Democratizing Venture Capital: Tax Incentives and the Geographic Expansion of Startup Investing*

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Can tax subsidies expand the geographic reach of startup investing? Despite decades of growth, institutional startup investing remains confined to a handful of coastal hubs, leaving most of the country with little access to the risk-seeking capital that finances high-growth entrepreneurship. We exploit the 2009–2010 enhancement of the Qualified Small Business Stock (QSBS) program — which eliminated federal capital gains taxes on investments in qualifying startups — to study whether tax subsidies can broaden the reach of startup investing. Using investment-level data covering 158 thousand investor–firm pairings, we show that the QSBS enhancement raised the probability that a previously unserved U.S. metropolitan area received venture capital (VC) investment in qualifying sectors by 8 to 10 percentage points. VC investment in ineligible sectors showed no comparable expansion. Within markets already served, investment tilted toward qualifying sectors, most sharply where venture activity had been thinnest. Investment in newly reached markets leaned toward industrial and manufacturing startups relative to the software-heavy mix of established hubs, consistent with local economic structure shaping where capital landed. Entering firms were not systematically lower quality than those in other non-hub markets, trailing established hubs mainly in outlier successes. Drawing on worker-level data, we further show that startups in newly served markets created high-wage jobs, attracted scientific and technical workers — including direct inflows from established hubs — and retained them at higher rates than hub startups, while metros receiving more eligible-sector entry saw faster growth in wages. Our findings suggest that a geographically neutral subsidy can generate a meaningful expansion of VC's geographic reach when it is large enough to overcome the informational frictions and network gaps that concentrate investor funds in established hubs.

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1 Introduction

Venture capital (VC) plays a formidable role in the U.S. economy. Among firms founded in the past five decades, VC-backed companies account for 41% of total market capitalization, 62% of public companies' R&D spending, and over 92% of patent value (Gornall and Strebulaev (2021)). Yet this form of financing is among the most geographically concentrated in America. Nearly two-thirds of formal equity financing for startups flows to a handful of coastal metropolitan areas (San Francisco, San Jose, New York, Boston, Los Angeles, and Seattle), leaving most of the country with little access to risk-seeking capital that funds high-growth entrepreneurship. This concentration reflects self-reinforcing dynamics in which thick networks of investors, entrepreneurs, and service providers lower the cost of deal-making in established hubs while raising barriers to first entry in unfamiliar markets (Saxenian (1994); Sorenson and Stuart (2001)). The result is a persistent geographic divide in access to entrepreneurial finance, with consequences for regional job creation, innovation, and economic dynamism that have attracted growing attention from policymakers (Moretti (2011); Chetty et al. (2014); Kerr and Robert-Nicoud (2020)).

Against this backdrop, we ask whether a tax subsidy that imposes no geographic conditions on eligibility can redirect VC to new markets. Our analysis revolves around the elimination of certain capital gains taxes under the Qualified Small Business Stock (QSBS) program, a major federal initiative providing tax relief to investors in qualifying startups without regard to where those startups are located. A startup in Lincoln, Nebraska, qualifies on the same terms as one in San Francisco, California. This design contrasts with the geographically targeted instruments typically used, with mixed results, to redirect investment toward underserved regions, such as the Opportunity Zone program, which restricts capital gains relief to designated low-income areas (Kline and Moretti (2014); Neumark and Simpson (2015)). Whether investors responded to these incentives by expanding into new and underserved markets, reorienting activity in markets where they were already present, or simply deepening investment in the hubs where VC has always concentrated, is the central question of this paper.

We organize our inquiry around three questions. First, did the expansion of the QSBS tax benefits open new geographical markets to professional equity investors, such as venture capitalists and angel investors[1] — and if so, was that expansion driven by the type of investor the subsidy reaches, by its

[1]VC funds are financial intermediaries. General partners (VC fund managers) raise capital from limited partners (outside investors), such as pension funds and endowments, and invest it in young private companies in exchange for equity,

sector-specific design, or by a broader post-crisis recovery in startup investing? Second, did the reform reshape investing activity in markets that were already partially served, and did the reallocation of capital across tax-eligible and tax-ineligible sectors intensify in the most underserved markets? Third, did the firms entering new and underserved markets generate real economic value? The answer to the last question determines whether QSBS benefits functioned as a catalyst for new entrepreneurial activity in underserved regions or simply as a costly geographic misallocation of tax expenditures.

The QSBS program was created under Section 1202 of the Internal Revenue Code (IRC) in 1993. Designed to stimulate investment in small, capital-intensive businesses, the program provides capital gains tax relief subject to three conditions. The portfolio company must be a domestic C-corporation whose gross assets do not exceed $50 million at the time of stock issuance. Investors must hold the qualifying stock for at least five years. And the company must use at least 80% of its asset value in qualified business activities throughout the holding period. This last requirement is defined by exclusion. The program explicitly disqualifies industries whose principal asset is human capital or reputation, including professional services, financial services, and hospitality, concentrating benefits in technology, manufacturing, pharmaceuticals, and other capital-intensive sectors where financing frictions are most severe.[2] The program operates at both the federal and state levels, with most states conforming to the federal exclusion.

We exploit the 2009 enhancement of the QSBS program as a natural experiment. Before 2009, the program had become nearly irrelevant. As regular capital gains tax rates declined over time, falling to 15% by 2003, the net tax benefit of QSBS qualification had shrunk to just 1% versus the regular capital gains rate. The American Recovery and Reinvestment Act (ARRA) of 2009 revitalized the program by raising the exclusion of qualifying capital gains from taxation to 75%, and the Small Business Jobs Act (SBJA) of 2010 went further, *fully eliminating* federal capital gains taxes on qualifying investments. The result was a sharp, well-defined wedge in after-tax returns between eligible and ineligible sectors. With the federal long-term capital gains rate averaging 22% over the post-reform period, the QSBS subsidy represents a substantial windfall for investors in qualifying startups.

In companion work, we show that this windfall induced VC funds, but not angel investors, to

earning management fees and a share of the fund's gains. Angel investors are individuals who invest their own wealth directly in such companies. VCs and angels differ in whose capital is at risk and how the investor is compensated.

[2]Some of these parameters were recently changed (relaxed) under the One Big Beautiful Bill Act (OBBBA) of 2025.

take greater ex-ante risk in project selection, backing earlier-stage firms and entering industries outside their prior experience domains (Campello and Junqueira 2026). We trace this differential response to organizational structure. Fund managers deploy predominantly outside capital and participate in fund gains through carried interest, making their investment thresholds more responsive to tax subsidies than those of angels investing their own wealth. Notably, the QSBS program did not reduce the costs of entering unfamiliar markets, typically associated with informational frictions and network building (Lerner 1995; Sorenson and Stuart 2001). However, by raising the payoff to success, QSBS increased the attractiveness of areas where entry costs had previously kept VC investing out or scarce. Accordingly, we would expect two outcomes. First, that the reform draws startup investing into new and underserved markets rather than merely deepening investment in established hubs. Second, that this geographic response comes from VC funds rather than other startup investors, such as angel investors.

We analyze these questions by assembling investment-level data from PitchBook covering 158 thousand investor–firm pairings across 35 thousand unique portfolio companies between 2004 and 2022. We classify all 382 U.S. metropolitan areas into four tiers based on their total VC activity in the pre-reform period of 2004–2008. Among the 149 metros with any pre-2009 VC activity, we partition by tertile into *Low Prior VC* (56 metros), *Medium Prior VC* (44 metros), and *Established Hubs* (49 metros). The last tier encompasses areas like San Francisco, New York, Boston, Los Angeles, and Seattle. The remaining 233 metropolitan areas received no VC-backed investment of any kind before 2009 (*No Prior VC*). This classification is constructed once and held fixed throughout, ensuring that tier assignment is not mechanically related to post-reform outcomes. Simple comparisons of pre- and post-reform VC activity show a significant expansion in the geographic reach of venture capital. Before 2009, only 39% of U.S. metropolitan areas had received any VC-backed investment; after the reform, that share rose to 60%. Of the 233 metros with *No Prior VC* activity, 86 received their first VC-backed startup after 2009, meaning more than one in three previously unreached markets entered the VC map for the first time.

To assess whether these patterns reflect a causal effect of the reform, we estimate a two-way fixed effects panel regression. It compares changes in the probability of eligible-sector VC entry in *No Prior VC* metros relative to metros with any prior VC experience, before and after 2009. The key identification challenge is size. Previously unserved metros are smaller than served ones (median populations of 146

versus 560 thousand residents), and entry probabilities scale with metro size.[3] As such, a naive comparison would confound the reform's effect with size-related trends in venture activity. Our specifications therefore compare previously unserved metros to served metros of comparable size. Metropolitan area (CBSA) fixed effects absorb all time-invariant differences across metros. Metro size is held fixed nonparametrically through population-decile×year fixed effects, with deciles computed from year-2000 metropolitan population, measured before the sample begins, and held fixed throughout. Our second specification adds Census division×year fixed effects, absorbing differential regional time trends.[4]

The estimates reveal a striking expansion of VC into previously unserved markets. The probability that a *No Prior VC* metro received eligible-sector VC investment rose by 8 to 10 percentage points following the reform. The effect is stable under population weighting, common-support trimming, five alternative tier classifications, and wild-cluster inference. Angel investors, who receive the identical statutory exclusion, show no comparable expansion. This is consistent with our prediction that the response would come through the VC organizational form, where managers deploy outside capital under carried-interest incentives, rather than from investors risking their own wealth.

A natural concern is that this expansion reflects a broad post-crisis recovery in VC activity — or a secular widening of venture capital's geographic reach — rather than a response to the sector-specific subsidy. The raw data suggest otherwise. Among previously unserved metros, 33% experienced positive growth in eligible-sector VC after 2009, compared to just 11% in ineligible sectors. We address this formally with a placebo test that re-estimates the baseline specification replacing the dependent variable with an indicator for ineligible-sector VC entry. If QSBS is the operative force, VC activity in ineligible sectors would show no corresponding increase as VC fund managers allocate resources across sectors. The estimates confirm this. The coefficients on ineligible-sector VC entry in previously unserved metros are small and statistically insignificant, inconsistent with a general geographic expansion of VC activity.

The sector-specific nature of the subsidy also implies that its effects should be visible within already-active markets, not only at the geographic frontier. If investors respond to the tax wedge by shifting capital from ineligible to eligible sectors, the composition of VC activity in markets with prior VC

[3] The share of CBSA-years with any eligible-sector VC activity rises from about 7% in the bottom decile of the year-2000 metro population distribution to 92% in the top decile; the cross-metro correlation between log population and the entry rate is 0.78.

[4] Standard errors are clustered at the CBSA level to account for serial correlation in VC activity within metros over time.

presence should shift toward eligible sectors after the reform — independently of any extensive-margin effects. The data confirm this prior. The share of VC-backed firms in eligible sectors rose by 13% within CBSAs with any pre-2009 activity (+0.08 relative to a mean of 0.60), identified from within-CBSA variation over time and consistent with the sector-specific reallocation argument being at play across the entire distribution of metro areas. The same force that opened new markets also reoriented existing ones.

We next ask where across the metro distribution this reallocation concentrated, comparing all four tiers against *Established Hubs*. Relative to that baseline, the probability of ineligible-sector entry fell in every underserved tier, by 17 percentage points in *No Prior VC* metros, while among metros with prior activity the intensity of ineligible investment fell by 34% to 45% and the eligible share of capital rose in *Low Prior VC* metros. This is where a sector-specific subsidy should bite. The ineligible deals that fail to keep pace are the marginal ones, in thin markets rather than in the hubs' deep deal flow. A triple-differences design tightens identification further, adding CBSA×year fixed effects that absorb every metro-level shock, so the estimate comes entirely from how the eligible–ineligible gap within a given metro changed after 2009, in previously unserved markets relative to served ones. That gap widens by 11 to 17 percentage points, with flat pre-reform coefficients and the effect emerging after the reform date.

Beyond documenting where capital went, we examine how VCs executed their first investments in new markets. With no local co-investors to share risk, the deals through which they entered *No Prior VC* metros were 11 percentage points less likely to involve a multi-investor syndicate than contemporaneous hub deals. Entrants held concentrated positions without the risk sharing and certification that syndication provides. Broader measures of risk selection show no such difference. Pre-commercial-stage investing and first-round funding did not shift differentially in new markets relative to hubs.

The startups they backed also differed modestly in industry mix. Technology dominates across all tiers, but its share is lower in previously unserved metros (40%) than in established hubs (54%), with the difference taken up by industrial-and-manufacturing and biotech startups. The tilt is consistent with the economic geography of the places being reached, from university towns like Lincoln (NE) to manufacturing cities like Greenville (SC). Formal cross-tier differences in industry shares are mostly statistically indistinguishable, however, with the industrial tilt the one exception. The composition of entry into new markets was broadly similar to eligible-sector activity elsewhere, modestly shaped by local economic structure rather than transplanted from the hubs.

That leaves our third question: did the firms entering new and underserved markets create real economic value? A program that redirects capital into previously unserved areas but seeds only short-lived, low-quality startups would misallocate tax expenditures rather than expand the entrepreneurial economy. We therefore examine the full chain of outcomes: the quality of the entering firms, the scale of the activity they generated, and the jobs, talent, and incomes they brought to their local economies. Portfolio company quality is measured by per-firm lifetime outcomes — failure rates and unicorn attainment from PitchBook, patent grants from the USPTO, and employment from Revelio Labs — compared across metro tiers, separately for pre- and post-2009 cohorts.

On quality, the prior runs in both directions. Markets long bypassed by venture capital may hold good projects that went unfunded for want of local capital, implying stronger entrants (Chen et al. 2010), or may lack the agglomeration economies that sustain firm performance, implying weaker ones (Saxenian 1994). Post-2009 failure rates in *No Prior VC* metros (41%) match *Low* and *Medium Prior VC* metros (40% each) and exceed *Established Hubs* (31%); patent rates (26%) fall within the non-hub range and just below the hubs (29%); employment per firm (15 employees) exceeds both non-hub tiers and trails the hubs (21). Difference-in-differences estimates formalize these comparisons. Relative to *Established Hubs*, the coefficients on *Low* and *Medium Prior VC* metros are statistically indistinguishable from zero across outcomes, except for a marginally significant *positive* patent-rate coefficient for *Low Prior VC* metros. Simply put, QSBS did not push underserved metros toward systematically lower-quality startups, nor did it uncover markets that systematically outperform.

On scale, activity in new markets is admittedly modest. *No Prior VC* metros produced 218 VC-backed startups post-2009, with 57 patent firms (257 patents) and 3,279 workers employed at those startups. *Established Hubs*, by comparison, produced 12,720 firms, 3,632 patent firms (26,856 patents), and 267,432 employees. That gulf is arguably what nascent ecosystems observed over a short window should look like. The value of QSBS as a place-based instrument lies in catalyzing first entry. Lincoln, Nebraska attracted 21 VC-backed startups employing nearly 900 workers — among them Virtual Incision, a surgical-robotics developer spun out of the University of Nebraska. Among *Low Prior VC* metros, Chattanooga, Tennessee grew from a single pre-2009 firm to 15 firms employing over 400 workers, including Bellhop and FreightWaves, both rooted in the city's logistics economy. These early footprints may, in time, compound into self-sustaining entrepreneurial ecosystems.

The ultimate test of value is what these firms did for workers and local economies. Drawing on worker-level data from Revelio Labs, job postings from Lightcast, and county income from the BEA, we find that startups in newly served markets pay wages at parity with hub startups (approximately $111,000 on average), which, given far lower local costs of living, implies a real compensation premium. They employ comparably credentialed scientific and technical talent, drawn from regional universities rather than the coastal elite, and retain workers at markedly higher rates than hub startups. More than a third of their hires moved in from another metro area, including direct inflows from the six coastal hubs, a counterflow to the usual direction of skilled migration. The gains also register beyond the firms themselves. Metros receiving more eligible-sector entry saw significantly faster growth in personal income and wages, with flat pre-reform trends and effects that compound through the 2010s. QSBS thus carried not only capital, but also talent and earnings, into regions long outside the venture economy.

Our results speak to two literatures. The first studies the geography of entrepreneurial finance. VC is among the most spatially concentrated forms of investment (Kerr and Robert-Nicoud 2020; Chen et al. 2010), sustained by information frictions that keep investors close to their local networks (Lerner 1995; Sorenson and Stuart 2001), with persistent consequences for regional economic opportunity (Moretti 2011; Chetty et al. 2014). Place-based policies aimed at redirecting investment toward underserved regions show mixed results (Papke 1993; Neumark and Simpson 2015; Kline and Moretti 2014; Busso et al. 2013). The second studies how taxes shape corporate and startup activity (Lin and Flannery 2013; Zwick and Mahon 2017; Giroud and Rauh 2019; Campello et al. 2025) and venture capital in particular (Kortum and Lerner 2000; Edwards and Todtenhaupt 2020; Dimitrova and Eswar 2023; Abdulrauf et al. 2025). Within this literature, Chen and Farre-Mensa (2026) document that QSBS raised aggregate firm births and patenting, and Denes et al. (2023) find that state angel tax credits raise investment activity without generating real economic effects. We contribute to both literatures by showing that a geographically neutral federal subsidy, one imposing no location requirements, generated a meaningful geographic expansion. It opened markets that had never received a VC-backed startup, reoriented the sectoral composition of already-active markets, and did so without lowering firm quality. The evidence points to the VC organizational structure as the transmission mechanism for these geographic effects.

The remainder of the paper proceeds as follows. Section 2 describes the QSBS program; Section 3 our data, metro classification, and the reform's geographic footprint. Sections 4 and 5 establish

that QSBS caused entry into new markets and trace the reallocation of capital across underserved tiers. Section 6 examines deal structure, industry mix, and firm performance in newly reached markets; Section 7 examines local jobs, wages, and talent flows; and Section 8 concludes.

2 The QSBS Program

The Qualified Small Business Stock (QSBS) program is a federal tax subsidy designed to stimulate investment in small, capital-intensive businesses. Established under Section 1202 of the Internal Revenue Code in 1993, the program provides capital gains tax relief to investors in qualifying startups. Despite its three-decade history, the program's geographic and social consequences have received little attention.

2.1 Eligibility Requirements

QSBS benefits depend on three conditions that must be satisfied simultaneously. First, the portfolio company must be a domestic C-corporation whose gross assets — defined as cash plus the adjusted tax basis of all other property — do not exceed $50 million immediately before *and* immediately after the stock issuance. Once a company's assets exceed this threshold, future stock issuances permanently lose QSBS eligibility, even if assets later fall back below $50 million. Second, the corporation must use at least 80% of its assets (by value) in qualified business activities throughout the investor's holding period. The program explicitly excludes industries where the principal asset is human capital or reputation — including professional services, financial services, and hospitality — concentrating benefits in technology, manufacturing, pharmaceuticals and biotechnology, and other capital-intensive sectors.[5] Third, investors must hold the qualifying stock for at least five years before selling. Gains on shares sold before this threshold receive no preferential treatment; gains on shares sold at or after five years qualify for the full exclusion. This holding requirement creates a sharp notch in the tax schedule that generates the strategic investment behavior documented by Campello and Junqueira (2026).

On the investor side, benefits flow to individual taxpayers. This includes both angel investors — who invest their own capital directly — and the general partners (GPs) of venture capital funds, which are organized as pass-through partnerships for tax purposes, meaning all gains and losses flow to

[5] A complete list of eligible and ineligible sectors appears in the internet appendix of Campello and Junqueira (2026).

partners' individual returns. Corporate investors, including corporate venture capital arms, are subject to corporate income taxes rather than capital gains taxes and therefore cannot access QSBS benefits regardless of their portfolio companies' characteristics.

2.2 The 2009 Reform and Its Fiscal Consequences

The program's economic significance changed dramatically in 2009. Before that year, QSBS benefits had become nearly irrelevant. The program provided a 50% exclusion from capital gains taxes when first enacted in 1993, when the long-term federal rate was 28%. As that rate fell over the following decade, however, the exclusion's value eroded: the included half of a QSBS gain remained taxed at a statutory 28% rate that did not decline with the general rate, so by 2003 — with the regular long-term rate at 15% — a fully qualifying gain faced an effective rate of 14% (half the gain taxed at 28%) against 15% on an otherwise identical non-qualifying gain, a net benefit of one percentage point.[6] The American Recovery and Reinvestment Act of 2009 revitalized the program by raising the exclusion to 75%, cutting the effective rate on qualifying gains to 7% by the same arithmetic. The Small Business Jobs Act of 2010 went further, eliminating federal capital gains taxes on qualifying investments entirely. The Protecting Americans from Tax Hikes Act of 2015 made this full exclusion permanent.[7]

The subsidy is economically large. At the federal level, investors in qualifying startups avoid paying the long-term capital gains tax — averaging 22% over the 2009–2025 period (Tax Foundation (2025)) — on realized gains up to a per-issuer cap of the greater of $10 million or ten times basis. To put this in perspective, an investor who puts $1 million into a qualifying startup that grows to $10 million avoids approximately $2 million in federal taxes relative to an otherwise identical investment in a non-qualifying sector. The aggregate fiscal consequences reflect this magnitude: federal tax expenditures attributable to QSBS grew from $68 million in 2010 to $3.4 billion in 2024 (both in 2024 dollars), with projected cumulative foregone revenues between 2025 and 2034 estimated at $40 billion in real terms (U.S. Department of the Treasury (2026)). By 2021, over 33,000 individual taxpayers claimed QSBS

[6] A portion of the excluded gain was also a preference item under the alternative minimum tax, further eroding the benefit for affected taxpayers; the 2010 reform removed this preference for fully excluded gains.

[7] The One Big Beautiful Bill Act of 2025 further expanded Section 1202 for stock issued after July 4, 2025: a tiered exclusion of 50%/75%/100% at three-, four-, and five-year holding periods, a per-issuer cap raised from $10 to $15 million, and a gross-asset ceiling raised from $50 to $75 million.

exclusions, with the benefit highly concentrated: taxpayers excluding more than $1 million account for roughly 90% of total gains excluded (Abdulrauf et al. (2025)).

2.3 Geographic Variation in QSBS Benefits

The QSBS program operates at both the federal and state levels, and while the federal benefit applies uniformly across the country, the total value of the subsidy varies geographically through state-level tax conformity. Most states conform with the federal exclusion, providing a corresponding state-level capital gains tax exemption for qualifying investments, which adds substantially to the federal benefit — state capital gains tax rates average around 5% nationally, but reach 13.3% in California and 8.97% in New Jersey (though neither state conferred the exclusion as of 2020), and 8.75% in the District of Columbia and 6.95% in New York, which did (Feenberg and Coutts (1993)).[8] In conforming high-tax states, the combined federal and state subsidy can therefore approach or exceed 30 cents on every dollar of gain. However, a handful of states have opted out or adopted conformity only recently. Pennsylvania, Mississippi, and Alabama have consistently declined to provide state-level QSBS benefits. California eliminated its conformity in 2013 following a court ruling citing constitutional issues. Utah adopted conformity in 2016, Massachusetts in 2022, and New Jersey in 2025. For investors domiciled in non-conforming states, the effective subsidy is lower, as federal benefits remain available but state-level capital gains taxes apply in full.

Despite this state-level heterogeneity, two features of the program preserve a meaningful degree of geographic uniformity in investment incentives. First, the federal exclusion is the dominant component of the total subsidy in most states, given that federal capital gains tax rates substantially exceed state rates across the country. Second, and more importantly for our purposes, while state-level taxes are determined by where the *investor* is domiciled, QSBS eligibility is determined by the characteristics of the *portfolio company*. This means that the program creates no inherent bias toward startups in locations where investors are concentrated — a startup in an underserved market qualifies on the same terms as one in an established hub. Whether investors responded to these incentives by expanding beyond established hubs — or simply deepened investment where they already operated — is an empirical question.

[8] Campello and Junqueira (2026) exploit this cross-state variation to show that QSBS-induced VC risk-taking is more pronounced in high capital gains tax states, where the total value of the tax subsidy is largest.

3 Data and Metro Classification

3.1 Data Sources and Sample Construction

Our primary data source is PitchBook, a commercial database that records the near-universe of VC-backed companies in the United States, including investor identities, deal dates, deal sizes, and company characteristics such as industry classification, founding date, and location. We construct our sample to be consistent with QSBS eligibility requirements. First, we restrict to U.S.-based firms. Second, we exclude firms designated as Limited Liability Partnerships or Limited Partnerships, as only C-corporations can issue qualifying stock under the program. Third, we exclude investor–firm pairs where the investment amount exceeds $50 million in the startup's first operating year or the investor's entry year, consistent with the program's gross asset threshold. We then classify firms into eligible and ineligible sectors based on the Internal Revenue Code's Section 1202 criteria. We track investor–firm pairs from investment entry through exit or up to a ten-year holding period over 2004–2022, focusing on entries through 2017 so that all investments can be observed long enough to determine whether they reach the five-year QSBS holding requirement. The final sample covers 158 thousand investor–firm pairings across 35 thousand unique portfolio companies and 39 thousand unique investors.

We supplement PitchBook with five additional data sources. Patent data come from the USPTO, which we match to PitchBook portfolio companies using exact and fuzzy name matching with geographic validation.[9] Employment and worker data come from Revelio Labs, which constructs workforce counts, position histories, and worker characteristics from publicly available professional profile data; for each position, Revelio also provides a modeled annual salary — an annualized, full-time rate of pay predicted from the position's occupation, seniority, employer, industry, and location, calibrated to observed pay data — which underlies the compensation comparisons in Section 7. We link Revelio Labs records to PitchBook companies sequentially on LinkedIn profile URLs, website domains, and fuzzy company names.[10] Labor demand is measured with online job postings from Lightcast, matched to portfolio companies at the firm level. Metro-level personal income and wage-and-salary disbursements

[9] We implement a two-stage procedure: exact matching on standardized company names (including legal names, trade names, and former names), followed by fuzzy matching using token-sort similarity with state-level blocking. Matches are validated using geographic proximity and founding-year plausibility, retaining only high-confidence matches (score ≥ 95).

[10] We retain the highest-similarity match, with ties broken by validating on country, state, and founding year.

come from the Bureau of Economic Analysis county accounts, aggregated to CBSAs. Geographic crosswalks linking portfolio company ZIP codes to Core Based Statistical Areas (CBSAs) are sourced from the Missouri Census Data Center's GEOCORR database.

3.2 Metro Area Classification

A metropolitan area (Core Based Statistical Area; CBSA) is the unit of geographic analysis throughout this paper. We assign each portfolio company to a CBSA based on its ZIP code at the time of first investment, using the GEOCORR crosswalk.[11] For companies appearing in multiple CBSAs across investor–firm pairings, we retain the canonical CBSA from the first observation.

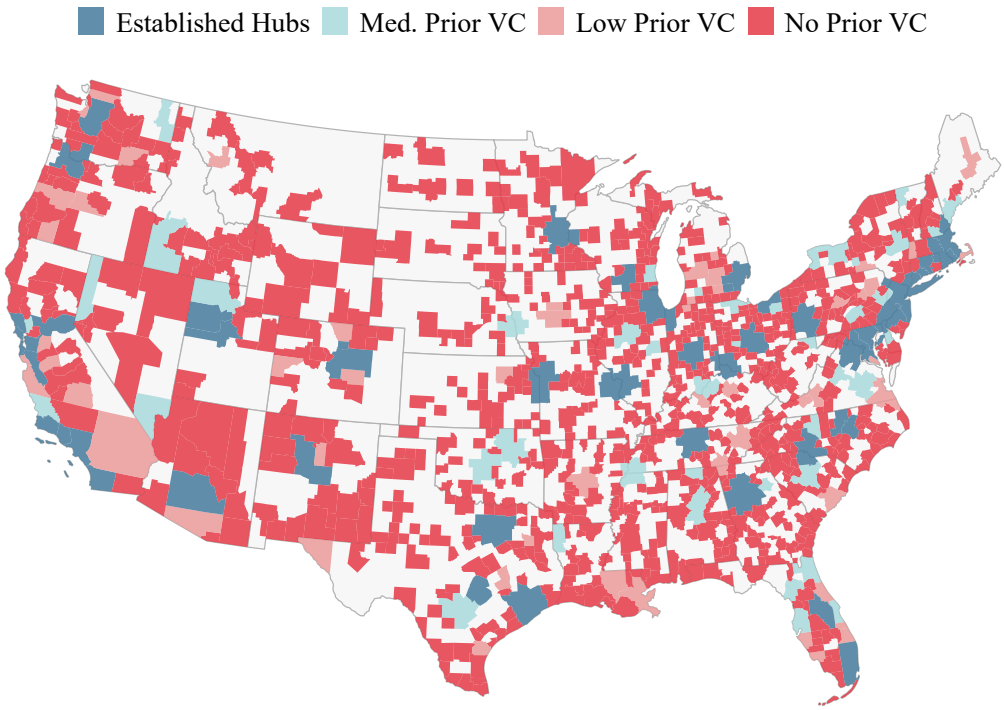
We classify CBSAs into four tiers based on their total VC-backed startup activity — eligible and ineligible sectors combined — during the pre-reform period of 2004–2008. This classification is constructed once and held fixed throughout, ensuring that tier assignment is not mechanically related to outcomes in either eligible or ineligible sectors. CBSAs with zero VC activity of any kind during 2004–2008 form the *No Prior VC* tier. All such metros are retained regardless of their post-2009 activity, so that the treated group is defined purely by the pre-reform period and is not selected on the outcome. Because previously unserved metros are far smaller in population than served ones (median populations of 146 thousand and 560 thousand residents, respectively), our baseline specifications absorb metro size nonparametrically through population-decile×year fixed effects, with deciles computed from year-2000 metropolitan population — measured before the sample begins — and held fixed, so that identification compares previously unserved metros to served metros of comparable size.[12] Among CBSAs with any pre-2009 activity, we partition by tertile of total pre-2009 VC-backed startup counts into *Low Prior VC* (bottom tertile; 56 metros), *Medium Prior VC* (middle tertile; 44 metros), and *Established Hubs* (top tertile; 49 metros). As shown below, our results are robust to several alternative tier classifications, including top-N VC hubs, as well as different quantile cuts; Table IA2 collects the *No Prior VC* coefficient across all of these classifications under both the common-support and population-weighted samples.

Figure 1 illustrates the geographic distribution of pre-2009 VC activity across the United States. The contrast across tiers is stark. *Established Hubs* — including San Francisco, New York, Boston, Los

[11] Company locations are the headquarters recorded by PitchBook.

[12] Table IA1 tests whether results are robust to population weighting and to restricting the sample to common support.

Figure 1: VC Activity by (Pre-2009) Metro Tier: Geographic Distribution



This figure displays U.S. Core Based Statistical Areas (CBSAs) classified into four tiers based on pre-2009 total VC activity. *Established Hubs* (dark blue) are CBSAs in the top tertile of pre-2009 VC-backed startup counts. *Medium Prior VC* (light blue) and *Low Prior VC* (light red) are the middle and bottom tertiles of CBSAs with any pre-2009 VC activity. *No Prior VC* (red) are CBSAs with zero VC-backed startups before 2009. Areas outside the 382 metropolitan CBSAs in the analysis universe are unshaded. Metro boundaries from the U.S. Census Bureau. VC investors only. Data from PitchBook.

Angeles, Seattle, and Austin — cluster along the coasts and in a handful of interior cities, and account for the vast majority of pre-2009 deal activity. *Medium Prior VC* metros include mid-sized cities with nascent but non-trivial VC ecosystems: Tampa, Las Vegas, San Antonio, Memphis, Rochester (NY), and Milwaukee, among others. *Low Prior VC* metros had only a handful of pre-2009 deals — places like Santa Cruz, Chattanooga, Charleston (SC), Tucson, and Grand Rapids. Finally, the *No Prior VC* tier covers a vast swath of the American interior: mid-sized university towns such as Lincoln (NE), Lafayette (IN), Iowa City, and Corvallis (OR); regional manufacturing centers such as Greensboro (NC), Fort Wayne (IN), and Green Bay (WI); and Sun Belt metros such as Fresno and Naples. The breadth of this last tier underscores the extent to which venture capital was geographically concentrated prior to the reform, and the correspondingly large universe of markets that the QSBS expansion could, in principle, reach.

3.3 Outcome Variables

We construct two main sets of outcome variables, both built from firm-level data with each firm assigned once to its canonical CBSA and entry year. The first set measures *investment activity*: the count of unique VC-backed firms entering each CBSA in a given year in QSBS-eligible sectors, which we aggregate to the CBSA–tier–period level for descriptive analysis and to the CBSA–year level for regression analysis. We also construct extensive-margin indicators: $\mathbb{1}\{\text{Any Eligible VC}\}_{ct}$ and $\mathbb{1}\{\text{Any Ineligible VC}\}_{ct}$, equal to one if CBSA c received at least one VC-backed startup in the respective sector in year t — as well as the fraction of VC-backed firms in eligible sectors and total capital raised, the latter reported in millions of USD and available only for deals with non-missing deal size in PitchBook.

The second set measures *firm-level lifetime outcomes*. *Failure* equals one if the firm is ever recorded as out of business in PitchBook or goes five or more consecutive years without raising new funding.[13] *Unicorn status* equals one if the firm is ever flagged by PitchBook as having achieved a valuation of $1 billion or more. *Patent firms* equals one if the firm ever receives a USPTO patent grant; *patents* counts cumulative USPTO grants across all years. *Employment* is the firm's mean annual headcount across all non-missing years in Revelio Labs. All binary indicators and patent counts are computed as the maximum or sum across all years in which the firm appears in the data; employment is averaged across non-missing years rather than summed, to avoid conflating firm size with data coverage.

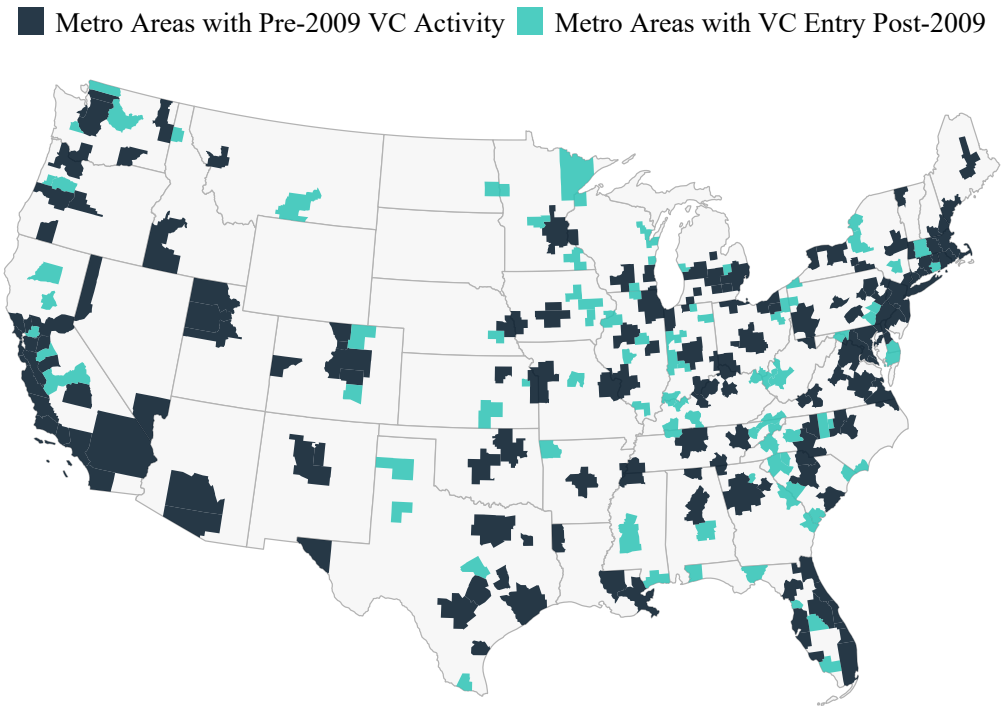
3.4 The Geographic Footprint of the Reform

VC activity in the U.S. has long been geographically concentrated (Chen et al. (2010)). Before the 2009 QSBS expansion, 149 of the 382 metropolitan areas — just 39% — had received any VC-backed investment, and nearly two-thirds of eligible-sector activity was clustered in San Francisco, San Jose, New York, Boston, Los Angeles, and Seattle. After the reform, the share of metros with VC activity rose to 60%: of the 233 metros with no prior VC activity of any kind, 86 received their first VC-backed startup.[14]

[13] Successful startups typically raise new investment rounds every 12 to 18 months (Gompers (1995)).

[14] Figure IA1 reports the counts by tier. Nearly all previously active metros remained active after 2009 — 50 of the 56 *Low Prior VC* metros, 43 of the 44 *Medium Prior VC* metros, and all 49 *Established Hubs* — so the extensive-margin gain came entirely from markets receiving their first VC-backed startup. The comparison is conservative with respect to window length: restricting the post-reform window to the same five-year length as the pre-period (2009–2013), 48% of metros (184 of 382) had VC activity — against 39% in 2004–2008 — and 52 of the 86 first-time entrants had already entered.

Figure 2: Geographic Expansion of VC Activity: New vs. Established Metro Areas

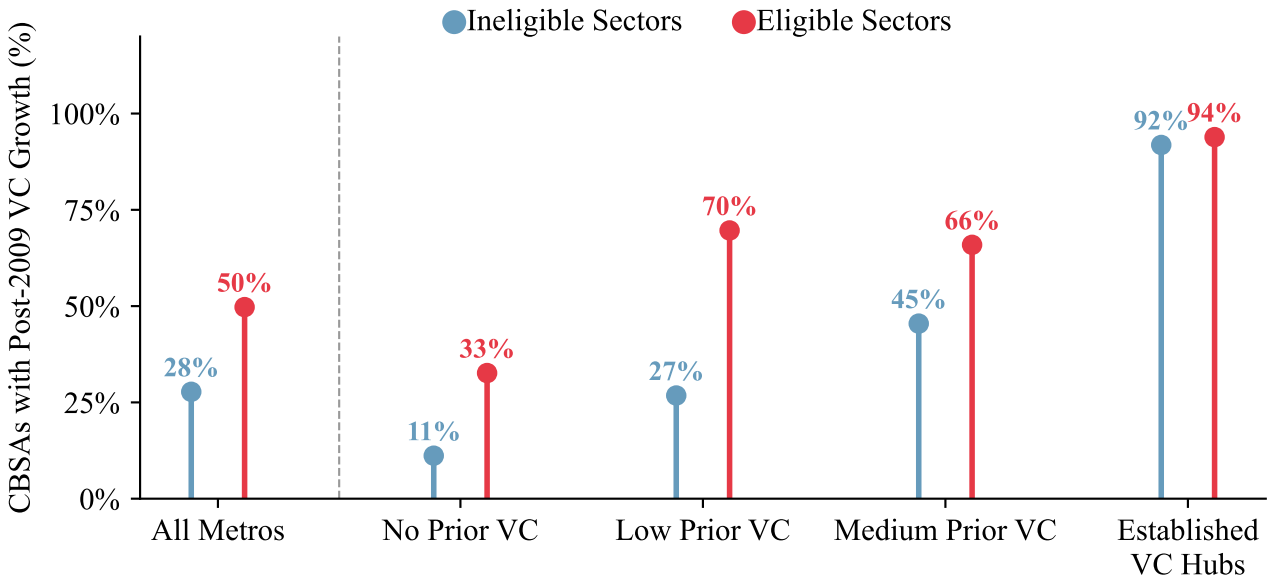


This figure displays U.S. Core Based Statistical Areas (CBSAs) classified by their pre-2009 total VC activity. *Metro Areas with Pre-2009 VC Activity* (dark green) are CBSAs that received at least one VC-backed startup between 2004 and 2008. *Metro Areas with VC Entry Post-2009* (teal) are CBSAs with zero VC activity before 2009 that received at least one VC-backed startup after 2009. Metro boundaries from the U.S. Census Bureau. VC investors only. Data from PitchBook.

Figure 2 maps this expansion. Post-2009 entry is distributed broadly across the interior of the country — the Midwest, Mountain West, and South — and the new markets are not satellite metros adjacent to existing hubs but mid-sized university towns and regional centers with no prior foothold in the VC ecosystem, including Lincoln (NE), Fayetteville (AR), Syracuse (NY), Iowa City, and Greenville (SC).

The expansion was driven specifically by QSBS-eligible investment. Figure 3 shows the share of metros in each tier with positive post-2009 VC growth, separately for eligible and ineligible sectors. Among *No Prior VC* metros, 33% experienced positive growth in eligible-sector VC after 2009, against just 11% in ineligible sectors — a 22 percentage point gap that narrows systematically as prior VC intensity increases and reaches near parity for *Established Hubs* (94% versus 92%). The gap is largest in the most underserved markets and vanishes in the hubs, where both sectors were already active — a pattern difficult to reconcile with a general post-2009 expansion of VC activity. Eligible-sector capital

Figure 3: Share of Metro Areas with Post-2009 VC Growth, by Sector Eligibility and Metro Tier



This figure shows the share of CBSAs within each metro tier with positive post-2009 VC growth, separately for QSBS-eligible and ineligible sectors. Growth is defined as a higher average annual VC-backed firm count in 2009–2017 than in 2004–2008; the denominator is all U.S. metropolitan CBSAs, including those with no VC activity in either period. Tiers are defined by pre-2009 total VC-backed startup counts. VC investors only. Data from PitchBook.

reached underserved markets that ineligible capital largely bypassed, while *Established Hubs* expanded in both sectors (Table IA3).

4 Did QSBS Open New Markets for Startup Investing?

The descriptive patterns in Section 3.4 suggest that the 2009 QSBS expansion shifted investment toward previously unserved metropolitan areas, and that the shift was driven by eligible-sector investment rather than a broad post-crisis recovery in VC activity. This is where the subsidy should bite. The QSBS exclusion is a windfall on every eligible deal; in established hubs, where deals were viable all along, it deepens activity without changing which markets are served. The deals it can tip are those that entry costs had kept out of reach, in markets where venture capital had penetrated least. This section asks whether those patterns reflect a causal effect of the reform.

4.1 Difference-in-Differences Evidence

We use a balanced CBSA-year panel covering all 382 U.S. metropolitan areas over 2004–2017 for VC investors only, with investment outcomes tracked through 2022. Our primary outcome is $\mathbb{1}\{\text{Any Eligible VC}\}_{ct}$, an indicator equal to one if CBSA c received at least one VC-backed startup in a QSBS-eligible sector in year t. Our baseline specification estimates:

$$\mathbb{1}\{\text{Any Eligible VC}\}_{ct} = \alpha_c + \gamma_{d(c),t} + \beta \cdot [\mathbb{1}\{\text{No Prior VC}\}_c \times \mathbb{1}\{\text{Post}\}_t] + \varepsilon_{ct}, \tag{1}$$

where α_c are CBSA fixed effects that absorb all time-invariant differences across metros — such as local industrial structure, proximity to universities, and population density — that might independently predict VC activity, and $\gamma_{d(c),t}$ are population-decile×year fixed effects, with $d(c)$ denoting metro c's decile of year-2000 metropolitan population — measured before the sample begins — assigned once and held fixed throughout. Because previously unserved metros are far smaller in population than served ones, these fixed effects are central to identification: they compare previously unserved metros to served metros of comparable size in the same year. Our second specification adds Census-division×year fixed effects, absorbing differential time trends across the nine Census divisions. $\mathbb{1}\{\text{No Prior VC}\}_c$ equals one for CBSAs with zero total VC activity — eligible and ineligible combined — during 2004–2008, and the coefficient β captures the differential change in the probability of receiving any eligible-sector VC investment in *No Prior VC* metros after 2009, relative to metros with any prior VC experience. $\mathbb{1}\{\text{Post}\}_t$ equals one for years 2009 and later; its main effect is absorbed by $\gamma_{d(c),t}$, just as α_c absorbs the time-invariant $\mathbb{1}\{\text{No Prior VC}\}_c$ term, which is why only the interaction appears in Equation (1). We include 2009 in the post-reform period because the ARRA was enacted in February of that year and the tax expenditure data show an immediate jump in QSBS uptake following enactment (U.S. Department of the Treasury (2026)).

4.1.1 Venture Capitalists vs. Angel Investors

Table 1 presents results separately for VCs and angel investors. Columns (1) and (2) show that the 2009 QSBS expansion increased the probability that a previously unserved metro received eligible-sector VC investment by 8 to 10 percentage points on the full universe of 382 metropolitan areas — +0.078

under the population-decile specification and +0.096 with Census-division×year fixed effects added. The effect is stable across the full battery of size-robustness specifications in Table IA1.

PLACE TABLE 1 ABOUT HERE

Columns (3) and (4) show that the same reform had no effect on angel investor entry into new markets: under the symmetric construction that defines previously unserved metros by their own prior angel activity, the coefficient is small and statistically indistinguishable from zero. This contrast is informative for two reasons. First, angel investors receive the same statutory QSBS benefits as VC general partners, so the null result for angels is difficult to reconcile with explanations based on contemporaneous shocks that broadly affected all startup investors after 2009 — a post-crisis recovery in risk appetite, declining interest rates, or secular growth in startup formation should have moved angels and VCs alike. Second, the contrast is consistent with the VC organizational structure being the operative mechanism. As Campello and Junqueira (2026) show, VC funds combine outside capital provided by limited partners with incentive-based carried-interest compensation for general partners. This creates convex, option-like payoffs that amplify responses to capital gains tax subsidies. Angel investors, who invest their own capital and bear full downside risk, lack this convexity, so their investment thresholds respond proportionally to the same tax change. The geographic result thus mirrors the risk-taking result in the companion paper: the same subsidy, flowing through the same statutory channel, generates fundamentally different behavioral responses depending on whether the recipient deploys outside capital under convex incentive contracts.

4.1.2 A Placebo Test: Ineligible-Sector VC

A natural concern is that the extensive-margin entry documented above reflects forces unrelated to the subsidy — a broad post-crisis resurgence of VC activity, or a secular widening of venture capital's geographic reach that would have carried investment into smaller markets regardless of the reform. Both alternatives, however, operate at the level of markets rather than tax-code sections. Table 2 addresses them directly by replacing the dependent variable with $\mathbb{1}\{\text{Any Ineligible VC}\}_{ct}$ and re-estimating the baseline specification from Equation (1). A recovery or diffusion process strong enough to open new

markets would raise ineligible-sector entry in tandem with eligible-sector entry. If QSBS is the operative force, ineligible-sector entry should show no corresponding increase, or even a decline as capital is reallocated away from non-qualifying investments.

PLACE TABLE 2 ABOUT HERE

The estimates confirm the latter: the coefficient on the interaction term is small and statistically insignificant under both specifications (+0.027 and +0.024 relative to a mean of 0.110), so previously unserved metros saw no differential expansion of *ineligible*-sector VC even as eligible-sector entry rose sharply. This null is a statement about the level of ineligible activity in underserved metros — it stayed flat — measured against served metros of comparable size. Against a different benchmark, *Established Hubs*, the same flat trajectory appears as a relative decline, because the post-2009 resurgence lifted both sectors in the hubs; that comparison is identified separately in Table 5 and discussed in Section 5.2. Nor can the pattern reflect size or region alone: any secular tendency of venture capital to spread down the metro-size distribution is absorbed by the population-decile×year fixed effects, which compare previously unserved metros only to served metros of the same size in the same year, while regional diffusion is absorbed by the Census-division×year fixed effects. Taken together with the angel null result in Section 4.1.1 — angel capital, eligible for the same exclusion, did not spread to these markets — this placebo provides strong evidence that QSBS, rather than a contemporaneous shock to VC markets or a secular trend in their geographic reach, is responsible for the expansion documented in Section 3.4.[15]

4.2 Triple-Differences Estimates

The difference-in-differences estimates in Section 4.1 compare *No Prior VC* metros to all other metros. A remaining concern is that some unobserved metro-level shock after 2009 — unrelated to QSBS — differentially affected previously unserved markets. We address this with triple-differences estimates that exploit within-CBSA variation between eligible and ineligible sectors, adding CBSA × year

[15] A hold-out exercise over a longer pre-treatment horizon reinforces this conclusion. Extending the investment-level data back to 2000 and redefining unserved status on 2000–2003 — before the estimation sample begins — we place placebo reform dates inside the pre-reform period: both placebo estimates are statistically indistinguishable from zero, whereas the actual 2009 reform yields positive estimates that reach +0.078 (t = 2.36) when unserved status is defined over the full 2000–2008 pre-reform window; dynamic estimates (not tabulated) show flat pre-2009 coefficients (joint p = 0.51). See Table IA4.

fixed effects that absorb all metro-level time-varying shocks, so that identification comes entirely from whether the eligible–ineligible gap within previously unserved metros widened after 2009 relative to the same gap in other metros.

The regression estimates:

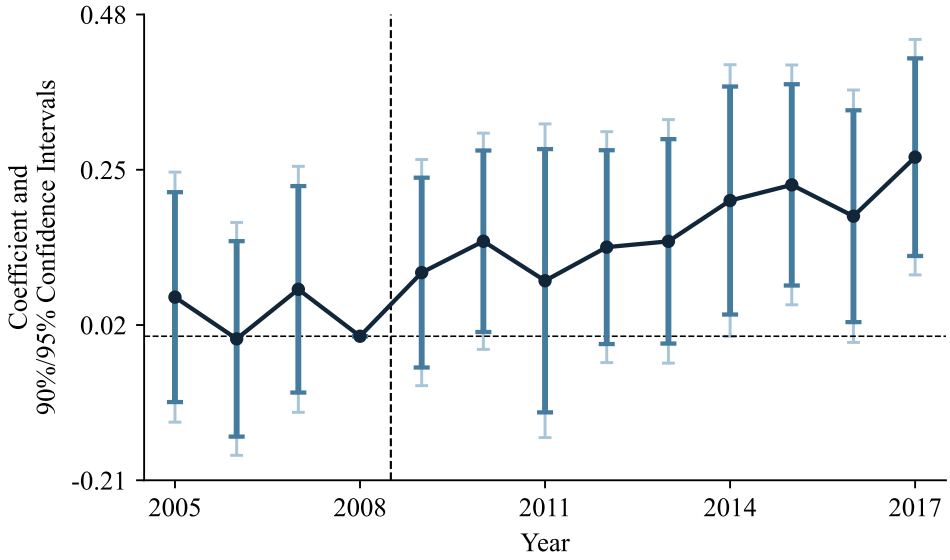
$$y_{cst} = \beta \cdot [\mathbb{1}\{\text{No Prior VC}\}_c \times \mathbb{1}\{\text{Eligible}\}_s \times \mathbb{1}\{\text{Post}\}_t] + \alpha_{cs} + \gamma_{ct} + \delta_{st} + \varepsilon_{cst}, \tag{2}$$

where c indexes CBSAs, s indexes sector eligibility, and t indexes years, the outcome y_{cst} is an indicator for any VC-backed firm activity, and $\mathbb{1}\{\text{No Prior VC}\}_c$ equals one for CBSAs with zero total pre-2009 VC activity. CBSA × Sector fixed effects (α_{cs}) absorb time-invariant differences in eligible versus ineligible VC composition across metros; CBSA × Year fixed effects (γ_{ct}) absorb all metro-level time-varying shocks; and Sector × Year fixed effects (δ_{st}) absorb national trends in eligible relative to ineligible VC activity. The lower-order terms of a conventional triple-differences specification—the main effects and pairwise interactions of the three indicators—are all subsumed by these two-way fixed effects, each in its most general form, leaving the triple interaction as the only estimable term.

Table 3 reports the estimates. The coefficient on the triple interaction is +0.174 under population weighting, which requires no sample restriction, and +0.112 and +0.148 on common-support samples restricted to metros at least as large as the 25th and 50th percentile of post-2009 entrants, respectively. These estimates confirm that the within-CBSA shift toward eligible-sector VC in previously unserved metros is robust to the inclusion of CBSA × Year fixed effects and to how the metro-size differential is handled. The gradient across the two common-support columns is itself informative. The composition shift is present across the full size range where first entry is observed and strengthens in larger markets, where the capacity to absorb entry is greatest. Identification in the most demanding specification comes entirely from the differential change in the eligible versus ineligible composition of VC activity within the same metro after 2009, in previously unserved markets relative to served ones — a variation that is difficult to attribute to anything other than the sector-specific nature of the QSBS subsidy. The estimates are essentially unchanged when the enactment year 2009 is excluded (+0.182, +0.112, and +0.153; see Table IA5).

PLACE TABLE 3 ABOUT HERE

Figure 4: QSBS and Eligible VC in New Markets: Triple-Differences Event Study



This figure plots dynamic triple-difference estimates of Equation (2), replacing the post indicator with event-time indicators; 2008 is the omitted baseline year. Each point is the coefficient on $\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Eligible}\} \times \mathbb{1}\{\text{year} = t\}$, with 90% (darker) and 95% (lighter) confidence intervals based on CBSA-clustered standard errors. The estimation weights by population, as in Column (1) of Table 3; fixed effects follow Equation (2). A joint test that all pre-2009 coefficients equal zero gives $p = 0.33$; Figure IA2 reports the corresponding estimates on the common-support sample of Column (3), with $p = 0.48$. Because previously unserved metros have no venture activity in either sector before 2009 by construction, the pre-reform coefficients test the stability of the eligible–ineligible gap in comparison metros — the counterfactual the triple difference borrows. Data are from PitchBook.

Figure 4 presents the dynamic version of Equation (2), replacing the post indicator with event-time indicators. Pre-reform coefficients are small and statistically indistinguishable from zero — a joint test that all pre-2009 coefficients equal zero gives $p = 0.33$ under population weighting, and $p = 0.48$ and $p = 0.66$ on the two common-support samples (Figure IA2) — with the effect emerging at the reform date and remaining stable through the post-period. Because previously unserved metros have no venture activity in either sector before 2009 by construction, the pre-reform coefficients test the stability of the eligible–ineligible gap in comparison metros — precisely the counterfactual that the triple difference borrows. Together, the two results leave little room for a secular-trend account. Any metro-level force drawing quiet markets into the venture economy, cyclical or secular, lifts both sectors and is differenced out by the CBSA×Year fixed effects. The sector-specific shift that survives emerges as a break at the statutory date rather than a gradual drift.

5 Did QSBS Expand Underserved Markets?

Section 4 established that QSBS caused VC investors to enter metropolitan areas that had never before received a VC-backed startup, and that the effect was absent for angels and specific to eligible sectors. The descriptive patterns in Section 3.4 further suggest that this reallocation was not confined to the extensive margin: the eligible–ineligible gap in post-2009 VC growth narrows systematically as prior VC intensity increases, and the raw composition of VC activity shifted toward eligible sectors across all underserved tiers. This section asks whether those patterns reflect a causal effect of the reform on markets that were already partially served, and whether the reallocation of capital toward eligible sectors intensified in the most underserved areas. We discuss these in turn.

5.1 The Composition Shift Toward Eligible Sectors

We begin by asking whether the reform shifted the sectoral composition of VC activity in metros that were already active before 2009. Table 4 examines this by restricting to CBSAs with any pre-2009 VC activity (*Low Prior VC*, *Medium Prior VC*, and *Established Hubs*) and regressing the fraction of VC-backed firms in QSBS-eligible sectors on a post-reform indicator, with CBSA fixed effects absorbing all time-invariant differences across metros. The within-CBSA shift in the eligible share captures whether existing VC markets recomposed toward eligible sectors following the reform, independently of any extensive-margin effects.

PLACE TABLE 4 ABOUT HERE

Column (1) shows that the fraction of VC-backed firm counts in eligible sectors rose by 7.6 percentage points within active metros after the reform (+0.076 relative to a mean of 0.597), and Column (2) shows a nearly identical shift in the fraction of total capital raised (+0.082 relative to a mean of 0.584), with both estimates statistically significant at the 1% level. The result is distinct from the extensive-margin finding in Section 4.1.1: it does not require a metro to have been previously unserved, and it is identified entirely from within-CBSA variation in the sectoral mix of VC activity over time. Together, the extensive-margin entry result and this composition shift point to the same underlying mechanism: QSBS redirected capital toward eligible sectors, both by opening new markets and by reorienting existing ones.

5.2 Capital Reallocation Across Metro Tiers

We now ask where within the full metro tier distribution the reallocation concentrated, using a broader specification that includes all four tiers and takes *Established Hubs* as the omitted baseline. This allows us to assess whether the composition shift was monotonically decreasing in prior VC intensity — as it should be if the subsidy bites hardest where eligible-sector activity was thinnest and the room to recompose toward qualifying sectors greatest — and whether ineligible-sector activity lost ground across the distribution.

Table 5 presents results for firm counts across both extensive-margin outcomes and the eligible-sector composition share. Column (1) shows that, relative to *Established Hubs*, the probability of eligible-sector VC entry rose by about 15 percentage points in *No Prior VC* metros (+0.149 relative to a mean of 0.389) and by a comparable margin in *Low Prior VC* metros (+0.137), with a positive but statistically insignificant effect for *Medium Prior VC* metros — a gradient consistent with the tax subsidy having its largest extensive-margin effect precisely where investors would not otherwise have entered.[16]

PLACE TABLE 5 ABOUT HERE

Column (2) reveals the relative decline of ineligible-sector entry: relative to *Established Hubs*, the probability of ineligible-sector VC entry fell across all underserved tiers — by 17 percentage points in *No Prior VC* metros (−0.172 relative to a mean of 0.151) and by comparable magnitudes in *Low Prior VC* (−0.189) and *Medium Prior VC* (−0.164) metros.[17] This gradient is what a sector-specific subsidy predicts. By raising the after-tax return on eligible deals, QSBS raises the opportunity cost of every ineligible deal. The deals that fail to materialize are the marginal ones, in thin markets where sourcing and monitoring costs are highest and local co-investors are scarce. Ineligible deal flow in the hubs is

[16] Results are robust to alternative hub definitions and tier granularity. Table IA6 collapses the classification to the top 15 metros by pre-2009 VC activity as the omitted baseline: the probability of eligible-sector entry in *No Prior VC* metros rises by 25.0 percentage points (t = 8.06), exceeding the tertile estimate partly because these tables use the ever-active metro sample and partly because the top 15 form a more demanding baseline (Table IA2 holds the sample fixed and confirms the ordering); capital again concentrates toward the top hubs. Tables IA7 and IA8 use the top 5 and 10 metros as the baseline, and Tables IA9 and IA10 use quartile and quintile classifications in place of tertiles; the *No Prior VC* extensive-margin result is stable across all alternatives, while the ineligible-sector coefficient is stable under the quartile and quintile classifications and attenuates — negative but statistically insignificant — under the top-5 and top-10 baselines.

[17] These estimates do not contradict the placebo null of Table 2. Ineligible activity in underserved metros was simply flat (Table IA3, Panel B): measured against served metros of comparable size, that flatness is a null; measured against *Established Hubs*, where the post-2009 resurgence lifted both sectors, it is a relative shortfall.

infra-marginal and continued to ride the post-2009 resurgence that lifted both sectors there. Because hubs and underserved metros follow different cyclical trajectories, we read these hub-benchmarked estimates as characterizing where the reallocation concentrated; the identification of the sectoral tilt itself comes from the size-matched comparisons of Tables 1 and 2 and from the triple-differences design of Table 3, whose CBSA×Year fixed effects absorb any metro-level trajectory — including a hub-specific boom — by construction.

Columns (3) and (4) estimate the intensive margin using Poisson regression on the subsample of CBSAs with positive VC activity; *No Prior VC* metros are absorbed by CBSA fixed effects due to complete separation.[18] Among metros with any prior activity, the intensity of ineligible-sector investment fell relative to *Established Hubs* by approximately 34 to 45 percent (Poisson estimates of −0.421 and −0.590) — the intensive-margin counterpart of the same contraction.

Column (5) shows the composition shift in firm counts for active metros (tiers 2–4). The fraction of VC-backed firms in QSBS-eligible sectors rose by 22% in *Low Prior VC* metros (+0.132 relative to a mean of 0.597) and is positive but statistically insignificant for *Medium Prior VC* metros, consistent with the most underserved active markets driving the recomposition result.

Together, these results confirm that QSBS opened new markets at the extensive margin while tilting the composition of activity within existing ones toward eligible sectors — expanding the geographic frontier of VC activity without simply adding investment uniformly across all markets.[19]

6 The Nature of Investment in New Markets

The previous sections established where QSBS-induced capital reallocation concentrated. This section asks what the investment reaching new markets looked like: how VCs invested, what kinds of startups

[18] *No Prior VC* metros have no pre-2009 activity by construction, so CBSA fixed effects leave nothing to identify the post indicator (a standard separation problem), removing them from specifications defined only for active metros. Their headline effect (Table 1) is unaffected, and the triple-differences design of Table 3 identifies them without pre-period activity.

[19] Capital flows mirror the firm-count patterns (Table IA11). The fraction of total capital going to eligible sectors rose by 27% in *Low Prior VC* metros (+0.158 relative to a mean of 0.584), while ineligible-sector capital fell significantly for *Medium Prior VC* metros (−$17.2 million relative to a mean of $32.9 million). Within tiers with prior activity, eligible-sector capital concentrated toward *Established Hubs* rather than spreading outward (−0.464 in logs for *Low Prior VC* metros) — the deepening of hub activity that the entry-cost logic predicts. *No Prior VC* metros are excluded where the eligible share is undefined absent prior activity, and are absorbed by fixed effects in the capital-level specifications (see footnote 18); their capital deployment is visible in the extensive-margin and triple-differences results.

they backed, and how those startups performed.

6.1 Investment Style

The entry-cost mechanism predicts that because previously unserved markets have no local co-investors, first entries should be held as concentrated, largely unsyndicated positions. We also examine the two broader measures of risk selection that Campello and Junqueira (2026) study at the investor–firm level, and report all three margins as they come.

Table 6 examines three investment characteristics at the investor–firm level that Campello and Junqueira use to proxy for risk-taking in project selection. *Pre-commercial stage* equals one if the portfolio company is in stealth mode, product beta, clinical trials, or has received a grant as its most recent financing — investments characterized by high information asymmetry, long exit timelines, and uncertain commercial viability (Hall and Lerner (2010)). *First funding* equals one if the company has no prior backing from any VC, angel, accelerator, corporate, or debt investor at the time of investment; companies with prior financing have passed through screening and due diligence that reduces risk for subsequent investors (Kerr et al. (2014); Gompers et al. (2020)). *Multi-investor* equals one if the initial round involves five or more investors, capturing above-median syndicate size in our sample; syndication reduces investment risk through risk sharing, information pooling, and social validation (Lerner (1994); Hochberg et al. (2007)). The sample is restricted to VC investors in QSBS-eligible sectors between 2004 and 2017, and the specification includes Investor×Industry, Industry×Year, Investor State×Year, and Industry×Firm State fixed effects with standard errors clustered at the investor level — identical to the investment selection analysis in Campello and Junqueira (2026). Coefficients on $\mathbb{1}\{\text{Tier} = \tau\} \times \mathbb{1}\{\text{Post}\}$ are measured relative to *Established Hubs* (omitted): for *Low* and *Medium Prior VC* metros they capture differential post-reform changes, while for *No Prior VC* metros they compare the deals through which VCs entered these markets with contemporaneous hub deals.

PLACE TABLE 6 ABOUT HERE

Columns (1) and (2) show no differential shift in either broad measure. Pre-commercial-stage investing — which rose under QSBS overall — did not rise disproportionately in underserved markets

relative to *Established Hubs*, and the first-funding coefficients are small for *No Prior VC* metros and of mixed sign across the other tiers. We take these estimates at face value: the reform did not tilt the type of company backed in new and underserved markets relative to hubs.

In contrast, Column (3) shows that post-reform investments in *No Prior VC* metros were 11.4 percentage points less likely to involve a large, multi-investor syndicate than contemporaneous hub investments. Some of this is mechanical — a market with no incumbent investors offers few partners to syndicate with. But the scarcity of co-investors is not a confound here; it is the friction itself. Entering these markets meant holding a concentrated position without the risk sharing and certification that syndication provides, an entry cost the subsidy made worth bearing.

6.2 Industry Composition

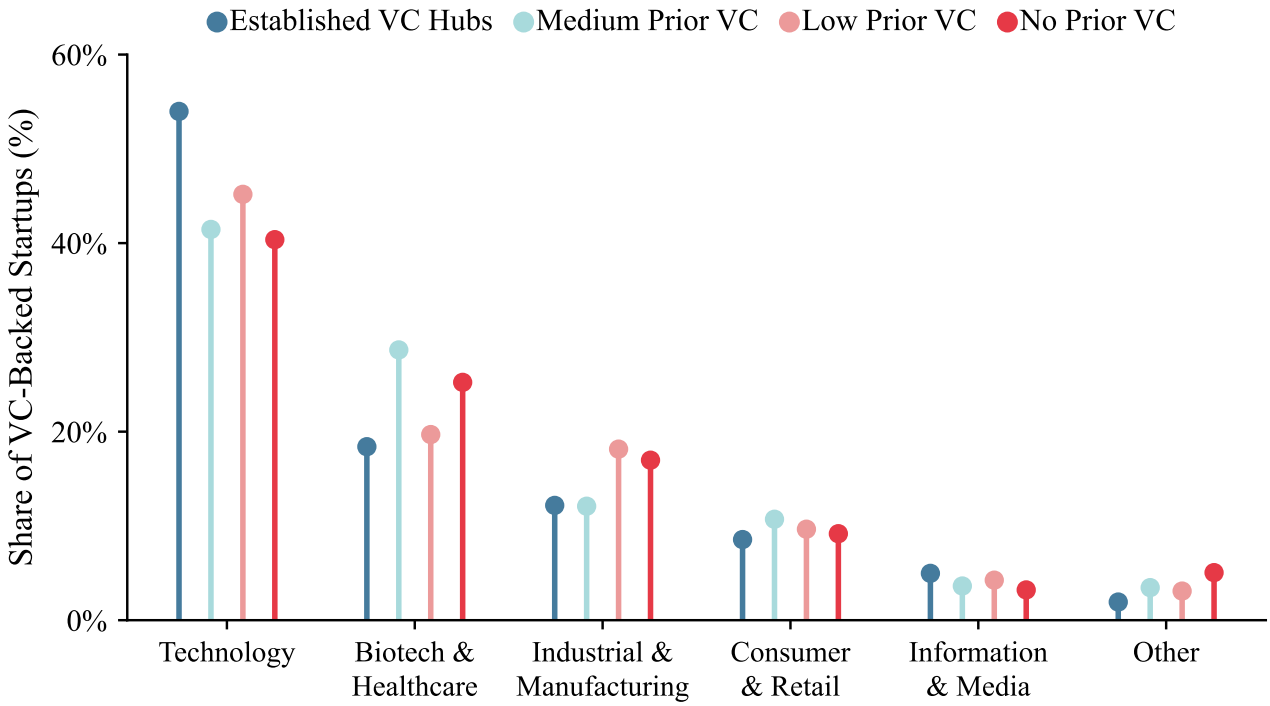
Figure 5 shows the share of VC-backed startups in each QSBS-eligible industry by metro tier, post-2009. Technology dominates across all tiers, but its share is lower in previously unserved metros (40%) than in *Established Hubs* (54%), with the difference taken up by Industrial & Manufacturing and Biotech & Healthcare, which together account for 42% of activity in *No Prior VC* metros versus 31% in the hubs.

Table 7 asks whether these compositional differences are statistically distinguishable, regressing metro-level industry shares on tier indicators — *Established Hubs* omitted — with Census-division×year fixed effects. For the most part, they are not: the tier coefficients are statistically indistinguishable from zero, reflecting considerable heterogeneity across metros within tiers. The exception is Industrial & Manufacturing, where *No Prior VC* metros allocate a 6.6 percentage point larger share than the hubs ($t = 2.16$); as the one significant coefficient among the industries tested, we read it with caution.

PLACE TABLE 7 ABOUT HERE

The direction of the tilt is consistent with the economic geography of the places being reached — university towns such as Lincoln (NE) and Lafayette (IN), with strong engineering and agricultural research institutions, and mid-sized manufacturing cities such as Greenville (SC) and Fayetteville (AR). But the data support a modest conclusion: entry into new markets was neither a transplant of hub investment patterns nor sharply different in kind. Eligible-sector investment reached new markets in roughly the mix found elsewhere, tilted somewhat toward the industrial base of the places it reached.

Figure 5: Industry Composition of QSBS-Eligible VC-Backed Startups by Metro Tier (Post-2009)



This figure shows the share of VC-backed startups in QSBS-eligible sectors within each metro tier, post-2009. Shares are computed from the post-2009 firm counts in Table IA15. Each industry has a vertical stem spanning the range across the four tiers; colored dots indicate the share for each tier. Tiers are defined by pre-2009 total VC-backed startup counts: *No Prior VC* = zero pre-2009 VC; *Low Prior VC* = bottom tertile of active metros; *Med. Prior VC* = middle tertile; *Established Hubs* = top tertile. VC investors only. Data from PitchBook.

6.3 Firm Quality and Scale

Redirected capital is only as valuable as the firms it reaches. A program that opens new markets but seeds only short-lived, low-quality startups would waste tax expenditures without expanding the entrepreneurial economy. The prior runs in both directions. Markets long bypassed by venture capital may hold good projects that went unfunded for want of local capital — in which case entering firms should outperform — or may lack the agglomeration economies that sustain firm performance, in which case the subsidy would be propping up weaker firms. We assess firm quality along four dimensions — failure rates and unicorn attainment from PitchBook, patent grants from the USPTO, and employment from Revelio Labs — counting each firm once at its canonical CBSA entry year, with outcomes reflecting lifetime realizations. Throughout, we compare *No Prior VC* metros to two benchmarks: the other non-hub tiers, whose ecosystems are closest to those of markets receiving their first VC-backed startup,

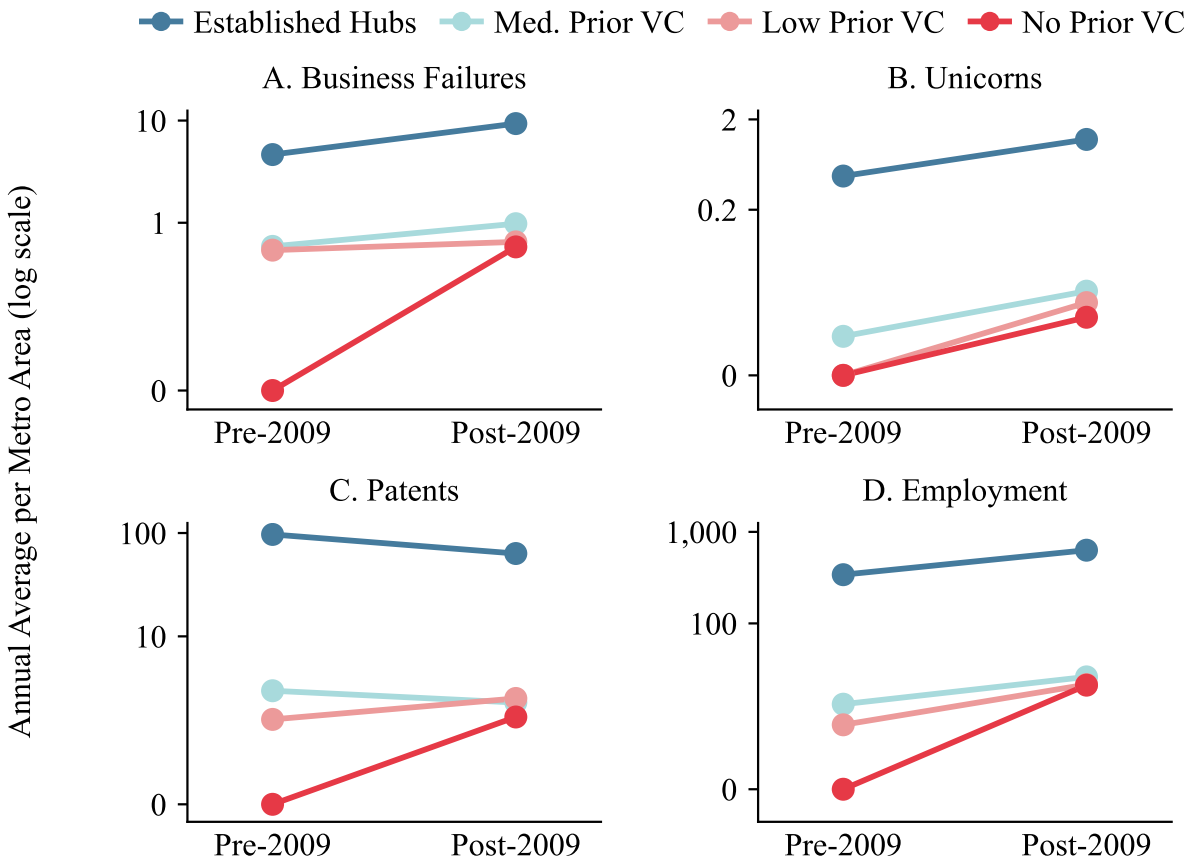
and *Established Hubs*, which mark the upper bound.

The headline finding is that firms entering new markets perform in line with those in other non-hub markets, and trail *Established Hubs* mainly in outlier successes. Failure rates in *No Prior VC* metros post-2009 (41%) match those in *Low* and *Medium Prior VC* metros (40% in both) and exceed *Established Hubs* (31%). Unicorn rates (0.9%) are in line with *Low* (1.2%) and *Medium Prior VC* metros (1.0%) and well below *Established Hubs* (4.0%). Patent rates (26%) fall within the non-hub range (24% to 31%) and modestly below *Established Hubs* (29%). Employment per firm (15 employees) exceeds both non-hub tiers (13 and 11) and trails *Established Hubs* (21) (Table IA12). Figure 6 shows the same comparisons over time: on the dimensions where non-hub markets trail the hubs — failure and unicorn rates — firms in newly entered markets perform like firms in other non-hub markets, while on patenting and employment they are comparable to the hubs themselves. Difference-in-differences estimates formalize these comparisons: relative to *Established Hubs*, the coefficients on *Low* and *Medium Prior VC* metros are small and statistically indistinguishable from zero across all four outcomes, with a single exception — a marginally significant *positive* patent-rate coefficient for *Low Prior VC* metros (Table IA13).[20]

On scale, activity in new markets is admittedly modest. *No Prior VC* metros produced 218 total VC-backed startups post-2009 — compared to 12,720 in *Established Hubs* — with 57 patent firms and 3,279 workers employed at those startups (Table IA14). These aggregate counts reflect the reality that building a VC ecosystem from scratch takes time and that our sample period captures only the earliest years of what may be a longer-run process. That said, the metros entering the VC map for the first time are not uniformly small: Lincoln, Nebraska attracted 21 VC-backed startups employing nearly 900 workers — among them Virtual Incision, a surgical-robotics developer spun out of the University of Nebraska — while among *Low Prior VC* metros, Chattanooga, Tennessee grew from a single pre-2009 firm to 15 firms employing over 400 workers, including Bellhop and FreightWaves. The value of QSBS as a place-based policy instrument therefore lies not in the immediate scale of activity it generates in underserved markets, but in its role as a catalyst for first entry — establishing a VC presence in markets that had none, and potentially laying the groundwork for self-sustaining ecosystems over a

[20] *No Prior VC* metros are absorbed by CBSA fixed effects in these regressions — all pre-2009 outcomes are zero by construction — so their post-2009 performance is characterized directly by the rates above. Post-2009 cohorts in newly entered metros are about half a year younger at the end of the observation window than hub cohorts, so right-truncation may slightly understate their out-of-business and unicorn rates; the five-year funding-gap component of failure is fully observed for all entry cohorts.

Figure 6: Average Annual Startup Outcomes per Metro Area by Tier: Pre- vs. Post-2009



This figure plots average annual counts of business failures, unicorns, patents, and employment for VC-backed startups in QSBS-eligible sectors, by metro tier, before (2004–2008) and after (2009–2022) the QSBS expansion. Each outcome reflects lifetime realizations per firm, averaged across entry cohorts within each period. Tiers are defined by pre-2009 total VC-backed startup counts. The y-axis uses a symmetric log scale. *No Prior VC* metros had zero activity in all outcomes pre-2009 by construction. Patent counts decline post-2009 due to right-truncation. Data from PitchBook, USPTO, and Revelio Labs.

longer horizon than our sample period captures.

Outcome rates by industry follow sector norms rather than a new-market penalty (Table IA15). Among firms entering *No Prior VC* metros, biotech and healthcare startups fail least often (29%), technology startups most often (51%), and industrial and manufacturing firms fall in between (38%) — an ordering similar to that within *Established Hubs*, whose sector-level failure rates range from 25% to 43%. The sector cells are small, however, and we read these comparisons as descriptive.

7 Local Labor-Market and Talent Effects

The preceding sections establish that QSBS opened new metropolitan markets to VC and that the firms entering those markets were not systematically lower quality than those in established hubs. A place-based evaluation, however, ultimately turns on the *workers* and the *local economy*: whether the jobs these startups create are good jobs, whether they draw skilled talent into regions that historically exported it, and whether the benefits reach the broader community. We assess these questions using worker-level data from Revelio Labs, job-postings data from Lightcast, and county-level income and wage data from the Bureau of Economic Analysis (BEA). Throughout, we compare VC-backed, QSBS-eligible startups (or the metros that host them) across tiers, focusing on post-2009 cohorts.

7.1 Workforce Composition, Skill, and Retention

Table 8 summarizes the workforce of VC-backed startups by metro tier. Startups in previously unserved metros are technically skilled but somewhat less so than hub startups: scientists and engineers account for 32% of their workforce, versus 39% in *Established Hubs*, with a correspondingly lower software-engineering share. This gap reflects *composition* — it mirrors the industrial-and-manufacturing tilt documented in Section 6.2 — rather than lower quality. Consistent with this, the workforce of new-market startups is more senior and draws less on foreign-born talent (13% of geolocated workers originate outside North America, versus 21% in hubs). Most strikingly, startups in new markets *retain* their workers better: separations per employee are markedly lower than in hubs. Columns (5)–(7) of Table 8 formalize these comparisons: relative to *Established Hubs*, the scientist-and-engineer share is 6.5 percentage points lower in *No Prior VC* metros, while the annual separation rate is 4.5 percentage points lower, off a hub baseline of 26% — both significant at the 1% level.

PLACE TABLE 8 ABOUT HERE

The educational profile of these workers reinforces the picture. Panel A of Table 9 reports degree attainment from Revelio education histories. The share of workers holding a doctorate is comparable across tiers — 3.0% in *No Prior VC* metros versus 3.8% in *Established Hubs* — and the advanced-degree share is similar (20% versus 26%). The one meaningful difference is university pedigree:

workers at new-market startups are half as likely to hold a degree from a top-25 U.S. or top-50 world university (7% versus 14%), reflecting reliance on strong *regional* institutions rather than the coastal elite. QSBS-induced startups in underserved markets thus employ comparably credentialed scientific talent, drawn from a different — and more local — set of universities.

PLACE TABLE 9 ABOUT HERE

7.2 Worker Compensation

If new-market startups were simply arbitraging cheap labor, they would pay markedly less than their hub counterparts. Panel B of Table 9 reports mean worker pay by tier, measured as the annual salary of each position — an annualized, full-time rate of pay, not an hourly wage or realized earnings — averaged across a firm's positions and then across firms, so the figures are per-employee averages. Startups in *No Prior VC* metros pay essentially the same as those in *Established Hubs* — approximately $111,000 versus $112,000 per worker per year — and a log-salary regression conditioning on Census division and entry year finds them statistically indistinguishable from hubs (-0.3%, $t = -0.1$). Because the cost of living in these interior metros is well below that of the coastal hubs, wage *parity* implies a meaningful real compensation premium: QSBS-induced entry created genuinely high-paying jobs.[21]

7.3 Talent Attraction and Geographic Redistribution

The most direct test of whether QSBS redistributed *talent* — not just capital — is whether the workers who staffed new-market startups relocated to do so, and from where. For each worker's first position at a portfolio company, we identify the metropolitan area of their immediately preceding position from their Revelio career history. Panel C of Table 9 reports the results. Among workers joining startups in *No Prior VC* metros, 37% moved in from a different metropolitan area — slightly *higher* than at hub startups (35.3%). Crucially, 5.6% came directly from one of the six coastal hubs (San Francisco, San

[21] Revelio Labs salaries are modeled rather than administratively reported, so we interpret levels as relative. The comparison is unchanged under Revelio's broader total-compensation measure, which adds variable pay: startups in *No Prior VC* metros pay 6.3% more than hubs, statistically indistinguishable from zero ($t = 1.3$).

Jose, New York, Boston, Los Angeles, or Seattle). While smaller than the hub-to-hub flow, this represents a counterflow to the usual direction of skilled migration: QSBS-induced startups pulled workers *out* of the established centers and into previously unserved regions. Consistent with the composition evidence, new-market startups drew less on international talent (21% from abroad, versus 32% at hubs), relying instead on domestic and regional labor markets.

7.4 Metro-Level Labor Demand and the Local Tax Base

We finally ask whether these effects register in aggregate labor demand and in the local tax base. Panel D of Table 9 measures labor demand using the volume of online job postings by our portfolio companies (Lightcast).[22] VC-backed startups in *No Prior VC* metros post as many or more jobs than those in *Established Hubs* (approximately 55 versus 41 per firm-year), confirming that the entrants are actively hiring rather than dormant shells.

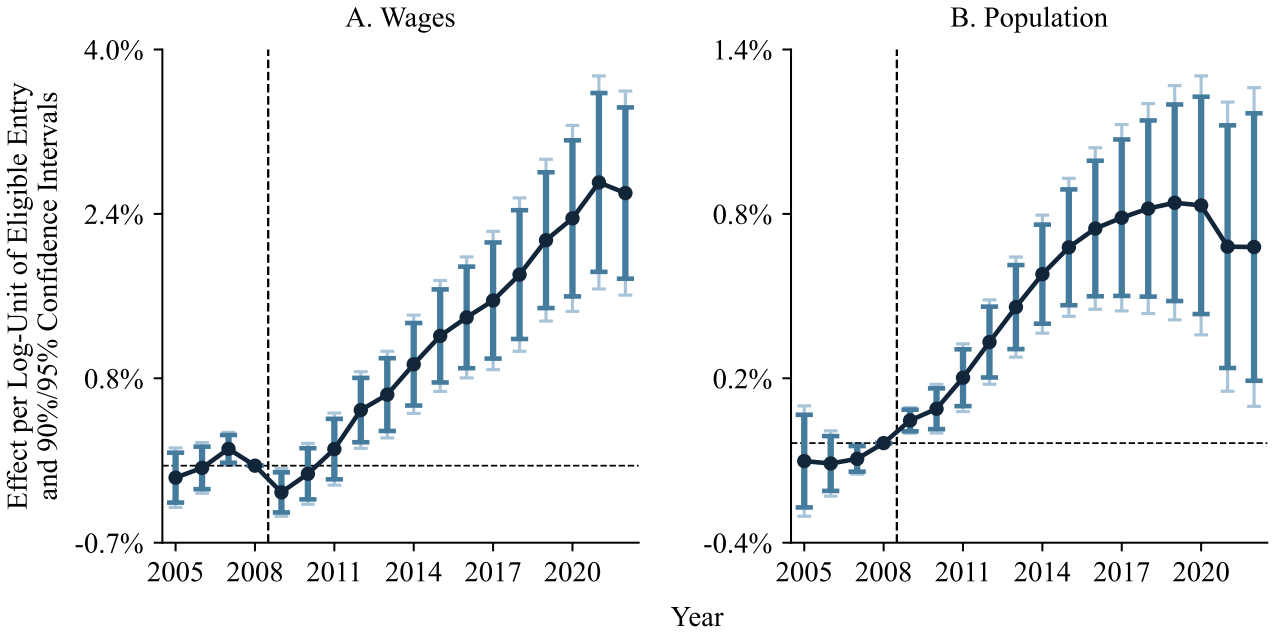
Turning to the broader local economy, Table 10 relates three complementary BEA outcomes (county data aggregated to CBSAs) to eligible-sector VC entry: personal income, the base of state income taxation; wage-and-salary disbursements, the labor-earnings component; and per-capita income, which separates living standards from sheer metro scale. Two facts stand out. First, growth loads on entry *intensity* (Panel A): among entrant metros, each log-unit of total post-2009 entry is associated with significantly faster growth in personal income (+0.7%, $t = 2.8$) and wages (+1.3%, $t = 4.3$), while the mere presence of entry has no effect. The gradient — identified within tiers rather than by the hub–nonhub contrast, and unchanged under alternative dose transformations — is consistent with local spillovers concentrated where entry was largest.[23] In magnitudes, an entrant metro that attracted a half-dozen QSBS-era startups (roughly two log-units) saw wages grow about 2.5 percent faster over the post-period, and nearly 5 percent faster by 2022, than a comparable entrant metro.

PLACE TABLE 10 ABOUT HERE

[22] Lightcast posting coverage begins circa 2010, so the comparison for Lightcast is post-reform and cross-tier.

[23] The dose is measured from realized post-2009 entry and is therefore not randomly assigned: the flat pre-reform coefficients in Figure 7 rule out selection on pre-existing trajectories, and the tier×year robustness restricts any confound to metro-specific contemporaneous shocks within tiers, but such shocks cannot be fully excluded — we read the gradient as strongly suggestive rather than dispositive.

Figure 7: Local Economic Spillovers Build Over Time: Event Study by VC Dose



This figure plots dynamic dose-response estimates of local economic outcomes. Each point is the coefficient on log(total post-2009 eligible-sector VC-backed startups) × $\mathbb{1}\{\text{year} = t\}$, defined for entrant metros, from a regression of the log CBSA outcome — wages and salaries (Panel A) and population (Panel B) — on the full set of intensity×year interactions, with Any-Entry×year indicators absorbing the extensive margin and CBSA and Census-division×year fixed effects; 2008 is the omitted baseline. Bars denote 90% (darker) and 95% (lighter) confidence intervals based on CBSA-clustered standard errors. Outcomes are BEA county data (CAINC30) aggregated to CBSAs, 2004–2022, for the 233 metros with VC activity at some point during 2004–2017 that match to the BEA county aggregates — 86 *No Prior VC* entrants, 54 *Low*, 44 *Medium Prior VC*, and 49 *Established Hubs*. The average post-period effect in Panel A corresponds to the intensive-margin wage estimate in Panel A of Table 10. Data are from BEA and PitchBook.

Figure 7 traces the dynamics: pre-reform coefficients are flat and statistically indistinguishable from zero — metros that would later attract more VC were *not* already on steeper trajectories — while wage gains emerge only after 2009 and compound through the 2010s (Panel A), as the newly funded firms scale. Population follows the same pattern at roughly half the magnitude (Panel B), echoing the worker in-migration in Panel C of Table 9; because wages outpace headcount, the gains reflect rising earnings per resident, not merely larger metros. Second, per-capita income shows no dose gradient (+0.001, insignificant — as expected when total income grows in step with the population inflow) and kept pace with hubs in the tier comparison (*No Prior VC*: +0.005, insignificant) — residents did not fall behind even as the coastal hubs enjoyed an exceptional post-2009 technology boom that dominates level comparisons. The metro-wide footprint of a few dozen startups is necessarily modest, but where

it can be detected, it is positive.

Taken together, the labor-market evidence closes the loop on the paper's central question. The firms that QSBS unlocked in previously unserved markets did not merely appear on a map: they created high-wage jobs, staffed them with scientific and technical workers — comparably credentialed, drawn in part from the coastal hubs — and retained that talent at higher rates than incumbents. A geographically neutral federal subsidy carried not only capital but skilled labor into the regions long left outside the venture-capital economy.

8 Concluding Remarks

This paper examines whether a tax subsidy designed without explicit geographic intent can nonetheless redirect venture capital toward previously unserved markets. It does so by studying the geographic consequences of the 2009 enhancement of the QSBS program. Our analysis yields four findings. First, the reform increased the probability that a previously unserved metro received eligible-sector VC investment by 8 to 10 percentage points, with the effect driven entirely by VC investors and absent for angels — pointing to the VC organizational structure as the transmission mechanism. Second, the expansion was not simply a broad resurgence of VC activity or a secular widening of its geographic reach. Relative to established hubs, ineligible-sector investment in underserved metros failed to keep pace even as eligible-sector investment surged. The composition shift toward eligible sectors was largest precisely in the most underserved markets, and the effects emerge as a break at the reform date rather than a gradual drift. Third, VCs entered previously unserved markets through concentrated, largely unsyndicated positions — bearing entry risk without local co-investors, as the entry-cost mechanism predicts — while broader measures of investment selection show no differential shift in new markets. Finally, the firms entering new markets performed in line with those in other non-hub markets and trailed established hubs mainly in outlier successes. Failure rates, patent rates, and employment per firm are broadly comparable across underserved tiers, even as the absolute scale of activity remains modest. Worker-level evidence reinforces this assessment: startups in newly served markets paid wages at parity with the established hubs, attracted scientific and technical talent — in part directly from those hubs — and retained workers at higher rates, while metros receiving more eligible-sector entry saw faster growth in wages.

Our findings advance the understanding of how tax policy shapes the geography of entrepreneurial finance in two important ways. First, they establish that geographically neutral subsidies generate a meaningful expansion of VC's geographic reach when they are large enough to overcome the information frictions and network gaps that concentrate VC activity in established hubs. Second, the evidence is consistent with the VC organizational structure as the transmission mechanism through which these geographic effects operate — a finding with direct policy implications. Our results suggest that tax subsidies will have their largest geographic reach when channeled through intermediaries that combine outside capital with incentive-based compensation. Whether the nascent ecosystems established by QSBS-induced first entry will compound over time into self-sustaining hubs remains an open question, and one with important implications for evaluating the long-run social return to the program.

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Table 1: Did QSBS Open New Markets? VC vs. Angel Investors

Dependent Variable:	$\mathbb{1}\{\text{Any Eligible VC}\}$		$\mathbb{1}\{\text{Any Eligible Angel}\}$	
	(1)	(2)	(3)	(4)
$\mathbb{1}\{\text{No Prior}\} \times \mathbb{1}\{\text{Post}\}$	0.078^{**}	0.096^{***}	-0.003	0.023
	(2.27)	(2.81)	(-0.07)	(0.57)
Observations	5,348	5,348	5,348	5,348
Adjusted R^2	0.66	0.67	0.62	0.62
Mean Dep. Var.	0.283	0.283	0.214	0.214
Population-decile×Year FE	✓	✓	✓	✓
Census Division×Year FE		✓		✓
CBSA FE	✓	✓	✓	✓
Full metro universe (382 CBSAs)	✓	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓	✓

This table presents estimates of the effect of the 2009 QSBS expansion on the probability that a metropolitan area receives eligible-sector venture-capital investment. The sample is a balanced panel of all 382 U.S. metropolitan areas (CBSAs), 2004–2017. $\mathbb{1}\{\text{No Prior VC}\}$ equals one for metros with no venture activity during 2004–2008 (in the angel columns, no angel activity). Because previously unserved metros are systematically smaller, every specification includes population-decile×year fixed effects, which compare previously unserved metros to served metros of comparable size in the same year; deciles are computed from year-2000 metropolitan population — measured before the sample begins — and held fixed throughout. Columns (2) and (4) add Census-division×year fixed effects, absorbing differential time trends across the nine Census divisions. Columns (1)–(2) use venture-capital investors; Columns (3)–(4) use angel investors. Eligible-sector venture entry into previously unserved metros rises significantly following the reform, whereas angel entry — eligible for the same exclusion — does not, consistent with the incentive operating through the venture-capital organizational form rather than through informal investment. *t*-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Investment data are from PitchBook; population data are from the Bureau of Economic Analysis.

Table 2: QSBS and Ineligible-Sector VC Entry: A Placebo Test

Dependent Variable:	$\mathbb{1}\{\text{Any Ineligible VC}\}$	
	(1)	(2)
$\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	0.027	0.024
	(1.42)	(1.26)
Observations	5,348	5,348
Adjusted R^2	0.62	0.63
Mean Dep. Var.	0.110	0.110
Population-decile×Year FE	✓	✓
Census Division×Year FE		✓
CBSA FE	✓	✓
Full metro universe (382 CBSAs)	✓	✓
Clustered SE (CBSA)	✓	✓

This table reports a placebo test of the market-opening effect of QSBS, using entry by *ineligible*-sector venture capital as the outcome. The sample is a balanced panel of all 382 U.S. metropolitan areas (CBSAs), 2004–2017, and the specification parallels Table 1: metropolitan size is held fixed through population-decile×year fixed effects, and Column 2 adds Census-division×year fixed effects; deciles are computed from year-2000 metropolitan population — measured before the sample begins — and held fixed throughout. Because the exclusion applies only to eligible sectors, a general post-2009 recovery in venture activity would raise ineligible-sector entry as well; instead the estimated effect is small and statistically insignificant under both specifications, while eligible-sector entry rises sharply (Table 1). The contrast localizes the response to the sectors the incentive targets; the accompanying relative decline of ineligible-sector activity in previously active markets is documented in Table 5. *t*-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Investment data are from PitchBook; population data are from the Bureau of Economic Analysis.

Table 3: QSBS and Eligible VC in New Markets: Triple-Differences Estimates

Dependent Variable:	$\mathbb{1}\{\text{Any VC Activity}\}$		
	Pop.-weighted (1)	Common support (25th pctile) (2)	Common support (50th pctile) (3)
$\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Eligible}\} \times \mathbb{1}\{\text{Post}\}$	0.174^{***}	0.112^{**}	0.148^{**}
	(3.30)	(2.02)	(2.31)
Observations	10,696	6,356	4,816
Adjusted R^2	0.86	0.82	0.82
Mean Dep. Var.	0.197	0.308	0.383
CBSA×Sector, CBSA×Year, Sector×Year FE	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓

This table presents triple-difference estimates of the effect of QSBS on eligible-sector venture-capital entry into previously unserved metropolitan areas. The unit of observation is a CBSA×sector-eligibility×year cell over 2004–2017, and the dependent variable equals one if any venture-backed startup is active in the cell. The reported coefficient is the interaction of *No Prior VC*, sector eligibility, and the post-2009 indicator. CBSA×sector and sector×year fixed effects absorb, respectively, time-invariant differences in the eligible-versus-ineligible mix across metros and national trends in eligible relative to ineligible activity, and CBSA×year fixed effects absorb all metro-level shocks; identification therefore rests on the post-2009 shift in the eligible-versus-ineligible composition within previously unserved metros relative to served metros. Because previously unserved metros are far smaller than served ones, Column (1) weights by population, requiring no sample restriction. Columns (2) and (3) instead restrict the sample to metros at least as large as the 25th and 50th percentile, respectively, of post-2009 entrants' year-2000 metropolitan population (160,280 and 235,658 residents; 227 and 172 CBSAs), so that comparisons are made within the size range where first entry is empirically observed. *t*-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Investment data are from PitchBook; population data are from the Bureau of Economic Analysis.

Table 4: Did QSBS Shift VC Composition Toward Eligible Sectors?

Dependent Variable:	Fraction Eligible	
	Firm Counts	Capital Raised
	(1)	(2)
$\mathbb{1}\{\text{Post}\}$	0.076^{***}	0.082^{***}
	(3.94)	(4.12)
Observations	2,086	2,086
Adjusted R^2	0.36	0.37
Mean Dep. Var.	0.597	0.584
CBSA FE	✓	✓
Clustered SE (CBSA)	✓	✓

This table estimates whether the fraction of VC activity in QSBS-eligible sectors rose after the 2009 QSBS expansion, among metros with any prior VC activity (tiers 2–4). Column (1) uses the fraction of VC-backed firm counts in eligible sectors; Column (2) uses the fraction of total capital raised in eligible sectors. CBSA fixed effects absorb all time-invariant differences across metros; the coefficient on $\mathbb{1}\{\text{Post}\}$ captures the within-CBSA shift in the eligible share following the reform. Sample restricted to tier $\neq 1$ since fraction eligible is undefined for metros with no prior VC activity. *t*-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table 5: QSBS-Induced VC Growth by Metro Tier: Firm Counts

	Extensive Margin (LPM)		*Intensive Margin (Poisson)*		*Composition*
Dependent Variable:	$\mathbb{1}\{\text{Any Elig. VC}\}$	$\mathbb{1}\{\text{Any Inelig. VC}\}$	Elig. Firms	Inelig. Firms	Frac. Eligible
	(1)	(2)	(3)	(4)	(5)
$\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	0.149***	−0.172***	—	—	—
	(5.73)	(−4.28)			
$\mathbb{1}\{\text{Low Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	0.137***	−0.189***	−0.379***	−0.590***	0.132***
	(3.33)	(−4.50)	(−3.88)	(−3.20)	(3.49)
$\mathbb{1}\{\text{Med. Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	0.064	−0.164***	−0.356***	−0.421***	0.069
	(1.30)	(−3.25)	(−2.97)	(−3.07)	(1.46)
Observations	3,892	3,892	1,472	537	2,086
Mean Dep. Var.	0.389	0.151	18.61	4.92	0.597
CBSA FE	✓	✓	✓	✓	✓
Census Division×Year FE	✓	✓	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓	✓	✓

This table presents estimates of where QSBS-induced VC growth concentrated, using tier×post interactions with Established Hubs (top tertile) as the omitted category. Tiers are defined by pre-2009 total VC activity, and $\mathbb{1}\{\text{No Prior VC}\}$ equals one for metros with no VC activity during 2004–2008. Columns (1)–(2) report linear-probability estimates for the extensive margin on a balanced CBSA-year panel, 2004–2017, comprising all metros with prior VC activity together with previously unserved metros at least as large as the 25th-percentile post-2009 entrant (278 CBSAs); this common-support restriction addresses the size differential between unserved metros and the hub baseline. Columns (3)–(4) report Poisson QMLE estimates for firm counts on the subsample of CBSA-years with positive activity; *No Prior VC* metros are absorbed by the CBSA fixed effects due to separation. Column (5) reports OLS estimates for the fraction of funded startups in eligible sectors, restricted to metros with prior VC activity (tiers 2–4), since the eligible share is undefined where there is no prior activity. The negative coefficients in Column (2) indicate that ineligible-sector VC in underserved metros failed to keep pace with its hub trajectory, consistent with a compositional tilt toward eligible sectors. t-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Data are from PitchBook.

Table 6: QSBS, Geographic Expansion, and Investment Risk-Taking

Dependent Variable:	𝟙{Pre-Commercial}	𝟙{First Funding}	𝟙{Multi-Investor}
	(1)	(2)	(3)
𝟙{No Prior VC} × 𝟙{Post}	−0.010	0.011	−0.114***
	(−0.70)	(0.69)	(−3.96)
𝟙{Low Prior VC} × 𝟙{Post}	−0.031	−0.051*	−0.035
	(−1.01)	(−1.77)	(−0.74)
𝟙{Med. Prior VC} × 𝟙{Post}	−0.014	0.035**	−0.021
	(−0.88)	(2.26)	(−0.65)
Observations	47,664	47,664	47,664
Adjusted R^2	0.10	0.07	0.21
Mean Dep. Var.	0.033	0.029	0.452
Investor×Industry FE	✓	✓	✓
Industry×Year FE	✓	✓	✓
Inv. State×Year FE	✓	✓	✓
Industry×Firm State FE	✓	✓	✓
Clustered SE (Investor)	✓	✓	✓

This table examines whether QSBS-induced VC entry into previously unserved metropolitan areas reflects the risk-taking behavior documented in Campello and Junqueira (2026), whose sample, fixed effects, and variable construction we follow throughout. The unit of observation is an investor–firm pair at entry. The coefficients of interest are the interactions $\mathbb{1}\{\text{Tier} = \tau\} \times \mathbb{1}\{\text{Post}\}$, one for each underserved tier τ, which capture the differential post-reform shift in investment risk-taking for eligible-sector VC investments in that tier relative to *Established Hubs*, the omitted baseline. Sample restricted to VC investors in QSBS-eligible sectors, 2004–2017. In untabulated estimates, the remaining risk-taking margins in Campello and Junqueira (2026) — out-of-state investment and entry into industries outside the investor's prior experience — show no differential shift across tiers (+0.012, $t = 0.31$ and +0.012, $t = 0.34$ for *No Prior VC*, respectively), so the distinctive geographic margin of QSBS-induced risk-taking is the willingness to invest without a syndicate. t-statistics based on investor-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table 7: Industry Composition of QSBS-Eligible VC-Backed Startups by Metro Tier (Post-2009)

Dependent Variable:	Post-2009 Share of Eligible VC Firms by Industry				
	Technology	Biotech & Healthcare	Industrial & Manufacturing	Consumer & Retail	Information & Media
$\mathbb{1}${No Prior VC}	−0.047	−0.051	0.066**	0.017	−0.019
	(−1.11)	(−1.32)	(2.16)	(0.70)	(−1.43)
$\mathbb{1}${Low Prior VC}	−0.028	−0.014	0.028	0.016	−0.005
	(−0.58)	(−0.40)	(1.01)	(0.69)	(−0.36)
$\mathbb{1}${Med. Prior VC}	−0.046	0.006	−0.005	0.040*	−0.019*
	(−1.31)	(0.17)	(−0.22)	(1.90)	(−1.67)
Observations	979	979	979	979	979
Adjusted R^2	0.03	0.05	0.03	0.01	0.04
Mean Dep. Var.	0.421	0.256	0.149	0.086	0.039
Census Division×Year FE	✓	✓	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓	✓	✓

This table provides a regression analog to Figure 5. The dependent variable is the share of QSBS-eligible VC-backed firms in each industry within a CBSA-year, post-2009, conditional on positive eligible activity. Each column uses the indicated industry's share as the dependent variable. The omitted baseline is *Established Hubs* (top tertile by pre-2009 VC activity); coefficients measure the difference in that industry's portfolio share relative to hubs, conditional on Census division×year fixed effects. CBSA fixed effects are excluded as they are collinear with the time-invariant tier classification. Tiers are defined by pre-2009 total VC-backed startup counts: *No Prior VC* = zero pre-2009 VC; *Low Prior VC* = bottom tertile of active metros; *Med. Prior VC* = middle tertile. *t*-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table 8: Scientific & Technical Talent of VC-Backed Startups by Metro Tier (Post-2009)

Measure	*Tier Means*				*Difference vs. Established Hubs*		
	No Prior VC	Low Prior VC	Medium Prior VC	Established Hubs	No Prior VC	Low Prior VC	Medium Prior VC
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Employees/Firm	16	16	13	24	−4.86	−7.08**	−9.49***
Sci+Eng Share (%)	32.2	39.2	38.7	39.4	−6.53***	0.39	0.74
Scientist Share (%)	5.2	9.1	8.1	7.2	−2.87**	1.85	0.70
Engineer Share (%)	27.0	30.1	30.6	32.2	−3.66**	−1.45	0.05
Software-Eng Share (%)	10.3	10.2	11.6	13.5	−2.30*	−2.81***	−0.96
Foreign-Origin Share (%)	12.9	11.6	15.3	21.3	−4.13	−6.46*	−2.75
Senior Share (%)	36.8	33.6	34.0	32.4	3.56*	0.21	0.32
Hires/Firm/Yr	5.3	6.2	4.7	9.2	−2.57	−2.27**	−3.39***
Ann. Separation Rate (%)	20.8	25.1	23.0	26.3	−4.49***	−0.09	−2.14***
N firms	173	224	512	11,379	—	—	—

This table characterizes the workforce of VC-backed startups in QSBS-eligible sectors, by metro tier. The sample comprises post-2009 entry cohorts (2009–2017), observed through 2022, restricted to firms with positive measured headcount in Revelio Labs. Columns (1)–(4) report tier means. Columns (5)–(7) report coefficients from firm-level regressions of each measure on tier indicators and Census-division fixed effects, with *Established Hubs* as the omitted category; statistical significance is assessed using standard errors clustered by CBSA. *Scientist*, *Engineer*, and *Senior* shares are mean headcount in each category divided by mean total headcount. *Foreign-Origin Share* is the mean share of geolocated workers originating outside North America. *Hires/Firm/Yr* is mean annual gross hires. The *Annual Separation Rate* is departures per year as a percentage of headcount, an inverse measure of worker retention. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Data are from Revelio Labs and PitchBook.

Table 9: Worker Education, Compensation, Geographic Origins, and Labor Demand by Metro Tier

Panel A: Educational Attainment

Firm's metro tier	Workers	PhD (%)	Advanced (%)	Elite Univ. (%)
No Prior VC	31,529	3.0	19.9	6.6
Low Prior VC	38,259	3.7	24.2	8.7
Medium Prior VC	78,323	3.8	22.5	7.2
Established Hubs	3,601,601	3.8	26.3	13.6

Panel B: Worker Compensation

Firm's metro tier	Firms	Avg. Salary ($)	Engineer ($)	Scientist ($)
No Prior VC	159	111,371	109,740	99,795
Low Prior VC	214	108,706	107,028	95,217
Medium Prior VC	472	106,893	104,788	99,298
Established Hubs	10,462	111,805	114,410	106,943

Panel C: Where New Hires Came From

Firm's metro tier	Arrivals w/ prior job	Moved-in (%)	From a hub (%)	From abroad (%)
No Prior VC	24,822	37.3	5.6	20.5
Low Prior VC	32,606	38.6	7.0	17.1
Medium Prior VC	58,500	36.1	5.8	18.3
Established Hubs	2,560,120	35.3	8.8	32.3

Panel D: Labor Demand (Online Job Postings, 2010–2022)

Firm's metro tier	Firms	Firm-Yrs	Postings	Postings/Firm-Yr
No Prior VC	87	279	15,223	54.6
Low Prior VC	155	554	14,590	26.3
Medium Prior VC	313	1,061	24,859	23.4
Established Hubs	7,659	31,481	1,295,181	41.1

This table characterizes the workers employed by VC-backed startups in QSBS-eligible sectors, and those startups' hiring activity, by metro tier, for post-2009 entry cohorts. *Panel A* reports the highest degree attained, from Revelio Labs education histories: *PhD* comprises doctoral degrees, *Advanced* comprises Master's and doctoral degrees, and *Elite Univ.* indicates a degree from a top-25 U.S. or top-50 world-ranked university. *Panel B* reports mean modeled worker compensation among firms with at least three salaried positions in Revelio Labs; a log-compensation regression on tier indicators with Census-division and entry-year fixed effects (standard errors clustered by CBSA) finds that startups in *No Prior VC* metros pay statistically indistinguishably from those in *Established Hubs* (-0.3%, $t = -0.1$), despite substantially lower local costs of living; compensation is modeled rather than administratively reported, so levels are best interpreted in relative terms. *Panel C* traces the geographic origins of new hires: for each worker's first position at a portfolio company, the metropolitan area of the immediately preceding position is identified from Revelio Labs employment histories; *Moved-in* indicates a prior position in a different metropolitan area, *From a hub* a prior position in San Francisco, San Jose, New York, Boston, Los Angeles, or Seattle, and *From abroad* a prior position outside the United States. *Panel D* reports online job-posting activity at these startups over 2010–2022; because Lightcast posting coverage begins around 2010, no pre-reform baseline is available and the comparison is cross-tier within the post-reform period, with *Firm-Yrs* the number of firm-years with posting activity in Lightcast and *Postings/Firm-Yr* equal to Postings divided by Firm-Yrs. Data are from Revelio Labs, Lightcast, and PitchBook.

Table 10: Local Tax Base and Labor-Market Outcomes: QSBS-Induced Entry and Metro Tiers

Panel A: Dose-Response — Entry Intensity and Local Economic Growth			
	Log personal income	Log wages & salaries	Log per-capita income
$\mathbb{1}\{\text{Any Entry}\} \times \mathbb{1}\{\text{Post}\}$	−0.009	−0.010	−0.012
	(−0.61)	(−0.61)	(−1.36)
$\log(\text{Total Entry}) \times \mathbb{1}\{\text{Post}\}$	0.007***	0.013***	0.001
(among entrant metros)	(2.75)	(4.34)	(0.55)
Observations	4,427	4,427	4,427
Mean Dep. Var.	16.87	16.15	10.66
Panel B: Tier-Level Differences Relative to Established Hubs			
	No Prior VC × Post	Low Prior VC × Post	Medium Prior VC × Post
Log personal income	−0.021	−0.026*	−0.031**
	(−1.53)	(−1.82)	(−2.25)
Log wages & salaries	−0.054***	−0.052***	−0.041***
	(−3.69)	(−3.16)	(−2.61)
Log per-capita income	0.005	0.000	−0.009
	(0.64)	(0.06)	(−1.06)
CBSA FE	✓	✓	✓
Census Div.×Year FE	✓	✓	✓

This table relates local economic outcomes to QSBS-induced venture-capital entry. Outcomes are logged CBSA-level aggregates built from BEA county data on personal income, per-capita income, and wage-and-salary disbursements (CAINC30), 2004–2022, for the 233 metros with VC activity at some point during 2004–2017 that match to the BEA county aggregates — 86 *No Prior VC* entrants, 54 *Low*, 44 *Medium Prior VC*, and 49 *Established Hubs*. All specifications include CBSA and Census-division×year fixed effects, with standard errors clustered by CBSA. *Panel A* decomposes the dose response into an extensive margin ($\mathbb{1}\{\text{Any Entry}\}$, equal to one for metros with at least one post-2009 eligible-sector VC-backed firm, interacted with Post) and an intensive margin (the log of the metro's total post-2009 count of such firms — a time-invariant entry dose — defined for entrant metros and zero otherwise, interacted with Post); the log is applied only to strictly positive counts. Growth loads on entry *intensity* rather than on the mere presence of entry. Estimates are nearly identical under one-term transformations (wages 0.014 ($t = 4.6$) under $\log(1 + \cdot)$ and 0.012 ($t = 4.5$) under the inverse hyperbolic sine) and are robust to absorbing each tier's full yearly trajectory (tier×year fixed effects, intensive margin: wages 0.013 ($t = 2.2$); income 0.012 ($t = 2.5$)), so the gradient is identified within tiers rather than by the hub–nonhub contrast; the dynamics are plotted in Figure 7. *Panel B* reports tier×Post difference-in-differences estimates with *Established Hubs* as the omitted category; because established hubs experienced an exceptional post-2009 technology boom, these level comparisons are dominated by the hub trajectory, and the per-capita income row shows that residents of underserved metros nonetheless kept pace. t-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Data are from the BEA and PitchBook.

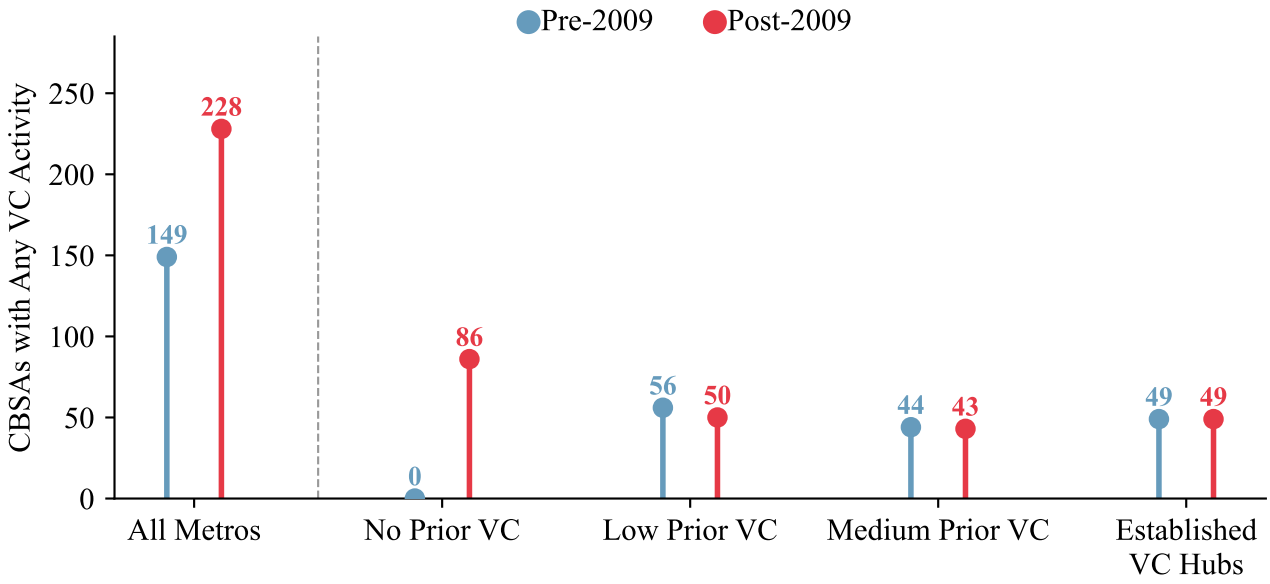
Internet Appendix to

"Democratizing Venture Capital: Tax Incentives and the Geographic Expansion of Startup Investing"

Murillo Campello
University of Florida & NBER

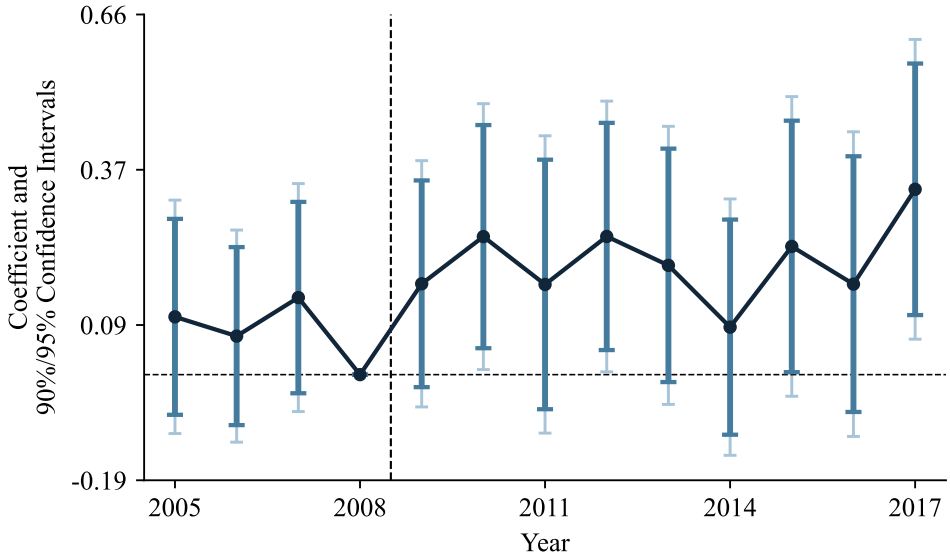
Guilherme Junqueira
University of Florida

Figure IA1: Number of U.S. Metro Areas with VC Activity: Pre- vs. Post-2009



This figure shows the number of U.S. metro areas (CBSAs) with at least one VC-backed firm, before and after the 2009 QSBS expansion, overall and by metro tier. A CBSA is counted if it had VC activity in at least one year of the relevant period (Pre-2009 = 2004–2008; Post-2009 = 2009–2017). Tiers are defined by pre-2009 total VC-backed startup counts: *No Prior VC* = zero pre-2009 VC activity; *Low Prior VC* = bottom tertile of active metros; *Medium Prior VC* = middle tertile; *Established VC Hubs* = top tertile. VC investors only. Data from PitchBook.

Figure IA2: Triple-Differences Event Study: Common-Support Sample



This figure replicates the triple-differences event study of Figure 4 on the common-support sample of Column (3) of Table 3, restricting to metros at least as large as the median post-2009 entrant; 2008 is the omitted baseline year, and 90% (darker) and 95% (lighter) confidence intervals are based on CBSA-clustered standard errors. A joint test that all pre-2009 coefficients equal zero gives $p = 0.48$; the corresponding test on the 25th-percentile common-support sample of Column (2) gives $p = 0.66$. Data are from PitchBook.

Table IA1: Robustness: Extensive-Margin Estimates Across Alternative Specifications and Samples

Specification and sample	Coef.	(t)
Baseline: all metros, population-decile×year FE	0.078**	(2.27)
+ log(Population)×Post control	0.075**	(2.20)
All metros, log(Population)×Post control	0.074**	(2.19)
All metros, population-weighted	0.071**	(2.33)
All metros, common support	0.077***	(2.66)
Metros with any VC activity, 2004–2017	0.155***	(4.70)

This table examines the sensitivity of the extensive-margin entry result to the specification of the size control and the definition of the estimation sample. The dependent variable is an indicator for any eligible-sector VC activity in a CBSA-year, and the reported coefficient is on $\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Post}\}$, where $\mathbb{1}\{\text{No Prior VC}\}$ equals one for CBSAs with zero total VC activity during 2004–2008. The first row reproduces the baseline specification of Table 1, Column (1): CBSA and population-decile×year fixed effects; deciles are computed from year-2000 metropolitan population — measured before the sample begins — and held fixed throughout. The second row adds a log(Population)×Post control to the baseline; the estimate is essentially unchanged, confirming that the coefficient of interest does not depend on the parametric control. The remaining rows include CBSA and Census-division×year fixed effects and address the size differential through, respectively, a continuous log(Population)×Post control, population weighting, and a common-support restriction that drops previously unserved metros smaller than the 25th-percentile post-2009 entrant (278 CBSAs). The final row restricts the sample to metros with VC activity at some point during 2004–2017 (235 CBSAs); because this restriction conditions on post-2009 outcomes, it mechanically inflates the estimated effect. A wild-cluster restricted bootstrap (Rademacher weights, 1,999 replications, null imposed) yields $p = 0.005$ for the common-support specification, corroborating the cluster-robust inference. t-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Investment data are from PitchBook; population data are from the Bureau of Economic Analysis.

Table IA2: Robustness: No Prior VC Extensive Margin Across Alternative Tier Classifications

Classification (baseline omitted)	$\mathbb{1}\{\text{Any Elig. VC}\}$		$\mathbb{1}\{\text{Any Inelig. VC}\}$	
	Common supp. (1)	Pop.-wtd. (2)	Common supp. (3)	Pop.-wtd. (4)
Tertile	0.144^{***}	0.129^{***}	-0.161^{***}	-0.139^{***}
Top 5	0.198^{***}	0.166^{***}	-0.042	-0.058
Top 10	0.180^{***}	0.175^{***}	-0.065	-0.077
Top 15	0.168^{***}	0.154^{***}	-0.100^{*}	-0.105^{***}
Quartile	0.166^{***}	0.145^{***}	-0.142^{***}	-0.135^{***}
Quintile	0.165^{***}	0.142^{***}	-0.184^{***}	-0.138^{***}

This table reports the No Prior VC × Post extensive-margin coefficient under alternative definitions of the metropolitan tiers, with the top group in each scheme (top tertile, top 5, top 10, top 15, top quartile, or top quintile) as the omitted category. Columns (1)–(2) use an indicator for any eligible-sector VC; Columns (3)–(4) use any ineligible-sector VC. "Common supp." restricts to metros at least as large as the 25th-percentile entrant (278 CBSAs); "Pop.-wtd." weights the full 382-metro sample by population. Because previously unserved metros and established hubs occupy largely disjoint size ranges, metropolitan size is controlled through the sample restriction and weighting rather than a continuous term. Tier boundaries are reconstructed from pre-2009 activity within each scheme, so the tertile row may differ slightly from the corresponding main-text estimates. Statistical significance is assessed using CBSA-clustered standard errors. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Data are from PitchBook.

Table IA3: Metro Area VC Activity by Tier: Pre- vs. Post-2009

Panel A: Eligible-Sector VC Activity

	Any Eligible VC		Avg. Firms Funded		Avg. Raised ($M, cond.)	
Tier	Pre-2009	Post-2009	Pre-2009	Post-2009	Pre-2009	Post-2009
No Prior VC	—	0.233	—	0.34	—	4.6
Low Prior VC	0.229	0.377	0.24	0.69	5.9	7.1
Medium Prior VC	0.618	0.689	0.97	1.97	8.4	11.4
Established Hubs	0.963	0.986	21.49	46.48	204.3	325.2

Panel B: Ineligible-Sector VC Activity

	Any Ineligible VC		Avg. Firms Funded		Avg. Raised ($M, cond.)	
Tier	Pre-2009	Post-2009	Pre-2009	Post-2009	Pre-2009	Post-2009
No Prior VC	—	0.048	—	0.05	—	6.1
Low Prior VC	0.039	0.042	0.04	0.05	4.7	3.5
Medium Prior VC	0.114	0.146	0.11	0.16	8.8	3.6
Established Hubs	0.518	0.705	1.61	4.87	24.5	44.8

This table presents descriptive statistics for VC activity by metro tier before and after the 2009 QSBS expansion. The sample is a balanced CBSA-year panel, 2004–2017, VC investors only. Tiers are defined by pre-2009 *total* VC activity (eligible and ineligible combined): *No Prior VC* = zero total VC pre-2009; *Low/Medium Prior VC* = bottom/middle tertile of metros with any prior VC; *Established Hubs* = top tertile. *Any Eligible (Ineligible) VC* is the fraction of CBSA-years with at least one VC-backed startup in a QSBS-eligible (ineligible) sector. *Avg. Firms Funded* is the mean count of newly funded startups per CBSA-year. *Avg. Raised ($M, cond.)* is the conditional mean of capital raised (among CBSA-years with positive reported capital) in millions USD. Pre-2009 = 2004–2008; Post-2009 = 2009–2017. Post-2009 statistics for the *No Prior VC* tier are computed over the 86 metros that received their first VC-backed startup after 2009. "—" indicates zero activity in that period by construction. Data are from PitchBook.

Table IA4: Hold-Out Definitions of Unserved Markets and Placebo Reform Dates

	Unserved defined on	Estimation window	(1)	(2)
Placebo reform 2006	2000–2003	2004–2008	−0.064	−0.016
			(−1.04)	(−0.28)
Placebo reform 2007	2000–2003	2004–2008	−0.032	0.013
			(−0.56)	(0.23)
QSBS reform 2009	2000–2008	2004–2017	0.059*	0.078**
			(1.78)	(2.36)
Population-decile×Year FE, CBSA FE			✓	✓
Census Division×Year FE				✓

This table implements the hold-out exercise: unserved status is redefined on data that predate the estimation sample, and the analysis is rerun with reform dates placed inside the pre-reform period. Extending the investment-level data back to 2000, *No Prior VC* is redefined as zero VC-backed startup entries during 2000–2003 (first two rows; 294 metros) or during the full 2000–2008 pre-reform window (final row; 224 metros). Because these years predate the sample construction of the main analysis, the panel is built directly from first financings of U.S. VC-backed startups over 2000–2017; the dependent variable is an indicator for any eligible-sector VC entry in a CBSA-year, and the reported coefficient is on $\mathbb{1}\{\text{Unserved}\} \times \mathbb{1}\{\text{Post}\}$, where Post begins in the year shown. All specifications include CBSA and population-decile×year fixed effects, with deciles computed from year-2000 metropolitan population; Column (2) adds Census-division×year fixed effects, as in Table 1. Because the 2000–2003 definition window is disjoint from the estimation sample, a constant rate of sporadic re-entry is absorbed by the CBSA fixed effects, so the placebo rows isolate precisely the accelerating diffusion that a secular-trends account implies; both placebo estimates are statistically indistinguishable from zero, while the actual 2009 reform — with unserved status defined over the full pre-reform window — yields a positive and significant estimate. In a dynamic version with event-time indicators (2008 omitted), a joint test that all pre-2009 coefficients equal zero gives $p = 0.51$. t-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Investment data are from PitchBook; population data are from the Bureau of Economic Analysis.

Table IA5: QSBS and Eligible VC in New Markets: Triple-Difference (Excluding 2009)

	Pop.-weighted (1)	Common support (25th pctile) (2)	Common support (50th pctile) (3)
$\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Eligible}\} \times \mathbb{1}\{\text{Post}\}$	0.182***	0.112*	0.153**
	(3.28)	(1.91)	(2.27)
Observations	9,932	5,902	4,472
CBSA×Sector, CBSA×Year, Sector×Year FE	✓	✓	✓

This table reproduces the triple-difference estimates in Table 3 for a sample that omits the reform year 2009 (a "donut" specification), under the population-weighted sample and the two common-support samples of that table. *t*-statistics based on CBSA-clustered standard errors are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. Investment data are from PitchBook; population data are from the Bureau of Economic Analysis.

Table IA6: Robustness: Top 15 Metros vs. Others

Panel A: Firm Counts			
Dependent Variable:	𝟙{Any Elig. VC}	𝟙{Any Inelig. VC}	Frac. Eligible
	(1)	(2)	(3)
𝟙{No Prior VC} × 𝟙{Post}	0.250***	−0.089*	—
	(8.06)	(−1.72)	
𝟙{Other Active Metros} × 𝟙{Post}	0.104***	−0.057	0.087***
	(4.10)	(−1.09)	(3.26)
Observations	3,290	3,290	2,086
Mean Dep. Var.	0.460	0.179	0.597
Panel B: Capital			
Dependent Variable:	Elig. Capital (Log)	Inelig. Capital (Log)	Frac. Eligible ($)
	(4)	(5)	(6)
𝟙{No Prior VC} × 𝟙{Post}	—	—	—
𝟙{Other Active Metros} × 𝟙{Post}	−0.299*	−0.520	0.108***
	(−1.67)	(−1.34)	(3.46)
Observations	1,427	520	2,086
Mean Dep. Var.	2.5	2.0	0.584
CBSA FE	✓	✓	✓
Census Division×Year FE	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓

This table replicates the main tier analysis of Tables 5 and IA11 using the top 15 metros by pre-2009 VC activity as the omitted baseline, with all remaining active metros grouped as *Other Active Metros*. The extensive-margin sample comprises metros with any 2004–2017 VC activity (235 CBSAs), and thus differs from the 278-CBSA common-support sample of Table 5. *Panel A* reports firm count outcomes; *Panel B* reports capital outcomes. Fraction eligible columns restricted to metros with prior VC activity. No Prior VC metros are excluded from capital regressions due to separation (see footnote 18). *t*-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table IA7: Robustness: Top 5 Metros vs. Others

Panel A: Firm Counts			
Dependent Variable:	𝟙{Any Elig. VC}	𝟙{Any Inelig. VC}	Frac. Eligible
	(1)	(2)	(3)
𝟙{No Prior VC} × 𝟙{Post}	0.273***	−0.030	—
	(7.32)	(−0.66)	
𝟙{Other Active Metros} × 𝟙{Post}	0.120***	0.007	0.102***
	(3.86)	(0.15)	(2.61)
Observations	3,290	3,290	2,086
Mean Dep. Var.	0.460	0.179	0.597
Panel B: Capital			
Dependent Variable:	Elig. Capital (Log)	Inelig. Capital (Log)	Frac. Eligible ($)
	(4)	(5)	(6)
𝟙{No Prior VC} × 𝟙{Post}	—	—	—
𝟙{Other Active Metros} × 𝟙{Post}	−0.729***	−0.371	0.104**
	(−3.24)	(−0.91)	(2.50)
Observations	1,427	520	2,086
Mean Dep. Var.	2.5	2.0	0.584
CBSA FE	✓	✓	✓
Census Division×Year FE	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓

This table replicates the main tier analysis classifying the top 5 metros by pre-2009 VC activity as Established Hubs (omitted baseline), with all remaining active metros grouped as Other Active Metros. The extensive-margin sample comprises metros with any 2004–2017 VC activity (235 CBSAs). *Panel A* reports firm count outcomes; *Panel B* reports capital outcomes. Fraction eligible columns restricted to metros with prior VC activity. *No Prior VC* metros are excluded from capital regressions due to separation. *t*-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table IA8: Robustness: Top 10 Metros vs. Others

Panel A: Firm Counts			
Dependent Variable:	𝟙{Any Elig. VC}	𝟙{Any Inelig. VC}	Frac. Eligible
	(1)	(2)	(3)
𝟙{No Prior VC} × 𝟙{Post}	0.260***	−0.054	—
	(7.66)	(−1.12)	
𝟙{Other Active Metros} × 𝟙{Post}	0.111***	−0.018	0.084***
	(3.97)	(−0.37)	(2.67)
Observations	3,290	3,290	2,086
Mean Dep. Var.	0.460	0.179	0.597
Panel B: Capital			
Dependent Variable:	Elig. Capital (Log)	Inelig. Capital (Log)	Frac. Eligible ($)
	(4)	(5)	(6)
𝟙{No Prior VC} × 𝟙{Post}	—	—	—
𝟙{Other Active Metros} × 𝟙{Post}	−0.420**	−0.228	0.094***
	(−2.03)	(−0.42)	(2.77)
Observations	1,427	520	2,086
Mean Dep. Var.	2.5	2.0	0.584
CBSA FE	✓	✓	✓
Census Division×Year FE	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓

This table replicates the main tier analysis classifying the top 10 metros by pre-2009 VC activity as Established Hubs (omitted baseline), with all remaining active metros grouped as Other Active Metros. The extensive-margin sample comprises metros with any 2004–2017 VC activity (235 CBSAs). *Panel A* reports firm count outcomes; *Panel B* reports capital outcomes. Fraction eligible columns restricted to metros with prior VC activity. *No Prior VC* metros are excluded from capital regressions due to separation. *t*-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table IA9: Robustness: Quartile Tier Classification

Panel A: Firm Counts			
Dependent Variable:	𝟙{Any Elig. VC}	𝟙{Any Inelig. VC}	Frac. Eligible
	(1)	(2)	(3)
𝟙{No Prior VC} × 𝟙{Post}	0.235***	−0.141***	—
	(8.46)	(−2.95)	
𝟙{Q1} × 𝟙{Post}	0.144***	−0.171***	0.126***
	(3.76)	(−3.54)	(3.27)
𝟙{Q2} × 𝟙{Post}	0.041	−0.145**	0.013
	(0.60)	(−2.47)	(0.19)
𝟙{Q3} × 𝟙{Post}	0.081**	−0.071	0.064
	(1.99)	(−1.10)	(1.46)
Observations	3,290	3,290	2,086
Mean Dep. Var.	0.460	0.179	0.597
Panel B: Capital			
Dependent Variable:	Elig. Capital (Log)	Inelig. Capital (Log)	Frac. Eligible ($)
	(4)	(5)	(6)
𝟙{No Prior VC} × 𝟙{Post}	—	—	—
𝟙{Q1} × 𝟙{Post}	−0.519**	0.152	0.156***
	(−2.46)	(0.20)	(3.87)
𝟙{Q2} × 𝟙{Post}	0.075	0.058	0.001
	(0.25)	(0.08)	(0.01)
𝟙{Q3} × 𝟙{Post}	−0.412*	−0.673	0.087**
	(−1.92)	(−1.44)	(1.99)
Observations	1,427	520	2,086
Mean Dep. Var.	2.5	2.0	0.584
CBSA FE	✓	✓	✓
Census Division×Year FE	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓

This table replicates the main tier analysis using quartiles instead of tertiles to classify metros with prior VC activity. Established Hubs (Q4, top quartile) is the omitted baseline. The extensive-margin sample comprises metros with any 2004–2017 VC activity (235 CBSAs). *Panel A* reports firm count outcomes; *Panel B* reports capital outcomes. Fraction eligible columns restricted to metros with prior VC activity. *No Prior VC* metros are excluded from capital regressions due to separation. t-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table IA10: Robustness: Quintile Tier Classification

Panel A: Firm Counts			
Dependent Variable:	𝟙{Any Elig. VC} (1)	𝟙{Any Inelig. VC} (2)	Frac. Eligible (3)
𝟙{No Prior VC} × 𝟙{Post}	0.242***	−0.156***	—
	(8.93)	(−3.44)	
𝟙{Q1} × 𝟙{Post}	0.118**	−0.170***	0.104**
	(2.26)	(−3.59)	(2.01)
𝟙{Q2} × 𝟙{Post}	0.128***	−0.203***	0.111**
	(2.70)	(−4.01)	(2.36)
𝟙{Q3} × 𝟙{Post}	0.166***	−0.161**	0.167***
	(2.73)	(−2.59)	(2.79)
𝟙{Q4} × 𝟙{Post}	0.019	−0.038	−0.005
	(0.56)	(−0.55)	(−0.13)
Observations	3,290	3,290	2,086
Mean Dep. Var.	0.460	0.179	0.597
Panel B: Capital			
Dependent Variable:	Elig. Capital (Log) (4)	Inelig. Capital (Log) (5)	Frac. Eligible ($) (6)
𝟙{No Prior VC} × 𝟙{Post}	—	—	—
𝟙{Q1} × 𝟙{Post}	−0.977**	0.531	0.129**
	(−2.60)	(0.89)	(2.42)
𝟙{Q2} × 𝟙{Post}	−0.344	−0.421	0.113**
	(−1.35)	(−0.64)	(2.17)
𝟙{Q3} × 𝟙{Post}	−0.162	−0.909	0.177***
	(−0.58)	(−1.47)	(2.74)
𝟙{Q4} × 𝟙{Post}	−0.310	−0.442	0.006
	(−1.41)	(−0.98)	(0.16)
Observations	1,427	520	2,086
Mean Dep. Var.	2.5	2.0	0.584
CBSA FE	✓	✓	✓
Census Division×Year FE	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓

This table replicates the main tier analysis using quintiles instead of tertiles to classify metros with prior VC activity. Established Hubs (Q5, top quintile) is the omitted baseline. The extensive-margin sample comprises metros with any 2004–2017 VC activity (235 CBSAs). *Panel A* reports firm count outcomes; *Panel B* reports capital outcomes. Fraction eligible columns restricted to metros with prior VC activity. *No Prior VC* metros are excluded from capital regressions due to separation. t-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table IA11: QSBS-Induced VC Growth by Metro Tier: Capital Raised

Dependent Variable:	Eligible Capital		Ineligible Capital		Frac. Eligible ($)
	Log	Levels ($M)	Log	Levels ($M)	
	(1)	(2)	(3)	(4)	(5)
$\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	—	—	—	—	—
$\mathbb{1}\{\text{Low Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	-0.464^{**}	-133.9^{*}	0.199	-14.6	0.158^{***}
	(-2.19)	(-1.93)	(0.25)	(-1.17)	(3.95)
$\mathbb{1}\{\text{Med. Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	-0.261	-125.1^{**}	-0.571	-17.2^{**}	0.073
	(-1.15)	(-2.12)	(-1.25)	(-2.08)	(1.49)
Observations	1,427	1,427	520	520	2,086
Mean Dep. Var.	2.5	137.2	2.0	32.9	0.584
CBSA FE	✓	✓	✓	✓	✓
Census Division×Year FE	✓	✓	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓	✓	✓

This table presents estimates of where QSBS-induced capital reallocation concentrated, using tier×post interactions with Established Hubs (top tertile) as the omitted baseline. The sample is a CBSA-year balanced panel, 2004–2017, VC investors only. Columns (1) and (3) report OLS for log capital on the raised > 0 subsample. Columns (2) and (4) report OLS for capital in millions USD (levels) on the raised > 0 subsample. Column (5) reports OLS for the fraction of total reported capital in eligible sectors, restricted to metros with prior VC activity (tiers 2–4). Deals with missing deal size are excluded throughout. *No Prior VC* metros exhibit separation in Columns (1)–(4) and are excluded from Column (5) because the eligible share is undefined absent prior activity. t-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook.

Table IA12: Startup Outcome Rates by Metro Tier: Pre- vs. Post-2009

	Pre-2009		Post-2009	
Panel A: Success and Failure				
Tier	Unicorn Rate (%)	Failure Rate (%)	Unicorn Rate (%)	Failure Rate (%)
No Prior VC	—	—	0.92	41.28
Low Prior VC	0.00	51.52	1.16	40.15
Medium Prior VC	0.53	39.57	1.04	40.41
Established Hubs	2.75	27.08	4.00	31.14
All Metros	2.61	28.01	3.77	31.86
Panel B: Innovation and Employment				
Tier	Patent Rate (%)	Employees/Firm	Patent Rate (%)	Employees/Firm
No Prior VC	—	—	26.15	15.0
Low Prior VC	34.85	7.4	31.27	13.3
Medium Prior VC	32.62	8.8	23.83	10.8
Established Hubs	43.71	19.8	28.55	21.0
All Metros	43.09	19.2	28.37	20.4

This table reports per-firm lifetime outcome rates for VC-backed startups in QSBS-eligible sectors, by metro tier and period. Each firm is counted once at its canonical CBSA entry year; outcomes reflect lifetime realizations. Tiers are defined by pre-2009 total VC-backed startup counts. *Panel A*: Unicorn Rate = percentage of firms ever flagged as unicorn by PitchBook; Failure Rate = percentage of firms ever recorded as out of business or experiencing a five-year funding gap. *Panel B*: Patent Rate = percentage of firms ever receiving a USPTO patent; Employees/Firm = mean annual total headcount per firm. "All Metros" pools all tiers. "—" indicates zero pre-2009 activity by construction for No Prior VC metros. Outcome data from PitchBook, USPTO, and Revelio Labs.

Table IA13: Did QSBS Generate Social Value in Underserved Markets? Per-Firm Outcomes

	Failure Rate (1)	Unicorn Rate (2)	Patent Rate (3)	Emp./Firm (4)
$\mathbb{1}\{\text{No Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	—	—	—	—
$\mathbb{1}\{\text{Low Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	−0.098	0.003	0.131*	3.291
	(−1.19)	(0.39)	(1.68)	(0.70)
$\mathbb{1}\{\text{Med. Prior VC}\} \times \mathbb{1}\{\text{Post}\}$	0.075	−0.001	0.048	−0.046
	(1.34)	(−0.10)	(1.01)	(−0.01)
Observations	1,346	1,346	1,346	1,346
Mean Dep. Var.	0.363	0.016	0.308	13.760
CBSA FE	✓	✓	✓	✓
Census Division×Year FE	✓	✓	✓	✓
Clustered SE (CBSA)	✓	✓	✓	✓

This table presents DiD estimates of per-firm lifetime outcome rates in previously underserved metro areas, using tier×post interactions with Established Hubs (top tertile) as the omitted baseline. Tiers are defined by pre-2009 total VC-backed startup counts: *No Prior VC* = zero pre-2009 VC; *Low Prior VC* = bottom tertile of active metros; *Med. Prior VC* = middle tertile. The sample is a CBSA-year panel, 2004–2022, VC investors and QSBS-eligible sectors only. Each firm is counted once at its canonical CBSA entry year. *Failure Rate*: fraction of firms ever going out of business or experiencing a five-year funding gap. *Unicorn Rate*: fraction ever flagged as unicorn by PitchBook. *Patent Rate*: fraction ever receiving a USPTO patent. *Emp./Firm*: mean annual total headcount per firm. No Prior VC metros are fully absorbed by CBSA fixed effects due to separation — all pre-2009 outcomes are zero by construction; see Table IA12 for their post-2009 performance directly. *t*-statistics based on CBSA-clustered standard errors in parentheses. *, **, *** at 10%, 5%, 1%. Data from PitchBook, USPTO, and Revelio Labs.

Table IA14: Total Startup Outcomes by Metro Tier: Pre- vs. Post-2009

	Firms		Unicorns		Patent Firms		Patents		Failures		Employment	
Tier	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
No Prior VC	0	218	0	2	0	57	0	257	0	90	0	3,279
Low Prior VC	66	259	0	3	23	81	99	401	34	104	491	3,434
Medium Prior VC	187	579	1	6	61	138	375	547	74	234	1,650	6,224
Established Hubs	3,999	12,720	110	509	1,748	3,632	22,579	26,856	1,083	3,961	79,369	267,432

This table reports total lifetime outcome counts for VC-backed startups in QSBS-eligible sectors, by metro tier and period. Each firm is counted once at entry year using its canonical CBSA; outcomes reflect lifetime realizations. Tiers are defined by pre-2009 total VC-backed startup counts. Unicorns = firms with post-money valuation above $1 billion in PitchBook. Patent Firms = firms ever receiving a USPTO patent. Patents = cumulative USPTO grants. Failures = firms ever recorded as out of business or experiencing a five-year funding gap, the same definition used in Table IA12. Employment = sum of firm-level mean annual headcounts. Data are from PitchBook, USPTO, and Revelio Labs.

Table IA15: Startup Outcome Rates by Industry and Metro Tier: Pre- vs. Post-2009

	Pre-2009				Post-2009			
Industry	*N*	Fail (%)	Unicorn (%)	Emp./Firm	*N*	Fail (%)	Unicorn (%)	Emp./Firm
Panel A: No Prior VC								
Technology	—	—	—	—	88	51.1	2.27	29.2
Biotech & Healthcare	—	—	—	—	55	29.1	0.00	5.2
Industrial & Manufacturing	—	—	—	—	37	37.8	0.00	8.2
Consumer & Retail	—	—	—	—	20	40.0	0.00	2.0
Information & Media	—	—	—	—	7	57.1	0.00	7.7
Other	—	—	—	—	11	27.3	0.00	2.7
Panel B: Low Prior VC								
Technology	20	60.0	0.00	12.9	117	38.5	1.71	17.1
Biotech & Healthcare	18	50.0	0.00	2.2	51	33.3	0.00	4.2
Industrial & Manufacturing	16	43.8	0.00	5.0	47	31.9	2.13	20.1
Consumer & Retail	7	42.9	0.00	12.8	25	64.0	0.00	7.2
Information & Media	—	—	—	—	11	63.6	0.00	2.0
Other	5	60.0	0.00	4.8	8	50.0	0.00	8.8
Panel C: Med. Prior VC								
Technology	62	41.9	1.61	13.5	240	35.4	2.08	14.2
Biotech & Healthcare	67	28.4	0.00	4.9	166	41.6	0.00	5.0
Industrial & Manufacturing	28	50.0	0.00	6.5	70	38.6	0.00	8.3
Consumer & Retail	6	66.7	0.00	30.7	62	45.2	0.00	13.3
Information & Media	2	50.0	0.00	13.2	21	52.4	4.76	25.5
Other	22	45.5	0.00	4.3	20	70.0	0.00	2.3
Panel D: Established Hubs								
Technology	2,100	25.3	3.24	22.6	6,865	30.1	4.56	22.9
Biotech & Healthcare	904	28.1	2.43	9.5	2,341	26.1	3.84	12.2
Industrial & Manufacturing	498	28.7	2.21	26.2	1,549	33.4	3.42	28.3
Consumer & Retail	135	28.9	2.96	28.5	1,088	38.2	3.58	22.0
Information & Media	221	31.2	0.90	16.8	632	42.6	1.58	17.6
Other	141	32.6	2.13	19.6	245	33.1	1.63	12.0

This table reports firm counts and per-firm lifetime outcome rates by industry and metro tier, before and after the 2009 QSBS expansion. Each firm is counted once at its canonical CBSA entry year; outcomes reflect lifetime realizations. Tiers are defined by pre-2009 total VC-backed startup counts. *Fail (%)*: percentage of firms ever going out of business or experiencing a five-year funding gap. *Unicorn (%)*: percentage of firms ever flagged as unicorn by PitchBook. *Emp./Firm*: mean annual total headcount per firm. "—" indicates no firms in the cell: *No Prior VC* metros had no pre-2009 VC activity by construction, and *Low Prior VC* metros happened to have no pre-2009 Information & Media entrants. VC investors, QSBS-eligible sectors only. Data from PitchBook and Revelio Labs.