

The Main Street Fund: Investing in an Entrepreneurial Economy

Aaron K. Chatterji



MISSION STATEMENT

The Hamilton Project seeks to advance America's promise of opportunity, prosperity, and growth.

We believe that today's increasingly competitive global economy demands public policy ideas commensurate with the challenges of the 21st Century. The Project's economic strategy reflects a judgment that long-term prosperity is best achieved by fostering economic growth and broad participation in that growth, by enhancing individual economic security, and by embracing a role for effective government in making needed public investments.

Our strategy calls for combining public investment, a secure social safety net, and fiscal discipline. In that framework, the Project puts forward innovative proposals from leading economic thinkers — based on credible evidence and experience, not ideology or doctrine — to introduce new and effective policy options into the national debate.

The Project is named after Alexander Hamilton, the nation's first Treasury Secretary, who laid the foundation for the modern American economy. Hamilton stood for sound fiscal policy, believed that broad-based opportunity for advancement would drive American economic growth, and recognized that "prudent aids and encouragements on the part of government" are necessary to enhance and guide market forces. The guiding principles of the Project remain consistent with these views.





The Main Street Fund: Investing in an Entrepreneurial Economy

Aaron K. Chatterji

Associate Professor, Duke Fuqua School of Business

JUNE 2018

This policy proposal is a proposal from the author(s). As emphasized in The Hamilton Project's original strategy paper, the Project was designed in part to provide a forum for leading thinkers across the nation to put forward innovative and potentially important economic policy ideas that share the Project's broad goals of promoting economic growth, broad-based participation in growth, and economic security. The author(s) are invited to express their own ideas in policy papers, whether or not the Project's staff or advisory council agrees with the specific proposals. This policy paper is offered in that spirit.

BROOKINGS

Abstract

One of the cornerstones of a dynamic and competitive economy is entrepreneurship. While the U.S. federal government has numerous programs to support entrepreneurship, there are also many policies—particularly at the state and local levels—that are not conducive to new business entry and growth. One important example of those policies is economic incentive programs, which states use to target large firms (sometimes a single large business) that are considering relocation or expansion within the country. Recent analyses indicate that states spend \$45 billion to \$80 billion annually on these incentives, which have been criticized as inefficient and anticompetitive, even by some governors and economic development officials who have used them. However, basic collective action problems prevent any state from unilaterally eliminating these incentives: businesses might migrate to states that continued to provide incentives. I therefore propose a federal Main Street Fund that would encourage states to redirect incentive payments toward initiatives that foster a competitive environment for all businesses, most notably for both new businesses and small businesses. The federal government would provide funds for any state that diverts money from its traditional economic incentives to invest in the foundations of a more competitive economy, including funding management training for new entrepreneurs, modernizing licensure programs, and investing in broadband and other initiatives to support the creation of new businesses.

Table of Contents

ABSTRACT	2
CHAPTER 1. INTRODUCTION	5
CHAPTER 2: BACKGROUND	7
CHAPTER 3. THE CHALLENGE	9
CHAPTER 4. THE PROPOSAL	13
CHAPTER 5. QUESTIONS AND CONCERNS	17
CHAPTER 6. CONCLUSION	18
APPENDIX	19
AUTHOR AND ACKNOWLEDGMENTS	20
ENDNOTES	21
REFERENCES	22

Chapter 1. Introduction

Americans appear to be living in an age of entrepreneurship. Companies that did not exist 10 years ago are changing the world. These young companies are building cars that drive themselves, media platforms that connect billions of people, and even private space transportation that might one day take us to a new frontier. Some young Americans are inclined toward the flexibility, idealism, and potential monetary rewards of being entrepreneurs. They are moving to technology hubs and bouncing back and forth between jobs, starting different companies, always in search of the next big thing. A select few of these start-ups are going public and driving equity markets to ever-greater heights. States, cities, and postsecondary institutions across the nation are starting accelerators and other initiatives to support entrepreneurship.

However, statistics from recent studies suggest that these very visible examples might run counter to a broader trend. The rate of new business start-ups has actually declined over the past 30 years. Americans are moving less frequently than they used to, and they are switching jobs less frequently, too, despite our perceptions of the new economy. At the same time, market concentration is increasing, with potentially important impacts on competition and productivity. Some erstwhile start-ups are now behemoths, and are even more powerful than the incumbents they once challenged.

Against this backdrop of declining dynamism, it is striking that many of our public policies are still tilted toward large, established companies at the expense of new entrants. One of the most important such policies is the \$45 billion to \$80 billion in incentives provided by states, cities, and counties striving to attract business development (Bartik 2018; Story, Fehr, and Watkins 2012). As they attempt to attract business development, states direct public funds—via tax breaks or direct payouts—to incumbent firms rather than to start-ups.

One notable recent example of states courting established businesses is Amazon's 2017 announcement that it is actively seeking a location for its second headquarters (known as HQ2). This news sparked a frenzy of activity in state capitols across the nation. State economic development officials, who are charged with creating jobs and supporting a strong private sector, prepared pitches for the Seattle-based corporation that tout various attributes of their states, including affordable cost

of living, robust transportation infrastructure, low tax rates, strong human capital, diversity, and available land.

While these factors are broadly attractive to every business in the state, economic development officials are also offering Amazon a set of customized incentives that only the retailing giant can take advantage of. These economic incentives have become controversial as states compete ferociously over companies and their associated jobs, escalating the incentives they offer. Indeed, Amazon's own request for proposal explains that the provision of these incentives will be a significant factor in their decision (Amazon 2017).

States are responding with large offers. New Jersey is offering the potential of \$7 billion in tax savings if Amazon builds HQ2 in Newark. Maryland's package of tax incentives is reportedly more than \$6 billion (Garfield 2018).

The opposition to economic incentives blurs the traditional battle lines in U.S. politics. Progressives decry these programs as corporate welfare, while many conservatives argue that these incentives amount to picking winners as a kind of industrial policy. Despite these views, these incentives continue to proliferate and no federal policy to address them is imminent.

I therefore propose to level the playing field between large firms and new entrants by creating a Main Street Fund. This federal-state program is designed to reduce the incentive packages that states provide to large companies, and would divert these funds instead to investments in evidence-based programs and policies that support entrepreneurship.

If indeed states are subsidizing large companies while generating few benefits for the broader economy, this runs counter to the proliferation of initiatives at all levels of government to support entrepreneurship. Governments have long been interested in promoting small businesses to lay the foundation for a more competitive economy. In particular, the federal government has made numerous efforts to support small businesses, ranging from subsidized small business loans to innovation grants for high-technology businesses and training centers. This policy proposal argues that there is potential for the federal government to do even more to promote entrepreneurship and to level the playing field for

incumbents and entrants. Without imposing direct taxes or regulation of incentives, the government can encourage states to create a more competitive environment for all firms, including new businesses.

If even a small fraction of funds currently spent on economic incentives were instead used to support new businesses, that would easily become the largest investment America makes in entrepreneurship. The mechanism for this investment is the Main Street Fund, an intergovernmental transfer program through which the federal government funds, up

to a prespecified limit, state investments in evidence-based approaches to support entrepreneurs. If successful, the Main Street Fund could be a significant step toward reducing wasteful spending and increasing economic growth.

In this paper I briefly review federal government programs that support entrepreneurship, survey the data regarding economic dynamism, and discuss the evidence on state incentives programs. I then explain how the proposed Main Street Fund would rebalance state policy in favor of entrepreneurship and economic dynamism.

Chapter 2. Background

The traditional rationale for federal government support for small businesses has been the existence of market failures related to credit access and other key resources required for growth. The federal government has accordingly put in place numerous programs to support the development of small business and entrepreneurship. Most of these programs work through intermediaries in the banking system or in state or local government. One hub for such programs has been the Small Business Administration. Its 7(a) loan program provides bank loan guarantees to qualified businesses, while its small business investment company program is aimed at boosting venture capital investing in underserved regions.

The U.S. Department of Commerce also has a suite of programs, most of them centered in the Economic Development Administration (EDA), to support businesses, including small businesses. EDA (funded at \$261 million in 2016) is the only federal agency that is completely focused on economic development, typically working in partnership with local economic development officials. EDA programs range from helping regions develop strategic plans, to initiatives that support investments in public works projects aimed at attracting new businesses.

In addition, the U.S. Department of the Treasury is active in supporting small businesses. Treasury's Community Development Financial Institutions fund was established in 1994 to improve access to capital, including small business lending, in distressed areas. More recently, Treasury has taken an enhanced role in the wake of the Great Recession. The Small Business Jobs Act of 2010 created the \$30 billion Small Business Lending Fund and the \$1.5 billion State Small Business Credit Initiative, both administered by Treasury, with the purpose of increasing access to capital for small businesses. Like many others, these programs are designed to leverage private sector investment or funding from other levels of government, meaning that federal money would spur other funding. For example, the State Small Business Credit Initiative was designed so that every dollar the federal government expends is leveraged by states for \$10 of new small business lending. Analysts continue to debate whether programs with this design truly leverage additional funds or simply fund preexisting initiatives.

Finally, some federal agencies—including the Department of Veterans Affairs, the Department of Defense, and the Department of Agriculture—have programs to support small business. One prominent pair of programs are the Small Business Administration's Small Business Innovation Research and Small Business Technology Transfer, which together provide more than \$3 billion a year to innovative companies based on a fixed percentage of the research and development budget of participating government agencies.¹

THE IMPORTANCE OF YOUNG FIRMS

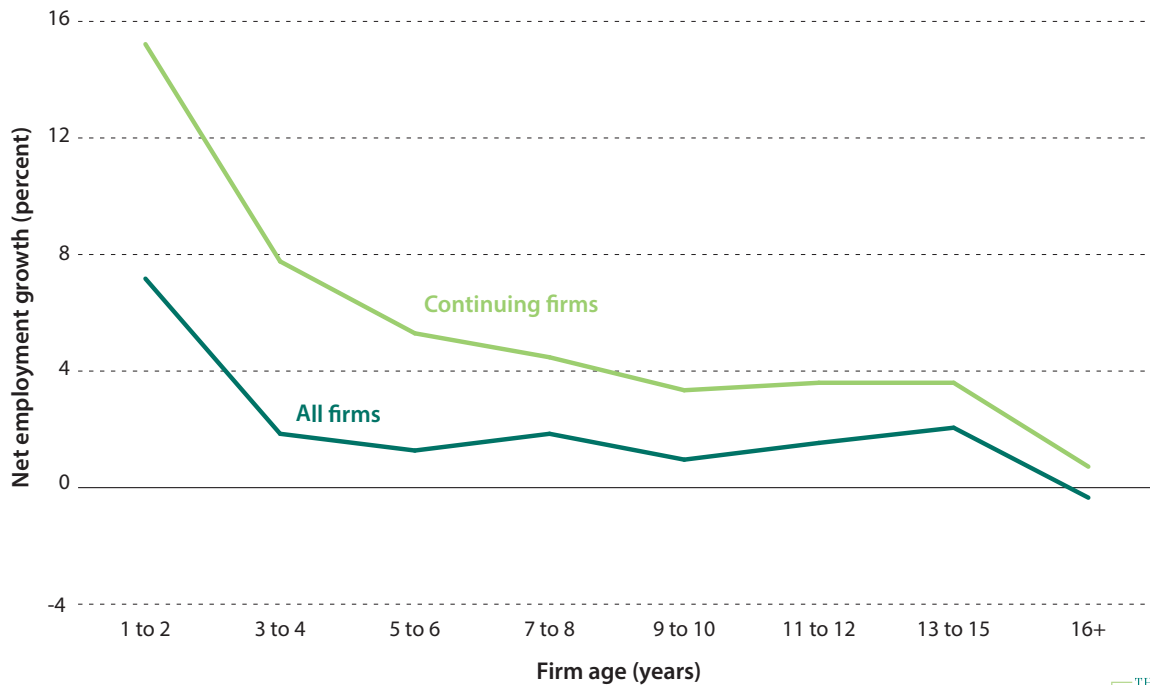
In recent years, however, entrepreneurship researchers have identified key differences between young businesses—which happen to be small—and the much larger overall population of small businesses. Young businesses drive net job creation in the economy (Haltiwanger, Jarmin, and Miranda 2013); older small businesses are far less likely to grow. Figure 1 shows that net employment growth—including job losses from firms that shut down—is highest for the youngest firms, after adjusting for firm size (dark green line). This relationship is even more pronounced when the focus is exclusively on firms that survive: the youngest firms grow even more quickly relative to their older counterparts (light green line).

Prior to recent research such as that by Haltiwanger, Jarmin, and Miranda (2013), the conventional wisdom had been that small businesses created most of the private sector jobs in the economy. Haltiwanger, Jarmin and Miranda (2013) use U.S. Census data to explore the relationship between firm size and growth. Controlling for firm age, they find no relationship between firm size and job creation. Based on these results, we should not expect older small businesses to necessarily create significant numbers of jobs. Instead, it appears that young firms, which are almost always small, hold the most potential for job creation. The authors describe young firms as more volatile in that they create (when they scale) and destroy (when they fail) a large number of jobs. Their key insight is that, conditional on surviving, young firms grow much faster than older firms.

This job creation is significant: 20 percent of total job creation comes from start-ups even though they are 10 percent of all firms (Decker et al. 2014). Even among young firms that survive, it is a small fraction of these that disproportionately

FIGURE 1.

Net Employment Growth, by Firm Age



Source: Haltiwanger, Jarmin, and Miranda 2013.

Note: Estimates are adjusted for firm size. "Continuing firms" excludes firms that shut down.



drive job creation. The fastest-growing firms, defined as those with employment growth greater than 25 percent per year, account for half of all jobs created in the United States. These firms tend to patent and commercialize innovative ideas and increase overall productivity (Decker et al. 2014). It is this small set of firms, perhaps 15 percent of all U.S. firms (Decker et al. 2014), that are most responsible for what we think of as the enormous economic benefits of entrepreneurship.²

These findings have encouraged policymakers to think about new policies to support young businesses, while tailoring another set of policies to small businesses. Though this distinction has yet to be formalized in the federal government, recent initiatives like Startup America, launched in 2011 during

the Obama administration, reflected customized solutions for the heterogeneous population of small businesses. Tailoring policies to small businesses and young businesses will require a significant shift in how the federal government organizes its business development programs, as discussed by Chatterji (2012). Most importantly, since young firms with high growth potential tend to cluster in a few geographic places and to be founded by individuals with higher education levels (Guzman and Stern 2016), directing more government support to these young firms might reinforce inequality across regions and skill levels. However, given the outsized impact on jobs and productivity of this narrow slice of firms, it is imperative for policymakers to carefully evaluate the environment for high-growth entrepreneurship.

Chapter 3. The Challenge

ECONOMIC DYNAMISM IN DECLINE

One way to describe the economic and social conditions that support entrepreneurship is in terms of dynamism, which describes the frequency of entrepreneurship and the mobility of workers across firms and geographic locations. Several economic trends suggest that the U.S. economy is becoming less dynamic. For example, the rate of new business starts has been declining for most of the past three decades, and the share of employment in young firms has declined by almost 30 percent over the same period (Decker et al. 2014). These trends are apparent even in high-technology sectors, where dynamism is believed to be strongest.

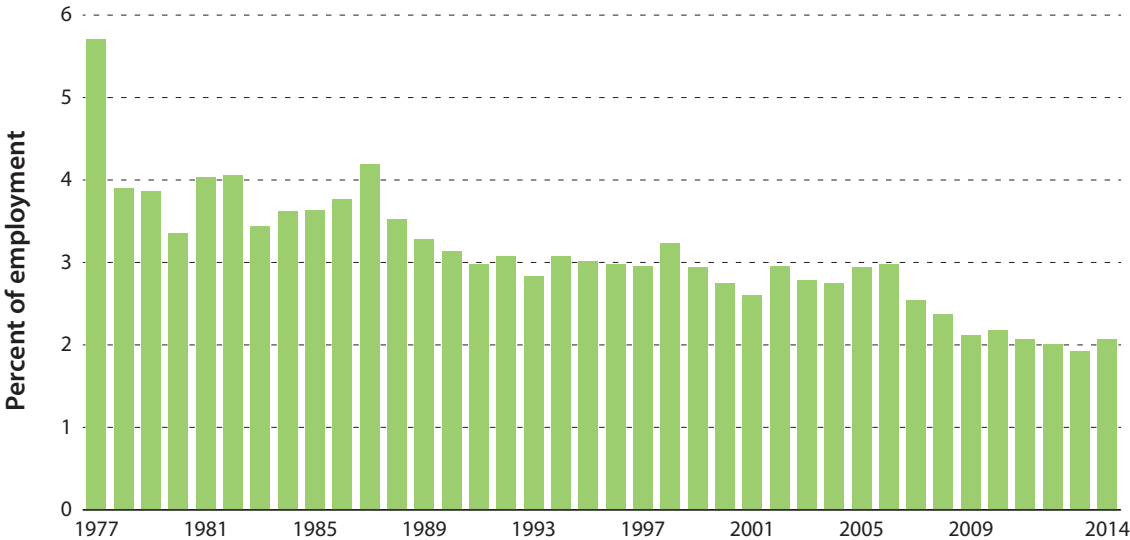
Figure 2 shows that the share of employment in new companies has fallen to 2 percent, which runs counter to the popular notion that entrepreneurs are ubiquitous and that workers are shuffling between jobs more than ever. As shown in figure 3, there is evidence that workers are changing jobs less frequently and moving to different geographical locations less often (see also Molloy, Smith, and Wozniak 2017). This is directly related to the declining rate of start-ups, given that young firms are

important contributors to employment growth and worker reallocation (Decker et al. 2014).

This decline in dynamism, particularly the start-up rate, has been attributed in part to increased market concentration and power of large companies. Furman (2016) offers evidence that most industries have seen increases in concentration of revenue. From 1997 to 2012, the average revenue share of the top four firms in a given industry increased from 24 to 33 percent (Shambaugh, Nunn, Breitwieser, and Liu 2018). Some proponents of this view note high-profile acquisitions of start-up companies by technology giants Google, Amazon, and Facebook as further evidence that the U.S. economy is not fostering enough competition.

Declining dynamism has important implications for how the economy functions. Decker et al. (2014) explain how declining economic dynamism contributes to the recent slower productivity growth of the U.S. economy. This decline and related concerns have led to proposals to strengthen antitrust

FIGURE 2.
Share of U.S. Employment in New Companies, 1977–2014



Source: U.S. Census Bureau 1977–2014.
Note: New companies are defined as those one year old or younger.

policy and enact other pro-competition policies to level the playing field for new businesses.

However, we need to be careful in assessing dynamism as it relates to entrepreneurship and start-ups. First, there is the issue of quantity versus quality: while the number of start-ups has declined, the quality of the remaining start-ups is more difficult to evaluate.³ Simply counting the number of start-ups provides an incomplete measure of dynamism, but we can examine which types of individuals are less likely to start firms today than they were decades ago. Research by Kozeniauskas (2018) finds that the decline in entrepreneurship is driven by individuals with higher education levels and that the size distribution of new firms has not changed significantly. These facts suggest that other factors might help explain the decline in entrepreneurship, such as better opportunities for highly educated individuals in existing firms due to changing labor demand.

HOW STATE POLICY FAVORS LARGE COMPANIES: THE CASE OF ECONOMIC INCENTIVES

Concerns about declining dynamism have refocused attention on an important way that public policy might be contributing to the problem: state business incentives that disproportionately flow to large, incumbent firms.

States use these incentives to attract new headquarters, expansions, and relocations of existing businesses. While it is difficult to collect systematic data on these incentives, recent research conducted by Timothy Bartik of the W. E. Upjohn Institute for Employment Research finds that states and other jurisdictions spent approximately \$45 billion in 2015

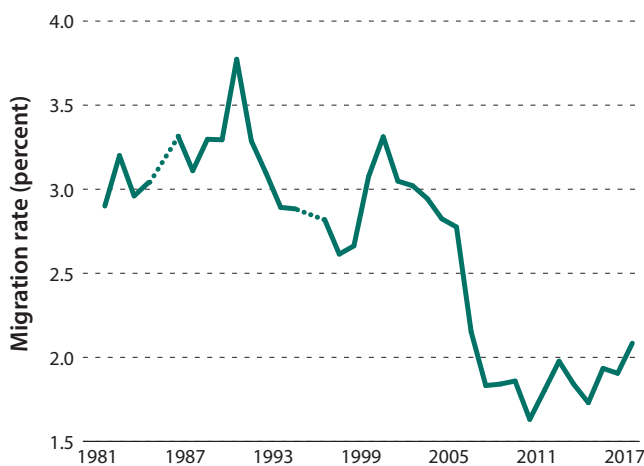
on incentives (Bartik 2017). That Upjohn study finds that the amount of incentives has tripled from 1990 to 2015, though the rate of growth has slowed a bit since 2000. Two-thirds of this increase has been driven by tax credits tied to specified job creation milestones.⁴

State business incentives became more common in the early 1990s as states began to offer \$100 million-plus packages, first to auto manufacturers and then to airlines. Today, there is considerable variation across states in the volume of incentives. A report in the *New York Times* (Story, Fehr, and Watkins 2012) found that Texas provides \$19 billion in incentives every year, but the highest per capita spenders were Alaska (\$991), West Virginia (\$845), and Nebraska (\$763). Some of the individual incentive packages can be large: Michigan awarded General Motors \$779 million in incentives in 2009 that the company can use to offset state taxes until 2029 (Bailey and Crawley 2009). Recent offers to Amazon for HQ2 and Foxconn are in the billions of dollars (Jensen 2018).

As the examples above suggest, these incentives typically benefit large, established firms, an example of an implicit subsidy that favors incumbent firms over entrants (Jensen 2018). Table 1, reproduced from a recent study of incentives in 16 programs across 14 states by GoodJobsFirst.Org (LeRoy et al. 2015), illustrates that most incentives, both in terms of number of awards and total dollars, go to large firms.

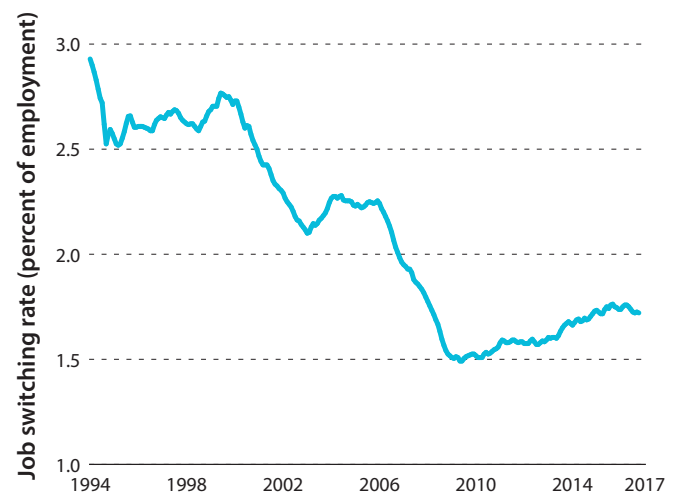
Moreover, as discussed below, evaluations of incentives programs, both in the United States and abroad, generally find mixed or no effects on job creation and other outcomes of interest (Jensen 2017b). Even if a particular incentive program

FIGURE 3A. Interstate Migration Rate, 1981–2017



Source: Bureau of Labor Statistics 1981–2017.
Note: Restricted to prime-age respondents, ages 25 to 54. Data were not available for 1985 and 1995.

FIGURE 3B. Job Switching Rate, 1994–2017



Source: Fallick and Fleischman 2004; Shambaugh, Nunn and Liu 2018.
Note: Data are the 12-month centered moving average of monthly employment-to-employment flows as a hazard rate.



did produce benefits for a single state, it could still dampen competition and dynamism by giving select companies an economic advantage over other firms and potential new entrants.

Neighboring states such as Missouri and Kansas often compete for the same companies, resulting in firms moving across state lines to new locations that are only a few miles apart, as was the case when AMC Theatres moved from Missouri to Kansas and Applebee's International moved from Kansas to Missouri. Bartik (2017) shows that even between neighboring states with very similar economic conditions, incentives can differ by multiples of two or three, suggesting that the incentives are not being set efficiently even from the perspective of individual states (i.e., either one state is providing more than necessary to attract business or the other state is providing too little). Figure 4 is reproduced from a 2017 report from The Pew Charitable Trusts that ranks states on the quality of their processes for evaluating their incentives programs and informing future policy decisions.

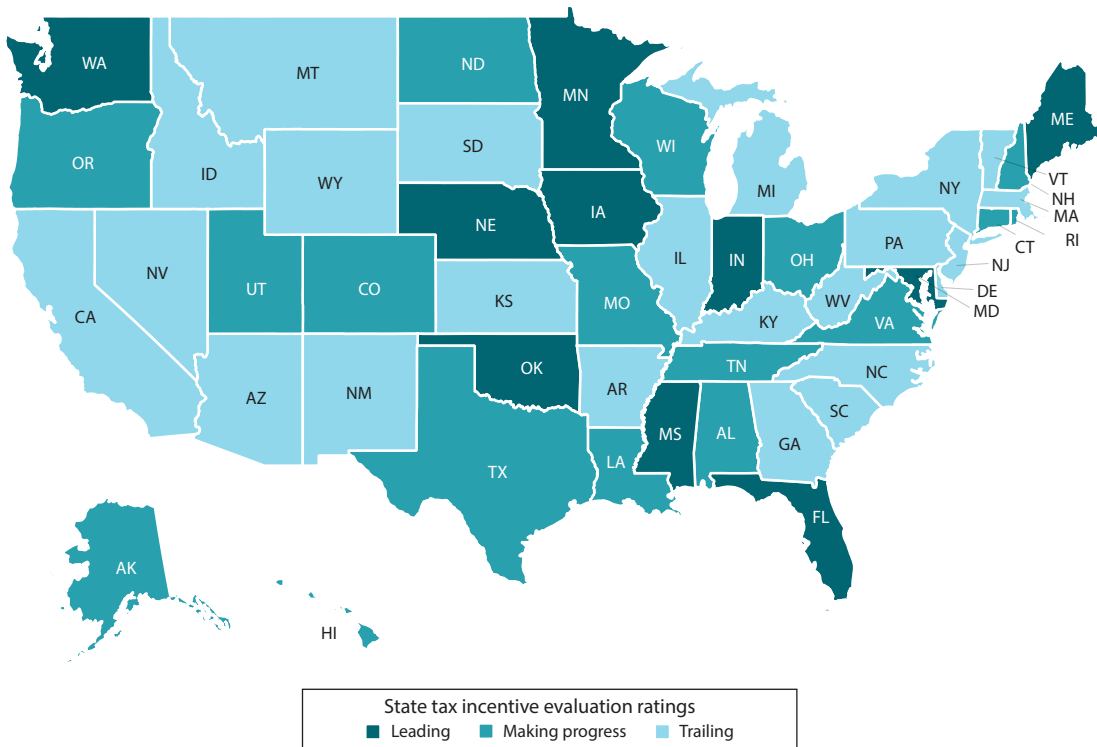
Despite the large sums that states have elected to spend, there is considerable debate about whether these incentives are wise economic policy. Supporters of incentives contend that these incentives pay off in the form of jobs, demand for local goods and services, in-migration, additional corporate investment,

spillovers to other firms in the region, and other kinds of agglomeration benefits. Importantly, all these benefits accrue to a given region at the expense of regions where firms would otherwise have located. Proponents also argue that corporate executives are compelled by their fiduciary responsibility to solicit these incentives on behalf of their shareholders, regardless of whether the incentives make for good public policy.

Critics argue that state incentives constitute a narrowing of the corporate tax base, requiring that tax rates be raised elsewhere to compensate. To the extent that all states use incentives, no one state can expect to benefit from the reallocation of business, and states face a classic collective action problem. Meanwhile, start-ups that do not receive incentive payments are put at a significant disadvantage. It should be noted that the federal government provides approximately 20 percent of state budgets, providing it with a direct interest in how these funds are being allocated.

As shown in figure 5a, state incentives have lowered effective corporate tax rates across the country. While it is challenging to identify where exactly the money for incentives is coming from, opponents point to recent reductions in state education funding, unemployment insurance, and other programs as evidence that economic incentives are crowding out other

FIGURE 4.
State Tax Incentive Evaluation Ratings



Source: The Pew Charitable Trusts 2017.

Note: Note from The Pew Charitable Trusts (2017): "Leading states have well-designed plans to regularly evaluate tax incentives, experience producing quality evaluations that rigorously measure economic impact, and a process for informing policy choices. States that are making progress have made a plan by enacting a policy that requires regular evaluation of major tax incentives. Trailing states lack a well-designed plan to regularly evaluate major tax incentives." The District of Columbia is classified as "making progress."

priorities. This would not necessarily be a cause for concern if it merely reflected a broad-based reduction in tax rates applicable to firms of any size. However, the differential availability of incentives to small versus large firms—and young firms versus incumbents—is likely damaging to business dynamism. Figure 5b demonstrates that much of the increase in state incentives (as defined in Bartik 2018) came in the form of job creation tax credits, which rose from virtually zero in 1990 to 0.6 percent of firm value added in 2015.

Moreover, it is not always clear that incentives increase employment in the states that use them. It is difficult for public officials to calculate the actual number of jobs created from these incentives and it is impractical in many cases to prevent companies from relocating a few years after receiving incentives. Several empirical studies have found little effect on jobs from incentive programs (Gabe and Kraybill, 2002; Jensen, 2017a, 2017b) and few states have rigorously evaluated their own tax incentive programs (Buss 2001). Bartik and Erickcek (2014) reviewed the literature on the effectiveness of incentives and find very little evidence that they create jobs. Even when incentives generate employment, they are often not very cost effective. The authors point out that data limitations make it challenging to generate robust insights on the effectiveness of incentives, and some specific programs have been successful. Jensen (2017b) studied Kansas’s Promoting Employment Across Kansas (PEAK) incentive program using establishment-level data. By matching firms that received incentives to a set of comparable firms that did not, he finds essentially no impact of the incentives on job creation. He also reports the results of a survey that found that firms would

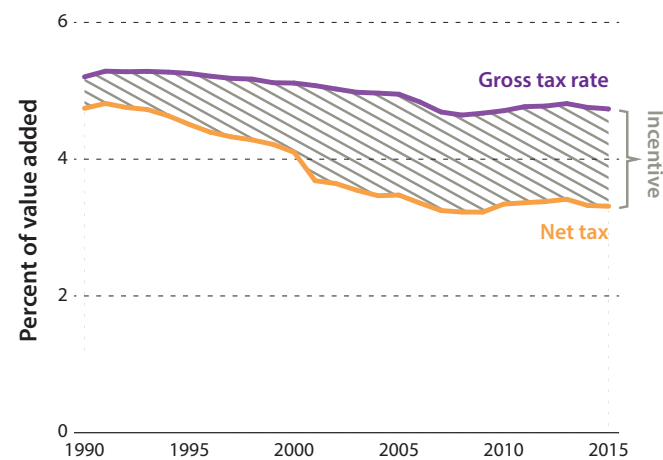
recommend the incentives to other firms, suggesting that the program was seen as beneficial to recipients even if it did not generate broader benefits for the state’s economy (Jensen 2017b).

Evidence based on careful matching of firms or experimental studies is likely the best path forward for drawing new insights about the effectiveness of incentives in boosting economic activity for individual states. One challenge is that incentives programs are highly customized, so a single evaluation, even if well-done, cannot be easily generalized to all incentive programs. Unfortunately, as the 2017 Pew Charitable Trusts study pointed out, only a handful of states evaluate their own programs and use the results to inform public policy. Greater transparency and collaboration with scholars would likely generate more evidence.

States’ experience with incentives has led some policymakers to argue against their use. For example, former Delaware Governor Jack Markell, who used incentive packages to open up shuttered refineries and keep spin-off companies from the Dow–DuPont merger in his state, has argued recently that the incentives money would have been better spent on education or health care (Markell 2017).

Of course, even incentives that are cost-effective for individual states present a problem for the country as a whole. Imposing higher effective tax rates on start-ups than on incumbents could blunt dynamism, and the lost revenue from large incumbent firms must be offset either by reduced government spending or by higher taxes elsewhere in the economy.

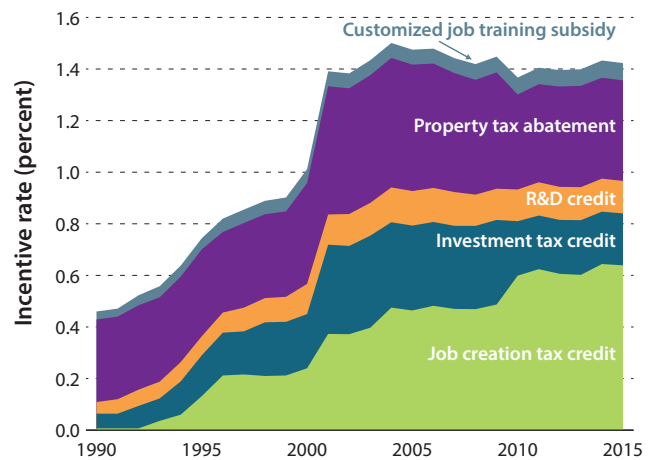
FIGURE 5A.
Net Tax, Gross Tax, and Incentive Rates as a Percentage of Value Added, 1990–2015



Source: Bartik 2017.

Note: The net present value of incentives is calculated by Bartik (2018) using a 12 percent discount rate, which is the rate commonly applied within businesses (Poterba and Summers 1995). Bartik’s (2017) database includes state and local taxes for 33 states and 45 industries. Incentives are calculated for export-base industries, defined as those that primarily sell goods and services outside their local economy.

FIGURE 5B.
Tax Incentives as a Percentage of Value Added, 1990–2015



Chapter 4. The Proposal

Some critics, including Governor Markell, have suggested a federal tax rate of 100 percent on incentives, while others have proposed to discourage incentives through enhanced regulation and more transparency. I offer another approach that not only discourages incentives for large businesses but also encourages an alternative approach to economic development—a bottom-up instead of top-down approach—via investing in entrepreneurs and innovators.

THE MAIN STREET FUND

The Main Street Fund would support states in adopting evidence-based programs that promote entrepreneurship, innovation, and small business. It would encourage states to reallocate their economic incentives spending toward entrepreneurship programs and other policies that enhance dynamism. States would have their Main Street Fund payments reduced if they provided new incentives and they would receive extra funds if they canceled existing incentives. General incentives to the business community—whether those incentives are improving infrastructure, changing overall corporate tax rates, or subsidizing community colleges that help provide a trained workforce—would not be considered incentives under this plan. Rather, the Main Street Fund is designed to discourage firm-specific or incumbent-specific subsidies that make it more difficult for new firms to enter the market. The Main Street Fund would start at a relatively small scale, ramping up only after careful evaluation and satisfactory results. While the study of entrepreneurship is a relatively new field, evaluations of entrepreneurship programs are becoming more common. The Main Street Fund would accordingly support programs that have a strong evidence base or those that are designed to be evaluated.

The federal funds provided through the Main Street Fund would work in the following way. First, each state would be allocated payments according to a formula that considers the state's population, demographics, and economic activity. Then, for any newly created incentive, states would lose funds they were slated to receive, dollar for dollar. At the same time, states would receive credits for incentives that they can demonstrate they have ended. States would be asked to report both figures each year as well as any evidence of other states using incentives to encourage firms to leave their state or as

part of a competition to attract a business. Funds that were left over—because states had initiated new incentives and so lost allotments—would be reallocated to remaining states that did not extend new incentives.⁵

The Main Street Fund would be administered in the U.S. Department of Commerce by the Economic Development Administration (EDA), given its focus on economic development and regional economies. A fixed amount of annual appropriations—set at \$5 billion in the first year—would be provided by Congress, a fraction of which would be used for research and evaluation of existing state programs to support entrepreneurship.

There are serious implementation challenges—some that are common to all intergovernmental transfer programs—that would need to be addressed. One of the most important is that without proper oversight, states could avoid labeling incentives spending as such, thereby increasing the value of the state's federal allocation. While this gaming behavior would nevertheless result in investment in entrepreneurship and small business, it would reduce the effectiveness of the Main Street Fund in discouraging business incentives that are aimed specifically at incumbents. In other policy contexts, research demonstrates that gaming can raise costs and reduce effectiveness of intergovernmental transfer programs (Baicker and Staiger 2005).

The Main Street Fund is designed to mitigate this problem, however. Under my proposal states would have two reasons to report misclassification by other states. First, each state has an interest in the rest of the country spending less on business incentives, because this spending draws economic activity away from that state. Second, because the cap on a state's allocation from the Main Street Fund is increased when other states receive smaller grants, each state has an interest in appropriate assessment of its neighbors' use of incentives. It should also be noted that the total cap on Main Street Fund spending, as well as each state's individual cap, lowers the risk for the federal government. Review of experience in the early years of the program, along with further consultation with federal and state budget experts, would be required to minimize opportunities for misclassification of incentive spending.

In developing and scaling up the Main Street Fund, EDA would need to conduct research on the appropriate design to mitigate gaming and align incentives, while also anticipating unintended consequences from successful implementation. Proper evaluation would help ensure the effectiveness and efficiency of the Main Street Fund.

SUPPORTED PROGRAMS WITHIN THE MAIN STREET FUND

There is a burgeoning academic literature that evaluates entrepreneurship initiatives. These studies provide some guidance regarding the kinds of programs that the Main Street Fund should support. For programs that have not yet been evaluated, the Main Street Fund could favor programs that are designed to facilitate rigorous evaluation. As mentioned above, the Main Street Fund would set aside a percentage of funding for monitoring and evaluation.

The following are four categories of programs to which states could apply their Main Street Fund allocations. States would be free to choose which programs to fund within a set of options, with a federal list of evidence-based programs guiding selection. In cases where there are existing efforts to invest in these initiatives, the role of the Main Street Fund would be to provide additional funding for evidence-based programs. In other cases, new initiatives would be created. The Main Street Fund would therefore be a tool for policy innovation at the state level.

Investment in Management Training

While we have long surmised that good management is important, there is a growing literature in economics that documents a causal impact of specific management practices on firm performance (Bloom et al. 2013; Bloom and Van Reenen 2007), including in start-ups (Chatterji et al. 2017). These management practices involve aligning pay with performance, providing clear feedback to employees, and enacting consistent evaluation and quality improvement processes. Research has found that these management practices can explain a large portion of the productivity differences between firms and even across countries (Bloom and Van Reenen 2010). Bloom, Sadun, and Van Reenen (2016) estimate that 30 percent of cross-country differences in total factor productivity can be attributed to differences in management practices.

In two papers using survey methods and randomized controlled trials, Bloom and Van Reenen (2007, 2010) find that firms with better management practices have superior performance on many outcome measures. These firms grow more quickly, are larger and more productive, and survive longer. In a randomized field experiment, Bloom et al. (2013) find that firms who adopt these practices experience a 17 percent increase in productivity in the first year (equivalent to \$300,000 in profitability), and that after three years these

firms are opening more plants than the control group. In some instances, business owners were aware of the practices but were not using them (e.g., measuring quality defects), and in other cases the owners had not been aware of the practices (e.g., inventory control procedures).

It is likely that these management practices are less widespread in many younger firms, particularly those firms outside entrepreneurial clusters. One interesting finding by Bloom and Van Reenen (2010) is that firms managed by the original founder tend to be poorly managed compared to other firms. This suggests that some of the characteristics of entrepreneurs might not be conducive to the implementation of effective management practices. Chatterji et al. (2017) find experimental evidence that learning about these management practices can have large effects on entrepreneurial firms, leading them to grow 28 percent faster and increasing their likelihood of survival by 10 percent compared to other firms. While more evidence is needed on the value of management practices for firms of different ages, it stands to reason that the management practices studied by Bloom and Van Reenen will also have positive effects on growth, productivity, and profits for young firms.

Given the importance of management, it is an open question why these practices have not diffused more widely. Training programs, networking, or business education are all potential channels for entrepreneurs to learn management. Entrepreneurial training programs have a mixed track record of success (Fairlie, Karlan, and Zinman 2015) but very few have been rigorously evaluated, and a small percentage focus only on management.

States already fund accelerators and networking events, but should also offer a stronger focus on acquisition of management skills. There is considerable variation in how management is taught across accelerator and training programs and there is no standard textbook or blueprint. In particular, I am not aware of any state-funded program that teaches to small businesses the specific management practices that the Bloom et al. (2013) research identifies as having value. The Main Street Fund would support programs that teach the practices that the academic literature has identified as being the most valuable for growth. In addition, it would use lessons from recent research to fund efforts to train the staff of accelerators and other entrepreneurship programs.

Enhanced Reciprocity for Licensed Workers

Subsidies to large incumbent firms are not the only state policy that impedes economic dynamism. Occupational licensing is often an important barrier to entry (Kleiner 2006) and specifically serves as an impediment to worker mobility across states, given the typical necessity of relicensure after a move (Johnson and Kleiner 2017). Recent research finds that

occupational licensing can also reduce new business entry (Zapletal 2017), particularly for those with less education and experience. Licensing regimes differ considerably by state, suggesting to critics that licensing restrictions are not always implemented in order to protect public health and safety, but are often driven by the desire to reduce competition.

Perhaps the most straightforward way for the Main Street Fund to mitigate the negative impact of licensing on dynamism would be to reimburse states for recognizing out-of-state licenses. Currently, states generate new revenue when licensed workers move to their state and are required to apply for a new occupational license in order to continue practicing their professions. While this is not the only incentive for states to require relicensure (e.g., they are sometimes reluctant to relinquish control over the standards for obtaining a license), it is likely an important part of states' motivation.

The Main Street Fund could encourage reciprocity by providing equivalent revenue for each out-of-state license that is recognized. To receive funds a state would have to demonstrate that workers holding licenses granted by other states had applied for recognition of those licenses with the state's licensing boards or relevant regulatory agencies. Ideally, out-of-state license payments from the Main Street Fund would be made both for workers who permanently move across state lines as well as for workers who work on a temporary basis. Because out-of-state applicants do not represent a large portion of licensure applicants, the existence of the Main Street Fund would not substantially increase states' desire to raise licensing fees (thereby capturing additional federal funds).⁶ Beyond helping to encourage entrepreneurship, this reform would support the broader mission of ensuring a more-dynamic and more-competitive economy.

Investment in Broadband Infrastructure

The Main Street Fund could also support broad-based investments in infrastructure to support entrepreneurship and innovation. One example would be access to high-speed internet, which is essential for many entrepreneurs. Research indicates that investments in broadband are associated with economic growth (Czernich et al. 2011) and can lead to increased entrepreneurship, depending on specific regional characteristics (Cumming and Johan 2010). Fairlie (2006) finds that having access to a computer substantially increased entrepreneurship, presumably because it lowered the costs of entry and operation. A budding entrepreneur with a device connected to a high-speed broadband connection can do more-efficient market research, receive feedback on their ideas, and promote their product or service. Marketing is a particularly important business function that effectively requires broadband in 2018. A survey by BIA/Kelsey of 1,000 American small businesses found that more than three-quarters use social media to spread the word about their

business (BIA Advisory Services 2016). In other important functions like finance and human resources, entrepreneurs are increasingly using cloud-based software programs to save time and money. Finally, broadband access in a place can draw more foot traffic, increasing demand for local retail and restaurants.

The Main Street Fund could be used to support the formation of public-private partnerships like the North Carolina Next Generation Network in the Research Triangle Park region that brought together municipalities, universities, and firms to bring high-speed broadband networks to the region at an affordable price. Or it could fund investments in a conduit system such as the one in Lincoln, Nebraska, that has laid the foundation for collaborations with telecommunications providers to offer new, higher-quality services to city residents (Olberding 2015). These conduits, which are plastic pipes that can hold fiber cables, dramatically lower the costs of subsequent broadband deployment by reducing the need to dig up and repave roads every time a new network is installed. These kinds of initiatives are likely to have broader economic and social benefits beyond simply increased entrepreneurship, which should make them even more attractive to the Main Street Fund.

Customized Initiatives for New Firms

There is growing evidence that it is new firms that are disproportionately responsible for new job creation and economic growth (Haltiwanger, Jarmin, and Miranda, 2013). As Guzman and Stern (2015, 2016) demonstrate, start-up quality is linked to regional economic growth; it is possible to identify characteristics of new businesses that are associated with the highest potential for growth. Entrepreneurs are a varied group, with some aiming to build a small business and others hoping to expand rapidly. It is these high-growth firms that drive overall economic growth (Kerr, Nanda, and Rhodes-Kropf 2014) and warrant particular support. Leveraging these new insights on entrepreneurial quality should be a top priority for state policymakers.

Targeted policies could help focus resources on the firms most likely to grow, increasing the return on investment for government funds. However, I do not know of any state-funded initiatives that are targeting new firms based on expected quality. The Main Street Fund could fill this gap by supporting state programs that explicitly target firms that are less than five years old, have high growth potential, and possess certain attributes that have been linked to growth in prior research. For example, states could create accelerators or capital programs, or export promotion initiatives that specifically target these high-growth firms or encourage them to be founded in the first place.

There is some emerging evidence that accelerators can have a positive effect on entrepreneurship. One important consideration when evaluating accelerators is distinguishing between selection and treatment. For example, famous accelerators like Y Combinator have graduated well-known firms like Dropbox, Airbnb, Zenefits, and Stripe. But this does not imply that if accelerators were set up in each of the 50 U.S. states we would observe similar outcomes everywhere. It could be that accelerators like Y Combinator and Techstars attract the most promising start-ups, much in the way that elite colleges tend to attract the most talented applicants. Even if accelerators in other areas use the same techniques as these pioneers to attract, train, and promote their start-ups, they may not see the same effects if they do not attract the same quality of applicants.

Some recent work by Yu (2015) and Gonzalez-Uribe and Leatherbee (2017) has employed novel research methods to separate out the selection from the treatment effects. Yu finds that start-ups in accelerators close earlier and raise less money than a matched set of firms that are not in accelerators. These findings might seem to argue against the efficacy of accelerators, but Yu points out accelerator graduates are more-efficient investments than other companies. The accelerator plays the role of resolving uncertainty about the company's quality early on, providing the entrepreneur with valuable information they can use to decide whether to pursue the venture or allocate their efforts elsewhere. Gonzalez-Uribe and Leatherbee study an innovative program in South America,

Start-up Chile. Using a regression discontinuity design, the authors find that providing physical space without additional training does not increase the performance of start-ups, but providing training together with space does increase the performance of entrepreneurial start-ups.

There have also been careful evaluations of some programs that provide capital to high-potential start-ups. Many start-ups struggle after initial funding; that period of struggle is often referred to as the valley of death or the Series-A crunch. Thus, there is interest in funding programs that can support promising start-ups. Howell (2017) finds that the U.S. Department of Energy's Small Business Innovation Research grant program doubles the likelihood that the recipient will attract venture capital and has a positive effect on invention and revenues.

The potential to export is also a possible growth driver for small business, though it comes with an up-front fixed cost. Numerous governments have developed export promotion initiatives, but, to my knowledge, there have been few careful evaluations. An exception is Martincus and Carballo (2010a, 2010b) who find evidence that export promotion initiatives are positively related to exports and that they disproportionately benefit smaller firms. While we need more evidence on a wider variety of capital and export promotion activities across different contexts, the Main Street Fund could help to launch and support these programs at the state level, and to provide a means for evaluation.

Chapter 5. Questions and Concerns

1. Are states—as opposed to cities or counties—the right partners for the Main Street Fund?

It is true that cities and counties also provide incentives. While the Main Street Fund could eventually expand to address other levels of government, focusing on 50 states is far more tractable in terms of implementation. There is a risk that states could push down incentives to city and county governments, however, in an effort to report a reduction in their own incentive spending while channeling funding to lower levels of government to continue to attract large firms. Thus, overall incentive trends would have to be tracked to monitor such gaming.

2. Would reduction in state business incentives put the United States at a competitive disadvantage relative to other countries?

If states were to dramatically reduce incentive spending, other nations could be more successful in attracting U.S.-based firms to relocate. The Main Street Fund would ramp up slowly, and it is unlikely that the incentives would decline dramatically in the short term. Moreover, creating a stronger entrepreneurial environment and building broad-based infrastructure will also attract larger companies, possibly offsetting any negative effects. To the extent that it is necessary to provide U.S. businesses with subsidies, it should be done at the national level in a way that balances national economic objectives and does not discriminate between incumbents and start-ups.

3. What would prevent states from misclassifying their business incentives and thereby receiving their full allotment under the Main Street Fund?

The Main Street Fund relies on two safeguards to minimize misclassification. First, oversight conducted by the Economic Development Administration would be essential to maintaining uniform standards across the states and for preventing misclassification of undesirable incentives as innocuous state budget policy.

Second, this proposal encourages states to alert the Economic Development Administration in the event of misclassification by other states. Any given state is eligible for a larger transfer from The Main Street Fund if other states' transfers are reduced due to their use of incentives. Moreover, states are often in competition with each other for business activity, and likely benefit from reduced incentive use by other states. Both considerations provide reasons for states to monitor each others' incentive activities.

Chapter 6. Conclusion

While government at all levels spends significant sums promoting entrepreneurship to catalyze economic growth, far more is spent on economic incentives for large incumbent firms. This bias toward established companies places entrepreneurs at a marked disadvantage. Given the outsized influence on job creation and productivity of young high-growth firms, this bias can do significant harm to the U.S. economy. Furthermore, economists generally see economic incentives for incumbent firms as inefficient, and those incentives have been criticized by policymakers on both

sides of the political spectrum. However, due to collective action problems, it is difficult for states to disengage from these activities. The Main Street Fund is designed to nudge states toward allocating a larger share of their economic development dollars to new businesses in the form of evidence-based entrepreneurship programs. If implemented, the Main Street Fund would be a significant step toward leveling the playing field for all businesses and toward creating a more competitive economy.

Appendix

APPENDIX TABLE 1.

Distribution of Deals and Dollars to Large Companies, by Program

State	Program	Years analyzed	Deals		Dollars	
			Total records analyzed	Percent to large recipients	Total value	Percent to large recipients
FL	Qualified Target Industry Tax Refund	2009–13	346	77%	\$148,756,810	89%
IN	EDGE Tax Credits	2010–14	654	67%	\$617,515,505	87%
IN	Hoosier Business Investment Tax Credit	2010–14	159	83%	\$80,449,815	96%
KS	Promoting Employment Across Kansas (PEAK)	2010–14	203	81%	\$43,936,329	95%
KY	Business Investment Program	2010–14	485	75%	\$724,059,031	91%
LA	Quality Jobs Program	2009–13	141	79%	\$559,940,498	94%
MO	Missouri Works	2013–14	136	69%	\$47,506,659	89%
NC	One NC Fund	2008–13	182	93%	\$26,376,376	95%
NM	High Wage Jobs Tax Credit	2011–13	236	70%	\$77,659,445	93%
NV	Personal Property Tax Abatement	2007–11	73	79%	\$56,149,992	96%
NY	Excelsior Program	2013–14	282	65%	\$469,074,830	89%
NY	Industrial Development Agencies (NYC only)	2014	307	39%	\$82,471,363	80%
PA	Job Creation Tax Credit	2010–14	243	74%	\$49,738,000	89%
VA	Virginia Jobs Investment Program	FY2011–14	339	75%	\$36,688,378	91%
VT	Vermont Employment Growth Incentive (VEGI)	2009–13	59	63%	\$49,948,440	83%
WI	Economic Development Tax Credit	2010–14	383	55%	\$132,232,765	80%
Totals and shares			4,228 total awards	70% weighted award-share average	\$3,202,504,236 total awarded	90% weighted \$-share average

Source: LeRoy et al. 2015.

Author

Aaron Chatterji

Associate Professor, Duke Fuqua School of Business

Aaron Chatterji, Ph.D. is an Associate Professor at Duke University's Fuqua School of Business and Sanford School of Public Policy. He previously served as a Senior Economist at the White House Council of Economic Advisors (CEA) where he worked on a wide range of policies relating to entrepreneurship, innovation, infrastructure and economic growth. Chatterji was also a visiting Associate Professor at Harvard Business School from 2014-2015. He is a Research Associate at the National Bureau of Economic Research.

Chatterji works at the intersection between academia, public policy and business, investigating the most important forces shaping our economy and society. His academic work has been published in the top journals in strategic management, economics, finance and organizational studies and he has received several awards for his research, including the 2017 Kauffman Prize Medal for Distinguished Research in entrepreneurship,

the Rising Star award from the Aspen Institute and the Strategic Management Society Emerging Scholar award. Chatterji has also won numerous teaching awards at Duke, for his teaching in the core curriculum and electives.

He has authored several op-ed pieces, including in the New York Times and Wall Street Journal, and has frequently appeared on national TV and radio. His new book, co-authored with Michael Lenox, is "Can Business Save the Earth?" (Stanford University Press).

Chatterji was a term member of the Council on Foreign Relations and previously worked as a financial analyst at Goldman Sachs. He received his Ph.D. from the Haas School of Business at the University of California at Berkeley and his B.A. in Economics from Cornell University.

Acknowledgments

I would like to thank the Hamilton Project team and the participants at the author's conference for their wonderful suggestions and comments.

Endnotes

1. State governments also have numerous programs to support entrepreneurs. These initiatives are often smaller versions of federal programs or are associated with federal matching funds (e.g., the Small Business Innovation Research match program) (Lanahan and Feldman 2017).
2. The authors note that most, though not all, of these firms are young firms.
3. Guzman and Stern (2015, 2016) create an entrepreneurial quality measure and document that quality—as measured by the characteristics of startups that lead to IPOs and acquisitions—appears more related to regional economic growth, which is highly variable across the country. They also demonstrate that, while the quantity of new entrants has declined from its historical highs, their measure of quality-adjusted entrepreneurship has remained steady since 2001.
4. Recent analysis by the *New York Times* also finds large spending on incentives of roughly \$80 billion (Story, Fehr, and Watkins 2012). Like Bartik (2018), Story, Fehr, and Watkins also find that the bulk of spending came in the form of tax relief.
5. There are other well-known programs through which the federal government supports state spending, including Medicaid and the Highway Trust Fund. In 2011 the Congressional Budget Office (2013) estimated that there were more than 200 so-called intergovernmental transfer programs administered from 30 agencies, with variation in the states' flexibility to spend the funds. Transfers are often distributed either through formulas or via a competitive process like a prize competition, as was the case with the Obama administration's Race to the Top education program.
6. One could stipulate that only fees equivalent to their rate in 2018 (possibly inflation adjusted) are eligible.

References

- Amazon. 2017. “Amazon HQ2 RFP [request for proposal].” Office of Economic Development, Amazon, Seattle, WA.
- Baicker, Katherine, and Douglas Staiger. 2005. “Fiscal Shenanigans, Targeted Federal Health Care Funds, and Patient Mortality.” *Quarterly Journal of Economics* 120 (1): 345–86.
- Bailey, David, and John Crawley. 2009, June 26. “GM Picks Michigan for New Small Car Plant.” *Reuters*.
- Bartik, Timothy J. 2017. “A New Panel Database on Business Incentives for Economic Development Offered by State and Local Governments in the United States.” W. E. Upjohn Institute for Employment Research, Kalamazoo, MI.
- . 2018. “Who Benefits from Economic Development Incentives? How Incentive Effects on Local Incomes and the Income Distribution Vary with Different Assumptions about Incentive Policy and the Local Economy.” W. E. Upjohn Institute for Employment Research, Kalamazoo, MI.
- Bartik, Timothy J., and George A. Erickcek. 2014. “Simulating the Effects of the Tax Credit Program of the Michigan Economic Growth Authority on Job Creation and Fiscal Benefits.” *Economic Development Quarterly* 28 (4): 314–27.
- BIA Advisory Services. 2016. “BIA/Kelsey Finds 77.6% of Small Businesses Use Social Media for Marketing.” BIA Advisory Services, Chantilly, VA.
- Bloom, Nicholas, and John Van Reenen. 2007. “Measuring and Explaining Management Practices across Firms and Countries.” *Quarterly Journal of Economics* 122 (4): 1351–1408.
- . 2010. “Why Do Management Practices Differ across Firms and Countries?” *Journal of Economic Perspectives* 24 (1): 203–24.
- Bloom, Nicholas, Benn Eifert, Aprajit Mahajan, David McKenzie, and John Roberts. 2013. “Does Management Matter? Evidence from India.” *Quarterly Journal of Economics* 128 (1): 1–51.
- Bloom, Nicholas, Raffaella Sadun, and John Van Reenen. 2016. “Management as a Technology?” Working Paper 22327, National Bureau of Economic Research, Cambridge, MA.
- Bureau of Labor Statistics. 1981–2017. “Current Population Survey Annual Social and Economic Supplement.” Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.
- Buss, Terry F. 2001. “The Effect of State Tax Incentives on Economic Growth and Firm Location Decisions: An Overview of the Literature.” *Economic Development Quarterly* 15 (1): 90–105.
- Chatterji, Aaron. 2012, November 12. “Why Washington Has It Wrong on Small Business.” *Wall Street Journal*.
- Chatterji, Aaron, Solène M. Delecourt, Sharique Hasan, and Rembrandt Koning. 2017. “Learning to Manage: Evidence from a Field Experiment in the Indian Startup Ecosystem.” Working Paper 17-100, Harvard Business School, Cambridge, MA.
- Congressional Budget Office (CBO). 2013. “Federal Grants to State and Local Governments.” Congressional Budget Office, Washington, DC.
- Cumming, Douglas, and Sofia Johan. 2010. “The Differential Impact of the Internet on Spurring Regional Entrepreneurship.” *Entrepreneurship Theory and Practice* 34 (5): 857–83.
- Czernich, Nina, Oliver Falck, Tobias Kretschmer, and Ludger Woessmann. 2011. “Broadband Infrastructure and Economic Growth.” *Economic Journal* 121 (552): 505–32.
- Decker, Ryan, John Haltiwanger, Ron S. Jarmin, and Javier Miranda. 2014. “The Role of Entrepreneurship in US Job Creation and Economic Dynamism.” *Journal of Economic Perspectives* 28 (3): 3–24.
- Fairlie, Robert W. 2006. “The Personal Computer and Entrepreneurship.” *Management Science* 52 (2): 187–203.
- Fairlie, Robert W., Dean Karlan, and Jonathan Zinman. 2015. “Behind the GATE Experiment: Evidence on Effects of and Rationales for Subsidized Entrepreneurship Training.” *American Economic Journal: Economic Policy* 7 (2): 125–61.
- Fallick, Bruce, and Charles A. Fleischman. 2004, May. “Employer-to-Employer Flows in the US Labor Market: The Complete Picture of Gross Worker Flows.” Finance and Economics Discussion Series Working Paper 2004-34, Federal Reserve Board, Washington, DC.
- Furman, Jason. 2016, September 16. “Beyond Antitrust: The Role of Competition Policy in Promoting Inclusive Growth.” Expanded remarks delivered at Searle Center Conference on Antitrust Economics and Competition Policy, Chicago, IL.
- Gabe, Todd M., and David S. Kraybill. 2002. “The Effect of State Economic Development Incentives on Employment Growth of Establishments.” *Journal of Regional Science* 42 (4): 703–30.
- Garfield, Leanna. 2018, April 4. “Cities Are Throwing Hundreds of Millions at Amazon to Land HQ2—Here’s How They Stack Up.” *Business Insider*.
- Gonzalez-Uribe, Juanita, and Michael Leatherbee. 2017. “The Effects of Business Accelerators on Venture Performance: Evidence from Start-Up Chile.” *Review of Financial Studies* 31 (4): 1566–1603.

- Guzman, Jorge, and Scott Stern. 2015. "Nowcasting and Placecasting Entrepreneurial Quality and Performance." Working Paper 20954, National Bureau of Economic Research, Cambridge, MA.
- . 2016. "The State of American Entrepreneurship: New Estimates of the Quantity and Quality of Entrepreneurship for 15 US States, 1988–2014." Working Paper 22095, National Bureau of Economic Research, Cambridge, MA.
- Haltiwanger, John, Ron S. Jarmin, and Javier Miranda. 2013. "Who Creates Jobs? Small Versus Large Versus Young." *Review of Economics and Statistics* 95 (2): 347–61.
- Howell, Sabrina T. 2017. "Learning from Feedback: Evidence from New Ventures." Working Paper 23874, National Bureau of Economic Research, Cambridge, MA.
- Jensen, Nathan M. 2017a. "The Effect of Economic Development Incentives and Clawback Provisions on Job Creation: A Pre-Registered Evaluation of Maryland and Virginia Programs." *Research & Politics* 4 (2).
- . 2017b. "Job Creation and Firm-Specific Location Incentives." *Journal of Public Policy* 37 (1): 85–112.
- . 2018, March 6. "Why Are Your State Tax Dollars Subsidizing Corporations?" *New York Times*.
- Johnson, Janna E., and Morris M. Kleiner. 2017. "Is Occupational Licensing a Barrier to Interstate Migration?" Research Division, Federal Reserve Bank of Minneapolis, Minneapolis, MN.
- Kerr, William R., Ramana Nanda, and Matthew Rhodes-Kropf. 2014. "Entrepreneurship as Experimentation." *Journal of Economic Perspectives* 28 (3): 25–48.
- Kleiner, Morris M. 2006. "Licensing Occupations: Ensuring Quality or Restricting Competition?" W. E. Upjohn Institute for Employment Research, Kalamazoo, MI.
- Kozeniauskas, Nicholas. 2018, January. "What's Driving the Decline in Entrepreneurship?" Unpublished paper.
- Lanahan, Lauren, and Maryann P. Feldman. 2017. "Approximating Exogenous Variation in R&D: Evidence from the Kentucky and North Carolina SBIR State Match Programs." *Review of Economics and Statistics*.
- LeRoy, Greg, Carolyn Fryberger, Kasia Tarczynska, Thomas Cafcas, Elizabeth Bird, and Philip Mattera. 2015. "Shortchanging Small Business." GoodJobsFirst.Org, Washington, DC.
- Markell, Jack. 2017, September 21. "Let's Stop Government Giveaways to Corporations." Op-Ed, *New York Times*.
- Martincus, Christian V., and Jerónimo Carballo. 2010a. "Beyond the Average Effects: The Distributional Impacts of Export Promotion Programs in Developing Countries." *Journal of Development Economics* 92 (2): 201–14.
- . 2010b. "Is Export Promotion Effective in Developing Countries? Firm-Level Evidence on the Intensive and Extensive Margins of Exports." Inter-American Development Bank, Washington, DC.
- Molloy, Raven, Christopher L. Smith, and Abigail Wozniak. 2017. "Labor Market Transitions and the Decline in Long-Distance Migration in the US." *Demography* 54 (2): 631–53.
- Olberding, Matt. 2015, November 17. "Ultra-fast Internet Service is Coming to Lincoln." *Lincoln Journal Star*.
- The Pew Charitable Trusts. 2017. "State Tax Incentive Evaluation Ratings." The Pew Charitable Trusts, Philadelphia, PA.
- Poterba, James M., and Lawrence H. Summers. 1995. "A CEO Survey of U.S. Companies' Time Horizons and Hurdle Rates." *MIT Sloan Management Review* (Fall).
- Shambaugh, Jay, Ryan Nunn, and Patrick Liu. 2018, February. "How Declining Dynamism Affects Wages." Framing Paper, The Hamilton Project, Brookings Institution, Washington, DC.
- Small Business Jobs Act of 2010, H.R. 5297 (2010).
- Story, Louise. 2012, December 1. "As Companies Seek Tax Deals, Governments Pay High Price." *New York Times*.
- Story, Louise, Tiff Fehr, and Derek Watkins. 2012, December 1. "United States of Subsidies: Explore the Data." *New York Times*.
- U.S. Census Bureau. 1977–2014. "Business Dynamics Statistics." U.S. Census Bureau, Washington, DC.
- Yu, Sandy. 2015. "The Impact of Accelerators on High-Technology Ventures." Graduate School of Business Administration, New York University, New York, NY.
- Zapletal, Marek. 2017. "The Effects of Occupational Licensing Evidence from Detailed Business-Level Data." Center for Economic Studies, U.S. Census Bureau, Washington, DC.



ADVISORY COUNCIL

GEORGE A. AKERLOF
University Professor
Georgetown University

ROGER C. ALTMAN
Founder & Senior Chairman
Evercore

KAREN ANDERSON
Senior Director of Policy and Communications
Becker Friedman Institute for
Research in Economics
The University of Chicago

ALAN S. BLINDER
Gordon S. Rentschler Memorial Professor of
Economics & Public Affairs
Princeton University
Nonresident Senior Fellow
The Brookings Institution

ROBERT CUMBY
Professor of Economics
Georgetown University

STEVEN A. DENNING
Chairman
General Atlantic

JOHN M. DEUTCH
Institute Professor
Massachusetts Institute of Technology

CHRISTOPHER EDLEY, JR.
Co-President and Co-Founder
The Opportunity Institute

BLAIR W. EFFRON
Partner
Centerview Partners LLC

DOUGLAS W. ELMENDORF
Dean & Don K. Price Professor
of Public Policy
Harvard Kennedy School

JUDY FEDER
Professor & Former Dean
McCourt School of Public Policy
Georgetown University

ROLAND FRYER
Henry Lee Professor of Economics
Harvard University

JASON FURMAN
Professor of the Practice of
Economic Policy
Harvard Kennedy School
Senior Counselor
The Hamilton Project

MARK T. GALLOGLY
Cofounder & Managing Principal
Centerbridge Partners

TED GAYER
Executive Vice President
Vice President & Director, Economic Studies
The Joseph A. Pechman Senior Fellow,
Economic Studies
The Brookings Institution

TIMOTHY F. GEITHNER
President
Warburg Pincus

RICHARD GEPHARDT
President & Chief Executive Officer
Gephardt Group Government Affairs

ROBERT GREENSTEIN
Founder & President
Center on Budget and Policy Priorities

MICHAEL GREENSTONE
Milton Friedman Professor of Economics
Director of the Becker Friedman Institute for
Research in Economics
Director of the Energy Policy Institute
University of Chicago

GLENN H. HUTCHINS
Co-founder
North Island

JAMES A. JOHNSON
Chairman
Johnson Capital Partners

LAWRENCE F. KATZ
Elisabeth Allison Professor of Economics
Harvard University

MELISSA S. KEARNEY
Professor of Economics
University of Maryland
Nonresident Senior Fellow
The Brookings Institution

LILI LYNTON
Founding Partner
Boulud Restaurant Group

HOWARD S. MARKS
Co-Chairman
Oaktree Capital Management, L.P.

MARK MCKINNON
Former Advisor to George W. Bush
Co-Founder, No Labels

ERIC MINDICH
Chief Executive Officer & Founder
Eton Park Capital Management

ALEX NAVAB
Former Head of Americas Private Equity
KKR
Founder
Navab Holdings

SUZANNE NORA JOHNSON
Former Vice Chairman
Goldman Sachs Group, Inc.

PETER ORSZAG
Vice Chairman of Investment Banking
Managing Director and
Global Co-head of Health
Lazard
Nonresident Senior Fellow
The Brookings Institution

RICHARD PERRY
Managing Partner &
Chief Executive Officer
Perry Capital

PENNY PRITZKER
Chairman
PSP Partners

MEEGHAN PRUNTY
Managing Director
Blue Meridian Partners
Edna McConnell Clark Foundation

ROBERT D. REISCHAUER
Distinguished Institute Fellow &
President Emeritus
Urban Institute

ALICE M. RIVLIN
Senior Fellow, Economic Studies
Center for Health Policy
The Brookings Institution

DAVID M. RUBENSTEIN
Co-Founder &
Co-Executive Chairman
The Carlyle Group

ROBERT E. RUBIN
Former U.S. Treasury Secretary
Co-Chair Emeritus
Council on Foreign Relations

LESLIE B. SAMUELS
Senior Counsel
Cleary Gottlieb Steen & Hamilton LLP

SHERYL SANDBERG
Chief Operating Officer
Facebook

DIANE WHITMORE SCHANZENBACH
Margaret Walker Alexander Professor
Director
The Institute for Policy Research
Northwestern University
Nonresident Senior Fellow
The Brookings Institution

RALPH L. SCHLOSSTEIN
President & Chief Executive Officer
Evercore

ERIC SCHMIDT
Technical Advisor
Alphabet Inc.

ERIC SCHWARTZ
Chairman and CEO
76 West Holdings

THOMAS F. STEYER
Business Leader and Philanthropist

LAWRENCE H. SUMMERS
Charles W. Eliot University Professor
Harvard University

LAURA D'ANDREA TYSON
Professor of Business Administration and
Economics
Director
Institute for Business & Social Impact
Berkeley-Haas School of Business

JAY SHAMBAUGH
Director

Highlights

In this paper, Aaron K. Chatterji of Duke University outlines the inefficiencies of state business incentives and the anticompetitive effects they generate. He suggests a policy strategy that both discourages state business incentives for incumbent firms and encourages state investments that promote successful entrepreneurship and other policies that enhance dynamism.

The Proposal

Encourage states to reduce incentives targeted at large, established firms. The proposed Main Street Fund would reduce its contributions to states that continue to use economic incentives targeted at incumbent firms, while increasing allocations to states that eliminate their incentives.

Support investments in initiatives that foster a competitive economy. The Main Street Fund would support state investments in management training, enhanced reciprocity for licensed workers, investments in broadband infrastructure, and customized initiatives for new firms.

Benefits

Policies that support young firms yield increased dynamism and competition. In turn, enhanced competition benefits not only new businesses and entrepreneurs, but also the economy more broadly through lower prices, higher wages, and greater economic output and efficiency.



1775 Massachusetts Ave., NW
Washington, DC 20036

(202) 797-6484

BROOKINGS



Printed on recycled paper.

WWW.HAMILTONPROJECT.ORG