

# Creating “Smart” Policy to Promote Entrepreneurship and Innovation

Karen G. Mills, Harvard Business School  
Annie Dang, Harvard Business School

May 19, 2020

## Abstract

Entrepreneurship is key to unlocking innovation and fostering regional and national economic productivity. Extensive studies demonstrate that small and young firms contribute to innovation and employment growth. But which of the many types of small firms are responsible? Of the over 30 million small businesses in the United States, most are sole proprietorships or local Main Street shops, and only a small number are high-growth businesses. The heterogeneity of America’s small businesses has led to some confusion and missteps in policy circles regarding the best strategies to promote entrepreneurship and innovation. We describe three policy areas: improving access to capital, delivering entrepreneurship advice and education, and creating entrepreneurial ecosystems, and show how policy solutions that drive high-growth start-ups differ from support for Main Street small businesses.

Keywords: Innovation, Entrepreneurship, Economic Policy, High-Growth, Start-ups

---

\* Author contact information: Karen Mills (Harvard Business School; [kmills@hbs.edu](mailto:kmills@hbs.edu)), Annie Dang (Harvard Business School; [annie.v.dang@gmail.com](mailto:annie.v.dang@gmail.com)). We thank the editors (Mike Andrews, Aaron Chatterji, Josh Lerner, and Scott Stern) for their support and Gabriella Elanbeck for wonderful research assistance. We are grateful to Mercedes Delgado and the participants at the NBER Conference on The Role of Innovation and Entrepreneurship in Economic Growth for their excellent feedback.

## Introduction

In 2011, as the United States was emerging from the Great Recession, a group of experienced entrepreneurs started a new company seeking to solve the pain points small businesses faced in accessing capital, barriers only exacerbated during the crisis as traditional bank lenders tightened credit to smaller firms. The company, named Kabbage, went on to become one of the most valuable financial technology or “fintech” companies, originating almost \$8 billion in loans and attaining unicorn status with a \$1.2 billion valuation by the end of 2019. Initially launched as a single loan product for eBay sellers, Kabbage expanded to offer fully automated online financing to small businesses, including a purchasing card, payment-processing solution, and cash flow management tool. Using artificial intelligence, machine learning, and Big Data to power internal loan underwriting algorithms, Kabbage successfully targeted a market segment ill-served by the traditional banking industry, while using innovative techniques to speed the lending process, manage risk, and hone the accuracy of its predictive models.

Kabbage’s meteoric success story is every entrepreneur’s dream, but it is not representative of a typical business owner’s experience in the United States. About half of small businesses fail within five years of starting (SBA Office of Advocacy, 2016). Moreover, the last several decades have witnessed a concerning decrease in start-up rates and a general fear that entrepreneurship in America is not what it once was, with the share of U.S. employment accounted for by young firms decreasing by 30 percent over the past 30 years (Decker et al., 2014). Numerous academics, economists, and policymakers have attempted to pinpoint the causes of this unsettling trend, but no definitive answer yet exists.

Why are the numbers so concerning? Research identifies entrepreneurship as key to unlocking innovation and fostering regional and national economic productivity (Van Praag and Versloot, 2007; Decker et al., 2014; Acemoglu et al., 2013; Lerner, 2020). Although scholars may

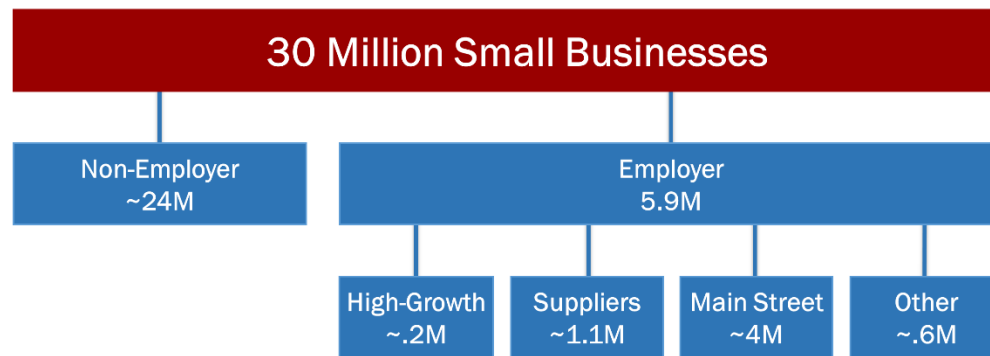
disagree on the most accurate measures (inputs versus outputs) of innovation (e.g., proportion of budget spent on research and development versus patent citations or the introduction of new and meaningful products and technologies), there is general agreement that entrepreneurship has a positive effect on employment, productivity, and growth at the national and local levels.

Extensive studies demonstrate that small and young firms contribute to innovation and employment growth (Haltiwanger, Jarmin, and Miranda, 2013; Henrekson and Johansson, 2010; Fritsch and Mueller, 2004; Almeida and Kogut, 1996). The question is: Which businesses are responsible for what kind of contribution? In the United States, small businesses form an important part of the national economy, comprising a significant portion of total firms (30.7 million businesses, equaling 99.9 percent of all firms), markedly contributing to employment (47.3 percent of private sector employees), and representing two out of every three net new jobs (SBA Office of Advocacy, 2019). However, behind these numbers lies a great deal of heterogeneity. As defined by the U.S. Small Business Administration (SBA), a small business is any independent business with fewer than 500 employees. Of the 30 million small businesses, 24.8 million or 81 percent are sole proprietorships—businesses without any employees. Efforts examining the remaining ‘employer’ small businesses underscore the massive variation amongst small firms in the United States (Mills, 2019; Guzman and Stern, 2019; Chatterji, 2018), particularly highlighting the difference between local firms and the fledgling innovative start-ups that will grow to become the next technology behemoths.

A recent categorization (Mills, 2019; Delgado and Mills, 2020; see Figure 1) shows that of the 6 million U.S. small businesses with employees, approximately 4 million operate in the local business-to-consumer (B2C) economy, firms conventionally labeled as “Main Street” businesses. These are the restaurants, coffee shops, dry cleaners, and other local businesses that make up the fabric of our communities. Another 1.1 million are supplier businesses, those that operate within the

supply chain and traditionally sell to other businesses (B2B) or to the government. Only a small proportion of America's 30 million small businesses—an estimated 200,000—are high-growth start-ups like Kabbage, generally viewed as the entrepreneurial source of transformative innovation.

**Figure 1: The Types of Small Businesses**



Source: Karen G. Mills, *Fintech, Small Business & the American Dream* (Palgrave Macmillan, 2019).

Reproduced with permission of Palgrave Macmillan.

The heterogeneity of America's small businesses has led to some confusion and missteps in policy circles regarding the best strategies to promote entrepreneurship and innovation. Many policies that create ideal conditions for large businesses to innovate (such as R&D tax credits) are often less effective for smaller firms. And it has become increasingly evident that small business policies for local Main Street businesses require a different template from actions that support the much smaller number of high-growth innovative firms, such as those that flourish in Silicon Valley and other technology ecosystems. This sliver of high-potential firms requires specially designed, nuanced policies that fuel high-growth entrepreneurship and target innovation (Aulet and Murray, 2013).

### **Policy Playbook for High-Growth Entrepreneurship**

In the face of declining start-up rates and fears of sinking economic dynamism in the United States, both federal and local governments have increased their focus on encouraging entrepreneurship. Some locales have centered their economic development strategies on luring large

innovative corporations by offering millions of dollars in tax breaks and other incentives, as seen by Amazon’s well-publicized and much debated search for a second headquarters (Mills and Rivkin, 2018). The hope is that these anchor companies will create an innovation center of gravity and spur other companies to move to or start up in the area. Over the last several decades, state and local governments have pledged significant resources to target these large incumbent firms, with some estimates putting the total amount of incentives at \$45 billion annually, tripling in size from 1990 to 2015 (Bartik, 2018).

In recent years, however, this strategy, sometimes called “elephant hunting,” has been replaced or supplemented by a series of policies designed to boost innovation and job creation through the direct encouragement of entrepreneurship. These various government policy efforts tend to fall into three main categories: improving access to capital, delivering entrepreneurship advice and education, and creating entrepreneurial ecosystems (see Figure 2). For each category, the policy options differ significantly depending on the type of small business targeted. The majority of efforts to spur innovation are directed at the smaller segment of high-growth firms, which are expected to deliver the most productivity growth.

**Figure 2: Policy Options to Promote Different Types of Entrepreneurship**

	High-Growth Firms	Main Street Businesses
Access to Capital	<ul style="list-style-type: none"> <li>• Angel and R&amp;D Tax Credits</li> <li>• Regional VC Support (SBIC)</li> <li>• SBIR/STTR</li> <li>• Scale-Up Capital</li> <li>• Grants / Business Plan Competitions</li> </ul>	<ul style="list-style-type: none"> <li>• Bank Loan Guarantees (SBA)</li> <li>• Fintech / Challenger Banks</li> <li>• Tax Policy</li> </ul>
Advice / Education	<ul style="list-style-type: none"> <li>• Entrepreneurship, education, and mentorship programs</li> <li>• Start-up academies</li> </ul>	<ul style="list-style-type: none"> <li>• Small Business Development Centers / SCORE Advisors</li> </ul>
Ecosystems	<ul style="list-style-type: none"> <li>• Accelerators / Incubators</li> <li>• Clusters</li> </ul>	<ul style="list-style-type: none"> <li>• Main Street Associations</li> <li>• Small Business Saturday</li> </ul>

Source: Examples from authors' analysis.

## Access to Capital

Financing is a key determinant of small business growth and success. Entrepreneurs in new and young firms need capital to build their businesses and pay their employees, purchase inventory and start-up equipment, and obtain other resources. Depending on the type of small business, access to capital can come from a host of different sources. Traditional Main Street businesses commonly access financing through banks, ranging from large financial institutions—like Bank of America and JPMorgan Chase—to regional banks, Community Development Financial Institutions (CDFIs), and community banks. High-growth start-ups, on the other hand, seek financing from entirely different capital markets, looking to venture capital and private equity firms for funding.

Venture capital (VC) is structured as high-risk capital which pursues early-stage entrepreneurial opportunities with high potential for dynamic growth and market disruption. The success rate of investments is low for the vast majority of VC firms, with only one or two out of every ten portfolio companies accounting for the majority of the returns to a particular fund (Kerr, Nanda, and Rhodes-Kropf, 2013; Nicholas, 2019; Sahlman, 2010). Because expertise and relationships are required to access and evaluate venture capital deals, funding has historically been

unevenly distributed, geographically and demographically. In 2018, over 80 percent of venture capital funding in the US went to companies in just three states—California, Massachusetts, and New York (NVCA, 2019). Similarly, in 2019, only 12.1 percent of venture money went to fund businesses co-founded by women, with an even smaller 2.8 percent going to businesses founded solely by women (Pitchbook, 2019). From 2013 to 2017, only about 23 percent of VC funding went to minority founders (RateMyInvestor, 2019). Recently, some VC firms have sought to remedy such disparities and improve their access to this untapped pool of talent and opportunity by funding larger numbers of diverse founders and increasing diversity among their own investors. Other actors like academic institutions, private foundations, and pension funds are also taking steps to increase their investments in women- and minority-owned funds while diversifying their own investment teams.

Several governments have crafted policy initiatives to address market gaps by growing the amount of and points of access to venture capital. One approach encourages new risk capital formation by stage, such as through angel capital tax credits<sup>1</sup> (Lerner et al., 2015) and R&D tax credits (Becker, 2015) in the United States and scale-up capital schemes in the United Kingdom.<sup>2</sup> Other policies have focused on geography, such as the SBA’s Small Business Investment Company (SBIC) program. This initiative funds over 300 small venture and private equity capital providers in geographies where there is less risk capital available for high-growth firms. Federal set-asides from research budgets fund substantial research and innovation grants to small companies through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR)

---

<sup>1</sup> Section 1202 of the U.S. Internal Revenue Code details an exclusion for both angel investors and entrepreneurs, providing 100 percent of tax-free gains up to \$10 million. This angel capital tax credit is designed to incentivize investors to finance promising start-ups, as well as to stimulate entrepreneurship by providing an additional viable source of capital.

<sup>2</sup> The UK government provides similar tax credits to promote entrepreneurship and investment, including the Enterprise Investment Scheme (EIS) and Seed Enterprise Investment Scheme (SEIS), both of which seek to incentivize the funding of innovative startups through 30 and 50 percent tax breaks, respectively, and up to a capped amount. In addition, Innovate UK, part of UK Research and Innovation, provides funding to innovative businesses (about 2.5 billion pounds since 2007, matched by industry funding).

programs. These activities support new entrepreneurs across multiple industries in their discovery and growth phases. Significant opportunity still exists, however, for additional policies that expand access to risk capital for a larger and more diverse set of investors and entrepreneurs.

### **Advice & Entrepreneurship Education**

The second critical area of support for entrepreneurship is the construction of advising networks that help entrepreneurs navigate the highly uncertain world of starting a business. Entrepreneurship education has come to the fore at numerous universities, business schools, and even high schools and continuing adult education. There is an insatiable appetite for counseling and advice, particularly from low-cost or free venues such as Small Business Development Centers (SBDCs) or the SCORE counselor network, both of which are supported by the U.S. Small Business Administration. The SBA also provides resources to underserved and underrepresented entrepreneurs who may face increased barriers in achieving their business goals, through specially targeted Women's Business Centers (WBCs) and Veterans Business Outreach Centers (VBOCs).

Here again, however, high-growth innovative start-ups tend to seek counsel via distinct tracks such as specialized boot camps and start-up academies geared towards high-tech and innovation-driven entrepreneurs and teams. Founders of high-growth firms can access tailored advice from venture capital and private equity partners with intimate knowledge of the particular sector they inhabit. They can also reach out to industry peers and build networks of likeminded entrepreneurs and funders in advance of officially launching their product or service, gaining intangible benefits and lessons in management skills, crisis leadership, and goal setting (Chatterji et al., 2018).

### **Ecosystems**

Entrepreneurs learn from each other, as well as from suppliers, customers, universities, and support organizations within their sector or cluster. Just as in other policy areas, ecosystems



conducive to helping innovative high-growth entrepreneurs look quite different from communities designed for businesses on Main Street. For the local mom and pop shops in the town square, Main Street business associations and other types of neighborhood commercial alliances provide a valuable source of business counseling and referrals, and often serve as conduits to the local and regional governments, with an eye towards the advancement of business owner interests.

For high-growth businesses, innovation ecosystems—clusters, incubators, and accelerators—have gained momentum in recent years. Prior studies show the importance of industry clusters in entrepreneurship and economic performance and growth (Porter, 1998; Saxenian, 1994; Delgado, Porter, and Stern, 2010, 2016). Well-known examples of clusters in the United States include information technology in Silicon Valley and biopharmaceuticals and medical devices in Boston. By co-locating with similarly focused companies in a particular field, young firms stand to gain agglomeration benefits and externalities, sharing in the technology, skills, knowledge, and innovations facilitated by both their collaborators and competitors (Chinitz, 1961; Feldman and Audretsch, 1999; Glaeser and Kerr, 2009; Delgado, Porter, and Stern, 2010). Clusters also tend to draw large pools of specialized talent, which is especially important as new innovative services businesses require an increasing number of STEM employees (Delgado and Mills, 2020).

The proven efficacy of industry clusters has not been limited to the traditional coastal cities. For example, strong “fintech” clusters have emerged outside the conventional financial hubs of New York City and San Francisco. Kabbage, highlighted earlier, is headquartered in Atlanta, Georgia, which also serves as home to major American credit reporting agency Equifax, bitcoin payment service BitPay, and international payments giant Global Payments Inc. The wider Atlanta metropolitan area also boasts a major location for financial systems provider Fiserv and an engineering office for payments processor Square.

Entrepreneurs and early-stage companies also gain significant knowledge and value by participating in mentorship programs designed specifically for high-growth start-ups. Accelerators and incubators, established by both private and public actors, provide young firms with access to mentorship and potential seed funding to test their business models and refine their innovations. These ecosystems also fuel environments where start-ups can collaborate with other members of their cohort to gain advice from peers and a broader network of investors and mentors. Research has shown the various beneficial effects of accelerators and incubators on regional entrepreneurship and innovation (Hochberg, 2016; Gonzales-Urbe and Leatherbee, 2017), leading to many levels of government employing them as tools to promote innovation and economic productivity (e.g., MassChallenge in Boston, LAUNCH accelerator by NASA, USAID, and the Department of State).

## **Conclusion**

Kabbage's journey to success has by no means been a completely smooth ride. Although the long-term effects of COVID-19 and the economic downturn remain to be seen, it is clear that companies like Kabbage are not immune to the shocks created by the pandemic. Soon after the United States declared a state of emergency due to coronavirus in mid-March of 2020, Kabbage announced it would furlough a significant number of its employees in America and shut down its Bangalore outpost completely. However, Kabbage reorganized and funneled its resources to help small businesses in a different way, setting up a website where customers could purchase gift cards to support their local businesses. It also repurposed its technology to facilitate loans to small businesses through the Paycheck Protection Program authorized by the CARES Act, ultimately becoming the program's second-largest lender by application volume and approving nearly \$7 billion in loans through August 2020. Kabbage was officially acquired by American Express several months afterwards, in October 2020 (de León, 2020; Kabbage Newsroom, 2020). As illustrated by the nimble actions of Kabbage and many other financial technology companies responding to the

coronavirus pandemic, innovation in times of crisis is a hallmark of entrepreneurship, with benefits that are widely distributed.

\* \* \*

America is fortunate to have a strong heritage in both innovation and entrepreneurship. It is part of the national spirit of independence and the belief in economic mobility and the American Dream. Over the last several decades, the U.S. economy has been built on a bedrock of innovations that have dramatically transformed traditional industries, from communications to financial services to Big Tech. However, the preservation of these strengths is far from assured. A relatively small number of high-growth entrepreneurs have been crucial drivers of the nation's innovation and productivity. The continued health of this innovation engine requires supporting a larger and more diverse set of entrepreneurs, and investing in targeted ecosystems and policies that close market gaps and give these entrepreneurs the tools they need to grow and prosper.

## References

- Acemoglu, D., Akcigit, U., Alp, H., Bloom, N., Kerr, W., 2013. Innovation, Reallocation and Growth.  
National Bureau of Economic Research Working Paper No. 18993 (Revised November 2017).
- Almeida, P., Kogut, B., 1997. The Exploration of Technological Diversity and the Geographic Localization of Innovation. *Small Business Economics* 9, 21-31.
- Aulet, B., Murray, F., 2013. A Tale of Two Entrepreneurs: Understanding Differences in the Types of Entrepreneurship in the Economy. Kauffman Foundation Working Paper.
- Bartik, T.J., 2018. Who Benefits From Economic Development Incentives? How Incentive Effects on Local Incomes and the Income Distribution Vary with Different Assumptions about Incentive Policy and the Local Economy. Upjohn Institute Technical Report No. 18-034.
- Becker, B., 2015. Public R&D Policies and Private R&D Investment: A Survey of the Empirical Evidence. *Journal of Economic Surveys* 29 (5), 917-942.
- Chatterji, A.K., 2018. The Main Street Fund: Investing in an Entrepreneurial Economy. Brookings Institution: The Hamilton Project.
- Chatterji, A., Delecourt, S., Hasan, S., Koning, R.M., 2018. When Does Advice Impact Startup Performance? National Bureau of Economics Research Working Paper No. 24789.
- Chinitz, B., 1961. Contrasts in Agglomeration: New York and Pittsburgh. *American Economic Review*

51 (2), 279-289.

Decker, R., Haltiwanger, J., Jarmin, R., Miranda, J., 2014. The Role of Entrepreneurship in US Job Creation and Economic Dynamism. *Journal of Economic Perspectives* 28 (3), 3-24.

de León, R., 2020. American Express acquiring small business lender Kabbage. CNBC. Accessed January 4, 2021. <https://www.cnbc.com/2020/08/17/american-express-acquiring-small-business-lender-kabbage.html>.

Delgado, M., Mills, K., 2020. The Supply Chain Economy: A New Industry Categorization for Understanding Innovation in Services. *Research Policy* 49 (8), 104039.

Delgado, M., Porter, M.E., Stern, S., 2010. Clusters and Entrepreneurship. *Journal of Economic Geography* 10 (4), 495-518.

Delgado, M., Porter, M.E., Stern, S., 2016. Defining Clusters of Related Industries. *Journal of Economic Geography* 16 (1), 1-38.

Fritsch, M., Mueller, P., 2004. Effects of New Business Formation on Regional Development over Time. *Regional Studies* 38 (8), 961-975.

Glaeser, E.L., Kerr, W.R., 2009. Local Industrial Conditions and Entrepreneurship: How Much of the Spatial Distribution Can We Explain? *Journal of Economics & Management Strategy* 18 (3), 623-663.

Gonzalez-Uribe, J., Leatherbee, M., 2018. The Effects of Business Accelerators on Venture Performance: Evidence from Start-Up Chile. *The Review of Financial Studies* 31 (4), 1566-1603.

Guzman, J., Stern, S., 2016. The State of American Entrepreneurship: New Estimates of the Quality and Quantity of Entrepreneurship for 32 US States, 1988-2014. National Bureau of Economic Research Working Paper No. 22905 (Revised July 2019).

Haltiwanger, J., Jarmin, R.S., Miranda, J., 2013. Who Creates Jobs? Small Versus Large Versus Young. *The Review of Economics and Statistics* 95 (2), 347-361.

Henrekson, M., Johansson, D., 2010. Gazelles as jobs creators: a survey and interpretation of the evidence. *Small Business Economics* 35, 227-244.

Hochberg, Y.V., 2016. Accelerating Entrepreneurs and Ecosystems: The Seed Accelerator Model, in: Lerner, J., Stern, S., *Innovation Policy and the Economy* 16. University of Chicago Press, Chicago, 25-51.

Kabbage Newsroom, 2019. Start Spreading the News: Kabbage Joins American Express. Accessed January 4, 2021,

- <https://newsroom.kabbage.com/news/kabbage-to-join-american-express/>.
- Kerr, W.R., Nanda, R., Rhodes-Kropf, M., 2014. Entrepreneurship as Experimentation. *Journal of Economic Perspectives* 28 (3), 25-48.
- Lerner, J., 2020. Government Incentives for Entrepreneurship, in: Goolsbee, A., Jones, B. (Eds), *Innovation and Public Policy*. University of Chicago Press (forthcoming).
- Lerner, J., Schoar, A., Sokolinski, S., Wilson, K., 2015. The Globalization of Angel Investments: Evidence Across Countries. National Bureau of Economic Research Working Paper No. 21808.
- Mills, K., 2019. *Fintech, Small Business & the American Dream*. Palgrave Macmillan, an imprint of Springer Nature, Cham, Switzerland.
- Mills, K., Rivkin, J., 2018. Amazon's HQ2 (A). Harvard Business School Case 718-494 (Revised August 2019.)
- National Venture Capital Association (NVCA), 2019. NVCA 2019 Yearbook.
- Nicholas, T. VC: An American History. Harvard University Press, Cambridge, Mass.
- Pitchbook, 2019. The VC Female Founders Dashboard. Accessed May 11, 2020, <https://pitchbook.com/news/articles/the-vc-female-founders-dashboard>.
- Porter, M.E., 1998. Clusters and Competition: New Agendas for Companies, Governments, and Institutions, in: Porter, M.E. (Ed), *On Competition*. Harvard Business School Publishing, Boston, 197-299.
- RateMyInvestor, DiversityVC, 2019. Diversity in U.S. Startups. Accessed May 11, 2020, [https://ratemyinvestor.com/DiversityVCReport\\_Final.pdf](https://ratemyinvestor.com/DiversityVCReport_Final.pdf).
- Sahlman, W.A., 2010. Risk and Reward in Venture Capital. Harvard Business School Background Note 811-036.
- Saxenian, A., 1994. *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Harvard University Press, Cambridge, Mass.
- U.S. Small Business Administration Office of Advocacy, 2019. Survival Rates and Firm Age. [https://www.sba.gov/sites/default/files/SurvivalRatesAndFirmAge\\_ADA\\_0.pdf](https://www.sba.gov/sites/default/files/SurvivalRatesAndFirmAge_ADA_0.pdf).
- U.S. Small Business Administration Office of Advocacy, 2019. Frequently Asked Questions. <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/24153946/Frequently-Asked-Questions-Small-Business-2019-1.pdf>.
- Van Praag, M., Versloot, P.H., 2007. What Is the Value of Entrepreneurship? A Review of Recent Research. *Small Business Economics* 29, 351-382.

