Entrepreneurship and the Decline of American Growth

JEC REPUBLICANS | DECEMBER 2022

Ranking Member Mike Lee (R-UT)

Joint Economic Committee Republicans

jec.senate.gov | G-01 Dirksen Senate Office Building Washington, DC 20510 | (202) 224-5171

EXECUTIVE SUMMARY

Entrepreneurs are alert to new opportunities, providing the new products, services, and methods that are foundational to economic growth. However, in the last half-century, entrepreneur-driven innovation has declined, leading to slower economic progress. Policymakers should remove barriers to entrepreneurship in order to unleash economic growth, and as a result, improve living standards for all Americans.

- Entrepreneurship has declined since the 1970s, across multiple different measures—business formation, self-employment, and productivity growth. The decline in entrepreneurial innovation coincides with a more than 2 percentage point drop in average real Gross Domestic Product (GDP) growth.
- Slow growth has large costs. Had growth rates since 1974 continued at their previous rate of almost 4 percent, the economy would have been approximately 50 percent larger in 2022.
- Around the same time entrepreneurship and GDP growth began to slow in the 1970s, government activity became increasingly hostile to economic expansion—new regulatory activity peaked, and government spending passed the threshold where it becomes a net-drag on economic growth.
- Policy reforms to support entrepreneurs should improve access to capital by removing barriers that raise the cost of financing new ideas. General policies to improve economic growth—such as institutional constraints on regulations, taxes, and spending—are also important reforms.

INTRODUCTION

Economic growth has served as a powerful force for improving living standards throughout America's history. However, in the last half-century, economic progress has slowed, holding back economic output. Had growth rates continued at their pre-1974 level of almost 4 percent, the economy would have been approximately 50 percent larger in 2022.

Slower growth undermines the prosperity of current and future generations. The benefits of past economic growth show up across various dimensions of well-being. Americans at all income levels have access to a greater quality and quantity of food than ever before, have more leisure time, and work fewer hours for higher incomes than at any other point in history.[1] They live in higher quality homes with modern appliances and less overcrowding. Advances in medical technology have helped increase the average life expectancy from 47 years in 1900 to 77 years in 2020.[2] Slower growth also undermines Americans' ability to surmount future fiscal, environmental, and social challenges.

The advances in work productivity, farming yields, housing, conservation, and medicine that drive much of our economic growth are the product of entrepreneurs—people who are alert to new possibilities, identified a market demand for their invention, and persevered in their endeavor, often through repeated failures. Other changes, like more workers, better educated workers, and fewer barriers to trade are also fundamentally important to growth but each of these changes is secondary to the entrepreneur who can take advantage of new and existing resources, employing them more productively. By understanding slower growth as, in large part, a product of less entrepreneur-driven innovation, policymakers can better diagnose causes of slower growth and potential solutions.

The report begins by documenting trends in gross domestic product (GDP) growth over time. We then discuss the role of the entrepreneur in economic progress and show that trends in declining

---

[1] Robert Fogel, *The Escape from Hunger and Premature Death, 1700–2100: Europe, America, and the Third World* (Cambridge: Cambridge University Press, 2004) doi:10.1017/CBO9780511817649; Charlie Giattino and Esteban Ortiz-Ospina, "Are We Working More than Ever?" Our World in Data, December 16, 2020, https://ourworldindata.org/working-more-than-ever.

[2] Elizabeth Arias and Jiaquan Xu, "United States Life Tables, 2020," National Vital Statistics Reports, National Center for Health Statistics, National Vital Statistics Program, Volume 71, Number 1, (2022) https://www.cdc.gov/nchs/data/nvsr/nvsr71/nvsr71-01.pdf.

entrepreneurship match similar trends in GDP growth rates. While there are many competing explanations for these trends, we discuss the central and directly policy-relevant role of public sector growth since the 1970s in the forms of regulatory accumulation, government spending, and taxes. The report concludes with policy proposals to unleash American entrepreneurship, primarily through reductions in the scope of government that would increase access to capital.

ECONOMIC GROWTH IS SLOWING

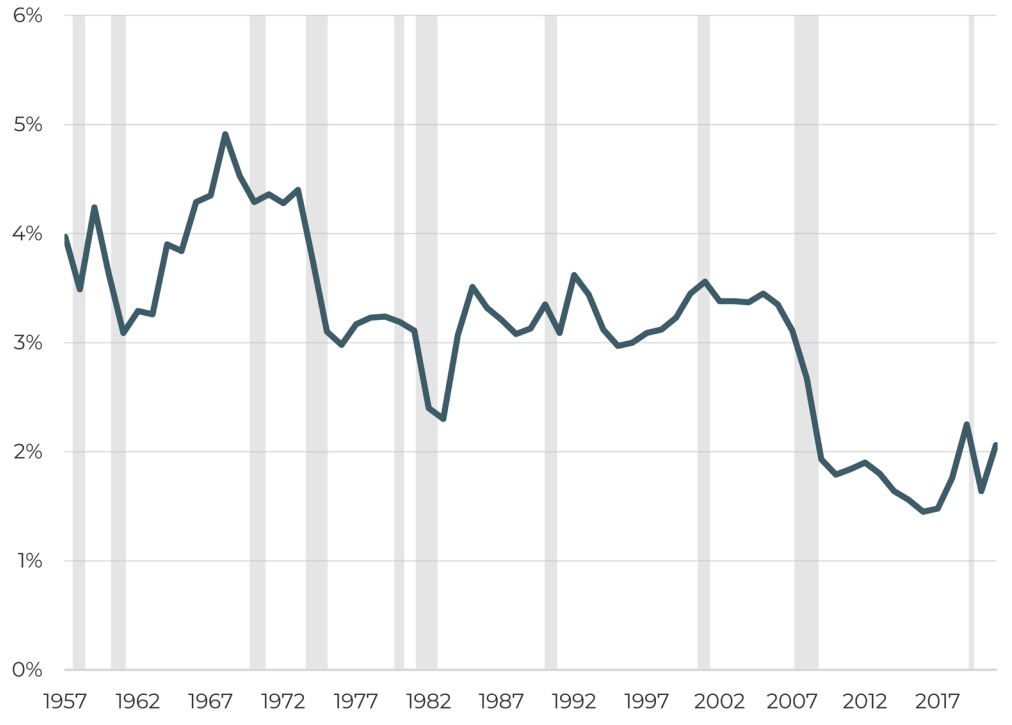
Rates of economic growth in the United States and other developed countries have slowed since the 1970s. In the past two decades alone, the U.S. GDP growth rate slowed by more than a full percentage point. GDP measures the total output of the economy, increasing with the addition of more resources—labor or capital—but more importantly, it provides a bird's eye view of improvements in how effectively raw resources are converted to useful items and value for consumers. In this sense, GDP growth can be thought of as a few-steps-removed proxy measure of entrepreneurship.[3]

Figure 1 presents a 10-year average of annual growth rates, since 10-year averages smooth short-term volatility. The Figure shows three distinct periods. Growth rates were initially high; between 1957 and 1974 the average real GDP growth rate was 3.8 percent. Between 1974 and 2008 the average GDP growth rate fell to 3.0 percent, and then fell again to 1.6 percent in the past 13 years (2008-2021). Between the first and third periods, the average GDP growth rate fell by more than 2 percentage points. Some of this decline is due to slower population growth and other demographic factors, but growth in GDP per capita has similarly fallen from an average annual growth rate of 2.4 percent between 1957-1974, to 0.9 percent from 2008-2021.

The next sections evaluate the role of declining entrepreneurship in contributing to slowing GDP growth.

[3] Tyler Cowen and Ben Southwood, "Is the Rate of Scientific Progress Slowing down?" SSRN, April 9, 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3822691.

Figure 1: Real Gross Domestic Product, 10-Year Average Annual Growth Rate, 1957-2021



Source: JEC Calculations; U.S. Bureau of Economic Analysis, National Bureau of Economic Research.

WHAT IS AN ENTREPRENEUR?

Improvements to clothes, cookware, housing, entertainment, transportation, and even food are the product of people—entrepreneurs—who were alert to new possibilities, identified a market demand for their idea, and persevered in their endeavor, often through repetitive failures. Entrepreneurship—the act of being an entrepreneur—is not limited to one thing, such as starting a business, but rather a multitude of actions that can take place inside or outside of an established firm.[4] In addition to starting a high-growth startup,

[4] In 1755, French Economist Richard Cantillon first described entrepreneurs as individuals who accept risk by directing resources in return for an uncertain income. For Cantillon, entrepreneurship was narrowly defined but broadly applicable, including examples of entrepreneurs such as shopkeepers, merchants, farmers, chimney sweeps, and seamstresses. In Joseph Schumpeter's famous theory, he described entrepreneurship as "the carrying out of new combinations," the dynamic, and evolutionary process of markets in which entrepreneurs disrupt market equilibria and bring about new innovations that replace existing ones. The Schumpeterian entrepreneurial process leads to "creative destruction," as new combinations of resources are shifted to higher valued uses, rendering old innovations obsolete and bringing about constant

entrepreneurship also includes opening a new barbershop, restaurant, or grocery store; investing with the goal of accelerating a business' growth or making it more efficient; and embarking on new ventures within an existing firm.

In each of these cases, the entrepreneur reallocates existing resources to generate new value. To do so, entrepreneurs require access to resources, i.e., capital. This capital can take the form of physical capital (such as machines or equipment), human capital (knowledge and skills), financial capital (money), social capital (relationships), or political capital (influence over government). In the case of Thomas Edison's lightbulb, the invention was only made commercially viable by financing from established corporations and industrialists of the time, including J. P. Morgan.[5] Similarly, Leonardo Da Vinci's most scientifically and culturally relevant creations were financed and supported by the Medicis, a major Florentine banking family.[6] Entrepreneurs' access to capital is critical, particularly financial capital. When access to capital is constrained, it can reduce innovation.

The primary focus of this report is on the entrepreneur who finds new ways to use scarce resources to create greater value for more people, simultaneously conserving resources and increasing standards of living. However, not all entrepreneurial activity is productive or welfare-enhancing. Poorly designed institutions can redirect the energy of entrepreneurs towards unproductive activities, such as lobbying for special tax incentives or regulations that penalize competitors.[7] As the quantity of regulations increases and federal taxation and spending

---

incremental progress towards new equilibria and greater economic value. Other influential theorists include Frank H. Knight's "theory of profit" where profit serves as the reward for bearing uncertainty, and Israel Kirzner's theory of "entrepreneurial alertness" where entrepreneurs exploit price disparities that arise from the imperfect knowledge of market participants. The distinctions among these various theories of entrepreneurship and their applications to economic analysis are the source of a large volume of academic literature and have different applications in economic analysis. Schumpeterian entrepreneurship views entrepreneurship as a disequilibrating process and can be incorporated in models of competitive equilibria. Kirznerian entrepreneurship is an equilibrating process. Knight's theory of profit provides a foundation for microeconomic analysis of risk taking and decision making within firms.

[5] Andrew B. Hargadon and Yellowlees Douglas, "When Innovations Meet Institutions: Edison and the Design of the Electric Light," *Administrative Science Quarterly* 46, no. 3 (2001): 476–501. https://doi.org/10.2307/3094872; "Edison's Miricle of Light," Program Description, PBS, http://www.shoppbs.pbs.org/wgbh/amex/edison/filmmore/description.html.

[6] Ricardo Luis Armentano and LLuis Kun, "Leonardo da Vinci—The First Bioengineer: Educational Innovation to Meet His Desire for Knowledge and Promote His Concept of Interdisciplinarity," *Creative Education*, 10 (2019): 1180-1191, doi: 10.4236/ce.2019.106089.

[7] William J. Baurnol, "Entrepreneurship: Productive, Unproductive, and Destructive," *Journal of Political Economy,* 98, no. 5 (1990): 893–921, http://www.jstor.org/stable/2937617.

expands, so do opportunities for unproductive forms of entrepreneurship.

The next section reviews trends in economic entrepreneurship, followed by a discussion of the ways in which the public sector may be disincentivizing productive entrepreneurship and creating additional avenues for unproductive entrepreneurship.

IS ENTREPRENEURSHIP DECLINING?

Measuring overall levels of entrepreneurship is challenging, given the various forms entrepreneurship can take. Common measures, such as business formation statistics and self-reports of entrepreneurial activity show steady declines since the 1980s. Overall levels of productivity growth—a broad measure of the contribution of entrepreneurs—tell a more mixed story.

Declining Business Formation

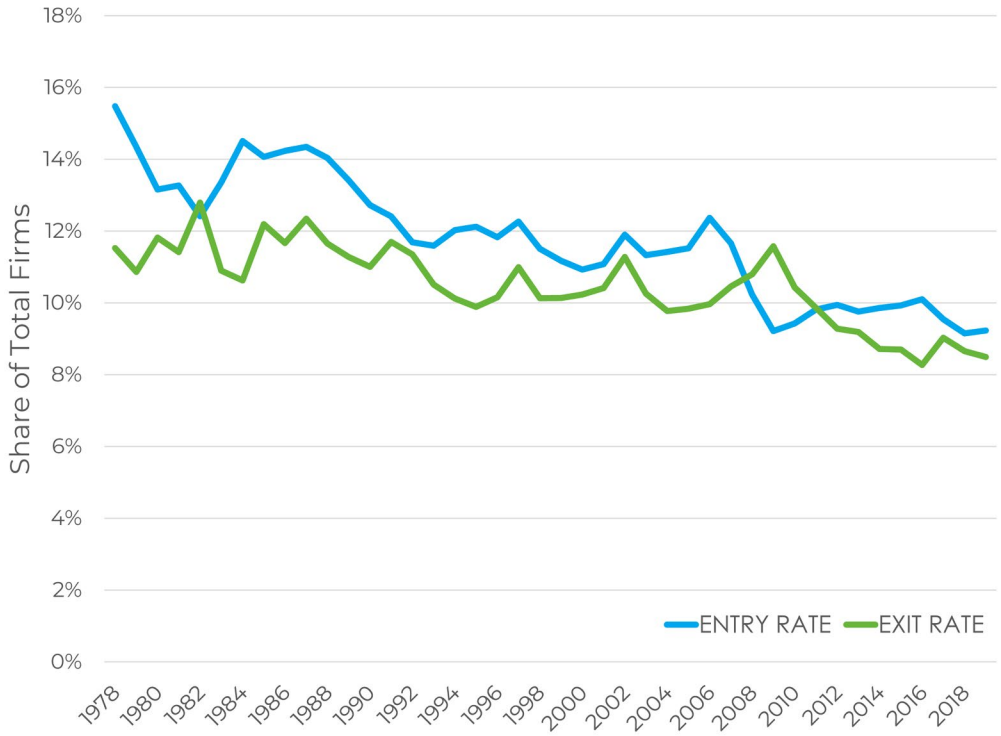
The most common measure of entrepreneurial activity is the rate at which new businesses form and existing businesses exit the market. A high entry rate is a sign that new firms with new ideas are entering the market, while a high exit rate reflects more than the high failure rate of start-up firms (18 percent of new firms fail within the first year) but also reflects old, inefficient firms being replaced.[8]

Figure 2 shows that from 1978 to 2019, the entry rate (number of new firms as a share of all firms) has declined by 6 percentage points, from 15 percent to 9 percent. The exit rate trend follows a similar decline, starting a decade later in 1990. Declining business formation is well documented in the academic literature,[9] which also finds young firms are less likely to become highly productive growth firms, especially since 2000.[10] Some of these trends may have shifted temporarily during

[8] Katherine Gustafson, "The Percentage of Businesses That Fail and How to Boost Your Chances of Success," Lending Tree, May 2, 2022, https://www.lendingtree.com/business/small/failure-rate/.
[9] Ufuk Akcigit and Sina T. Ates, "Ten Facts on Declining Business Dynamism and Lessons from Endogenous Growth Theory," *American Economic Journal*: *Macroeconomics*, 13, 1: 257-98, https://www.aeaweb.org/articles?id=10.1257/mac.20180449.
[10] Ryan Decker, John Haltiwanger, Ron S. Jarmin, and Javier Miranda, "Where Has All the Skewness Gone? The Decline in High-Growth (Young) Firms in the U.S." NBER Working Paper 21776, December 2015, https://www.nber.org/papers/w21776; John Haltiwanger, Ron S. Jarmin, Robert Kulick, and Javier Miranda, *High Growth Young Firms: Contribution to Job, Output, and Productivity Growth*, (University of Chicago Press, 2017) https://www.nber.org/books-and-chapters/measuring-entrepreneurial-businesses-current-knowledge-and-challenges/high-growth-young-firms-contribution-job-output-and-productivity-growth; Steven J. David and John

the pandemic but it is unclear if the pandemic trend of higher business starts and elevated failures is a temporary product of pandemic-era policy distortions or something longer-lasting.[11]

Figure 2: Business Entry and Exit Rates, 1978-2019



Source: Business Dynamics Statistics, Census.

Firm formation rates may be an imperfect measure of entrepreneurship for several reasons. Increasingly, individuals can engage in entrepreneurial activities online and through the "gig" economy without establishing a firm in the formal sense. Additionally, given the diversity in legal, tax, and regulatory treatments among business types, business formation statistics may at times reflect changes in the tax or regulatory code. For example, the *Tax Reform Act of 1986* reduced the top marginal personal income tax rate to a level below the corporate income tax rate, leading to an increase in S-Corp

Haltiwanger, "Labor Market Fluidity and Economic Performance," NBER Working Paper 20479, September 2014, https://www.nber.org/papers/w20479.

[11] The Census Bureau estimates that the overall number of startups increased 21 percent between December 2019 and December 2021. United States Census Bureau, Business Formation Statistics, https://www.census.gov/econ/bfs/index.html; Ryan A. Decker and John Haltiwanger, "Business Entry and Exit in the COVID-19 Pandemic: A Preliminary Look at Official Data," FEDS Notes, May 6, 2022, https://www.federalreserve.gov/econres/notes/feds-notes/business-entry-and-exit-in-the-covid-19-pandemic-a-preliminary-look-at-official-data-20220506.htm.

elections (formation of pass through entities that are taxed at personal income tax rates rather than at the corporate income tax rate) in the years following passage of the reform.[12] For these reasons it is important to recognize that trends in firm formation may overstate or understate the extent to which economic growth is weakening or markets are becoming more or less competitive.

Declining Entrepreneurship among the General Population

Another way to assess levels of entrepreneurship in an economy is by reported rates of entrepreneurship in surveys of the general population. Empirical research using these measures similarly suggests that a declining share of the U.S. population can be classified as entrepreneurs.

Using the Panel Study of Income Dynamics (PSID), Sergio Salgado shows declines in entrepreneurship across different definitions of entrepreneur, using increasingly narrower definitions of entrepreneurship such as "business owners," "active business owners," "self-employed business owners," and "self-employed business owners with managerial or professional occupations." Salgado's results for the last and narrowest definition show that the share of entrepreneurs in the general population fell by half between 1985 and 2014, from 7.8 percent to 3.9 percent.[13] Most of this decline is concentrated among high-skilled college graduates.[14]

Tracking rates of self-described entrepreneurs fails to fully capture individuals who innovate and undertake new ventures without starting a new firm. This is particularly relevant to high skill workers in large firms and may explain some of the declining entrepreneurship rates. It is hard to directly observe this type of within-firm innovation but the efficiency gains from the innovation should eventually show up in both aggregate GDP and productivity statistics, which we turn to next.

---

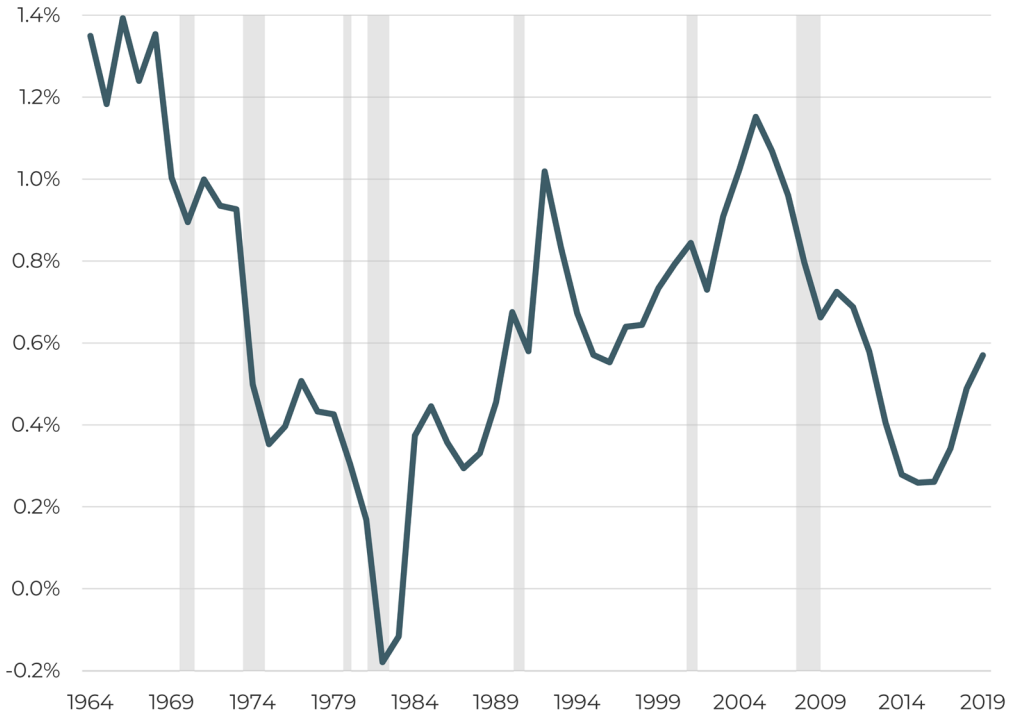
[12] Tom Petska, "Taxes and Organizational Choice: Déjà vu All Over Again?" Internal Revenue Service, Statistics of Income Division, 1997, https://www.irs.gov/pub/irs-soi/tomasa97.pdf.
[13] Sergio Salgado, "Technical Change and Entrepreneurship," SSRN, June 2, 2020, https://ssrn.com/abstract=3616568.
[14] Helu Jiang and Faisal Sohail, "Skill Biased Entrepreneurial Decline," *Review of Economic Dynamics*, March 2020, https://doi.org/10.1016/j.red.2022.03.004; Nicholas Kozeniauskas, "What's Driving the Decline in Entrepreneurship?" New York University Working Paper, November 2021, https://economics.uq.edu.au/files/34530/Kozeniauskas-entrepreneurship.pdf; Sergio Salgado, "Technical Change and Entrepreneurship."

Declining Productivity?

Productivity growth is a much broader measure of entrepreneurship, but unlike the measures already discussed, it is overinclusive rather than underinclusive, measuring things such as education, skill acquisition, and other factors related to GDP growth that cannot be explained by physical inputs. The trend of productivity growth tells a similar, but potentially more complicated story, compared to other measures of entrepreneurship. Figure 3 presents a measure of total factor productivity (TFP), which represents how efficiently an economy uses its inputs. Economic growth depends on inputs of labor, capital, and the effectiveness with which these inputs are combined and utilized (TFP).

Figure 3 shows a 10-year average of annual productivity growth rates. The trend shows that TFP was growing at historically low rates through the 1970s and early-1980s, falling from a ten-year average annual growth rate of 1.3 percent in 1964 to -0.2 percent in 1982. TFP growth rates then picked up following the information technology booms of the late 1980s and early-1990s, grew again with technological advances in the early-2000s, and declined following the 2008-09 Great Recession. Productivity growth has since slowly recovered, and the 10-year average was roughly at its historical average in 2019.

Figure 3: Total Factor Productivity, 10-Year Average Annual Growth Rate, 1964-2019



Source: JEC Calculations; Bureau of Labor Statistics; National Bureau of Economic Research.

The pre-pandemic trend of increasing productivity beginning around 2017 could mark a departure from the slower economic growth of previous decades, especially if productivity growth is accompanied by growth in the labor force and capital stock. The upward trend may also be showing some of the entrepreneurship that is not captured in new firm starts or individual-level surveys but is instead happening within firms. However, in recent decades, similar periods of accelerating productivity growth have peaked quickly and experienced subsequent slowdowns following recessions, as was the case in the 1990s and early-2000s. A wide variety of other measures of scientific progress similarly indicate that innovation has slowed, including patent activity, research quality, intellectual production, life expectancy gains, and computing power.[15]

[15] Tyler Cowen and Ben Southwood, "Is the Rate of Scientific Progress Slowing Down?"

BOX-1. SOCIAL CAPITAL AND ENTREPRENEURSHIP

While entrepreneurship has direct benefits for improving standards of living and quality of life, entrepreneurs also build and support social capital. Social capital is the set of relationships that provide economic and emotional support, shared values, and trust through families, communities, workplaces, and religious congregations. Economic entrepreneurs strengthen communities by creating jobs and supplying needed goods and services. Social entrepreneurs build and maintain civic institutions with the aim of creating social change or supporting other non-market goals.

The economic entrepreneur can contribute to social capital directly as a job creator and employer, facilitating the social connection and empowerment that is associated with work. For example, men who work are more likely to get invited to do things by others, find it easier to get help with a move, and have someone available with whom to share fears and worries; in addition to being healthier, more likely to be married, and less likely to spend time alone.[16] Along with providing employment, entrepreneurial ventures like barber shops, corner stores, coffee shops, tailors, and gyms provide common meeting places where social connections are made and maintained.[17]

The economic entrepreneur is necessary but insufficient for a well-functioning society. Social entrepreneurs maintain the institutions that facilitate mutual trust, shared norms, and reciprocity, in addition to catalyzing new social change. The social entrepreneur is alert to the needs of their community, for example, stepping in to fill information gaps, organize services, and provide care during and after natural disasters.[18] These social entrepreneurs are also the leaders who

---

[16] Christina King, Scott Winship, and Adam Michel, "Reconnecting Americans to the Benefits of Work," U.S. Congress Joint Economic Committee Republicans, October 27, 2021, https://www.jec.senate.gov/public/index.cfm/republicans/2021/10/reconnecting-americans-to-the-benefits-of-work.

[17] Salvatore Colleuori, "The Colonial Tavern, Crucible of the American Revolution," War on the Rocks, August 10, 2015, https://warontherocks.com/2015/04/the-colonial-tavern-crucible-of-the-american-revolution/; Kai Ryssdal, "A History of the African-American Barbershop," Marketplace, January 28, 2014, https://www.marketplace.org/2014/01/28/history-african-american-barbershop/; Ben Johnson, "English Coffeehouses, Penny Universities," Historic UK, https://www.historic-uk.com/CultureUK/English-Coffeehouses-Penny-Universities/.

[18] Emily Chamlee-Wright and Virgil Henry Storr, "The Entrepreneur's Role In Post-Disaster Community Recovery: Implications for Post-Disaster Recovery Policy," Mercatus Center at George Mason University, Policy Primer No. 6, July 2008, https://ppe.mercatus.org/system/files/MPS_PP6_community_and_entrepreneurs-web.pdf.

maintain our religious congregations, organize support for those in need, and run recreational sports teams.

Economic and social entrepreneurship are symbiotic forces that reinforce each other. Without robust economic growth—driven by entrepreneurial innovation—the social sector atrophies. However, sustained economic progress also requires active social entrepreneurs to maintain the shared norms and institutions that undergird well-functioning markets.[19]

CAUSES OF ENTREPRENEURIAL DECLINE

There are many explanations for depressed entrepreneurial activity. Some examples include, slowing population growth and an aging labor force, declining access to capital due to reduced competition across industries, and increasingly larger investments needed to make smaller innovations.[20] The research exploring each of these factors is expansive and each factor likely has some explanatory power, deserving its own treatment. However, the remaining sections of this paper will focus on the causes of slower growth and fewer entrepreneurs most directly in policymakers' control—the obstacles imposed by government.

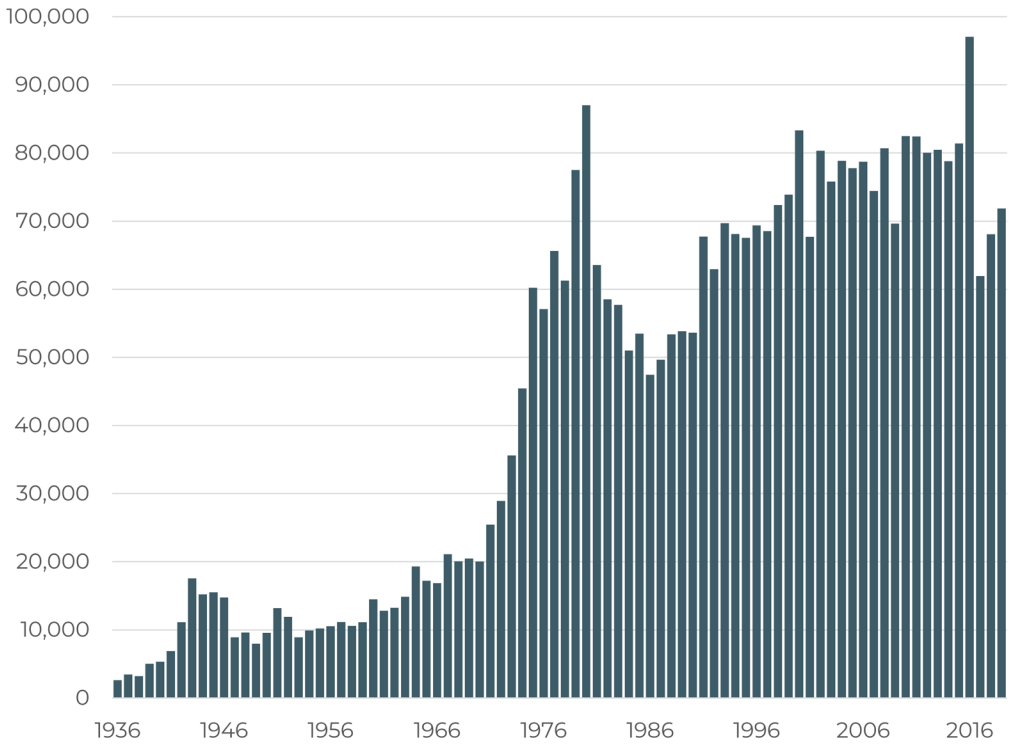
Around the same time GDP growth began to slow in the 1970s, government activity became increasingly hostile to economic expansion. The number of new rules issued by executive agencies expanded, and government spending, and the taxes necessary to finance it, passed a tipping point where it begins to drag on economic growth. This section will review these trends and the evidence for their connection to declining entrepreneurship. We will also review some of the evidence on how government affects GDP growth to provide additional support to the literature on entrepreneurship, which like the measures described in the section above can omit certain types of entrepreneurship.

[19] Samuel Gregg, "Why Free Markets Need a Cultural Base," National Review, August 1, 2022, https://www.nationalreview.com/2022/08/why-free-markets-need-a-cultural-base/.
[20] Sergio Salgado, "Technical Change and Entrepreneurship;" German Gutiérrez and Thomas Philippon, "The Failure of Free Entry," NBER Working Paper 26001, June 24, 2019, https://www.nber.org/papers/w26001.

Regulatory Accumulation

Government intervention in the private sector has grown dramatically since the 1970s. One measure of the flow of regulatory activity is the number of pages in the federal register each year. The federal register is the daily account of all the proposed and final rules, agency guidance, and executive orders. Figure 4 shows that the annual number of pages increased from 20,000 in 1970 to 87,000 in 1980.[21] The same Figure shows another regulatory resurgence in the 1990s, ahead of the second big slowdown in growth in the 2000s.

Figure 4: Total Pages Published in the Federal Register, 1936-2019



Source: Federal Register Statistics, via George Washington University Regulatory Studies Center.

The number of pages in the federal register is an imprecise measure of regulatory burden, but a related measure shows a similar trend. The number of regulatory restrictions—defined as words or phrases in the Code of Federal Regulations that indicate an obligation to comply, such as "must" or "shall"—has increased by almost 170 percent in the last 50

[21] "Federal Register Pages Published," Federal Register Statistics, via the George Washington University Regulatory Studies Center, Updated July 9, 2020, https://regulatorystudies.columbian.gwu.edu/reg-stats.

years. Between 1970 and 1980 the number of restrictions increased by 57 percent, growing faster than in any other decade.[22]

The expansion of economic interventions was driven in part by the anti-economic-growth movement in the 1960s and 1970s.[23] Reflected in popular books of the time, including the *Population Bomb* (1968) and *Silent Spring* (1962), the goal was to limit economic growth through various measures, including population controls, as a way to protect the environment. Laws from the time, such as the *National Environmental Policy Act* (NEPA), the *National Historic Preservation Act*, the *Clean Air Act*, the *Clean Water Act*, and the *Endangered Species Act*, provided overly broad mandates that go beyond commonsense environmental protection, instead primarily making it unnecessarily hard to build in and expand our most innovative cities and businesses.

These laws, NEPA in particular, set up a process that was intended to protect the natural and built environment, but instead created a system ripe for abuse by special interest groups and other unproductive entrepreneurs who use the process to block new infrastructure, electricity generation, redevelopment projects, and other economically significant investments.[24] With expansive control over economic activity—delegated by legislatures—regulatory agencies and courts can stand in the way of economic progress by simply moving too slowly or not approving new proposals. These laws have effectively hamstrung infrastructure development and create a system which requires government permission for many new products, making it harder for productive entrepreneurs to realize their innovations.[25]

Costs of Regulatory Accumulation

Regulations can create excessive burdens for individual entrepreneurs and innovation within existing businesses. These rules and mandates

---

[22] Patrick McLaughlin, Jonathan Nelson, Thurston Powers, Walter Stover, and Stephen Strosko, RegData U.S. 4.0 Annual Dataset, QuantGov, Mercatus Center at George Mason University, 2021.
[23] Alan Cole, "A Conversation with Jim Pethokoukis on Anti-growth Politics," Full Stack Economics, April 20, 2022, https://fullstackeconomics.com/a-conversation-with-jim-pethokoukis-on-anti-growth-politics/.
[24] Lettie McSpadden Wenner, "The Misuse and Abuse of NEPA," *Environmental Review*, 7, no. 3 (1983): 229–54. https://doi.org/10.2307/3984482.
[25] For example, one mile of rail costs $861.4 million to build in the United States, and as much as $2.6 billion in New York City; many multiples of the cost in most OECD countries, including Spain ($128 million), Italy ($255 million), and France ($392 million). "What the Data Is Telling Us," Transit Costs Project, May 13, 2021, https://transitcosts.com/what-does-the-data-say/; Eno Center for Transportation, "Eno Transit Cost and Project Delivery," Accessed July 7, 2022, https://www.enotrans.org/wp-content/uploads/2020/09/Eno-Transit-Cost-and-Project-Delivery.pdf.

disincentivize firms from growing larger to take advantage of economies of scale, entering new markets, bringing new products to consumers, or investing in talent development. For individuals, unnecessary rules create barriers to challenging incumbent firms by restricting access to capital resources and increasing fixed compliance costs. As these costs accumulate, the burden weighs on productivity and in turn, economic growth.

The simplest measure of regulatory cost accounts for the compliance burden. The latest available OMB Information Collection Budget (2018) finds that the annual paperwork burden imposed by Federal regulations amounted to 11.5 billion hours annually.[26] At the average private sector wage in August 2022, this paperwork burden amounts to more than $370 billion in wages spent on unproductive compliance activities, with the actual cost likely much higher as compliance staff are typically lawyers and other highly paid professionals.[27]

Direct compliance costs to existing firms do not include the much larger costs of forgone economic activity. Dustin Chambers, Patrick Mclaughlin, and Oliver Sherouse find that regulatory growth depresses annual new firm startup rates by between 4 percent and 20 percent across industries.[28] German Gutiérrez and Thomas Philippon find that, in comparison to other possible explanations, regulation, along with lobbying, can almost fully explain the recently observed declines in new firm startup rates and dynamism within industries.[29] By increasing costs and barriers to entry that protect incumbent firms, regulations can undermine competition and protect existing firms from the need to innovate to maintain market share.

The effects of regulation on GDP show a similar trend as the direct effect on measures of entrepreneurship and help illustrate the cumulative costs on society. The costs of regulatory accumulation compound over time. Bentley Coffey, Patrick McLaughlin, and Pietro Petro find that the U.S. economy would have been 25 percent larger in

---

[26] "Information Collection Budget," Office of Management and Budget, 2018, https://www.whitehouse.gov/wp-content/uploads/2020/12/2018-ICB-Report-Final.pdf.
[27] "Table B-3. Average Hourly and Weekly Earnings of All Employees on Private Nonfarm Payrolls by Industry Sector, Seasonally Adjusted," U.S. Bureau of Labor Statistics. U.S. Bureau of Labor Statistics, Last Modified, September 2, 2022, https://www.bls.gov/news.release/empsit.t19.htm.
[28] Dustin Chambers, Patrick A. McLaughlin, and Oliver Sherouse, "Regulation, Entrepreneurship, and Dynamism," Mercatus Working Paper, October 2020, https://www.mercatus.org/publications/regulation/regulation-entrepreneurship-and-dynamism-0.
[29] German Gutiérrez and Thomas Philippon, "The Failure of Free Entry," NBER Working Paper 26001, June 2019, https://www.nber.org/papers/w26001.

2012 if regulation had been held constant at 1980 levels, implying that regulatory growth since 1980 reduced 2012 GDP by $4 trillion.[30] In 2012, this amounted to approximately $13,000 per capita. Using a different estimation method and a longer time period, John Dawson and John Seater estimate an even larger impact of regulation on economic growth, also finding that changes in regulation likely contributed to the productivity slowdown in the 1970s.[31]

Taxes and Spending

Taxes directly reduce incentives for entrepreneurship and slow growth, in addition to the negative effects of the spending they fund.[32] Income taxes and business taxes reduce common measures of entrepreneurship and countries with smaller governments have more entrepreneurs.

Progressive taxes—higher marginal rates for higher income levels—on personal income reduce the payoff of productive activities and related innovation, making them particularly punitive on entrepreneurs who engage in risky ventures with small chances of large financial rewards. High tax rates on entrepreneurial profits effectively act as a tax on success, mechanically lowering the incentive to engage in innovation. This effect has been confirmed using macro-level data from the European Union and micro-level data in the U.S.[33]

Entity level taxes, such as the corporate income tax, also have large and measurable negative effects on business formation and growth. Exploiting differences in corporate income tax rates across U.S. States and over time shows that higher taxes reduce patenting activity, R&D spending, new product introductions, and new firm employment.[34]

---

[30] Bentley Coffey, Patrick A. McLaughlin, and Pietro Peretto, "The cumulative cost of regulations," *Review of Economic Dynamics*, 38, (October 2020): 1-21, https://doi.org/10.1016/j.red.2020.03.004.
[31] John W. Dawson and John J. Seater, "Federal Regulation and Aggregate Economic Growth," *Journal of Economic Growth*, 18 (2013): 137-177, https://doi.org/10.1007/s10887-013-9088-y.
[32] Garrett Watson and Nicole Keading, "Tax Policy and Entrepreneurship: A Framework for Analysis," Tax Foundation, April 3, 2019, https://taxfoundation.org/tax-policy-entrepreneurship.
[33] Roger H. Gordon and Julie Berry Cullen, "Taxes and Entrepreneurial Activity: Theory and Evidence for the U.S." NBER Working Paper 9015, June 2002, https://www.nber.org/papers/w9015; Mina Baliamoune-Lutz and Pierre Garello, "Tax Structure and Entrepreneurship," *Small Business Economics,* 42 (2014): 165-190, https://link.springer.com/article/10.1007/s11187-013-9469-9; William M. Gentry and R. Glenn Hubbard, "'Success Taxes,' Entrepreneurial Entry, and Innovation," NBER Working Paper 10551, June 2004, https://www.nber.org/papers/w10551.
[34] Abhiroop Mukherjee, Manpreet Singh, and Alminas, Žaldokas, "Do Corporate Taxes Hinder Innovation?" *Journal of Financial Economics*, 124, 1 (April 2017): 195-221, https://www.sciencedirect.com/science/article/abs/pii/S0304405X17300041; E. Mark Curtis and

Similar data from 17 European countries show that corporate income taxes have a significant negative effect on business entry rates.[35] Like progressive income taxes, corporate taxes also reduce firm risk taking by asymmetrically taxing the returns from risky projects but not fully sharing in the losses from bets that do not pay off.[36]

In the aggregate, the negative effects of taxes on GDP are also large, measuring both disincentives for entrepreneurship and other economic costs. Former Chair of the Council of Economic Advisers for President Obama, Christina D. Romer, and coauthor David H. Romer find that a one percent increase in taxation as a share of GDP leads to a decrease of almost three percent in real GDP.[37] Valerie Ramey corroborates that narrative method estimates show tax increases reduce GDP by between two and three times the revenue raised.[38] William McBride likewise concludes that "nearly every empirical study of taxes and economic growth published in a peer-reviewed academic journal finds that tax increases harm economic growth."[39]

The spending that taxes fund is also a drag on entrepreneurship and in turn a drag on GDP growth. Any theoretical benefits of government spending decline as the public sector expands relative to the private sector.[40] Two different cross-country comparisons show that a smaller

---

Ryan A. Decker, "Entrepreneurship and State Taxation," Federal Reserve Finance and Economics Discussion Series, January 2018, https://www.federalreserve.gov/econres/feds/entrepreneurship-and-state-taxation.htm.

[35] Marco Da Rin, Marina Di Giacomo, and Alessandro Sembenelli, "Entrepreneurship, Firm Entry, and the Taxation of Corporate Income: Evidence from Europe," *Journal of Public Economics,* 95 (October 2011): 1048-1066, https://www.sciencedirect.com/science/article/abs/pii/S0047272710000757.

[36] Alexander Ljungqvist, Liandong Zhang, and Luo Zuo, "Sharing Risk with the Government: How Taxes Affect Corporate Risk Taking," NBER Working Paper 21834, January 2017, https://www.nber.org/papers/w21834.

[37] Christina D. Romer and David H. Romer, "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks," *American Economic Review*, 100, no. 3 (2010): 763-801, https://www.aeaweb.org/articles?id=10.1257/aer.100.3.763.

[38] Valerie A. Ramey, "Ten Years After the Financial Crisis: What Have We Learned from the Renaissance in Fiscal Research?" *Journal of Economic Perspectives*, 33, no. 2 (Spring 2019): 89-114,https://pubs.aeaweb.org/doi/pdf/10.1257/jep.33.2.89.

[39] William McBride, "What Is the Evidence on Taxes and Growth?" Tax Foundation, December 18, 2012, https://taxfoundation.org/what-evidence-taxes-and-growth/.

[40] Robert J. Barro, "Government Spending in a Simple Model of Endogenous Growth," *Journal of Political Economy*, 98, no. 5 (1990): 103-125; Livio Di Matteo, "Measuring Government in the 21st Century: An International Overview of the Size and Efficiency of Public Spending," Fraser Institute, 2013, https://www.fraserinstitute.org/sites/default/files/measuring-government-in-the-21st-century.pdf.

government sector is associated with more entrepreneurial activity.[41] Too much government spending on unproductive activities can distort private markets, crowd out private investment, encourage corruption and other forms of rent-seeking (unproductive entrepreneurship), and reduce economic mobility—including through entrepreneurship—by subsidizing non-work with income transfers and other benefits.

One comprehensive summary and update of the literature finds that once government spending surpasses 26 percent of GDP, annual per capita GDP growth begins to decline.[42] Combined U.S. State and Federal spending permanently surpassed 26 percent of GDP in 1967 and climbed steadily beyond that level through the 1980s and in to the early-1990s. Before the COVID-19 pandemic, spending stood at 33 percent of GDP, far surpassing the growth-maximizing level.[43] Government tax revenue as a share of the economy also steadily increased before and after the 1970s' deceleration in entrepreneurship and economic growth. Like spending, U.S. tax revenue is likely higher than its growth-maximizing level. Due to data limitations, it is difficult to make strong causal claims, but the predicted tipping point for U.S. spending coincides with the slowdown in national economic growth rates and other direct measures of entrepreneurship.

There are many important fiscal policy levers lawmakers can pull to encourage entrepreneurship. Keeping taxes and spending low—both historically and compared to other countries—and improving the tax treatment of business investments and losses could help boost entrepreneurship.

UNLEASHING THE AMERICAN ENTREPRENEUR

Sustainably returning economic growth rates to the pre-twenty-first century norm should be policymakers' key concern. A larger economy not only allows individuals to enjoy increased material well-being, but expands the resources necessary to address future challenges, including those challenges posed to the environment, health, and

[41] Christian Bjornskov and Nicolai J. Foss, "Economic Freedom and Entrepreneurial Activity: Some Cross-Country Evidence," *Public Choice,* 134 (2008): 307-328, https://link.springer.com/article/10.1007/s11127-007-9229-y; Kristina Nyström, "The Institutions of Economic Freedom and Entrepreneurship: Evidence from Panel Data," *Public Choice,* 136 (2008): 269-282, https://link.springer.com/article/10.1007/s11127-008-9295-9.
[42] Livio Di Matteo, "Measuring Government in the 21st Century," 86.
[43] Bureau of Economic Analysis, "Table 1.1.5. Gross Domestic Product," and "Table 3.1. Government Current Receipts and Expenditures," National Income and Product Accounts, Accessed February 2022; JEC Calculations.

social connection. General policies—such as institutional constraints on regulations, taxes, and spending—to improve economic growth and innovation will be important. But, more specific reforms, targeted to improve entrepreneurs' access to capital and remove disincentives to experimentation could provide additional, direct benefits to economic progress.

Institutional constraints to limit the Federal government's growth and begin to shrink its size can come in many different forms. To reduce the burdens of regulation, Congress and the President could reinstate a regulatory budget, implement standard sunset requirements for new regulations, require Congress to authorize economically significant regulations, and set up regular ex-post reviews of rulemaking. Specifically, Congress could consider reforms such as the *Regulations from the Executive in Need of Scrutiny (REINS) Act* to require congressional approval of new rules with major economic impacts (greater than $100 million), and the *Locating the Inefficiencies of Bureaucratic Edicts to Reform and Transform the Economy (LIBERATE) Act* to establish a system to review and repeal Federal regulations and agency guidance documents that place undue burdens on American businesses and entrepreneurs.[44] These reforms would help increase accountability of Federal agencies and reinsert Congress in the process of ensuring regulations meet the statutory intent of the authorizing legislation.

To reduce spending and the commensurate tax burden the government imposes on its citizens, Congress will need to keep taxes from increasing automatically following the expiration of major provisions of the *Tax Cuts and Jobs Act* in 2026. Beyond keeping taxes from rising, Congress and the President could pursue statutory spending caps or other well-designed balanced budget requirements that bring spending in line with tax revenues and continue to lower the burden of Federal spending and taxes over time. The most important precursor to institutional constraints is gaining the political consensus that such reforms are necessary.

In addition to institutional process reforms, Congress could improve access to capital for entrepreneurs through more targeted reforms. In

[44] Regulations from the Executive in Need of Scrutiny Act of 2021, S. 68, 117th Congress (2021-2022), https://www.congress.gov/bill/117th-congress/senate-bill/68; LIBERATE Act, S. 4055, 117th Congress (2021-2022), https://www.congress.gov/bill/117th-congress/senate-bill/4055.

2012, Congress passed the *Jumpstart Our Business Start-ups (JOBS) Act* to expand small business' access to capital by legalizing equity crowdfunding and liberalizing some rules for accredited and nonaccredited investors.[45] Congress should consider additional reforms in this vein.

First, Congress should further expand entrepreneurs' access to investor capital. One such reform could eliminate accredited investor standards that exclude all but the wealthiest Americans from venture capital, private equity, hedge funds, and other non-commoditized investment opportunities. Accredited investor rules incorrectly assume that wealthy investors are more sophisticated than other Americans, and keep entrepreneurs from sharing their high-risk, high-return investment opportunities with 90 percent of Americans. Based on the latest available data from the Federal Reserve Survey of Consumer Finances, accredited investor rules place limitations on the approximately $16.3 trillion in financial assets of 90 percent of households (115 million households), excluding them from investing in the highest performing investment opportunities in the United States.[46]

Second, policymakers should reduce regulatory barriers to forming public companies. An initial public offering (IPO) is an important way early investors recoup their funding and earn a return—the payment for taking a risk on the investment. Since the late 1980s, the number of IPOs has declined, replaced by mergers and acquisitions as the primary form of exit from venture capital.[47] This shift could have wide ranging implications for increased market power and innovation, but most directly affects the incentives of the entrepreneur who has fewer options to sustain and grow a new firm.[48] The current IPO process is long and costly, taking between six to nine months on average and

[45] Thaya Brook Knight, "A Walk Through the JOBS Act of 2012: Deregulation in the Wake of Financial Crisis," Cato Institute Policy Analysis No. 790, May 3, 2016, https://www.cato.org/policy-analysis/walk-through-jobs-act-2012-deregulation-wake-financial-crisis.
[46] Survey of Consumer Finances, 1989 - 2019, Board of Governors of the Federal Reserve System, Last Updated, November 4, 2021, https://www.federalreserve.gov/econres/scf/dataviz/scf/chart/#series:Financial_Assets;demographic:inccat;population:1,2,3,4,5,6;units:median;range:1989,2019.
[47] Michael J. Mauboussin and Dan Callahan, "Public to Private Equity in the United States: A Long-Term Look," Morgan Stanley, August 4, 2020, 45, https://www.morganstanley.com/im/publication/insights/articles/articles_publictoprivateequityintheusalongtermlook_us.pdf.
[48] Chris Edwards, "Corporate Power and Shared Prosperity," Testimony before the U.S. Congress Joint Economic Committee, July 14, 2021, https://www.cato.org/testimony/corporate-power-shared-prosperity.

costing millions of dollars.[49] The Securities Exchange Commission (SEC) can begin to address these inefficiencies by streamlining the IPO process.[50]

Third, in addition to generally keeping taxes low, Congress should consider specific reforms that would ease some of the costliest tax barriers to entrepreneurs. One way to limit the tax code's asymmetric taxation of profits is to allow businesses and investors wider latitude to use their losses to offset gains in previous or future tax years. Investment intensive startups would also benefit from permanent full expensing for all forms of capital investment, including research and development.[51] And keeping capital gains taxes low supports capital flow into more innovative ventures where after-tax returns need to be high enough to justify riskier investments.[52]

CONCLUSION

Entrepreneurship is critical to the advancement of human progress. Entrepreneurship conserves resources, meets material needs, improves health, supports social capital, and expands economic opportunity. While policymakers may be tempted to craft policy with the explicit objective of actively supporting entrepreneurship, it is the private sector, not the government, that is best equipped to drive the energies of entrepreneurs to productive outcomes. As the government's size exploded in the 1970s and continued to expand after that, entrepreneurship and economic growth slowed.

The burden of overregulation, high levels of spending, and distortionary taxation costs the American economy trillions of dollars a year. With concerted efforts toward reform, it is possible to look with optimism at a future where the American entrepreneur is again unleashed to the benefit of Americans' economic and social well-being.

Hugo Dante
Adam N. Michel
Joint Economic Committee

---

[49] "A Guide to Every Step in the IPO Process," PitchBook, July 12, 2021, https://pitchbook.com/blog/ipo-process-explained.
[50] David Erickson, "What's Wrong with the IPO Process and How to Fix It," Knowledge at Wharton, December 15, 2020, https://knowledge.wharton.upenn.edu/article/whats-wrong-ipo-process-fix/.
[51] Kyle Pomerleau, "The Tax Code as a Barrier to Entrepreneurship," Written Testimony Before the U.S. House Committee on Small Business, Tax Foundation, Feb. 15, 2017, https://taxfoundation.org/tax-code-barrier-entrepreneurship/.
[52] Chris Edwards, "Corporate Power and Shared Prosperity."