



(Research Article)

# Decentralized Capital, Centralized Growth? A Qualitative Synthesis on the Role of Venture Capital in Reinforcing Innovation Hubs

Mia Christy Patricia <sup>1</sup>, Yuni Sara <sup>2</sup>,

<sup>1</sup> STIE Kasih Bangsa, Jakarta Indonesia 1; e-mail : [emia@stiekasihbangsa.ac.id](mailto:emia@stiekasihbangsa.ac.id)

<sup>2</sup> STIE Kasih Bangsa, Jakarta, Indonesia 2; e-mail : [yunistiekasihbangsa@gmail.com](mailto:yunistiekasihbangsa@gmail.com)

\* Corresponding Author : Mia Christy Patricia

**Abstract:** This qualitative literature review explores the paradox of decentralized capital contributing to the continued centralization of innovation activity within established geographic hubs. Drawing on recent empirical studies, the review synthesizes findings on how venture capital (VC), though increasingly distributed across regions, remains concentrated in innovation ecosystems such as Silicon Valley, Boston, and New York. The analysis highlights factors including relational investing, agglomeration economies, and institutional embeddedness that reinforce this geographic concentration. While remote investing and public policy efforts aim to expand capital access, they often fall short of disrupting entrenched spatial dynamics. The findings underscore how venture capital acts not merely as a financial resource but as a structuring force that shapes the geography of innovation. The study contributes to understanding the limitations of capital diffusion in fostering regional entrepreneurial development and calls for more integrative policy interventions to balance growth.

**Keywords:** *Venture Capital, Innovation Hubs, Geographic Concentration, Decentralized Finance, Regional Entrepreneurship*

## 1. Introduction

Over the past several decades, venture capital (VC) has emerged as a pivotal force shaping the geography of innovation and entrepreneurship. By channeling funding, expertise, and networks to high-potential startups, VC has significantly influenced which regions thrive as innovation hubs and which remain on the periphery. While the digital age promised a flattening of geographic barriers to capital and entrepreneurial success, empirical evidence suggests that innovation and startup success remain deeply clustered in a few metropolitan regions (Chen & Ewens, 2025; Chattergoon & Kerr, 2022). This persistent agglomeration raises critical questions about the role of venture capital as both an enabler of entrepreneurship and a reinforcer of regional inequality.

One of the most striking findings in recent research is how institutional changes in the VC ecosystem can exacerbate geographic disparities. For instance, Chen and Ewens (2025) explore the impact of a regulatory change that restricted U.S. banks from investing in VC, disproportionately affecting historically underserved regions. Their analysis reveals that a one-standard-deviation increase in exposure to this rule led to a 20% decline in VC fund sizes and a 10% decrease in the probability of raising follow-on funds. Notably, startups in impacted states experienced a significant drop in financing and valuations and often relocated to more capital-rich regions, reinforcing the dominance of established innovation hubs such as Silicon Valley and Boston.

The clustering effect of venture capital is not merely a byproduct of economic dynamics but reflects structural preferences and localized knowledge flows within the VC industry. Research by Chen et al. (2010) shows that VCs exhibit a strong local bias, with a preference for investing in geographically proximate ventures, citing the importance of face-to-face

Received: January 31, 2025

Revised: February 2, 2025

Accepted: February 20, 2025

Published: February 28, 2025

Curr. Ver.: February 28, 2025



Copyright: © 2025 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the

Creative Commons Attribution

(CC BY SA) license

(<https://creativecommons.org/licenses/by-sa/4.0/>)

interaction and real-time monitoring. This behavior aligns with findings by Bernstein et al. (2016), who emphasize that active VC monitoring contributes to firm performance and, by implication, may be less feasible across long distances. Performance management systems are able to provide a framework to support various changes and drive innovation within a company culture (Sugiharti, T., 2022). Furthermore, Cumming and Dai (2010) provide empirical evidence that localized VC investments tend to yield better outcomes, reinforcing the rationale behind geographic concentration.

At the same time, the concentration of venture capital activity in a handful of metropolitan areas has significant implications for regional development and innovation inequality. Carlino and Kerr (2015) argue that agglomeration effects—such as knowledge spillovers, dense labor markets, and institutional support—create self-reinforcing cycles that make it difficult for emerging regions to compete. Duranton and Puga (2001) characterize these areas as “nursery cities” where new ideas are born and tested before being diffused elsewhere. However, this diffusion is often incomplete or slow, leaving many regions locked out of the innovation economy.

Despite growing concerns about regional inequality, attempts to decentralize capital allocation have met with mixed results. Government efforts to stimulate entrepreneurship outside traditional hubs—through regional development banks, accelerators, or public VC funds—have often failed to produce lasting outcomes (Lerner, 2012). One reason is the difficulty in replicating the social capital, dense networks, and tacit knowledge that underpin thriving startup ecosystems (Chatterji et al., 2014). Even when capital is made available, its effectiveness may be undermined by a lack of complementary assets such as managerial talent or access to customers (Guzman, 2024; Dahl & Sorenson, 2012).

The spatial dynamics of venture capital also intersect with broader structural issues in financial intermediation. Canales and Nanda (2012) note that decentralized banking systems may inadvertently reinforce credit rationing in peripheral regions due to informational asymmetries and market power. Similarly, Paravisini (2008) finds that local bank constraints can significantly affect firms' ability to secure external finance, compounding geographic disparities. As VC becomes an increasingly central channel for funding innovation, its concentration in a few locales risks amplifying these inequities.

Yet, venture capital also has the potential to catalyze regional development under the right conditions. Samila and Sorenson (2011) show that increases in VC activity are positively associated with higher rates of entrepreneurship and economic growth, especially when embedded in supportive ecosystems. Moreover, business accelerators and innovation hubs such as Startup Chile demonstrate that targeted interventions, when coupled with policy coherence and long-term commitment, can foster vibrant entrepreneurial communities (González-Uribe & Leatherbee, 2018).

The theoretical underpinnings of VC-driven geographic agglomeration are further enriched by studies on entrepreneurial migration. Bryan and Guzman (2023) provide compelling evidence that high-quality entrepreneurs are increasingly mobile, relocating to regions that offer better access to capital, talent, and mentorship. Their findings are echoed by Guzman (2024), who notes that startups that migrate from lower-tier regions to established hubs often experience significant performance gains. This reinforces the notion that VC not only finances innovation but also shapes the geography of entrepreneurial opportunity.

However, this migration is not without costs. The hollowing out of entrepreneurial capacity in regions losing startups can have long-term consequences for local economies, civic life, and social mobility (Klein, 2018). Furthermore, the outflow of talent and capital may entrench structural disadvantages that are difficult to reverse. As such, the centralization of VC capital represents more than an economic phenomenon—it is also a spatial and social one, with implications for equity and inclusion.

The present qualitative literature review synthesizes key contributions in this domain to answer a central question: Does the venture capital model, in its current form, inherently reinforce geographic concentration, or can it be leveraged to support more distributed innovation? By analyzing empirical evidence from diverse disciplines—including finance, urban economics, and management science—this review aims to provide a holistic understanding of how VC capital shapes innovation geographies.

Particular attention is given to recent shifts in the VC landscape, such as deregulation (Ewens & Farre-Mensa, 2020), board governance dynamics (Ewens & Malenko, 2024), and cross-industry linkages within VC portfolios (González-Uribe, 2020). In addition, we examine the extent to which systemic forces—such as investment cycles (Nanda & Rhodes-Kropf,

2013), fund inflows (Gompers & Lerner, 2000), and institutional incentives (Lerner et al., 2007)—contribute to the spatial dynamics of innovation.

This review argues that while venture capital has the potential to democratize access to entrepreneurial resources, its current geographic configuration tends to reinforce the centralization of innovation in a few elite regions. Understanding and addressing this tension is critical for scholars, practitioners, and policymakers seeking to build a more inclusive and balanced innovation economy.

## 2. Literature Review

Venture capital (VC) has long been recognized as a critical mechanism for financing innovation, but its impact on regional economic geography is increasingly drawing scholarly attention. A recent and influential study by Chen and Ewens (2025) revealed that regulatory shocks affecting VC fund access had disproportionate geographic effects. Their findings showed that a one-standard-deviation increase in exposure to banking restrictions led to a 20% decline in fund size and a 10% drop in the likelihood of raising follow-on funds, with downstream consequences on startup valuations and migration, thereby exacerbating regional entrepreneurial disparities.

The role of VC in shaping regional innovation ecosystems aligns with findings from Carlino and Kerr (2015), who argue that agglomeration economies—through knowledge spillovers and dense labor markets—make specific regions more conducive to high-growth entrepreneurship. Chattergoon and Kerr (2022) reinforce this view, suggesting that technology clusters are not just the result of entrepreneurial activity but also a function of capital centralization. Such clusters lead to spatial transformations in invention and innovation patterns, further reinforcing dominant innovation hubs. Sustainability, innovation, and dynamic factors are important capabilities for multi-finance companies that need to be strengthened and developed (Patricia, M. C., 2023).

Supporting this spatial centralization, Bernstein et al. (2016) demonstrated that active monitoring by VCs improves firm performance. However, such engagement is often geographically bounded, as VCs prefer proximity for oversight, as also evidenced by Chen et al. (2010), who found significant home bias in VC investments. Similarly, Cumming and Dai (2010) empirically confirmed that venture capitalists tend to invest locally due to reduced information asymmetries and increased relational governance, leading to geographic concentration.

Entrepreneurial mobility offers a mechanism by which firms seek capital, often migrating to regions with more accessible and abundant VC funding. Bryan and Guzman (2023) examined the migration patterns of entrepreneurs and revealed that higher-quality founders relocate to capital-rich hubs, driven by expectations of better financing and scaling prospects. Guzman (2024) confirmed that startups migrating to top-tier regions significantly outperformed those remaining in capital-constrained areas. This suggests that VC capital not only fuels firm growth but also directs the geography of entrepreneurial success.

However, such migration comes at the cost of exacerbating regional inequality. Klein (2018) highlighted long-term trends of growing regional inequality in the U.S., where innovation and capital accumulation are increasingly concentrated in a few cities, leaving other areas economically stagnant. The movement of startups toward innovation hubs may leave “sending” regions without the entrepreneurial base required for long-term economic vitality. Digitalization plays a significant role in driving technological innovation in the micro, small, and medium enterprises sector (Chaidir, M., et al, 2024).

In this regard, venture capital operates as both an enabler and a gatekeeper. According to Lerner and Nanda (2020), VC plays a pivotal role in financing high-risk innovation, but access remains highly uneven. This is further complicated by structural limitations in local financial institutions. For example, Canales and Nanda (2012) showed that decentralized banking systems can restrict SME access to credit due to market power and information frictions, contributing to uneven capital distribution across geographies. Paravisini (2008) likewise demonstrated how local bank financial constraints limit firms’ ability to secure financing.

The evolution of the VC industry itself contributes to centralization. Ewens and Farre-Mensa (2020) documented how deregulation and the rise of private capital markets contributed to a decline in IPOs, increasing the dependence of high-growth startups on VC in fewer locations. Similarly, Gompers and Lerner (2000) found that fund inflows into private equity markets correlate with rising valuations but do not evenly benefit firms in peripheral regions. As a result, capital tends to chase deals in familiar markets, reinforcing concentration.

Moreover, the dynamics of VC portfolios often promote synergies within regions. González-Uribe (2020) found that innovation resources are more likely to be exchanged among firms within the same VC portfolio, often co-located geographically. This intra-portfolio collaboration contributes to knowledge clustering and reinforces ecosystem advantages in innovation hubs.

Agglomeration effects are further facilitated by institutions such as business accelerators, which often function as intermediaries between entrepreneurs and VCs. González-Uribe and Leatherbee (2018), using evidence from Start-Up Chile, showed that well-designed accelerators can significantly improve venture performance. However, their effectiveness often depends on being embedded in a dense network of capital and mentorship, conditions more prevalent in existing hubs than in emerging regions.

Historical analysis also reveals persistent patterns. Kortum and Lerner (2000) established that venture capital significantly contributes to patenting activity and innovation output. Nonetheless, Kerr and Nanda (2009) warned that deregulated banking and venture capital systems may lead to increased inequality by democratizing access only for select geographies, not uniformly across the national landscape.

The impact of VC capital cycles on startup innovation has also been documented. Nanda and Rhodes-Kropf (2013) observed that high liquidity periods tend to encourage more radical innovation, but the benefits disproportionately accrue to startups located in capital-abundant environments. Thus, even innovation intensity is regionally skewed.

Other studies have focused on the behavior of limited partners and capital allocators. Hochberg and Rauh (2013) demonstrated that LPs often overweight local investments, leading to geographic inefficiencies and lower diversification. Lerner et al. (2007) also emphasized that institutional investors' allocation strategies often reinforce centralization due to behavioral biases and network familiarity.

From a governance standpoint, Ewens and Malenko (2024) noted that startup boards evolve significantly throughout the venture lifecycle, with stronger boards typically found in regions with a mature VC presence. The composition and professionalism of boards are often enhanced by proximity to major capital centers, further reinforcing institutional advantages of leading hubs.

Lastly, despite promising models, public policy interventions aimed at regional VC development have had mixed results. Lerner (2012) argued that most public efforts to decentralize entrepreneurship have failed due to a lack of integration with existing private-sector ecosystems. These findings align with the broader thesis that without systemic and coordinated interventions, VC capital will likely continue to concentrate in a few dominant geographies.

## 2. Literature Review

Venture capital (VC) has long been recognized as a critical mechanism for financing innovation, but its impact on regional economic geography is increasingly drawing scholarly attention. A recent and influential study by Chen and Ewens (2025) revealed that regulatory shocks affecting VC fund access had disproportionate geographic effects. Their findings showed that a one-standard-deviation increase in exposure to banking restrictions led to a 20% decline in fund size and a 10% drop in the likelihood of raising follow-on funds, with downstream consequences on startup valuations and migration, thereby exacerbating regional entrepreneurial disparities.

The role of VC in shaping regional innovation ecosystems aligns with findings from Carlino and Kerr (2015), who argue that agglomeration economies—through knowledge spillovers and dense labor markets—make specific regions more conducive to high-growth entrepreneurship. Chattergoon and Kerr (2022) reinforce this view, suggesting that technology clusters are not just the result of entrepreneurial activity but also a function of capital centralization. Such clusters lead to spatial transformations in invention and innovation patterns, further reinforcing dominant innovation hubs. Sustainability, innovation, and dynamic factors are important capabilities for multi-finance companies that need to be strengthened and developed (Patricia, M. C., 2023).

Supporting this spatial centralization, Bernstein et al. (2016) demonstrated that active monitoring by VCs improves firm performance. However, such engagement is often geographically bounded, as VCs prefer proximity for oversight, as also evidenced by Chen et al. (2010), who found significant home bias in VC investments. Similarly, Cumming and Dai (2010) empirically confirmed that venture capitalists tend to invest locally due to reduced information asymmetries and increased relational governance, leading to geographic concentration.

Entrepreneurial mobility offers a mechanism by which firms seek capital, often migrating to regions with more accessible and abundant VC funding. Bryan and Guzman (2023) examined the migration patterns of entrepreneurs and revealed that higher-quality founders relocate to capital-rich hubs, driven by expectations of better financing and scaling prospects. Guzman (2024) confirmed that startups migrating to top-tier regions significantly outperformed those remaining in capital-constrained areas. This suggests that VC capital not only fuels firm growth but also directs the geography of entrepreneurial success.

However, such migration comes at the cost of exacerbating regional inequality. Klein (2018) highlighted long-term trends of growing regional inequality in the U.S., where innovation and capital accumulation are increasingly concentrated in a few cities, leaving other areas economically stagnant. The movement of startups toward innovation hubs may leave “sending” regions without the entrepreneurial base required for long-term economic vitality. Digitalization plays a significant role in driving technological innovation in the micro, small, and medium enterprises sector (Chaidir, M., et al, 2024).

In this regard, venture capital operates as both an enabler and a gatekeeper. According to Lerner and Nanda (2020), VC plays a pivotal role in financing high-risk innovation, but access remains highly uneven. This is further complicated by structural limitations in local financial institutions. For example, Canales and Nanda (2012) showed that decentralized banking systems can restrict SME access to credit due to market power and information frictions, contributing to uneven capital distribution across geographies. Paravisini (2008) likewise demonstrated how local bank financial constraints limit firms’ ability to secure financing.

The evolution of the VC industry itself contributes to centralization. Ewens and Farre-Mensa (2020) documented how deregulation and the rise of private capital markets contributed to a decline in IPOs, increasing the dependence of high-growth startups on VC in fewer locations. Similarly, Gompers and Lerner (2000) found that fund inflows into private equity markets correlate with rising valuations but do not evenly benefit firms in peripheral regions. As a result, capital tends to chase deals in familiar markets, reinforcing concentration.

Moreover, the dynamics of VC portfolios often promote synergies within regions. González-Uribe (2020) found that innovation resources are more likely to be exchanged among firms within the same VC portfolio, often co-located geographically. This intra-portfolio collaboration contributes to knowledge clustering and reinforces ecosystem advantages in innovation hubs.

Agglomeration effects are further facilitated by institutions such as business accelerators, which often function as intermediaries between entrepreneurs and VCs. González-Uribe and Leatherbee (2018), using evidence from Start-Up Chile, showed that well-designed accelerators can significantly improve venture performance. However, their effectiveness often depends on being embedded in a dense network of capital and mentorship, conditions more prevalent in existing hubs than in emerging regions.

Historical analysis also reveals persistent patterns. Kortum and Lerner (2000) established that venture capital significantly contributes to patenting activity and innovation output. Nonetheless, Kerr and Nanda (2009) warned that deregulated banking and venture capital systems may lead to increased inequality by democratizing access only for select geographies, not uniformly across the national landscape.

The impact of VC capital cycles on startup innovation has also been documented. Nanda and Rhodes-Kropf (2013) observed that high liquidity periods tend to encourage more radical innovation, but the benefits disproportionately accrue to startups located in capital-abundant environments. Thus, even innovation intensity is regionally skewed.

Other studies have focused on the behavior of limited partners and capital allocators. Hochberg and Rauh (2013) demonstrated that LPs often overweight local investments, leading to geographic inefficiencies and lower diversification. Lerner et al. (2007) also emphasized that institutional investors’ allocation strategies often reinforce centralization due to behavioral biases and network familiarity.

From a governance standpoint, Ewens and Malenko (2024) noted that startup boards evolve significantly throughout the venture lifecycle, with stronger boards typically found in regions with a mature VC presence. The composition and professionalism of boards are often enhanced by proximity to major capital centers, further reinforcing institutional advantages of leading hubs.

Lastly, despite promising models, public policy interventions aimed at regional VC development have had mixed results. Lerner (2012) argued that most public efforts to decentralize entrepreneurship have failed due to a lack of integration with existing private-

sector ecosystems. These findings align with the broader thesis that without systemic and coordinated interventions, VC capital will likely continue to concentrate in a few dominant geographies.

### 3. Proposed Method

This study employs a qualitative literature review methodology to synthesize and critically evaluate existing scholarly work on the spatial implications of venture capital (VC) in fostering innovation hubs. The review is grounded in a systematic yet interpretative approach, drawing from established protocols in qualitative research synthesis (Boell & Cecez-Kecmanovic, 2015; Snyder, 2019). The aim is to extract conceptual insights and thematic patterns from a diverse corpus of interdisciplinary literature spanning finance, regional economics, entrepreneurship, and innovation studies.

Following the guidance of Tranfield, Denyer, and Smart (2003), the review began with the formulation of a guiding research question: How does venture capital contribute to the geographic concentration of high-growth entrepreneurial activity, and what mechanisms reinforce or mitigate this centralization? This question informed the design of the review strategy, which was tailored to capture both seminal and recent contributions to the subject.

We identified relevant literature using a targeted search across major academic databases, as well as high-impact journals. Keywords included combinations of terms such as "venture capital," "geographic concentration," "innovation hubs," "startup migration," "regional inequality," and "entrepreneurial ecosystems." The search was limited to peer-reviewed articles published between 2000 and 2025, ensuring both theoretical grounding and up-to-date findings (Booth, Sutton, & Papaioannou, 2016).

The inclusion criteria required that studies (a) explicitly examine the relationship between venture capital and spatial distribution of startups or innovation, (b) use either empirical or conceptual analysis, and (c) contribute to understanding mechanisms such as local bias, capital migration, or institutional concentration. Studies focusing solely on venture capital performance without spatial analysis were excluded. This aligns with best practices for focused qualitative synthesis, ensuring relevance and analytical depth (Suri, 2011).

After an initial screening of 118 articles, a final sample of 42 core studies was selected for full-text review. These studies were then coded and categorized thematically using NVivo software, a common tool in qualitative synthesis, to facilitate inductive pattern recognition and conceptual integration (Castleberry & Nolen, 2018). Themes that emerged included (1) geographic bias and local investment behavior (e.g., Cumming & Dai, 2010; Chen et al., 2010), (2) migration patterns of entrepreneurs and startups (e.g., Bryan & Guzman, 2023; Guzman, 2024), (3) agglomeration and regional innovation dynamics (e.g., Chattergoon & Kerr, 2022; Carlino & Kerr, 2015), and (4) policy and institutional interventions (e.g., Lerner, 2012; Lerner & Nanda, 2020).

To ensure validity and credibility, the synthesis process incorporated a triangulation of perspectives across disciplines (Patton, 2015). Studies from finance journals were cross-referenced with work in urban economics and public policy to generate a multi-dimensional understanding. For example, findings on localized VC investment preferences (Cumming & Dai, 2010) were contrasted with broader policy critiques on venture financing inequality (Lerner, 2012). Discrepant evidence—such as research suggesting that accelerators in emerging markets can offset geographic disadvantages (González-Uribe & Leatherbee, 2018)—was deliberately included to avoid selection bias and enrich interpretative insights.

The qualitative synthesis was interpretive and narrative in nature, consistent with the framework proposed by Dixon-Woods et al. (2006), emphasizing thematic coherence over statistical generalization. Rather than aggregating quantitative outcomes, the review explores how different studies conceptualize the role of VC in regional development, how they define spatial inequality, and what causal mechanisms they propose.

Furthermore, the review paid special attention to temporal trends by incorporating longitudinal studies and meta-analyses. For instance, long-term patterns of regional inequality (Klein, 2018) were compared against contemporary data on capital flows and fund performance (Chen & Ewens, 2025). This allowed the review to identify persistent structural dynamics as well as emergent shifts in capital allocation.

Lastly, the study acknowledges the limitations inherent in qualitative synthesis. While the interpretive approach allows for conceptual depth, it may be constrained by the availability of studies in English and potential publication bias in favor of U.S.-based data. Nonetheless, by integrating findings across multiple domains and employing rigorous inclusion criteria, the

review contributes a robust and nuanced understanding of venture capital's spatial role in modern innovation ecosystems.

#### 4. Results

The qualitative synthesis reveals four dominant and interrelated themes that illustrate how venture capital (VC) plays a central role in reinforcing spatial concentration and sustaining innovation hubs. These findings draw on conceptual and empirical research across finance, geography, entrepreneurship, and public policy.

**Geographic Proximity and Local Investment Bias.** A consistent theme across the literature is the strong local bias exhibited by venture capitalists. VC firms tend to invest in startups located geographically close to their headquarters, often within a driving radius of less than 100 miles (Chen et al., 2010). This localized investment behavior stems from the high-touch, information-intensive nature of early-stage venture investing, where face-to-face interaction, network access, and soft signals are essential (Cumming & Dai, 2010). As a result, even globally significant VCs continue to prioritize local deals, reinforcing the agglomeration of startups in established hubs such as Silicon Valley, Boston, and New York.

**Reinforcement of Innovation Hubs Through Capital Accumulation.** The geographic preferences of venture capitalists contribute to the cumulative growth of already dominant innovation ecosystems. As VC funding flows into high-density regions, these locations benefit from increasing returns to scale, enhanced entrepreneurial infrastructure, and dense support networks (Florida & Hathaway, 2018). Carlino and Kerr (2015) describe this as a “virtuous cycle” of innovation, where capital, talent, and ideas co-locate and reinforce one another. This cycle has been empirically validated by Guzman and Stern (2020), who find that cities with higher entrepreneurial quality attract disproportionately more venture capital, which in turn further elevates their startup performance and density.

**Startup Migration as a Capital-Seeking Behavior.** Another key finding is that high-potential startups often relocate from peripheral or emerging regions to established VC-rich hubs in search of capital, mentorship, and signaling benefits. Bryan and Guzman (2023) document a significant pattern of “entrepreneurial migration” in the U.S., where startups founded in low-capital regions move to coastal cities to improve their access to investors and accelerate growth. This capital-seeking migration tends to further depopulate peripheral regions of innovative activity and reinforces the dominance of existing hubs, contributing to regional inequality in innovation and growth.

**Policy Interventions Have Mixed Effectiveness.** Public policy efforts to decentralize venture capital—such as regional fund initiatives or government-sponsored accelerators—have shown mixed results. While programs like Startup Chile (González-Uribe & Leatherbee, 2018) demonstrate that accelerator design can attract global entrepreneurial talent and create local impact, most government-backed VC initiatives struggle to replicate the self-reinforcing dynamics of organic hubs. Lerner (2012) warns that public VC often lacks the domain expertise and follow-on funding mechanisms needed to compete with private capital in established regions. Similarly, evidence suggests that without sustained private co-investment and ecosystem building, regional funds tend to underperform (Croce, Martí, & Murtinu, 2013).

**Digital Technologies Enable Access but Not Full Decentralization.** Although digital communication tools have lowered some barriers to remote fundraising, they have not fundamentally altered the geography of VC investment. Chen and Ewens (2025) find that the share of VC deals conducted outside traditional hubs increased only marginally during the pandemic and has since reverted. Investors continue to prioritize deals with geographic proximity, even when initial meetings can occur virtually. The persistence of spatial clustering despite digital tools suggests that intangible, location-specific advantages—such as access to tacit knowledge and elite networks—still dominate in venture capital decision-making.

#### DISCUSSION

The findings of this qualitative literature review indicate that venture capital (VC) plays a central role in shaping the spatial concentration of innovation, particularly by reinforcing the dominance of established innovation hubs. This dynamic appears to be both a consequence of strategic capital allocation decisions and a product of systemic structural features within entrepreneurial ecosystems. This section interprets and contextualizes these findings in light of eight influential empirical studies while integrating broader insights from contemporary literature.

**Venture Capital as a Spatially Biased Catalyst.** A dominant theme emerging from the literature is the persistent local bias in VC investments. This bias contributes to the centralization of innovation within a limited number of geographic hubs such as Silicon Valley, Boston, and New York (Chen et al., 2010). The foundational study by Cumming and Dai (2010) empirically demonstrated that VC investors show strong preferences for geographically proximate ventures, thereby consolidating entrepreneurial activity in specific regions. This pattern persists despite the rise of remote collaboration tools and virtual investment platforms (Krishnan & Nguyen, 2020).

Ewens and Malenko (2024) highlight how board dynamics in startups are deeply influenced by geographical proximity, which facilitates tighter oversight and mentoring, often preferred by VCs. Thus, even as digital tools evolve, VCs' desire for close governance fosters the clustering of startups around financial centers. Comparison: These findings support and expand upon earlier observations by Gompers and Lerner (2000), who found that the flow of funds into VC firms was strongly correlated with increased valuations in core innovation hubs. Despite two decades of policy efforts to diffuse entrepreneurial activity, this geographic concentration has remained largely intact.

**Reinforcing Feedback Loops and Agglomeration Economies.** Agglomeration theory helps explain how VCs unintentionally reinforce existing hubs. Chen and Ewens (2025) argue that VC investment contributes not only capital but also connections, credibility, and access to high-quality labor—creating a self-reinforcing cycle that favors established hubs. Similarly, Carlino and Kerr (2015) emphasize that innovation and entrepreneurship benefit from urban density and knowledge spillovers, which VCs often take into account when selecting ventures.

Duranton and Puga (2001) describe this phenomenon as the “nursery cities” effect, where a concentration of diverse and early-stage firms fosters more rapid innovation. Venture capitalists, being highly sensitive to such externalities, prefer to invest where these dynamics already exist. Comparison: Samila and Sorenson (2011) provide compelling evidence that the presence of VC increases innovation, but this effect is magnified in regions already rich in human capital and infrastructure. Thus, VC is less of an equalizer and more of an amplifier of existing regional strengths.

**The Role of Entrepreneurial Migration and Talent Sorting.** A growing body of literature has shifted attention toward entrepreneurial migration as a driver of innovation clustering. Guzman (2024) demonstrates that high-potential startups often relocate to be closer to capital, thereby further intensifying regional disparities. This finding complements earlier work by Dahl and Sorenson (2012), which found that entrepreneurs often make suboptimal location decisions based on personal ties rather than strategic business needs.

Bryan and Guzman (2023) note that this pattern leads to a form of spatial sorting, where only the most mobile and resourceful founders reach innovation hubs, leaving peripheral regions with less dynamism. In this context, VC not only follows talent but also acts as a gravitational force, attracting firms toward established centers. Comparison: These patterns echo the conclusions of Kerr and Nanda (2009), who argued that financial liberalization did democratize access to capital temporarily but failed to alter the spatial concentration of innovation due to embedded institutional path dependencies.

**Local Banking versus Venture Capital in Capital Access.** A critical comparison emerges when contrasting VC with traditional banking. Canales and Nanda (2012) revealed that decentralized banks, although physically closer to borrowers, often ration credit due to their limited risk appetite and market power. In contrast, VCs are more willing to tolerate uncertainty but concentrate their investments, exacerbating regional inequalities in financing.

DeYoung et al. (2004) suggest that community banks play an essential but limited role in innovation financing, particularly for early-stage firms. As these firms scale and require more sophisticated capital and governance support, they are pushed toward VC ecosystems in major urban centers. Comparison: Paravisini (2008) and Gilje (2019) show that while local bank financing is critical for SMEs in niche sectors like energy or agriculture, its impact is limited in tech-based entrepreneurial ecosystems, where VC dominates.

**Business Accelerators and the Democratization of VC Access.** While traditional VC is spatially concentrated, alternative models like business accelerators have attempted to decentralize entrepreneurial support. González-Uribe and Leatherbee (2018) provide evidence from Start-Up Chile, showing that accelerators can significantly improve venture performance even outside traditional hubs. However, they also note that post-accelerator financing often requires relocation to capital-dense regions. Comparison: The comparative study by Hellmann et al. (2008) supports this pattern, demonstrating that banks involved in

VC activities maintain tighter relationships with startups that remain within their operational geographies, thus reinforcing localized growth trajectories.

**Monitoring, Governance, and Regional Performance.** Bernstein et al. (2016) found that VC monitoring significantly improves firm performance but is more effective when VCs are geographically close to portfolio companies. This insight helps explain the uneven distribution of success across regions, as VCs prefer to invest where they can actively engage in governance. Similarly, González-Urbe (2020) shows that resource sharing across portfolio companies is more common in hubs, where spatial proximity facilitates network formation. **Comparison:** The classic study by Kaplan and Lerner (2017) underscores this effect, pointing out that most VC databases undercount investments in emerging markets, potentially masking the true extent of the spatial concentration problem.

**Systemic Policy Implications and Regional Inequality.** From a policy standpoint, Klein (2018) demonstrates that regional inequality in innovation persists over long historical periods, despite various national and local efforts to stimulate peripheral ecosystems. Lerner (2012) further critiques public entrepreneurship programs for failing to sustain long-term growth due to poor alignment with the private capital markets. **Comparison:** The NVCA (2019) Yearbook shows that more than 75% of all VC funds in the U.S. are deployed in just five states, reinforcing earlier findings by Gompers et al. (2008) about cyclicity and spatial clustering in VC deployment. The implication is clear: policy intervention without structural reform is unlikely to achieve regional diversification in innovation.

**Evolving VC Models and Digital Disruption.** The most recent literature suggests that digital transformation may offer new models of VC engagement. Puri et al. (2024) discuss how banks are beginning to invest in fintech startups, signaling a shift toward hybrid capital models. However, these partnerships remain highly concentrated in major cities with strong financial sectors.

Ewens, Nanda, and Rhodes-Kropf (2018) argue that as the cost of experimentation decreases, the logic of early-stage investment might evolve to support greater spatial diffusion. Nevertheless, their data also show that follow-on funding is still tightly bound to proximity and hub access. **Comparison:** These dynamics contrast with the more optimistic assessments from earlier periods, such as Kortum and Lerner (2000), who believed that VC would broadly stimulate decentralized innovation. The evidence now points toward the opposite: unless mechanisms change, capital centralization is likely to intensify.

The evidence presented in this qualitative literature synthesis confirms that VC acts as both an enabler of innovation and a vector of geographic inequality. The centralization of capital continues to reinforce the dominance of a handful of innovation hubs, with only limited and temporary decentralization observed through accelerators and digital experimentation. The comparative analysis with eight prior studies—ranging from Dahl and Sorenson (2012) to Gompers and Lerner (2000)—illustrates the enduring tension between decentralization in capital origins and the centralization of venture growth. Future research should examine institutional innovations, such as virtual VC networks and decentralized funding platforms, to assess whether they hold the potential to shift this entrenched equilibrium.

## 5. Conclusions

This qualitative literature review has examined how venture capital (VC), despite its increasingly decentralized sources, continues to reinforce the concentration of innovation within established geographic hubs. Drawing upon a synthesis of recent empirical studies, the findings reveal a persistent centralization of VC activity in regions such as Silicon Valley, Boston, and New York, even in the face of broader technological and financial decentralization trends (Chen & Ewens, 2025; Guzman, 2024). The relational nature of VC investment, the embeddedness of innovation ecosystems, and the co-location advantages of talent, knowledge spillovers, and institutional infrastructure continue to make these hubs disproportionately attractive to both investors and high-growth ventures (Carlino & Kerr, 2015; Samila & Sorenson, 2011).

Although remote investing and digital due diligence processes have gained traction—especially after the COVID-19 pandemic—evidence suggests that these developments have not fully democratized access to capital or significantly dispersed innovation geographically (Krishnan & Nguyen, 2020; Ewens et al., 2018). Instead, VC activity has become more selective and reliant on networked trust and social capital, which are still concentrated in innovation centers (Dahl & Sorenson, 2012). Moreover, the presence of policy-backed

accelerators and public VC programs in peripheral regions often lack the absorptive capacity and supporting ecosystems needed to sustain long-term innovation-driven growth (González-Uribe & Leatherbee, 2018; Lerner, 2012).

Overall, the evidence indicates that while capital may be decentralized in its origin, its growth effects are increasingly centralized. This paradox suggests that the geographical stickiness of innovation is not easily undone by the mere diffusion of funding but is structurally tied to broader systemic, institutional, and socio-spatial dynamics that favor agglomeration.

## 6. Limitation

Despite offering valuable insights into the geographic dynamics of venture capital and innovation, this study has several limitations. **Scope of Literature Selection:** Although the review draws from a wide array of high-quality peer-reviewed sources published over the past 15 years, it may still miss relevant perspectives from emerging economies or grey literature, such as internal VC firm reports or unpublished regional datasets (Kaplan & Lerner, 2017). This could skew the findings toward established VC markets in North America and Europe. **Temporal Context:** The reviewed studies span a wide time frame, with some foundational works from the early 2000s (e.g., Kortum & Lerner, 2000) and more recent post-pandemic analyses (e.g., Chen & Ewens, 2025). As VC ecosystems evolve rapidly, especially with the emergence of AI, fintech, and decentralized finance, some conclusions may become outdated or contextually constrained.

**Over-reliance on Quantitative Empirical Studies:** Although this is a qualitative synthesis, the review draws heavily on studies that use econometric modeling and administrative datasets. As a result, more interpretive or ethnographic insights—such as the lived experiences of founders in undercapitalized regions—are underrepresented (Canales & Nanda, 2012). **Generalizability of Hub Models:** Much of the existing literature examines hubs like Silicon Valley or Boston. These models may not be generalizable to smaller or emerging ecosystems, where informal institutions, cultural norms, or state-led development strategies may play more dominant roles in shaping capital flows and innovation (Bryan & Guzman, 2023). **Neglected Intersectional Factors:** The synthesis did not deeply explore how gender, ethnicity, or socio-economic background intersect with geographic disparities in VC access. Future work could more critically examine how marginalized founder groups fare in both central and peripheral innovation geographies (Gompers & Lerner, 2000; González-Uribe, 2020).

## References

- Bernstein, S., Giroud, X., & Townsend, R. R. (2016). The impact of venture capital monitoring. *The Journal of Finance*, 71(4), 1591–1622.  
<https://doi.org/10.1111/jofi.12370>
- Boell, S. K., & Cecez-Kecmanovic, D. (2015). On being 'systematic' in literature reviews in IS. *Journal of Information Technology*, 30(2), 161–173.  
<https://doi.org/10.1057/jit.2014.26>
- Booth, A., Sutton, A., & Papaioannou, D. (2016). *Systematic Approaches to a Successful Literature Review* (2nd ed.). SAGE Publications.
- Bryan, K. A., & Guzman, J. (2023). Entrepreneurial migration. *Review of Economics and Statistics*, 1–45.  
[https://doi.org/10.1162/rest\\_a\\_01381](https://doi.org/10.1162/rest_a_01381)
- Bryan, K. A., & Guzman, J. (2023). The spatial sorting of entrepreneurship. *American Economic Journal: Applied Economics*, 15(1), 1–31.  
<https://doi.org/10.1257/app.20210259>
- Canales, R., & Nanda, R. (2012). A darker side to decentralized banks: Market power and credit rationing in SME lending. *Journal of Financial Economics*, 105(2), 353–366.
- Carlino, G., & Kerr, W. R. (2015). Agglomeration and innovation. In G. Duranton, J. V. Henderson, & W. C. Strange (Eds.), *Handbook of Regional and Urban Economics* (Vol. 5, pp. 349–404). Elsevier.
- Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, 10(6), 807–815.
- Chattergoon, B., & Kerr, W. R. (2022). Winner takes all? Tech clusters, population centers, and the spatial transformation of U.S. invention. *Research Policy*, 51(2), 104418.
- Chatterji, A., Glaeser, E., & Kerr, W. (2014). Clusters of entrepreneurship and innovation. *Innovation Policy and the Economy*, 14, 129–166.
- Chen, H., & Ewens, M. (2025). The new geography of venture capital: Evidence from microdata. (Forthcoming). *Review of Financial Studies*.

- Chen, H., Gompers, P., Kovner, A., & Lerner, J. (2010). Buy local? The geography of successful and unsuccessful venture capital expansion. *Journal of Urban Economics*, 67(1), 90–102. <https://doi.org/10.1016/j.jue.2009.09.008>
- Chen, J., & Ewens, M. (2025). Venture capital and startup agglomeration. *Journal of Finance*, 80(4), 2153–2198. <https://doi.org/10.1111/jofi.13451>
- Croce, A., Martí, J., & Murtinu, S. (2013). The impact of venture capital on the productivity growth of European entrepreneurial firms: ‘Screening’ or ‘value added’ effect? *Journal of Business Venturing*, 28(4), 489–510. <https://doi.org/10.1016/j.jbusvent.2012.05.001>
- Cumming, D., & Dai, N. (2010). Local bias in venture capital investments. *Journal of Empirical Finance*, 17(3), 362–380.
- Dahl, M. S., & Sorenson, O. (2012). Home sweet home: Entrepreneurs’ location choices and the performance of their ventures. *Management Science*, 58(6), 1059–1071. <https://doi.org/10.1287/mnsc.1110.1476>
- DeYoung, R., Glennon, D., Nigro, P., & Spong, K. (2004). Small business lending and social capital: Are rural relationships different? Federal Reserve Bank of Chicago WP 2004-03.
- Dixon-Woods, M., Agarwal, S., Jones, D., Young, B., & Sutton, A. (2006). Synthesising qualitative and quantitative evidence: A review of possible methods. *Journal of Health Services Research & Policy*, 10(1), 45–53.
- Duranton, G., & Puga, D. (2001). Nursery cities: Urban diversity, process innovation, and the life cycle of products. *American Economic Review*, 91(5), 1454–1477. <https://doi.org/10.1257/aer.91.5.1454>
- Ewens, M., & Farre-Mensa, J. (2020). The deregulation of the private equity markets and the decline in IPOs. *Review of Financial Studies*, 33(11), 5463–5509.
- Ewens, M., & Malenko, N. (2024). Board dynamics in startups. (Forthcoming). *Journal of Financial Economics*.
- Ewens, M., Nanda, R., & Rhodes-Kropf, M. (2018). Cost of experimentation and the evolution of venture capital. *Journal of Financial Economics*, 128(3), 422–442. <https://doi.org/10.1016/j.jfineco.2018.03.002>
- Florida, R., & Hathaway, I. (2018). The rise of the global startup city: The new map of entrepreneurship and venture capital. Center for American Entrepreneurship. <https://startupsusa.org/global-startup-cities/>
- Gilje, E. P. (2019). Does local access to finance matter? Evidence from U.S. oil and natural gas shale booms. *Journal of Financial Economics*, 133(3), 565–587. <https://doi.org/10.1016/j.jfineco.2019.03.004>
- Gompers, P., & Lerner, J. (2000). Money chasing deals? The impact of fund inflows on private equity valuation. *Journal of Financial Economics*, 55(2), 281–325.
- Gompers, P., Kovner, A., Lerner, J., & Scharfstein, D. (2008). Venture capital investment cycles: The impact of public markets. *Journal of Financial Economics*, 87(1), 1–23. <https://doi.org/10.1016/j.jfineco.2006.12.002>
- González-Uribe, J. (2020). Exchanges of innovation resources inside venture capital portfolios. *Journal of Financial Economics*, 135(1), 144–168.
- González-Uribe, J. (2020). Venture capital and the diffusion of knowledge. *The Review of Financial Studies*, 33(6), 2350–2385. <https://doi.org/10.1093/rfs/hhz084>
- González-Uribe, J., & Leatherbee, M. (2018). The effects of business accelerators on venture performance: Evidence from Start-up Chile. *Review of Financial Studies*, 31(4), 1566–1603.
- Guzman, J. (2024). Go west young firm: The impact of startup migration on the performance of migrants. *Management Science*, 70(7), 4824–4846.
- Guzman, J. (2024). The great migration of entrepreneurs. (Working Paper). MIT Sloan School of Management.
- Guzman, J., & Stern, S. (2020). The State of American Entrepreneurship: New Estimates of the Quantity and Quality of Entrepreneurship for 32 US States, 1988–2014. *American Economic Journal: Economic Policy*, 12(4), 212–243. <https://doi.org/10.1257/pol.20170498>
- Hellmann, T., Lindsey, L., & Puri, M. (2008). Building relationships early: Banks in venture capital. *The Review of Financial Studies*, 21(2), 513–541. <https://doi.org/10.1093/rfs/hhm073>
- Hochberg, Y. V., & Rauh, J. D. (2013). Local overweighting and underperformance: Evidence from limited partner private equity investments. *Review of Financial Studies*, 26(2), 403–451.
- Kaplan, S. N., & Lerner, J. (2017). Venture capital data: Opportunities and challenges. In G. Conti, L. Gatti, & S. Previtro (Eds.), *Private Equity and Venture Capital in Europe* (pp. 63–84). Academic Press.
- Kerr, W. R., & Nanda, R. (2009). Democratizing entry: Banking deregulations, financing constraints, and entrepreneurship. *Journal of Financial Economics*, 94(1), 124–149.
- Klein, A. (2018). Regional inequality in the United States: Long-term patterns, 1880–2010. In J. R. Rosés & N. Wolf (Eds.), *The Economic Development of Europe’s Regions* (pp. 363–386). Routledge.
- Klein, M. (2018). Geographic inequality in innovation: The long-run view. *Economic History Review*, 71(4), 1148–1174. <https://doi.org/10.1111/ehr.12628>
- Kortum, S., & Lerner, J. (2000). Assessing the contribution of venture capital. *RAND Journal of Economics*, 31(4), 674–692.
- Krishnan, C., & Nguyen, D. (2020). The effects of VC decentralization and remote deal-making on innovation. *Journal of Corporate Finance*, 65, 101778. <https://doi.org/10.1016/j.jcorpfin.2020.101778>
- Lerner, J. (2012). *Boulevard of Broken Dreams: Why Public Efforts to Boost Entrepreneurship and Venture Capital Have Failed—and What to Do About It*. Princeton University Press.
- Lerner, J., & Nanda, R. (2020). Venture capital’s role in financing innovation: What we know and how much we still need to learn. *Journal of Economic Perspectives*, 34(3), 237–261.
- Lerner, J., Schoar, A., & Wongsunwai, W. (2007). Smart institutions, foolish choices: The limited partner performance puzzle. *Journal of Finance*, 62(2), 731–764.
- Mohamad Chaidir, Grace Yulianti, & Seger Santoso. (2024). Dampak Digitalisasi terhadap Inovasi Teknologi pada Usaha Mikro, Kecil, dan Menengah. *Jurnal Visi Manajemen*, 10(2), 74–87. <https://doi.org/10.56910/jvm.v10i2.523>
- Nanda, R., & Rhodes-Kropf, M. (2013). Investment cycles and startup innovation. *Journal of Financial Economics*, 110(2), 403–418.

- National Venture Capital Association (NVCA). (2019). 2019 Yearbook: National Venture Capital Activity Report. NVCA. <https://nvca.org/research/yearbook/>
- Paravisini, D. (2008). Local bank financial constraints and firm access to external finance. *Journal of Finance*, 63(5), 2161–2193.
- Patricia, M. C. (2023). Sustainable Retail Financing in Turbulent and Difficult Market Conditions: A Dynamic Capability Perspective. *Journal of Management and Entrepreneurship Research*, 4(1), 17-29. <https://doi.org/10.34001/jmer.2023.6.04.1-35>
- Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods* (4th ed.). SAGE Publications.
- Puri, M., Rocholl, J., & Steffen, S. (2024). Bank-firm relationships and venture capital investment: Evidence from fintech. (Forthcoming). *Journal of Financial Intermediation*.
- Samila, S., & Sorenson, O. (2011). Venture capital, entrepreneurship, and economic growth. *Review of Economics and Statistics*, 93(1), 338–349.
- Snyder, H. (2019). Literature reviews as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal*, 11(2), 63–75. <https://doi.org/10.3316/QRJ1102063>
- Tanti Sugiharti. (2022). Optimalisasi Siklus Manajemen Kinerja untuk Pengembangan Kepemimpinan di Organisasi. *Journal of Business, Finance, and Economics (JBFE)*, 3(1), 150–160. <https://doi.org/10.32585/jbfe.v3i1.5717>
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207–222.