dinlersoz, Greenwood, and Penciakova write, "most firms are born small, stay small, and innovate little."[28] This is because most small firms that are principally lifestyle businesses and "have little desire to grow big or to innovate in any observable way."[29] If a "Main Street" firm goes out business because of the COVID-19-induced recession, the owner and his or her employees clearly suffer. But once the economy returns to normalcy, market demand will restore virtually all of this local economic activity, either through firms reopening, new firms entering, or existing firms gaining market share. For example, if the nation loses 100,000 restaurants from the economic crisis, once the economy rebounds and people start going back out to eat, more restaurants will open.

In contrast, venture most capital-backed firms are born small, but they grow fast and innovate a lot. If they go out of business, the impact is much broader than if a typical mom-and-pop firm goes out of business. This is because the lion's share of VC-backed firms are in globally traded sectors, such as biotechnology, advanced manufacturing, information technology, and clean energy. If we lose a generation of these firms because of the current crisis, it is possible that other nations that either suffered reduced economic impacts or that provided their venture-backed firms with stronger support, will take market share away from U.S. firms. One can be assured that China will not let its advanced-technology startups go out of business because of the current crisis.

To estimate this job-loss impact, we look at the employment growth rate of venture-backed firms. Puri and Zarutskie found that between 1981 and 2005 venture-backed firms grew employment significantly faster than non-VC-backed firms—from around 8 employees in their first year to around 166 in their 10th year (54 percent growth per year). However, such high rates of growth reflect the low base young firms start from. Another study that accounted for firms going out of business found that venture-backed firms added at 8 percent a year growth.[30] As a result, we estimated that these firms, all small today, would expand employment 16 percent a year if they survive. Taking this rate of growth, and assuming that the current economic crisis leads to an additional 10 percent of firms going out of business because the SBA's affiliation rule precludes them from receiving support through the Paycheck Protection Program, ITIF concludes they will support 703,000 fewer jobs after 10 years.

About the Author

Robert D. Atkinson is the founder and president of ITIF. Atkinson's books include: *Big Is Beautiful: Debunking the Myth of Small Business* (MIT, 2018), *Innovation Economics: The Race for Global Advantage* (Yale, 2012), and *The Past and Future of America's Economy: Long Waves of Innovation That Power Cycles of Growth* (Edward Elgar, 2005). Atkinson holds a Ph.D. in city and regional planning from the University of North Carolina, Chapel Hill, and a master's degree in urban and regional planning from the University of Oregon.

About ITIF

ENDNOTES

1. U.S. Small Business Administration, "Small Business Compliance Guide: Size and Affiliation a Guide to the SBA's Size Program and Affiliation Rules," (June 2018), https://www.sba.gov/sites/default/files/2018-09/2018-07-13%20AFFILIATION%20GUIDE_Updated%20%281%29.pdf.
2. Barriers to Small Business Participation: Hearing before the Subcommittee on Contracting and Workforce of the Committee on Small Business, 112th Cong. 203 (2012), https://www.govinfo.gov/content/pkg/CHRG-112hhrg76461/html/CHRG-112hhrg76461.htm.
3. Victor Hwang et al., "Access to Capital for Entrepreneurs: Removing Barriers," (Ewing Marion Kauffman Foundation, April 2019), https://www.kauffman.org/wp-content/uploads/2019/12/CapitalReport_042519.pdf.
4. "Venture Impact: The Economic Importance of Venture Capital-Backed Companies to the U.S. Economy," (IHS Global Insight, 2009), 2, http://faculty.msmc.edu/hossain/grad_bank_and_money_policy/economic%20importance%20of%20venture%20capital%20backed%20companies.pdf.
5. Ufuk Akcigit, et al., "Synergising ventures: The impact of venture capital-backed firms on the aggregate economy," Vox, September 24, 2019, https://voxeu.org/article/impact-venture-capital-backed-firms-aggregate-economy.
6. Monika Schnitzer and Martin Watzinger, "Measuring the Spillovers of Venture Capital," (working paper series no. 6623, CESifo, 2017), http://www.cesifo-group.de/DocDL/cesifo1_wp6623.pdf.
7. Akcigit, et al., "Synergizing Ventures."
8. John Wu, and Robert D. Atkinson, "How Technology-Based Start-Ups Support U.S. Economic Growth, (ITIF, November 2017), p. 6, https://itif.org/publications/2017/11/28/how-technology-based-start-ups-support-us-economic-growth.
9. Thomas Chemmanur, et al., How Does Venture Capital Financing Improve Efficiency in Private Firms? A Look Beneath the Surface," Review of Financial Studies (RFS), August 30, 2009, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1025322.
10. IHS Global Insight, "Venture Impact," 8.
11. Akcigit, et al., "Synergizing Ventures."
12. Ibid.
13. Christian Catalini, et al., "Passive Versus Active Growth: Evidence from Founder Choices and Venture Capital Investment," (working paper 26073, NBER, 2019), https://ideas.repec.org/p/nbr/nberwo/26073.html.
14. Barriers to Small Business Participation: Hearing before the Subcommittee on Contracting and Workforce of the Committee on Small Business, 112th Cong. (2012) (statement of Dirk D. Haire, Partner, Fox Rothschild); Suren G. Dutia, "AGTECH: Challenges and Opportunities for Sustainable Growth," (Ewing Marion Kauffman Foundation, April 2014), https://www.kauffman.org/wp-content/uploads/2019/12/AgTechWhitePaper_42314_FINAL2.pdf.
15. Crunchbase, Company Search (Headquarters Location, Number of Employees, Founding Date, Last Funding Date, Operating Status), accessed March 29, 2020, https://www.crunchbase.com/discover/organization.companies/9982e14745719f8ee5ca7e300f082b1d.
16. "How Accurate is Chrunchbase," https://inn0vationmatt3rs.wordpress.com/2013/06/17/techcrunch-europe-please-improve-the-accuracy-of-crunchbase/
17. NVCA and PitchBook, National Venture Capital Association 2020 Yearbook, https://nvca.org/wp-content/uploads/2020/03/NVCA-2020-Yearbook.pdf.
18. The Kaufman foundation reports that angle funded firms were about 12 percent more than VC-backed firms in 2014. See Dane Stangler, et al., "Trends in Venture Capital, Angel Investments, and Crowdfunding across the Fifty Largest U.S. Metropolitan Areas," (Kauffman Foundation, December 2016), https://www.kauffman.org/entrepreneurship/reports/trends-in-venture-capital-angel-investments-and-crowdfunding/.

19. Jeffrey Sohl, “The Angel Market in 2018: More Angels Investing in More Deals at Lower Valuations,” Center for Venture Research, May 9, 2019, https://paulcollege.unh.edu/sites/default/files/resource/files/2018-analysis-report.pdf.
20. In 2013, 91 percent of all angel investment was invested in seed and early stage deals. See http://www.law.northwestern.edu/research-faculty/clbe/events/innovation/documents/Dutta_angel_VC.pdf
21. Crunchbase provides data on the number of VC-backed companies in a number of size ranges (e.g., 1-10, 11-50, etc.). ITIF used the mid-point employment range for each category (e.g., for firms from 1 to 10 we used the mid-point of 5.5 jobs) and multiplied that by the number of firms in each size category.
22. Supradeep Dutta and Timothy B. Folta, “A comparison of the effect of angels and venture capitalists on innovation and value creation,” http://www.law.northwestern.edu/research-faculty/clbe/events/innovation/documents/Dutta_angel_VC.pdf.
23. Manufacturing jobs have a multiplier of 2.91. (Calculated based on multipliers from the Bureau of Economic Analysis, U.S. Department of Commerce Regional Input Output Modeling System (RIMS II), n.d. (accessed January 1, 2009). The multipliers are based on 2006 national annual input-output data and 2006 regional data.). NIH funding has a multiplier of 2.67. https://www.unitedformedicalresearch.org/wp-content/uploads/2017/03/NIH-Role-in-the-Economy-FY2016.pdf
24. Melia Russell, “Andreessen Horowitz-backed Wonderschool just laid off 75% of staff on a Zoom call, telling employees the coronavirus could dry up any more funding for 2 years,” Business Insider, March 25, 2020, https://www.businessinsider.com/andreessen-horowitz-wonderschool-layoffs-coronavirus-2020-3.
25. Alex Nicoll, “Airbnb-backed Zeus Living just laid off 30% of staff as the coronavirus upends travel and hospitality startups,” Business Insider, March 24, 2020, https://www.businessinsider.com/airbnb-backed-zeus-living-cuts-thirty-percent-of-staff-2020-3.
26. Alex Nicoll, “Days after laying off 20% of its workforce, Brookfield-backed Convene furloughs more than half of remaining employees due to coronavirus closures,” Business Insider, March 25, 2020, https://www.businessinsider.com/convene-furloughs-half-of-remaining-employees-after-layoffs-last-week-2020-3.
27. John Wu, and Robert D. Atkinson, “How Technology-Based Start-Ups Support U.S. Economic Growth, (ITIF, November 2017), Figure 20, https://itif.org/publications/2017/11/28/how-technology-based-start-ups-support-us-economic-growth.
28. Akcigit, “Snergising Ventures.”
29. Erik Hurst, and Benjamin Wild Pugsley, “What Do Small Businesses Do?,” (The Brookings Institution, August 2011), https://www.brookings.edu/wp-content/uploads/2016/07/2011_fall_bpea_conference_hurst.pdf.
30. IHS Global Insight, “Venture Impact,” 8.