State Venture Capital

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Governments around the world are increasingly shifting economic development expenditures to the support of early-stage businesses. In the United States, state governments have also expanded their development agencies' mandates from primarily serving as tourism-support operations to now working as engines of small business development.

This Article challenges the conventional wisdom driving the creation of state venture capital programs and argues that the structure of state venture capital is deeply flawed. Rather than remedy inequities between states and within states—for instance, in the urban/rural divide that is a feature of most states' political economies—state venture capital is more likely to perpetuate and even exacerbate inequality. Furthermore, it introduces the potential for waste and corruption that jeopardize governmental legitimacy. From a legal perspective, state venture capital makes use of existing private financing and its accompanying legal infrastructure to channel financing and fill funding gaps, particularly for marginalized entrepreneurs. However, by co-opting private entity forms, it often impairs the administrative mechanisms designed to safeguard public funds. State venture capital also faces daunting market headwinds that make it difficult for venture financing to thrive outside of Silicon Valley and a few other venture capital hubs.

Despite these challenges, state venture capital can be structured to give it better odds of success. This Article proposes reforms that can help governments create economic environments in which entrepreneurship is more likely to thrive, governance mechanisms that can foster accountability, and investment selection and contract design features that make it more likely that state venture capital programs will succeed.

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INTRODUCTION

Beyond the borders of Silicon Valley and a handful of other startup hubs, entrepreneurs struggle to find the financing and innovation infrastructure that support early-stage businesses.[1] The lack of funding and concentration of venture capital (VC) funding in a small number of locations has important recursive effects: the rich venture ecosystems in California, New York, and Massachusetts get richer while talent and capital drain away from other states.

Responding to the relative lack of capital outside of these hubs, state governments are increasingly shifting government development expenditures from mere tourism-support operations to broad economic development mandates, including venture investment and

1. Maxwell Wessel, *Don't Build Your Startup Outside of Silicon Valley*, HARV. BUS. REV. (Oct. 23, 2013), https://hbr.org/2013/10/dont-build-your-startup-outside-of-silicon-valley [https://perma.cc/YD5Y-YNVK].

small business incubation. At least 37 states have some form of state-managed venture capital fund.[2]

The reasons for channeling economic support through venture capital are twofold. First, by structuring the investment through a venture vehicle, the state can simulate a standard VC fund. This allows the fund to borrow some of the efficient contractual forms and business structures that enable private VC deals. Common, comfortable structures also encourage co-investment, allowing government funds to leverage private funding, often by a multiple of as much as ten private dollars for each government dollar invested.[3] States are thus more likely to make a greater impact in support of entrepreneurship-related social goals, such as supporting women- or minority-owned businesses that might otherwise struggle to obtain funding.[4]

Second, the venture capital model tends to produce superior results compared with bank financing or other capital-raising models; venture capital-funded firms tend to outperform other firms[5] across multiple metrics, including superior job creation, market values, and revenues.[6] So, the logic goes, if VC works in the private sector, why should the government not attempt to harness the power of VC for public purposes?

This Article challenges the standard logic driving the creation of state venture capital programs and argues that the structure of many state venture capital programs is deeply flawed. State venture capital theoretically serves as a catalyst, shock absorber, and transition tool. It is meant to fill financing gaps and provide an overall smoothing effect on increasingly volatile capital and labor markets, and, for some states, it may be envisioned as a mechanism to help the states transition to a high-technology economy. However, rather than remedying inequities between states and within states—for instance, in the urban/rural divide that is a feature of most states' political economies or the lack of funding for women- and minority-owned businesses—state venture capital is more likely to perpetuate and even exacerbate inequality.[7] Furthermore, it introduces the potential for waste and corruption

2. U.S. DEP'T OF THE TREASURY, SSBCI PROGRAM PROFILE: VENTURE CAPITAL PROGRAM 4–5 (2011), https://home.treasury.gov/system/files/256/SSBCI_Program_Profile_Venture_Capital_FINAL_May_17.pdf [https://perma.cc/77XW-7V7D].

3. For example, states receiving support from the State Small Business Credit Initiative (SSBCI) are expected to generate private lending that is at least ten times the amount of their SSBCI funds. A study of SSBCI participants showed that, as of December 31, participants had secured $8.95 in financing for every $1 in SSBCI funds. *See, e.g.*, ROBERT JAY DILGER & GRANT A. DRIESSEN, CONG. RSCH. SERV., R42581, STATE SMALL BUSINESS CREDIT INITIATIVE: IMPLEMENTATION AND FUNDING ISSUES 2 (2022), https://sgp.fas.org/crs/misc/R42581.pdf [https://perma.cc/RE57-ZZ43] (citing U.S. DEP'T OF THE TREASURY, STATE SMALL BUSINESS CREDIT INITIATIVE: A SUMMARY OF STATES' 2016 ANNUAL REPORT 2 (2016)).

4. According to a recent study, less than 2% of VC funding went to women- and minority-owned businesses. Dean Takahashi, *Diversity VC Reports 1.87% of Venture Capital Allocated to Women and Minority-Owned Startups*, VENTUREBEAT (Nov. 9, 2022), https://venturebeat.com/games/diversity-vc-reports-1-87-of-venture-capital-allocated-to-women-and-minority-owned-startups/ [https://perma.cc/LX3Z-PFRA].

5. Henry Chen et al., *Buy Local? The Geography of Venture Capital*, 67 J. URB. ECON. 90, 90 (2010) (noting that "venture capital-backed companies outperform their peers on many dimensions: (i) operational growth, (ii) post-IPO performance, (iii) innovation and patenting activity, and (iv) potential for scale" (citations omitted)).

6. *Id.* (citing PAUL A. GOMPERS & JOSH LERNER, THE MONEY OF INVENTION: HOW VENTURE CAPITAL CREATES NEW WEALTH (2001)).

7. *See, e.g.*, Takahashi, *supra* note 4 (reporting that less than 2% of all state venture capital funding went to women- and minority-owned businesses).

jeopardizing governmental legitimacy. From a legal entity perspective, state venture capital uses existing private financing and accompanying legal infrastructures to channel financing and remedy market gaps, particularly for marginalized entrepreneurs. By co-opting private entity forms, state venture capital often (purposely) avoids the administrative mechanisms designed to safeguard public funds.

Despite its laudatory goals, state venture capital has not been able to overcome the daunting market barriers that necessitate its existence. Persistent economic and geographic constraints make it likely that venture programs in most states will struggle to produce positive returns. However, state venture capital is not bound to fail. By investing in an entrepreneurial ecosystem that supports small businesses, allowing venture capital to grow organically, states may be able to better support small businesses than through direct funding. For states that have existing programs, the Article suggests several reforms, including accountability mechanisms, investment selection criteria, and contract design mechanisms that give state venture capital a greater chance at success.

The Article proceeds as follows. In Part I, the Article describes how venture capital financing fills in funding gaps at the early stages of a company's development, then outlines how government investment has come to play an increasing role in VC funding. The Article describes the market failures state governments intend to address through their interventions and describes analogous efforts at the national level. In Part II, the Article details specific strategies for economic development by state agencies and shows how the mandates of these agencies have expanded over time to include venture investing. Part II provides examples of how state agencies and funds fill these varying roles and also describes the extensive federal government efforts to develop and sustain state venture capital.

Part III provides a political and legal explanation for the use of state venture funds. The legal structures used in state venture capital yoke private investment forms to state financing, theoretically allowing the state to harness the animal spirits of the market to achieve important social goals. However, these structures are not always a good fit, and the expectations of state venture capital often exceed its capabilities. Part IV describes the headwinds facing venture capital and describes how the synchronicity of talent, capital, and legal know-how that enables vibrant venture capital markets cannot be simply transported to new jurisdictions. Successful state venture capital programs are not simply a consequence of political desire and abundant capital. Part V thus suggests that state investment funding should be de-prioritized, and that other kinds of social infrastructure spending should take precedence, including educational, technology, and physical infrastructure expenditures that are more likely to disperse benefits more broadly, and with much more potential impact, than the concentrated spending of state venture capital programs. For programs already in place, Part V also suggests a series of reforms to help ensure that state venture capital is better protected against waste and corruption, that state investments do not cannibalize private venture activity, and that state venture contracts are designed to create appropriate incentives for both state governments and recipient entrepreneurs.

I. THE ROLE OF VENTURE CAPITAL

State venture capital has arisen as a response to gaps in small business funding. Such gaps have always existed, of course. Famously, Steve Jobs was unable to obtain a bank loan when he and Steve Wozniak first founded Apple, and initial funding came through the sale of Jobs' VW bus and Wozniak's HP calculator.[8] Many states have determined that they can fill at least some of these gaps, and states' desire to fill these gaps is driven in part by a desire to remediate economic dislocations related to technological innovation and, to some extent, local effects created by globalization, such as the outsourcing of manufacturing.[9] Venture capital can thus be viewed as a mechanism to help communities transition from basic manufacturing-based economies to higher-skilled manufacturing or knowledge-based economies. Relatedly, state officials may worry about migration out of the state, the erosion of the state's tax base, a general lack of competitiveness with other states. The development of new businesses can help mitigate some of these concerns.

This Part describes the core financing problems affecting startup businesses and then identifies why these problems may, in theory, result in a "market failure" justifying state intervention in private financing markets. Because these funding problems occur at the local, state, and national levels, this Part also describes national efforts to remediate early-stage funding deficits through national government-funded investment programs.

A. Scarcity in a Time of Plenty

Venture capital, the investment of funds by professional fund managers in private, early-stage companies,[10] has been key to the growth of many of the country's largest public companies.[11] Recent years have seen record-breaking VC funding. In 2021, for instance, global venture funding reached a record $621 billion, more than twice the amount in 2020.[12]

8. Nik Rawlinson, *History of Apple: The Story of Steve Jobs and the Company He Founded*, MACWORLD (Apr. 25, 2017), https://www.macworld.com/article/671584/history-of-apple-the-story-of-steve-jobs-and-the-company-he-founded.html [https://perma.cc/B76M-UDE3].

9. *See infra* Part III.B (discussing various states' VC approaches).

10. ANDREW METRICK & AYAKO YASUDA, VENTURE CAPITAL AND THE FINANCE OF INNOVATION (Jennifer Manias ed., 3d ed. 2021) (defining venture capital as provided by a financial intermediary—a VC fund—directly investing funds in private portfolio companies, with the VC fund taking an active role in monitoring portfolio companies, seeking to maximize return on investment, and investing to fund the internal growth of companies).

11. Will Gornal & Ilya A. Strebulaev, The Economic Impact of Venture Capital: Evidence from Public Companies 9 tbl.2 (June 2021) (unpublished manuscript) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2681841 [https://perma.cc/NG7C-MJ6Q] (finding that, of the public companies founded after 1968, 42% were labeled as "VC-backed" under the study methodology); *see also* Jeremy Greenwood, Pengfei Han & Juan M. Sánchez, *Venture Capital: A Catalyst for Innovation and Growth*, 104 FED. RSRV. BANK ST. LOUIS 120, 120 (2022) ("The companies and products and services VC helped develop are ubiquitous in our daily lives: the Apple iPhone, Google Search, Amazon, Facebook and Twitter, Starbucks, Uber, Tesla electric vehicles, Airbnb, Instacart, and the Moderna COVID-19 vaccine.").

12. CB INSIGHTS, STATE OF VENTURE: GLOBAL 2021 8 (2022), https://www.cbinsights.com/reports/CB-Insights_Venture-Report-2021.pdf [https://perma.cc/M2K3-YS5F].

And yet, despite ample dry powder, many startups face significant funding challenges.[13] Some of these challenges are common to all startups, regardless of geographic location. Most businesses struggle to obtain funding in the early days of their business lifecycles.[14] Funding is often available at later stages of business growth after firms have shown the market viability of their product or service. However, firms often struggle to survive what financiers and entrepreneurs call the "valley of death," the early stages of the business life cycle in which the firm attempts to survive the gap from invention to successful commercialization.[15]

Other challenges relate to the insular nature of the venture capital market and the persistence of networks, tend to privilege certain entrepreneurs over others.[16] VC funding is particularly scarce, for example, for women and minority entrepreneurs. As an industry reporter noted, the VC market is a study in contradictions:

> Venture funds have record dry powder—deployable capital on hand—and yet funding continues to steadily decline. There is seemingly more talk of backing women and people of color in the industry than ever, and yet the numbers are headed in the opposite direction. VCs said publicly that they were focusing on companies on the path to profitability, but that wasn't true for even a minute.[17]

Despite these problems, however, the most important impediment to venture capital funding is not an economic or social constraint, but a more fundamental problem: geography. The following Part introduces the stubborn geography of venture capital.

B. Parochial Venture Capital

A primary impediment to venture capital—and with special salience to the phenomenon of state venture capital—is the regional concentration of funding. Because VC firms provide not just funding but also serve as monitors and advisors to their portfolio firms, geographic proximity that facilitates such portfolio firm involvement is often

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13. As of the end of the first quarter of 2022, Preqin estimated that venture capital dry powder—the amount of uninvested capital ready to be deployed—had grown by $43.1 billion in the quarter to a total of $478.5 billion and that early-stage venture capital funds had approximately $168.6 billion in dry powder. Press Release, Preqin, Venture Capital AUM at Record High of $2tn—Preqin Reports (Apr. 8, 2022), https://www.preqin.com/Portals/0/Documents/Q1%202022%20VC%20Press%20Release_ES.pdf [https://perma.cc/LU78-M3N5].

14. Peter Lee, *Enhancing the Innovative Capacity of Venture Capital*, 24 YALE J.L. & TECH. 611, 615–17 (2022) (noting that early-stage companies may face funding challenges for a variety of reasons: "First, social connections play an outsize role in connecting startups with VCs," which shrinks the pool of entrepreneurs likely to obtain funding. Second, venture funds "tend to invest in the same popular technologies while eschewing truly revolutionary innovations." Third, venture firms seek "quick, big hits while mitigating risk," which results in a neglect of "capital-intensive industries with long investment horizons.").

15. Stephen K. Markham et al., *The Valley of Death as Context for Role Theory in Product Innovation*, 27 J. PROD. INNOVATION MGMT. 402, 402 (2010).

16. *See, e.g.*, Jon A. Garfinkel et al., *Alumni Networks in Venture Capital Financing* 3–5 (SMU Cox Sch. of Bus. Rsch. Paper, Paper No. 21–17, 2023), https://ssrn.com/abstract=3970128 [https://perma.cc/CT2Y-KA9J] (finding that venture capitalists prefer firms associated with entrepreneurs from their alma mater and invest more money in such firms).

17. Rebecca Szkutak, *Amid Record Dry Powder, VCs Are Determined to Fund Anything but You*, TECHCRUNCH (Nov. 11, 2022), https://techcrunch.com/2022/11/11/amid-record-dry-powder-vcs-are-determined-to-fund-anything-but-you/ [https://perma.cc/NG94-49TA].

considered a prerequisite for investment. Sequoia Capital, a premier VC firm headquartered in Silicon Valley, is operated by a well-known mantra: "[I]f we can't ride a bicycle to it, we won't invest."[18] And indeed, venture capital is remarkably concentrated and has been so since its inception. A 2009 study by Chen et al. found that more than half of the approximately 1,000 venture capital offices listed in *Pratt's Guide to Private Equity and Venture Capital Sources* were located in the San Francisco, Boston, and New York areas, and about half of the companies financed by these funds were located in those same three cities.[19]

VC funding tends to be local because information asymmetries in venture capital investing are high, and so too are the potential agency costs.[20] VC fund managers are typically very involved in the governance of their portfolio companies through board membership and the recruitment and incentivization of managers.[21] The ability to intensively monitor portfolio companies, provide mentoring and coaching to management teams, and make introductions to other potential partners and funders is linked to the ability for VC managers to interact frequently—and in person—with portfolio company managers and employees.[22] But it is not merely a concern with agency costs, coaching, and introductions that may drive venture funds to invest locally; after all, funds could create satellite offices around the country to take advantage of opportunities in untapped markets. The reason they do not is that powerful network effects, generated through congregations of VC firms, accountants, lawyers, academic centers, and entrepreneurs, create snowballing advantages for incumbent VC centers, making the rich richer.[23]

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18. Alex Konrad, *Why VC Firm Sequoia Broke with Tradition to Put Down Roots in Europe's Startup Scene*, FORBES (Nov. 17, 2020), https://www.forbes.com/sites/alexkonrad/2020/11/17/vc-firm-sequoia-puts-down-roots-in-europe-startup-scene/ [https://perma.cc/J9VA-ZL5X] (quoting Sequoia leader Doug Leone).

19. Chen et al., *supra* note 5, at 90.

20. *Id.* "Agency costs" in the VC context include the costs of monitoring portfolio firms as well as any losses caused by shirking by the portfolio company management. *Id.* at 91.

21. *Id.* at 90.

22. Paul Gompers et al., *How Venture Capitalists Make Decisions*, HARV. BUS. REV., Mar.–Apr. 2021, at 70, 76.

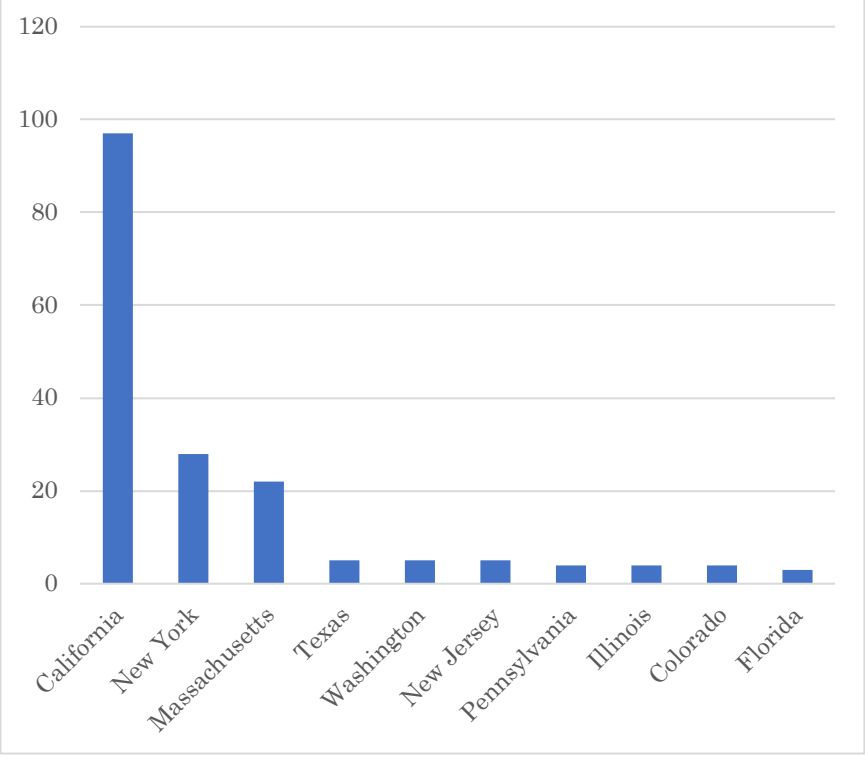
23. As Chen et al. explain:

> Many venture capital investments are in industries where geographically localized knowledge spillovers are likely to be important (second-order agglomeration externalities). Accordingly, venture capital firms locate to maximize benefits from these spillovers and also to maximize opportunities for localized knowledge spillovers within the venture capital community as investors and entrepreneurs seeking financing need to visit a smaller number of geographic locations (first-order agglomeration externalities). Early successes by venture capital firms are reinforced when the most talented new entrepreneurs seek capital from previously successful firms (historical artifact). A virtuous cycle of co-location is maintained as entrepreneurs choose to locate their businesses closer to funding sources, pools of talented employees, and academic researchers. The higher success rate for companies based in the venture capital centers suggests that these may be optimal geographies for founding new venture-backed businesses.

Chen et al., *supra* note 5, at 101; *see also* Douglas Cumming & Na Dai, *Local Bias in Venture Capital Investments*, 17 J. EMPIRICAL FIN. 362, 378 (2010) (finding that "VCs exhibit strong local bias in their investment decisions," and invest about 50% of the time "within 233 miles from their VCs," but also noting that "more reputable U.S. VCs exhibit less local bias, suggesting that more reputable VCs are better capable of reducing information asymmetry associated with distance").

Focusing on total funding in recent years shows an even greater dominance of the Bay Area (and California generally), with more than three times as much money going to California firms than to firms in New York, the next leading state.[24] There is also a significant drop-off between the biggest three states and the rest of the country; more than four times the amount of money goes to third-place Massachusetts firms than to fourth-place Texas firms.[25] The total dollar figures for the top ten VC destinations are shown in Figure 1 below.[26]

Figure 1. Top 10 States for Venture Capital Investment (2021) (in billions USD)



Of course, VC firms may also fail to serve certain markets due to a variety of other impediments. Aside from geographical limitations, financial intermediaries may be reluctant to provide funding because some projects naturally entail higher risk and smaller private rewards. Also, VC firms sometimes cannot adequately assess the risks associated

24. *VCs Have Spoken: The 10 US States Dominating Venture Capital in 2021*, AIRSWIFT (Jan. 19, 2022), https://www.airswift.com/blog/top-us-states-vc-backed-2021 [https://perma.cc/AA6N-SDGV].

25. *Id.*

26. *Id.*

with particular investments.[27] VC firms may attempt to mitigate these concerns through the use of heuristics like common social or educational backgrounds. For example, Garfinkel et al. note that VC firms tend to prefer entrepreneurs who received a degree from the same university or universities attended by the fund managers.[28] An explanation for this finding is that a connection established through a common educational institution may help alleviate some of the concerns created by the inherent information asymmetries between the VC firm and the entrepreneurs.[29] However, such heuristics may also perpetuate bias.

In sum, VC firms away from the coasts face a variety of related economic, social, and geographic challenges that impair early-stage business funding. To make up for the lack of private venture investments, states have increasingly been offering direct funding opportunities to entrepreneurs.

II. THE CASE FOR GOVERNMENTAL INTERVENTIONS

Government-sponsored or government-owned early investment funds are often designed to establish funding channels that gulley through the blockages described in the preceding section. Both governments and scholars have provided numerous economic and market-oriented justifications for government intervention in venture capital markets to alleviate the lack of early-stage business funding. Many of these justifications are strongly supported by theory and evidence when applied to national spending initiatives, but their potency diminishes considerably when applied to state and local government interventions.

A. Public Funds and Public Goods

Public investment funds, in theory, can help resolve a variety of market failures that hamper the development of private markets. Public funds thus supplement or substitute for weak private markets that otherwise fail to achieve a desired social outcome. As Musacchio et al. argue, public funding may provide positive informational externalities.[30] Even though an investment may generate gains and competitive advantages that inure primarily to the firm receiving government support, public financial institutions may still provide such support because "the capabilities demonstrated by the supported firm can result in spillover effects that lead to a more productive and competitive industry as whole."[31] Governments

27. *See generally* Aldo Musacchio et al., The Role and Impact of Development Banks: A Review of Their Founding, Focus, and Influence (unpublished manuscript) (on file with Brandeis International Business School) (Mar. 2017), https://people.brandeis.edu/~aldom/papers/The%20Role%20and%20Impact%20of%20Development%20Banks%20-%203-9-2017.pdf [https://perma.cc/A7L3-782R] (examining the market role of development backs in positive externality projects).

28. Garfinkel et. al., *supra* note 16, at 4 ("On the other hand, if the investment patterns we document are driven by favoritism or homophily (a 'taste' for founders from the same alma mater), then investment outcomes may be worse."). They found, however, that investments created through these connections perform better than unconnected investments, and that 'connected' startups are 33% more likely to conduct an IPO post-funding. *Id.*

29. *Id.*

30. Musacchio et al., *supra* note 27, at 35 (defined as "public returns generated from the production and dispersion of information and knowledge").

31. *Id.*

may provide funding, for instance, to support research and development efforts that contribute to the competitiveness of domestic firms as a whole.[32]

Governments can also help resolve coordination problems, such as a failure to provide "complementary, orchestrated" investment among potential market participants.[33] Government support and funding may spur the development of a critical mass of market players in a particular location and may also support the creation of supply chains to service these networks of market actors.[34] Government investments may also provide undersupplied ventures public goods. For example, because the cost of developing renewable energy sources is high relative to most non-renewable resources, private actors may not be incentivized to develop alternative energy sources.[35] Government institutions often also provide loans and grants to support education, worker nobility, cultural preservation, disaster relief, and environmental protection, mitigation, and adaptation initiatives. As Hockett & Omarova explain, public funding can help redress the inadequate provision of "collective goods."[36] Because some innovations take a long time to develop, private entities might recognize they would not be able to fully capture the benefits of the investment, leading them to decide not to undertake such investment. Private finance is thus directed to the provision of goods that "yield direct revenues (e.g., 'user fees') within a relatively short timeframe."[37] Collective goods, meanwhile, tend to remain underfunded through private markets. Public finance can provide the "collective agency" necessary to make private investment profitable and financially advantageous.[38]

Gelter also summarizes a variety of motivations for national governments to create, own, and/or subsidize businesses that might otherwise operate as privately-held firms.[39] Like Musacchio et al., Gelter argues that governments might find that a particular firm or industry provides positive externalities to the rest of the economy; this is often the case with infrastructure investments such as railways or airports.[40] Governments might also want to maintain control over certain firms to maintain critical supply chains;[41] this

32. *Id.*

33. *Id.* at 38–39.

34. *Id.* (arguing government institutions will often provide "[g]rants for conducting industry relevant evaluations and technical assistance for establishing networks of entrepreneurs within a particular industry." One institution, as an example, provides "grants for monitoring and evaluation of its programs (or supported programs), for conducting educational workshops, to enable dissemination of informative publications, and to support innovation platforms").

35. Musacchio et al*., supra* note 27, at 29.

36. Robert C. Hockett & Saule T. Omarova, *Private Wealth and Public Goods: A Case for a National Investment Authority*, 43 J. CORP. L. 437, 447 (2018) ("[Collective] goods . . . can generally be supplied only by persons acting in their collective capacities, in concerted fashion." This is contrasted to "goods that can generally be supplied by persons acting in their individual capacities, in un-concerted fashion.").

37. *Id.* at 455.

38. *Id.* at 456 (arguing for the creation of a National Investment Authority that would serve to coordinate the public financing of collective goods).

39. *See generally* Martin Gelter, *Is Economic Nationalism in Corporate Governance Always a Threat?*, 16 OHIO ST. BUS. L.J. 1 (2021).

40. *Id.* at 22 (noting that government investment may be preferable for these types of firms, not just because they are generally viewed as public-good producers, but also because high transaction and coordination costs may make private ownership difficult or infeasible, "especially in a fluid economy where firms will enter and exit the market, and where the degree of benefits reaped by each firm will change over time").

41. *Id.* at 22–23.

concern was highlighted during the COVID-19 pandemic, which showed that the "United States is not ready in a policy or infrastructure or even physical-capacity sense to respond to major shocks to its supply chains."[42] Finally, governments may wish to support domestic firms as a "development strategy" before exposing them to global competition.[43]

Partly in response to the need for VC funding, national-level development funds have proliferated around the world in recent decades.[44] The reasons for this proliferation are multifaceted and vary from country to country. Some countries have few natural resources and create development funds (often sponsored by multilateral development banks) to foster economic activity.[45] Other countries use government development funds as shock absorbers that help manage economic disruptions arising from globalization.[46] Sometimes called "sovereign development funds" or "strategic investment funds," these funds share several characteristics: (1) they are either wholly or partially capitalized by a sponsoring government; (2) they invest to achieve financial, economic, and even social returns, meaning that they have a double or triple bottom-line of both financial profit as well as the production of other public goods; (3) they seek to "crowd-in" private capital by seeking co-investors at the level of the fund itself or at the level of individual projects supported by the fund; (4) they operate as "expert investors" for their sponsoring sovereign; (5) they provide "long-term patient capital, primarily as equity," though they may also sometimes act as a lender; and (6) they are legally established as investment funds or investment corporations.[47]

B. A Theory of State Venture Capital and Other Small Business Subsidies

At subnational levels, the concerns are naturally more localized. This is not to suggest that state and local officials do not share the large-scale economic concerns animating national-level officials. Rather, subnational officials typically lack the regulatory reach and budgetary power necessary to implement significant policy prescriptions that might address these concerns The following Parts describe the primary political and economic challenges facing state officials and show how these challenges explain the emergence of state venture capital.

1. The Increasing Demands on State and Local Governments

State and local governments play a significant role in providing essential goods and services to the public. Nearly half of all state and local government expenditures fall within two main categories of expenses: public welfare (including Medicaid, cash payments through the Temporary Assistance for Needy Families (TANF) program, and

42. Bradley Martin, Commentary, *Supply Chains and National Security*, RAND CORP.: THE RAND BLOG (Apr. 12, 2021), https://www.rand.org/blog/2021/04/supply-chains-and-national-security.html [https://perma.cc/ZD8A-B3LP].

43. Gelter, *supra* note 39, at 24–25.

44. World Bank Group [WBG], *Strategic Investment Funds: Establishment and Operations*, at 1–2, WBG Rep. No. 172646 (June 16, 2022), https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099613406162214370/ [https://perma.cc/PEU6-SBXF].

45. *Id.*

46. *Id.* at 3.

47. Håvard Halland et al., *Strategic Investment Funds: Opportunities and Challenges* 1–2 (WBG Pol'y Rsch., Working Paper No. 7851, 2016), https://ssrn.com/abstract=2849143 [https://perma.cc/8TUZ-MANK].

Supplemental Security Income) and elementary and secondary education.[48] No other category (such as higher education, health and hospitals, or highways and roads, the next three largest categories) amounts to even 10% of the total budget, based on U.S. Bureau of Census data.[49] Public welfare costs, in particular, have been rising steeply in recent years—Medicaid costs and public employee retirement and healthcare costs alone absorb about one-fifth of all state and local tax revenues.[50] To cover budgetary gaps, states are sending less funding to cities; cities, in turn, are meeting their funding gaps by "increasing fees and fines on everything from garbage collection to parking tickets."[51] State spending on higher education has also decreased, resulting in higher costs of attendance for college students.[52] State and local spending on infrastructure has decreased as well.[53] Boyd and Dadayan compiled data on spending following the Great Recession and noted that while Medicaid spending increased 23.1% from 2008 to 2015, tax revenues only grew 5.9%.[54] As a result, spending decreased in every other category, except roads, as seen in Figure 2 below.

Figure 2. Changes in State Budget Spending, 2009–2015[55]

Category	**2009**	**2015**	**% Change**
Education	91.1	66.5	-27.0%
Water & Sewer Systems	41.7	34.9	-16.3%
Office	23.4	19.2	-18.1%
Transportation (inc. highways and streets)	112	119.3	6.5%
Public Safety	5.2	3.7	-28.4%
Health care	6.7	5.1	-24.0%
Amusement and recreation	8.5	5.3	-37.4%
Power	12.3	8.3	-32.6%
Equipment, intellectual property	80.5	75.2	-6.6%
All other	17.9	14.7	-18.0%

Note that, particularly because of higher Medicaid and pension costs, states are spending a decreasing percentage of their revenues on two of the primary mechanisms—education and general infrastructure spending—that fuel continued growth and economic activity.[56]

48. *Public Welfare Expenditures*, URB. INST., https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/state-and-local-backgrounders/public-welfare-expenditures [https://perma.cc/5Z64-C9RZ].

49 *Id.* (citing data from the U.S. Bureau of the Census's 1977–2020 Survey of State and Local Government Finance).

50. Cezary Podkul & Heather Gillers, *Why Are States So Strapped for Cash? There Are Two Big Reasons*, WALL ST. J. (Mar. 29, 2018), https://www.wsj.com/articles/why-are-states-so-strapped-for-cash-there-are-two-big-reasons-1522255521 (on file with the *Journal of Corporation Law*).

51. *Id.*

52. Don Boyd & Lucy Dadayan, *Slow Tax Revenue Growth, Rising Pension Contributions, and Medicaid Growth Lead State and Local Governments to Reshape Their Finances*, 109 PROC. ANN. CONF. ON TAX'N 1, 7 tbl.2 (2016).

53. *Id.*

54. *Id.*

55. *Id.* at 11 tbl.4.

56. *Id.* at tbl. 2.

Governments could raise taxes to meet shortfalls in education and infrastructure spending, but increasing taxes is politically treacherous, hence the rise in stealth-tax measures such as increased fees and fines. A recent study found that fines and fees make up more than 10% of general fund revenues in nearly 600 U.S. jurisdictions and more than 20% in nearly half of those jurisdictions.[57] In a well-known and particularly shameful example, the Department of Justice's (DOJ) 2015 report on its investigation of the Ferguson Police Department noted that Ferguson officials "consistently set maximizing revenue as the priority for Ferguson's law enforcement activity,"[58] through fines and fees for violations (primarily minor violations such as parking infractions, traffic tickets, or housing code violations) as well as fees for access to justice, such as court appearances.[59] The judicial system was effectively converted into a fundraising operation, with court staff "keenly aware that the City considers revenue generation to be the municipal court's primary purpose."[60] The DOJ found that these practices disproportionately harm African-Americans and that this harm stemmed "at least in part" from racial bias.[61] The DOJ concluded that, "[u]ltimately, unlawful and harmful practices in policing and in the municipal court system erode police legitimacy and community trust, making policing in Ferguson less fair, less effective at promoting public safety, and less safe."[62]

While cities and states are coming under increasing budgetary pressure, citizens are also slowly but steadily increasing their expectations of government. While Americans generally disfavor "socialism" (with 39% having a positive opinion and 57% viewing it negatively) to "capitalism" (with 60% positive and 35% negative views), the percentage of Americans expecting an increased role for government has increased significantly since 2010.[63] As of 2019, more Americans have shifted in their belief that "government should do more to solve problems" (rising from 36% to 47%), a preference for increased services and increased taxes (16% to 25%), a belief that business will harm society if not regulated (45% to 53%), and a preference for an active government (34% to 42%).[64]

While these numbers reflect a general rise in expectations for government, there is still broad support for a market orientation in most aspects of economic activity. By wide margins, Americans prefer the "free market," not the government, to be primarily responsible for technological innovation (75% favoring free market to 19% favoring the government), the distribution of wealth (68% to 28%), the economy in general (62% to 33%), wages (62% to 35%), and a majority even prefer the private sector to government in

57. Mike Maciag, *Addicted to Fines: Small Towns in Much of the Country Are Dangerously Dependent on Punitive Fines and Fees*, GOVERNING (Aug. 19, 2019), https://www.governing.com/archive/gov-addicted-to-fines.html [https://perma.cc/8KBF-AXBV].

58. CIV. RTS. DIV., U.S. DEP'T OF JUST., INVESTIGATION OF THE FERGUSON POLICE DEP'T 9 (2015), https://www.justice.gov/sites/default/files/opa/pressreleases/attachments/2015/03/04/ferguson_police_department_report.pdf [https://perma.cc/3CG5-BVUB].

59. *Id.*

60. *Id.* at 14.

61. *Id.* at 15.

62. *Id.*

63. Jeffrey M. Jones & Lydia Saad, *U.S. Support for More Government Inches Up, but Not for Socialism*, GALLUP (Nov. 18, 2019), https://news.gallup.com/poll/268295/support-government-inches-not-socialism.aspx [https://perma.cc/7BPD-5VMU].

64. *Id.*

managing higher education (56% to 41%) and healthcare (53% to 44%).[65] However, governments are expected to take the lead in protecting consumers' privacy online (57% favoring the government to 40% favoring the free market) and environmental protection (66% to 30%)[66] and, of course, the government is widely expected to protect Americans from foreign threats and unsafe products,[67] to prevent discrimination,[68] and to develop and maintain transportation systems.[69] About half of all respondents in the Gallup poll believed that the government has a "high responsibility for ensuring a minimum standard of living."[70]

This polling data reflects many individuals' nuanced views on the role of the government in market intervention. The government is not expected to solve all problems and, of particular relevance for this Article, the government is generally not expected to play a significant role in catalyzing technological innovation.[71] However, governments are expected to have a significant role in transportation systems development and, it could be inferred, in the construction and maintenance of infrastructure generally such as power, water, and transportation systems, and perhaps even telecommunications systems.[72] This distinction will prove important later in this Article as Part IV suggests potential reforms and spending priorities that may enhance entrepreneurial ecosystems.

In sum, state and local governments are under significant financial strain. As public welfare costs have increased, governments have spent less on education[73] and infrastructure,[74] two drivers of long-term economic growth. Yet, citizens still expect the

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65. Mohamed Younis, *Four in 10 Americans Embrace Some Form of Socialism*, GALLUP (May 20, 2019), https://news.gallup.com/poll/257639/four-americans-embrace-form-socialism.aspx [https://perma.cc/NW47-APVQ].

66. *Id.*

67. 92% of respondents say the government should have total or high responsibility in protecting Americans from foreign threats, and 79% say that the government should protect consumers from unsafe products. Jones & Saad, *supra* note 63.

68. *Id.* (finding that 71% of respondents held this view).

69. *Id.* (finding that 70% of respondents held this view).

70. *Id.*

71. Even if citizens do not expect the government to play such a role, governments (especially at the national level) do play such a role. *See* MARIANA MAZZUCATO, THE ENTREPRENEURIAL STATE: DEBUNKING PUBLIC VS. PRIVATE SECTOR MYTHS 109–10 (2013) (noting how the U.S. "innovation strategy" focused on technologies that became essential parts of the first iPods); *see also* Mariana Mazzucato & Gregor Semieniuk, *Public Financing of Innovation: New Questions*, 33 OXFORD REV. ECON. POL'Y 24, 34 (2017) (compiling examples of the public sector absorbing the risk of technological innovation before VCs and the private sector would enter the market).

72. In an example of how governments are beginning to treat internet access as a basic service, the U.K. government created a new Universal Service Obligation "giving every household and business the right to request a broadband connection of at least 10 Mbps, to ensure no-one is left behind." DEP'T FOR DIGIT. CULTURE MEDIA & SPORT, U.K., FUTURE TELECOMS INFRASTRUCTURE REVIEW 1 (2018), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732496/Future_Telecoms_Infrastructure_Review.pdf [https://perma.cc/8CTW-A38F]. For a review of recent legislative efforts in the United States, see Heather Morton, *Broadband 2020 Legislation*, NAT'L CONF. OF STATE LEGISLATURES (Jan. 11, 2021), https://www.ncsl.org/research/telecommunications-and-information-technology/broadband-2020-legislation.aspx [https://perma.cc/8CTW-A38F].

73. Anna Valero, *Education and Economic Growth* 33 (Ctr. for Econ. Performance Discussion Paper, Paper No. 1764, 2021), https://files.eric.ed.gov/fulltext/ED614082.pdf [https://perma.cc/Z2MM-ZGAB].

74. Maria Vagliasindi, *How Does Infrastructure Support Sustainable Growth?*, WORLD BANK BLOGS (Apr. 18, 2022), https://blogs.worldbank.org/digital-development/how-does-infrastructure-support-sustainable-growth [https://perma.cc/PR36-F99K].

government to provide these services. This expectation forces states to make difficult funding choices and to be creative in finding new ways to grow local economies. As described in the following Part, it is this need for creative solutions that explains, at least in part, the development of state venture capital programs.

2. The Political and Economic Justifications for State Venture Capital

To clear some of the brush surrounding the arguments for state venture capital, note first that some market failures cannot be (and are not intended to be) resolved through state government interventions, even though there may be a federal justification for such efforts. For example, a market may fail to develop because there is only one potential buyer—the federal government—for the product or service. Such a market, called a monopsony, occurs with national defense-related purchases, for example. There is no market for nuclear submarine engineering outside of the federal government, and even if there were, the government might inhibit the development of such a market by prohibiting the transfer of such technology. The federal government, rather than the state governments, has the expectation and responsibility of being the entity that funds broadly beneficial and national societal goods, such as national defense, interstate commerce, and global communications networks. Additionally, of course, the federal government has considerably more funds at its disposal to invest in such projects.

However, states may undertake efforts to create public benefits through public investment or catalyzing private investment. Such beneficial public spillovers might enhance economic development through job creation or the support of certain industries that also support broader societal goals, such as green technology. A localized venture capital program may also create positive network effects by encouraging the development of a broader professional base—including financial professionals, attorneys, and accountants—that could benefit private venture capitalists who might seek to enter the local market. States may also benefit private markets by performing a certification function for firms in which they invest.[75] Government due diligence may help reduce certain informational asymmetries that burden venture capital relationships generally, and this certification function may encourage private investment.

Many states also grapple with local dislocations created by large-scale economic trends.[76] The reasons for these dislocations are complex, and not easily reduced to simple explanations that suggest equally simple solutions. Some states, especially those in the so-called "Rust Belt," have experienced significant manufacturing job losses in the years since World War II.[77] While globalization may have had some impact, a Federal Reserve study

75. For example, states certify accounting, legal, and financial industries through various administrative channels.

76. AMY LIU ET AL., BROOKINGS METRO, MAKING LOCAL ECONOMIES PROSPEROUS AND RESILIENT: THE CASE FOR A MODERN ECONOMIC DEVELOPMENT ADMINISTRATION 5 (2022), https://www.brookings.edu/articles/making-local-economies-prosperous-and-resilient-the-case-for-a-modern-economic-development-administration/ [[https://perma.cc/LXL6-RGSN].

77. *See* Simeon Alder, David Lagakos & Lee Ohanian, *The Decline of the U.S. Rust Belt: A Macroeconomic Analysis* 4 (FRB Atlanta, Working Paper No. 14-5, 2015), https://ssrn.com/abstract=2586168 [https://perma.cc/KU8G-AZY3] (finding that the Rust Belt accounted for 43% of aggregate employment in 1950, but just 27% in 2000. In manufacturing, "the Rust Belt share was over one-half in 1950 and fell to one-third in 2000.").

suggests that at least half of losses are attributable to less competitive labor markets as well as less competitive "output" markets in which fewer firms are competing with one another in the production of certain goods.[78] Labor markets became less competitive, they argue, because of the ascendance of "powerful labor unions in most of the prominent Rust Belt industries."[79] Output markets, meanwhile, were "characterized by close-knit oligopolists in many industries that, by many metrics, faced very low competitive pressure from the outside."[80] The deteriorating competitive environment left U.S. manufacturers less prepared to compete with low-cost foreign manufacturers.

As a result of open trade and globalization, overall wealth has increased significantly, but wealth has become increasingly concentrated.[81] Meanwhile, wage inequality has increased, and unemployment has remained high in certain parts of the country. Consistent with the Federal Reserve study, Petri and Banga find that technological change and shifts in demand have also driven wage inequality and unemployment.[82] Technological change often does not impact professions that "demand flexibility, judgment, and common sense";[83] such jobs include those at the high and low ends of the pay scale. High-end jobs that require "extensive problem solving and include professional, technical, and managerial occupations"[84] are generally safe from being made redundant through automation, as are jobs that require "situational adaptability and personal interactions," such as food service and health assistance jobs.[85] On the other hand, jobs that require some skill and involve the performance of routine tasks—such as many well-paying manufacturing jobs—are more likely to be automated.[86]

In theory, state venture capital can help reduce the negative effects of these shifts. State investment, particularly in technology-based early-stage companies, can be one of a set of tools to help employees advance from middle-skill, labor-oriented positions to judgment-based, professional, or technical careers or to find work in higher-skill manufacturing positions. The following Part describes this logic in detail, illuminating the expansion of state venture capital: how it developed, what it is designed to do, and how it benefits from federal support.

78. *Id.* at 7–10.

79. *Id.* at 7.

80. *Id.*

81. *See* Bariş Kaymak, David Leung & Markus Poschke, *Accounting for Wealth Concentration in the United States* (Fed. Rsrv. Bank of Cleveland, Working Paper No. 22-28, 2022), https://doi.org/10.26509/frbc-wp-202228 [https://perma.cc/44PL-34LV].

82. Peter A. Petri & Meenal Banga, *The Economic Consequences of Globalisation in the United States* 1, 9 (ERIA Discussion Paper Series, Paper No. 311, 2020), https://www.eria.org/publications/the-economic-consequences-of-globalisation-in-the-united-states/ [https://perma.cc/5LUY-QVH6].

83. *Id.* at 11.

84. *Id.*

85. *Id*.

86. *Id*.

III. THE LOGIC OF STATE VENTURE CAPITAL

Federal agencies and state governments employ a wide variety of initiatives to spur economic development, including community development block grants,[87] enterprise zones (providing tax breaks for businesses in designated areas), job creation and investment tax credits, the federal "new markets" tax credit (supporting funding for "Community Development Entities"),[88] and opportunity zones (a program providing tax credits for investors in distressed areas).[89] This Part details a few of the development strategies used by state governments and then turns to state venture capital programs as a development mechanism.

A. The Traditional Development Formula: Supporting and Retaining Large Businesses

A core mission for most state economic development agencies is to attract large, economy stimulating businesses.[90] As a Brookings report suggests, economic developers who seek to incentivize a company to locate in a particular neighborhood, city, region, or state will sometimes use a "but for" test: "*But for* this incentive, company X would not be making this investment."[91] Such incentives necessarily reduce the potential tax revenues that could be used to fund other services. State politicians feel pressure to provide services that impact their constituents' quality of life such as clean streets, safe communities, new and better jobs, and a sense that living standards are rising.[92] Often this potential tradeoff of incentives for business development is most obvious when a highly visible opportunity

87. The program has been described as a "Federal funding program intended to fight blight, help low-income people, and respond to urgent public welfare needs allows local governments to choose how to spend their allotted money." PEW CHARITABLE TRS., HOW STATES CAN DIRECT ECONOMIC DEVELOPMENT TO PLACES AND PEOPLE IN NEED 3 (2021), https://www.pewtrusts.org/-/media/assets/2021/01/how_states_can_direct_economic_development_to_places_and_people_in_need.pdf [https://perma.cc/FHD5-CDBX].

88. This program allocates tax credits to "specialized financial intermediaries called Community Development Entities (CDEs). The CDEs sell the credits to investors and use the proceeds to invest in businesses and nonprofits in targeted census tracts." *Id.*

89. Opportunity zones were created under the Tax Cuts and Jobs Act of 2017 and were designed to provide an "economic development tool" to "spur economic development and job creation in distressed communities by providing tax benefits to investors." INTERNAL REV. SERV., FS-2020-13, FACT SHEETS: OPPORTUNITY ZONES (Aug. 2020), https://www.irs.gov/newsroom/opportunity-zones [https://perma.cc/G8BD-P9LK]. Following a nomination process, "8,764 communities in all 50 states, the District of Columbia and five U.S. territories were certified as Qualified Opportunity Zones (QOZs)." *Id.*

90. *See* ERIN SPARKS & LUCAS PAPPAS, NAT'L GOVERNORS ASS'N, REDESIGNING STATE ECONOMIC DEVELOPMENT AGENCIES 1 (2012) (noting that "[t]raditionally, state economic development agencies focused on attracting investments from larger firms and often competed with one another in offering incentive packages").

91. JOSEPH PARILLA & SIFAN LIU, BROOKINGS INST., EXAMINING THE LOCAL VALUE OF ECONOMIC DEVELOPMENT INCENTIVES: EVIDENCE FROM FOUR U.S. CITIES 8 (2018). The report expands: "Under this rubric, cities and states deploy a firm-specific financial incentive to nudge firm behavior in a manner in which it would not otherwise occur in order to improve a given location's labor market, tax base, physical footprint, or industrial advantage. Should the 'but for' condition hold and the economic benefits of the investment outweigh the costs of the incentives, the deal raises the collective well-being of the jurisdiction since investment and job creation has occurred where it would have otherwise not, with the incentive making the difference." *Id.*

92. *See id.* at 9 ("As an increasing share of Americans express declining confidence in their economic circumstances, local and state policymakers have come under intense pressure to deliver growth that lifts up a broad swath of their residents.").

is made public. This was the case with Amazon's announcement that it was seeking a location for its "HQ2."[93] Amazon put cities in a "classic prisoner's dilemma": the cities knew that they would be better off by competing on their "natural advantages," rather than by offering incentives.[94] Jack Markell, Delaware's former governor, described this process from the perspective of a government official:

> Amazon's public encouragement of a bidding war highlights a competition that state and local governments engage in every day. I became very familiar with this process: A big business promises thousands, hundreds or even dozens of jobs and waits for offers from mayors and governors eager to demonstrate to voters that they are bringing them jobs. In Delaware, our economic development office, with my full approval, was busy calculating direct subsidies to corporations through grants and tax breaks
>
> . . . .
>
> The result is a market failure in which neither side is motivated to fix the problem. State and local policy makers can't unilaterally opt out without potentially negative consequences for their constituents, while businesses have a fiduciary obligation to pursue these short-term direct incentives.[95]

To fund incentive programs, states will often create specific "deal-closing" funds to attract and retain businesses.[96] Such funds are typically managed by the state development agency and can be used to supplement state and local tax incentives with direct, upfront payments.[97] Nevada's Catalyst Fund, for example, provided a $1.2 million grant to lure Solar City to Las Vegas.[98] In effect, these funds serve as a war chest for states in bidding wars over a particular business looking for a new location, and state agencies often require evidence of competition with other states before dispersing funds from the deal-closing program.[99]

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93. Press Release, Amazon, Amazon Opens Search for Amazon HQ2—a Second Headquarters City in North America (Sept. 7, 2017), https://press.aboutamazon.com/2017/9/amazon-opens-search-for-amazon-hq2-a-second-headquarters-city-in-north-america [https://perma.cc/VA8F-YPW9].

94. PARILLA & LIU, *supra* note 91, at 9.

95. Jack Markell, *Let's Stop Government Giveaways to Corporations*, N.Y. TIMES (Sept. 17, 2017), https://www.nytimes.com/2017/09/21/opinion/incentives-businesses-corporations-giveaways.html [https://perma.cc/S9ZX-25GB] (arguing for a "federal tax of 100 percent on every dollar a business receives in state or local incentives that are directed specifically to that company," thereby ending "payouts that go directly to a company's bottom line and would eliminate the pressure these companies are under to pursue such enticements").

96. Jacob Bundrick & Weici Yuan, *Do Targeted Business Subsidiaries Improve Income and Reduce Poverty? A Synthetic Control Approach*, 33 ECON. DEV. Q. 351, 351 (2019).

97. Norton Francis, *What Do State Economic Development Agencies Do?*, URB. INST. 3 (July 2016), https://www.urban.org/sites/default/files/publication/83141/2000880-What-Do-State-Economic-Development-Agencies-Do.pdf [https://perma.cc/D5YT-HMM7] (noting that as of 2015, 21 states had a deal-closing fund).

98. *Id.*

99. *Id.* (stating that bidding wars can be fierce because the targeted businesses, typically manufacturing firms, "generally provid[ing] jobs with good wages and benefits, invest in building and equipment, and purchase local goods and services." State development agencies thus make "incredible efforts to recruit a single marquee corporation like Boeing or General Electric: one large manufacturer can drive a whole ecosystem of supply chains and economic activity").

While the primary mission of most state development agencies is to market the state to employers,[100] agencies will often employ similar incentive strategies to retain businesses. And, as is the case in marketing efforts generally, it is typically more efficient to retain businesses than to attract new businesses.[101] As part of these efforts, state development agencies will sometimes offer tailored job training programs beyond what may be generally offered by state workforce development agencies. This may include, for example, linking an individual company with a community college to create a pipeline of workers with a particular set of skills or with the state funding the training of certain company employees (either through a grant or a tax credit).[102]

States use development programs for a wide range of economic purposes, including economic catalyzation, physical revitalization, firm retention, or to correct market failures.[103] As an example, Figure 3 lists the Nevada Governor's Office of Economic Development's (GOED) various programs.

100. *Id.* (stating most state development funds are deployed in attracting and retaining businesses).

101. Francis, *supra* note 97, at 4 (citing Timothy J. Bartik, *Incentive Solutions* (Upjohn Inst., Working Paper No. 04-99, 2004)). The general proposition that customer retention is more efficient than customer attraction is well documented, as "acquiring a new customer is anywhere from five to 25 times more expensive than retaining an existing one." Amy Gallo, *The Value of Keeping the Right Customers*, HARV. BUS. REV. (Oct. 29, 2014), https://hbr.org/2014/10/the-value-of-keeping-the-right-customers [https://perma.cc/9XAL-8JNB].

102. Francis, *supra* note 97, at 4.

103. PARILLA & LIU, *supra* note 91.

Figure 3. GOED's Programs[104]

Program Area	**Mandate / Goals**
Workforce Development	Programs that provide skills training and career development frameworks, including the Workforce Innovations for the New Nevada (WINN) program and the Lear and Earn Advanced-Career Pathways (LEAP) Framework
Rural Community and Economic Development	Promoting and facilitating community development throughout rural Nevada
Innovation Based Economic Development	Increasing research capacity; commercialization of research (transformation of research to new products and start-ups); fostering entrepreneurship; increasing access to capital; building up and expanding a technically skilled workforce
International Trade	Assisting Nevada businesses to begin or expand activities in international markets and attracting foreign investment to the state
Procurement Technical Assistance Center (PTAC), Procurement Outreach Program (POP)	Education, marketing, and support for Nevada businesses seeking to sell their services and/or products to the government
Nevada Film Office	Support for film, television, music, video games, and other multimedia projects
Emerging Small Business Program	Assisting small businesses in obtaining work/contracts with state and local government agencies
Southern Nevada Strategic Infrastructure Working Group	Identifying infrastructure projects that will enhance the growth of new industries, support long-term sustainable job growth, and growth across sectors throughout the region

104. *What We Do: Strategic Programs & Incentives for Economic Growth*, NEV. GOVERNOR'S OFF. ECON. DEV., https://goed.nv.gov/programs/ [https://perma.cc/U8WE-Z6AK].

Nevada's efforts are not unique or even unusual. All states operate economic development programs of various kinds.[105] What is notable, however, is how these efforts have evolved over time to include startup and venture capital funding, as described in the following Part.

B. The New Formula: Supporting Economic Development Through State Venture Capital Programs

The economic development programs described above have been in operation for decades.[106] As venture capital has increased in prominence in private markets, states have sought to add VC to their development strategies.[107] More broadly, states provide a variety of services to start-up businesses.[108] Many entrepreneurs may have extensive experience making and selling their product, but they lack the business expertise to produce at scale, manage regulator issues, and obtain the financing needed to support growth. Start-up businesses have uncertain prospects and may be years away from producing the cash flows needed to support high levels of debt financing. Some states (as well as regions and communities) fill these funding gaps by creating dedicated catalyst funds and services such as Ohio's Third Frontier Program, which provides grants and technology validation services to "demonstrate that a technology is commercially viable through activities such as testing and prototyping" with a goal to "license the technologies to companies."[109]

States support entrepreneurship through several different types of support programs, including incubator services, accelerators, and "hybrid" early-stage investment programs.[110] Incubators typically provide support over one to five years of a start-up's life cycle, and they operate as non-profit entities.[111] Incubators are non-competitive, renting space to small firms and providing (minimal, tactical)" mentoring and ad hoc education opportunities.[112] Accelerators, on the other hand, offer support for a shorter period—usually three to six months—and typically select start-ups through a competitive process.[113] Mentoring and educational opportunities are more intense, and the accelerator itself may be a for-profit entity (though some are established as public or non-profit

105. *See* PEW CHARITABLE TRS., *supra* note 87, at 1 ("[G]overnments at all levels have spent hundreds of billions of dollars over the past 40 years on a range of geographically targeted, or 'place-based,' economic development programs . . . .").

106. *Id.*

107. *See* Robert Maxim et al., *How Cities, States, and Tribes Can Boost Entrepreneurship Via the American Rescue Plan*, BROOKINGS INST. (May 19, 2021), https://www.brookings.edu/articles/how-cities-states-and-tribes-can-boost-entrepreneurship-via-the-american-rescue-plan [https://perma.cc/U85J-UYH8] (discussing states, cities, and tribes and their relationship with venture capital).

108. *See* PEW CHARITABLE TRS., *supra* note 87 (discussing various state approaches).

109. Press Release, Ohio Dep't of Dev., Ohio Supporting Technology Startups & Talent (Apr. 19, 2022), https://development.ohio.gov/home/news-and-events/all-news/04192022-third-frontier-startups-talent [https://perma.cc/JYN6-7QWD].

110. Ian Hathaway, *Accelerating Growth: Startup Accelerator Programs in the United States*, BROOKINGS INST. (Feb. 17, 2016), https://www.brookings.edu/research/accelerating-growth-startup-accelerator-programs-in-the-united-states/ [https://perma.cc/LDD3-JSGY].

111. *Id.*

112. *Id.*

113. Alejandro Cremades, *How Startup Accelerators Work*, FORBES (Jan. 10, 2019), https://www.forbes.com/sites/alejandrocremades/2019/01/10/how-startup-accelerators-work/ [https://perma.cc/3WD9-ERP5].

entities).[114] Some programs operate as hybrid entities that provide a mix of accelerator and incubator features, and tend to offer support through a competitive selection process.[115]

The primary focus of this Article is not the broader support services, however, but direct funding programs used by states to support venture capital and start-up businesses. These funding efforts will typically be concentrated at the early stages in a venture's lifecycle where private funding is most likely to be scarce. States will provide support to "address market inefficiencies in a region's 'financing life cycle' or 'capital continuum' for high-growth businesses" through the initial phases of phases of company development, "from pre-revenue to profit generation. In these phases, demand by small businesses for risk capital is likely to exceed the available supply."[116] Rather than filling all of the funding gap themselves, state VC programs will catalyze private investment and co-invest alongside private capital, ideally working to "address identified market imperfections, not to interfere in efficient markets where private capital resources are sufficient to meet demand."[117] The legal status of the funds differs from state to state, but all of them have local economic development as a central goal of the fund.

The oldest state venture capital fund, the Massachusetts Technology Development Corporation (MTDC) dates from 1978, and by the late 1980s, the states of Illinois, New York, Oregon, Wisconsin, and New Hampshire had also developed venture-type funds.[118] Funds were typically organized as "quasi-public," entities, non-profits, or public authorities, governed by a publicly appointed board of directors, and were capitalized with federal grants, state or local appropriations, and occasionally general obligation bond issuances.[119]

By 2008, venture capital funds could be found in most states, with some states having more than one fund and programs operating through one of two structures.[120] First, state programs may involve the creation of a fund through which the state directly invests in a business, as shown below in Figure 4. Sometimes private entities, such as private venture firms, will invest in the government fund or alongside the fund. More than half of the states with venture capital programs engage in direct investment.[121]

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114. Hathaway, *supra* note 110.

115. *Id.*

116. STATE SMALL BUS. CREDIT INITIATIVE, U.S. DEP'T OF THE TREAS., BEST PRACTICES FROM PARTICIPATING STATES: VENTURE CAPITAL PROGRAMS 2 (2014).

117. *Id.*

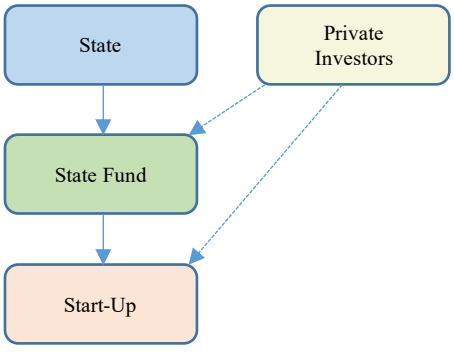
118. Peter S. Fisher, *State Venture Capital Funds as an Economic Development Strategy*, 54 J. AM. PLAN. ASS'N 166, 166 (1988).

119. *Id.*

120. U.S. DEP'T OF THE TREAS., *supra* note 2, at 5.

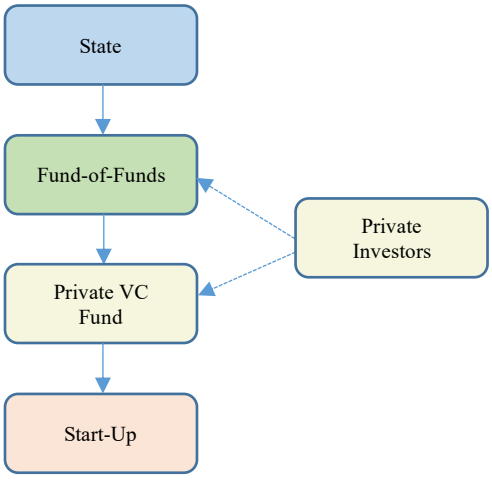
121. ERIC CROMWELL & DAN SCHMISSEUR, INFORMATION AND OBSERVATIONS ON STATE VENTURE CAPITAL PROGRAMS 20 (2013), https://creconline.org/wp-content/uploads/2017/08/VC-Report.pdf [https://perma.cc/2TZT-C986].

Figure 4. State-Run VC Fund



States can also set up a "fund-of-funds," which invests in other, private VC funds that then invest in start-up businesses. The fund-of-funds structure is modeled in Figure 5.

Figure 5. State Venture Fund-of-Funds



Both types of fund structure provide the same ultimate goal: investment in startup firms. However, the operational differences between the two are significant. A fund-of-funds structure will generally have lower operating costs than a state-run VC fund because a fund-of-funds has fewer investment decisions to make.[122] Fund-of-funds managers are deciding only on which of a relatively modest number of VC funds to invest in rather than on the potentially hundreds of start-up firms that may seek investment funds. Similarly, a fund-of-funds will not be engaged in portfolio firm monitoring efforts, as will a state-run firm. The operational expertise required to run a fund-of-funds is thus generally much lower, and the number of employees required to manage the fund's investments is also

122. *Id.*

typically fewer, resulting in lower overall administrative costs.[123] State-run firms, by contrast, must attract top talent to staff capable management teams, conduct business analyses, monitor individual investment performance, and, in some cases, provide direct technical assistance to businesses in which the fund has invested.[124] States can make use of both types of structures. Florida, for example, has a state-run venture capital fund[125] as well as a fund-of-funds.[126]

Aside from these two primary fund structures, states may also simply engage private VC firms to invest public funds; this outsourcing model has been used in Florida, New Hampshire, Rhode Island, and Washington.[127] Similarly, states may also set up co-investment funds in which they invest alongside private investors in investments that meet certain pre-determined criteria. Arkansas, Indiana, Oklahoma, Tennessee, Kansas, and West Virginia all have co-investment programs.[128] States may also set up "Certified Capital Company" (CAPCO) programs. Under the CAPCO model, tax credit incentives were offered to insurance companies to use their investment capital to invest in CAPCOs, which would then invest in venture-stage businesses.[129] The tax credits would equal 100–120% of the amount loaned or invested in a CAPCO.[130]

States will also sometimes attempt to juice private markets by providing tax credits to angel investors. Between 1998 and 2018, 31 states implemented some form of angel investor tax credit.[131] Typical features of such programs include a credit for 25–50% of the amount invested, limitations on the types of investment, and limitations on the total amount of credit that the state can provide under the program during any given year.[132] The programs have been viewed as "an economic development tool for attracting local investment, with hopes that high-tech centers will develop into miniature Silicon Valleys."[133] And the tax credit system has several attractive features, including the avoidance of the government "pick[ing] winners," retention of market incentives that leave investors with "skin in the game," relatively low administrative burdens for state governments and a more precise means of benefitting venture investors than broad capital gains tax cuts.[134]

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123. *Id.*

124. *Id.* at 5–6.

125. *Florida Venture Capital Program*, FL. OPPORTUNITY FUND, https://www.floridaopportunityfund.com/florida-venture-capital-program/ [https://perma.cc/D37F-Y6RV].

126. *Fund of Funds Program*, FL. OPPORTUNITY FUND, https://www.floridaopportunityfund.com/fund-of-funds-program/ [https://perma.cc/24YU-CUBM].

127. CROMWELL & SCHMISSEUR, *supra* note 121, at 21.

128. *Id.*

129. CHIP COOPER, DAVID BARKLEY & MIKE WILLIAMS, UNDERSTANDING CAPCOS 4 (2001).

130. ROBERT G. HEARD & JOHN SIBERT, GROWING NEW BUSINESSES WITH SEED AND VENTURE CAPITAL: STATE EXPERIENCES AND OPTIONS 16 (2000).

131. Matthew R. Denes et al., *Investor Tax Credits and Entrepreneurship: Evidence from U.S. States* 12 (Nat'l Bureau of Econ. Rsch., Working Paper No. 27751, 2020), https://ssrn.com/abstract=3683635 [https://perma.cc/S5FM-KNWL].

132. Norton Francis, *Angel Investor Tax Credits*, TAX POL'Y CTR. (Nov. 24, 2014), https://www.taxpolicycenter.org/publications/angel-investor-tax-credits/full [https://perma.cc/LFD9-3PXM].

133. *Id.*

134. Denes et al., *supra* note 131, at 2.

1. VC Program Examples: Nevada, Florida, New York, and Connecticut

States will often manage multiple venture capital programs. As the following Parts indicate, state venture capital programs typically target areas that states believe are ones in which they would like to (or already have been able to) develop a strategic market advantage.

a. Nevada

In addition to the economic development programs detailed in Part II.A, Nevada also operates several funds that serve economic development purposes. The Nevada Catalyst Fund is designed to "bolster efforts to attract new businesses to the state or assist with the substantial expansion of an existing business through transferable tax credits that are granted to a company with substantial capital investment and fast-paced plans to create high-paying jobs."[135] The Knowledge Fund "was created to further research, innovation and commercialization at Nevada's research universities and institutions."[136] Finally, the Nevada Opportunity Fund (providing loans to small business enterprises, minority-owned businesses, women-owned businesses and disadvantaged businesses).[137] Finally, Nevada also operates a venture capital program, "Battle Born Venture," that makes equity investments in "early stage, high-growth Nevadan enterprises" in certain strategic industries including Aerospace & Defense, Agriculture, Energy, Health Care, IT, Logistics & Operations, Manufacturing, Mining, Tourism & Gaming, and Water.[138]

b. Florida

Florida operates three different venture funds. The Florida Venture Capital Program (FLVCP) directly invests in small businesses within targeted industries sectors.[139] The state reports that as of June 30, 2022, the FLVCP has made 21 investments, with active investments in nine companies.[140] Florida's fund-of-funds program was developed in 2008 to "realize significant long-term capital appreciation by identifying and investing in a diversified, high-quality portfolio of venture capital funds that target (in whole or in part) investment opportunities within Florida."[141] As of June 30, 2022, the program has invested $31 million in nine venture capital funds.[142] Finally, the Clean Energy Investment Program (CEIP) funds energy-efficient and renewable energy products and technologies in Florida.[143] The Florida Energy and Climate Commission funded the CEIP with $36 million

135. NEV. GOVERNOR'S OFF. OF ECON. DEV., BUDGET NO. 1529, NEVADA CATALYST ACCOUNT 26 (2021).

136. *Knowledge Fund*, UNIV. OF NEV. RENO, https://www.unr.edu/research-innovation/about/knowledge-fund [https://perma.cc/WW37-NALA].

137. *Innovation Based Economic Development*, NEV. GOVERNOR'S OFF. OF ECON. DEV., https://goed.nv.gov/programs-incentives/technology-commercialization/ [https://perma.cc/E6QM-WQ9Z].

138. *Battle Born Venture,* NEV. GOVERNOR'S OFF. OF ECON. DEV., https://goed.nv.gov/battle-born-venture/ [https://perma.cc/Y2PV-JY5V].

139. *Florida Venture Capital Program*, *supra* note 125.

140. *Id.*

141. *Fund of Funds Program*, *supra* note 126.

142. *Id.*

143. *Clean Energy Investment Program*, FL. OPPORTUNITY FUND, https://www.floridaopportunityfund.com/clean-energy-investment-program/ [https://perma.cc/7KYH-EG9T].

received by the state through the American Recovery and Reinvestment Act.[144] As of June 30, 2022, the program has invested $32.5 million through nine investments.[145]

c. New York

New York State has created several venture funds over different cycles to catalyze small businesses in the state. Operating out of a division of the Empire State Development Agency, New York Ventures (NYV) manages a $100 million direct investment fund as well as several legacy funds.[146] NYV "partners with diverse teams that are using technology to solve important challenges in areas of strategic interest and importance," seeks to provide "greater access to capital for regions, industries and individuals, including women and minority entrepreneurs," and has a goal of building a "robust startup ecosystem across New York State, leveraging public and private sector assets."[147]

As with many other state development funds, NYV specializes in certain industries, including climate technology, health-related technologies and life science technologies, agricultural-related technology systems, advanced manufacturing, SaaS, data, AI, and "other critical technologies."[148] NYV invests primarily in seed and Series A financing rounds, and NYV typically employs a co-investment approach where it invests alongside a lead strategic investor, but does not serve as a GP.[149]

d. Connecticut

Connecticut is also a leader in using state capital to promote early-stage businesses. The state uses a variety of different funds to provide support for different types of businesses and at different stages of the start-up life cycle.[150] The flagship Eli Whitney fund invests in "emerging and established companies to stimulate their development of high technology products, processes, and services."[151] The BioScience Facilities Fund, meanwhile, supports development of laboratory space in Connecticut in order to "encourage the growth of biotechnology research and development companies," and the Clean Tech Fund supports "the demand for alternative energy technologies, which focus on energy conservation, environmental protection, or the elimination of harmful waster."[152] The Seed Fund, BioSeed Fund, and PreSeed Fund also provide financing for early-stage, high technology business.[153]

The funds are managed by Connecticut Innovations, Incorporated (CI), a quasi-public agency.[154] CI was created to, among other objectives, "stimulate and encourage the

144. *Id.*

145. *Id.*

146. *New York Ventures: Venture Capital Investment in New York State*, EMPIRE STATE DEV., https://esd.ny.gov/venture-capital [https://perma.cc/Z8UC-P63V].

147. *Id.*

148. *Id.*

149. *Id.*

150. STATE OF CONN. AUDITORS OF PUB. ACCTS., AUDITORS' REPORT: CONNECTICUT INNOVATIONS, INCORPORATED AND CTNEXT, LLC FISCAL YEARS ENDED JUNE 30, 2019 AND 2020, at 3 (2022).

151. *Id.*

152. *Id.* at 3–4.

153. *Id.* at 4.

154. *Id.* at 2.

research and development of new technologies, businesses, and products," encourage the transfer and adoption of such technologies, stimulate the development of science parks and incubator facilities, and to "promote science, engineering, mathematics, and other disciplines that are essential to the development and application of technology within Connecticut by the infusion of financial aid for research, invention, and innovation in situations in which such financial aid would not otherwise be reasonably available from commercial or other sources."[155]

C. Federal Government Strategies in Support of State and Local Economic Development

States do not fund all of these programs through their own budgets—they often rely on the federal government for a significant portion of their VC funding budgets. The federal government provides a variety of funding and services to state and local government development.[156] Among other initiatives, the federal government provides support for investments in infrastructure, utilities, regional industry specialization and network development, regional economic diversification, workforce development, and technology- and innovation-based economic development.[157]

The federal government has also established a program that supports state small business catalyzation efforts: the State Small Business Credit Initiative (SSBCI) Program. The SSBCI was established following the Financial Crisis to provide a source of funding for states, the District of Columbia, territories, and tribal governments.[158] Reauthorized and expanded through the American Rescue Plan Act of 2021, the SSBCI is designed to "expand access to capital for small businesses emerging from the pandemic, build ecosystems of opportunity and entrepreneurship, and create high-quality jobs."[159]

The SSBCI provides both funding and technical assistance for recipient jurisdictions. Among other things, SSBCI recipient jurisdictions may use funds for:

- Venture capital programs (set up through "public-private partnerships" that focus on "providing capital to underserved startups and democratizing venture capital across geography and to diverse founders");[160]
- Loan participation programs (where jurisdictions "buy an interest in the loans made by lenders or lend directly alongside private lenders, providing direct lending to finance small businesses");[161]

155. STATE OF CONN. AUDITORS OF PUB. ACCTS., *supra* note 150.

156. One recent accounting identified over 130 separate federal programs that support state and local economic development. Some of these directly support state venture capital efforts. JULIE M. LAWHORN, CONG. RSCH. SERV., R46683, FEDERAL RESOURCES FOR STATE AND LOCAL ECONOMIC DEVELOPMENT 1 (2021).

157. *Id.* at 7.

158. *CDFA Resource Center: SSBCI State Small Business Credit Initiative,* COUNCIL OF DEV. FIN. AGENCIES, https://www.cdfa.net/rc/SSBCI.html [https://perma.cc/5ZDE-NDKC].

159. *Id.*

160. U.S. DEP'T OF THE TREAS., STATE SMALL BUSINESS CREDIT INITIATIVE (SSBCI) PROGRAM FACT SHEET 1 (2021), https://home.treasury.gov/system/files/256/Small-Business-Credit-Initiative-SSBCI-Fact-Sheet-November-2021.pdf [https://perma.cc/QT2N-F2H5].

161. *Id.*

- Loan guarantee programs (providing credit support to small businesses that might not otherwise be able to secure loans);[162]
- Collateral support programs (setting aside funds as collateral to back small businesses' loans);[163] and
- Capital access programs (providing "portfolio insurance in the form of loan loss reserve fund into which the lender and borrower contribute, supplemented with SSBCI funds").[164]

The SSBCI was intended to assist state venture capital by supporting underserved communities and building financing ecosystems. Following the American Rescue Plan Act of 2021, the SSBCI program has allocated $1.5 billion for socially and economically disadvantaged individuals (SEDI)[165] with an additional $1 billion allocated for jurisdictions that "demonstrate robust support for SEDI-owned businesses."[166] The program also seeks to leverage private capital,[167] and recipient jurisdictions must describe in their application "how the SSBCI funding causes and results in new lending and investment, ensuring that the funds are used for small businesses and start-ups that would otherwise lack opportunities for growth-supporting capital."[168] Finally, the program specifically attempts to address "longstanding structural inequities in access to credit and unequal opportunities for growth revealed and exacerbated by the pandemic."[169]

To summarize, federal and state programs work together to support state venture capitalism. Government intervention through venture financing is designed to fill funding gaps, support underserved communities, build up financing ecosystems, address inequities, and help local economies transition by assisting in the development of higher-skill, higher-paying jobs. However, as argued in Part IV, a variety of problems afflict state venture capital and limit its effectiveness including corruption, rent-seeking, misaligned incentives, and geographic constraints.

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162. *Id.*

163. *Id.*

164. *Id.*

165. U.S. DEP'T OF THE TREAS., *supra* note 160, at 2 (explaining that the funds are intended to target "small businesses owned by individuals that have faced barriers to access to the capital, markets, and networks they need to grow their businesses because of certain statuses or membership in certain groups, including membership in a group that has been subjected to racial or ethnic prejudice or cultural bias within American society," as well as small businesses in Community Development Financial Institution Investment Areas, which are "generally low-income, high-poverty geographies that receive insufficient support for the needs of small businesses, including minority-owned businesses").

166. *Id.*

167. *Id.* The SSBCI program is designed to "catalyze $10 of small business lending and investment for every $1 of SSBCI capital program funding, magnifying the effects of the federal funds allocated through the program." *Id.*

168. *Id.* The program is designed to "mobilize[] local sources of capital, such as community banks, CDFIs, Minority Depository Institutions, and investors, to support local small businesses," and "reward[] investments outside of traditional high-access areas and to start-ups that have struggled to receive funding." U.S. DEP'T OF THE TREAS., *supra* note 160, at 2.

169. *Id.* at 3. The recipients "must explain the economic benefits of their programs, such as how they will create well-paying jobs and how they might support American manufacturing, supply chain industries, communities facing transitions to net zero economies or deindustrialization, or how they might further other policy objectives." *Id.*

IV. STATE VENTURE CAPITAL HEADWINDS

State venture capital programs are designed to serve as market gap-fillers and social shock-absorbers and, consequently, can help build and maintain governmental legitimacy. Given their laudatory goals, what's not to like about state venture capital programs?

Unfortunately, a lot. State venture programs face a number of barriers that hamper their effectiveness. This Part provides a counterpoint to the justifications for state venture capital.

A. The Potential for Corruption

State venture capital programs are at risk of corruption as firms may seek benefits from venture capital programs and politically connected fund managers may "acquiesce to such transfers to politically connected companies."[170] Most obvious is the risk that venture funds could incentivize pay-to-play schemes where investment is conditioned on the promise of reciprocal financial support for elected officials. Such schemes have been uncovered in numerous scandals involving public investment funds,[171] and the problem has been serious enough that the SEC has reinforced rules designed to curb the practice.[172]

One particularly high-profile example of corruption risk is found with the Texas Emerging Technology Fund (ETF), a state venture fund set up by then-Texas Governor Rick Perry. Created in 2003, the fund was to be "used for economic development, infrastructure development, community development, job training programs, and business incentives."[173] The fund functioned as both a venture capital fund and a deal-closer fund, providing incentives for businesses "for which a Texas site is competing with another viable out-of-state option."[174] A state audit revealed extensive problems with the administration of the fund, however. For example, during the 2004–2005 fiscal years, the fund did not require companies to submit applications for projects that ultimately received ETF awards. In just those two years, 11 projects received awards totaling $222,281,000; one of the largest awards, $44,000,000 to Sematech, was awarded without an application and without any requirement that Sematech create any direct jobs.[175] ETF award agreements were also inconsistent and lacked definitions on "full-time" employment and provisions enabling the find to disburse funds only after the recipient company's compliance with the agreement.[176]

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170. Josh Lerner, *The Government as Venture Capitalist: The Long-Run Impact of the SBIR Program*, 72 J. BUSINESS 285, 292 (1999).

171. *E.g.*, Steven L. Rattner, Litigation Release No. 21748, 2010 WL 4663181 (Nov. 18, 2010); Final Consent Judgment as to Defendant Steven L. Rattner, SEC v. Rattner, No. 10-cv-8699 (S.D.N.Y. Nov. 23, 2010).

172. Political Contributions by Certain Investment Advisers, 77 Fed. Reg. 28476 (May 15, 2012) (to be codified at 17 C.F.R. pt. 275). These rules cover corrupt activities involving public pensions' investments in private funds (such as hedge funds and private equity funds), however, and so wouldn't reach the small business investments at stake in state venture capital programs.

173. TEX. STATE AUDITOR'S OFF., SAO REP. NO. 15-003, AN AUDIT REPORT ON THE TEXAS ENTERPRISE FUND AT THE OFFICE OF THE GOVERNOR, at i (2014).

174. *Id.*

175. *Id.* at 1.

176. The auditor's report noted that the ETF agreements did not provide a definition of "full-time" employment in 97% of the 110 award agreements reviewed and "did not consistently include provisions in award

The Governor's office, which managed the ETF, did not consistently provide notice of awards to the Lieutenant Governor and the Speaker of the House of Representatives to create an effective verification process to monitor award agreement compliance.[177] Most concerning, however, were media reports that many awards went to donors and friends of Governor Perry.[178] In 2015, the Texas State Legislature passed a bill abolishing the ETF and empowering the Texas Treasury Safekeeping Trust Company to "wind up the portfolio in a manner that, to the extent feasible, provides for the maximum return on the state's investment."[179]

B. The Potential for Rent Seeking

Related to problems of corruption, public venture capital programs are also subject to rent-seeking and "political capture problems, where well-connected individuals end up with the bulk of the benefits."[180] CAPCOs, described in Part II.B, also demonstrate how the very structure of some venture capital programs can incentivize rent-seeking behavior, a phenomenon which describes how market actors will expend resources in an attempt to compete for a government benefit.[181] While the state policy objective may be to encourage co-investment by private firms, the structure of the program created a risk that it would become merely a tool for extracting rents by fund managers and other institutional intermediaries.

Recall that the CAPCO model provided tax credit incentives to insurance companies to use their investment capital to invest in Certified Capital Companies (CAPCOs) which then invest in venture-stage businesses.[182] The CAPCO structure was a great deal for both CAPCO managers and the insurance companies that invested in the CAPCOs because it effectively transferred all investment risks to the state. While investment funds are

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agreements enabling it to disburse funds only after recipients have complied with job-creation requirements." *Id.* 15% of the 115 award agreements reviewed included a provision "to disburse all funds before recipients had complied with job-creation requirements or other requirements." *Id.*

177. TEX. STATE AUDITOR'S OFF., *supra* note 173, at 2.

178. *Perry Donors Have Ties to Companies that Benefit from His Tech Fund*, DALL. MORNING NEWS (Oct. 3, 2010), https://www.dallasnews.com/news/politics/2010/10/03/perry-donors-have-ties-to-companies-that-benefit-from-his-tech-fund [https://perma.cc/H6QY-7FPA]. The Dallas Morning News noted awards to (among others) Terrabon Inc., a company whose backers included Phil Adams, "a college friend of Perry's who has given his campaign at least $314,000," and Convergen Lifesciences Inc., a company founded by David G. Nance, a "former Perry appointee who has given the governor $80,000." *Id.*

179. TEX. GOV'T CODE ANN. § 490.104(b) (2015).

180. Josh Lerner, *Government Incentives for Entrepreneurship* 213 (Nat'l Bureau Econ. Rsch., Working Paper No. 26884, 2020) (citing Ufuk Akcigit, Salomé Baslandze & Francesca Lotti, *Connecting to Power: Political Connections, Innovation, and Firm Dynamics* (Nat'l Bureau Econ. Rsch., Working Paper No. 25136, 2018)).

181. For a seminal discussion of the concept of rent-seeking, see generally Anne O. Krueger, *The Political Economy of the Rent-Seeking Society*, 64 AM. ECON. REV. 291 (1974); see also *Rent-Seeking*, OXFORD ENG. DICTIONARY, https://www.oed.com/dictionary/rent-seeking_n?tab=factsheet#99149428092 [https://perma.cc/ALA6-DH4C] (defining rent-seeking as "the fact or process of seeking to gain larger profits by manipulating public policy or economic conditions, esp. by means of securing beneficial subsidies or tariffs, making a product artificially scarce, etc.").

182. *Supra* Part III.B.

generally structured to carefully tailor risks and incentives,[183] Cooper, Barkley, and Williams point out that, in a standard CAPCO structure, the investing insurance companies bear "no equity risk and only low credit risk."[184] Further, "the CAPCO owners and managers also bear little risk, given the compensation paid to them in relation to the small amount they may invest."[185] The consequence of this structure is that "the insurance companies do not underwrite the investment skill of the CAPCO managers in the way a private investor would, but base their decisions to lend on the quality of the collateral and guarantee."[186] As a result, "[t]he equity risk in the CAPCO structure is borne almost entirely by the state."[187]

Given its incentive and risk structure, the results of the CAPCO program have been unsurprisingly dismal. Audits revealed that most of the funds in the program were not invested in small, venture-stage firms, but instead were invested in "safe, low-risk investments" (as well as generating fees for fund managers).[188] Meanwhile, insurance companies also profited, "getting their money back plus the tax credit and interest."[189]

C. Incentive Mismatches

Ignoring the potentially corrupt uses of state VC programs, venture capital as a form of investment often does not match up well with the interests of government officials. First, it can be difficult to find success with true venture capital. Venture capital investment strategies are based on very large returns on a very small number of investments and little or no return on most investments. Further, VC investments often take years to bear fruit. As one commentator noted:

> For venture-backed startups, things move fast, they break, and chaos reigns. Most companies fail. In a typical well-performing venture fund, 50% of the companies will fail, 40% will break even or return very little, and 10% will carry the entire portfolio. Investment decisions must be made quickly and under a high degree of uncertainty (where, ultimately, failure is the norm). Finally, it can take a decade or more for a startup to generate a return on an investment. These conditions, and the decade-long timeframe, are unthinkable for government

183. *See* John Morley, *The Separation of Funds and Managers: A Theory of Investment Fund Structure and Regulation*, 123 YALE L.J. 1228, 1228 (2014) (positing that "investment funds . . . are distinguished not by the assets they hold, but by their unique organizational structures, which separate investment assets and management assets").

184. Chip Cooper, David Barkley & Mike Williams, *Understanding CAPCOs*10 (Nat'l Ass'n of Seed & Venture Funds ed., 2001), https://www.cdfa.net/cdfa/cdfaweb.nsf/ord/understandingcapcos.html/ [https://perma.cc/F56G-9JGL].

185. *Id.*

186. *Id.*

187. *Id.* (noting that "[t]he state provides the tax credits, and, as a result, sacrifices future tax revenues. The tax credits make the guarantee possible, without which the insurance companies would not lend. Under any comparable scenario, an investor of this type would deserve equity compensation similar to or exceeding that received by the limited partners in a traditional venture fund").

188. NORTON FRANCIS, URB. INST., STATE FINANCING INCENTIVES FOR ECONOMIC DEVELOPMENT 5 (2016), https://www.urban.org/sites/default/files/publication/78201/2000635-state-financing-incentives-for-economic-development.pdf [https://perma.cc/BS2S-G3J5].

189. *Id.* (noting that "fund managers were also winners, mainly through fees, but the states lost the tax revenue and got very little in the way of local investment").

> officials, which is why they need to appreciate this dynamic and protect the program accordingly.[190]

These incentive mismatches may lead government officials to focus on short-term opportunities that show gains within election cycles, as suggested by Bertoni and Quas's study of government-affiliated venture firms.[191]

Government interventions in general have been subject to a traditional criticism that bureaucrats should not "pick winners" in private markets, a notion that expresses a distrust in a government's ability to more reliably select viable business opportunities compared to the wisdom of the market. Some scholars have argued that the notion of picking winners often has a more pointed and literal meaning in the context of government venture capital programs, however, as officials may be tempted to "seek to select firms based on their likely success, and fund them regardless of whether the government funds are needed."[192] By picking sure winners, the officials are able to "claim credit for the firms' ultimate success even if the marginal contribution of the public funds was very low."[193]

The incentives that drive venture capital programs may also be at odds with other important government policies. For example, governments are under pressure to provide (or to be perceived as providing) benefits equitably across the jurisdiction. But this strategy may conflict with a wealth-maximizing investment strategy in which venture funds may be better-spent if concentrated in a few key cities or regions that have a supportive infrastructure already in place.[194]

States may also have program goals that are inherently in conflict with federal programs. For example, the federal government invests in the development of artificial intelligence systems, but these systems may generate process efficiencies that ultimately eliminate jobs held by human beings. A particular state or region may be especially affected by this technological development, and a state program may be developed to provide job training or other kinds of support to assist the now redundant and displaced workers.

Finally, a state venture fund mandate to pursue social goals may come in conflict with portfolio companies' interests. Many, if not most, portfolio companies will be organized as for-profit entities, and will thus generally be under fiduciary obligations to focus on member or stockholder interests.[195] Ultimately, then, government funds and entrepreneur incentives may never be perfectly aligned.

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190. Ian Hathaway, *Some Considerations for Governments Interested in Public Venture Capital Programs*, CTR. FOR AM. ENTREPRENEURSHIP (Jan. 23, 2019), https://startupsusa.org/some-considerations-for-governments-interested-in-public-venture-capital-programs [https://perma.cc/JBE3-HGFG].

191. Fabio Bertoni & Anita Quas, The Electoral Cycle of Government Venture Capital Investments (Nov. 1, 2016) (unpublished manuscript), https://ssrn.com/abstract=2777169 [https://perma.cc/9WJK-VLS8].

192. Josh Lerner & Colin Kegler, *Evaluating the Small Business Innovation Research Program: A Literature Review*, *in* THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM: AN ASSESSMENT OF THE DEPARTMENT OF DEFENSE FAST TRACK INITIATIVE 307, 316 (Charles W. Wessner ed., 2000).

193. *Id.*

194. Hathaway, *supra* note 190 (noting that, although "there will be pressure to spread public funds equitably around the state, a more effective strategy would be to bolster regions where startup activity is already occurring [because] . . . modern, innovation-driven entrepreneurship thrives in dense, urban areas").

195. *See* Leo E. Strine, Jr., *The Dangers of Denial: The Need for a Clear-Eyed Understanding of the Power and Accountability Structure Established by the Delaware General Corporation Law*, 50 WAKE FOREST L. REV. 761, 766 (2015) (describing the fiduciary duties Delaware corporate directors hold to their shareholders); Stephen

D. Poor Performance

As highlighted earlier, venture capital is built to accentuate "wins" rather than "mistakes," as only a handful of portfolio firms will achieve strong returns and most investments will fail.[196] VC firms "bury their dead very quietly" and emphasize successes without discussing their failures.[197] As many as 75% of VC-backed firms will not provide any returns to their investors.[198] A study by Correlation Ventures evaluating the returns of U.S. venture-back firms from 2009–2018 found that 64% of financings did not produce a positive return for their investors, 18% produced 1–3x investment, 6% produced 3–5x, 7% produced 5–10x, 3% produced 10–20x, and less than 2% produced >20x.[199] And it is primarily that small percentage of investments generating greater than 10x returns that drive overall returns for venture capital funds. VC is not a small-ball game where funds are looking to score on singles and doubles;[200] it is a game where funds swing for the fences but strike out most of the time.

Predictably, then, numerous studies across many different state venture programs have come to a simple, reliable conclusion: State venture capital doesn't perform very well. Because state economic development programs generally struggle to produce positive returns,[201] this should not come as a surprise. Most state development efforts are geographically focused and are designed to incentivize investment and job creation in specific regions, cities, or neighborhoods.[202] However, despite "hundreds of billions" of dollars in financing over more than 40 years of such programs (as well as continuing costs of tens of billions of dollars per year), the programs have generally performed poorly, in part, because of poor targeting.[203] Looking specifically at government venture programs, a large study by Federal Reserve economist Kovner and Harvard economist Josh Lerner

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M. Bainbridge, *Why We Should Keep Teaching* Dodge v. Ford Motor Co., 48 J. CORP. L. 77 (2022) (deciding, after considering Professor Stout's classic arguments, that *Dodge* and its shareholder wealth maximization holding remain good law); Robert T. Miller, *Delaware Law Requires Directors to Manage the Corporation for the Benefit of Its Stockholders and the Absurdity of Denying It: Reflections on Professor Bainbridge's* Why We Should Keep Teaching *Dodge v. Ford Motor Co.*, 48 J. CORP. L. DIGIT. 32 (2023) (tracing the history and consequence of the directors' fiduciary duty).

196. Hathaway, *supra* note 190.

197. Deborah Gage, *The Venture Capital Secret: 3 Out of 4 Start-Ups Fail*, WALL ST. J. (Sept. 20, 2012), https://www.wsj.com/articles/SB10000872396390443720204578004980476429190 (on file with the *Journal of Corporation Law*) (quoting Harvard Business School researcher Shikhar Ghosh).

198. *Id.*

199. David Coats, *Venture Capital—No, We're Not Normal*, MEDIUM (Sept. 11, 2019), https://medium.com/correlation-ventures/venture-capital-no-were-not-normal-32a26edea7c7 [https://perma.cc/7EP5-K9J3].

200. As one author has defined it, small ball is "traditionally a baseball term applied to a scoring strategy that involves singles, walks, stolen bases (all easier to create) all coupled together to manufacture a run as opposed to hoping for the big swing for a home run (which are more difficult to make happen)." Chris Heivly, *The Risk of a Small Ball Strategy*, INC. (Dec. 26, 2014), https://www.inc.com/chris-heivly/the-risk-of-a-small-ball-strategy.html [https://perma.cc/XWK3-G43X].

201. *See generally* Dale A. Oesterle, *State and Local Government Subsidies for Business: A Siren's Trap* (Moritz Coll. of L., Working Paper Series No. 148, 2011), https://ssrn.com/abstract=1860285 [https://ssrn.com/abstract=1860285].

202. *How States Can Direct Economic Development to Places and People in Need*, PEW CHARITABLE TRS. (Feb. 2, 2021), https://www.pewtrusts.org/en/research-and-analysis/reports/2021/02/how-states-can-direct-economic-development-to-places-and-people-in-need [https://perma.cc/4EXZ-444X].

203. *Id.*

found generally poor results for such programs.[204] Community development venture capital (CDVC), for example, has a lower success rate than private venture capital firms, even when controlling for the CDVC tendency to invest in less-profitable industries and disadvantageous locations.[205]

State angel investor tax credits also show mixed results. A 2020 study by Denes, Howell, Mezzanotti, Wang, and Xu found that while angel tax credits increased the number of angel investments by 18% and the number of angel investors by 32%, the tax credits seemed to have no effect on the number of high-tech firms created, jobs created, and patents filed.[206] The authors interpreted the results as suggesting that increased investment by angel investors crowds out investment that would have happened in absence of the policy, and the types of businesses funded by angel investors using the program tend to be "low-growth and relatively old, muting potential effects on firm entry and job creation."[207] Further, rather than bring new investors into the market, the tax credit program resulted in investments by insiders, a practice they refer to as "relabeling" since the transaction would have occurred anyway as a typical insider funding transaction, but is labeled as an "angel investment" to take advantage of the tax credit.[208] The tax credit programs also seem to drive an increase in investment by local, inexperienced angel investors, while "professional, arms-length angels are relatively unresponsive to the tax incentive."[209] An influx of inexperienced investors may help explain the poor performance of the programs, as they are likely to have "less access to high-quality deals" and may also have a weaker ability to screen for high-quality deals, so their investments are likely to have limited impacts on firm and overall economic growth. Inexperienced investors may also be investing for non-pecuniary reasons (for example, supporting a family member's business).[210]

The empirical data on government venture programs is not entirely negative, however. The Kovner and Lerner study found a silver lining, for example, in that positive network effects may be created by government investment even when the investments themselves are not necessarily successful.[211] In some cases, government investment may also create a snowball effect as the initial investment catalyzes private investment. In a recent study of the effect of government venture capital financing, Brander, Du, and Hellman find that

204. ANNA KOVNER & JOSH LERNER, STAFF REP. NO. 572, FED. RSRV. BANK OF N.Y., DOING WELL BY DOING GOOD? COMMUNITY DEVELOPMENT VENTURE CAPITAL 12 (2012).

205. *Id.* at 33.

206. Denes et al., *supra* note 13, at 2, 21.

207. *Id.* at 33.

208. *Id.* at 24–25 (noting that insiders may invest for tax arbitrage reasons, "potentially even making 'investments' that are subsequently paid out as dividends"). In their dataset of firms whose investors used the angel tax credit, they identify that 35% of firms that have at least one investor who is an executive or family member of an executive, compared to just 8% of startups in AngelList that have at least one investor who is also employed at the company at which they are investing. *Id.*

209. *Id.* at 27. The study also included a survey of angel investors, and professional investors were especially likely to say that the tax credit had no bearing on their investment decision, with 76% of all investors viewing tax credits as at least slightly important, but 64% of professional investors viewing tax credits as not at all important. *Id.* at 29. Responses to the survey included statements such as: "If the deal is bad a tax credit will not make it good" and "If I believe in the business model/technology then a tax credit is largely irrelevant. Conversely, if I don't believe in the model then the tax credit is also irrelevant." *Id.*

210. *Id.*

211. KOVNER & LERNER, *supra* note 204, at 20–21.

government venture capital tends to increase the total amount of financing available—in other words, it does not necessarily crowd out private financing.[212] The study went on to find that enterprises that receive government venture capital financing also tend to receive more funding in total than enterprises funded purely from private venture capital, and even receive more private financing than firms that receive only private financing.[213]

Another encouraging study of Small Business Innovation Research (SBIR) grants, part of a large federal venture program, found that SBIR awardees "enjoyed substantially greater employment and sales growth."[214] Interestingly, however, the outperformance was confined to locations in which there was already substantial venture capital activity, suggesting that government investment generally performs better in competitive venture capital environments, perhaps, because it is less likely to be the result of rent seeking and corruption in more competitive environments.[215]

E. The Inevitability of Geography

As suggested by the SBIR study, some poor performance may be attributable simply to the fact that venture capital tends to thrive in a strong economic ecosystem and to struggle in weak venture ecosystems, so venture capital programs investing in weak ecosystems have as much hope for success as a tree planted in a desert. A Pew Charitable Trusts review of geographically-focused development programs[216] found that "eligibility for place-based programs often extends to locations with varying degrees of economic hardship, and if businesses and developers can receive the same tax or other incentives for investing in an area that is doing well versus one that is struggling, they usually prefer the former."[217] Areas least in need of help tend to receive it, and areas most in need of help receive little, if any, investment.[218] While the dominance of Silicon Valley is likely to continue,[219] other locations have attempted to develop sustainable venture ecosystems on

212. James A. Brander, Qianqian Du & Thomas Hellmann, *The Effects of Government-Sponsored Venture Capital: International Evidence*, 19 REV. FINANCE 571, 590 (2015).

213. *Id.* at 613.

214. Josh Lerner, *The Government as Venture Capitalist: The Long-Run Impact of the SBIR Program* 6 (Nat'l Bureau of Econ. Rsch., Working Paper No. 5753, 1996), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=225586 [https://perma.cc/T43S-ZTL6].

215. *Id.*

216. PEW CHARITABLE TRS., *supra* note 202. The review included a literature review of "more than 100 studies from research organizations, academics, and governments, including more than 40 produced by states," as well as more than 30 interviews with "national experts, government officials, and researchers." *Id.*

217. *Id.*

218. *Id.* Specifically, Pew found that "[p]oor targeting also reflects two oft-competing pressures that policymakers face: the need to improve economic conditions in distressed areas and the broader imperative to attract businesses to locate and hire statewide. When those aims conflict, statewide economic development usually wins." *Id.*

219. Chris Metinko & Gené Teare, *More Opportunity Than Capital: Venture Dollars Spread Throughout the US*, CRUNCHBASE NEWS (May 20, 2021), https://news.crunchbase.com/venture/fastest-growing-states-venture-capital-investment [https://perma.cc/754Q-MJLY]. As the article notes, it may not be possible to recreate the Bay Area in other jurisdictions, and "[t]here are only five or seven places like it in the world—like London or Hong Kong." *Id.* (quoting Mike Smerklo, managing director of Austin-based Next Coast Ventures). Another fund manager opined: "Those (historically large venture markets) may become less dominant in the next 10 to 20 years than they were in the last 10 to 20 years, but the fall of Silicon Valley is overblown." *Id.* (quoting Steve Case, founder of DC-based Revolution).

a smaller scale. Michigan increased its venture investment from $400 million in 2018 to $3.1 billion in 2020.[220] North Carolina saw growth from $800 million in 2016 to $4.1 billion in 2020.[221] Texas also continues to grow as a VC hub, with an increase from $2.1 billion in 2016 to $4.4 billion in 2020.[222] The State of Washington has seen even stronger growth, from $1.6 billion in 2016 to $4.4 billion in 2020.[223] Some have suggested the creation of fund-of-funds structures to support non-coastal VC. One such idea, a Great Lakes fund-of-funds, would be "private sector-led, and organized by experienced fund managers and investors who appreciate that the main goal is to help investors realize good returns alongside a complementary social impact mission."[224]

All these locations share some common features, including large and strong research universities with talented, entrepreneurial graduates, relatively large populations, and large, successful companies that serve as launching pads for entrepreneurs' new ventures. These factors help create an ecosystem where smaller, "secondary" markets are "now spawning second- and third-generation companies—similar to what Boston and Silicon Valley have done for decades."[225]

Outside of these locations—which already have large populations, large and prestigious research universities, and large, successful incumbent companies—venture capital has not thrived. To be sure, some fund managers have made efforts to move beyond the VC power centers. A 2020 New York Times article suggested, for example, that a "wave of venture capitalists is heading to quieter, less-expensive locales [like Montana, Nebraska, New Mexico, and North Carolina], where they are helping fund start-ups."[226] Yet these small outposts are the exception that proves the rule. Ian Hathaway of the Center for American Entrepreneurship suggested that the Times is "massively overselling the reality," and compiled data showing that assets under management in the Bay Area alone accounted for 55% of all venture capital investment, with New York and Boston combined coming in at 18%, Chicago, Los Angeles, Seattle, and DC combining for 12%, and all other locations in the United States combined for just 15%.[227] And these market shares have

220. *Id.*

221. *Id.*

222. Metinko & Teare, *supra* note 219.

223. *Id.*

224. John C. Austin, *As the Venture Capital Game Gets Bigger, the Midwest Keeps Missing Out*, BROOKINGS INST. (June 6, 2019), https://www.brookings.edu/research/as-the-venture-capital-game-gets-bigger-the-midwest-keeps-missing-out [https://perma.cc/73F9-JAPM]. The fund would start with $150 million to $200 million in capital and would be "pitched as a vehicle for institutional investors to make solid but relatively small bets ($5 to $10 million), among a network of emerging yet effective managers with experience in the region." *Id.* Investors would be drawn from the Great Lakes region's philanthropies, state pension funds, and university endowments. *Id.*

225. Metinko & Teare, *supra* note 219 (arguing that entrepreneurs are "waking up to the idea that a successful company can be started anywhere as tech talent increases and reaches across the country").

226. Craig S. Smith, *Seeking New Businesses and Better Lives, Investors on the Coasts Move Inland*, N.Y. TIMES (June 2, 2020), https://www.nytimes.com/2020/04/15/business/smallbusiness/venture-capital-move-inland.html (on file with the *Journal of Corporation Law*).

227. Ian Hathaway, *The Geographic Concentration of Venture Capital(ists)*, IAN HATHAWAY (Apr. 28, 2020), http://www.ianhathaway.org/blog/2020/4/28/the-geographic-concentration-of-venture-capitalists [https://perma.cc/94SQ-EYRT]. Cities outside of the Bay Area perform better when looking at investor counts and a number of active portfolio companies, with the Bay Area counting 28% percent of investors, New York

concentrated over time. Chen et al. find that the share of VC offices in the United States located in the Bay Area increased from 15% in 1985 to 21.6% in 2005, supporting their view that a virtuous cycle will increasingly strengthen the Bay Area (and to a lesser extent New York and Boston) relative to other areas.[228] Even large urban areas with strong research universities and sophisticated financial, legal, and accounting intermediaries are likely to struggle to compete with coastal venture capital.

F. Lack of Accountability

Because state venture capital funds are often built to mimic private funds—with minimal bureaucracy and nimble investment decision making—they may operate without the normal checks and balances found with state agencies. For example, JobsOhio (an Ohio development fund) is structured so that it can "move at the speed of business."[229] These structures will often take public funds but employ them through private entity structures (or, at least, public entity structures designed to look and operate like private structures). Such structures may provide some insulation from the procurement and spending restrictions that slow the investment decisions of public bodies. But the benefits of efficiency may come at the cost of accountability as the routine checks and balances that protect against corruption and waste are missing or are of limited functionality.

JobsOhio was created to be able to swiftly deploy funds for business development and retention.[230] By creating a quasi-public entity that is largely insulated from scrutiny from other parts of the government, JobsOhio can indeed operate more quickly (but with an accountability trade-off).[231] JobsOhio operates without disclosure or the normal mechanisms of government supervision.[232] For example, when the state auditor attempted to audit the funding of JobsOhio—which is financed through state liquor revenues that would otherwise go to the general budget—the auditor met immediate resistance from the governor and the state legislature.[233] After the accounts were subpoenaed by the auditor, the state legislature passed a bill stating that the liquor revenues were private funds and, thus, not subject to a public audit by state officials.[234] The auditor responded to the legislature, "[w]hile there have been no indications of misdealing, the potential for self-dealing or other mischief exists sometime in the future. This office's audit will help protect against the real possibility of human failings."[235]

JobsOhio's quasi-privatized structure is not unique; many states have set up their funds outside of the normal budgetary and regulatory frameworks that govern state

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and Boston 23%, Chicago, LA, Seattle, and DC 16%, and the rest of the U.S. at 33%. The numbers for the percentage of active portfolio companies are 42%, 21%, 14%, and 22%, respectively. *Id.*

228. Chen et al., *supra* note 5, at 93 tbl.1.

229. William G. Batchelder, *10 Years Later, JobsOhio Continues to Move at the Speed of Business*, JOBSOHIO (Feb. 26, 2021), https://www.jobsohio.com/blog/10-years-later-jobsohio-continues-to-move-at-the-speed-of-business [https://perma.cc/3BNE-7CNL].

230. *Id.*

231. *Id.*

232. *Id.*

233. *Id.*

234. Batchelder, *supra* note 229.

235. Dylan Scott, *The Strange Case of JobsOhio and Public Auditing of Private Firms*, GOVERNING (June 7, 2013), https://www.governing.com/archive/gov-ohio-officials-battle-over-auditing-of-economic-development-money.html [https://perma.cc/EDB8-XDVT].

agencies.[236] The justifications for such structures are not only economic (the ability to reduce some of the bureaucratic frictions that slow government dealmaking), but in theory setting up a fund outside an agency can help provide a layer of insulation from political considerations and help maintain the fund's independence. Independence is often traded off against accountability, however, as is the case with JobsOhio. Operating outside of a traditional agency structure does not guarantee against the possibility of corruption, and governmental actors and fund managers may be linked even where there is not a direct reporting line between them (say, for example, if the fund manager is appointed by the governor instead of through an independent board).

G. Potential Inequities

State investment spending also seems to not only fail to remediate inequities, but it can actually exacerbate them. Patrick examined the effects of government investment on, among other things, rural employment.[237] She found that government subsidies tend to be most effective in urban areas, but that investment actually harms employment in rural areas.[238] She suggests this is the case because capital subsidies have two effects. First, firms that can substitute capital for labor—in a simple example, replacing farm laborers with machines—will adjust their mix of capital and labor in favor of capital.[239] Second, these subsidy-related reductions in total costs "allow relatively capital-intensive firms to outbid relatively labor-intensive firms for land, causing changes in locations' industry mix."[240] In rural areas, this means fewer jobs although potentially greater rewards for a particular entrepreneur. These findings showed that government support of private enterprise has "a significant negative medium-term effect on rural county employment levels and no significant effect otherwise."[241]

Further, as noted above, public subsidies of entrepreneurial efforts are disproportionately captured by well-connected persons. As Lerner notes, this dynamic is especially pernicious given that "the most creative entrepreneurs are often outsiders," and in particular that immigrants are disproportionately engaged in entrepreneurship.[242] Despite the remedial goals of many state venture capital programs—including the desire to channel funding to those who struggle to obtain it through traditional financing networks—state venture programs still risk falling into regressive patterns of capital access where connected entrepreneurs are best able to take advantage of state-subsidized investment.

V. PROSPECTS FOR LEGAL AND POLICY REFORM

As described in the preceding Part, state venture capital faces numerous headwinds that, at best, limit its potential effectiveness. At worst, state venture programs risk inviting

236. Batchelder, *supra* note 228.
237. Carlianne Patrick, *Jobless Capital? The Role of Capital Subsidies*, 60 REG'L SCI. & URB. ECON. 169 (2015).
238. *Id.* at 169.
239. *Id.*
240. *Id.*
241. *Id.*
242. Lerner, *supra* note 180, at 11.

corruption, encouraging rent-seeking, and exacerbating inequities. The following Parts offer several remedies. Some of these remedies are drastic (e.g., eliminating state VC programs), and some are more modest and, consequently, more likely to be implemented (e.g., building better venture ecosystems and improving VC program governance and accountability).

A. Program Elimination

The simplest legal solution for underperforming and potentially corrupt state venture funds is to pass a legislative act to end them, rather than seeking to reform them. Because of the daunting practical challenges acting as headwinds to the successful operation of state venture funds, states may change course by ceasing fund operations or simply cutting off funding over time and allowing the fund to wind up its investments. While such a remedy seems draconian, it is not unheard of; Texas, after all, ended the operation of the VC fund developed during the Perry administration.[243]

More fundamentally, it is not at all clear that citizens would choose to fund development projects like state venture capital programs over other spending initiatives, such as healthcare or educational investments. A noteworthy example of citizen preferences is found in an Alberta, Canada referendum.[244] Citizens were offered the choice on how to spend surplus funds generated through natural resource extraction. Specifically, Albertans were asked how a trust fund, holding the surplus, should be invested.[245] The fund, the Alberta Heritage Savings Trust Fund, was originally established in 1976 with the broad goals of saving for the future, strengthening and diversifying the economy, and improving the quality of life of Albertans.[246] Much of the work undertaken by the fund "covered activities that are conventionally undertaken by the general budget," and the "checks and balances that were set up for these activities were less stringent than those normally applied to the general budget."[247] But assessing the fund's effectiveness in achieving these objectives was difficult, and citizens were apparently skeptical of the broad mandate.

In 1995, the Alberta government surveyed Albertans in a survey titled "Can we interest you in an $11 billion decision?," and survey responses indicated that Albertans preferred to focus less on broad development objectives and, instead, to "keep the Fund for future generations and focus on generating better returns on long-term investments."[248] The fund abandoned its development mandate in 1997, and the mandate was narrowed so

243. *See supra* text accompanying note 178.

244. Halland et al., *supra* note 47, at 12–13.

245. *Id.*

246. *Id.*

247. *Id.* at 12–13 ("[B]y transferring money to a fund with loosely defined objectives, the executive (through the cabinet) determined spending priorities in a very autonomous fashion." While there were "ex-post considerations of these decisions that could have prompted the legislature's refusal to approve further transfers into the fund, these were rather weak and could not easily reverse a spending decision once it had been made").

248. ALBERTA TREAS. BD. & FIN., ALBERTA HERITAGE TRUST FUND: HISTORICAL TIMELINE 2 (2022), https://open.alberta.ca/publications/alberta-heritage-savings-trust-fund-historical-timeline#detailed [https://perma.cc/3NTS-JDKF].

that the fund could no longer be used by the government for "direct economic development or social investment purposes."[249]

However economically rational (and even politically palatable) it might be to end governmental VC programs, the persistent incentive to visibly attempt to remediate inequities and provide for transitional economic growth also remain powerful motivators to implement state VC programs. This is true even if the programs have a limited impact and may only help a few isolated firms. What could states do instead to tackle these challenges? As the next Part argues, states could focus less on trying to plant seeds and more on providing the right environment for organic growth.

B. Developing a Better Small Business Ecosystem

The hard work of developing a financial and economic infrastructure that supports early-stage companies takes time and extended investment. As with strategic investment funds and other national-level initiatives, states can learn lessons from efforts that developed and developing economies have undertaken to grow entrepreneurial ecosystems. The idea that entrepreneurial activity develops best in certain economic, social, and legal environments has led to the development of entrepreneurial ecosystem frameworks for understanding how to best shape government policies.[250] An entrepreneurial ecosystem is made up of "the union of localized cultural outlooks, social networks, investment capital, universities, and active economic policies that create environments supportive of innovation-based ventures."[251] Strong or "munificent" entrepreneurial ecosystems have been characterized as having, among other attributes, strong family businesses and role models, a diversified economy (both in terms of business types and business sizes), a rich infrastructure, availability of skilled workers and resources, a solid financial community, and government incentives to start new businesses.[252] A weak or sparse entrepreneurial environment, by contrast, lacks "an entrepreneurial culture and values, networks, special organizations or activities aimed at new companies,"[253] does not have a tradition of entrepreneurship, lacks innovative industries, suffers from weak infrastructures and capital markets, and offers few (and ineffective) government incentives to start a new business.[254]

In an exhaustive literature review, Spigel identifies three general types of attributes that contribute to a vibrant entrepreneurial ecosystem: cultural attributes, social attributes, and material attributes. Cultural attributes include "cultural attitudes which support and normalize entrepreneurial activities, risk taking, and innovation," as well as local examples of successful entrepreneurs and ventures.[255] Social attributes include the human

249. *Id.*

250. Ben Spigel, *The Relational Organization of Entrepreneurial Ecosystems*, 41 ENTREPRENEURSHIP THEORY & PRAC. 49, 52 (2017).

251. *Id*. at 49. Spigel provides another, similar definition in the paper: "Entrepreneurial ecosystems are combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise supporting high-risk ventures." *Id.* at 50.

252. Paola Dubini, *The Influence of Motivations and Environment on Business Start-Ups: Some Hints for Public Policies*, 4 J. BUS. VENTURING 11, 14 (1989).

253. *Id.*

254. *Id.*

255. Spigel, *supra* note 250, at 56 tbl.1.

connections and talent that are essential to develop and grow an entrepreneurial ecosystem, including skilled workers that want to work at startup firms, investment capital from family, friends, angel investors, and venture capital firms, social networks linking "entrepreneurs, advisors, investors, and workers and that allow the free flow of knowledge and skills,"[256] and mentors and role models who can provide advice for younger or inexperienced entrepreneurs.

Finally, material attributes encompass public goods and services that, of all the different attributes, are most directly impacted by government efforts and policies. Such goods and services include state programs or regulations that provide funding support for entrepreneurship or remove barriers to venture creation, higher education systems that "both train new entrepreneurs and produce new knowledge spillovers," service providers such as incubators, patent lawyers, and accounting firms, physical infrastructure, such as office space, high-capacity information technology systems, and transportation systems, and open markets that provide "sufficient local opportunities to enable venture creation and unimpeded access to global markets."[257] Investment in basic infrastructure systems that support a venture ecosystem can help a state government avoid the rent-seeking, misaligned incentives, and inequities that can result from poorly structured and governed VC programs.

Naturally, entrepreneurs themselves have strong opinions on the qualities of productive entrepreneurial ecosystems. In a large-scale survey of over 1000 entrepreneurs, researchers at the World Economic Forum, Stanford University, Ernst & Young, and Endeavor (an entrepreneur support non-profit) identified three key areas of an ecosystem that are crucial for entrepreneurs: (1) accessible markets, (2) human capital and workforce, and (3) funding and finance.[258] Further, governments are seen by entrepreneurs as both potential growth accelerators and growth inhibitors.[259] The following Parts outline how governments, through policy and investment, can work towards developing strong venture ecosystems.

1. State Policy and Investment Prescriptions

Some countries have challenges in developing strong entrepreneurial ecosystems because of barriers not found in the United States. As a general matter, the United States has a strong culture of entrepreneurship.[260] For example, the United States has a sophisticated system of corporate and securities law that provides ample investor

256. *Id.*

257. *Id.*

258. WORLD ECON. F., ENTREPRENEURIAL ECOSYSTEMS AROUND THE GLOBE AND EARLY-STAGE COMPANY GROWTH DYNAMICS—THE ENTREPRENEUR'S PERSPECTIVE 4 (Jan. 2014), https://www3.weforum.org/docs/WEF_II_EntrepreneurialEcosystemsEarlyStageCompany_Report_2014.pdf [https://perma.cc/ZA35-TJ37].

259. *Id.*

260. *See, e.g.*, Lee Ohanian, *What Makes America Great? Entrepreneurship*, *in* AMERICAN EXCEPTIONALISM IN A NEW ERA 89, 90 (Thomas W. Gilligan, ed., 2017) ("Entrepreneurship is part of America's DNA . . . ."); *but see* SCOTT A. SHANE, THE ILLUSIONS OF ENTREPRENEURSHIP: THE COSTLY MYTHS THAT ENTREPRENEURS, INVESTORS, AND POLICY MAKERS LIVE BY (2008) (arguing that the United States is not exceptionally entrepreneurial and has decreased in entrepreneurial vigor over time).

protections.[261] And, if a particular state's corporate law is not viewed as optimal for the creation of either venture funds or for the small businesses, Delaware's limited partnership and corporate law are available anywhere in the country (or in the world, for that matter) to anyone with an internet connection and a means of payment.

It is not the legal infrastructure—at the level of the corporation or the fund—that presents the most significant barriers to the success of a state venture ecosystem. However, other potential frictions can be reduced or significantly impacted by government policies and investments, including state taxes, higher education support, and technology infrastructure.

a. State Taxes

Tax laws can have a significant (and often negative) impact on innovation and entrepreneurial activity. As Hedlund notes that, although the decision to innovate and become and entrepreneur is driven by a variety of personal factors, "financial incentives play a significant role."[262] For example, a study on how income tax rates affect innovation indicated that a simulated 40% increase in the income tax rate would produce a drop of up to 48% in the number of persons filing patents.[263] A similar study found that changes in personal income taxes directly correlated to a respective increase or decrease to patents and citations.[264] Corporate tax rates also directly affect venture capital activity. Curtis and Decker examine the connection between entrepreneurship and state corporate tax levels, and find that corporate tax increases reduce entrepreneurial activity, and that startups are "more sensitive to these tax changes than incumbent firms."[265] High taxes can also drive entrepreneurs to other jurisdictions with lower tax rates.[266] Supporting venture capital ecosystem thus presents stark choices for state governments: supporting innovation through tax cuts will necessarily reduce the amount of government revenues that could be used to support other government services. However, in the long term, such a policy would support overall economic growth and innovation, as suggested in the research cited above.

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261. For a discussion on the importance of legal protections for investors in developing a strong securities market, see Bernard S. Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 UCLA L. REV. 781, 783 (2001) (arguing that "there are two essential prerequisites for strong public securities markets. A country's laws and related institutions must give minority shareholders: (1) good information about the value of a company's business; and (2) confidence that the company's insiders (its managers and controlling shareholders) won't cheat investors out of most or all of the value of their investment through 'self-dealing' transactions (transactions between a company and its insiders or another firm that the insiders control) or even outright theft").

262. AARON HEDLUND, CTR. FOR GROWTH & OPPORTUNITY, HOW DO TAXES AFFECT ENTREPRENEURSHIP, INNOVATION, AND PRODUCTIVITY? 1 (2019).

263. *Id.* at 2 & n.9 (citing Alexander M. Bell et al., *Do Tax Cuts Produce More Einsteins? The Impacts of Financial Incentives vs. Exposure to Innovation on the Supply of Inventors* (Nat'l Bureau of Econ. Rsch., Working Paper No. 25493, 2019), https://www.nber.org/system/files/working_papers/w25493/w25493.pdf [https://perma.cc/EB4V-CPE6]).

264. Ufuk Akcigit et al., *Taxation and Innovation in the Twentieth Century*, 137 Q.J. ECON. 329, 353 (2021); Abhiroop Mukherjee, Manpreet Singh & Alminas Žaldokas, *Do Corporate Taxes Hinder Innovation?*, 124 J. FIN. ECON. 195, 196 (2017) (finding approximately a 5% change in patenting activity following a tax increase).

265. E. Mark Curtis & Ryan A. Decker, *Entrepreneurship and State Taxation* 28 (Fin. & Econ. Discussion Series, Paper No. 2018-003, 2018), https://doi.org/10.17016/FEDS.2018.003 [https://perma.cc/9NTA-A6S9].

266. HEDLUND, *supra* note 262, at 2 (citing studies finding that "top-tier scientists and inventors actively migrate toward locations with lower taxes").

As Hedlund summarizes, the studies "emphasize the importance of getting tax rates and tax structures right. The costs of getting it wrong include reduced entrepreneurship and innovation and therefore lower long-run growth rates, not just a diminished incentive to work hard."[267]

b. Higher Education

Higher education institutions play a vital role in supporting venture capital, innovation, and entrepreneurship. An extensive literature supports the connection between universities and economic activity.[268] For example, Audrestch, Lehmann, and Hülsbeck find that the innovation activity of young and high-tech firms is shaped by "research intensive universities," and that the existence of research-intensive universities may be more important in shaping startups than overall regional competitiveness.[269]

States can benefit from higher education innovation by both encouraging universities to institute policies and programs that are designed to foster innovation (such as technology transfer offices) and by creating policies and external conditions that support higher education generally.[270] Universities can produce significant "spillover effects" for their regions, including technological spillovers that impact the formation of new businesses.[271] For this reason, universities have been increasingly focused on the former—working to increase technology transfer and innovation[272]—in part because of a decrease in state funding of higher education.[273] By increasing funding to institutions of higher education,

267. *Id.* at 3.

268. *E.g.*, Andrea Bonaccorsi et al., *University Specialization and New Firm Creation Across Industries*, 41 SMALL BUS. ECON. 837, 837 (2013) (finding universities specializing in hard sciences had a positive effect on innovation in the area); David B. Audretsch, Marcel Hülsbeck & Erik E. Lehmann, *Regional Competitiveness, University Spillovers, and Entrepreneurial Activity*, 39 SMALL BUS. ECON. 587, 587 (2012) (finding "strong evidence that regional competitiveness and university spillovers are strong complements in fostering innovation activity of entrepreneurial firms"); Erik E. Lehmann, *The Role of Universities in Local and Regional Competitiveness*, *in* THE OXFORD HANDBOOK OF LOCAL COMPETITIVENESS 211, 230 (David B. Audretsch, Albert N. Link & Mary Lindenstein Walshok eds., 2015) (finding universities, and the human capital that the universities attract, are part of the "fundamental characteristics of contemporary competitive dynamics of regions today"); Christian Sandström et al., *Public Policy for Academic Entrepreneurship Initiatives: A Review and Critical Discussion*, 43 J. TECH. TRANSFER 1232, 1232 (2018) (finding that "academic entrepreneurship initiatives are . . . contextually dependent upon factors such as university strength").

269. Audretsch, Hülsbeck & Lehmann, *supra* note 268, at 588. Regional competitiveness includes "the ability to attract capital, the ability to attract highly-skilled employees and entrepreneurs, and the ability to attract knowledge and innovative activity." *Id*. at 589.

270. Erik E. Lehmann et al., *The Role of Higher Education for the Development of Entrepreneurial Ecosystems*, 10 EUR. J. HIGHER EDUC. 1, 2 (2020).

271. Audretsch, Hülsbeck & Lehmann, *supra* note 268, at 593. Spillover effects are positive externalities accessed by firms, "for which the university is the source of the spillover but not fully compensated." *Id.* at 592 (citing Richard G. Harris, *The Knowledge-Based Economy: Intellectual Origins and New Economic Perspectives*, 3 INT'L J. MGMT. REV. 21 (2001)).

272. *See* Richard S. Katzman & Ricardo Azziz, *Technology Transfer and Commercialization as a Source for New Revenue Generation for Higher Education Institutions and for Local Economies*, *in* INTERNATIONAL EXPERIENCE IN DEVELOPING THE FINANCIAL RESOURCES OF UNIVERSITIES 89, 92 (Abdulrahman Obaid Al-Youbi, Adnan Hamza Mohammad Zahed & Adbullah Atalar eds., 2021).

273. *See* PEW CHARITABLE TRS., TWO DECADES OF CHANGE IN FEDERAL AND STATE HIGHER EDUCATION FUNDING: RECENT TRENDS ACROSS LEVELS OF GOVERNMENT 5 (2019) (showing that state funding for higher

and particularly research-intensive universities, a state is making an investment in an entrepreneurial ecosystem.

c. Technology Infrastructure

Infrastructure that enables technological development has also been found to have a significant impact on the strength of entrepreneurial ecosystems. Although infrastructure is "highly capital intensive," it serves to "reduce barriers to startup in that it facilitates connectivity, interaction and the exchange of knowledge and ideas that potentially could fuel entrepreneurial ventures."[274] Different sorts of startup firms may require different sorts of infrastructure. For example, technology firms may need high speed internet connections while manufacturing start-ups may require standard forms of transportation infrastructure such as railroads, highways, and waterways.[275] Audretsch, Heger, and Veith find that infrastructure supporting the development of new firms is linked to entrepreneurial activities, and that association between infrastructure and startup activity is "specific to both the particular type of infrastructure as well as the particular industry context within which the entrepreneurial decision is being considered."[276] Ajide finds similar results when examining the impact of infrastructure on entrepreneurial activities in 20 African countries during the period of 2006–2018: transportation, electricity, water and sanitation, information and communication technology (including broadband) have a significant, positive effect on entrepreneurial startups in the countries.[277] Survey data also indicates the importance of infrastructure to entrepreneurial ecosystem strength.[278]

In sum, states can provide strong conditions for innovation and entrepreneurship by creating appropriate incentive structures through investor- and entrepreneur-friendly tax laws by investing in higher education institutions (which have been shown to provide positive spillover effects to the regions in which they operate)[279] and investing in the physical infrastructure that supports economic activity and growth. Further, such investments are likely to have broadly positive effects on the quality of life in a state as opposed to the more concentrated benefits that might be achieved through venture capital funding.

However, tax reform, educational expenditures, and infrastructure investment are not sufficient conditions for the development of a strong entrepreneurial ecosystem. Entrepreneurial ecosystems develop through a combination of legal, social, and financial factors; countries (or states) cannot simply adopt certain legal reforms and policy

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education has decreased approximately 31% since 2000, although federal funding has increased over the same period).

274. David B. Audretsch, Diana Heger & Tobias Veith, *Infrastructure and Entrepreneurship*, 44 SMALL BUS. ECON. 219, 221 (2015).

275. *Id.*

276. *Id.* at 226.

277. Folorunsho M. Ajide, *Infrastructure and Entrepreneurship: Evidence from Africa*, 25 J. DEVELOPMENTAL ENTREPRENEURSHIP, no. 3, 2020, at 1, 1.

278. WORLD ECON. F., *supra* note 258, at 77. One respondent, for example, stated that: "Our growth started to speed up in earnest from 1999. The essential factor for this growth was an improvement of the Internet speed. [The data communications technology] ADSL had spread very fast under the government's intentional drive. The government and incumbent carrier focused on Internet business and invested big capital." *Id.* (alteration in original).

279. *Id.*

prescriptions and expect to see immediate results. Instead, these factors should be viewed as necessary conditions that provide fertile soil in which entrepreneurial activity can flourish; conditions may need to develop over time, and laws, policies, and strategies may need to be adjusted to keep pace with technological innovations, changes in the supply and quality of human talent, and changes to the competitive landscape both globally and among the states.

It is not necessary—and, as argued above, probably not desirable—to use public funds to directly support early-stage companies. A successful entrepreneurial ecosystem can develop without state intervention.[280] However, most states already have venture capital funds. Political inertia (if not the forces of rent-seeking and corruption) will likely keep such programs running, even if the economics suggest they should not. The following Part suggests legal structures and potential reforms that help increase the odds that a state venture program will be successful.

C. Establishing Best Practices in State Venture Capital

As described above, although the language of state venture capital suggests that it is used for economic purposes, state venture capital may have functions beyond financial returns, including serving a legitimizing function for state government. Yet this function is also its most fraught, because using a fund as either a deal-closer or early-stage business-supporter often comes with the risk that a government office will operate without the typical constraints impacting the governance and investment decisions of traditional economic development agencies. Such a structure represents a trade-off between a promise of greater results and the peril of fewer checks and balances on the use of public funds. The legitimacy of the fund—and, to some degree, of the sponsoring state office or government generally—relies on the successful operation of the fund. Little wonder, then, that state venture programs are often experts at promoting the successes of the fund, but careful to hide the failures.[281]

Some work has been done on establishing best practices for state venture funds, but much of the work has focused on general principles rather than specific legal reforms and structures. For example, the Treasury Department convened a "Venture Capital Working Group" to consider best practices for state venture funds and has also sponsored reports on best practices for funds. In a report prepared for the Treasury, for example, consultants recommended eight principles for well-designed state VC programs (whether or not the programs are part of the SSBCI program).[282] The principles are:

- Understand the supply of and demand for venture capital;[283]

280. *See id.* at 9 (discussing differences between entrepreneurial ecosystems throughout cultures).

281. CROMWELL & SCHMISSEUR, *supra* note 121, at 24.

282. *Id.* at 30–32.

283. *Id.* at 30. State VC programs should "have a realistic understanding of capital supply and demand unique to a specific geographic region" because "[v]enture investing can vary greatly from state to state and region to region." *Id.* This knowledge should include understanding the number of existing local VC funds, the amounts invested, the number of transactions, funding sources, and funding stages. *Id.*

- Focus on capacity building with an ecosystem approach;[284]
- Create pathways to the next investment round;[285]
- Plan for the long-term and manage expectations;[286]
- Specifically address the potential for conflicts of interest and political influence;[287]
- Attract the most capable leaders to manage resources;[288]
- Measure results accurately with defensible logic;[289] and
- Align state economic development interests with the financial interests of fund managers and limited partner VC fund investors.[290]

Adding to these general governance principles, the following Parts outline specific policies and legal mechanisms that states can employ to help manage state venture capital.

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284. CROMWELL & SCHMISSEUR, *supra* note 121, at 30. State venture programs should not operate as stand-alone initiatives but, rather, should be part of a larger "small business support system" that is aligned with "market-based principles." *Id.* State VC should work with the SSBCI to "support complementary development strategies while building innovation capacity within their state's economy." *Id.*

285. *Id.* State program managers reported to the consultants that that the problem was not in finding market demand for their funding, but in helping start-up beneficiaries in finding the next source of funding in markets "underserved by institutional venture investors." *Id.* Borrowing from the strategies of private VC investors, state VC programs should "continually plan for the next financing event, actively communicating about investment opportunities and expanding professional networks to the benefit of portfolio of companies." CROMWELL & SCHMISSEUR, *supra* note 121, at 30.

286. *Id*. at 30–31. As an advantage over even private investment funds, state VCs can afford to be "patient capital." *Id.* at 30. Venture financing generally is "dynamic and unpredictable," and fund managers should plan for a 6–10-year maturation cycle. *Id.* at 31. They must also manage expectations and help stakeholders understand that "comprehensive returns" include "both financial ROI and economic development calculations." *Id.*

287. CROMWELL & SCHMISSEUR, *supra* note 121, at 31. Noting that "[i]t is not unheard of for a manager of a VC program to receive correspondence from a state official (elected or appointed) about an investable deal that has their interest," and that civic leaders often serve on advisory committees "with responsibilities for vetting opportunities and making investment recommendations," governance mechanisms should address and mitigate potential conflicts of interest through "clearly stated policies and processes" that "govern activities and investment decisions." *Id.*

288. *Id.* Some state programs will attempt to hire experienced managers to build up their in-house capacity, while other state programs have relied on external managers. *Id.* In either case, "successful programs are built on the understanding that success is determined largely by who is involved with managing funds." *Id.*

289. CROMWELL & SCHMISSEUR, *supra* note 121, at 31. Noting that "there are currently no recognized national standards for evaluating the direct and indirect impact of state VC programs," the report recommends that the SSBCI develop "sound, logical methodologies for calculating value." *Id.* State VC programs should also benchmark on investment leverage, job retention/creation, and any direct and indirect economic impacts. *Id.*

290. *Id.* The report expresses skepticism that "'[d]ouble bottom-line' rhetoric" provides adequate assurance that the fund will sufficiently prioritize public interests while maximizing co-investors' personal financial interests; thus, "[s]tate policy leaders should recognize that indirect economic development benefits such as the creation of high-wage jobs and the development of new industries are achieved *indirectly* from profit-motivated investing, not by placing new priorities on professional investors that perform best when singularly focused." CROMWELL & SCHMISSEUR, *supra* note 121, at 32. As a result, they argue, "states can best target economic objectives by influencing the parameters of allowable investments, and then fully participate in the sharing of financial returns so that successful investments create new sources of capital for future investments." *Id.*

1. Managing Agency Costs

As with private funds, the interests of the principal (the state and, by extension, its citizens) and the agent (the fund manager) may not be perfectly aligned, and the manager may act in ways that deviate from the fund's mandate and the interests of the principal. This is particularly challenging in funds that have mixed financial, social, or economic motives. For example, a fund may be created to achieve certain financial objectives, such as a requirement that the fund be self-supporting by generating sufficient profits to pay for its own operations, yet may also be tasked with supporting certain business sectors that have been identified as important for long-term economic reasons.

As an example of such a double-bottom-line mandate, Nevada's Battle Born Growth program was created to "equity and equity-like investments in small high-growth Nevadan for-profit businesses" with its investments confined to companies in aerospace and defense, agriculture, energy, healthcare, IT, logistics and operations, manufacturing, mining, tourism and gaming, and water.[291] The fund sought an economic return on investment and to reinvest those returns into the program for the benefit of Nevadans.[292] The program is designed to maximize profits, but it operates within the constraints of a limited investment scope that pushes investment funds to certain key industries (though the industry categories themselves are fairly broad).

Because state venture funds generally operate with mixed financial, economic, and political motives, state fund governance structures must seek to "optimize the balance between meeting these objectives on the basis of its specific mandate,"[293] providing clarity on how to balance or prioritize the objectives "especially in cases when they may conflict."[294] The state fund's governance system must also provide key performance indicators (KPIs) that allow the state government to monitor the performance of the fund.[295] From a legal perspective, this requires legislation and the corresponding creation of fund organizational documents that create clear mandates for funds as well as reporting structures with appropriate KPIs that allow state officials (and ultimately, taxpayers) to track the performance of the fund.[296]

State venture funds that seek to leverage private capital may also face complications from the different objectives sought by the various "principals" that invest in the fund. Co-investment alongside private firms can help bring discipline to state venture capital investments, but private firms may not share an interest in pursuing mandates; state funds must carefully manage "common agency" costs—principal-agent costs associated with multiple principals with potentially conflicting views seeking to influence and direct a

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291. *Our Mandate*, BATTLE BORN VENTURE, https://www.battlebornventure.com/our-mandate [http://web.archive.org/web/20210121165715/https://www.battlebornventure.com/our-mandate] (noting investments take place across various sectors).

292. *Id.* Since December 2022, Battle Born Ventures has participated in the U.S. Treasury's SSBCI program and has also broadened its mandate. BATTLE BORN VENTURE, ANNUAL REPORT 2022, at 5 (2022), https://battlebornventure.com/wp-content/uploads/2023/01/battleborn_annualreport_final.pdf [https://perma.cc/RF53-TUT3].

293. WBG, *supra* note 44, at 81.

294. *Id.*

295. *Id.* at 267.

296. *Id.* at 57.

common agent.[297] To minimize principal-agent and common agency costs, state funds should develop governance structures that "anticipate and correct for any deviation in rational economic decisions between the principal(s) and manager(s)."[298]

Another form of agency costs arises when government leaders supervising or determining policies with respect to the fund fail to faithfully steward the fund. Such faithless governance may occur because of corrupt motives—for example, when a politician uses a venture fund to reward political cronies, as was alleged to be the case with the Texas Emerging Technology Fund.[299] But more banally, the government may simply face competing priorities and decide to deviate from its mandate to satisfy short-term political objectives. The government may also distort private markets by favoring the fund over constituents' investment vehicles that may be competing with the fund for investments.[300] A strong governance structure can help insulate the fund from political manipulations that might result in the corruption of the fund, deviations from the fund's mandate, or the crowding-out of private capital.[301]

2. Additionality and Investment Selection

A hallmark of good investment selection for public investment funds is the requirement that such investments meet the condition of "additionality." Additionality refers to a "real increase in social value that would not have occurred in the absence of the intervention being appraised."[302] In other words, the government intervention should do something that the private market would not have done itself. Additionality may relate to scale (a greater number of benefits provided), timing (an activity happening earlier than it otherwise might have), a specific group or area (the intervention may have special benefits for a target population), and quality (the output or outcomes may be of higher quality because of the intervention).[303]

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297. *See* B. Douglas Bernheim & Michael D. Whinston, *Common Agency*, 54 ECONOMETRICA 923, 923 (1986) ("Frequently . . . the action chosen by a particular individual (the agent) affects . . . *several* other parties (the principals), whose preferences for the various possible actions typically conflict."); Paul Rose, *Common Agency and the Public Corporation*, 63 VAND. L. REV. 1355, 1362–63 (2010).

298. WBG, *supra* note 44, at 81.

299. Dealbook, *Rival Slams Texas Governor Over Tech Fund Ties*, N.Y. TIMES (Oct. 5, 2010), https://archive.nytimes.com/dealbook.nytimes.com/2010/10/05/in-texas-challenger-slams-gov-over-tech-fund-ties [https://perma.cc/7LCG-L552]. Former Governor Rick Perry's political opponents accused Perry of using the Texas Emerging Technology Fund to reward his donors. (quoting Democratic gubernatorial candidate Bill White, who argued that the fund was "part of a pattern of Rick Perry helping his friends, and his friends helping Rick Perry. . . . Maybe I'm old fashioned, but I happen to believe people who have experience in venture capital will invest venture capital more wisely than people who haven't, especially those in government").

300. WBG, *supra* note 44, at 82.

301. *Id.*

302. HM TREAS., THE GREEN BOOK: CENTRAL GOVERNMENT GUIDANCE ON APPRAISAL AND EVALUATION 126 (2022), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063330/Green_Book_2022.pdf [https://perma.cc/W2HT-KX43] (U.K.).

303. ENGLISH PARTNERSHIPS, ADDITIONALITY GUIDE: A STANDARD APPROACH TO ASSESSING THE IMPACTS OF INTERVENTIONS 6–11 (3d ed., 2008), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/191511/Additionality_Guide_0.pdf [https://perma.cc/E4QM-RFEQ].

State venture capital should apply principles of additionality when considering investment. Government expenditures should, to the extent possible, focus on creating broadly available public goods rather than taking risks on narrower, targeted opportunities. Some opportunities will be catalytic, and states will always have to play the game of competing with other states for large businesses. But states should also try to play to their strengths. It is unlikely there will ever be a successful, solely government-created and sponsored Silicon Appalachia, for example, given the lack of an adequate entrepreneurial ecosystem. Attempting to support big bets in these areas would—in an era of decreasing state expenditures on everything except pension obligations and Medicaid costs—likely rob localities of other legitimizing government services.

Additionality operates on a knife's edge—it disciplines state investment so that it does not compete with private investment, but it also discourages state officials from wasting state funds on valueless investments. Has the market passed on a business investment because of a true market failure, or is the business simply a poor investment? Finding truly worthy investments that are not otherwise able to find financing in the private market is the challenge presented by an additionality analysis.[304]

3. Co-Investment

Investing alongside private firms—provided that, unlike the CAPCO structure, co-investors also face downside risks—can have a powerful disciplining effect on government investment. And indeed, as noted above, some programs try to leverage government VC funding with private capital. To do so, the government fund must effectively sell its investment selection acumen, independence, and accountability to entice other firms to invest alongside it. As a recent study by Bai et al. states, "collaboration with private sector is greater where the rankings of government effectiveness are higher, when the programs target earlier-stage companies, and when the local private venture market is more developed."[305] And, particularly in such cases, government funding programs effectively increase local innovation.[306]

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304. Note also that additionality may sometimes come into tension with other governance mechanisms designed to discipline state venture capital, such as a co-investment program (described *infra* Part V.C.3). Generally speaking, private capital seeks wealth maximization, and the notion of additionality suggests that public capital should not displace private capital. The roles of government and the private sector are thus more clearly defined by the notion of public goods on the one hand, and private profits on the other. However, as governments tend to adopt private structures and methodologies to run VC programs (in part because they can help provide a disciplining function), and as private firms and businesses expand their purposes to include social goals, the line between the public and private sector becomes hazier.

Likewise, the notion of additionality becomes less clear in such cases. Additionality may be made easier in cases when the government is investing purely for social goals and private parties are investing purely out of a profit motive: no wealth-maximizing private party would choose public goods over private profit, so the government is not competing with private parties when it makes such investments. But when private parties seek to invest in public goods—whether explicitly in their articles and in their business structure, as is the case with public benefit corporations, or simply through an expansive view of the business judgment rule, which allows the corporation to take a broad view of wealth maximization over the long term—the range of additionality may be compressed.

305. Jessica Bai et al., *The Dance Between Government and Private Investors: Public Entrepreneurial Finance Around the Globe* 23 (Nat'l Bureau of Econ. Rsch., Working Paper No. 28744, 2022), https://www.nber.org/papers/w28744 [https://perma.cc/4X8L-JDKL].

306. *Id.*

In general, Bai et al. argue, private investors care only about financial returns, while governments consider the externalities generated by the projects.[307] Private and public investors may differ in that "private investors not only finance firms, but can also enhance a startup's probability of success by providing monitoring, advisory, and networking services, therefore increasing the probability of success."[308]

4. Optimizing State Venture Capital Contract Design

The likelihood of success for state venture capital can also be increased by developing the right mix of incentives in the investment agreements between the venture funds and the entrepreneurs. Most government venture financing, however, is offered through suboptimal contractual structures. Lach, Neeman, and Schankerman theorize the optimal design of government loans for research and development-heavy startups using "mechanism design" methods and argue that while most government funding for early-stage projects uses "zero or negative interest rates and high self-financing provisions," an optimal contract will instead require a "high interest rate but (virtually) zero self-financing."[309] Simulating the application of their model, they find that a zero liability policy can generate "significant welfare gains" compared to what is seen through the private markets and typical government interventions, especially when the positive externalities of the project are high and the cost of public funds is low.[310]

Two implications flow from this theory. First, optimal policies should target the middle: "Low-risk projects are likely to be financed by the private market anyway, so government support is redundant. High-risk projects will not be privately funded but, unless they generate very large externalities, the expected social payoff does not justify supporting them."[311] Second, economic policies need to be suited to the political and economic environment of the jurisdiction.[312] In other words, the "size of project externalities, cost of public funds, and effectiveness of the private venture capital market"[313] are all crucial factors in determining the optimal policy for a state venture fund. To add to this analysis, the legitimacy benefits a well-functioning VC program could provide should also factor into the positive externalities of the project.

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307. *Id.* at 7–8.

308. *Id.* at 5–6.

309. Saul Lach, Zvika Neeman & Mark Schankerman, *Government Financing of R&D: A Mechanism Design Approach*, 13 AM. ECON. J.: MICROECONOMICS 238, 266 (2021).

310. *Id.*

311. *Id.*

312. *Id.* The authors also note reasons for the failure to fund the middle:

> A policy of "targeting the middle" is likely to be politically less attractive to governments than targeting the "best" (low risk) projects, as is often done in practice. Being able to show program "successes" may increase prospects for budgetary support. The social cost of redundancy that such a program entails remains hidden. In addition, the public agency responsible for the program may worry about the government's commitment to fund it in the future and hedge this risk by choosing profitable projects if they can retain the proceeds.

Id.

313. Lach, Neeman & Schankerman, *supra* note 309, at 266.

CONCLUSION

State venture capital is not inherently flawed, nor is it a panacea for struggling state economies. Government-supported small business financing holds promise as a transition mechanism for state economies, but it also provides potential channels for corruption and waste.

In practice, state venture capital often suffers from structural flaws that limit its effectiveness and may even encourage corruption and waste. Even assuming that a state venture capital program is adequately managed and has strong governance structures in place, the fund may still not achieve its objectives because the general economic ecosystem in which the fund operates may not be conducive to venture investing and entrepreneurial activity generally. For example, a particular location may lack a legal, financial, or educational infrastructure that supports entrepreneurship. In some cases, states would be better off by investing in social infrastructure that benefits all citizens or, if one prefers, all market participants.

If a case is made that state venture capital has the potential to help a community or state transition to more modern economy, guardrails—including legal structures that help manage agency costs, promote better investment selection methodologies, encourage co-investment, and optimize state VC contract design—can help keep state programs on a path that limits corruption and helps to reduce wasteful investments.