



“Jobs! Jobs! Jobs!”

Testimony before the
Subcommittee on Innovation, Entrepreneurship, and Workforce Development
of the
Committee on Small Business
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Chairman Crow, Ranking Member Kim, and members of the subcommittee, thank you for the invitation to testify today.

My name is John Dearie and I'm the founder and president of the Center for American Entrepreneurship. CAE is a nonpartisan research, policy, and advocacy organization whose mission is to engage policymakers in Washington and across the nation regarding the critical importance of entrepreneurs and startups to innovation, economic growth, and job creation – and to pursue a comprehensive policy agenda intended to significantly enhance circumstances for new business formation, survival, and growth.

Introduction

The focus of today's hearing is both timely and critically important. Despite robust job creation in recent months – 559,000 in May, 278,000 in April, and 785,000 in March – the damage to the U.S. labor market inflicted by Covid-19 remains profound. Indeed, even if the Bureau of Labor Statistics (BLS) reports this Friday that 1 million new jobs were created in June – as some economists have forecast – nonfarm payrolls will still be down nearly 7 million from pre-pandemic levels and more than 10 million jobs short of likely employment had the pandemic not happened.

New job creation, therefore, remains an urgent national priority – which is why I very much appreciate the opportunity to express CAE's strong support for the **Next Generation Entrepreneurship Corps Act**, recently introduced by you, Mr. Chairman, and Rep. Troy Balderson (R-OH) in the House, along with Senators Chris Coons (D-DE) and Tim Scott (R-SC).

The Act will encourage entrepreneurship and job creation in under-served communities across the country by way of a new competitive fellowship program that will select 320 entrepreneurs annually from diverse backgrounds who will receive startup capital, mentoring, and other support to start both traditional and high-growth businesses in distressed or low-income areas.

CAE is proud to support the Act, Mr. Chairman, and salutes you and your co-sponsors for your leadership.

Startups Are the Engine of Job Creation

Given the urgency of job creation, the focus of this hearing on entrepreneurship is very much on target. Members of this subcommittee are no doubt familiar with the reality that new businesses – or “startups” – are responsible for most net new job creation.¹ I confess that when I first heard that I didn’t believe it. What about every other kind of business – small and large, older and younger – don’t they create jobs too?

To grasp the critical importance of startups to job creation, it’s important to first understand how tremendously dynamic the U.S. labor market is. Most of the activity in the labor market each year reflects what labor economists refer to as “churn” – the continuous process of hiring and separation that occurs as new businesses form and others close, as existing businesses create new jobs and eliminate others, and as workers leave old jobs for new opportunities.

When the Labor Department reports that 200,000 jobs were created in a particular month, for example, it’s because there were 4.8 million separations – people either losing or leaving their jobs – and 5 million new hires, or some similar differential.

In 2019, 67.9 million separations occurred while 70 million Americans took new jobs, for a net gain of just over 2 million new jobs.² Assuming a 40-hour work-week, annual hire and separation figures imply that approximately 34,000 jobs are destroyed, and slightly more are created, every hour America is open for business. Indeed, about a third of the U.S. labor force turns over in a typical year.

The relevance of monthly hires and separations to the importance of startups is that research by the Census Bureau, the Ewing Marion Kauffman Foundation, and others has shown that existing businesses, of any age or size, in aggregate, nearly always produce more separations than hires.³ Indeed, considered together, existing businesses shed on a net basis – total separations subtracted from total new hires – about 1 million jobs each year, as they become more efficient, incorporate capital and technology, and increasingly focus on what they do best.

¹ Ryan Decker, John Haltiwanger, Ron Jarmin, and Javier Miranda, “The Role of Entrepreneurship in U.S. Job Creation and Economic Dynamism,” *Journal of Economic Perspectives*, Volume 28, Number 3, Summer 2014, Pages 3–24.

² “Job Openings, Hires, and Quits Set Record Highs in 2019,” U.S. Bureau of Labor Statistics, June 2020.

³ John Haltiwanger, Ron Jarmin, and Javier Miranda, “Business Dynamics Statistics Briefing: Jobs Created from Business Startups in the United States,” Ewing Marion Kauffman Foundation, January 2009. See also Tim Kane, “The Importance of Startups in Job Creation and Job Destruction,” Ewing Marion Kauffman Foundation, July 2010.

By stark contrast, new firms in their first year of existence create an average of about 3 million new jobs every year. Stated another way, were it not for new businesses, total employment in this country would actually shrink by about a million jobs in most years.

But how many of those new jobs survive? New businesses are inherently risky and fragile. Roughly a third close by their second year, half within the first five years, suggesting that many of the jobs initially created are eventually lost.

Economists Robert Litan and Michael Horrell answered this critical question in 2010. Using Census Bureau data, they constructed startup “classes” or cohorts – new businesses grouped by the year of their formation. By tracking total employment of the various classes year after year, Litan and Horrell showed that, after five years, surviving firms of each class had employees totaling 80 percent of the initial new employment created by that class, as job growth at surviving firms offset job losses at shrinking or failed firms.⁴

Helping to further explain this reality is another Census Bureau study, which determined that new firms that survive tend to grow at much faster rates than older businesses. The study’s authors found what they described as a “rich ‘up-or-out’ dynamic for startups and young firms,” meaning that while there is a high failure rate among new businesses, those that survive tend to grow and hire at very rapid rates.⁵

To be sure, companies that grow and create jobs at such exponential rates are rare. Even so, repeated research makes clear that new businesses are America’s true engine of job creation, adding an average of 3 million net new jobs each year, while ongoing churn at existing firms eliminates a net average of about 1 million jobs annually.

Startups Are an Important Engine of Economic Growth

Startups also contribute to job creation more generally as a powerful driver of economic growth. Over most of economic history, it had been widely understood that economic growth stems from enhancements to one or both of the two principal components of an economy – labor and capital (machinery). For an economy to grow, it was thought, either the supply of labor had to expand or capital intensity had to somehow increase, or both.

But in 1957, American economist Robert Solow demonstrated that most of economic growth cannot be attributed to increases in labor or capital, but only to gains in productivity – more output per unit of input – driven by innovation. As businesses and workers become more efficient, costs fall, profits and incomes rise, demand expands, and economic growth and job creation accelerate.⁶

⁴ Robert E. Litan and Michael Horrell, “After Inception: How Enduring is Job Creation by Startups?” Ewing Marion Kauffman Foundation, July 2010.

⁵ John Haltiwanger, Ron Jarmin, and Javier Miranda, “Who Creates Jobs? Small vs. Large vs. Young,” NBER Working Paper Series, Working Paper 16300, August 2010.

⁶ Robert M. Solow, “Technical Change and the Aggregate Production Function,” *Review of Economics and Statistics* (The MIT Press) 39, no. 3, 1957: 312–320.

Solow's identification of innovation-driven productivity gains as the driver of economic growth has been echoed by economists ever since. As Nobel Laureate economist Paul Krugman has observed: "Productivity isn't everything, but in the long run it's almost everything."

A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker...Compared with the problem of slow productivity growth, all our other long-term economic concerns – foreign competition, the industrial base, lagging technology, deteriorating infrastructure, and so on – are minor issues.⁷

Solow's growth model is one of the great economic insights of all time – the economic equivalent of E=MC². Solow was awarded the Nobel Prize in economics in 1987, the National Medal of Science in 1999, and the Presidential Medal of Freedom in 2014.

The great significance of Solow's work is that it not only defined the *nature* of economic growth, it identified its principal *source*. That's because economists have long understood that innovation – particularly major or “disruptive” innovation – comes disproportionately from new businesses.

And that makes sense – entrepreneurs typically launch a new business because they have something new: a new product or new service, or some innovative twist on an old idea. Existing firms do innovate, but mostly at the margin. They don't innovate in the same way or to the same extent as new businesses because they're heavily invested in the establishment – their product, their service, their way of doing things. And they're definitely not interested in disruption.

Economists Robert Litan and Carl Schramm emphasized this reality in their 2012 book “Better Capitalism”:

[E]ntrepreneurs throughout modern economic history, in this country and others, have been disproportionately responsible for truly radical innovations – the airplane, the railroad, the automobile, electric service, the telegraph and telephone, the computer, air conditioning, and so on – that not only fundamentally transformed consumers' lives, but also became platforms for many other industries that, in combination, have fundamentally changed entire economies...

Large companies, with their large fixed costs of plant, equipment, and to some extent personnel, have perfected the economic arts of economies of scale production and incremental innovation. But...most large companies are less eager to pursue radical innovations – those that disrupt current business models in which the firms are heavily invested.⁸

Joseph Schumpeter called the constant process of insurgents overtaking and replacing incumbents “creative destruction” and proclaimed it to be the driving force of capitalist progress.

From the standpoint of innovation, economic growth, and job creation – arguably the three most important metrics of economic health and vitality – thriving entrepreneurship is the beating heart, the very soul, of any economy.

⁷ Paul Krugman, *The Age of Diminished Expectations*, The Washington Post Company, 1990, pp. 9–13.

⁸ Robert E. Litan and Carl J. Schramm, *Better Capitalism: Renewing the Entrepreneurial Strength of the American Economy*, Yale University Press, 2012.

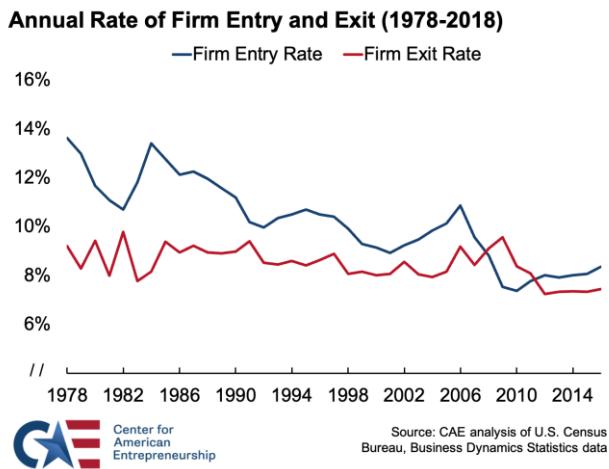
The Engine of Growth and Job Creation is Breaking Down

Unfortunately, as scholars at the Kauffman Foundation, the Brookings Institution, and elsewhere have documented, entrepreneurship in America is in trouble. Not everywhere, of course; in places like Silicon Valley, Austin, TX, Boulder, CO, and Cambridge, MA entrepreneurship is thriving. But in broad terms, entrepreneurship in America is struggling.

After remaining remarkably consistent for decades, the number of new businesses launched in the United States peaked in 2006 and then began a precipitous decline – a decline accelerated by the Great Recession. From 2000 to 2006, the economy produced an average of 511,000 new employer firms every year. Between 2009 and 2019, however, the number of new businesses launched each year dropped to about 400,000 – meaning, over that period, the United States experienced a startup deficit of 100,000 missing new firms every year, or one million in total.⁹

A spike in new business applications occurred in 2020, as many people who lost their jobs due to the Covid-19 economic shut-down filed applications to launch a new business. But the Covid-driven increase in applications is unlikely to signal a reversal in the multi-year decline in entrepreneurship. The spike in new business applications is due more to economic necessity rather than a sudden surge in entrepreneurial fervor. Moreover, the largest portion of new business activity has been “non-store retail” – people selling products online – so many of these new businesses are sole-proprietorships unlikely to grow quickly or create many jobs.¹⁰

Even more alarming, economists Robert Litan and Ian Hathaway have shown that *rates* of entrepreneurship – the fraction of all U.S. businesses that are new – have fallen near a four-decade low, and that this decline is occurring in all 50 states, in all but a handful of the 360 metro areas they examined, and across a broad range of industry sectors.¹¹



⁹ Business Dynamic Statistics, Census Bureau, <https://www.census.gov/ces/dataproducts/bds/data.html>.

¹⁰ See “The Startup Surge? Unpacking 2020 Trends in Business Formation,” Jimmy O’Donnell, Daniel Newman, and Kenan Fikri, Economic Innovation Group, February 8, 2021.

¹¹ “Declining Business Dynamism in the United States: A Look at States and Metros,” Robert E. Litan and Ian Hathaway, The Brookings Institution, May 5, 2014.

As Solow's growth model would predict, U.S. productivity has fallen along with the decline in rates of new business formation. Annual productivity gains averaged about 2.5 percent from 1948 to 2000, but have fallen to about 1.4 percent since 2005 – a full percentage point slower. Productivity surged by 5.4 percent in the first quarter of 2021, but the spike is mostly attributable to the sharp recovery in economic output as the nation emerges from the pandemic.

As expected, anemic productivity growth has subdued economic growth. For 54 years following World War II – from 1947 and 2000 – the U.S. economy grew at an average annual rate of 3.5 percent. By stark contrast, the economy has not grown at 3 percent or better, on a year-over-year basis, since 2005 – 15 years ago. And since the end of the Great Recession in 2009, the economy has grown at the lackluster annual pace of just 2.3 percent.

The economy is expected to grow by 6 or 7 percent this year after contracting by 3.5 percent last year due to the pandemic. Following this brief surge in growth, however, most economists expect the economy to return to the pre-pandemic trend of sub-3 percent growth.

The difference between growth of 2.3 percent and 3.5 percent may not seem significant, but in an economy the size of the U.S. economy percentage points matter – a lot. Had the economy grown at 3.5 percent rather than 2.3 percent since emerging from recession in 2009, economic output in 2019 alone would have been \$2.4 trillion – or 12 percent – greater than it was. By the way, \$2.4 trillion is roughly the size of France's economy – the world's seventh largest. American businesses, households, and consumers missed out on additional economic activity equivalent to the world's seventh largest economy, in 2019 alone.

Over a 25-year period, the difference between a U.S. economy growing at 3.5 percent annually rather than 2.3 percent is an additional – that is, on top of the output generated at 2.3 percent – \$116 *trillion* in economic output.

Nobel Prize recipient Edward Prescott and his colleague Lee Ohanian from Stanford University have argued that the economy's anemic performance in recent years is due largely to the plunge in productivity growth – caused by the dramatic decline in startups:

The remarkable productivity growth that has enabled the U.S. to become the wealthiest country on earth has slowed considerably in recent years.

The most recent period of rapid productivity growth in the U.S. – and rapid economic growth – was in the 1980s and '90s and reflected the remarkable success of new businesses in information and communications technologies, including Microsoft, Apple, Amazon, Intel, and Google. These new companies not only created millions of jobs but transformed modern society, changing how much of the world produces, distributes and markets goods and services.

Sadly, the annual rate of new business creation is about 28 percent lower today than it was in the 1980s, according to our analysis of the U.S. Census Bureau's Business Dynamics Statistics annual data series. Getting the U.S. economy back on track will require a much higher annual rate of new business start-ups.¹²

¹² Edward C. Prescott and Lee E. Ohanian, "U.S. Productivity Growth Has Taken a Dive," *The Wall Street Journal*, February 3, 2014.

Why are Startup Rates Declining?

Rates of new business formation have fallen near multi-decade lows, both in terms of the number of new businesses being launched and the share of all U.S. businesses that are new. But why?

To find out – and to stay in close touch with entrepreneurs and their unique challenges and needs – my CAE colleagues and I get out of Washington on a regular basis and conduct roundtables with entrepreneurs in cities and towns across the country.

A remarkable take-away from our roundtables – and enormously significant from the standpoint of potential policy solutions – is that the problems and obstacles encountered by entrepreneurs all across the country are remarkably consistent. Here’s some of what they tell us:

- “We have the jobs, and we need to fill them to survive, but we can’t find enough people with the skills we need.”
- “The country’s immigration policies exacerbate the talent problem because they undermine our ability attract and retain the world’s best and most innovative people.”
- “A number of major ‘life risks’ – such as limited access to portable and affordable healthcare¹³ and childcare,¹⁴ record levels of student debt,¹⁵ retirement savings uncertainty,¹⁶ and the proliferation of noncompete agreements – make entrepreneurship especially risky.”
- “Access to sufficient startup capital at reasonable terms is a constant challenge.”
- “Regulatory burden, complexity, and uncertainty is particularly problematic for startups because they lack the resources and scale of larger firms over which to absorb and amortize the costs of compliance. Regulation uncertainty and complexity also distract entrepreneurs from focusing on their business, increasing the chances of mistakes and failure.”
- “Tax complexity and uncertainty also diverts too much of our time and attention away from our new businesses – and a number of aspects of the U.S. tax code are unsupportive of, or even hostile to, startups and their investors.”

Our regular roundtables with entrepreneurs reveal a number of critical insights central to any discussion about accelerating economic growth and job creation.

¹³ See “Pass the Primary Care Enhancement Act,” John R. Dearie, *The Hill*, May 23, 2020.

¹⁴ See “National Childcare Policy is Pro-Entrepreneurship and Pro-Growth,” John R. Dearie and Leslie Lynn Smith, *The Hill*, April 21, 2021.

¹⁵ See “Free Entrepreneurs from Student Debt to Supercharge the Economy,” Sarah-Eva Marchese and John R. Dearie, *The Hill*, February 2, 2019.

¹⁶ See “‘SECURE 2.0’ Will Modernize Retirement Security for the Post-COVID American Workforce,” John R. Dearie, *The Hill*, May 28, 2021.

First, new businesses are extremely fragile – a third fail by their second year, half by their fifth. And yet, those new businesses that survive tend to innovate, grow, and create jobs at very rapid rates.

Second, the policy needs and priorities of new businesses are unique. Startups are different from existing businesses. The challenges they confront are different and their ability to successfully navigate those challenges is more limited.

Third, many policymakers in Washington and around the country don't sufficiently understand or appreciate the unique nature, importance, vulnerabilities, and needs of startups. Focused on the priorities of either large corporations or the small business community, policymakers too often overlook the economy's true engine of growth and job creation.

Finally, policy help for America's entrepreneurs is urgently needed. Given the critical role they play as the principal source of innovation, economic growth, and job creation – and given the damage to new and small businesses inflicted by the Covid-19 crisis – America's young businesses need and deserve a comprehensive policy framework designed to promote new business formation, survival, and growth.

Conclusion

Economic growth is driven by productivity gains, which are driven by innovation – which comes disproportionately from new businesses. Revitalizing American entrepreneurship, therefore, is the *essential pathway* to faster economic growth and job creation.

And that necessary revitalization requires changes in public policy. Fortunately, we have an excellent sense of what needs to be done. Research conducted in recent years, together with input from entrepreneurs by way of the roundtables mentioned above and other forums, has produced a uniquely credible pro-entrepreneurship growth agenda that, if enacted, would dramatically enhance the circumstances for new business formation, survival, and growth – and, in doing so, accelerate economic growth to rates necessary to generate the opportunity, jobs, and wage growth the American people need and deserve.

That agenda is presented in the Appendix that follows.¹⁷

The **Next Generation Entrepreneurship Corps Act** – which will promote entrepreneurship in under-served areas of the country and among under-represented demographic groups – is an excellent example of the kind of pro-entrepreneurship policy that America needs now more than ever.

Thank you for organizing this important hearing and for inviting me to participate.

¹⁷ For more on the importance of entrepreneurship and startups to innovation, economic growth, and job creation – and startups' unique policy needs – visit www.startupsUSA.org. Also see “Where the Jobs Are: Entrepreneurship and the Soul of the American Economy,” John R. Dearie and Courtney Geduldig, Wiley, 2013.

Appendix

Policy Agenda to Revitalize American Entrepreneurship

Recent research has demonstrated that new businesses – “startups” – are disproportionately responsible for the innovations that drive productivity growth and economic growth, and account for virtually all net new job creation. Alarmingly, recent research has also demonstrated that rates of entrepreneurship in America have fallen near a 40-year low, *and that this decline is occurring in all 50 states, in all but a handful of 360 metro areas examined, and across a broad range of industry sectors, including high-technology.*

Given the importance of thriving entrepreneurship to innovation, economic growth, job creation, rising wages, and expanding opportunity, such circumstances amount to nothing less than a national emergency. And this emergency is particularly urgent given the need to accelerate the economic recovery following the Covid-19 pandemic. Reversing the decline in American entrepreneurship requires changes in public policy.

CAE’s recommended policy agenda is structured in response to a straightforward question: What do entrepreneurs need to thrive? The simplest answer is:

- Great new ideas (innovation);
- Access to capital;
- Access to skilled talent; and,
- Relief from distractions like regulatory and tax burden, complexity, and uncertainty.

Innovation

Innovation the basic craft and contribution of entrepreneurs. Whether a new product or service, “building a better mousetrap,” or new methods of producing, distributing, or delivering products and services, new ideas are the essence of innovation, which drives productivity gains and economic growth, and creates jobs, wealth, and opportunity. New ideas can come from the mind and imagination of entrepreneurs or as the result of scientific inquiry and discovery.

Restore the Research and Development (R&D) Tax Credit to the Most Favorable in the World

The Research and Experimentation Tax Credit – commonly known as the research and development (R&D) tax credit – was created as part of the Economic Recovery and Tax Act of 1981 to incentivize technological progress and innovation by allowing businesses to deduct a portion of the cost of research and product development from their taxable earnings. The United States was one of the first countries to incentivize R&D by way of the tax code and claimed the world’s most generous tax treatment of R&D into the early 1990s.

Since its introduction, the R&D tax credit has been shown to be a powerful driver of innovation and economic growth. A large and growing body of research indicates that R&D investment is associated with future gains in profitability and market value at the firm level, and with increased productivity at the firm, industry, and broader economy levels. R&D also has significant “spill-over” benefits, as research conducted by one firm can lead to progress that increases the productivity, profitability, and market value of other firms in related fields. A [2015 analysis](#) of the R&D expenditures of 15 OECD countries over the period 1990 to 2013 concluded that a 1 percent increase in R&D spending accelerates economic growth by 0.61 percent. Research also shows that R&D investment has become increasingly mobile, with businesses and corporations locating more of their investment outside their home countries. Investment location decisions are determined by many factors, including the growth of foreign markets, production costs, talent and skills availability – and tax and other incentives offered by governments.

The United States no longer claims the most favorable tax treatment of corporate R&D. A [recent analysis](#) by the Information Technology and Innovation Foundation has shown that the United States now ranks 24th out of 34 nations studied in terms of R&D tax treatment. More favorable tax treatment of R&D means that foreign companies are able to invest more heavily in relative terms, with potentially profound implications for innovative advantage over the longer term. Moreover, as global companies – including American companies – look for places to invest in R&D, many other countries are now substantially more attractive than the United States.

Restoring America’s preeminence in incentivizing R&D will not be cheap. But losing the innovation advantage our nation has enjoyed for 80 years would be much more costly. Moreover, academic research regarding the stimulative effect of R&D investment on the rate of economic growth and job creation, as well as the significant “spillover” impact of such investment, strongly suggests that any short-term loss in tax revenue will be substantially or even entirely recovered through faster economic growth and job creation over the longer run.

Enhance the Tax Provisions of the PATH Act

The R&D tax credit would be particularly relevant for startups, which often incur substantial losses in their early years due to development of new products, services, methodologies, and techniques – and for whom preservation of cash flow and operating capital is crucial to survival. And yet, until recently, startups were largely shut out of any benefit associated with the credit because it can only be applied against taxable earnings, which many startups don’t have for years, and sometimes many years.

The **Protecting Americans from Tax Hikes** (“PATH”) Act of 2015 made a number of improvements to the application of the R&D tax credit, perhaps most notably finally making the credit permanent after numerous extensions and expirations since its creation in 1981. Now certain of the credit’s availability, businesses can make investment decisions more effectively and efficiently. In addition, the PATH Act addressed the disconnect between the policy intention of the R&D credit and startups by allowing new businesses to apply the credit against payroll taxes, rather than income taxes, up to \$250,000 annually. To qualify, companies must have had gross receipts for five years or less and gross receipts of less than \$5 million for the tax year the credit is applied.

CAE recommends enhancing the PATH Act's tax provisions for startups by: 1) aligning the criterion for eligibility with that of Section 1202 of the tax code; 2) raising the eligibility threshold; and, 3) increasing the deduction limit.

First, CAE recommends that the eligibility criterion be changed from gross *receipts* to gross *assets*. This change would make the PATH Act provisions consistent with the tax code's definition of "Qualified Small Business," (QSBs) which are currently defined as businesses with "less than \$50 million in gross assets." This consistency would simplify and harmonize related provisions of the tax code, facilitating compliance and reporting by investors and, thereby, promoting capital formation.

Second, CAE recommends that the eligibility threshold for the PATH Act's payroll tax provisions be raised from the current definition of QSBs of "less than \$50 million in gross assets" to "less than \$100 million in gross assets." The current gross asset limit is too restrictive, as the high costs of innovative research, coupled with valuable intellectual property and successive rounds of financing, often push new innovative companies over the \$50 million limit (see recommendation regarding Section 1202 on page 20 below).

Finally, CAE recommends that the payroll tax credit deduction limit be raised from the current \$250,000 to \$1 million. Doing so would align U.S. policy with similar policy in Canada, a major innovation competitor to the United States.

Restore Government R&D to its Historical High

For eighty years, research and scientific advancement funded by the U.S. government has been a critical source of America's global leadership in technology and innovation. Federal R&D investment has supported large-scale national achievements like winning World War II, splitting the atom, and landing men on the moon, and fueled the development of new technologies that spawned new industries like wireless telecommunications, computers, digital information, and genome-based pharmaceuticals.

In recent decades, however, the federal government's commitment to research and development has waned dramatically. After peaking in 1964, federal R&D investment as a percent of GDP and total federal outlays has plunged to the lowest levels in 60 years, undermining America's technological edge and raising alarming strategic challenges, particularly from China. In addition to enhancing the tax treatment of commercial R&D, CAE urges policymakers to restore U.S. government funding of R&D to the historical high of 2 percent of GDP. To do so, funding would need to increase from the current \$125 billion annually to \$450 billion.

Under the leadership of [Vannevar Bush](#), Dean of MIT's Department of Engineering and, most notably, science advisor to President Franklin D. Roosevelt and the first Director of the Office of Scientific Research and Development established in 1941 (later replaced the [National Science Foundation](#)), the U.S. government carried out wartime research and development that led to breakthroughs that helped win the war, including advances in radar technology, computers, cryptography, and the Manhattan Project to build the atomic bomb. Following the successful launch of the "sputnik" satellite by the Soviet Union in 1957, federal R&D spending [increased quickly](#), peaking at 2 percent of GDP and 10 percent of total federal outlays in 1964, after President John F. Kennedy set America's sights on the moon.

At that time, the federal government funded two-thirds of all R&D conducted in the United States – an amount greater than the R&D spending by the rest of the world’s governments and businesses, combined.

Over subsequent decades, however, growth in federal R&D spending slowed. R&D outlays grew at an average annual rate of 5.6 percent between 1953 and 1985, then fell to an average annual rate of just 0.4 percent between 1990 and 2016. By the mid-1990s, federal R&D investment had fallen below 1 percent of GDP, where it has remained ever since. As Goldman Sachs pointed out in a [May 2020 report](#), “In FY 2019, federal R&D spending equaled 0.6 percent of U.S. GDP and 2.8 percent of total federal outlays, the lowest in over 60 years.” U.S. R&D investment as a percent of GDP now [ranks 10th](#) in the world, behind major economic competitors such as Japan, South Korea, Taiwan, and Germany.

Particularly alarming is the decline in federal funding of basic research. Basic or pure research is conducted to gather general information and to expand existing knowledge and understanding, whereas applied research is conducted for more targeted purposes – to resolve a particular question or to achieve a specific commercial objective. In this sense, basic research is the foundation for applied research, establishing the context of knowledge and understanding within which additional progress can be made regarding specific inquiries. While businesses conduct some basic research, they are not well suited for such projects, given the scale and risk that basic research entails together with the unknown practical outcome of such inquiry.

Government funding of basic research has played a critical role in driving many technological breakthroughs that have helped U.S. industry become a global technology leader, and in the creation of iconic America companies – including Sun Microsystems, Pfizer, Genentech, Cisco, and Google – which trace their origin back to federally funded basic research. In fiscal year 2017, the federal government funded \$40.2 billion in basic research, down 13 percent from 2005 in inflation-adjusted terms. This decline followed more than 50 years of steady increases.

As the United States has reduced its commitment to R&D, other nations have [dramatically expanded](#) theirs. Over the period 2000 to 2017, India increased domestic R&D spending at an average annual rate of 8 percent, South Korea by 10 percent, and China by nearly 20 percent.

The competitive threat from China is of particular concern. In recent years, China has targeted critical industries like petrochemicals, electronics, metals and materials, machinery and equipment, pharmaceuticals and biotechnology, information technology, and [artificial intelligence](#). China’s [Belt and Road](#) infrastructure initiative, the [Made in China 2025](#) plan to dominate global manufacturing, and the [China Standards 2035](#) blueprint are critical aspects of China’s ambition to be the 21st century’s unrivaled economic super-power – all supported by robust research and development. According to the [National Science Board](#), China [likely surpassed](#) the United States in R&D funding for the first time in 2019.

If America is to retain its status as the world’s innovation leader, the multi-decade decline in federal government’s commitment to scientific research must be reversed. Tripling federal R&D funding is a major challenge given current fiscal circumstances, but there is little doubt that America’s economic future depends on such a commitment. To argue that we can’t afford to meet the competition is to argue that we can’t afford to own the future.

Pass the Endless Frontier Act

Scientific and technological innovations – when transmitted into society through licensing or entrepreneurship – drive gains in productivity, which in turn drive economic growth, job creation, and expanding opportunity. To remain a global innovation leader in an increasingly competitive world economy, and to accelerate the economic recovery from the Covid-19 crisis, the United States must renew its commitment to science- and technology-driven innovation.

CAE strongly supports the immediate enactment of the **Endless Frontier Act**. [Introduced](#) on May 27, 2020 by Senators Charles Schumer (D-NY) and Todd Young (R-IN), along with Reps. Ro Khanna (D-CA) and Mike Gallagher (R-WI), the bipartisan, bicameral [legislation](#) is intended to enhance U.S. leadership in science and tech innovation. The legislation – re-named the **U.S. Innovation and Competition Act** – was passed by the Senate on June 8, 2021 with a bipartisan vote of 68-32.

The Act will address this national priority in several important ways. The Act would expand the National Science Foundation (NSF), to be renamed the National Science and Technology Foundation (NTSF); establish a new Technology Directorate within the NTSF; authorize \$100 billion for the new directorate to reinvigorate American leadership in the discovery and application of ten key technology areas that will define global competitiveness; authorize an additional \$10 billion for the Commerce Department to designate at least 10 regional technology hubs; and fund programs to accelerate the transfer of new technologies from the lab to the marketplace.

Streamline Technology Transfer and Commercialization of Government-Funded Innovation

The principal way new innovations and technologies are transmitted into the economy for the benefit of broader society is through commercialization, either by way of licensing to existing businesses or through startups. But too often, promising innovations stemming from federally-funded research face a slow, cumbersome, and uncertain path to commercial viability. Discoveries with significant social and economic benefit often take years to reach the commercial marketplace, while other innovations never leave the research lab. More streamlined and efficient commercialization of federally-funded innovation would dramatically enhance the competitiveness and growth capacity of the U.S. economy.

On May 1, 2018, the National Institute of Standards and Technology (NIST) issued a Request for Information (RFI), [published](#) in the Federal Register, pursuant to its [Return on Investment \(ROI\) Initiative for Unleashing American Innovation](#), the purpose of which is to dramatically increase returns on federal investment in research and development through reform of tech transfer and commercialization procedures. In response, CAE submitted a [comment letter](#) on July 30, 2018.

In April of 2019, NIST released its final [Green Paper](#) summarizing stakeholder input received from hundreds of experts and organizations representing thousands of companies, universities, federal laboratories, and other institutions. The paper focused on 15 major findings by NIST to help inform decision-making and implement reform actions by the relevant departments and agencies – eight of which would require revisions to the [Stevenson-Wydler Technology Innovation Act](#) of 1980.

On December 10, 2020, NIST announced that it had transmitted an [ROI legislative package](#) for modernizing the Stevenson-Wydler Act to the Senate Committee on Commerce, Science, and Transportation and its Subcommittee on Science, Oceans, Fisheries and Weather, as well as the House Committee on Science, Space, and Technology and its Subcommittee on Research and Technology for consideration. The ROI legislative proposal responds directly to the findings summarized in the NIST Green Paper. CAE strongly supports the enactment of the NIST-suggested reforms.

Expand I-Corps

The National Science Foundation's (NSF) [Innovation Corps](#) ("I-Corps") program was created in 2011 to accelerate the translation of scientific and engineering discoveries into technologies, products, processes, and services that enhance the nation's competitiveness, benefit society, and promote economic growth. Developed by famed Silicon Valley entrepreneur Steve Blank and based on his "Lean Startup" model, I-Corps provides training and mentoring to university-based researchers and faculty to explore the commercial potential of NSF-funded research. The goals of the I-Corps program are to: 1) spur translation of fundamental research to the marketplace; 2) encourage collaboration between academia and industry; 3) train NSF-funded faculty, students, and other researchers in innovation and entrepreneurship; and, 4) maximize the potential of NSF's investments in basic research through creation of a National Innovation Network (NIN) comprising I-Corps "Nodes" (central training sites) and sites (universities) that work cooperatively to build, utilize, and sustain the national innovation ecosystem.

Since its launch in 2011, the I-Corps program has been adopted by several other federal research agencies including the National Institutes of Health, the Department of Energy, the Department of Health and Human Services, and the National Security Agency, and has delivered remarkable results – to date, the program has trained over 1,200 teams of scientists and engineers, resulting in 583 startups and \$300 million in follow-on funding. The FY 2019 funding request for I-Corps was just \$30 million. CAE recommends that I-Corps' resources be significantly increased and that the program be expanded to include all research agencies, including through widespread integration into other relevant R&D programs such as the Small Business Innovation Research (SBIR) program.

Access to Talent

A wide and worsening disconnect between the skill needs of 21st century employers, including startups, and the skills of graduates from American high schools, colleges, and universities – often referred to as the “skills gap” – is arguably the most significant obstacle to the full productive capacity of the U.S. economy and to our nation’s ability to fulfill its sacred promise of providing opportunity for all American citizens. Roundtables with entrepreneurs conducted regularly across the country by CAE staff reveal that finding job applicants with appropriate skills is one of the most difficult challenges confronted by American startups. Current immigration policies further exacerbate the skilled talent shortage problem. Moreover, a number of major structural economic barriers – “life risks” – impede thriving entrepreneurship in America, such as limited access to portable and affordable healthcare and childcare, record levels of student debt, and the proliferation of noncompete agreements.

Establish the “U.S. Business-Education Workforce Dialogue”

The President should direct the Department of Commerce and the Department of Education to immediately co-establish the U.S. Business-Education Workforce Dialogue – a framework of ongoing discussion and collaboration between business and education leaders to regularly examine kindergarten through grade 12, community college, and university curricula to ensure that the nation’s education system serves the broader educational needs of American students, as well as the skill requirements of 21st century businesses.

The Dialogue should include educators at K-12 schools, community and vocational colleges, and universities, as well as leaders of multinational corporations, regionally active firms, small businesses, and young startups. Dialogue participants should meet on a regular basis – at least semi-annually – in pursuit of a robust and specific agenda, facilitated by a dedicated staff.

Importantly, the Departments should neither set the agenda for the Dialogue nor seek to pre-determine its outcomes. Rather, the Administration’s role should be to establish, facilitate, and encourage the Dialogue, allowing business and education leaders to identify the relevant issues and, working together, develop and implement effective solutions, with the help of policymakers.

A particular focus of the Dialogue should be to better leverage the value of the nation’s 1,200 community colleges. Whether serving as an educational “on-ramp” for first generation college-goers or low-wage/low-skill adults, offering cutting-edge occupational training, or working with businesses to provide continuing education and training for their employees, community colleges are the natural backbone of the nation’s workforce development efforts.

At its best, the Dialogue should seek to make employers fully integrated partners with American schools, colleges, and universities in producing both a highly educated and appropriately trained, “ready-on-day-one” workforce. Employers should not only communicate their skill needs to educators, but also provide business community input into curricula determinations, help set aptitude standards, develop apprenticeship programs and work/study arrangements, and encourage active business professionals and other practitioners to serve as teachers, instructors, assistants, advisers, and mentors.

This kind of active collaboration would likely produce substantial savings for businesses – U.S. [employers spend](#) about \$415 billion each year on informal on-the-job training and an additional \$175 billion each year on formal education and training, according to Georgetown University’s Center on Education and the Workforce.

A regular and robust dialogue between U.S. business and education leaders offers tremendous and highly tangible potential benefits to the nation and its citizens. Economists at Harvard University [have estimated](#) that if the math proficiency of U.S. students were raised to levels currently observed in Canada and South Korea, U.S. economic output could be expanded by “nothing less than 75 trillion” over the next 80 years – roughly \$1 trillion annually.

Free Would-be Entrepreneurs from Obstructive Student Debt

Student loan debt, a serious and worsening problem for years, has now reached levels that threaten America's economic future. According to the Federal Reserve, total outstanding student loan debt reached \$1.56 trillion as of Sep. 30, 2017, more than tripling from \$480 billion in 2006. America's college class of 2017 graduated with an average debt of \$39,400, up 6 percent from the previous year. In total, some 44 million Americans — one in four adults — are paying off student loans.

Mounting student debt poses serious challenges to the U.S. economy. A particularly dangerous anti-growth effect of record student debt is its depressive impact on entrepreneurship. Recent research has demonstrated that new businesses, or "startups," are disproportionately responsible for the innovations that drive economic growth and account for virtually all net new job creation.

But starting a business is risky — nearly half of all startups fail within five years. Launching a new business while carrying a mountain of student debt can be virtually impossible. An analysis released last May found that "student debt is negatively related to the propensity to start a firm, particularly larger and more successful ventures."

Indeed, millennial entrepreneurship is in free fall. The share of Americans under 30 who own a business has plunged 65 percent since the 1980s and is now at a 25-year low. According to a 2016 Small Business Administration report, millennials are the least entrepreneurial generation in recent history. Such circumstances amount to nothing less than a national emergency, which requires a commensurately serious policy response.

With this reality in mind, we propose that Congress pass new legislation that we've tentatively entitled the "Entrepreneurship, Growth, and Opportunity Act" (EGOA). The legislation would be modeled on the Public Service Loan Forgiveness (PSLF) program, which was created by the College Cost Reduction and Access Act of 2007 (CCRAA). Under the terms of PSLF, former students who are full-time employees at a federal, state or local government agency, or a 501(c)(3)-designated organization, and who have made 120 on-time minimum student loan payments, are eligible to have their remaining student debt forgiven.

EGOA would have four principal elements.

First, entrepreneurs launching new businesses and those choosing to work for a startup would be permitted to consolidate all existing student loans, both federal and private, into a single fixed-rate loan under the terms of the Federal Loan Consolidation Program, created in 1986.

Second, to provide immediate debt relief, minimum payments in service of the newly consolidated debt would be capped at \$200 per month, or \$2,400 annually. To provide further relief, annual payments on the consolidated student loan would be deductible from taxable income, an approach the state of Maine has recently implemented.

Third, if the entrepreneur or startup employee remains at a startup for five years (either a single firm or multiple new businesses) and has made loan payments of at least \$200 on time for 60 months (five years) — for a total of \$12,000 — any remaining student debt would be forgiven.

To ensure that such a program is also in the interest of the taxpayer, we envision one final element of EGOA. We propose that entrepreneurs who participate in the EGOA program for five years and have their remaining student debt forgiven and whose total compensation – salary plus the market value of any equity awarded – exceeds \$250,000 at any time during the subsequent 10 years, pay the U.S. Treasury a small percentage – perhaps 1 percent – of their total annual compensation.

Under the terms of EGOA, in other words, the U.S. taxpayer would, in effect, swap the forgiven debt for a stake in the entrepreneur’s potential subsequent success, with the possibility of a major pay-off. For example, if a successful entrepreneur’s total earnings over the 10-year period following debt forgiveness were \$5 million, a 1-percent assessment would generate a taxpayer bonus of \$50,000 – far greater in most cases than the amount of debt forgiven.

Though not without administrative challenges – such as defining qualifying “entrepreneurs” and “startups” – EGOA is a potential solution to the obstructive impact of student debt on entrepreneurship. Freed from the burden of servicing student debt, many would-be entrepreneurs will take the risk of launching perhaps the next Microsoft, Google or Tesla. And the tax receipts generated by the additional economic activity and job creation driven by those new businesses, combined with potential bonus payments made by successful entrepreneurs, make the Entrepreneurship, Growth and Opportunity Act a winner for the U.S. taxpayer.

Create an “Entrepreneur Visa”

Foreign-born entrepreneurs have been an important part of America’s economic landscape for many decades. A [study released by CAE](#) in December of 2017 found that 43 percent of Fortune 500 companies – and 57 percent of the top 35 companies – were founded by immigrants or a child of immigrants. These companies are headquartered in 68 metro areas across 33 states and employ millions of Americans.

And yet the United States is one of only a few industrialized nations that do not have a visa category for foreign-born entrepreneurs. In recent years, many other nations including [China](#), [Canada](#), [Germany](#), [France](#), [New Zealand](#), [Australia](#), [Chile](#), and [the UK](#) – have overhauled their immigration laws to attract foreign-born entrepreneurs, including American entrepreneurs.

It should also be pointed out that many of the well-documented abuses of the existing H-1B visa process are attributable to the current lack of a clearly defined and lawful pathway for foreign-born entrepreneurs who want to build their new companies in America. Problems associated with the H-1B visa include the fact that such visas are arbitrarily capped at 85,000 per year, the demand far outstrips the supply, large companies benefit disproportionately while smaller businesses are virtually shut out, and recipients must be sponsored by a U.S. company to whom they become indentured servants.

With these realities in mind, CAE proposes the creation of a new visa category – an “Entrepreneur Visa” – specifically designated for foreign-born entrepreneurs who want to launch new businesses in the United States.

To qualify, applicants would have to meet national security requirements and would have to have raised initial funding – perhaps \$100,000 – from private investors to validate themselves as entrepreneurs and to authenticate the validity of their business idea. Under the terms of the entrepreneur visa, foreign-born entrepreneurs would be admitted on a temporary basis, say two years. If by the end of that period their business has been successfully launched, is producing verifiable revenue, and has produced jobs for at least two nonfamily members, the temporary visa would be extended – say, for an additional three years. If the new business continues to grow and has created jobs for at least five nonfamily members by the end of the initial five-year period, the foreign-born entrepreneur would be granted permanent residency in order to continue building their business and creating American jobs.

A 2013 [study](#) by the Kauffman Foundation concluded that an entrepreneur visa would create between 500,000 and 1.6 million new American jobs within 10 years. Other [studies](#) have estimated that a new visa category for foreign-born entrepreneurs could create as many as 3 million new American jobs over a decade.

Award “Graduation Green Cards”

A permanent residency card – “green card” – should be awarded to any foreign-born student meeting national security requirements who completes an undergraduate or postgraduate degree from an American college or university and wants to remain in the United States following graduation. Research has repeatedly demonstrated that immigrants are twice as likely as native-born Americans to start a new business. More than 1 million foreign-born students – the largest foreign-born student population in the world – study at American colleges and universities each year. Current policy requires most to leave the country after graduation, taking their U.S.-acquired education and training with them.

Establish the Entrepreneurship Corps

In 1961, President John F. Kennedy announced the establishment of the [Peace Corps](#), a volunteer service organization through which young Americans work abroad for a period of two years with governments, schools, nonprofit and non-governmental organizations, and entrepreneurs in critical areas such as education, youth development, community health, business, information technology, agriculture, and the environment.

The Peace Corps is based on an idea originally proposed in 1950 by [Walter Reuther](#), president of the United Auto Workers, in an article entitled, “A Proposal for a Total Peace Offensive.” Reuther argued that the United States should establish a voluntary agency for young Americans to be sent around the world to fulfill humanitarian and development objectives. “I believe that the more young Americans who are trained to be sent abroad with a slide rule, textbook, and medical kit to help people help themselves with the tools of peace, the fewer young Americans will need to be sent with guns and weapons of war.” Since its establishment, more than 235,000 Americans have served in the Peace Corps in 141 countries.

Today, the United States itself is threatened by a number of glaring social-economic challenges, including underemployment and job anxiety; stagnant middle-class wages; wide and worsening income, wealth, and opportunity inequality; persistently high rates of poverty; and, near-record numbers of Americans reliant on government programs like food stamps and disability

insurance. Such problems – and the anger, cynicism, and populism they inspire – have undermined public confidence in corporations and government, led to charges that America’s political and economic system is not only unfair but “rigged,” and threatened the social cohesion and consensus that a thriving democracy requires. Building a more inclusive and accessible economy – one that “works for everyone” – has emerged as one of America’s most urgent domestic challenges. Thriving entrepreneurship is an important part of the solution.

In 1990, [Teach for America](#) (TFA) was founded by Princeton University Student [Wendy Kopp](#) to address education disparities in America. TFA recruits and trains college graduates from top universities to serve as teachers for at least two years in public schools in low-income urban and rural communities throughout the United States. In September of 2015, the organization reached a milestone of 50,000 corps members and alumni, who have collectively taught more than 5 million low-income students across the nation.

Echoing President Kennedy’s historic call for volunteer service in the cause of global peace – and inspired by the more recent example of Teach for America – CAE encourages President Biden to establish an “Entrepreneurship Corps” to underscore the importance of American entrepreneurship generally and, more specifically, to promote and support entrepreneurship in distressed and underserved communities across America, with a special emphasis on assisting aspiring entrepreneurs of color. Entrepreneurship Corps recruits should be accomplished college graduates with backgrounds in business, science, technology, engineering, and mathematics who would be assigned to one or more startups in distressed areas to assist in their development and success. The standard service commitment would be two years. Participants would earn a reasonable salary paid by the Corps and have transportation costs covered, like other federal government employees.

Like the Peace Corps, the Entrepreneurship Corps would be a prestigious national service experience for young Americans responding to Presidential call to action. And like TFA, the Entrepreneurship Corps would be an attractive post-graduation job opportunity and would deploy an army of high-quality talent with the aim of improving socio-economic conditions in distressed areas through the transformative power of entrepreneurship.

Pass the Next Generation Entrepreneurship Corps Act

Entrepreneurship is a powerful driver of economic growth, job creation, and expanded opportunity – which is why policymakers should do more to promote and support entrepreneurship in under-served areas of the country and among under-represented aspects of the American population. With this urgent need in mind, CAE strongly supports enactment of the [Next Generation Entrepreneurship Corps Act](#), introduced on February 23, 2021 by Senators Chris Coons (D-DE) and Tim Scott (R-SC), along with Representatives Jason Crow (D-CO) and Troy Balderson (R-OH). The Act will create a selection committee of 12 industry experts to review applications and select 320 entrepreneur fellows annually from diverse backgrounds to start both traditional and high-growth businesses in distressed or low-income census tracts. Selected fellows will be provided a \$120,000 two-year stipend for living and basic startup expenses, healthcare coverage, interest-free deferral of federal student loans, immersive training, matching with a local business mentor, and support from an advisory board of CEOs and venture capitalists.

Pass the Primary Care Enhancement Act

Thriving entrepreneurship requires entrepreneurs not only willing but also able to launch new businesses, as well as the talented employees they need to turn new ideas into reality. Roundtables that CAE regularly conducts with entrepreneurs across the country have revealed that access to affordable, portable (not connected to a particular corporate job), high-quality healthcare is a top “mobility” priority among entrepreneurs – especially [women](#) entrepreneurs – enabling them to strike out on their own, and to attract and retain the employees they need.

The **Primary Care Enhancement Act** would provide more affordable, flexible, high-quality healthcare to 23 million Americans – including entrepreneurs. The legislation – introduced in the [House](#) on July 11, 2019 by Reps. Earl Blumenauer (D-OR), Devin Nunes (D-CA), Bradley Schneider (D-IL), and Jason Smith (R-MO), and in the [Senate](#) on December 9, 2019 by Senators Bill Cassidy (R-LA), Doug Jones (D-AL), Jerry Moran (R-KS), and Jeanne Shaheen (D-NH) – would correct an outdated aspect of the U.S. tax code that currently classifies Direct Primary Care (DPC) as insurance rather than medical care, which has prevented millions of Americans with tax-exempt Health Savings Account (HSA)-qualified High Deductible Health Plans (HDHP) from getting high-quality primary care from a doctor of their choice.

DPC is one of the most important value-based reforms to U.S. healthcare in recent years. First defined in section 1301(a)(3) the Affordable Care Act, DPC practices offer affordable primary care for a low flat monthly fee without co-pays or deductibles. DPC is typically offered by an employer who also provides insurance coverage for healthcare outside of primary care, and is most often delivered virtually (by phone or on-line) to encourage less frequent office visits, but more frequent communication with the doctor of one’s choice.

Since 2009, almost 1,300 new DPC practices have developed as many employers, unions, and even health plans now rely on DPC doctors to provide better care for their employees. DPC arrangements give patients a personal relationship with a high-quality primary care doctor, and a care team to help manage complex chronic conditions. DPC practices save millions of healthcare dollars each year by reducing hospitalizations and administrative costs with a flat fee (per member per month payment) model that avoids the misaligned incentives in today’s predominately fee-for-service primary care.

In order to be eligible to fund an HSA, current law requires an individual must have an HDHP – *and no other health plan or coverage that might include services similar to the HDHP*. But, at present, the IRS considers DPC arrangements as a health plan, or other coverage, based on Section 223(c) of the Internal Revenue Code, authorized as a part of the Medicare Modernization Act (P.L. 108–173) in 2003, which pre-dates most DPC agreements as they are known today.

The Primary Care Enhancement Act would create a simple exception to existing IRS rules that define DPCs as a health plans – an exemption that would apply only to DPC arrangements that cost less than \$150 per month and that only include primary care services. Procedures that require the use of general anesthesia or laboratory services not typically administered in a primary care context – so-called “concierge” practices – would not be included in the exemption. By opening access to affordable, personalized primary care provided by doctors of the patient’s choosing, the Primary Care Enhancement Act will enhance the value, flexibility, and appeal of HSA-qualified HDHPs, strengthening American entrepreneurship.

Enact Portable and Affordable Childcare

Quality and reliable childcare allows parents to enter and remain in the labor force, promotes the [healthy development](#) of young children, and supports families at a critical stage in ways that pay significant [societal dividends](#) in subsequent years. Increasingly, however, the [rising cost of childcare](#) is jeopardizing the financial security of many American households, the health and development of the nation's children, economic mobility and vitality, socio-economic fairness and inclusion – and American entrepreneurship. Young adults have identified childcare costs [as the top reason](#) they are having fewer children at a time when the U.S. fertility rate has fallen to [a record low](#), threatening the nation's demographic and economic future.

Unlike many developed countries where childcare and early education are heavily subsidized, the United States has no national childcare policy. In 2019, American families spent an average of [\\$9,100 to \\$9,600](#) annually for one child's care, or 14 percent of median family income, surpassing the cost of housing, college tuition, transportation, food, and healthcare. Indeed, all 50 states and the District of Columbia fail by a wide margin the definition of affordability, [established](#) in 2016 by Department of Health and Human Services' Office of Child Care, that childcare costs should not exceed 7 percent of a family's annual income.

Roundtables that CAE staff conduct regularly with entrepreneurs have revealed that the high cost of reliable childcare is a major obstacle to thriving entrepreneurship, particularly among [women](#). The Covid-19 pandemic and the disproportionate damage to [employment among women](#) – due in large part to childcare deficiencies – has underscored the urgency of the issue. A lack of access to affordable childcare prevents many would-be entrepreneurs from pursuing their new business idea, and can significantly complicate the entrepreneurial experience, increasing the chances of failure.

Expanded access to affordable and reliable childcare, therefore, is a profoundly pro-entrepreneurship, pro-innovation, pro-growth policy imperative.

The American Rescue Plan Act, signed in law by President Biden on March 11, 2021, provides a [child tax credit](#) of \$3,600 for children under six and \$3,000 for children six to 17 to all single parent households with annual income below \$112,500 and married-parent households with annual income under \$150,000. The credit will improve childcare circumstances, as families are able to use the funds for whatever purpose they deem most important. But even if the entire credit is put toward childcare, it would only cover a third of the annual cost of care. Other proposed solutions range from [universal pre-K](#), to the [Child Care for Working Families Act](#), to government-funded [universal childcare and early education](#). Each would significantly improve national childcare circumstances, each would entail significant costs, and each – along with other alternatives – is worthy of vigorous debate among policymakers.

As policymakers consider various options, CAE believes that the key parameters to meaningful reform include: 1) make quality child care affordable, especially for low-income families; 2) ensure high-quality and reliable care; 3) increase the supply and range of childcare alternatives by incentivizing the development of new and innovative childcare solutions; and, 4) improve the economic circumstances of childcare workers, many of whom are women of color who [make less than](#) the minimum wage.

By increasing the supply of labor and talent in the economy, better preparing children for school and productive careers, and dismantling a major obstacle to thriving entrepreneurship, economic mobility, and economic dynamism, policies that deliver portable and affordable childcare are likely to pay for themselves over the longer run. Moreover, many of the benefits of effective and equitable national childcare policies would accrue to women, middle-class families, and families of color, who have disproportionately shouldered the cost and burdens of policy inaction for decades.

Ban Noncompete Agreements

Noncompete agreements, which [have proliferated](#) throughout the U.S. economy in recent years, are a major barrier to labor mobility and entrepreneurship. CAE supports [the Workforce Mobility Act](#) introduced by Senators Todd Young (R-IN) and Chris Murphy (D-CT) in October of 2019. The bill would ban the enforcement of noncompetes in all but the most necessary of circumstances, such as the sale of a business or the dissolution of a commercial partnership.

Enhance Military Spouse Entrepreneurship

Military spouses make an incalculable contribution to the nation by bearing a unique and heavy burden – a burden that extends far beyond long separations, single parenting, and simmering anxiety for the well-being of their deployed spouse. According to the Department of Defense, each year a third of all military personnel change duty stations, meaning that most military families endure a move every two to four years.

On the one hand, the nomadic aspect of military life has its appeal – another part of the country or world to explore, new friends to meet, exciting new experiences and opportunities. But frequent moves also mean interrupted relationships, social uncertainty or isolation, kids pulled out of schools and away from friends, anxiety and adjustment.

Perhaps most problematic, change of duty stations makes holding a job or pursuing a career that matches the education and qualifications of military spouses – 92 percent of whom are women – difficult or even impossible. The result is staggering unemployment and under-employment. [Surveys of military families](#) reveal that nearly a quarter of military spouses are unemployed and as many as 60 percent experience underemployment – more than seven times the national average, even before the Covid-19 pandemic.

The ramifications of high military spouse unemployment are severe. Most obviously, under- or unemployment threatens financial security. In 2018, Blue Star Families' [annual survey](#) of military families reported “financial issues/stress” as the top source of military family anxiety – ranking even higher than spousal separation. In the same survey, 70 percent of millennial respondents indicated that two incomes are now vital to the family’s well-being.

More fundamentally, under- and unemployment – particularly over long periods – can lead to feelings of unfulfillment, frustration, and resentment among military spouses unable to pursue their own professional goals. And the risk of such problems is high, given that 80 percent of military spouses are [younger than 40](#), and 45 percent hold a bachelor’s or advanced degree compared to 33 percent among the U.S. population overall. Career-related unhappiness, in turn,

undermines spouses' satisfaction with the military lifestyle despite profound pride in serving the nation and participating in the military's mission.

Family finances and the military spouse experience – and their impact on military marriages and families – determine whether a service member stays in or leaves the military. This is especially true when spouses and service members reach mid-career and begin the period of maximum earning potential. At a time when the military is seeking to [raise retention rates](#) to make up for recruiting shortfalls, the relationship between spousal satisfaction and retention is especially critical.

And, ultimately, military readiness depends on retention. New service members can always be trained, but training cannot re-supply experience and professional maturity among military ranks. This reality is especially urgent given the increasing technological sophistication of modern warfare and the associated education, skill, and experience requirements of military personnel. If the military is to retain its most skilled and seasoned service members, it must find ways to improve the military spouse experience, which includes ensuring that military spouses can enjoy meaningful careers. Billions are invested annually in training and readiness, but military readiness always begins at home.

Most current military spouse employment programs, such as the [Military Spouse Employment Partnership](#), focus on connecting spouses to existing civilian employment opportunities in their local area of deployment – a reasonable approach in robust labor markets. But recent research has revealed that 44 percent of military spouses living on or near the largest bases live in areas with [depressed labor markets](#).

Even in robust labor markets, conventional employment is likely limited to a two- to four-year period at most, as another change of duty station again will require a spouse to leave his or her job. In the context of the military's itinerant lifestyle, meaningful and impactful employment programs must focus on job mobility and portability as well.

Entrepreneurship is an alternative that offers economic empowerment, flexibility, and financial remuneration on terms consistent with the unique needs of military spouses. Launching a new business – especially an Internet-based or remote-work business not bound to a particular brick-and-mortar location – offers a unique professional experience that can be pursued without interruption from anywhere in the world. In addition to potential financial success, entrepreneurship provides a pathway to personal and professional fulfillment, the chance to pursue a long-time interest or idea, to create, to build something new from scratch, to become one's own boss and potentially an employer of others. In its inherent flexibility and self-autonomy, entrepreneurship would seem tailor-made for military spouses.

But entrepreneurship is also risky and fraught with challenges. Research has shown that a third of all startups fail by their second anniversary, half by their fifth. And to have the best chance of survival, entrepreneurs – especially first-time entrepreneurs – need help. They need to learn basic business skills, accounting, licensing and regulatory requirements, how to think through and perfect a product or service idea, how to identify and successfully pursue potential customers, how to secure the capital they need, and how to navigate the tax code. For military spouses managing young families, extended separation from serving spouses, and the challenges of frequent duty station changes, the challenges are all the more daunting.

CAE is strongly of the view that policymakers should act to assist military spouse entrepreneurs. According to the [Association of Military Spouse Entrepreneurs](#) – a web-based community for military spouse entrepreneurs launched in 2019 “to connect, collaborate, and learn how to launch, build, and scale their own business” – military spouse legislation should seek to:

- Accelerate the [streamlining of occupational licensing “mobility”](#) and interstate transfers mandated by the the fiscal 2020 National Defense Authorization Act.
- Mandate the inter-state recognition of LLC formation and waive fees associated with interstate transfers for military spouse-owned businesses, as is currently the case for active-duty military personnel but not for military spouses.
- Allow military spouses living on military bases to operate businesses from their on-base homes – especially critical for military families deployed overseas. On-base businesses are currently banned as they are perceived to be in competition with Military Exchange Stores.
- Provide military spouse entrepreneurs subsidized or reduced-rate access to the tools necessary for successful remote work, such as computers, webcams, and videoconferencing software.
- Provide educational and training programs for military spouses on business topics such as the legal and regulatory requirements of business formation, accounting, customer identification, marketing, and business tax compliance.
- Offer military spouse entrepreneurs “upskilling” programs to strengthen and update existing skills and backgrounds that may have atrophied during military deployments or military-related absence from the workforce.
- Provide incentives to military contractors to offer internship and apprenticeship opportunities to military spouses.
- Facilitate inter-community military spouse entrepreneurship by establishing military-wide professional networking groups to help identify potential customers and business collaboration opportunities.
- Establish a military-wide mentorship program that provides incentives for more established military spouse entrepreneurs and non-military business professionals to serve as mentors to military spouse entrepreneurs, as well as connection assistance to potential mentors.
- Provide military backing of reduced-rate start-up loans from banks to military spouse entrepreneurs.
- Provide on- and off-base access for military spouses to resources such as shared workspaces and shared professional services such as accounting, legal, business development, and marketing services.

Access to Capital

Starting a new business requires money. In the initial days of a startup, capital needs may be limited to the bare essentials – money to purchase supplies, computers, and other office equipment. Falling costs for computers, software, and other office technologies in recent years, together with the distributional and promotional power of the Internet, have dramatically lowered the cost of getting a new business off the ground.

But as new businesses begin to grow, capital needs multiply. Entrepreneurs need money to pay bills, move out of the garage or dining room into office space, and, hopefully, begin paying initial employees. Most importantly, entrepreneurs need capital to further develop their product or service idea, research the marketplace, and develop and implement a strategy for identifying and targeting customers.

Because such costs typically arrive long before the first dollar of revenue, capital and credit are the lifeblood of any new business. Difficulties in accessing sufficient capital and credit at reasonable terms can delay or prevent the launch of a new business, disrupt the further growth and development of an existing business, or even kill an otherwise healthy and viable business.

Make the SBA More Responsive to the Unique Nature and Needs of Startups

The Small Business Administration (SBA) administers several programs to support new and small businesses, including loan guaranty programs to enhance small business access to capital; programs to increase small business federal contracting opportunities; direct loans for businesses, homeowners, and renters to assist their recovery from natural disasters; and access to entrepreneurial education to assist with business formation and expansion. The SBA also administers the Small Business Investment Company (SBIC) program (see below).

The SBA's Technology Program Office also administers the [Small Business Innovation Research](#) (SBIR) Program and the Small Business Technology Transfer (STTR) Program. Through these two competitive programs, the SBA ensures that the nation's small, high-tech, innovative businesses are a significant part of the federal government's research and development efforts. Eleven federal departments participate in the SBIR program, five participate in the STTR program, awarding \$2 billion to small high-tech businesses.

Congress should instruct the Small Business Administration (SBA) to establish a formal framework for ongoing dialogue with lending institutions and startups regarding how SBA programs, products, and procedures can more clearly distinguish between existing small businesses and new, high-growth startups. The SBA should also be instructed to determine how SBA-backed lending and other programs can be tailored and made more responsive to the unique nature and needs of startups (e.g., less complex, less reliant on cash-flow and physical asset collateral). To reinforce this expanded organizational and programmatic perspective, Congress should also rename the SBA the Small Business and Entrepreneurship Agency (SBEA).

Increase the SBA Guarantee to SBICs

The SBA's Small Business Investment Company ([SBIC](#)) program – established by the Small Business Investment Act of 1958 – is designed to “improve and stimulate the national economy in general and the small-business segment thereof in particular” by stimulating and supplementing “the flow of private equity capital and long-term loan funds which small-business concerns need for the sound financing of their business operations and for their growth, expansion, and modernization, and which are not available in adequate supply.”

The SBIC program was created in response to concerns raised in a Federal Reserve Board report to Congress that identified a gap in the capital markets for long-term funding for growth-oriented small businesses. The report noted that the SBA’s loan programs were “limited to providing short-term and intermediate-term credit when such loans are unavailable from private institutions” and that the SBA “did not provide equity financing.” Equity financing (or equity capital) is money raised by a company in exchange for a share of ownership in the business. Ownership is represented by owning shares of stock outright or having the right to convert other financial instruments into stock. Equity financing allows a business to obtain funds without incurring debt, or without having to repay a specific amount of money at a particular time. The Federal Reserve’s report concluded there was a need for a federal government program to “stimulate the availability of capital funds to small business” to assist these businesses in gaining access to long-term financing and equity financing. Facilitating the flow of capital to small businesses to stimulate the national economy was, and remains, the SBIC program’s primary objective.

The SBA does not make direct investments in small businesses. Rather, it partners with privately owned and managed SBICs licensed by the SBA to provide financing to small businesses with private capital the SBIC has raised, along with funds the SBIC borrows at favorable rates because the SBA guarantees the loan obligation. Some SBICs specialize in a particular field or industry, while others invest more generally. Most SBICs concentrate on a particular stage of investment (i.e., startups, expansion, or turnarounds) and geographic area. Since 1958, SBICs have channeled more than \$67 billion to 166,000 American businesses across a variety of industries. Some of America’s most iconic companies have received investment capital from SBICs, including Apple, Tesla, Whole Foods, Staples, Intel, FedEx, and Costco.

[As of September 30, 2020](#), there were 302 licensed SBICs participating in the SBIC program. The SBIC program currently has invested or committed about \$32 billion in small businesses, with the SBA’s share of capital at risk valued at \$13.5 billion. In fiscal year 2020, SBICs were provided nearly \$1.8 billion in SBA leverage and invested another \$3 billion from private capital for a total of \$4.88 billion in financing for 1,063 small businesses.

On June 21, 2018, the **Small Business Investment Opportunity Act** was enacted to modify the SBIC program, increasing the amount of outstanding leverage allowed for individual SBICs from \$150 million to \$175 million. While a step in the right direction, CAE is of the view that the increase of \$25 million was insufficient, especially since the cap was previously raised in 2009. CAE urges Congress to increase the cap on the SBA guarantee to SBICs to \$250 million.

Re-structure and Re-launch the SBA’s Early-Stage Innovation Fund (ESIF) Initiative

In January 2013, the Small Business Administration (SBA) launched the Early-Stage Innovation Fund initiative (ESIF) – an offshoot of the SBA’s Small Business Investment Company (SBIC) program (see recommendation above). Whereas licensed SBIC’s invest primarily in the growth of existing small businesses, ESIF licensed firms were required to invest at least half their funds in early- and seed-stage startups. By guaranteeing up to \$50 million in additional capital per licensed fund, the ESIF initiative was intended to help leverage private capital already raised by active funds, providing additional investment capacity to venture capital funds beyond the venture capital centers of Silicon Valley, New York, and Boston, which attract three-quarters of all venture capital. In announcing the program, the SBA said it planned to guarantee up to \$1 billion in additional startup capital over five years at no cost to the American taxpayer.

On September 19, 2016, the SBA proposed changes to the ESIF program because as of June of 2016, the SBA had licensed only five venture capital funds. Then, on June 11, 2018, the SBA announced that it was withdrawing its proposed rule and ending the ESIF program. [According to the SBA](#), the initiative failed because the SBA-backed portion of ESIF-affiliated investments were structured as subordinated debt that paid quarterly interest back to the government equivalent to the rate of a 10-year Treasury bill plus 1.5 percentage points and “debentures are not well-suited to an early stage investing strategy since many early-stage investments do not provide ongoing cash flows needed to pay the current interest an annual charges associated with SBA guaranteed debentures.” Given the importance of early- and seed-stage risk capital to startups, together with the relative scarcity of venture capital in heartland states, CAE recommends that the SBA work with the venture capital community to determine a financing structure consistent with the earnings and repayment realities unique to startup and relaunch the Early-Stage Innovation Fund initiative as soon as possible.

Raise the Cap on the Reg A Exemption (or “Mini-IPO”)

The JOBS Act of 2012 sought to revive the Regulation A exemption – sometimes called a “mini-IPO” – which allows public companies to raise capital through general solicitation without the full burden of disclosures typically required of a conventional initial public offering (IPO). The Act increased the amount of capital that could be raised under the exemption from \$5 million to \$50 million and instructed the Securities and Exchange Commission to reevaluate the cap every two years.

In 2015, the SEC adopted final rules to implement Section 401 of the JOBS Act by creating two tiers of Regulation A offerings: Tier 1, for offerings of up to \$20 million in a 12-month period; and Tier 2, for offerings of up to \$50 million in a 12-month period. From June 2015 through December 2019, issuers in the Regulation A market reported raising approximately \$2.4 billion in 382 qualified offerings. The vast majority of capital raised under Regulation A, approximately \$2.2 billion (91 percent), was raised under Tier 2, with only \$230 million (9 percent) raised under Tier 1.

In March 2020, the SEC [issued proposed amendments](#) to simplify, harmonize, and improve the “patchwork” exempt offering framework under the Securities Act, with the aim of reducing potential friction points and to make the capital raising process more effective and efficient. In proposing the amendments, the Commission noted that exempt offerings accounted for more

than double the new capital raised by registered offerings in 2019 – \$2.7 trillion in exempt offerings compared to \$1.2 trillion in registered offerings. The SEC approved the prosed amendments on [November 2, 2020](#), which included raising the maximum offering amount under Tier 2 of Regulation A from \$50 million to \$75 million.

While the increase in the Reg A cap is welcome news, companies seeking to raise more than \$75 million – say, \$100 million, still a small amount by any standard – must resort to the conventional IPO process and the burden of standard disclosures. With this in mind, and given the expanding importance of exempt offerings to the financing of young high-growth companies, CAE urges the SEC, or Congress, to raise the Reg A exemption cap to at least \$100 million.

Raise the Cap and Increase the Number of Permitted Investors for 3(c)(1) Investment Funds

On May 24, 2018, the **Economic Growth, Regulatory Relief, and Consumer Protection Act** was signed into law by President Trump. Title V of the legislation addresses capital formation – including a provision, “Supporting America’s Innovators,” Section 504, that had previously passed the House (H.R. 1219) and Senate (S. 444) by wide margins. The section amends section 3(c)(1) of the **Investment Company Act of 1940** by raising the permitted number of investors from 100 to 250 for investment funds not making a public offering of securities that are exempt from registration as an investment company with the Securities and Exchange Commission and from the filing of costly disclosure requirements associated with registration – provided the fund size does not exceed \$10 million.

The increase in the number of permitted investors accomplished two important objectives: 1) getting more capital to early-stage companies; and, 2) allowing accredited investors to allocate small amounts of capital to a potentially lucrative asset class. But limiting the increase in permitted investors to funds less than \$10 million is also problematic. Funds larger than \$10 million are still limited to 99 investors, meaning the average investment is much larger. In the case of a \$30 million fund, for example, the average investment is \$300,000 – too large for many accredited individual investors. An unintended consequence of this mathematical reality is that current limits on exempt funds reinforce deficiencies in diversity among entrepreneurs and those who invest in them. A growing body of research indicates that for entrepreneurs of color to access greater amounts of capital requires greater diversity among fund managers and their investors. Funds with higher participation by individual investors tend to be more diverse and, therefore, more willing to invest in entrepreneurs of color.

With these thoughts in mind, CAE recommends that the cap on funds exempted from registration requirements be raised to \$100 million – which would be consistent with the recommendation immediately above regarding capital raises under the Reg A exemption. In addition, CAE recommends raising the number of permitted investors to at least 250 and, ideally, to 1,999, the current limit for Qualified Purchasers funds. Such consistency would simplify compliance, facilitating capital formation for all new companies. Moreover, by allowing more individual investors to participate in larger funds – and committing smaller amounts of capital – the higher cap and higher number of permitted investors would be supportive of more diverse emerging fund managers and greater investment in entrepreneurs of color and women entrepreneurs.

Pass the New Business Preservation Act

CAE supports the immediate passage of the **New Business Preservation Act**, the purpose of which is to incentivize continued and more equitably distributed venture capital investment in America's most innovative startups. The Act was introduced in the Senate (S. 3515) on March 18, 2020 by Senators Amy Klobuchar (D-MN), Chris Coons (D-DE), Tim Kaine (D-VA), and Angus King (I-ME), and was introduced in the House (H.R. 6403) on March 26, 2021 by Reps. Dean Phillips (D-MN), Terri Sewell (D-AL), Ro Khanna (D-CA), and Tim Ryan (D-OH).

Despite their unique economic importance, startups are also extremely fragile because they are new – with half of all startups failing within their first five years. Because of their risk profile, many startups are unable to secure bank financing like existing small businesses and instead rely on venture capital, which has been a major source of financing for young innovative companies since the late 1940s.

Venture capital firms are long-term investors that provide early-stage capital – raised from institutional investors like pension funds, insurance companies, university endowments, and foundations – to new and rapidly growing companies in exchange for an equity stake in the company. Venture firms also assist in the management and professionalization of the young companies in which they invest, typically taking seats on the board. Venture capital has helped finance thousands of American companies, including Intel, Federal Express, Apple, Microsoft, Google, Cisco, Home Depot, and Starbucks.

At present, venture capital in the United States is highly concentrated, with about 80 percent of venture capital raised and invested in just three cities – San Francisco, Boston, and New York. This concentration – which has worsened by ten percentage points over the past decade – limits access to venture financing in many parts of the country with the effect of limiting the nation's innovative capacity and economic vitality.

The New Business Preservation Act would address this problem by establishing a program, administered by the Treasury Department, which would allocate \$2 billion in federal dollars (\$1.5 billion initially, and \$500 million in follow-on investment) to the states on a straightforward population basis to attract private venture capital by offering a 1-to-1 match of federal dollars with venture capital investment in promising startups, particularly in states outside the major venture capital centers.

The legislation is modeled on Israel's "Yozma" program of the late-1990s, which successfully incentivized U.S. venture capital firms to invest in promising Israeli startups, and builds on other successful federal-state partnerships to support small businesses, such as the State Small Business Credit Initiative (SSBCI).

Importantly, the legislation is carefully structured so that the federal government will not "pick winners and losers," but rather will rely on private entities to source and manage investments in promising early-stage companies in every state. All investment decisions will be based entirely on private investor determination of the economic prospects of the new companies receiving equity capital. Finally, the program authorized by the Act is intended to be "evergreen," with any gains from investments following exits to be used to incentivize future rounds of private investment in heartland startups.

Mobilize More Angel Investors Through a Federal Tax Credit

In recent years, “angel” investors – individuals who invest in young promising companies – have become a major source of startup capital in the United States. Like venture capitalists, angels invest in new, high potential companies in exchange for an equity stake in the business. As with venture capital, angel capital is recovered and returns realized when financed firms either go public or are bought by another company.

Many angel investors – particularly those who are current or former entrepreneurs – also provide advice, mentoring, and other support to the management team of the new businesses in which they invest. Perhaps for this reason, research has shown that angel investment significantly increases a startup’s chances of success. A [study](#) conducted by William Kerr and Stanislav Sokolinski of Harvard University and Antoinette Schoar of MIT found:

“Startups funded by angel investors are 14 percent to 23 percent more likely to survive for the next 1.5 to 3 years and grow their employment by 40 percent relative to non-angel funded startups. Angel funding affects the subsequent likelihood of a successful exit, raising it by 10 percent to 17 percent. Having angel funding also seems to matter significantly for the ability of a firm to obtain follow-on financing.”

Angel investors also differ from venture capitalists in significant ways. For example, unlike VCs, who invest institutional capital in amounts of \$1 million or more, angels invest their own money, typically in amounts between \$25,000 and \$250,000. Despite smaller individual investments, aggregate angel capital rivals that of venture capital. In 2019, [angels invested](#) a total of \$24 billion in 63,730 companies. For every new company that receives venture capital, nearly 20 others receive angel capital. Amazon, Home Depot, and Uber are just a few of the thousands of companies launched with angel capital.

Perhaps most importantly, whereas venture capital is typically invested during a later growth phase after initial financing has helped create a viable company, angel investors have emerged as the principal source of outside “seed” or early-stage funding critical to the formation, survival, and growth of new businesses – providing 90 percent of such capital once entrepreneurs have exhausted their own resources and those of family and friends.

According to the Center for Venture Research (CVR), there are currently about 335,000 active angel investors in the United States. According to the SEC, [another 12 million American households](#) meet accredited investor criteria. Most are likely unaware of what angel investing is and of the opportunity to participate in financing the next generation of great new companies.

To be sure, angel investing is risky and not appropriate for every accredited investor. More than half of all angel investments lose money, and just 7 percent of all investments generate 75 percent of returns. But given the importance of angel investors to startups – and the importance of startups to economic growth and job creation – the formation and commitment of angel capital should be responsibly incentivized. If only 3 percent of the 12 million additional potential angels chose to allocate a portion of their financial portfolios to promising new companies launched in their cities and towns, the number of active angel investors would double to 650,000 – and, presumably, the amount of capital invested would double to \$50 billion annually.

In CAE's view, this objective can be best achieved by way of a federal tax credit, coupled with relief from taxes on any gains in the value of angel investments held for at least five years. Twenty-six states have enacted tax credits to incentivize angel investing. Details vary from state to state regarding the size of the credit, limits per investment, caps on total investments, and qualifying businesses. Most states offer credits of between 25 and 35 percent.

And the evidence to date is clear – tax credits work. For example, after Ohio created its Technology Investment Tax Credit in 1996, the program was used by 4,800 angels to invest more than \$160 million in 668 companies through 2013, according to the state economic development agency. Similarly, after Wisconsin enacted a 25 percent tax credit in 2005, total angel investments jumped more than 10 times and the number of angel investor groups in the state increased from just four to more than 20. Other states have experienced similar success.

A federal tax credit equal to 25 percent of investments in startups would lower investment risk to angels by providing an immediate return. While tax credits encourage investment, the majority of the angel's money remains at risk, preserving the investor's incentive to carefully examine potential projects and ensuring that scarce investment capital will be directed to only the most promising business ideas.

Exempting any returns on investments in startups held for at least five years from federal capital gains tax would maximize the pay-off on any successful investments. Since total capital gains tax revenues have historically represented less than 5 percent of federal tax revenues, exempting gains on angel investments from taxation would have almost no impact on federal tax revenue while having a potentially dramatic effect on new business formation and growth. Moreover, because most angel investors reinvest most or all of their returns into the next generation of innovative new companies, exempting such gains from federal taxes would have the further benefit of increasing the amount of seed capital available to startups.

Pass the IGNITE American Innovation Act

To respond to the capital needs of new and small businesses amid the Covid-19 pandemic, Congress created the [Paycheck Protection Program](#) (PPP) in March of 2020 and the Federal Reserve Board later established the [Main Street Lending Program](#). Unfortunately, due to their unique financial and funding circumstances, thousands of fragile startups have been shut out of [PPP](#) and the Fed's [lending facility](#), with many forced to [lay-off employees](#) or [close their doors](#) permanently.

With these realities in mind, CAE strongly supports the immediate passage of the **IGNITE American Innovation Act**, [introduced](#) on August 5, 2020 by Rep. Dean Phillips (D-MN) and Rep. Jackie Walorski (R-IN). The legislation would amend the U.S. tax code to permit pre-revenue startups to "monetize" tax assets on their balance sheets – principally net operating losses (NOLs) and research and development credits – as a means of getting badly needed capital to promising young companies as the pandemic continues.

Reduce Regulatory Burden, Complexity, and Uncertainty

Regulation is essential to market economies. It establishes the rules of competition, ensures a level playing field, governs participants' behavior, and protects consumers, public health and safety, private property, and environmental resources. Without question, innovation, economic growth, and wealth creation depend on the promulgation and enforcement of regulation.

But regulation isn't free, or without consequence. Regulation imposes costs – costs borne by businesses. A wave of new, inconsistent or outdated regulations, or complex and confusing regulations can distract business owners' focus and time away from their product line and the marketplace. They can impose costs that consume resources that could otherwise be invested back into businesses. Regulation can also create economic distortions, entrenched interests, and powerful constituencies, and lead to cronyism and dependency. Perhaps most insidiously, regulation and its costs operate like an invisible and, therefore, easily overlooked, tax.

The stifling effect of regulatory burden and complexity is particularly acute for startups. New businesses lack the resources and scale of larger firms over which to absorb and amortize the costs of compliance. Moreover, their very survival, especially during the initial years, depends on the energy, focus, and flexibility of their leaders.

Create a Regulatory On-Ramp for Startups

The Congressional Budget Office (CBO) and Office of Management and Budget (OMB) should be directed, by Congress and the Administration, to co-develop a reduced, "light touch" regulatory framework (i.e., a "regulatory on-ramp") to which new businesses would be subject for the critical first five years after formation. The framework should be comprised of only the most essential product safety, environmental, and worker protection regulations as co-determined by CBO and OMB. Co-development of the framework by CBO and OMB is important since regulation is the implementation of Congressional intent by Executive branch agencies. To minimize regulatory uncertainty, the new-business framework should also protect new businesses from new regulations for the critical first five years.

To be sure, the startup regulatory framework would need to be updated, improved, and refined from time to time by CBO and OMB. But any changes would apply only to new firms the following year and not to young firms already operating within the five-year window of regulatory certainty. To avoid abuse of the regulatory on-ramp – such as business owners simply renaming or reconstituting existing companies every five years – the Internal Revenue Service (IRS), working with the CBO and OMB, should develop appropriate definitions, characteristics, and limitations regarding the meaning of "new business."

Require Third-Party Review of All Economically Significant Regulations

CBO and OMB should also be directed, by Congress and the Administration, to co-conduct third-party analysis of the economic costs and benefits of all proposed new regulations with an economic impact deemed greater than \$100 million. The third-party review should require analysis of the costs of the proposed regulation in relation to other federal regulations, as well as in relation to existing state and local regulations. In particular, the third-party review should

focus on the impact of proposed new regulations on new and small businesses. Proposed regulations determined to have economic costs, or costs to new and small businesses, that exceed identifiable benefits should require Congressional approval for enactment.

Create a Regulatory Improvement Commission (RIC)

The federal government has a large, multi-faceted, and very effective apparatus for crafting and promulgating new regulations, but no regular mechanism for systematically addressing outdated, duplicative, ineffective, or unnecessarily burdensome regulations.

With this omission in mind, Congress should create a Regulatory Improvement Commission (RIC) as proposed by Michael Mandel, chief economist at the Progressive Policy Institute. Mandel has pointed out that the sheer accumulation of regulations over time can begin to suppress innovation and growth – even if every individual regulation, considered in isolation, is determined to be sound and reasonable.

The problem is that it's possible for every individual regulation to pass a cost-benefit test, while the total accumulation of regulation creates a heavy burden...The number of regulations matter, even if individually all are worthwhile. I call this the "pebble in the stream" effect. Throw one pebble in the stream, nothing happens. Throw two pebbles in the stream, nothing happens. Throw one hundred pebbles in the stream, and you've dammed up the stream. Which pebble did the damage? It's not any single pebble, it's the accumulation.

Modeled on the Base Closure and Realignment Commission (BRAC) – which provided independent, objective, nonpartisan review and analysis of U.S. military installations – the RIC's purpose would be to serve as a procedural mechanism for the regular evaluation, simplification, streamlining, consolidation, and elimination of selected existing regulations.

The RIC would be comprised of a bipartisan group of highly qualified stakeholder appointees and staffed by experts seconded from various regulatory agencies, Congress, and independent organizations. After selecting a portion of the regulatory code for review – a "scoop" of pebbles from the pile in the stream – the RIC would solicit input from individuals, businesses, other affected stakeholders, and outside experts, hold public hearings, and carefully and objectively examine the evidence in an open and transparent manner.

Upon completion of its analysis, the RIC would submit a package of recommended improvements to Congress for a "fast-tracked" up-or-down vote. Following Congressional approval, the package would be sent to the White House for the President's approval and signature, ensuring that the reforms carried the force of law.

A Regulatory Improvement Commission would provide a regular and politically feasible alternative to irregular and incoherent deregulation efforts, and would avoid the obvious flaws of regulatory agency self-review that have foiled most deregulatory efforts to date. Moreover, by considering the cumulative impact of regulations across agencies, the RIC would also escape the self-defeating trap of focusing on individual regulations that, considered in isolation, often appear perfectly sound and reasonable. And by requiring Congressional approval by way of a fast-tracked up-or-down vote, the RIC process would provide legislators with the necessary

political cover to deliver authentic regulatory reform and simplification, safe from the conflict and interest group pressure that scrutiny of individual regulations often provokes.

Improve Tax Treatment of Startups and Their Investors

A number of aspects of the U.S. tax code are unsupportive of, or even hostile to, startups and their investors. CAE urges the Biden Administration and Congress to pursue additional tax reform to enhance the tax treatment of American entrepreneurs and startups.

Allow Startups to Carry Forward Operating Losses and R&D Credits

Most new businesses lose money in their initial years – sometimes for many years – before hopefully becoming profitable. Such losses are often due to substantial research and development (R&D) investments, salaries, and other expenses that exceed earnings. For many startups, R&D and salaries can be the primary expenses of the new company in its early years. Whatever the cause, startups, because they are new, have no previous income against which to apply current operating losses. Moreover, income against which losses can eventually be deducted might not materialize for years.

Even more problematic, two aspects of the current tax code that restrict loss and credit carry-forwards – Sections 382 and 383 – can have the effect of virtually eliminating any carry-forward tax benefit for startups. Sections 382 and 383 were written in the mid-1980s to prevent “loss trafficking” – companies acquiring failing firms with large losses solely to use the acquired company’s tax losses to offset other unrelated income. Section 383 pertains to tax credits, while Section 382 pertains to net operating losses. The rules can virtually eliminate the use of net operating losses and credits following transactions perceived as a change in ownership.

Startups often depend on outside investments – from venture capital firms or other sources – to finance R&D and other expenses, sometimes for many years. Such investments are critical for the survival and growth of new firms – but often trigger 382 and 383 change-of-ownership restrictions, potentially nullifying net operating loss carry-forward tax benefits, including for R&D investments. In other words, Section 382 and 383 carry-forward restrictions actually punish startups for incurring the very kinds of investments that federal tax policy explicitly encourages for older established firms. With this policy inconsistency in mind, CAE recommends that a safe harbor be created for startups to protect them from the unintended consequences of Sections 382 and 383 limitations.

Allow Startups to Expense 100 Percent of Business Investment

The Small Business Tax Revision Act of 1958 created for the first time a special first-year depreciation allowance, whereby small businesses could deduct or “expense” from their taxable earnings a portion of the total cost of capital and equipment investment, pursuant to section 179 of the Internal Revenue Code. Expensing is the most accelerated form of depreciation, allowing businesses to write off the cost of business investment immediately rather than over time. Future deductions are not as valuable to businesses due to the time value of money and because deductions are not indexed for inflation. Expensing stimulates business investment by

maximizing the tax benefit of depreciation, thereby effectively lowering the cost of the capital required to make the investment.

CAE recommends that startups be allowed 100 percent first-year expensing of all business-related capital, equipment, real estate, and research and development investment. Expensing would only be relevant for those new firms generating positive earnings in their early years, and many startups do not (see recommendation above). Still, for those that do, 100 percent first-year expensing would be enormously significant and impactful. According to an analysis by the Treasury Department, 100 percent expensing lowers the average cost of capital on new investments by more than 75 percent. Such savings are enormously significant, especially for new businesses for whom access to capital at reasonable terms remains a principal challenge.

Enhance the Payroll Tax Provisions of the PATH Act

The Research and Development tax credit is particularly relevant for startups, which often incur substantial losses in their early years due to research and development of new products and services, methodologies, and techniques – and for whom preservation of cash flow and operating capital is crucial to survival. And yet, until recently, startups were largely shut out of any benefit associated with the credit because startups often have no taxable earnings (for years) against which to apply the credit.

The Protecting Americans from Tax Hikes (“PATH”) Act of 2015 made a number of improvements to the application of the R&D tax credit, perhaps most notably finally making the credit permanent after numerous extensions and expirations since its creation in 1981. Now certain of the credit’s availability, businesses can make investment decisions more effectively and efficiently.

The PATH Act also addressed the disconnect between the policy intention of the R&D credit and startups by allowing new businesses to apply the credit against payroll taxes, rather than income taxes, up to \$250,000 annually. To qualify, companies must have had gross receipts for five years or less and gross receipts of less than \$5 million for the tax year the credit is applied.

CAE recommends enhancing the PATH Act’s tax provisions for startups by: 1) aligning the criterion for eligibility with that of Section 1202 of the tax code; 2) raising the eligibility threshold; and, 3) increasing the deduction limit.

First, CAE recommends that the eligibility criterion be changed from gross *receipts* to gross *assets*. This change would make the PATH Act provisions consistent with the tax code’s definition of “Qualified Small Business,” (QSBs) which are currently defined as businesses with “less than \$50 million in gross assets.” This consistency would simplify and harmonize related provisions of the tax code, facilitating compliance and reporting by investors and, thereby, promoting capital formation.

Second, CAE recommends that the eligibility threshold for the PATH Act’s payroll tax provisions be raised from the current definition of QSBs of “less than \$50 million in gross assets” to “less than \$100 million in gross assets.” The current gross asset limit is too restrictive, as the high costs of innovative research, coupled with valuable intellectual property and successive rounds of financing, often push new innovative companies over the \$50 million limit (see recommendation regarding Section 1202 below).

Finally, CAE recommends that the payroll tax credit deduction limit be raised from the current \$250,000 to \$1 million. Doing so would align U.S. policy with similar policy in Canada, a major innovation competitor to the United States.

Incentivize the Formation and Commitment of Angel Capital

Section 1202 of the tax code was enacted in 1993 to incentivize investment in “qualified small businesses” (QSBs) by excluding 50 percent of capital gains on investments held for at least five years from federal income tax. The PATH Act of 2015 made permanent a 100 percent exclusion from capital gains tax for any gains on long-term investments in qualified small businesses, up to \$10 million or ten times the original investment, whichever is greater. Previously, the American Recovery and Reinvestment or “Stimulus” Act of 2009 raised the excluded portion from 50 percent to 75 percent, and exempted any gains from the Alternative Minimum Tax (AMT). Subsequent legislation raised the exclusion to 100 percent and extended the AMT exclusion temporarily. CAE recommends that this full exclusion from federal income tax of any gains on angel investments in startups held for at least five years be retained in order to maximize the payoff on any successful investments.

CAE also recommends that the Section 1202 gross asset definition for QSBs be raised from the current “less than \$50 million in gross assets” to “less than \$100 million in gross assets.” The current gross asset limit is too restrictive, as the high costs of innovative research, coupled with valuable intellectual property and successive rounds of financing, often push growing new companies over the \$50 million limit and, therefore, out of Section 1202’s favorable treatment of capital gains.

Finally, at present the Section 1202 exclusion only applies to investments in companies organized as C corporations. Because most new businesses are launched as S corporations, partnerships, or limited liability companies (LLCs) – “pass-throughs” – CAE also recommends that the 1202 exclusion be applied to any startup that converts to a C corporation within five years, and that the period of time spent as a pass-through count toward the five-year holding period required by Section 1202. In other words, angel investors would not have to hold the investment for five years beyond conversion to a C corporation, but only five years beyond the original investment in the company.

Improve Treatment of Startup Investment Losses

As a counterpart to the Section 1202 tax treatment of angel investment *gains*, Section 1244 of the tax code allows investors in qualified small businesses to deduct *losses* on such investments as an ordinary loss (deducted from ordinary income) rather than as a capital loss. Normally, the tax code treats equity investments as capital assets and, therefore, losses are deducted as capital losses to offset capital gains. If capital losses exceed gains in a particular year, remaining losses are deductible up to a limit of \$3,000 annually, with any additional remaining losses carried forward to subsequent years. By contrast, a loss on a Section 1244 investment is deductible from ordinary income up to \$50,000 for individuals and \$100,000 for couples filing jointly.

To qualify for Section 1244 treatment, the issuing company’s aggregate equity capital must not exceed \$1 million at the time of issuance, the company must have derived more than 50 percent of its income from business operations rather than passive investments for the previous five

years, and the shareholder must have purchased the stock directly from the company and not received it as compensation. Startups generally don't issue stock for years after launch, if ever – nor have they been in existence for five years – and, therefore, currently don't meet the requirements of qualifying small businesses.

To further incentivize seed-stage investments in start-ups, CAE recommends expanding Section 1244 to permit losses sustained by angel investors on investments in new companies held for at least 5 years to be deductible from ordinary income up to \$250,000 annually.