

Entrepreneurship in Regional Economic Development

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Entrepreneurship generally refers to “an action, process, or activity that involves the startup and growth of a new enterprise.” While the umbrella of what may be considered entrepreneurship is large, in this report, the term refers to the creation and growth of a new business enterprise, especially one that provides economic growth or development. Entrepreneurship may be carried out by an individual business owner starting a new endeavor or within an existing firm that develops a new product, service, or process.

In the United States, an average of 4.1 million businesses are started annually. Research indicates that the average annual cohort of startups “creates a total of 3.0 million jobs in the first year after startup and employs 2.6 million workers five years later.” With recent improvements in data availability and quality, researchers confirm that entrepreneurial firms are responsible for net job growth in the United States. This clarifies previous research, which credited small (but not necessarily young) businesses as driving job growth. Entrepreneurial firms are also associated with facilitating innovation, technological progress, and the transfer of knowledge. However, not all startups create jobs; a small number of young, high-growth firms and knowledge- and technology-intensive (KTI) firms contribute disproportionately to net job creation and other economic outcomes.

Many view the cumulative impacts of entrepreneurship across various industry sectors as contributing to expanded market competition and the national economic base. Additionally, entrepreneurship development is a core component of many regional economic development plans, due to both its potential to create jobs and contribute to other economic activity. For some practitioners and policymakers, entrepreneurship offers an alternative to traditional business recruitment-based economic development strategies.

Congress and executive agencies have sought to promote business development for decades, and those efforts have traditionally been through broader approaches, arguably focused less directly on entrepreneurship. For example, Congress and executive agencies have long supported small businesses, including through agencies such as the Small Business Administration. Although small businesses and entrepreneurial firms may share certain characteristics, the two are distinct. The defining characteristics of entrepreneurial firms are that they are generally younger and are associated with identifying and exploiting new products, processes, or markets. Policymakers may seek to distinguish between entrepreneurial firms and small businesses and consider whether to address the two with distinct policy pathways.

In recent decades, federal policies have incorporated support for entrepreneurship in addition to—or as an alternative to—longstanding economic development programs that have previously focused on infrastructure and business development, particularly small business development. Due to the job creation and economic impacts associated with young and KTI firms, recent federal policies have further focused on assisting these types of firms. Congress may be interested in expanding entrepreneurial support activity depending on its priorities and policy objectives (e.g., job creation, innovation, energy transition, national competitiveness, regional diversification). Congress may also consider focusing on the establishment and growth of particular sets of entrepreneurial firms—such as those more likely to result in especially high growth and employment—or providing support for all entrepreneurs, including those whose activities may contribute to more modest or sustainable economic growth. Experts suggest that entrepreneurial support policies should be informed by an understanding of the distinct types of entrepreneurial firms, their unique needs, impact, and likely growth trajectories. As such, policymakers and practitioners may seek to further analyze specific business formation, business survival, and job creation data and trends, and how they correlate with expanded entrepreneurial activity, if at all.

Contents

Introduction	1
What Is Entrepreneurship?	2
Firm Age	4
Distinction from Small Businesses	4
Employer Status	5
Business Applications by Major Industry Groups.....	6
Startup Trends and Factors Impacting Entrepreneurship	7
Entrepreneurship’s Role in Job Creation.....	8
First Year Job Creation Rates for Entrepreneurial Firms	9
Subsequent Job Creation Conditional on Business Survival.....	10
Job Creation by Major Industry Groups.....	11
Identifying High-Growth Entrepreneurial Firms and Likely Employer Firms	11
Knowledge- and Technology-Intensive Firms’ Role in Economic Growth	14
Entrepreneurship’s Expanding Role in Economic Development Policies.....	15
Selected Types of Federal Support for Innovative Entrepreneurship.....	16
Entrepreneurship in Small Business and SBA Policies	18
Entrepreneurship in Federal Economic Development and Economic Development Administration (EDA) Policies.....	19
Entrepreneurship in Federal Policies for Distressed Areas	20
Federal Advisory Committees and Executive Branch Initiatives	21
Policy Considerations.....	21
Targeted and Broad-Based Policies	22
Equity and Regional Disparities	22
Linking Entrepreneurship and Workforce Development	23
Options to Expand the Research and Evaluation of Entrepreneurship	23
Concluding Observations	24
Additional CRS Reports	24

Figures

Figure 1. Average Annual Number of Startups by Employer Status, 1995-2018.....	6
Figure 2. Business Applications and High Propensity Business Applications, 2005 – June 2024.....	13

Contacts

Author Information.....	25
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Introduction

Entrepreneurship is viewed as an “engine for economic growth” due to its potential to create jobs, contribute to market competition, facilitate innovation, drive technological changes, and transfer knowledge.¹ While the umbrella of what may be considered entrepreneurship is large, it generally refers to the creation and growth of a new business enterprise, especially one that expands economic growth or development.² This can occur with the founding of an entirely new business or may take place within an existing business that branches out into new endeavors.

In the United States, an average of 4.1 million businesses are started annually.³ Entrepreneurial firms (also commonly referred to as “startups” or “young firms”—this report uses those terms, as well as “entrepreneurial firms,” interchangeably) contribute to a large share of net job creation. However, not all young firms have employees or create jobs. Most young firms do not create jobs and do not survive the initial startup phase.⁴

Nevertheless, due to the number of new U.S. businesses started annually and entrepreneurship’s potential to grow the economy, Congress has demonstrated consistent interest in entrepreneurship in recent decades. In recent years, for instance, Congress established new programs to support entrepreneurship, such as the Economic Development Administration’s Build to Scale and Regional Technology and Innovation Hubs (Tech Hubs) programs. These and other federal programs reflect an interest in targeting high-growth young firms, perhaps due to their association with higher rates of net job creation. This report summarizes these and other federal policies designed to expand entrepreneurial activity; it does not provide in-depth analysis of individual programs. For additional information on programs considered supportive of entrepreneurial development, see the “Additional CRS Reports” section at the end of this report.

This report also summarizes several features of entrepreneurial firms, describes recent findings on job creation rates and other economic impacts, and highlights why entrepreneurship’s role has expanded in economic development practice in recent decades. This report focuses on the economic and business development aspects of entrepreneurship rather than social or other forms of entrepreneurship. It also focuses on the community-level factors that may influence entrepreneurship rather than individual characteristics of entrepreneurs (e.g., training,

¹ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 22, <https://doi.org/10.7551/mitpress/13873.001.0001>; Martin A. Carree and A. Roy Thurik, “The Impact of Entrepreneurship on Economic Growth,” in *Handbook of Entrepreneurship Research*, Eds. Zoltan J. Acs, David B. Audretsch (Springer: New York, NY, 2011), pp. 586-588; and Chen Yeh, “Why Are Startups Important for the Economy?” *Federal Reserve Bank of Richmond Economic Brief* (February 2023), No. 23-06, https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-06.

² Economists frequently differentiate short-term from long-term determinants of economic growth. In this report, as in other contexts, an increase in employment (job creation) is generally considered one of several dimensions of short-term economic growth. Most economic theory suggests that more people being employed in a national or regional economy typically translates to increases in income and spending activity, which thereby contributes to gross domestic product (GDP) growth (a measure of overall economic activity). Increases in the productivity of physical capital, the stock of human capital, or technological progress are generally considered factors correlated with long-term growth. This report makes note of several factors that may contribute to both short-term and long-term economic growth; however, this report does not provide a comprehensive analysis of all aspects of economic growth.

³ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 41, <https://doi.org/10.7551/mitpress/13873.001.0001>.

⁴ John Haltiwanger, et al., “High Growth Young Firms: Contribution to Job, Output and Productivity Growth,” in *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, eds. John Haltiwanger, et al. (University of Chicago Press: Chicago, IL, 2017), p. 47, <http://www.nber.org/chapters/c13492>.

background, age, and demographics), which may also influence the trajectory, rate, and number of startups.

In addition to its potential for job creation and economic growth, entrepreneurship is also considered a core regional economic development strategy for other reasons. For example, it can provide alternative sources of income and build individual wealth. Often, it is used as a core component of local area redevelopment strategies as well. This report focuses on aspects of entrepreneurial development policies that target innovative startups for economic growth and development objectives rather than policies that support typical startups and self-employment opportunities.

With respect to data on businesses and business formation, some researchers have stated that “representativeness and timeliness are both crucial and notably difficult to achieve in business statistics.”⁵ Federal statistical agencies such as the U.S. Census Bureau (Census) have faced challenges in collecting timely, accurate data on young firms for a variety of reasons, including limited firm-level data and difficulty in connecting firm, individual, community, or global circumstances with their effects on businesses. Additionally, data from business surveys may be limited due to survey type and issues related to “sampling and representativeness.”⁶

Improvements in longitudinal business databases have provided new, additional insight on business dynamism and entrepreneurship.⁷ As noted below, definitions of entrepreneurs are occasionally imprecise and there are several differing ways of measuring when a firm starts and grows. This report summarizes analyses completed by federal agencies and outside groups that have used various data sources, including Census’s Business Formation Statistics, and other sources.⁸

What Is Entrepreneurship?

Entrepreneurship refers to the creation and growth of a new business enterprise. One broad definition of “entrepreneur” refers to “anyone who organizes a new business firm of any variety.”⁹ This report follows researchers who use “entrepreneur” to specifically refer to an individual or entity that generates value through the creation or expansion of economic activity or by identifying and exploiting new products, processes, or markets.¹⁰ Entrepreneurship can take place with the start of an entirely new business, or within an existing business that may seek to

⁵ Sandrine Kergroach, Rüdiger Ahrend, and Annabelle Mourougane, “Business Statistics as Usual Will No Longer Suffice,” Organization for Economic Co-operation and Development (OECD), *OECD Statistics* [blog], February 20, 2024, <https://oecdstatistics.blog/2024/02/20/business-statistics-as-usual-will-no-longer-suffice>.

⁶ Ibid.

⁷ See, for example, the U.S. Census Bureau (Census) Business Formation Statistics (<https://www.census.gov/econ/bfs/index.html>), which were first published in February 2018 and provide data on businesses beginning in 2004. See also Emin Dinlersoz, “Business Formation Statistics: A New Census Bureau Product that Takes the Pulse of Early-Stage U.S. Business Activity,” Census, February 8, 2018, <https://www.census.gov/newsroom/blogs/research-matters/2018/02/bfs.html>.

⁸ Ibid.

⁹ This definition, among others, are summarized by William J. Baumol in *The Microtheory of Innovative Entrepreneurship* (Princeton University Press: Princeton, NJ, 2010), pp. 18, 26.

¹⁰ Ibid; and Organization for Economic Cooperation and Development (OECD), *Entrepreneurship at a Glance 2017*, (OECD Publishing: Paris), p. 14, https://doi.org/10.1787/entrepreneur_aag-2017-en. For a summary of additional categorizations of entrepreneurs in economic literature, see Tristan L. Botelho, Daniel Fehder, and Yael Hochberg, “Innovation-Driven Entrepreneurship,” National Bureau of Economic Research Working Paper 28990, July 2021, pp. 4-7, <http://www.nber.org/papers/w28990>.

expand into new business activities such as creating new products or processes with the intent to grow.

Entrepreneurs are often associated with a new good or service, market approach, or an overall orientation towards seeking out new opportunities.¹¹ According to certain definitions, entrepreneurial firms are founded to take advantage of opportunity (rather than out of necessity), distinguishing entrepreneurs from business owners that launch enterprises in order to be self-employed.¹² According to some definitions of entrepreneurship (i.e., “Schumpeterian entrepreneurship”), the entrepreneurs that develop new products, processes or markets are distinct because they are innovative (sometimes called transformational) entrepreneurs.¹³ In contrast, certain types of entrepreneurs—sometimes referred to as lifestyle or replicative entrepreneurs (or “typical startups”)—generally do not introduce a new product, process, or market and may operate primarily to provide income for their owner(s).¹⁴ Lifestyle entrepreneurs “provide a family income or support a desired lifestyle. These entrepreneurs typically seek independence and control over their own schedule. In some cases, lifestyle entrepreneurs sacrifice growth for lifestyle choices. These entrepreneurs generally hire few people.”¹⁵ Examples may include a cleaning business, a local retail store, or a home-based consultant.¹⁶

Starting a business may provide other benefits for individuals and communities.¹⁷ For example, starting a business may be a way for individuals to create income in places with limited job opportunities from employer firms, including returning citizens and justice-involved individuals.¹⁸

¹¹ Peter F. Drucker, *Innovation and Entrepreneurship Practice and Principles* (Harper & Row: New York, NY, 1985), pp. 30-36; and Thomas A. Garrett, “Entrepreneurs Thrive in America—Federal, State Policies Make a Difference for Those Facing Risk,” The Federal Reserve Bank of St. Louis, April 1, 2005, <https://www.stlouisfed.org/publications/bridges/spring-2005/entrepreneurs-thrive-in-america-federal-state-policies-make-a-difference-for-those-facing-risk>, which argues that “while small businesses do create economic growth, they are not necessarily entrepreneurial. Only those small businesses that focus on new and sometimes risky opportunities and investments can be considered entrepreneurial.”

¹² David B. Audretsch, Max C. Keilbach, and Erik E. Lehmann, *Entrepreneurship and Economic Growth* (Oxford University Press: New York, NY, 2006), pp. 34-39; and Magnus Henrekson and Mikael Stenkula, “Entrepreneurship and Public Policy,” in *Handbook of Entrepreneurship Research*, eds. Zoltan J. Acs and David B. Audretsch (Springer: New York, NY, 2011), pp. 595-631.

¹³ Chen Yeh, “Why Are Startups Important for the Economy?” *Federal Reserve Bank of Richmond Economic Brief* (February 2023) No. 23-06, https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-06. See also Zoltan J. Acs, “High-Impact Entrepreneurship,” in *Handbook of Entrepreneurship Research*, eds. Zoltan J. Acs, David B. Audretsch (Springer: New York, NY, 2011), pp. 165-166.

¹⁴ Typical startups are generally not responsible for high rates of job creation. However, young firms may initially launch without a growth orientation and later identify opportunities to expand. See Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), <https://doi.org/10.7551/mitpress/13873.001.0001>.

¹⁵ Jason Henderson, “Building the Rural Economy with High-Growth Entrepreneurs,” *Economic Review*, Federal Reserve Bank of Kansas City, 2002, vol. 87, issue Q III, pp. 48-49, <https://fedinprint.org/item/fedker/31698>. For additional context, see Shane Scott, *The Illusions of Entrepreneurship* (Yale University Press: New Haven, CT, and London, England; 2008), p. 164.

¹⁶ Ibid.

¹⁷ See David Summers, “The Economic Impact of Entrepreneurship: Setting Realistic Expectations,” *Academy of Entrepreneurship Journal*, 2015, vol. 21, n. 2, pp. 103-107, <https://www.abacademies.org/articles/aejvol21no22015.pdf>.

¹⁸ In July 2022, the Senate Committee on Small Business and Entrepreneurship held a hearing noting research on the impact of entrepreneurship on decreasing recidivism, among other findings and programs. For witness testimonies, see “A New Start: Opportunities and Barriers to Entrepreneurship for Returning Citizens and Justice Impacted Individuals, (continued...)”

Within its broad definition, entrepreneurship encompasses a range of activities. In calling for a broad definition of entrepreneurs, some researchers note that entrepreneurs should not be defined by whether they succeed or fail (as they often do fail), or by their original growth plans or intentions (as plans and markets shift).¹⁹ The following sections explore several central aspects of what might be included under the unifying term “entrepreneurship.”

Firm Age

Generally, given entrepreneurship’s focus on new business endeavors, entrepreneurial firms are considered to be businesses that are relatively young. Precisely how young, though, is a matter of some debate.²⁰

Some researchers characterize startups as firms that are one year old or less; others classify startups as firms that are two years old or less.²¹ Often, firms with employees (“employer firms”) may be characterized as young firms (meaning businesses with employees) if they are less than five years old, but that time period may vary from 2 to 10 years depending on the researcher.²² Certain mature firms may have entrepreneurial characteristics as well—by spinning off new products, processes, or new businesses entirely.²³

Distinction from Small Businesses

The federal government has long provided support to small businesses. However, while small businesses and entrepreneurial firms may share certain characteristics, the two are distinct.²⁴ The defining characteristics of entrepreneurial firms are that they are generally younger and are associated with starting a new business activity, such as a new product or process.

Small businesses in the United States have a technical definition, laid out in regulations issued by the U.S. Small Business Administration (SBA) and capped by either the number of employees or

<https://www.sbc.senate.gov/public/index.cfm/2022/7/a-new-start-opportunities-and-barriers-to-entrepreneurship-for-returning-citizens-and-justice-impacted-individuals>.

¹⁹ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), pp. 99-131, <https://doi.org/10.7551/mitpress/13873.001.0001>.

²⁰ Additionally, researchers vary in their approaches to measuring the birth or initiation of startups. Some milestones used to define the birth of a startup include when it initiates a business application, the beginning of hiring, or reporting revenue. Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), pp. 39, 167, <https://doi.org/10.7551/mitpress/13873.001.0001>.

²¹ A U.S. Bureau of Labor Statistics (BLS) analysis defined “startups” as new employer firms or establishments that are less than one year old. See Akbar Sadeghi, “Business Employment Dynamics by Age and Size of Firms,” BLS, January 2022, <https://www.bls.gov/spotlight/2022/business-employment-dynamics-by-age-and-size/home.htm>. Fed Small Business, a source of small business research and analysis by the 12 Reserve Banks of the Federal Reserve System, classifies startups as firms that are two years or less. See “Startup Firms,” <https://www.fedsmallbusiness.org/categories/startup-firms>.

²² See, for example, John Haltiwanger, et al., “Business Dynamics Statistics Briefing: Job Creation, Worker Churning, and Wages at Young Businesses,” November 2012, https://www.kauffman.org/wp-content/uploads/2019/12/bds_report_7.pdf; and Christopher Goetz and Martha Stinson, “Business Dynamics Statistics Trace Evolution of Job Growth, Employment at U.S. Firms over Four Decades,” U.S. Census (Census), February 16, 2022, <https://www.census.gov/library/stories/2022/02/united-states-startups-create-jobs-at-higher-rates-older-large-firms-employ-most-workers.html>.

²³ Peter F. Drucker, *Innovation and Entrepreneurship Practice and Principles* (Harper & Row: New York, NY, 1985), pp. 22-23.

²⁴ Ibid., p. 22.

level of receipts.²⁵ Conversely, the federal government does not provide an official definition of entrepreneurial firms. Although entrepreneurial firms may meet SBA's definition of a small business, they are generally identified as such by their age and by their goals of creating new businesses, products, or processes.

Employer Status

Young firms are both employers (businesses with employees) and nonemployers (businesses with no employees). In the United States, an average of 4.1 million businesses are started annually. The majority of those (3.7 million) are started with no employees (see **Figure 1**). Overall, the majority of total U.S. firms are also nonemployers.²⁶

Some researchers and policymakers often focus on employer firms because their dynamics “have a larger impact on productivity and economic growth.”²⁷ Others argue that nonemployer firms should not be overlooked because nonemployer firms may later create jobs and impact local and regional economies. Nonemployer startup data may also provide insight on early-stage entrepreneurship, entrepreneurial activity, and firm survival trends.²⁸

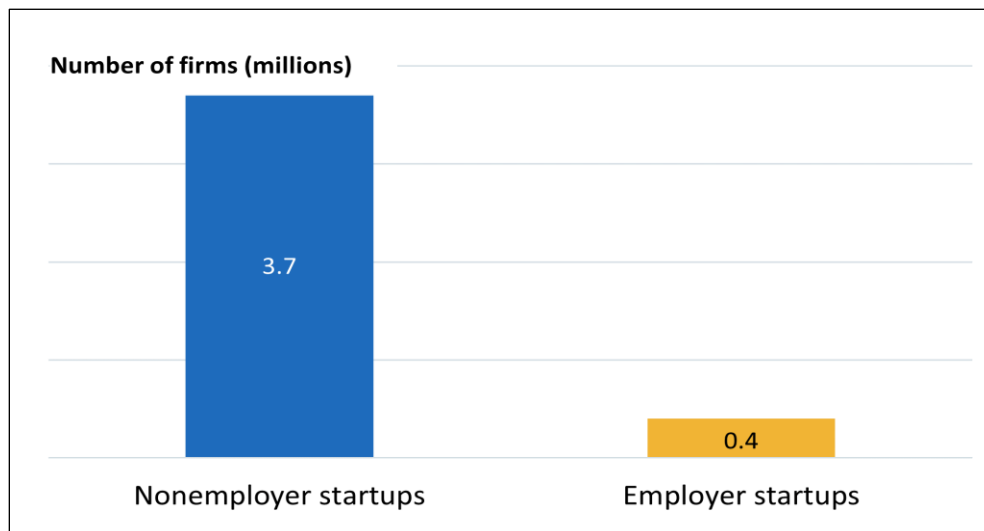
²⁵ For industry-level small business size standards used in certain federal government programs and contracting, see the U.S. Small Business Administration's Table of Size Standards, <https://www.sba.gov/document/support-table-size-standards>. For a definition of “small business,” including size standards, see CRS Report RL33243, *Small Business Administration: A Primer on Programs and Funding*, by Robert Jay Dilger, R. Corinne Blackford, and Anthony A. Cilluffo.

²⁶ Nonemployer firms are small in terms of revenues as well. They average “less than four percent of all sales and receipts nationally.” See Census, “Nonemployer Statistics, About this Program,” <https://www.census.gov/programs-surveys/nonemployer-statistics/about.html>; and Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival among U.S. Startups*, (Cambridge, MA: MIT Press, 2023), p. 19, <https://doi.org/10.7551/mitpress/13873.001.0001>.

²⁷ CBO, *Federal Policies in Response to Declining Entrepreneurship*, December 29, 2020, p. 3, <https://www.cbo.gov/publication/56906>.

²⁸ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups*, (Cambridge, MA: MIT Press, 2023), pp. 4, 62, <https://doi.org/10.7551/mitpress/13873.001.0001>.

Figure 1. Average Annual Number of Startups by Employer Status, 1995-2018



Source: CRS, using data and figure from Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 103, <https://doi.org/10.7551/mitpress/13873.001.0001>.

Notes: Fairlie, et al. estimate that an average of 4.1 million businesses are started annually. Numbers based on Fairlie’s compilation of administrative data for several startup cohorts that launched between 1995 and 2011. The comprehensive startup data panel is the result of linking data from the U.S. Census Bureau’s Longitudinal Business Database (LBD) (for employer establishments) and confidential and restricted access data from the Integrated Longitudinal Business Database (ILBD) (for nonemployer establishments). The analysis uses the new startup panel dataset to follow “each startup cohort for seven years after startup covering the years 1996 to 2018.”

Business Applications by Major Industry Groups

Entrepreneurship occurs in every industry group.²⁹ Researchers point out that new businesses are often more concentrated in service-oriented and retail businesses, and less concentrated in “industries that favor large-scale establishments and operations.”³⁰ New businesses are also less concentrated in sectors with high barriers to entry, such as large financial investments (e.g., certain types of manufacturing).³¹

In an analysis of weekly business applications between 2022 and 2023, Census counted the number of applications by industry sector using a firm’s highest level North American Industry Classification System (NAICS) code. The four leading sectors, in terms of *new* business applications, were:

²⁹ Maximiliano Dvorkin and Charles S. Gascon, “Startups Create Many Jobs, but They Often Don’t Last,” Federal Reserve Bank of St. Louis, August 18, 2017, <https://www.stlouisfed.org/publications/regional-economist/third-quarter-2017/startups-create-many-jobs-but-they-often-dont-last>.

³⁰ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 35, <https://doi.org/10.7551/mitpress/13873.001.0001>; and Maximiliano Dvorkin and Charles S. Gascon, “Startups Create Many Jobs, but They Often Don’t Last,” Federal Reserve Bank of St. Louis, August 18, 2017, <https://www.stlouisfed.org/publications/regional-economist/third-quarter-2017/startups-create-many-jobs-but-they-often-dont-last>.

³¹ Maximiliano Dvorkin and Charles S. Gascon, “Startups Create Many Jobs, but They Often Don’t Last,” Federal Reserve Bank of St. Louis, August 18, 2017, <https://www.stlouisfed.org/publications/regional-economist/third-quarter-2017/startups-create-many-jobs-but-they-often-dont-last>.

- retail trade;
- professional scientific, and technical services;
- construction; and
- other services (except public administration).³²

Census data about the top industry sectors for new businesses reflect levels of all new business applications and do not distinguish between potentially innovative or successful businesses and others. As noted, not all new businesses will create jobs or contribute to broader economic growth or development (see “Entrepreneurship’s Role in Job Creation” for additional information on the subset of likely employer startups).

Startup Trends and Factors Impacting Entrepreneurship

Much research and data over the past two decades point to a slowdown in some entrepreneurship. For instance, the U.S. establishment entry rate, with some fluctuations, has largely declined since the late 1970s.³³ The establishment entry rate is the count of new establishments (which are individual business locations) in a given year divided by the average count of establishments that year and the previous year. The establishment entry rate in 1978 was 15.1; by 2021, the most recent year for which data is available at the time of publication, it was 10.5. At the same time,

Business Dynamism

Business dynamism is “the perpetual process of new firms forming, growing, shrinking, and dying.”^a Researchers analyze business dynamics data, such as Census’s Business Dynamics Statistics (BDS), for several purposes.^b For instance, researchers may analyze BDS data to describe trends in the entry, growth, decline, and exit of businesses and net employment changes at the establishment level.^c

a. Ufuk Akcigit and Sina T. Ates, “What Happened to U.S. Business Dynamism?” FEDS Notes, Washington: Board of Governors of the Federal Reserve System, February 14, 2020, <https://www.federalreserve.gov/econres/notes/feds-notes/what-happened-to-us-business-dynamism-20200214.html>.

b. The U.S. Census states that, “The BDS is created from the Longitudinal Business Database (LBD), a confidential database available to qualified researchers through secure Federal Statistical Research Data Centers. The use of the LBD as its source data permits tracking establishments and firms over time.” See U.S. Census, “About this Program,” <https://www.census.gov/programs-surveys/bds/about.html>. BDS data is available at <http://www.census.gov/ces/dataproducts/bds/>.

c. U.S. Census, “BDS Methodology,” <https://www.census.gov/programs-surveys/bds/documentation/methodology.html>. See, for example, analysis by the Economic Innovation Group on economic dynamism (<https://eig.org/dynamism/>) and state dynamism (<https://eig.org/state-dynamism/>).

³² Census, “Special Projects—Weekly [Business Formation Statistics] BFS by Industry,” <https://www.census.gov/econ/bfs/data/weeklynaics.html>.

The North American Industry Classification System (NAICS) “is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.” In this instance, Census uses the two-digit NAICS series. See Census, “Introduction to NAICS,” <https://www.census.gov/naics/>.

³³ One way to assess entrepreneurship trends is to examine establishment entry and exit rates. The *establishment exit rate* is the same calculation as the entry rate, but for closing establishments.

the establishment exit rate has stayed fairly level.³⁴

Economic and social conditions may influence the number, growth rate, and trajectory of startups, and include several potential challenges and opportunities.³⁵ Several challenges to entrepreneurship are cited frequently in academic reports and policy debates. Young firms are especially vulnerable to times of restricted lending, economic recessions, and the periods following economic downturns.³⁶ Other challenges generally fall into three primary categories:

- startup expenses and access to capital and credit,
- demographic trends, and
- other challenges such as obtaining affordable insurance (both personal and business), finding technical assistance and other business services, navigating regulatory environments, and ensuring adequate broadband coverage, particularly in rural areas.³⁷

For additional information on startup trends, see CRS In Focus IF12792, *Is U.S. Entrepreneurship Declining?*

Entrepreneurship's Role in Job Creation

Job growth is considered one of several dimensions of short-term economic growth,³⁸ and for decades, entrepreneurship has been correlated with such growth, in part due to young firms' roles in creating jobs.³⁹ Researchers estimate that "the average annual cohort of 4.1 million startups in

³⁴ For additional analysis on startup trends, see CBO, *Federal Policies in Response to Declining Entrepreneurship*, December 2020, p. 2, <https://www.cbo.gov/publication/56906>.

³⁵ Jason Henderson, "Building the Rural Economy with High-Growth Entrepreneurs," *Economic Review*, Federal Reserve Bank of Kansas City, 2002, vol. 87, issue Q III, <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=45429110eb37965d1ba0a5db687bd442dd1be48e>. Additionally, researchers have examined characteristics related to the entrepreneur as an individual, including training, background, age, and demographics, which may also influence the trajectory, rate, and number of startups. This report focuses on the community-level factors that may influence entrepreneurship trends.

³⁶ See, for example, Rebecca Zarutskie and Tiantian Yang, "How Did Young Firms Fare During the Great Recession," in *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, eds. John Haltiwanger, et al. (University of Chicago Press: Chicago, IL, 2017), pp. 253-288.

³⁷ CBO, *Federal Policies in Response to Declining Entrepreneurship*, December 2020, p. 2, <https://www.cbo.gov/publication/56906>; CBO, *Private Health Insurance Premiums and Federal Policy*, February 2016, <https://www.cbo.gov/publication/51130>; and Aaron K. Chatterji, "The Main Street Fund: Investing in an Entrepreneurial Economy," The Hamilton Project policy proposal, June 2018, https://www.brookings.edu/wp-content/uploads/2018/06/ES_THP_20180611_Chatterji.pdf.

³⁸ Physical and human capital and the rate of technological change are generally considered the other key factors contributing to economic growth. In the context of economic policy, growth is generally measured in terms of gross domestic product (GDP) and/or per capita GDP. *Real GDP* may be used as the total value of economic output adjusted for inflation. See CRS In Focus IF10408, *Introduction to U.S. Economy: GDP and Economic Growth*, by Mark P. Keightley and Lida R. Weinstock. See also John Haltiwanger, Ron S. Jarmin, and Javier Miranda, "Who Creates Jobs? Small Versus Large Versus Young," *The Review of Economics and Statistics*, May 2013, vol. 95, no. 2, pp. 347-361; and CBO, *Federal Policies in Response to Declining Entrepreneurship*, December 29, 2020, p. 8, <https://www.cbo.gov/publication/56906>; and John Haltiwanger, et al., "High Growth Young Firms: Contribution to Job, Output and Productivity Growth," in *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, eds. John Haltiwanger, et al. (University of Chicago Press: Chicago, IL, 2017), p. 13, <https://www.nber.org/system/files/chapters/c13492/c13492.pdf>.

³⁹ Karen G. Mills and Annie V. Dang, "Panel Remarks: Creating 'Smart Policy,'" in *The Role of Innovation and Entrepreneurship*, ed. Michael J. Andrews, et al. (Chicago, IL: University of Chicago Press, 2022), pp. 561-566, <https://www.nber.org/system/files/chapters/c14508/c14508.pdf>; and Joern H. Block, Christian O. Fisch, and Mirjam (continued...)

the United States creates a total of 3.0 million jobs in the first year after startup and employs 2.6 million workers five years later.”⁴⁰ Furthermore, a 2022 analysis by Census economists examined net job creation rates (i.e., “how many more jobs created than destroyed relative to overall employment”) and found that the rate was “notably higher for young firms compared to old ones.”⁴¹

The share of jobs supported by startups is relatively small—typically less than 5% of total U.S. employment.⁴² Meanwhile, in recent years, researchers have observed that employer startups have higher rates of job creation (and job destruction) than mature employer firms, and that employer startups’ job creation (and job destruction) activity generally occurs in their initial years.⁴³ In addition, in recent years, Census has launched new programs designed to provide better statistical coverage of business formation data, which researchers have used to clarify that *young* employer firms—rather than *small* employer firms—are the primary job creators of the U.S. economy.⁴⁴ Job creation rates of startups also vary by industry sector and other factors.⁴⁵

First Year Job Creation Rates for Entrepreneurial Firms

First year job creation rates for startups vary depending on whether employer and nonemployer startups are both measured.⁴⁶ Research suggests that startup job creation and survival rates are

van Praag, “The Schumpeterian Entrepreneur: A Review of the Empirical Evidence on the Antecedents, Behaviour and Consequences of Innovative Entrepreneurship,” *Industry and Innovation*, 2017, vol. 24, issue 1, pp. 61–95, <https://doi.org/10.1080/13662716.2016.1216397>.

⁴⁰ In this analysis, the average annual cohort includes both employer and nonemployer firms. Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 11, <https://doi.org/10.7551/mitpress/13873.001.0001>.

⁴¹ In this analysis, young firms were defined as firms with “positive employment for five years or less, and old firms are those with positive employment for more than five years.” See Christopher Goetz and Martha Stinson, “Business Dynamics Statistics Trace Evolution of Job Growth, Employment at U.S. Firms over Four Decades,” Census, February 16, 2022, <https://www.census.gov/library/stories/2022/02/united-states-startups-create-jobs-at-higher-rates-older-large-firms-employ-most-workers.html>.

⁴² Chen Yeh, “Why Are Startups Important for the Economy?” *Federal Reserve Bank of Richmond Economic Brief* (February 2023) No. 23-06, https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-06.

Some researchers estimate that the portion of jobs provided by startups is less than 2%-3% of total employment. See, for example, John Haltiwanger, Ron S. Jarmin, and Javier Miranda, “Who Creates Jobs? Small Versus Large Versus Young,” *The Review of Economics and Statistics*, May 2013, vol. 95, no. 2, p. 360; and Maximiliano Dvorkin and Charles S. Gascon, “Startups Create Many Jobs, but They Often Don’t Last,” Federal Reserve Bank of St. Louis, August 18, 2017, <https://www.stlouisfed.org/publications/regional-economist/third-quarter-2017/startups-create-many-jobs-but-they-often-dont-last>.

⁴³ Researchers note that after controlling for firm age, there is no “systematic relationship between firm size and growth.” See John Haltiwanger, Ron S. Jarmin, and Javier Miranda, “Who Creates Jobs? Small Versus Large Versus Young,” *The Review of Economics and Statistics*, vol. 95, no. 2 (May 2013), pp. 350, 360.

⁴⁴ John Haltiwanger, Ron S. Jarmin, and Javier Miranda, “Who Creates Jobs? Small Versus Large Versus Young,” *The Review of Economics and Statistics*, May 2013, vol. 95, no. 2, pp. 348, 360; and Chen Yeh, “Why Are Startups Important for the Economy?” *Federal Reserve Bank of Richmond Economic Brief* (February 2023) no. 23-06, https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-06.

⁴⁵ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), <https://doi.org/10.7551/mitpress/13873.001.0001>; Congressional Budget Office (CBO), *Federal Policies in Response to Declining Entrepreneurship*, December 29, 2020, <https://www.cbo.gov/publication/56906>; and Christopher Goetz and Martha Stinson, “Business Dynamics Statistics Trace Evolution of Job Growth, Employment at U.S. Firms over Four Decades,” Census, February 16, 2022, <https://www.census.gov/library/stories/2022/02/united-states-startups-create-jobs-at-higher-rates-older-large-firms-employ-most-workers.html>.

⁴⁶ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), pp. 39-59, 99-131, <https://doi.org/10.7551/mitpress/13873.001.0001>. See also <https://www.aeaweb.org/conference/2024/program/paper/zSz8ebD2>.

lower than official estimates because such calculations generally exclude data on nonemployer startups.⁴⁷ A 2023 analysis, for instance, found that startup job creation rates differed based on the definition of an entrepreneurial firm (i.e., the employer status of the firm) by examining data on a cohort of employer and nonemployer startups that launched between 1995 and 2011.⁴⁸ The average number of jobs created was lower (0.74 jobs in the first year) when employer and nonemployer firms are measured together, and was higher (2.56 jobs in the first year) when only employer firms were measured.⁴⁹

Subsequent Job Creation Conditional on Business Survival

While young firms contribute proportionately more to net job creation rates than do mature firms, young firms' early stages are often volatile, and young firms have higher rates of job destruction due to firm "exits" (when firms shut down and cease to exist for various reasons, including mergers or acquisitions).⁵⁰ Historically, over half of startups close by their fifth year.⁵¹

Although many startups close within five years, this does not necessarily reflect an unsuccessful venture. This is especially true for the most innovative firms. Within several industries—notably

⁴⁷ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), pp. 101-102, <https://doi.org/10.7551/mitpress/13873.001.0001>.

Nevertheless, some researchers assert that nonemployer firms "make substantial contributions to job creation: an average of nearly 319,000 jobs seven years after startup." See Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 130, <https://doi.org/10.7551/mitpress/13873.001.0001>.

⁴⁸ Researchers combined two existing Census datasets. Businesses are required to file income and payroll taxes separately. A business may exist for years without employees and only file income taxes. Later, upon hiring, the business may file payroll taxes. Without linking the datasets, it is difficult to measure job creation and survival rates. The researchers linked the two administrative panel data sets in order to "identify the transition between employer and nonemployer status" and to "measure job creation and survival among all startups in the economy that generate revenue." Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), pp. 30-31, 43, <https://doi.org/10.7551/mitpress/13873.001.0001>. See also <https://www.aeaweb.org/conference/2024/program/paper/zSz8ebD2>.

⁴⁹ The more restrictive group excluded sole proprietors without employer identification number (EIN) startups and included nonemployer startups that were incorporated, S corporations, partnerships, or sole proprietorships with EINs based on the rationale that the business registration requirement is stronger for these business types than for sole proprietorships without EINs. See Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), pp. 130-131, <https://doi.org/10.7551/mitpress/13873.001.0001>. Census notes that "Most nonemployers are self-employed individuals operating unincorporated businesses (known as sole proprietorships), which may or may not be the owner's principal source of income." See U.S. Census Bureau, "Nonemployer Statistics, About this Program," <https://www.census.gov/programs-surveys/nonemployer-statistics/about.html>.

⁵⁰ John Haltiwanger, Ron S. Jarmin, and Javier Miranda, "Who Creates Jobs? Small Versus Large Versus Young," *The Review of Economics and Statistics*, May 2013, vol. 95, no. 2, pp. 348, 352, 359.

⁵¹ See John Haltiwanger, et al., "High Growth Young Firms: Contribution to Job, Output and Productivity Growth," in *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, eds. John Haltiwanger, et al. (Chicago, IL: University of Chicago Press, 2017), p. 20, 47, <http://www.nber.org/chapters/c13492>, as noted by Chen Yeh in "Why Are Startups Important for the Economy?" *Federal Reserve Bank of Richmond Economic Brief* (February 2023) No. 23-06, https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-06. For additional analysis of startups' post-entry job creation dynamics, see Ryan Decker, et al., "The Role of Entrepreneurship in U.S. Job Creation and Economic Dynamism," *Journal of Economic Perspectives*, Summer 2014, vol. 23, no. 3, <https://doi.org/10.1257/jep.28.3.3>.

technology⁵² and pharmaceuticals⁵³—a common innovation pattern is for smaller, younger firms to create and develop a product or service, and later sell to a larger, established business to complete the commercialization process at a scale the startup could not manage.⁵⁴ Some observers would consider this an entrepreneurial success, especially for the entrepreneur, who likely received a significant payout from the process. Others worry that this model might discourage internal research at larger companies⁵⁵ and encourage market consolidation.⁵⁶

Job Creation by Major Industry Groups

A 2023 analysis of administrative data for several startup cohorts that launched between 1995 and 2011 showed that the average number of jobs created per startup varies by industry. Startups in accommodations and food services, manufacturing, and management industries averaged higher job creation rates. In contrast, startups in the real estate and agriculture industries created jobs at a rate that was lower than the average rate for all startups.⁵⁷

Identifying High-Growth Entrepreneurial Firms and Likely Employer Firms

Analysts and federal agencies categorize certain businesses as “high-growth” or “likely employer” firms, which could be used to identify certain entrepreneurial firms that may be more likely to create jobs.⁵⁸ As noted, young entrepreneurial firms vary in terms of their growth trajectories and employer status. Certain young firms contribute to a larger share of net job creation, yet not all young firms have employees or create jobs. Most young firms do not create jobs and do not survive the initial startup phase.⁵⁹

⁵² In a 2019 interview, Apple CEO Tim Cook said that, “We acquire everything that we need that can fit and has a strategic purpose to it. And so we acquire a company on average, every two to three weeks” (emphasis added). Lauren Feiner, “Apple Buys a Company Every Few Weeks, Says CEO Tim Cook,” *CNBC*, May 6, 2019, <https://www.cnbc.com/2019/05/06/apple-buys-a-company-every-few-weeks-says-ceo-tim-cook.html>.

⁵³ “Pharmaceutical companies use mergers and acquisitions strategically to strengthen market positions, expand product portfolios, access new technologies, and enhance innovation capabilities.” Lorenzo Cattivelli, Anca Cojoc, Penka Kovacheva, and Maria Salgado, “The Impact of Pharmaceutical M&A on Innovation: Insights from the Literature and Gaps Remaining,” *Concurrences Competition Law Review*, no. 3-2024, May 2024, <https://www.concurrences.com/en/review/issues/no-2-2024/law-economics/the-impact-of-pharmaceutical-m-a-on-innovation-insights-from-the-literature-and>.

⁵⁴ One influential academic model found incentives for smaller firms to specialize in innovation in order to encourage a buyout, while larger firms had incentives to lower their own internal R&D spending and instead acquire innovative smaller firms. Gordon M. Phillips and Alexei Zhdanov, “R&D and the Incentives from Merger and Acquisition Activity,” *The Review of Financial Studies* 26 (1), January 2013: 34-78, <https://doi.org/10.1093/rfs/hhs109>.

⁵⁵ Bijan Khezri, “The Perils of Innovation by Acquisition,” *Harvard Business Review*, September 21, 2022, <https://hbr.org/2022/09/the-perils-of-innovation-by-acquisition>.

⁵⁶ Michael L. Katz, “Big Tech Mergers: Innovation, Competition for the Market, and the Acquisition of Emerging Competitors,” *Information Economics and Policy*, vol. 54, March 2021, <https://doi.org/10.1016/j.infoecopol.2020.100883>.

⁵⁷ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), pp. 55-59, <https://doi.org/10.7551/mitpress/13873.001.0001>.

⁵⁸ Economists point out that there are other measures of firm growth—in addition to employment growth—such as growth in revenue, sales, or profits, and these measures may not consistently track with employment growth in the United States. See Richard L. Clayton, et al., “High-Employment-Growth Firms: Defining and Counting Them,” *Monthly Labor Review*, U.S. Bureau of Labor Statistics, June 2013, <https://www.bls.gov/opub/mlr/2013/article/pdf/clayton.pdf>.

⁵⁹ John Haltiwanger, et al., “High Growth Young Firms: Contribution to Job, Output and Productivity Growth,” in (continued...)

A small number of high-growth firms contribute most to job creation.⁶⁰ Definitions of “high growth” firms vary.⁶¹ The Organization for Economic Cooperation and Development defines high-growth firms as businesses with 10 or more employees with an annualized growth rate of 20% over three years; other studies examine high-growth firms that increased employment by more than 25% per year.⁶² Some researchers note that since 2000, high-growth firms have concentrated in certain industries, such as “high tech and energy related industries.”⁶³ Other researchers find that “younger firms are more likely to be high-growth firms.”⁶⁴

Separately, Census’s Business Formation Statistics (BFS) measures “business initiation” activity based on business applications.⁶⁵ (Business applications are applications for an Employer Identification Number that are “made predominantly for business purposes.”⁶⁶) BFS data includes information about the type, location, and number of startups that launch across industry sectors.⁶⁷ Census uses certain firm characteristics to classify a subset of business applicants as “high-propensity businesses” (HPBs) if they

- are organized as a corporate entity,
- indicate a plan to hire employees, purchase a business, or change business organizational type,
- have a date for providing first wages and planned wages, and
- have a NAICS industry code in accommodation and food services (72) or in portions of construction (237, 238), manufacturing (312, 321, 322, 332), retail

Measuring Entrepreneurial Businesses: Current Knowledge and Challenges, eds. John Haltiwanger, et al. (University of Chicago Press: Chicago, IL, 2017), p. 47, <http://www.nber.org/chapters/c13492>.

⁶⁰ Entrepreneurship experts frequently cite a 2010 meta-analysis of studies on employment growth, which observed that a small number of young, high-growth startups (sometimes referred to as “gazelles”) contribute disproportionately to new net job creation. See Magnus Henrekson and Dan Johansson, “Gazelles as Job Creators: A Survey and Interpretation of the Evidence,” *Small Business Economics*, vol. 35 (2010), pp. 227–244, <https://doi.org/10.1007/s11187-009-9172-z>. See also John Haltiwanger, et al., “High Growth Young Firms: Contribution to Job, Output and Productivity Growth,” in *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, eds. John Haltiwanger, et al. (University of Chicago Press: Chicago, IL, 2017), p. 11, <https://www.nber.org/system/files/chapters/c13492/c13492.pdf>; and Chen Yeh, “Why Are Startups Important for the Economy?” *Federal Reserve Bank of Richmond Economic Brief* (February 2023), no. 23-06, https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-06.

⁶¹ For a discussion of high-employment-growth firms and definitional matters related to classification of such firms, including the OECD’s definition, see David M. Talan and James R. Speltzer, “High-Employment-Growth Firms: Defining and Counting Them,” BLS, June 2013, <https://www.bls.gov/opub/mlr/2013/article/pdf/clayton.pdf>.

⁶² See, for example, Ryan Decker, et al., “The Role of Entrepreneurship in US Job Creation and Economic Dynamism,” *Journal of Economic Perspectives*, Summer 2014, vol. 23, no. 3, pp. 8-10, <https://doi.org/10.1257/jep.28.3.3>. See also Jason Henderson, “Building the Rural Economy with High-Growth Entrepreneurs,” *Economic Review*, Federal Reserve Bank of Kansas City, 2002, vol. 87, issue Q III, pp. 48-49, <https://fedinprint.org/item/fedker/31698>.

⁶³ John Haltiwanger, et al., “High Growth Young Firms: Contribution to Job, Output and Productivity Growth,” in *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, eds. John Haltiwanger, et al. (Chicago, IL: University of Chicago Press, 2017), p. 47.

⁶⁴ Richard L. Clayton, et al., “High-Employment-Growth Firms: Defining and Counting Them,” *Monthly Labor Review*, U.S. Bureau of Labor Statistics, June 2013, p.7, <https://www.bls.gov/opub/mlr/2013/article/pdf/clayton.pdf>.

⁶⁵ According to Census, the Business Formation Statistics (BFS) “only consider entirely new employer business formations originating from business applications; new non-employer businesses or new employer businesses formed by existing firms are not included in the business formation measures.” Census, “Frequently Asked Questions (FAQs),” <https://www.census.gov/econ/bfs/faqs.html>.

⁶⁶ Census, “Business Formation Statistics—Definitions,” <https://www.census.gov/econ/bfs/definitions.html>.

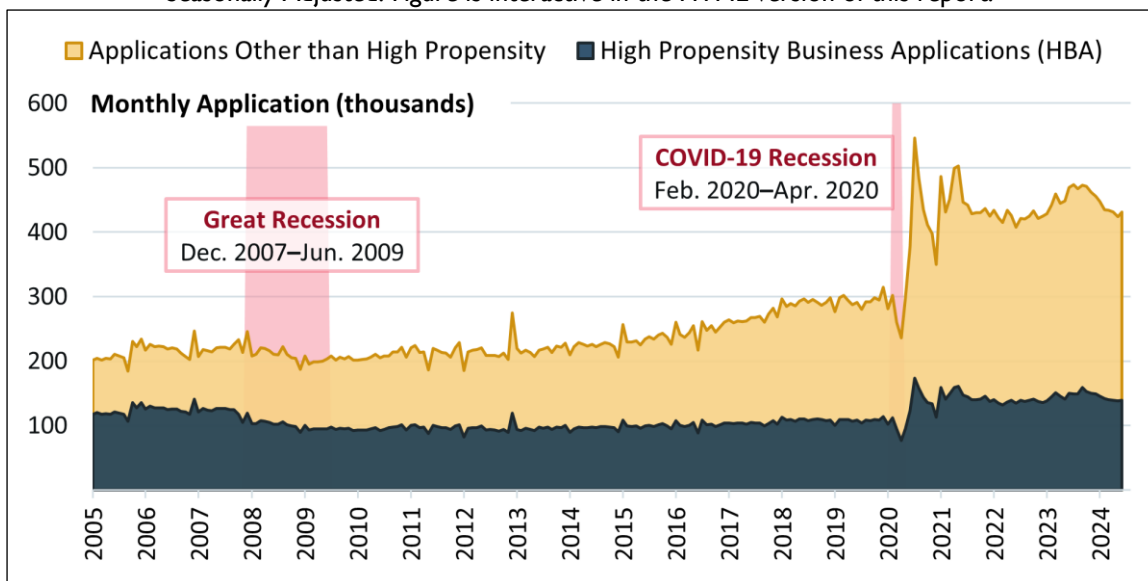
⁶⁷ Census, “Business Formation Statistics,” <https://www.census.gov/econ/bfs/index.html>, https://www.census.gov/econ/bfs/about_the_data.html, and <https://www.census.gov/econ/bfs/current/index.html>.

(44, 452), professional, scientific, and technical services (5411, 5413), educational services (6111), and health care (621, 623).⁶⁸

Analysts consider HPBs to be “likely employers” and use data on these firms for insight on the job creation potential of startups in certain industry sectors and locations.⁶⁹ See **Figure 2** for a comparison of the share of HPB applications to all business applications between 2005 and 2024. The number of total business applications increased following the end of the COVID-19 recession, yet the share of HPB applications compared to overall applications is lower for the same period.⁷⁰

Figure 2. Business Applications and High Propensity Business Applications, 2005 – June 2024

Seasonally Adjusted. Figure is interactive in the HTML version of this report.



Source: CRS, using data and figure from U.S. Census Bureau (Census), Business Formation Statistics, <https://www.census.gov/econ/bfs/index.html>, and U.S. recession data from the Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/USRECDP>. Figure based on Census’s visualization at <https://www.census.gov/library/visualizations/interactive/bfs-visualizations.html>, which notes that the “utilities sector is not seasonally adjusted.”

Notes: Data provided through June 2024.

⁶⁸ The high-propensity business characteristics are “periodically evaluated and revised based on updated formations data.” See Census, “Business Formation Statistics – Methodology,” <https://www.census.gov/econ/bfs/technicaldocumentation/methodology.html>. For a monthly interactive visualization of high-propensity business applications compared to total business applications (or by industry sector), see **Figure 2** or <https://www.census.gov/econ/bfs/visualizations/interactivegraphs.html>.

⁶⁹ See, for example, Conor Gowder, “Useful Stats: Sectoral breakdown of total and high-propensity business applications, 2005-2023,” State Science & Technology Institute (SSTI), June 13, 2024; and Jimmy O’Donnell, Daniel Newman, and Kenan Fikri, “The Startup Surge? Unpacking 2020 Trends in Business Formation,” Economic Innovation Group, February 8, 2021, <https://eig.org/the-startup-surge-business-formation-trends-in-2020/>.

⁷⁰ For an interactive visualization of “Business Applications by two-digit NAICS sector and year, 2005-2023” see Conor Gowder, “Useful Stats: Sectoral Breakdown of Total and High-Propensity Business Applications, 2005-2023,” State Science & Technology Institute (SSTI), June 13, 2024, at <https://ssti.org/blog/useful-stats-sectoral-breakdown-total-and-high-propensity-business-applications-2005-2023>.

Knowledge- and Technology-Intensive Firms' Role in Economic Growth

The successful development of entrepreneurial firms is generally considered beneficial to regional economies and to the national economic base—particularly when knowledge- and technology-intensive (KTI) firms start up and grow. KTI firms are commonly defined as belonging to “industries that globally invest the largest shares of their output in research and development (R&D).”⁷¹ R&D activities, in some circumstances and contexts, may contribute to scientific and technological advances that are thought to increase productivity, which is a key determinant of long-term economic growth.⁷²

KTI firms are often targeted for federal policies designed to meet science, technology, innovation, and national competitiveness goals, as well as economic growth and development objectives.⁷³ For example, the Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) programs were designed to enhance national competitiveness and “increase the participation of small innovative companies in federally funded R&D.”⁷⁴ For additional examples, including regional innovation strategies, see “Entrepreneurship in Federal Economic Development and Economic Development Administration (EDA) Policies.” Policymakers and practitioners may face consideration of whether to support the development of *young* KTI firms in particular. Some researchers observe that “among innovative firms, young and small firms have higher innovation intensities than mature firms.”⁷⁵

Job quality may be an additional reason that KTI firms may be emphasized in certain federal policies. In 2019, for example, KTI firms employed 16% of U.S. jobs in the science, technology,

⁷¹ For information on the definition and examples of knowledge- and technology-intensive (KTI) firms, see National Science Board, National Science Foundation (NSF), “Production and Trade of Knowledge- and Technology-Intensive Industries, Science and Engineering Indicators,” 2022, NSB-2022-6, <https://nces.nsf.gov/pubs/nsb20226/>.

⁷² See Ledia Guci and Abigail Okrent, “Production and Trade of Knowledge- and Technology-Intensive Industries,” NSF, April 19, 2022, <https://nces.nsf.gov/pubs/nsb20226/production-patterns-and-trends-of-knowledge-and-technology-intensive-industries>.

Researchers have summarized this relationship in the context of entrepreneurial development activities by noting that, “entrepreneurship generates growth because it serves as a vehicle for innovation and change, and therefore as a conduit for knowledge spillovers.” See Martin A. Carree and A. Roy Thurik, “The Impact of Entrepreneurship on Economic Growth,” in *Handbook of Entrepreneurship Research*, Eds. Zoltan J. Acs and David B. Audretsch (Springer: New York, NY, 2011), pp. 586-588.

For an overview of the concept of productivity, see CRS In Focus IF10557, *Introduction to U.S. Economy: Productivity*, by Lida R. Weinstock, which notes that,

Productivity is broadly defined as the ratio of output to inputs. With respect to the economy, productivity measures how efficiently goods and services can be produced by comparing the amount of economic output with the amount of inputs (labor, capital, etc.) used to produce those goods. Policymakers are interested in productivity because productivity growth is generally the most consequential determinant of long-term economic growth and substantive improvements in individual living standards.

⁷³ See CRS Report R47373, *Science and Technology Issues for the 118th Congress*, coordinated by Nicole T. Carter; and Zoltan J. Acs, “High-Impact Entrepreneurship,” in *Handbook of Entrepreneurship Research*, eds. Zoltan J. Acs, David B. Audretsch (Springer: New York, NY, 2011), pp. 165-166.

⁷⁴ David B. Audretsch, Max C. Keilbach, and Erik E. Lehmann, *Entrepreneurship and Economic Growth* (Oxford University Press: New York, NY, 2006), pp. 176-178; and CRS Report R43695, *Small Business Research Programs: SBIR and STTR*, by Marcy E. Gallo.

⁷⁵ Ryan Decker, et al., “The Role of Entrepreneurship in U.S. Job Creation and Economic Dynamism,” *Journal of Economic Perspectives*, Summer 2014, vol. 23, no. 3, p. 13, <https://doi.org/10.1257/jep.28.3.3>.

engineering, and math (STEM) occupations; STEM jobs generally pay higher wages than non-STEM jobs.⁷⁶

Entrepreneurship's Expanding Role in Economic Development Policies

Entrepreneurship is viewed as an “engine for economic growth” due to the job creation, productivity, innovation, and knowledge spillovers facilitated by certain types of young firms.⁷⁷ State and local economic development practitioners increasingly incorporate entrepreneurship into long-term economic development plans as a means of creating jobs.⁷⁸ State and local stakeholders also continue to target high-growth firms because of their association with greater prospects for job creation than typical startups.⁷⁹ Many implement entrepreneurial development activities through business accelerator, incubator, capital access, technical assistance, and network development activities.⁸⁰

Economic development practitioners and policymakers also pursue entrepreneurial development strategies to diversify regional economies and create resiliency from economic shocks and other events. In their view, longstanding economic development strategies that target large firms or recruit existing businesses from outside areas may not be reliable or sufficient strategies for creating growth or jobs in all communities.⁸¹ In this way, entrepreneurship offers an alternative to

⁷⁶ See, for example, wages in computer and information technology occupations compared to median annual wage at U.S. Bureau of Labor Statistics (BLS), “Computer and Information Technology Occupations,” <https://www.bls.gov/ooh/computer-and-information-technology/home.htm>. See also the BLS’ employment projections at “Employment in STEM Occupations,” <https://www.bls.gov/emp/tables/stem-employment.htm>.

⁷⁷ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 22, <https://doi.org/10.7551/mitpress/13873.001.0001>; Martin A. Carree and A. Roy Thurik, “The Impact of Entrepreneurship on Economic Growth,” in *Handbook of Entrepreneurship Research*, eds. Zoltan J. Acs and David B. Audretsch (Springer: New York, NY, 2011), pp. 586-588; and Chen Yeh, “Why Are Startups Important for the Economy?” *Federal Reserve Bank of Richmond Economic Brief* (February 2023) no. 23-06, https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-06.

⁷⁸ David Summers, “The Economic Impact of Entrepreneurship: Setting Realistic Expectations,” *Academy of Entrepreneurship Journal*, 2015, vol. 21, no. 2, pp. 103-107, <https://www.abacademies.org/articles/aejvol21no22015.pdf>; and Don Macke and Dell Gines, “Entrepreneurship in Rural America: A Road to Prosperity,” audio conference series organized by the Federal Reserve System, September 10, 2013, <https://fedcommunities.org/wp-content/uploads/2022/11/20130910-connecting-communities-presentation-rural-entrepreneurship.pdf>.

⁷⁹ See Ryan Decker, et al., “The Role of Entrepreneurship in US Job Creation and Economic Dynamism,” *Journal of Economic Perspectives*, Summer 2014, vol. 23, no. 3, pp. 6, 8-10, <https://doi.org/10.1257/jep.28.3.3>. See also Jason Henderson, “Building the Rural Economy with High-Growth Entrepreneurs,” *Economic Review*, Federal Reserve Bank of Kansas City, 2002, vol. 87, issue Q III, pp. 48-49, <https://fedinprint.org/item/fedker/31698>.

⁸⁰ For examples, see the activities designed by Regional Tech Hubs, which were designated by the Economic Development Administration in July 2024 (<https://www.eda.gov/funding/programs/regional-technology-and-innovation-hubs>); and activities included in National Governors Association, “Entrepreneurship in States,” June 2019, https://nga.org/wp-content/uploads/2018/06/NGA_Entrepreneurship_2019.pdf.

⁸¹ Karen G. Mills and Annie V. Dang, “Panel Remarks: Creating ‘Smart Policy,’” in *The Role of Innovation and Entrepreneurship*, ed. Michael J. Andrews, et al. (Chicago, IL: University of Chicago Press, 2022), pp. 561-562; Jason Henderson, “Building the Rural Economy with High-Growth Entrepreneurs,” *Economic Review*, Federal Reserve Bank of Kansas City, 2002, vol. 87, Q III, p. 48, <https://fedinprint.org/item/fedker/31698>; and Michael Mazerov and Michael Leachman, “State Job Creation Strategies Often Off Base,” Center on Budget and Policy Priorities, February 2016, pp. 6-8, <http://www.cbpp.org/sites/default/files/atoms/files/2-3-16sfpp.pdf>.

business recruitment.⁸² Some analysts and practitioners, however, recommend a balance of business recruitment and entrepreneurial development strategies.⁸³

Selected Types of Federal Support for Innovative Entrepreneurship

Federal policies designed to facilitate innovative entrepreneurship often include those that support the amenities, infrastructure, networks, human and financial capital, technical assistance, and other resources vital for new firm formation. Numerous federal entities and programs directly and indirectly support entrepreneurship.⁸⁴ Assistance programs are primarily provided by the SBA (see “Entrepreneurship in Small Business and SBA Policies”), and smaller programs are also administered by the National Science Foundation (NSF) and the Departments of Agriculture, Commerce, Defense, Energy, and the Treasury.⁸⁵ In addition to loan, grant, and technical assistance programs, federal education, tax, immigration, and intellectual property policies and regulatory actions may affect the level and quality of entrepreneurship as well.⁸⁶

Federal policies designed to facilitate entrepreneurship may use distinct approaches that are informed by overarching policy objectives. For instance, entrepreneurial development policies designed to advance national economic or innovation objectives (e.g., the SBIR and STTR programs⁸⁷) tend to focus on high-growth or KTI startups. In contrast, policies designed to support community-driven regional economic development objectives (e.g., programs administered by federal regional commissions and authorities) are often broad-based and flexible, making them available to support startups for both innovative and self-employment functions.

Federal policies designed to facilitate entrepreneurship may be paired with policies to support other objectives, such as small business development, R&D, innovation, energy transition, public health, or economic growth or development. For instance:

- The Department of Energy’s (DOE’s) Office of Technology Transitions (OTT) administers several programs designed to assist entrepreneurs to develop and commercialize energy technologies (e.g., the Lab-Embedded Entrepreneurship Programs, Advanced Research Projects Agency-Energy (ARPA-E));⁸⁸

⁸² See, for example, Don Macke and Dell Gines, “Entrepreneurship in Rural America: A Road to Prosperity,” audio conference series organized by the Federal Reserve System, September 10, 2013, <https://fedcommunities.org/wp-content/uploads/2022/11/20130910-connecting-communities-presentation-rural-entrepreneurship.pdf>; and Timothy J. Bartik, “Introduction to Special Issue: Learning More About Incentives,” *Economic Development Quarterly* (2020), vol. 34, no. 2, pp. 95-100, <https://doi.org/10.1177/0891242420916033>.

⁸³ National Governors Association, “Entrepreneurship in States,” June 2019, p. 43, https://nga.org/wp-content/uploads/2018/06/NGA_Entrepreneurship_2019.pdf.

⁸⁴ See, for example, the catalogue of federal programs compiled by Professor Andrew Reamer in 2017. Reamer categorized federal programs into three areas: (1) federal organizations fully focused on entrepreneurship, (2) entrepreneurship development programs in federal organizations with a broader mission, and (3) entrepreneurship support in broader federal programs. See Andrew Reamer, “Federal Efforts in Support of Entrepreneurship: A Reference Guide (Working Draft),” April 13, 2017, <https://gwipp.gwu.edu/federal-efforts-support-entrepreneurship-reference-guide-working-draft>.

⁸⁵ Aaron Chatterji, Edward Glaeser, and William Kerr, “Clusters of Entrepreneurship and Innovation,” *Innovation Policy and the Economy*, vol. 14, no. 1 (2014), p. 152.

⁸⁶ Aaron Chatterji, Edward Glaeser, and William Kerr, “Clusters of Entrepreneurship and Innovation,” *Innovation Policy and the Economy*, vol. 14, no. 1 (2014), pp. 129-166.

⁸⁷ For additional information, see CRS Report R43695, *Small Business Research Programs: SBIR and STTR*, by Marcy E. Gallo.

⁸⁸ For additional information, see Department of Energy, Office of Technology Transitions, “Entrepreneurs,” <https://www.energy.gov/technologytransitions/entrepreneurs>.

- The Department of Defense’s Embedded Entrepreneur Initiative (EEI) provides support for technology commercialization for both defense and commercial markets;⁸⁹
- The NSF Innovation Corps (I-Corps) is an entrepreneurial training program designed to meet several objectives, including workforce training, innovation, technology transfer, and the commercialization of basic research;⁹⁰ and
- The Economic Development Administration’s (EDA’s) Tech Hubs and Recompete Programs support entrepreneurial development and are designed to meet national economic growth and regional economic development objectives.⁹¹

The following sections highlight select recent federal entrepreneurial development initiatives that are separate from—or in addition to—small business development initiatives. The initiatives were selected in order to highlight:

- the overlapping nature of certain entrepreneurial and small business development programs,
- the expansion of the EDA’s remit into innovation- and entrepreneurship-focused activities,
- the expansion of entrepreneurship activities in policies for economically distressed regions, and
- the types of administrative efforts used to coordinate entrepreneurship strategies at individual agencies and across agencies.

The following examples are illustrative and do not present a comprehensive review of all federal entrepreneurship policies.

⁸⁹ Defense Advanced Research Projects Agency, “Embedded Entrepreneur Initiative,” <https://eei.darpa.mil/#opportunity>.

⁹⁰ NSF, “Innovation Corps (I-Corps),” <https://new.nsf.gov/funding/initiatives/i-corps>.

⁹¹ EDA, “Program List,” <https://www.eda.gov/funding/programs>.

Examples of Entrepreneurial Development Strategies

Although there are similar approaches to promoting both small businesses and entrepreneurship, the following are often used for entrepreneurial development purposes to support new firm formation and growth:⁹²

- Reducing startup costs and expanding access to capital in varying forms and scales, including equity and venture capital and microcredit;⁹³
- Using tax policy, regulation, and legal protection for property rights to support entrepreneurial activity (e.g., tax incentives for R&D investments, subsidies for targeted industries, patent policies);⁹⁴
- Expanding access to places, facilities, technology, and human capital, which may include science parks, workforce training, immigration policies, and university partnerships to expand technology transfer and commercialization, among other policies;⁹⁵
- Developing entrepreneurial ecosystems, as well as individual networks, to connect entrepreneurs to capital, technical expertise, and other non-financial opportunities, which may include business incubators and accelerators;⁹⁶ and
- Providing entrepreneurial education and entrepreneurial development programs, which may include management training, business coaching, and other technical assistance or services.⁹⁷

Researchers note that data on outcomes for entrepreneurial development programs is limited for some strategies and mixed for others.⁹⁸ For a summary and examples of other select federal entrepreneurial development programs, see CRS In Focus IFI2793, *Federal Assistance for State and Local Entrepreneurship Development Policies and Recent Legislation*.

Entrepreneurship in Small Business and SBA Policies

Strategies that are often used to promote entrepreneurship may overlap with, but also be distinct from, strategies used to promote small business development. A key difference between

⁹² Joern H. Block, Christian O. Fisch, and Mirjam van Praag, “The Schumpeterian Entrepreneur: A Review of the Empirical Evidence on the Antecedents, Behaviour and Consequences of Innovative Entrepreneurship,” *Industry and Innovation*, 2017, vol. 24, issue 1, pp. 61–95, <https://doi.org/10.1080/13662716.2016.1216397>; and Karen G. Mills and Annie V. Dang, “Panel Remarks: Creating ‘Smart Policy,’” in *The Role of Innovation and Entrepreneurship*, ed. Michael J. Andrews, et al. (Chicago, IL: University of Chicago Press, 2022), pp. 561–566, <https://www.nber.org/system/files/chapters/c14508/c14508.pdf>.

⁹³ Thomas A. Garrett, “Entrepreneurs Thrive in America—Federal, State Policies Make a Difference for Those Facing Risk,” The Federal Reserve Bank of St. Louis, April 1, 2005, <https://www.stlouisfed.org/publications/bridges/spring-2005/entrepreneurs-thrive-in-america-federal-state-policies-make-a-difference-for-those-facing-risk>.

Microcredit is “a small loan granted to a borrower not served by a traditional financial institution. The loans are frequently too small to be considered by commercial banks. Other times, the borrowers lack the credit history or the collateral to qualify for traditional financing. Around the world, microcredit institutions seek to provide financial services in areas where these services would not otherwise be available.” See <https://www.dallasfed.org/~media/documents/educate/everyday/entrepreneurs.pdf>.

⁹⁴ A 2005 analysis by the Federal Reserve Bank of St. Louis, argued “Four policies that have an impact on entrepreneurship are: tax policy, regulation, start-up costs and access to capital markets, and legal protection and property rights.” See Thomas A. Garrett, “Entrepreneurs Thrive in America—Federal, State Policies Make a Difference for Those Facing Risk,” The Federal Reserve Bank of St. Louis, April 1, 2005, <https://www.stlouisfed.org/publications/bridges/spring-2005/entrepreneurs-thrive-in-america-federal-state-policies-make-a-difference-for-those-facing-risk>.

⁹⁵ For a summary of the nonimmigrant visa categories that could be used by entrepreneurs see “Visas for Temporary Professional Workers” in CRS Report R47159, *Temporary Professional Foreign Workers: Background, Trends, and Policy Issues*, by Jill H. Wilson. See also CBO, “Federal Policies and Innovation,” November 17, 2014, <https://www.cbo.gov/publication/49487>.

⁹⁶ Individual networks help entrepreneurs by providing business know-how and other support. Similarly, at the community or national level, the development of entrepreneurial ecosystems may help increase the number of startups and the survival rate of new firms. An entrepreneurial ecosystem facilitates connections and interactions between entrepreneurs, firms, governments, and institutions, and is often framed as an integrated network that is composed of a region’s physical, institutional, social, and other assets and activities. See David B. Audretsch and Maksim Belitski, (continued...)

entrepreneurship and small business policies is that small business policies may more frequently focus on promoting *existing* businesses rather than potential entrepreneurs. Policies to expand entrepreneurship generally take a more “systemic” approach, meaning they are often designed to create an entrepreneurial ecosystem by building upon opportunities available to entrepreneurs and addressing individual, firm, and community-level challenges.⁹⁹

Entrepreneurial firms and small businesses face similar but distinct opportunities and challenges. For example, both are likely to need access to capital. However, certain young entrepreneurial firms may be more likely to need different types of capital and capital for different purposes, such as high-tech equipment and research facilities or growth capital. Some observers note, for instance, that SBA’s 7(a) loan guarantee program provides most of its loans to established businesses rather than to startups. One reason is that SBA loan programs have guarantees from commercial banks, “which are often reluctant to lend to unproven startups.”¹⁰⁰ Additionally, some analysts have called for entrepreneurship policies that provide different incentives based on firm size, even among young firms. They argue that R&D tax credits may be more effective for large businesses rather than small businesses in terms of facilitating innovation.¹⁰¹

In recent decades, federal policies have incorporated support for entrepreneurship in addition to—or as an alternative to—longstanding economic development programs that have previously focused on activities such as small business development and infrastructure. To some degree, this represents an expanded approach to federal economic development. Certain SBA programs launched in recent years appear to delineate the different needs of small businesses and entrepreneurial firms. This includes SBA’s Growth Accelerator Fund Competition, which awards grants to entities providing services to startups, particularly those focused on innovation and R&D. For more information, see CRS In Focus IF12310, *The Small Business Administration’s Growth Accelerator Fund Competition*, by Adam G. Levin.

Entrepreneurship in Federal Economic Development and Economic Development Administration (EDA) Policies

Congress has directed federal agencies that have historically focused on various aspects of regional economic development (other than entrepreneurship), such as the EDA, to expand

“Entrepreneurial Ecosystems in Cities: Establishing the Framework Conditions,” *The Journal of Technology Transfer*, Springer, vol. 42, no. 5 (October 2017), pp. 1030-1051, <https://doi.org/10.1007/s10961-016-9473-8>; Don Macke and Dell Gines, “Entrepreneurship in Rural America: A Road to Prosperity,” audio conference series organized by the Federal Reserve System, September 10, 2013, <https://fedcommunities.org/wp-content/uploads/2022/11/20130910-connecting-communities-presentation-rural-entrepreneurship.pdf>; and Kauffman Foundation, “Entrepreneurial Ecosystem Builder Playbook,” <https://www.kauffman.org/ecosystem-playbook-draft-3/ecosystems/>.

⁹⁷ Joern H. Block, Christian O. Fisch, and Mirjam van Praag, “The Schumpeterian Entrepreneur: A Review of the Empirical Evidence on the Antecedents, Behaviour and Consequences of Innovative Entrepreneurship,” *Industry and Innovation*, 2017, vol. 24, issue 1, pp. 61–95, <https://doi.org/10.1080/13662716.2016.1216397>.

⁹⁸ Robert W. Fairlie, et al., *The Promise and Peril of Entrepreneurship: Job Creation and Survival Among U.S. Startups* (Cambridge, MA: MIT Press, 2023), p. 186, <https://doi.org/10.7551/mitpress/13873.001.0001>; and Aaron Chatterji, Edward Glaeser, and William Kerr, “Clusters of Entrepreneurship and Innovation,” *Innovation Policy and the Economy*, vol. 14, no. 1 (2014), pp. 129-166.

⁹⁹ David B. Audretsch, Max C. Keilbach, and Erik E. Lehmann, *Entrepreneurship and Economic Growth* (Oxford University Press: New York, NY, 2006), pp. 176-177.

¹⁰⁰ Aaron. Chatterji, “Why Washington Has It Wrong on Small Business,” *Wall Street Journal*, November 12, 2012, <https://www.wsj.com/articles/why-washington-has-it-wrong-on-small-business-1377527329>.

¹⁰¹ Karen G. Mills and Annie V. Dang, “Panel Remarks: Creating ‘Smart Policy,’” in *The Role of Innovation and Entrepreneurship*, ed. Michael J. Andrews, et al. (Chicago, IL: University of Chicago Press, 2022), p. 561, <https://www.nber.org/system/files/chapters/c14508/c14508.pdf>.

assistance for state and local innovation and entrepreneurship activities. After EDA was established in 1965, the agency's core programs primarily focused on investments in infrastructure, public works, and other services, along with support for planning and technical assistance.¹⁰² In the 2000s and 2010s, legislation expanded EDA programming to include explicit support for innovation and entrepreneurship activities. For example, the America COMPETES Reauthorization Act of 2010 (P.L. 111-358) established the Build to Scale Program (B2S, formerly Regional Innovation Strategies) and the EDA's Office of Innovation and Entrepreneurship (OIE).¹⁰³ Today the EDA's stated mission emphasizes innovation.¹⁰⁴

EDA continues to administer several programs designed to support certain state, regional, and local entrepreneurship strategies, including several that prioritize KTI firms and innovation outcomes. The longest-running EDA program focused specifically on innovation and entrepreneurship is the B2S program, which supports entrepreneurship, commercialization, capital formation, and related efforts to expand startups, promote company growth, and increase access to risk capital across regional economies.¹⁰⁵ The newest EDA program focused on innovation and entrepreneurship is the Tech Hubs program, which is designed to support technology development, job creation, and expanded U.S. innovation capacity. Other EDA programs that are authorized to support technology and innovation objectives include:

- the **STEM Talent Challenge Program**, which funds efforts to expand career pathways and meet employers' needs for a STEM capable workforce;¹⁰⁶ and
- the **Economic Adjustment Assistance Program**, which is a broad-based, flexible economic development program that can be used for a range of planning and implementation projects, including entrepreneurial development and/or technology-based economic development, though the program was not authorized solely to address entrepreneurship or innovation objectives.¹⁰⁷

Entrepreneurship in Federal Policies for Distressed Areas

Congress and executive agencies have included entrepreneurship as a core component of revitalization policies for economically distressed areas. For instance, entrepreneurship is one of the four authorized implementation activities for EDA's newest program for economically distressed areas, the Recompete Pilot Program.¹⁰⁸ Entrepreneurial training, education, or related

¹⁰² Robert W. Lake, Robin Leichenko, and Amy Glasmeier, "EDA and U.S. Economic Distress 1965–2000," EDA Research Report, 99-07-13812, July 2004, p. 5.

¹⁰³ The EDA's Office of Innovation and Entrepreneurship (OIE) was authorized to "foster innovation and the commercialization of new technologies, products, processes, and services with the goal of promoting productivity and economic growth in the United States." 15 U.S.C. §3720(b).

¹⁰⁴ EDA, "Overview," <https://eda.gov/about>.

¹⁰⁵ Build to Scale was established in Section 603 of the America COMPETES Reauthorization Act of 2010 (P.L. 111-358) as codified by 15 U.S.C. §3722. See EDA, "Build to Scale," <https://www.eda.gov/funding/programs/build-to-scale>.

¹⁰⁶ EDA, "STEM Talent Challenge," <https://www.eda.gov/funding/programs/stem-challenge>.

¹⁰⁷ 42 U.S.C. §3149, <https://www.eda.gov/economic-adjustment-assistance>.

The EDA defines technology-based economic development as "economic development planning or implementation projects that foster regional knowledge ecosystems that support entrepreneurs and startups, including the commercialization of new technologies, that are creating technology-driven businesses and high-skilled, well-paying jobs of the future." See EDA, "Investment Priorities," <https://www.eda.gov/funding/investment-priorities>.

¹⁰⁸ 15 U.S.C. §3722b.

activities are explicitly noted in the authorizing statutes for most of the federal regional commissions and authorities.¹⁰⁹

Federal Advisory Committees and Executive Branch Initiatives

Researchers note that numerous federal advisory committees supporting entrepreneurship have been established in recent decades.¹¹⁰ The SBA and the EDA manage two of the active committees focused on entrepreneurship:

- **Invention, Innovation, and Entrepreneurship Advisory Committee (IIEAC).**
The SBA's Office of Investment and Innovation established the IIEAC, which focuses on startup and small business innovation ecosystems.¹¹¹
- **National Advisory Council on Innovation and Entrepreneurship (NACIE).**
The EDA's OIE manages NACIE, a federal advisory committee that was established to "encourage the development and implementation of policies that cultivate technology commercialization."¹¹² NACIE's 2024 report, *Competitiveness Through Entrepreneurship: A Strategy for U.S. Innovation*, outlined 10 recommendations, including activities to address barriers to financial and human capital.¹¹³ The report recommended the establishment of a National Innovation Accelerator Network to connect partners and to facilitate access to innovation, commercialization, and capital resources. The report also suggested a national council to develop public-private partnerships and coordinate federal efforts.

Certain executive branch efforts have also promoted entrepreneurship. As one example, in 2011, the Obama Administration launched a series of entrepreneurship development activities in five key areas through the "Startup America" initiative.¹¹⁴

Policy Considerations

In evaluating whether or how to promote entrepreneurship, policymakers may also seek to understand the overall economic impact associated with increased levels and different types of startups (e.g., high growth, innovative, typical). Because certain conditions, amenities, and networks are believed to have a role in the startup and growth of new firms—the so-called "entrepreneurial ecosystem"—policymakers may also seek to further tailor entrepreneurial development programs to address certain place-, firm-, or industry-based challenges and opportunities as well (e.g. workforce development). Congress may opt to consider differences

¹⁰⁹ For additional information regarding federal regional commissions and authorities, see CRS In Focus IF11140, *Federal Regional Commissions and Authorities: Overview of Structure and Activities*, by Julie M. Lawhorn.

¹¹⁰ See Andrew Reamer, "Federal Efforts in Support of Entrepreneurship: A Reference Guide (Working Draft)," April 13, 2017, <https://gwipp.gwu.edu/federal-efforts-support-entrepreneurship-reference-guide-working-draft>.

¹¹¹ SBA, "Invention, Innovation, and Entrepreneurship Advisory Committee," <https://www.sba.gov/about-sba/organization/sba-initiatives/invention-innovation-entrepreneurship-advisory-committee>.

¹¹² EDA, "National Advisory Council on Innovation and Entrepreneurship (NACIE)," <https://www.eda.gov/strategic-initiatives/national-advisory-council-on-innovation-and-entrepreneurship>.

¹¹³ National Advisory Council on Innovation and Entrepreneurship, *Competitiveness Through Entrepreneurship: A Strategy for U.S. Innovation*, February 2024, https://www.eda.gov/sites/default/files/2024-02/NACIE_Competitiveness_Through_Entrepreneurship.pdf.

¹¹⁴ For additional information, see The White House, "Fact Sheet: White House Launches 'Startup America' Initiative," <https://obamawhitehouse.archives.gov/startup-america-fact-sheet>.

between entrepreneurial firms and small businesses, and whether those differences call for distinct or overlapping policy pathways.¹¹⁵

Alternatively, Congress may consider a limited federal role in supporting entrepreneurship and the formation of new businesses. Some observers, for instance, view existing policies as creating too many “typical startups,” which may not necessarily lead to economic growth or development.¹¹⁶ Some outside groups suggest that Congress could minimize federal involvement in entrepreneurial development policies in favor of state and private sector support for startups.¹¹⁷

If Congress seeks to maintain or expand federal involvement in entrepreneurial development, there are several ways to shape the implementation of such efforts through policy. The following sections highlight select policy considerations.

Targeted and Broad-Based Policies

If Congress seeks to support entrepreneurial development for jobs or economic expansion objectives, policymakers may opt to focus assistance on facilitating the growth of particular types of startups, such as young high-growth or KTI firms.¹¹⁸ Other may argue that innovation occurs in many industries and is not limited to industries with high concentrations of KTI firms. Policies focused solely on the development of KTI firms may overlook innovation opportunities in other fields.

Entrepreneurship is viewed as a vehicle for providing alternative sources of income, building individual wealth, and creating social connections at the community level. If Congress seeks to support entrepreneurial development to meet these objectives, policymakers may opt to focus assistance on facilitating the growth of all startups regardless of type or potential for productivity or employment growth.

Equity and Regional Disparities

Congress may seek to review whether and how existing or new regional innovation strategies (RIS) programs—such as EDA’s Tech Hubs program—expand entrepreneurship, including in economically distressed regions or in areas that are not leading technology centers. In doing so, Congress may consider whether, or to what extent, existing or additional resources should be directed to these newer approaches to regional economic development. For instance, recently authorized and expanded RIS policies incorporate entrepreneurship development as one of the core implementation strategies.¹¹⁹ According to some observers, programs such as the Tech Hubs

¹¹⁵ Some entrepreneurship experts have called for the development of entrepreneurship policies that are separate from, or in addition to, small business policies. For an example of these perspectives, see Aaron Chatterji, “Why Washington Has It Wrong on Small Business,” *Wall Street Journal*, November 12, 2012, <https://www.wsj.com/articles/why-washington-has-it-wrong-on-small-business-1377527329>.

¹¹⁶ Shane Scott, *The Illusions of Entrepreneurship* (Yale University Press: New Haven, CT and London, England; 2008).

¹¹⁷ For an example of this perspective, see Chris Edwards, “The Small Business Administration and Policies for Entrepreneurship,” Cato Institute, February 1, 2022, <https://www.cato.org/testimony/small-business-administration-policies-entrepreneurship>.

¹¹⁸ For examples of this perspective, see Aaron K. Chatterji, “The Main Street Fund: Investing in an Entrepreneurial Economy,” The Hamilton Project policy proposal, June 2018, p. 15, https://www.brookings.edu/wp-content/uploads/2018/06/ES_THP_20180611_Chatterji.pdf; and Karen G. Mills and Annie V. Dang, “Panel Remarks: Creating “Smart Policy,”” in *The Role of Innovation and Entrepreneurship*, ed. Michael J. Andrews, et al. (Chicago, IL: University of Chicago Press, 2022), pp. 561-566.

¹¹⁹ Recently authorized and expanded policies include support for regional innovation strategies (RIS) programs (e.g., (continued...))

program have not had funding levels approved that would allow for transformative regional innovation and entrepreneurship at scale.¹²⁰

In response to concerns about geographic diversity and equity in entrepreneurial development policies, Congress may consider place-based or other targeted policies that include criteria or assistance for certain types of regions or entrepreneurs. Some have proposed that facilitating high-growth entrepreneurship may require “supporting a larger and more diverse set of entrepreneurs and investing in targeted ecosystems and policies that close market gaps.”¹²¹ These concerns also underlie discussions regarding entrepreneurial development in remote or economically distressed regions, which may involve assistance that is particular to such circumstances and businesses.¹²²

Linking Entrepreneurship and Workforce Development

Workforce training and human capital concerns are often linked with entrepreneurial and economic development. For instance, young and growing KTI firms are likely to seek a workforce with STEM-related skills or access to workforce training resources. For this reason, policymakers could consider integrated and flexible policy approaches that include support for workforce development strategies in tandem with entrepreneurial development strategies.

Options to Expand the Research and Evaluation of Entrepreneurship

Entrepreneurship experts note that “no single indicator can ever adequately cover entrepreneurship.”¹²³ As such, Congress may also seek to examine multiple indicators of entrepreneurial activity to inform the size, shape, and scale of future policy interventions. A range of social and economic data and metrics may be used depending on the preferred policy objectives and context. For instance, it may be useful to examine whether jobs created by young firms are long-lasting or short-lived, the geographic diversity of startups and new jobs, and the quality of jobs and firms.¹²⁴ Policymakers may also further examine how employment or productivity gains are correlated with changing business dynamics (i.e., new firms forming, growing, shrinking, and dying), if at all.

National Science Foundation’s Regional Engines Program, EDA’s Tech Hubs and Build to Scale Programs), which were designed with multiple objectives—including job creation, innovation, and national competitiveness.

¹²⁰ Christine Mui and Mohar Chatterjee, “Why Biden’s Multibillion-Dollar Plan to Build America’s Next Tech Powerhouses Is Getting Starved,” September 16, 2024, <https://www.politico.com/news/2024/09/16/biden-tech-powerhouses-hubs-00179016>.

¹²¹ Karen G. Mills and Annie V. Dang, “Panel Remarks: Creating ‘Smart Policy,’” in *The Role of Innovation and Entrepreneurship*, ed. Michael J. Andrews, et al. (Chicago, IL: University of Chicago Press, 2022), pp. 561-566, <https://www.nber.org/system/files/chapters/c14508/c14508.pdf>.

¹²² For an example of this perspective, see Don Macke and Dell Gines, “Entrepreneurship in Rural America: A Road to Prosperity,” audio conference series organized by the Federal Reserve System, September 10, 2013, <https://fedcommunities.org/wp-content/uploads/2022/11/20130910-connecting-communities-presentation-rural-entrepreneurship.pdf>.

¹²³ OECD, *Entrepreneurship at a Glance 2017* (OECD Publishing: Paris), p. 16, https://doi.org/10.1787/entrepreneur_aag-2017-en.

¹²⁴ David Summers, “The Economic Impact of Entrepreneurship: Setting Realistic Expectations,” *Academy of Entrepreneurship Journal*, 2015, vol. 21, no. 2, pp. 88-107.

Concluding Observations

In response to recent reports about declining business startup rates, economic development practitioners and outside groups have proposed a range of policy instruments to address multiple factors impacting entrepreneurship at the federal, regional, community, and firm levels. Broadly speaking, these often include changes to regulatory actions, tax policies, immigration policies, and financial and technical assistance programs, each with their own merits and limitations.¹²⁵ Due to the limited, and occasionally mixed, evaluations of many entrepreneurial development strategies, Congress may seek additional evaluation of such interventions.¹²⁶ Congress could review whether to use such interventions to maintain or change the current level of support for entrepreneurial development activities or to focus on increasing the quality of entrepreneurship.

Additional CRS Reports

Federal agencies administer various financial and technical assistance programs to support entrepreneurship, innovation, and regional innovation strategies. For additional information on select federal programs that may support entrepreneurial development activities, see

- CRS Report R43695, *Small Business Research Programs: SBIR and STTR*.
- CRS Report R45015, *Minority Business Development Agency: An Overview of Its History and Current Issues*.
- CRS Report R41352, *Small Business Management and Technical Assistance Training Programs*.
- CRS In Focus IF12176, *The Small Business Administration's Program for Investment in Microentrepreneurs*.
- CRS In Focus IF12310, *The Small Business Administration's Growth Accelerator Fund Competition*.
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¹²⁵ For examples of specific policies proposed by federal agencies and working groups, see CBO, *Federal Policies in Response to Declining Entrepreneurship*, December 29, 2020, <https://www.cbo.gov/publication/56906>; and NACIE, "Competitiveness Through Entrepreneurship: A Strategy for U.S. Innovation," February 2024, https://www.eda.gov/sites/default/files/2024-02/NACIE_Competitiveness_Through_Entrepreneurship.pdf. For examples of specific policies focused on entrepreneurship and regional economic development proposed by academic researchers, see Aaron Chatterji, Edward Glaeser, and William Kerr, "Clusters of Entrepreneurship and Innovation," *Innovation Policy and the Economy*, vol. 14, no. 1 (2014), pp. 129-166.

¹²⁶ Aaron Chatterji, Edward Glaeser, and William Kerr, "Clusters of Entrepreneurship and Innovation," *Innovation Policy and the Economy*, vol. 14, no. 1 (2014), pp. 129-166.

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