



IE UNIVERSIDAD

TESIS DOCTORAL/DOCTORAL
DISSERTATION

Lo Que Sube, Debe Bajar: Una Exploración del Hype en el
Emprendimiento y la Financiación de Nuevos
Emprendimientos / What Goes Up, Must Come Down: An
Exploration of Hype in Entrepreneurship and New-Venture
Finance

Eduardo Andrés Boada Rodríguez

SEGOVIA, 2025



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ABSTRACT (English)

This dissertation advances scholarship on entrepreneurial hype by offering a comprehensive analysis of its origins, mechanisms, and consequences across entrepreneurial ventures, venture capital markets, and investor decision-making. Drawing on interdisciplinary insights from entrepreneurship, sociology of expectations, and behavioral finance, the research comprises three interconnected studies that collectively unpack the nuanced dynamics underlying hype phenomena. The first study synthesizes existing literature from entrepreneurship and innovation studies to conceptualize hype as an expectation-driven process manifesting at venture, industry, and market levels. It identifies hype as both a strategic tool entrepreneurs deploy to secure resources and legitimacy, and as a broader market-level dynamic influencing industry trajectories and capital flows. The second study empirically investigates the highly financialized, disruption-oriented, and fast-growing entrepreneurial model that has become the center of attention for scholars and the public, and its financial cornerstone, venture capital, positioning them as socio-technical systems subject to hype cycles. Through qualitative analysis of public discourse over two decades, it reveals the instability and contestation underlying what is typically perceived as a dominant entrepreneurial paradigm, contributing to debates around sustainability and ethical challenges inherent to this approach to entrepreneurship. The third study employs experimental methods to examine how counterfactual emotions, particularly fear of errors of commission (investing incorrectly) and omission (missed opportunities), influence early-stage investment decisions. Findings reveal that potential regret associated with commission errors significantly curtails investor willingness to commit capital, illuminating how emotional and social dynamics critically shape investor behavior under conditions of uncertainty. Together, these chapters provide novel theoretical and practical insights, emphasizing the interplay between entrepreneurial narratives, investor cognition, and socio-economic environments. The dissertation not only deepens the understanding of entrepreneurial hype but also informs stakeholders on navigating the delicate balance between leveraging and mitigating hype within contemporary entrepreneurial ecosystems.

ABSTRACT (Español)

Esta tesis contribuye al avance del conocimiento sobre el fenómeno del *hype* en el emprendimiento, mediante un análisis exhaustivo de sus orígenes, mecanismos y consecuencias en las nuevas empresas, los mercados de capital de riesgo y la toma de decisiones de los inversionistas. Basándose en enfoques interdisciplinarios que abarcan el emprendimiento, la sociología de las expectativas y las finanzas conductuales, la investigación comprende tres estudios interrelacionados que, en conjunto, desentrañan las dinámicas que subyacen al fenómeno del *hype*. El primer estudio recopila la literatura existente en los campos del emprendimiento e innovación para conceptualizar el *hype* como un proceso impulsado por expectativas, que se manifiesta al nivel de la empresa, de la industria y del mercado. Identifica el *hype* tanto como una herramienta estratégica utilizada por los emprendedores para obtener recursos y legitimidad, como una dinámica más amplia a nivel de mercado que influye en las trayectorias industriales y en los flujos de capital. El segundo estudio investiga empíricamente el modelo emprendedor altamente financiado, orientado a la disrupción y de rápido crecimiento, que ha captado la atención de académicos y del público, así como su pilar financiero, el capital de riesgo, considerándolos sistemas sociotécnicos sujetos a ciclos de *hype*. A través de un análisis cualitativo del discurso público a lo largo de dos décadas, revela la inestabilidad y la disputa que subyacen lo que habitualmente se percibe como un paradigma emprendedor dominante, aportando así a los debates sobre sostenibilidad y los desafíos éticos inherentes a este enfoque del emprendimiento. El tercer estudio emplea métodos experimentales para examinar cómo las emociones contrafactuales, en particular el temor a errores de comisión (invertir incorrectamente) y de omisión (perder oportunidades), influyen en las decisiones de inversión en etapas tempranas. Los hallazgos revelan que el posible arrepentimiento asociado con errores de comisión reduce significativamente la disposición de los inversionistas a comprometer capital, lo que pone de relieve cómo las dinámicas emocionales y sociales moldean de manera crítica el comportamiento inversionista en condiciones de alta incertidumbre. En conjunto, estos capítulos ofrecen aportes teóricos y prácticos, al resaltar la interacción entre las narrativas emprendedoras, la cognición de los inversionistas y los entornos socioeconómicos. Esta tesis no solo profundiza la comprensión del *hype* emprendedor, sino que también ofrece orientaciones a los distintos actores sobre cómo navegar el delicado equilibrio entre aprovechar y mitigar el *hype* en los ecosistemas emprendedores contemporáneos.

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the generous support and encouragement of many individuals. Foremost, I express my heartfelt gratitude to my supervisors, Dan Lerner and Pablo Muñoz, whose guidance, insights, and patience have been invaluable. I sincerely thank the Defense Committee for their thoughtful input and participation in the culmination of this project. Likewise, I deeply appreciate the faculty from various universities and conference participants whose feedback significantly improved this dissertation.

I extend special thanks to IE University, particularly the Entrepreneurship Department and the PhD Program Direction, notably Julio de Castro, Laura Maguire, and Maria Muriel, who have supported me academically, logistically, and emotionally throughout this five-year journey. My gratitude also goes to the faculty and my colleagues in the Entrepreneurship Department for creating a welcoming environment that became my second home.

Lastly, I thank my family and friends for their unwavering support and encouragement. My mother, father, and brother, who are my foundation; my wife and daughter, who inspire and motivate me daily; and my in-laws, whose support has been invaluable. Completing this journey would have been impossible without them.

Although I cannot name everyone individually, I am genuinely grateful to the many others who contributed significantly to my personal and academic growth. I feel truly fortunate for their presence in my journey.

To my mother, my wife, and my daughter.

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INTRODUCTION (English)

Within entrepreneurial activity, hype occupies a critical position (Wood et al., 2024). Entrepreneurs may actively generate hype around their ventures (Fisher et al., 2024) or leverage existing industry hype to mobilize capital and support their business initiatives (Heupel et al., 2024; Wood et al., 2024). Defined in this context as “a collective vision and promise of a possible future, around which attention, excitement, and expectations increase over time” (Logue & Grimes, 2022, p. 1056), hype can serve as a valuable short-term resource. However, it may also present long-term liabilities, as the heightened expectations accompanying hype become binding commitments (Borup et al., 2006) that limit entrepreneurial flexibility (Logue & Grimes, 2022) and can ultimately compromise venture viability (Murray & Fisher, 2023).

Successfully navigating hype and associated expectations thus constitutes a central aspect of entrepreneurial strategy, representing the predominant scholarly perspective on hype within entrepreneurship research (Wadhwani & Lubinski, 2025). Yet, it is increasingly recognized that entrepreneurs are not merely creators and managers of hype; they are also influenced by externally generated hype. For instance, positive industry events such as notable funding rounds or successful exits can attract entrepreneurs from other sectors who perceive enhanced opportunities for resource acquisition and success (Pontikes & Barnett, 2017). Consequently, hype is both an outcome of entrepreneurial framing and storytelling (Garud et al., 2019; 2023) and an antecedent to phenomena like market bubbles (Chang et al., 2016) and managerial fads (Abrahamson, 1991).

At the opposite end of entrepreneurs’ strategic engagement with hype are new-venture investors, who constitute primary targets (Garud et al., 2023; Heupel et al., 2024) and counterparts within the entrepreneurial market—the virtual space where exchanges concerning venture ownership and capitalization take place. Investors operate within an environment that makes them particularly susceptible to hype, which originates not only from entrepreneurs but

also from macro-level environmental events (Chang et al., 2016) and internal community dynamics (Valliere & Peterson, 2004). Indeed, their operating context is deeply socially embedded, fostering continuous awareness of peer actions and comparisons (Sorenson & Stuart, 2008). Moreover, given the high failure rate of new ventures, investor success hinges upon identifying profitable investments capable of offsetting losses incurred from unsuccessful portfolio ventures (Nanda & Rhodes-Kropf, 2013). These conditions may predispose investors to cognitive biases and behavioral shifts induced by hype (Kleinert & Hildebrand, 2024; Valliere & Peterson, 2005; Wood et al., 2020), with fear of missing out (FOMO), groupthink, and resultant herd behavior being among the most thoroughly documented phenomena (e.g., Fisher et al., 2024; Kleinert & Hildebrand, 2024; Valliere & Peterson, 2004).

Despite growing scholarly interest (Garud et al., 2022; Wood et al., 2024) and recent advancements in understanding the effects of hype on entrepreneurs and investors (e.g., Heupel et al., Kleinert & Hildebrand, 2024; Logue & Grimes, 2022; Wood et al., 2024), research in this area remains nascent, leaving numerous facets underexplored. One issue that becomes apparent after a cursory inspection of the extant literature that relates to hype in entrepreneurship is that the topic has been explored almost independently by academics in entrepreneurship itself and by those in the sub-field of new-venture finance, with few notable exceptions (e.g., Pontikes & Barnett, 2017). Research within entrepreneurship has predominantly adopted a “strategic view” (Wadhwani & Lubinski, 2025), emphasizing how entrepreneurs manage hype to gain legitimacy and resources while mitigating negative repercussions when expectations go unmet, including navigating the indistinct ethical boundary between embellishment and deception (Garud et al., 2023; Sheaf & Wood, 2022). Conversely, new-venture finance scholars have concentrated on investors’ cognitive and behavioral changes in relation to industry-specific bubbles, such as the dot-com bubble (Valliere & Peterson, 2004; Zhelyazkov & Tatarynowicz, 2021), or periods characterized by

increased market activity or “market heat” (Kleinert & Hildebrand, 2024; Lo et al., 2024). This fragmented research landscape impedes a comprehensive understanding of hype in entrepreneurship and complicates initial scholarly engagement. The field would thus benefit significantly from integrating perspectives across these domains and introducing novel conceptual frameworks.

Research to date has substantially benefited from the translation of concepts derived from science, technology, and innovation (STI)—particularly from the sub-field known as the sociology of expectations (Borup et al., 2006; Brown & Michael, 2003)—into entrepreneurship. This translation has, for example, yielded the prevalent definition of hype within entrepreneurial studies (Logue & Grimes, 2022), and it has guided the strategic view of hype (Wadhwani & Lubinski, 2025) by highlighting hype’s constructivist and performative dimensions (mobilizing resources and agenda-setting; Borup et al., 2006) and emphasizing the practical and ethical risks involved (Brown, 2003). Nonetheless, additional insights from STI and the sociology of expectations remain untapped, offering potential to further enrich our understanding of entrepreneurial hype. An example of such opportunities is the exploration of hype in entrepreneurship through the framework proposed by Ruef and Markard (2010), which typifies the expectations that accompany hype in three distinct levels (specific, general, and frame), whose interaction with each other during the hype cycle shapes the outcome after the disappointment phase (Ruef & Markard, 2010; van Lente et al., 2013).

Addressing the gaps identified in existing research, this dissertation aims to advance scholarship on hype in entrepreneurship by synthesizing prior work and introducing novel perspectives. Specifically, its objectives are threefold: (1) to comprehensively review extant literature on hype broadly, and particularly as it pertains to entrepreneurship and new-venture financing, synthesizing insights into a cohesive analytical framework to map existing knowledge and identify promising research opportunities; (2) to broaden the study’s focus

beyond entrepreneurial management of hype, exploring alternative perspectives; and (3) to examine one of the cognitive mechanisms influencing investment decisions within a hype-driven context, providing both an initial exploration of specific issues and an illustrative example of potential avenues for future research. Each subsequent chapter of this dissertation corresponds to these aims.

Chapter One systematically reviews literature on hype and market bubbles within entrepreneurship and new-venture finance, incorporating foundational research from the STI field (van Lente et al., 2013), the domain that has generated the most extensive body of work on hype. Utilizing inductive analysis, key concepts are synthesized into a structured framework organized around two primary dimensions: time, defined according to Gartner Inc.'s classic hype cycle stages (Linden & Fenn, 2003), and hype levels, identified inductively as individual or venture, technology or industry, and market. This approach highlights interconnections across stages and levels, facilitating the identification of understudied areas and potential future research directions.

The second chapter introduces a novel perspective by exploring the phenomenon of entrepreneurial hype surrounding entrepreneurship itself—specifically, the highly financialized, disruption-oriented, and fast-growing entrepreneurial model that originated in Silicon Valley (Audretsch, 2021; Welter et al., 2019; Zankl & Grimes, 2024), widely heralded (but also increasingly questioned) as the archetypal model in entrepreneurship scholarship (Audretsch et al., 2021). To study the nature and significance of this hype, this dissertation conceptualizes this “standard model” (Welter et al., 2019) as a socio-technical system (Geels, 2002) engaged in an ongoing process of establishing dominance as the principal approach for opportunity recognition and exploitation (Shane & Venkataraman, 2000), especially in technology- and innovation-driven endeavors. Given venture capital's (VC) central role within this system (Aldrich & Ruef, 2018), the hype surrounding VC is analyzed as a manifestation

of broader enthusiasm toward it. In turn, this serves as an indicator of the system's contestation with the existing regime to assert its position (Kriechbaum et al., 2021). Even though the VC and the entrepreneurial system as it is a part of may appear to have established themselves securely, results paint a more complex picture. The study of the hype around VC over the past twenty years reveals that these entities have gone through distinct phases, in which the expectations and outlook that surround them have changed both in valence and content, in a pattern consistent with that socio-technical configurations whose place within a system is not yet completely defined or stable.

The final chapter investigates how prospective counterfactual thinking and associated emotions influence new-venture investment decisions. Insights from the preceding chapters indicated that hype fosters decision-making contexts where judgments deviate from the rational parameters outlined by Subjective Expected Utility Theory (Savage, 1954). Among these deviations, FOMO emerged as particularly relevant to new-venture investors, evident both in scholarly literature (e.g., Huang, 2018; Kleinert & Hildebrand, 2024; Valliere & Peterson, 2004) and from empirical findings derived from this dissertation's qualitative data (highlighted by 18 of 34 interviewees). FOMO, intrinsically linked to counterfactual thinking (Hodkinson, 2019), is characterized by significant emotional and social components (Burnell et al., 2019; Good & Hyman, 2020). Consequently, this chapter empirically examines the influence of counterfactual thinking on new-venture investment decisions, considering both individual and social dimensions. It further investigates the effects of the inverse phenomenon—fear of errors of commission (investing unwisely)—on investment behavior. Using two vignette-based experiments, the study demonstrates that specific forms of counterfactual thinking substantially affect new-venture investment decisions, with social dynamics playing a critical role in shaping these effects.

The field of hype in entrepreneurship, though nascent, shows significant scholarly promise, underscored by recent initiatives such as the Journal of Business Venturing’s call for a special issue dedicated to the topic (Garud et al., 2022). This dissertation, through its constituent chapters, makes valuable contributions to existing knowledge and lays the groundwork for future inquiry. The topic also bears considerable practical relevance, as the dominant contemporary model for technology-oriented startups—heavily leveraging hype to achieve rapid growth metrics at the expense of profitability—is increasingly scrutinized and questioned (Aldrich & Ruef, 2018; Audretsch, 2021; Welter & Baker, 2024). In light of recent scandals illustrating how hype dynamics can precipitate substantial entrepreneurial failures (e.g., WeWork, Theranos), it becomes imperative for scholars, practitioners and policymakers to better understand the processes and biases underlying this model, thus mitigating risks of exploitation and systemic instability.

Table A summarizes the types of study, research questions, methods, findings, and areas of contribution for the studies included in this dissertation.

Table A: Overview of Research

Essays	<i>Essay 1</i>	<i>Essay 2</i>	<i>Essay 3</i>
	Research On Hype In Entrepreneurship And New-Venture Finance: An Integrative Review	The Hype Around Venture Capital and its Implications for the Standard Model of Entrepreneurship	Damned If You Do, Damned If You Don’t: How Counterfactual Emotions Shape Early-Stage Investment Decision-Making
Co-Authors	None	Pablo Muñoz, Daniel A. Lerner	Daniel A. Lerner, José Lejarraga
Type	Literature Review	Qualitative (Secondary Data, Semi-Structured Interviews)	Quantitative (Experiments)
Research Question	<i>What are the common themes and advances in the topic of hype in entrepreneurship and new venture funding?</i>	<i>How has the discourse around VC evolved and what are the implications for the entrepreneurial model it is a part of?</i>	<i>How does prospective counterfactual thinking affect new-venture investors’ decision?</i>
Level of Analysis	Entrepreneur/Venture, Technology/Industry, Market	Sociotechnical Systems	Individual
Main Contribution	Entrepreneurship; New Venture Finance	Entrepreneurship; Sociology of Expectations	New Venture Finance; Decision-Making Science

Main Theory	Sociology of Expectations (Borup et al., 2006)	Hype in Socio-technical transitions (Geels, 2002; Kriebbaum et al., 2021)	Regret Theory (Loomes & Sudgen, 1982)
Data	136 Academic Articles	110 Media Articles; 34 Semi-structures interviews	710 participants with investment experience
Main Findings	Framework that integrates the literature on hype across the fields of entrepreneurship, new-venture finance, and other disciplines and identifies main themes and research opportunities	Findings track the valence and content of the hype surrounding VC as markers of the process of the standard model of entrepreneurship as a sociotechnical system to establish itself within the regime	Findings quantify the effect of anticipated regret and envy in the new-venture investor setting and expose the existence of a “non-investing norm” among investors.

INTRODUCCIÓN (Español)

Dentro de la actividad emprendedora, el hype ocupa una posición crítica (Wood et al., 2024). Los emprendedores pueden generar activamente hype en torno a sus iniciativas (Fisher et al., 2024) o aprovechar el hype existente en la industria para movilizar capital y respaldar sus proyectos empresariales (Heupel et al., 2024; Wood et al., 2024). Definido en este contexto como “una visión y promesa colectiva de un futuro posible, en torno a la cual aumentan la atención, la emoción y las expectativas con el tiempo” (Logue & Grimes, 2022, p. 1056), el hype puede funcionar como un recurso valioso a corto plazo. No obstante, también puede acarrear pasivos a largo plazo, ya que las expectativas elevadas que acompañan al hype se convierten en compromisos vinculantes (Borup et al., 2006) que limitan la flexibilidad emprendedora (Logue & Grimes, 2022) y, en última instancia, pueden comprometer la viabilidad del emprendimiento (Murray & Fisher, 2023).

Navegar con éxito el hype y las expectativas asociadas constituye, por tanto, un aspecto central de la estrategia emprendedora, representando la perspectiva académica predominante sobre el hype en la investigación sobre emprendimiento (Wadhwani & Lubinski, 2025). Sin embargo, se reconoce cada vez más que los emprendedores no son solo creadores y gestores del hype; también se ven influidos por el hype generado externamente. Por ejemplo, eventos positivos en la industria, como rondas de financiación destacadas o salidas exitosas, pueden atraer a emprendedores de otros sectores que perciben mayores oportunidades para adquirir recursos y alcanzar el éxito (Pontikes & Barnett, 2017). En consecuencia, el hype es tanto un resultado del discurso y la narrativa emprendedora (Garud et al., 2019; 2023) como un antecedente de fenómenos como las burbujas de mercado (Chang et al., 2016) y las modas gerenciales (Abrahamson, 1991).

En el otro extremo de la interacción de los emprendedores con el hype se encuentran los inversionistas en nuevas empresas, quienes constituyen objetivos primarios (Garud et al.,

2023; Heupel et al., 2024) y contrapartes dentro del mercado emprendedor—el espacio virtual donde tienen lugar los intercambios sobre propiedad y capitalización de nuevos emprendimientos. Los inversionistas operan en un entorno que los hace particularmente susceptibles al hype, el cual se origina no solo en los emprendedores, sino también en eventos ambientales a nivel macro (Chang et al., 2016) y en dinámicas internas de la comunidad (Valliere & Peterson, 2004). De hecho, su contexto operativo está profundamente incrustado en lo social, fomentando una conciencia constante de las acciones de sus pares y comparaciones con ellos (Sorenson & Stuart, 2008). Además, dado el alto índice de fracaso de las nuevas empresas, el éxito de los inversionistas depende de identificar inversiones rentables capaces de compensar las pérdidas derivadas de emprendimientos fallidos en sus portafolios (Nanda & Rhodes-Kropf, 2013). Estas condiciones pueden predisponer a los inversionistas a sesgos cognitivos y cambios conductuales inducidos por el hype (Kleinert & Hildebrand, 2024; Valliere & Peterson, 2005; Wood et al., 2020), siendo el “temor a quedarse fuera” (FOMO), el pensamiento de grupo y el comportamiento gregario resultante, algunos de los fenómenos más documentados (e.g., Fisher et al., 2024; Kleinert & Hildebrand, 2024; Valliere & Peterson, 2004).

A pesar del creciente interés académico (Garud et al., 2022; Wood et al., 2024) y de los avances recientes en la comprensión de los efectos del hype sobre emprendedores e inversionistas (e.g., Heupel et al.; Kleinert & Hildebrand, 2024; Logue & Grimes, 2022; Wood et al., 2024), la investigación en esta área sigue siendo limitada, dejando múltiples aspectos sin explorar. Un aspecto que se vuelve evidente tras una inspección superficial de la literatura existente sobre el hype en el emprendimiento es que el tema ha sido abordado casi de manera independiente por académicos del campo del emprendimiento y por aquellos especializados en financiación de nuevas empresas, con pocas excepciones destacables (e.g., Pontikes & Barnett, 2017). La investigación en emprendimiento ha adoptado predominantemente una “perspectiva

estratégica” (Wadhvani & Lubinski, 2025), destacando cómo los emprendedores gestionan el hype para obtener legitimidad y recursos, mientras mitigan las repercusiones negativas cuando no se cumplen las expectativas, incluyendo la navegación de la difusa frontera ética entre la exageración y el engaño (Garud et al., 2023; Sheaf & Wood, 2022). Por el contrario, los estudios de la financiación de nuevas empresas se han centrado en los cambios cognitivos y conductuales de los inversionistas en relación con burbujas sectoriales, como la burbuja “dot-com” (Valliere & Peterson, 2004; Zhelyazkov & Tatarynowicz, 2021), o en periodos caracterizados por un aumento de la actividad del mercado o “market heat” (Kleinert & Hildebrand, 2024; Lo et al., 2024). Este panorama fragmentado de la investigación dificulta una comprensión integral del hype en el emprendimiento y complica el acercamiento académico inicial. El campo se beneficiaría así considerablemente de la integración de perspectivas entre estos dominios y de la introducción de marcos conceptuales novedosos.

La investigación hasta la fecha se ha beneficiado sustancialmente de la traducción de conceptos procedentes de la ciencia, la tecnología y la innovación (CTI)—en particular del subcampo conocido como la sociología de las expectativas (Borup et al., 2006; Brown & Michael, 2003)—al ámbito del emprendimiento. Esta traducción ha dado lugar, por ejemplo, a la definición prevalente de hype en los estudios emprendedores (Logue & Grimes, 2022), y ha orientado la perspectiva estratégica del hype (Wadhvani & Lubinski, 2025) al poner de relieve sus dimensiones constructivistas y performativas (movilización de recursos y establecimiento de agendas; Borup et al., 2006), así como los riesgos prácticos y éticos implicados (Brown, 2003). No obstante, siguen existiendo aportes no aprovechados provenientes de CTI y de la sociología de las expectativas, que podrían enriquecer aún más nuestra comprensión del hype emprendedor. Un ejemplo de tales oportunidades es la exploración del hype en el emprendimiento a través del marco propuesto por Ruef y Markard (2010), que tipifica las expectativas asociadas al hype en tres niveles distintos (específico, general y marco), cuya

interacción durante el ciclo de hype dan forma al desenlace posterior a la fase de desilusión (Ruef & Markard, 2010; van Lente et al., 2013).

Con el propósito de abordar las lagunas identificadas en la investigación existente, esta tesis busca avanzar el conocimiento académico sobre el hype en el emprendimiento mediante la síntesis del trabajo previo y la introducción de nuevas perspectivas. Específicamente, sus objetivos son tres: (1) revisar de manera integral la literatura existente sobre el hype en general y, en particular, en relación con el emprendimiento y la financiación de nuevas empresas, integrando los hallazgos en un marco analítico cohesivo que permita mapear el conocimiento actual e identificar oportunidades prometedoras de investigación; (2) ampliar el enfoque más allá de la gestión emprendedora del hype, explorando perspectivas alternativas; y (3) examinar uno de los mecanismos cognitivos que influyen en las decisiones de inversión en contextos marcados por el hype, proporcionando una exploración inicial de cuestiones específicas y un ejemplo ilustrativo de posibles vías para futuras investigaciones. Cada uno de los capítulos de esta tesis corresponde a uno de estos objetivos.

El Capítulo Uno recopila sistemáticamente la literatura sobre hype y burbujas de mercado dentro del emprendimiento y la financiación de nuevas empresas, incorporando investigaciones fundamentales del campo de la ciencia, tecnología e innovación (CTI), el ámbito que ha producido el cuerpo más amplio de trabajos sobre el tema (van Lente et al., 2013). A través de un análisis inductivo, se sintetizan conceptos clave en un marco estructurado organizado en torno a dos dimensiones principales: el tiempo—según las etapas clásicas del ciclo del hype de Gartner Inc. (Linden & Fenn, 2003)—y los niveles de hype, identificados inductivamente como individual o de la empresa, tecnológico o industrial, y de mercado. Este enfoque permite trazar las interconexiones entre etapas y niveles, facilitando la identificación de áreas poco exploradas y futuras líneas de investigación.

El segundo capítulo introduce una perspectiva novedosa al explorar el fenómeno del hype emprendedor en torno al emprendimiento mismo—en particular, el modelo emprendedor altamente financiado, orientado a la disrupción y de rápido crecimiento que se originó en Silicon Valley (Audretsch, 2021; Welter et al., 2019; Zankl & Grimes, 2024), celebrado ampliamente (aunque cada vez más cuestionado) como el modelo arquetípico en la investigación en emprendimiento (Audretsch et al., 2021). Para analizar la naturaleza y el significado de este hype, se conceptualiza dicho “modelo estándar” (Welter et al., 2019) como un sistema sociotécnico (Geels, 2002) inmerso en un proceso continuo de establecer su dominio como enfoque principal para la identificación y explotación de oportunidades (Shane & Venkataraman, 2000), especialmente en actividades impulsadas por tecnología e innovación. Dado el papel central del capital de riesgo (VC) dentro de este sistema (Aldrich & Ruef, 2018), el hype en torno al VC se analiza como una manifestación del entusiasmo generalizado hacia este modelo. A su vez, dicho hype actúa como indicador de la disputa del sistema con el régimen existente por consolidar su posición (Kriechbaum et al., 2021). Aunque el capital de riesgo y el sistema emprendedor del que forma parte parecen haberse establecido firmemente, los resultados ofrecen una visión más compleja: el análisis del hype alrededor del VC en las dos últimas décadas revela fases diferenciadas, en las que las expectativas y perspectivas asociadas han variado en valencia y contenido, siguiendo un patrón propio de configuraciones sociotécnicas cuyo lugar en el sistema aún no está plenamente definido ni estabilizado.

El capítulo final examina cómo el pensamiento contrafactual prospectivo y las emociones asociadas influyen en las decisiones de inversión en nuevas empresas. Los hallazgos de los capítulos anteriores indicaron que el hype genera contextos de decisión en los que los juicios se desvían de los parámetros racionales establecidos por la Teoría de la Utilidad Esperada Subjetiva (Savage, 1954). Entre estas desviaciones, el miedo a quedarse fuera (FOMO) emergió como particularmente relevante para los inversionistas en nuevas empresas,

tanto en la literatura académica (e.g., Huang, 2018; Kleinert & Hildebrand, 2024; Valliere & Peterson, 2004) como en los datos cualitativos recopilados en esta tesis (mencionado por 18 de los 34 entrevistados). El FOMO, intrínsecamente vinculado al pensamiento contrafactual (Hodkinson, 2019), posee componentes emocionales y sociales significativos (Burnell et al., 2019; Good & Hyman, 2020). Este capítulo investiga empíricamente la influencia del pensamiento contrafactual sobre las decisiones de inversión en nuevas empresas, considerando tanto dimensiones individuales como sociales. Además, explora el efecto del fenómeno inverso—el miedo a cometer errores de comisión (invertir de forma desacertada)—sobre el comportamiento inversionista. A través de dos experimentos con viñetas, el estudio muestra que formas específicas de pensamiento contrafactual afectan sustancialmente las decisiones de inversión, y que las dinámicas sociales desempeñan un papel crítico en la configuración de estos efectos.

Aunque el campo del hype en el emprendimiento es aún limitado, presenta un gran potencial académico, como lo demuestra la reciente convocatoria para un número especial dedicado al tema por parte del *Journal of Business Venturing* (Garud et al., 2022). Esta tesis, a través de sus capítulos constitutivos, realiza aportes valiosos al conocimiento existente y sienta las bases para investigaciones futuras. El tema presenta además una importancia práctica considerable, dado que el modelo predominante para startups tecnológicas—que recurre intensivamente al hype para alcanzar métricas rápidas de crecimiento, a menudo a costa de la rentabilidad—está siendo cada vez más cuestionado (Aldrich & Ruef, 2018; Audretsch, 2021; Welter & Baker, 2024). A la luz de escándalos recientes que ilustran cómo las dinámicas del hype pueden precipitar fracasos empresariales significativos (e.g., WeWork, Theranos), resulta imperativo que académicos, profesionales y responsables de políticas comprendan mejor los procesos y sesgos que sustentan este modelo, con el fin de mitigar los riesgos de explotación e inestabilidad sistémica.

La Tabla A resume los tipos de estudio, preguntas de investigación, métodos, hallazgos y áreas de contribución de los estudios incluidos en esta tesis.

Tabla A: Resumen de Investigación

Ensayos	<i>Ensayo 1</i>	<i>Ensayo 2</i>	<i>Ensayo 3</i>
	Research On Hype In Entrepreneurship And New-Venture Finance: An Integrative Review	The Hype Around Venture Capital and its Implications for the Standard Model of Entrepreneurship	Damned If You Do, Damned If You Don't: How Counterfactual Emotions Shape Early-Stage Investment Decision-Making
Coautores	Ninguno	Pablo Muñoz, Daniel A. Lerner	Daniel A. Lerner, José Lejarraga
Tipo	Revisión de Literatura	Cualitativo	Cuantitativo
Pregunta de Investigación	<i>¿Cuáles son los temas comunes y avances en el estudio del hype en el emprendimiento y la financiación de nuevas empresas?</i>	<i>¿Cómo ha evolucionado el discurso en torno al capital de riesgo y qué implicaciones tiene para el modelo emprendedor del que forma parte?</i>	<i>¿Cómo afecta el pensamiento contrafactual prospectivo a las decisiones de inversión en nuevas empresas?</i>
Nivel de Análisis	Emprendedor/Nueva empresa, Tecnología/Industria, Mercado	Sistemas sociotécnicos	Individual
Contribución	Emprendimiento; Financiación de nuevas empresas	Emprendimiento; Sociología de las expectativas	Financiación de nuevas empresas; Ciencia de la toma de decisiones
Teoría	Sociología de las expectativas (Borup et al., 2006)	Hype en transiciones sociotécnicas (Geels, 2002; Kriechbaum et al., 2021)	Teoría del arrepentimiento (Loomes & Sugden, 1982)
Datos	136 artículos académicos	110 artículos de prensa; 34 entrevistas semiestructuradas	710 participantes con experiencia en inversión
Hallazgos	Marco que integra la literatura sobre el hype en los campos del emprendimiento, la financiación de nuevas empresas y otras disciplinas, identificando temas clave y oportunidades de investigación	Los resultados rastrean la valencia y el contenido del hype en torno al capital de riesgo como indicadores del proceso mediante el cual el modelo estándar de emprendimiento busca establecerse como sistema sociotécnico dentro del régimen existente	Los resultados cuantifican el efecto del arrepentimiento anticipado y la envidia en el contexto de inversión en nuevas empresas, y revelan la existencia de una “norma de no invertir” entre los inversionistas

CHAPTER 1 – An Integrative Review of Hype in the Entrepreneurship Market

ABSTRACT

This literature review synthesizes research on hype in the entrepreneurship market, focusing on its antecedents, dynamics, and consequences at the venture, industry, and market levels. Drawing on scholarship from entrepreneurship, finance, and Science, Technology, and Innovation (STI) studies, I identify how hype emerges, influences investment behavior, and shapes new venture development. I propose an integrative framework that maps the interactions between different levels of hype, revealing feedback loops that drive cycles of exuberance and correction. This study advances understanding of entrepreneurial hype by bridging insights from fragmented research streams and identifying gaps in knowledge, particularly regarding market-level hype. I conclude by outlining avenues for future research.

INTRODUCTION

Although research on hype in entrepreneurship is relatively new, scholarship on the topic is expanding rapidly (Garud et al., 2023). In the subfield of new-venture financing, dedicated studies on hype remain scarce, despite its recognized importance among practitioners (e.g., Rao, 2024). Moreover, there is minimal overlap between research on hype in entrepreneurship and hype in venture financing, with few exceptions, such as the study by Pontikes and Barnett (2017). This gap is problematic, as investors are integral to entrepreneurial activity (Drover et al., 2017), and their perspectives must be integrated with those of other stakeholders—particularly entrepreneurs—to develop a comprehensive understanding of hype within the entrepreneurial ecosystem. More specifically, this integration is crucial for understanding the entrepreneurship market, which encompasses the exchanges of ownership and capitalization of new ventures.

A key obstacle to advancing knowledge in both areas and their intersection is that research on hype is dispersed across multiple fields (Powers, 2012). In many cases, relevant insights are embedded in studies that do not explicitly address hype or only touch on it tangentially. This fragmentation makes it difficult for scholars to access the necessary knowledge to build upon existing work. A focused review of hype in entrepreneurship and entrepreneurial finance is therefore warranted to synthesize the existing literature, identify conceptual gaps, and highlight opportunities for future research. In the context of this dissertation, this effort also serves to establish a conceptual foundation for the empirical analyses in the subsequent chapters. To achieve these objectives, I survey the literature on hype within entrepreneurship and new-venture financing while also drawing on insights from related fields where hype has been examined from diverse perspectives, contributing to the nascent body of work on the subject.

Accordingly, this review examines literature from Science, Technology, and Innovation (STI) Studies—an inherently interdisciplinary field—as well as Economics and Finance. Research in these domains provides foundational concepts that have informed the emerging study of hype in entrepreneurship (e.g., Heupel et al., 2024; Logue & Grimes, 2022). Of these streams, STI studies have developed the most extensive body of work (van Lente et al., 2013), particularly regarding the relationship between hype and technological innovation (e.g., Dedehayir & Steinert, 2016). Key contributions include defining, operationalizing, and measuring hype (e.g., Ruef & Markard, 2010), analyzing its dynamics (e.g., Brown & Michael, 2003), and assessing its consequences (e.g., Ruef & Markard, 2010). After reviewing this foundational literature, I conduct a comprehensive examination of studies on hype within entrepreneurship and new-venture financing.

This review contributes to the literature on hype in the entrepreneurial ecosystem in three ways. First, it consolidates and synthesized the relevant scholarship, offering a broad overview of the phenomenon that enables researchers to grasp its key concepts efficiently. Second, it advances understanding by proposing an integrative framework that categorizes the antecedents, dynamics, and consequences of hype in entrepreneurship and new-venture financing. This framework also identifies the multiple levels of entrepreneurial hype (Ruef & Markard, 2010) and the interconnections between these levels, an aspect largely unexplored in prior research. Third, it highlights multiple avenues for future inquiry, furthering the development of this emerging field.

METHODOLOGY

Integrative Review Approach and Selection Procedure

Because hype has been studied across multiple disciplines using diverse perspectives, the resulting body of knowledge is fragmented (Powers, 2012). In such cases, an integrative

literature review is particularly appropriate for identifying and synthesizing relevant research traditions (Gamble & Muñoz, 2022; Snyder, 2019; Wang et al., 2013). Thus, the first step of this cross-disciplinary review was to conduct a broad search of literature addressing hype in the context of entrepreneurship and new-venture finance.

I conducted an initial search using the Scopus database on December, 2024, restricting the query to title, abstract, and keywords and employing the terms “hype” OR “bubble” AND “entrepreneur” OR “entrepreneurship” OR “new venture” OR “venture capital” OR “angel” OR “crowdfunding.” The search was limited to peer-reviewed journal articles and reviews published in English, excluding conference papers and practitioner-oriented publications. The term “bubble” was included because, in economics and finance, hype is often discussed in the context of asset overvaluation events, which also apply to new-venture finance (e.g., Valliere & Peterson, 2004). This search yielded 193 articles, from which I retained only those published in journals listed in the Association of Business Schools’ Academic Journal Guide, 2024 (ABS AJG, 2024) (Morales-Raya & Muñoz, 2024) (109 articles). I then manually screened these articles for relevance through a three-stage process: first by title, then by abstract, and finally by full text, resulting in a refined set of 76 articles.

To ensure that no relevant literature from the field of entrepreneurship was overlooked, I conducted an additional search in leading management and entrepreneurship journals, using “hype” and “bubble” as search terms. Following Drover et al. (2017), who conducted a literature review on equity financing, I included the Academy of Management Journal (AMJ), Academy of Management Review (AMR), Administrative Science Quarterly (ASQ), Entrepreneurship Theory and Practice (ETP), Journal of Business Venturing (JBV), Journal of Management (JOM), Journal of Management Studies (JMS), Management Science (MS), Organization Science (OS), Strategic Entrepreneurship Journal (SEJ), and Strategic

Management Journal (SMJ). This search identified 21 additional articles, increasing the total number of articles on hype in entrepreneurship and new-venture financing to 97.

To incorporate foundational literature from other fields that have informed research on hype in the entrepreneurial ecosystem, I manually examined the references of five highly relevant articles (Gamble & Muñoz, 2022). Namely, Heupel et al. (2024), Logue & Grimes (2022), Pontikes & Barnett (2017), Valliere & Peterson (2004), and Wood et al. (2024). Again, only articles published in ABS AJG-listed journals were considered. This process added 40 new articles, primarily from Sociology, Economics, and Finance, bringing the final sample to 137 articles. Table 1.1 presents the distribution of articles across disciplines based on the ABS AJG classification.

Table 1.1: Reviewed Literature by Discipline

Discipline	No. of Articles (n = 137)	Sample Distribution (%)
Entrepreneurship and Small Business Management	28	20%
Economics	22	16%
Finance	16	12%
General Management, Ethics, Gender & SR	16	12%
Innovation	14	10%
Strategy	11	8%
Information Management	7	5%
Social Sciences	5	4%
Operations Research & Management Science	5	4%
Organization Studies	4	3%
Management Development & Education	2	1%
Marketing	2	1%
International Business & Area Studies	2	1%
Accounting	1	1%
Public Sector	1	1%
Regional Studies, Planning, & Environment	1	1%

Categorization and Prioritization

Following the methodology of Gamble and Muñoz (2022), I categorized the final 137 articles according to their relevance to the phenomenon of interest. Articles were assigned to

one of four categories, with Category 1 consisting of studies fully aligned with hype in entrepreneurship and new-venture finance and Category 4 including studies that only tangentially addressed the topic. Articles in Categories 1 and 2 were used for the primary analysis, while those in Categories 3 and 4 served to complement and contextualize the findings (Gamble & Muñoz, 2022; Morales-Raya & Muñoz, 2024). The 77 articles classified as Categories 1 and 2 are listed in Appendix 1.1.

Distribution and Evolution of the Literature

The number of articles on hype in entrepreneurship has increased significantly over the past 25 years (Figure 1.1). The reviewed literature predominantly employs quantitative and qualitative research methods. Table 1.2 summarizes the methodological distribution of the articles.

Figure 1.1: Evolution of Literature on Hype in the ENT Market

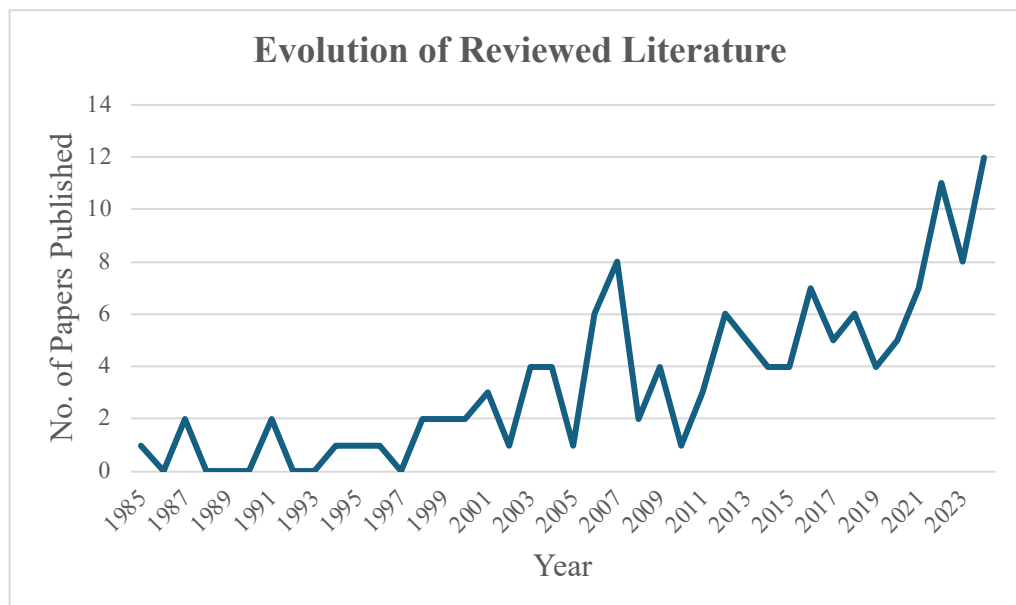


Table 1.2: Thematic and Methodological Distribution

Focal Industry	No.	Approach	No.
Financial Markets & Venture Capital	72	Quantitative	66
Entrepreneurship & Startup Ecosystems	18	Qualitative	38
Other	12	Conceptual	29
Creative & Media Industries	10	Mixed Methods	2
Management & Organizational Behavior	8		
Technology & Innovation Management	8		
Economic Bubbles & Financial Crises	4		
Blockchain, Cryptocurrency, and Digital Assets	3		

Analysis

For the analysis, I first categorized the articles by discipline and subsequently by theme within each discipline, summarizing the findings and insights for each article. To establish a conceptual foundation, I prioritized seminal literature from two research streams that have informed studies on hype in entrepreneurship and new-venture finance: The Sociology of Expectations within STI Studies and the study of bubble markets within Economics and Finance. These foundational studies provided theoretical clarity on hype definitions, measurement, and dynamics, enabling a conceptual link between hype and financial bubbles. For example, understanding the measurement of hype (e.g., Dedehayir & Steinert, 2016) related to bubbles in financial markets (e.g., Chang et al., 2016) allowed for the identification of periods of elevated hype within the new-venture finance literature, even when articles did not explicitly use the term “hype.”

After establishing these conceptual foundations, I examined the literature on entrepreneurship and new-venture finance to identify the primary research topics. Studies published in entrepreneurship journals primarily focus on how entrepreneurs leverage hype to secure resources (e.g., Logue & Grimes, 2022; Wood et al., 2024). In contrast, studies in finance journals explore aggregate investor behavior during periods of exuberance, including collusion with investment bankers to underprice initial public offerings (IPOs) (Bradley et al., 2015) and investment in unfamiliar sectors during speculative cycles (Lo et al., 2024).

I then employed open coding to identify relevant data, breaking it down into discrete analytical units for further examination. These codes were subsequently aggregated to develop an initial data structure. The Gartner Hype Cycle (Linden & Fenn, 2003) was used as a guiding framework to organize the findings, as an initial assessment of the codes revealed that most could be mapped onto its structure. This decision allowed for the use of a well-established, theoretically grounded framework while maintaining a coherent analytical narrative.

A key finding from this review is that hype operates at multiple levels, a phenomenon consistent with characterizations in STI studies (Kriechbaum et al., 2021; Ruef & Markard, 2010; van Lente et al., 2013). These levels include the venture level (e.g., startups leveraging hype for fundraising), the technology/industry level (e.g., sector-wide speculation in emerging fields), and the market level (e.g., broader capital inflows and cycles of exuberance). Once this layered structure became evident, I revisited the literature to identify connections between these levels, which provided the basis for the final stage of the analysis. These insights were then synthesized into an integrated framework that typifies the hype phenomenon in the entrepreneurial ecosystem.

FINDINGS

To explore the concept of hype in the entrepreneurial market and its treatment in the literature, the first step is to define the phenomenon and identify the core concepts and dynamics that shape it. Regarding its definition, van Lente et al. (2013) offer a widely cited characterization of hype as “waves of high rising expectations” (van Lente et al., 2013, p. 1615). Meanwhile, the prevalent definition within entrepreneurship research, which is itself informed by the STI literature, comes from Logue and Grimes (2022). They define hype as “a collective vision and promise of a possible future, around which attention, excitement, and expectations increase

over time” (Logue & Grimes, 2022, p. 1056). Common to these definitions are the elements of shared expectations and a cyclical nature in which expectations rise and fall over time.

Regarding the first element, expectations, it is important to note that both STI literature and entrepreneurship research that builds upon it predominantly adopt a constructivist perspective, viewing hype and expectations as performative in that their articulation shapes innovation trajectories by establishing perceived requirements (Borup et al., 2006; van Lente et al., 2013). This perspective contrasts with the realist approach taken in economics, where hype is treated as exaggeration, revealed by the discrepancy between forecasted and actual outcomes. Consequently, from a constructivist standpoint, the measurement of hype does not rely on comparing expectations with eventual states but rather on media attention and the content of expectation statements (van Lente et al., 2013). With regard to hype’s cyclical nature, scholars argue that disappointment is an inherent part of these dynamics, as expectations are deliberately set high to mobilize resources (Borup et al., 2006). The pattern of hype evolution has been described in the five stages of the Gartner Hype Cycle, which consists of a trigger event, a peak of expectations, a trough of disillusionment, a slope of enlightenment, and a plateau of productivity (Dedehayir & Steinert, 2016). However, the specificity of a technology’s anticipated applications, as well as broader environmental factors, influence the trajectory of hype cycles, meaning they do not always conform to the stylized pattern proposed by Gartner (van Lente et al., 2013).

These definitions are useful in linking hype to related concepts such as shared expectations and optimism, yet they do not address two fundamental questions necessary for framing hype within the entrepreneurial market: (1) Who or what generates hype? and (2) What is the object of the hype? Given the diverse stakeholders and complex contextual factors involved, the answers to these questions are multifaceted. The following sections explore these aspects through the reviewed literature.

A key characteristic of hype and expectations, as conceptualized in the sociology of expectations, is that these phenomena operate at multiple interconnected levels of analysis. Scholars in this field categorize expectations into three levels: (1) specific expectations, which pertain to an individual project, organization, or product; (2) general expectations, which relate to broader technological fields or industries; and (3) frame expectations, which are of a different kind and link emerging technologies to societal goals and concerns (Kriechbaum et al., 2021; Ruef & Markard, 2010; van Lente et al., 2013). Multiple levels of hype have also been acknowledged in new-venture finance. Valliere and Peterson (2004) identified hype in venture capital at three levels: investors, companies, and markets. The findings of this review somewhat align with this conceptualization, revealing that hype in the entrepreneurship market emerge around (1) specific ventures or their founders, (2) technologies or industries, and (3) the market as a whole.

This categorization retains two of Valliere and Peterson's levels—companies (which correspond to specific ventures) and industries (which they refer to as markets). However, I exclude investor hype, as in this case it refers to the entity generating hype rather than the object of hype, unlike the other two levels. Additionally, I introduce market-level hype as a central dimension, as it has been largely overlooked in entrepreneurship research. While the first two levels (individual and industry) match those of the framework used in STI to study expectations, the third one (market level) does not conform to this model. It is of a higher level than the industry, since it encompasses the entrepreneurship market, but it does not belong to the category of frame expectations, since it does not exclusively contain those related to societal goals and concerns. It also includes expectations surrounding the market's internal performance, and so the expectations that drive market hype would also fit among general expectations. Furthermore, I chose to focus on the nature of the object of hype, rather than the nature of the expectations around it, since this better fits the findings and it also maintains some

parsimony. Had I not chosen this route and opted for segregating between object (individual, industry/technology, and market) *and* type of expectation, the end result would have included at least five types of expectations that contribute to hype at different levels in a nested structure that would have added a lot of complexity without providing much more insight in the context of this review. Therefore, the remainder of this chapter, retains a three-level framework to analyze the data and examine potential connections between these levels wherever the data permitted.

Contextual Elements

The entrepreneurship market operates within a distinct context in which investor incentives, the structure of the venture capital (VC) industry in particular (the most widely recognized form of equity financing (Drover et al., 2017)), and the cognitive biases of stakeholders play a central role in shaping expectations and behaviors. Several of these characteristics make the market particularly susceptible to hype cycles and prone to asset bubbles.

New-venture investments are inherently risky, with the majority yielding no returns for investors. Consequently, the minority of successful investments must generate sufficient profits to offset losses and provide satisfactory portfolio-wide returns (Nanda & Rhodes-Kropf, 2013). This skewed payoff structure renders investors highly sensitive to potential “homerun” opportunities, making them particularly susceptible to hype surrounding ventures and markets that promise large gains (Valliere & Peterson, 2004). Furthermore, investors’ incentives are such that they both promote and feed off hype cycles. VC firms’ performance metrics, which determine their ability to raise future funds, are based on the valuations of their portfolio companies (Lo et al., 2024) and their ability to rapidly take firms public (Lee & Wahal, 2004). Additionally, because general partners’ (GPs) earnings include fixed management fees based on portfolio size rather than performance (Green, 2004), growth potential is often prioritized

over short-term profitability (Puri & Zarutskie, 2012). Since perceived growth potential is largely shaped by shared expectations, hype becomes an integral part of valuation processes. At its worst, the incentive structure of the VC industry can create conflicts of interest, as GPs may benefit from overstating the potential of their investments, thereby sustaining bubbles even when actual returns fail to materialize (Valliere & Peterson, 2005).

Like all decision-makers, new-venture investors face cognitive constraints that render them vulnerable to biases, which, in turn, can amplify hype cycles. Loss aversion, for instance, influences risk perception, causing investors to become more risk-seeking when faced with the possibility of missing out on a high-return opportunity (Valliere & Peterson, 2004). Investors also struggle with signal misinterpretation, sometimes failing to assess the accuracy of entrepreneurial signals or distinguish genuine quality indicators from strategic mimicry (Valliere & Peterson, 2005). As a result, they are susceptible to cheap talk by entrepreneurs (Kleinert & Hildebrand, 2024) and can be unduly swayed by founder charisma (Forbes, 2006). Additionally, some investors experience heightened regret aversion, prioritizing errors of omission (i.e., failing to invest in a high-growth startup) over errors of commission (i.e., investing in an overhyped but ultimately unsuccessful venture) (Valliere & Peterson, 2005). Collectively, these biases increase investors' willingness to believe inflated expectations presented by entrepreneurs, industry networks, and the media, making them more likely to act on hype-fueled narratives.

New-venture investment is also a socially embedded activity, with syndication being a common practice in which a lead investor invites others to co-invest (Sorenson & Stuart, 2008). Additionally, both angel investors and VCs rely on strong professional networks to access attractive opportunities and enhance portfolio performance (Sorenson & Stuart, 2008; Wood et al., 2020). In this environment, investors are highly attuned to the behavior of their peers and

often defer to the judgment of other investors, which makes them particularly susceptible to herd behavior dynamics (Valliere & Peterson, 2004; Wood et al., 2020).

The media play a pivotal role in hype cycles by not only disseminating news and expectations but also actively shaping discourse within the entrepreneurship market (Garud et al., 2019). Media coverage influences the perceptions of market participants (Gurun & Butler, 2012) and can foster overenthusiasm (Dedehayir & Steinert, 2016; Heupel et al., 2024). It affects all levels of entrepreneurship, driving excitement around individual founders and ventures, entire industries, and even the broader entrepreneurial ecosystem (Cervantes-Zacarés et al., 2022; Lo et al., 2024). However, the media exhibit systematic biases, such as a preference for success stories (Cervantes-Zacarés et al., 2022), sensational framing (Garud et al., 2023), and a proclivity for covering local companies more favorably (Gurun & Butler, 2012). These biases contribute to inflated expectations, which can, in turn, influence the behavior of entrepreneurs. A notable example is the media-fueled hype surrounding Silicon Alley, which encouraged entrepreneurs to enter the space by amplifying the visibility of successful ventures and founders (Garud et al., 2019).

The media also influence investors, particularly when coverage reinforces preexisting beliefs by aligning with collective expectations (Lo et al., 2024). This was evident during the dot-com bubble, when positive media narratives encouraged VCs to continue investing aggressively, despite clear signs of overinflated valuations (Thornton & Marche, 2003). However, media influence is not unidirectional—actors within the entrepreneurial market actively leverage the media to advance their agendas. Entrepreneurs and researchers utilize press releases to establish legitimacy in the eyes of investors and resource providers, mitigate uncertainty, and persuade stakeholders (Brown, 2003; Jang, 2007). Similarly, VCs actively seek analyst coverage following an IPO to generate hype around their portfolio firms, inflate

stock prices, and maximize returns by selling shares at elevated valuations (Bradley et al., 2015).

Antecedents and generation of hype in the entrepreneurship market

Hype is a multi-level phenomenon, occurring at different levels and interacting across them (Ruef & Markard, 2010; van Lente et al., 2013). Results show that actors and forces at one level can generate hype at another level, but that it is more common for determinants within a specific level to produce hype at that same level. However, hype can also migrate between levels, influencing different parts of the entrepreneurial ecosystem over time.

In the macro-environment, I identified several determinants that shape hype in the entrepreneurship market as a whole. These were grouped into three categories: institutional and policy influences, economic and market drivers, and culture. The first category includes policy changes designed to promote entrepreneurship through tax exemptions, direct incentives, and other stimuli, as implemented in the United States and Europe (Bertoni et al., 2019; Cervantes-Zacarés et al., 2022; Månsson & Landström, 2006; Sahlman & Stevenson, 1985). Economic and market drivers include macroeconomic growth (Thornton & Marche, 2003), stock market performance (Ning et al., 2015), and liquidity availability (Bertoni et al., 2019). Institutional structures and culture encompass the portrayal of entrepreneurs as heroic figures (Sahlman, 1999) and the emphasis on high-growth, equity-backed new venture creation within media, education systems, and public discourse (Aldrich & Ruef, 2018). These factors create both financial and non-financial incentives for entrepreneurs and investors to participate in the market, increasing startup formation, investment activity, and exit opportunities, while simultaneously raising expectations about potential gains. They also influence other key stakeholders, such as limited partners (LPs) in venture capital funds, shaping their investment decisions (Green, 2004). However, the macro-level environment also affects industry-level hype, as regulatory frameworks can facilitate or hinder the adoption of specific technologies

(Giones & Brem, 2017), shaping industry outlooks in the eyes of market participants. Additionally, external shocks, such as changes in the natural environment, can catalyze industry-specific hype, as seen during the clean-tech investment boom (Giorgis et al., 2024).

Hype at the industry level can also originate within the same level. In STI literature, the technology trigger—a significant technological advancement—is commonly identified as the initial catalyst of hype cycles (Kriechbaum et al., 2021). Such events prompt various stakeholders to interpret the new technology's potential applications and commercial prospects (Giones & Brem, 2017). These interpretations, however, can be prone to hyperbole and overestimation. This dynamic was observed during the tulip mania of the 17th century, when amateur investors misjudged the commercial viability of newly cultivated tulip varieties, leading to unsustainable price inflation (Chang et al., 2016). In other cases, early entrepreneurial successes are necessary to generate collective expectations around a new technology. This was evident in the railway investment boom of the 19th century (Chang et al., 2016) and, more recently, in the wave of enthusiasm surrounding artificial intelligence (AI) following the launch of ChatGPT (found through the interviews with experts conducted as part of the empirical strategy in Chapter 2). Additionally, key events such as successful funding rounds and high-profile exits can spark sector-wide enthusiasm, even in the absence of a fundamental technological breakthrough. Such events often lead to exaggerated expectations about an industry's viability, as seen in the venture capital boom fueled by the rise of platform businesses (Pontikes & Barnett, 2017).

Hype generation at the individual level has been a central focus of scholarly attention in entrepreneurship research, particularly regarding how entrepreneurs strategically cultivate hype to gain legitimacy and secure resources for their projects. This process involves narrative construction, whereby entrepreneurs craft compelling stories about their capital, market opportunity, and innovation potential (Lounsbury & Glynn, 2001), create meaning around new

technologies (Garud et al., 2014), and associate their ventures with symbolic legitimacy (Garud et al., 2019). Framing strategies serve as rhetorical devices that help familiarize audiences with novel ventures and technologies, making selected aspects of the venture more salient (Sinhur et al., 2022). However, in their efforts to generate excitement, entrepreneurs often engage in varying degrees of exaggeration, ranging from hyperbole to embellishment, and in some cases, deception or fraud (Garud et al., 2023; Scheaf & Wood, 2022; Wood et al., 2022).

A crucial temporal aspect of entrepreneurial narratives is their ability to generate anticipation for the future (Garud et al., 2019). Entrepreneurs strategically leverage this anticipation to create hype, awareness, and fear of missing out (FoMO) among stakeholders (Fisher et al., 2024). Entrepreneurs also generate expectations for their ventures by linking their ventures' stories to wider growth stories (Garud et al., 2014) and in this practice a mechanism is found by which hype travels downward from the industry/technology level to the venture level. Additional tactics employed to cultivate hype include displays of “swagger” and passion (Heupel et al., 2024), showmanship (Chang et al., 2016), and “cheap talk”—the use of unverifiable growth projections to enhance perceived potential (Kleinert & Hildebrand, 2024).

Engaging with hype enables entrepreneurs to pursue path-breaking innovation (Logue & Grimes, 2022), but rising expectations can also have undesirable consequences. Heightened expectations create binding commitments (Wood et al., 2024), limiting entrepreneurs' temporal and categorical flexibility (Logue & Grimes, 2022) while exposing ventures to stakeholder disappointment if expectations go unmet (Wood et al., 2024). Ventures that rely on unbounded claims—assertions detached from current reality that include superlative descriptions of a future product—engage in a high-stakes strategy. While such claims can attract attention, generate hype, and mobilize resources, they also increase the difficulty of delivering on promises (Murray & Fisher, 2022). When claims are perceived as excessively exaggerated, ventures may even face accusations of fraud (Wood et al., 2022). Additionally, when

entrepreneurs associate their ventures with cultural symbols, organizational forms, or emerging collective identities to benefit from their legitimacy, they risk sacrificing distinctiveness (Garud et al., 2019). This can become a liability if these symbols later become stigmatized, as audiences may already strongly associate the venture with them (Garud et al., 2014).

To manage the risks of engaging with hype, entrepreneurs employ a range of strategic responses tailored to their circumstances. To maintain flexibility, they seek to convert hype into social proof through relational and field-organizing practices (Logue & Grimes, 2022). When confronted with stakeholder disappointment, they revise their storytelling to sustain the temporal expectations created by hype (Wood et al., 2024) and regain lost legitimacy (Garud et al., 2014).

Beyond entrepreneurs, other stakeholder groups can also generate hype around specific projects. Some groups may have a direct financial incentive to amplify hype, as was the case with the South Sea Company in the early 18th century, when politicians invested in the company and actively promoted it to inflate stock prices (Chang et al., 2016). In other cases, hype may emerge from genuine excitement about a project. For example, rumor communities, which are becoming increasingly prevalent in product markets, helped shape expectations around the iPad (Seidel et al., 2020). Sometimes, financial incentives and genuine enthusiasm align, as seen in crowdfunding platforms, where target audiences generate hype through word-of-mouth (Pinkow, 2023). In such cases, supporters have a vested interest in generating hype to ensure a campaign's success, but they may also be genuinely excited about the project.

Dynamics of the Entrepreneurship Market During Periods of Elevated Hype

With respect to the cognitive processes, decision-making, and behaviors of actors in the entrepreneurship market during periods of elevated hype at the industry and market levels, there is evidence of systematic departures from standard practices among both entrepreneurs and investors. These deviations are particularly pronounced among investors, who, during

periods of industry-specific hype, begin to believe that traditional investment criteria no longer apply (Buenstorf & Fornahl, 2009). Consequently, they reinterpret key market signals. For instance, high valuations are not perceived as potential signs of overvaluation but rather as indicators of urgency, driven by a meta-cognitive process in which investors assume that others will think the same way, creating a self-reinforcing loop (Valliere & Peterson, 2004). Similarly, failures within a hyped sector are interpreted as evidence of increased upside potential for surviving businesses rather than as signals of heightened risk (Valliere & Peterson, 2004). During systemic hype, when overall market sentiment is high, investors become overly optimistic, leading them to overestimate the success prospects of new ventures. They interpret increased market activity—such as rising IPO volumes—as confirmation of higher upside potential and diminished risk (Lo et al., 2024). They also increasingly rely on heuristic thinking and emotions, discounting true financial signals in favor of cues that align with their optimism, such as entrepreneurial “cheap talk” (Kleinert & Hildebrand, 2024; Lo et al., 2024). Additionally, the perception of heightened competition increases investors’ sensitivity to FoMO (fear of missing out), amplifying herd behavior (Kleinert & Hildebrand, 2024). This belief in a new set of market rules leads investors to disregard financial fundamentals, such as earnings and book equity value (Gavious & Schwartz, 2011; Isaksson & Fredriksen, 2020), in favor of benchmark multiples and growth narratives presented by entrepreneurs (Kleinert & Hildebrand, 2024). Investors also conduct less rigorous due diligence during these periods (Wang et al., 2013).

During sectoral or market-wide exuberance, investors alter their behavior in ways that align with their collective state of mind, and that might even be called reckless. Evidence was found of investors deviating from their usual investment patterns, chasing hype-driven industries based on consensus views of their potential (Pontikes & Barnett, 2017) and paying premiums to participate, effectively jumping on the bandwagon (Cusumano et al., 2024;

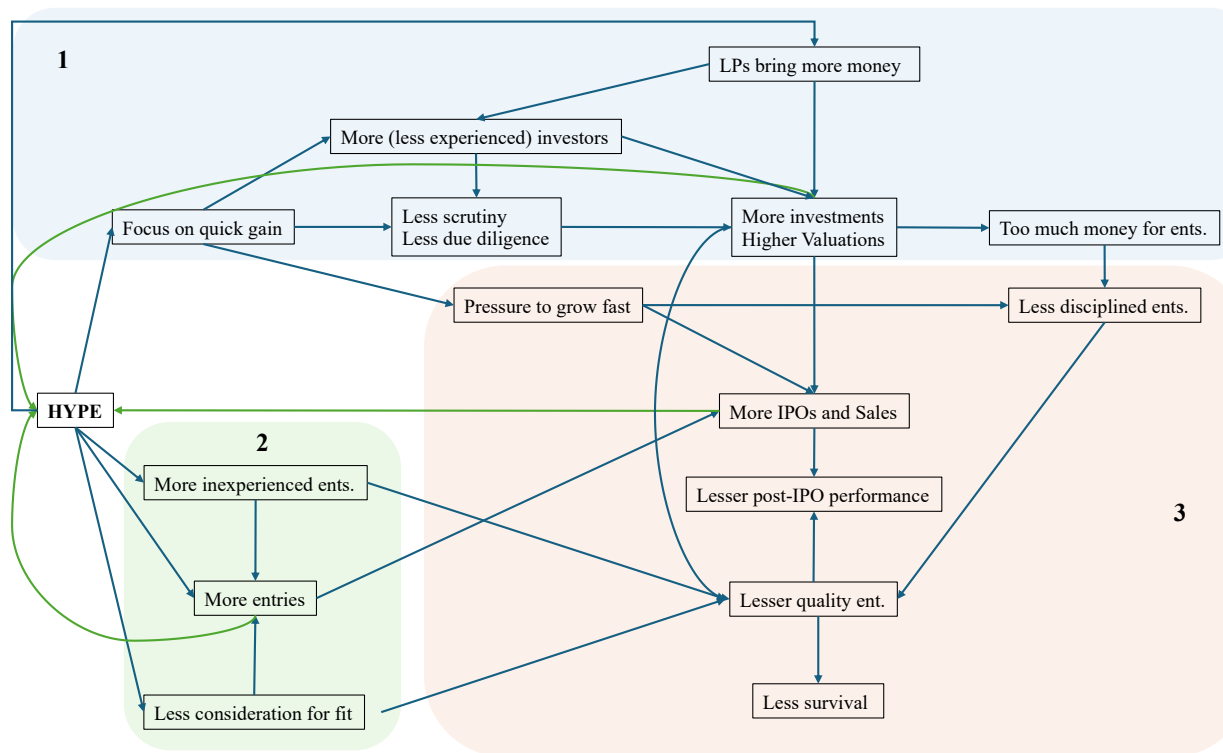
Valliere & Peterson, 2004). Investors also enter unfamiliar industries in response to market heat, displaying a greater willingness to experiment (Lo et al., 2024; Nanda & Rhodes-Kropf, 2013). Some investors abandon clear investment strategies altogether during periods of generalized optimism, as seen in the early 2000s (Green, 2004). Additionally, investors increasingly focus on capitalizing on hype cycles rather than on building sustainable businesses, prioritizing fast growth and quick exits over long-term value creation (Bradley et al., 2015; Kleinert & Hildebrand, 2024; Sorenson & Stuart, 2008). This shift manifests in preference for younger companies (Isaksson & Fredriksen, 2020; Månsson & Landström, 2006), funding ventures with weak or nonexistent business models (Thornton & Marche, 2003), and accelerating firms' entry into public markets (Lee & Wahal, 2004). Investors have also been found to reduce their control over the companies they invest in during periods of sectoral hype (Liu et al., 2014). While these behaviors may stem from overenthusiasm and urgency, some enter unethical territory (Chang et al., 2016). For example, during IPOs in speculative bubbles, venture capitalists have been found to collude with investment bankers in quid pro quo arrangements, underpricing newly issued shares to ensure positive analyst coverage, thereby inflating IPO hype. These arrangements benefit VCs but come at the expense of the company, the entrepreneur, and the public (Bradley et al., 2015; Degeorge et al., 2006).

Although entrepreneurs often act as promoters of hype, they are also subject to its effects. There is evidence that entrepreneurs adjust their behavior during periods of elevated industry and market hype, responding both to investor expectations and changing market conditions (Pontikes & Barnett, 2017). Entrepreneurs may conform to prevailing market narratives, sometimes despite their better judgment (Turcan, 2011). For instance, they may enter hot sectors in response to inflated valuations, increased exit activity, and other vital market events, judging that these industries offer the best opportunities for resource acquisition and survival (Pontikes & Barnett, 2017; Thornton & Marche, 2003; Wang et al., 2013). By

jumping on the bandwagon, entrepreneurs capitalize on the legitimacy established by their predecessors (Garud et al., 2023). However, they may also internalize the market sentiment, becoming overly optimistic about their own ventures' prospects (Turcan, 2011). These two forces—conforming to market trends and internalizing optimism—lead entrepreneurs to engage in unsustainable business practices in pursuit of fast growth. For example, they may allocate disproportionate sums to marketing efforts (Thornton & Marche, 2003) or engage in money-losing transactions to sustain momentum and visibility (Sahlman, 1999). Such practices occur in an environment of poor strategic planning and careless spending, which, once established, can become ingrained and difficult to reverse (Min et al., 2008; Thornton & Marche, 2003).

The interaction between entrepreneurs and investors during periods of industry-level hype has been described by Pontikes and Barnett (2017), and the findings of other studies in the sample echo and expand upon this account. I synthesize these inputs in the following manner (Figure 1.2):

Figure 1.2: Industry Hype Cycle



- 1) Hype creates a strong appetite for quick gains and fosters optimism, attracting inexperienced investors and those unfamiliar with the industry. This influx of new investors heightens competition among them, leading to investment decisions made with less scrutiny and reduced due diligence. Additionally, in the case of VC, LPs are influenced by hype cycles and increase the capital available for investment in the sector, further fueling investment activity. The combined effect of these forces is a higher volume of investments, including in low-quality ventures, and a surge in valuations, both of which reinforce the hype. The result is a market in which too much capital chases too few viable opportunities, creating an environment of excessive liquidity that benefits entrepreneurs in the short term.
- 2) Hype also attracts more entrepreneurs, including inexperienced founders and those drawn to the market by the perceived abundance of resources, even if their ventures are not well suited to the industry. This inflow lowers the average quality of entrants. The

increased volume of new startups contributes to consensus views about the sector's promise, reinforcing entrepreneurial herd behavior and triggering a snowball effect in which more founders enter the space simply because others are doing so.

- 3) Investors' incentive to capitalize on the hype while it lasts translates into pressure on entrepreneurs to grow quickly, enabling fast exits for investors. This imperative for rapid scaling, combined with the lack of financial discipline fostered by abundant resources (Garud et al., 2019), leads to unsustainable practices that undermine long-term profitability and survival. However, despite their fragile financial foundations, these ventures increase in size and are taken to market, sustaining the illusion of success. While some exits may be premature or of lower quality, they are nonetheless perceived as positive outcomes in the short term, reinforcing investor optimism and generating vital events that further perpetuate hype and attract new market participants. In the long run, however, post-exit performance tends to decline, revealing the structural weaknesses of hype-driven investment cycles.

De-escalation of Hype

In contrast to the extensive focus on the factors that generate hype and the dynamics that unfold during periods of elevated hype, there is comparatively less emphasis in the literature on the mechanisms that cause hype to diminish. At the individual level, entrepreneurs' failure to meet expectations results in stakeholder disappointment, a loss of legitimacy, and eventual withdrawal of support (Garud et al., 2014). In an effort to mitigate this decline, entrepreneurs attempt to reconfigure their narratives, though this strategy does not always succeed (Brown, 2003; Garud et al., 2014). When expectation-setting involves deception, entrepreneurs find it increasingly difficult to justify their claims, leading them to escalate their fabrications in a self-perpetuating cycle. However, this cycle ultimately collapses

when the deceptions are publicly exposed, triggering a rapid downward trajectory (Garud et al., 2023).

Just as positive vital events can spark waves of enthusiasm and market entries at the industry and technology levels, negative events, such as high-profile bankruptcies, can lead to self-reinforcing waves of exits (Pontikes & Barnett, 2017). These become more frequent as the cycle progresses, partly due to the declining quality of entrants, as illustrated in Figure 1.2. In this way, hype de-escalation can propagate from individual ventures to the broader industry level. Additionally, a negative shift in collective expectations around a technology or industry can affect individual ventures that have aligned themselves with the category, even if they are performing as expected. This phenomenon, termed “environmental legitimacy jolt” (Garud et al., 2014), forces ventures to reframe their narratives in an effort to distance themselves from the now stigmatized category—a stark reversal of their previous efforts to associate with it when it was viewed favorably.

Broader, industry-level factors can also contribute to the decline of hype cycles. These include the realization that an industry or technology is less sustainable or profitable than previously assumed, the emergence of technical challenges (Chang et al., 2016), and the failure of innovative activity to deliver on its promised potential (van Lente et al., 2013). In addition to these general causes of hype de-escalation, research on historical market bubbles identifies case-specific drivers of collapse. For example, in the hard-drive bubble, customer disappointment led to greater conservatism among resource providers, intensifying competition among firms and ultimately causing profit margins to collapse, leading to the industry’s downfall (Sahlman & Stevenson, 1985). Similarly, in the clean-tech bubble, expectations were heavily reliant on the assumption of ever-rising fossil fuel prices—a scenario that did not materialize. As investors came to recognize that clean-tech ventures required longer

timeframes for liquidity, they scaled down their investments, exposing structural misalignments between venture capital and the sector (Giorgis et al., 2024).

Furthermore, a negative shock at the industry level can spill over to other sectors, particularly when companies in those sectors share investors with affected industries. When a downturn occurs, investors may reallocate resources to support struggling firms in the distressed sector, leaving less capital available for other industries. Additionally, investor sentiment may shift broadly, leading to the perception that the downturn is widespread, prompting a broader market contraction (Townsend, 2015). Through these mechanisms, the process of de-hyping can extend beyond a single industry, affecting the entrepreneurial market as a whole.

Consequences of Hype Cycles

Once hype in the entrepreneurship market subsides—whether at the level of an individual venture, an industry, or the broader market—a critical question arises: What are the short- and long-term consequences, and what is the net value added?

At the venture level, hype can serve as a valuable tool for gaining legitimacy and mobilizing resources, particularly in the early stages of a venture when uncertainty is high (Logue & Grimes, 2022; Lounsbury & Glynn, 2001; Martens et al., 2007). However, hype can be both a short-term resource and a long-term liability (Logue & Grimes, 2022). In best-case scenarios, exaggerated claims by entrepreneurs become reality, and even deceptive narratives may, in hindsight, appear harmless—a successful case of “fake it till you make it” (Wood et al., 2022). When expectations are not met, however, disappointment can damage the entrepreneur’s reputation (Garud et al., 2023), and in cases where deception is uncovered, ventures may face fraud allegations (Wood et al., 2022).

The most extensive evidence regarding the consequences of hype is found at the technology and industry level. Proponents of a net-positive view—often aligned with the

constructivist/performative perspective—argue that hype cycles are necessary at this level, much as they are at the venture level (Borup et al., 2006). They contend that expectations help stakeholders make sense of new innovations (Seidel et al., 2020), provide legitimacy, set agendas for innovators, and attract and accelerate investment (van Lente et al., 2013), thereby acting as catalysts for technological advancement (Giorgis et al., 2024). Furthermore, hype cycles are not only instrumental in the creation of new technologies but also in their commercial exploitation, as they foster shared agreement on the viability of emerging opportunities (Giones & Brem, 2017) and help facilitate the formation of new markets (Geiger & Gross, 2017).

As illustrated in Figure 1.2, hype cycles at the industry level lead to a greater volume of entrepreneurial activity. However, the average quality of ventures funded during periods of exuberance tends to decline, resulting in lower survival rates (Green, 2004; Pontikes & Barnett, 2017) and diminished post-exit performance (Coakley et al., 2007, 2009). Despite these undesirable outcomes and the value destruction that often accompanies hype collapses, some scholars argue that hype cycles provide a net-positive effect on value creation (Bygrave et al., 2000; Hendershott, 2004). For instance, Bygrave and colleagues (2000) found that, following the hard-drive bubble, the firms that survived more than compensated for the losses of failed ventures. Similarly, Hendershott (2004, p. 298) assessed the aftermath of the dot-com bubble and concluded: “the billions of dollars... used to create hundreds of dot-coms created significant value despite the fact that only 5% of the 441 venture-backed dot-coms in our sample can be deemed long-term successes,” reporting a net wealth creation of \$17 billion USD from the bubble. Beyond financial wealth creation, infrastructure investments fueled by hype cycles can lay the foundation for future industry growth, partially offsetting value destruction. Employees who develop skills in failed ventures often transfer their expertise to new companies or launch their own startups, fostering long-term economic resilience (Buenstorf & Fornahl, 2009). Additionally, government initiatives inspired by hype-driven investment waves may endure

and contribute to future competitiveness (Bygrave et al., 2000). These findings align with a Darwinian approach to entrepreneurship, which justifies negative externalities by arguing that the aggregate sum of entrepreneurial activity ultimately drives economic growth (Zankl & Grimes, 2024).

But some of the arguments in the reviewed research presented a less optimistic perspective on industry- or technology-centered hype cycles. These accounts emphasized value destruction resulting from the “evaporation of hot money” (Buenstorf & Fornahl, 2009; Chang et al., 2016) and reputational losses that can affect entire industries (Borup et al., 2006). A recurring theme in these critiques is that waves of excitement and disappointment lead to overinvestment during the boom phase and underinvestment during the bust phase. During periods of exuberance, excessive resources flow into hyped industries, diverting investment from other sectors and creating inefficiencies (Brown, 2003). However, when disillusionment sets in, stakeholders withdraw support rapidly, leaving entrepreneurs and innovators who previously benefited from ample resources struggling to secure funding (Sahlman & Stevenson, 1985; Thornton & Marche, 2003). From an innovation standpoint, this volatility may be suboptimal compared to a more stable pattern of stakeholder support and investment (Logue & Grimes, 2022; Brown, 2003).

Additionally, the declining quality of entrepreneurial activity and reckless investor behavior toward the later stages of hype cycles further highlight the wastefulness associated with market exuberance. Evidence suggests that ventures founded in the later phases of hype cycles are more likely to fail, particularly those that follow herd behavior by entering overcrowded sectors without a strong foundation (Hendershott, 2004; Pontikes & Barnett, 2017; Stang & Macy, 2001). At the market level, startups that receive funding when market sentiment is high and investment activity is at its peak are less likely to survive than those funded during more moderate investment climates (Nanda & Rhodes-Kropf, 2013).

In sum, it is difficult to draw a definitive conclusion about the net value of hype cycles in the entrepreneurship market. The evidence suggests both positive and negative consequences, sometimes within the same study. In some cases, the outcome depends on specific contingencies. At the individual level, an entrepreneur's ability to leverage hype effectively while managing its constraints is critical to determining whether it serves as an asset or liability (Logue & Grimes, 2022; Wood et al., 2024). At the industry level, the most important factor appears to be the balance between efficient and inefficient firms entering the market during hype periods (Clain-Chamosset-Yvrard et al., 2024), and it would be natural for this conclusion extends to the market level as well. Furthermore, startups founded during periods of high market enthusiasm tend to experience more extreme outcomes—they are more likely to become either major successes or outright failures (Nanda & Rhodes-Kropf, 2013). This suggests that entrepreneurship during hype-driven periods becomes a higher-stakes activity with significant societal implications.

An interesting pattern found in the research is the contrast between short- and long-term consequences of hype. In the short term, hype tends to produce positive outcomes, such as increased investment, rapid venture growth, and heightened entrepreneurial activity. However, negative effects tend to emerge later, including higher failure rates, post-exit underperformance, and reputational damage (Brown, 2003; Logue & Grimes, 2022; Hendershott, 2004). Furthermore, the long-term consequences of hype are often borne by others, such as late-stage investors, employees of failed ventures, and peripheral stakeholders (Brown & Michael, 2003).

It is evident, however, that the end of a hype cycle at the industry or market level leads to a notable shift in investor outlook and behavior. Once hype dissipates, investors often reinterpret periods of exuberance as lapses in judgment (Buenstorf & Fornahl, 2009; Sahlman & Stevenson, 1985) and failures in governance systems to regulate excesses and prevent abuses

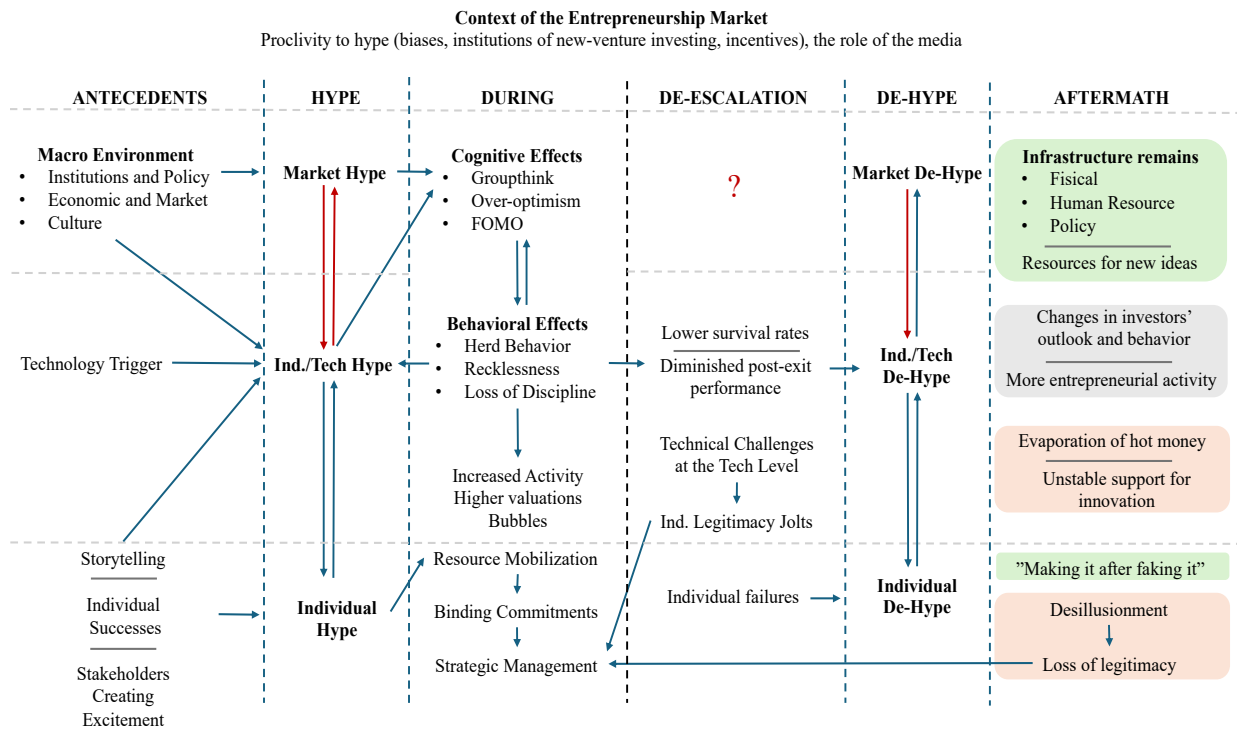
of power (Valliere & Peterson, 2005). In response, they adopt a more cautious stance (Thornton & Marche, 2003), shifting from a trial-and-error approach to one driven by greater risk aversion. The psychological driver of FOMO (fear of missing out) is replaced by its opposite—fear of making poor investment decisions (Kleinert & Hildebrand, 2024). Investors prioritize profitability over growth, leading them to reassess their investment criteria (Garud et al., 2019; Min et al., 2008; Thornton & Marche, 2003).

Following an industry- or market-level correction, investors tend to decrease total investment activity, focus more on later-stage companies (Ning et al., 2015), and increase syndication to share risks and costs (Isaksson & Fredriksen, 2020). Although much of the research on these post-hype behavioral shifts comes from studies of the dot-com bubble, interviews conducted as part of Chapter 2 suggest that similar patterns have emerged following the post-pandemic investment downturn, indicating that these behavioral shifts are common across different hype cycles.

DISCUSSION

After making sense of my findings, I was able to map them onto a framework that represents the multiple levels at which the phenomenon of hype presents itself in the entrepreneurship market. This framework is presented in Figure 1.3, and it also highlights the connections found between the different levels (blue arrows) as well as elements that were not found in the literature, but which could potentially exist (red arrows and interrogation mark).

Figure 1.3: Integrative Framework of the Literature



Results indicate that the antecedents of hype can come from all three levels (individual, technology/industry, and market) and they generate hype at their own level, but individual and market-level antecedents can also directly impact hype at the industry level. Examples of this are entrepreneurs “hyping-up” a technology (Heupel et al., 2024), and policy or natural environment changes creating excitement about new possibilities for an industry (Giorgis et al., 2024). Hype also moves from one level to another, as is the case when individual level hype moves upward when an individual success creates expectations about an entire industry (Chang et al., 2016). One implication of these findings is that technology/industry-level hype is the focal point of this phenomenon, as represented by the number of arrows that point to and from it.

It is also worth highlighting that, while the extant literature allowed for the distinction between the generation of hype at the technology/industry and market levels, the effects related to hype at these levels are very similar, and they cover cognitive and behavioral changes in both entrepreneurs and investors (e.g. Kleinert & Hildebrand, 2024; Valliere & Peterson,

2004). This also seems to be the case in the aftermath, once the hype subsides. On the other hand, the effects of hype at the individual level were quite different in the literature. This stems most likely from the perspective from which individual level hype has been studied—namely, a strategic (Wadhvani & Lubinski, 2025) and constructivist perspective (e.g., Logue & Grimes, 2022; Wood et al., 2024)—which focuses on the consequences that entrepreneurs face when they themselves engage with hype in order to mobilize support and resources. In mapping the aftermath of hype cycles, I made the distinction between positive (green), neutral (grey), and negative effects (orange). Again, here the literature drove me to separate between the consequences of technology/industry hype and those at the individual/venture level.

Finally, care should be taken not to interpret my framework in a chronologically linear fashion. As represented in the arrows that point from right to left, this type of reading is not possible, or desirable. Hype is characterized by self-reinforcing feedback loops (Valliere & Peterson, 2004), as shown in Figure 1.3, and this requires that the reading of my framework utilizes a notion of time more akin to that of *Kairos* than *Chronos* (Araujo & Easton, 2012).

Contribution & Future Research

This study advances the discussion on hype in entrepreneurship research (Garud et al., 2023) by synthesizing the extant literature on the topic, and presenting hype in the entrepreneurship market as a phenomenon that takes place at three-levels of analysis: the individual project/entrepreneur, the technology/industry, and the entrepreneurial market as a whole. As evidenced in this review, expectations in the entrepreneurship market can build around several distinct targets and this typification individually addresses the elements involved in creating, maintaining, and terminating cycles of elevated expectations at each level and their effects. It also provides a framework to explore relationships between the targets of these expectations.

Results also reveal a number of gaps in our understanding of the dynamics of hype in the entrepreneurship market and its effects, and identifying the areas that remain understudied within this topic for future research represents another of the contributions of this review. Some of these gaps present interesting opportunities for furthering our understanding on the focal phenomenon. Notably, the search for connections between the different levels at which hype takes place revealed that existing literature has overlooked some plausible links that present opportunities for further research. More specifically, results evidenced the lack of research on entrepreneurial hype at the market level and its relationship with the other levels in which hype presents itself. Aside from a few studies that reference the concept of “market heat” as a context for studying new-venture investor behavior (Kleinert & Hildebrand; 2024; Lo et al., 2024; Sorenson & Stuart. 2008), the phenomenon of market-level generalized expectations and exuberant optimism remains largely unexplored. This includes the kind of expectations that surround this type of hype (i.e., whether they are only confined to the immediate financial gains to be made, or if they also include high expectations regarding the entrepreneurship market itself), its de-escalation process, and the interactions between hype and “de-hype” at the market and technology/industry levels. One notable exception related to this last point is the research of Townsend’s (2015), which studies the propagation of industry-level shocks to the entire VC market, and stands as evidence that a shift in outlook at the industry-level can become more wide-spread.

A lack of research regarding the effects that individual hype has on investors’ cognition was also identified. While the literature has explored how industry and market hype influence investors cognition and behavior (e.g., Pontikes & Barnett; Valliere & Peterson, 2004;2005; Kleinert & Hilderbrand; 2024), We do not know if they react in the same manner to the hype created by entrepreneurs around their own ventures (Fisher et al., 2024). Additionally, entrepreneurs’ cognition as it relates to the hype that they themselves generate has not yet been

explored. Does the process of “hyping up” a venture change how founders perceive the prospects of their projects and the associated risks? Are there certain individual traits that make an entrepreneur more likely to engage with hype, or more successful if they do so? Finally, entrepreneur’s strategic engagement with hype seems to be the predominant perspective under which the phenomenon has been studied (Wadhwani & Lubinski, 2025), and this perspective paints the investor as the target of hype. But what about new-venture investors’ own strategizing around the phenomenon? For example, GPs of VC firms may benefit from the hype around their investments, and they may therefore work to sustain hype and the resulting bubbles (Valliere & Peterson, 2005), but what tradeoffs does this engagement entail, especially vis-à-vis LPs. If we take the view of a GP as an entrepreneur and the LP as their investor, we might ask about the implications for the GP of using hype to secure resources. Are they the same as the ones faced by the founders of companies? These questions provide a starting point for new research which might complement the mainstream direction that it has taken thus far.

Conclusion

This review advances the study of hype in the entrepreneurship market by synthesizing fragmented research across disciplines and proposing a multi-level framework that captures its antecedents, dynamics, and consequences. The findings indicate that hype is not merely a byproduct of entrepreneurial activity but a structuring force that shapes investment behavior, venture outcomes, and industry evolution. While hype mobilizes resources and accelerates innovation, it also fosters speculative investment, market distortions, and heightened failure rates. Notably, this review highlights the comparatively underexplored role of market-level hype. By integrating insights from entrepreneurship, finance, and STI studies, it also provides a foundation for future research on hype cycles in the entrepreneurship market. A deeper understanding of these mechanisms could be useful for designing policies and strategies that mitigate the risks of hype-driven market behavior.

APPENDICES

Appendix 1.1: Category 1 and 2 Studies

Authors	Year	Title	Journal	Level of hype
Abrahamson, E.	1991	Managerial fads and fashions: The diffusion and rejection of innovations	Academy of Management Review	Industry/Technology
Aldrich H.E.; Ruef M.	2018	Unicorns, gazelles, and other distractions on the way to understanding real entrepreneurship in the United States	Academy of Management Perspectives	Market
Bertoni, F., Colombo, M.G., Quas, A., Tenca, F.	2019	The changing patterns of venture capital investments in Europe	Journal of Industrial and Business Economics	Market
Bikhchandani, S., D. Hirshleifer, and I. Welch	1998	Learning from the behavior of others: Conformity, fads, and informational cascades	Journal of Economic Perspectives	Individual/Venture
Borup, M., Brown, N., Konrad, K., & Van Lente, H.	2006	The sociology of expectations in science and technology	Technology Analysis and Strategic Management	Industry/Technology
Bradley D.; Kim I.; Krigman L.	2015	Top VC IPO underpricing	Journal of Corporate Finance	Market
Brown, N.	2003	Hope against hype-accountability in bio-pasts, presents and futures	Science and Technology Studies	Industry/Technology
Brown, N., & Michael, M.	2003	A sociology of expectations: Retrospecting prospects and prospecting retrospects	Technology Analysis and Strategic Management	Other
Buenstorf G.; Fornahl D.	2009	B2C-bubble to cluster: The dot-com boom, spin-off entrepreneurship, and regional agglomeration	Journal of Evolutionary Economics	Market
Bygrave, W., Lange, J., Roedel, J. and Wu, G.	2000	Capital market excesses and competitive strength: the case of the hard disk drive industry 1984 – 2000	Journal of Applied Corporate Finance	Industry/Technology
Cervantes-Zacarés D.; Ortigosa-Blanch A.; Martí-Sánchez M.	2022	The influence of the media on the history of business success	International Entrepreneurship and Management Journal	Market
Chalmers D.; Fisch C.; Matthews R.; Quinn W.; Recker J.	2022	Beyond the bubble: Will NFTs and digital proof of ownership empower creative industry entrepreneurs?	Journal of Business Venturing Insights	Industry/Technology
Chang V.; Newman R.; Walters R.J.; Wills G.B.	2016	Review of economic bubbles	International Journal of Information Management	Industry/Technology
Clain-Chamosset-Yvrard L.; Raurich X.; Seegmuller T.	2024	Entrepreneurship, growth and productivity with bubbles	Journal of Macroeconomics	Market
Coakley J.; Hadass L.; Wood A.	2007	Post-IPO operating performance, venture capital and the bubble years	Journal of Business Finance and Accounting	Individual/Venture
Coakley J.; Hadass L.; Wood A.	2009	UK IPO underpricing and venture capitalists	European Journal of Finance	Market
Cusumano M.A.; Gawer A.; Yoffie D.B.; von Bargen S.; Acquay K.	2024	The impact of platform business models on the valuations of unicorn companies	Information and Organization	Market
Dedehayir, O., & Steinert, M.	2016	The hype cycle model: A review and future directions	Technological Forecasting and Social Change	Industry/Technology
Degeorge et al	2006	Analyst Hype in IPOs: Explaining the Popularity of Bookbuilding	Review of Financial Studies	Market

Fisher et al	2024	Event-based entrepreneurship	Journal of Business Venturing	Industry/Technology
Forbes W.	2006	The boys in the bubble: Internet entrepreneurs and stock market value	Omega	Individual/Venture
Gächter I.; Gächter M.	2021	Success factors in ICOs: Individual firm characteristics or lucky timing?	Finance Research Letters	Individual/Venture
Garud R.; Lant T.K.; Schildt H.A.	2019	Generative imitation, strategic distancing and optimal distinctiveness during the growth, decline and stabilization of Silicon Alley	Innovation: Organization & Management	Industry/Technology
Garud, R., Gehman, J., Giuliani, A.P.	2014	Contextualizing entrepreneurial innovation: a narrative perspective	Research Policy	Individual/Venture
Garud, R., Schildt, H. A., & Lant, T. K.	2014	Entrepreneurial storytelling, future expectations, and the paradox of legitimacy	Organization Science	Individual/Venture
Garud, R., Snihur, Y., Thomas, L.D., Phillips, N.	2023	The dark side of entrepreneurial framing: a process model of deception and legitimacy loss	Academy of Management Review	Individual/Venture
Gavious I.; Schwartz D.	2011	Market valuations of start-up ventures around the technology bubble	International Small Business Journal	Market
Geiger, S., & Gross, N.	2017	Does hype create irreversibilities? Affective circulation and market investments in digital health	Marketing Theory	Industry/Technology
Giones F.; Brem A.	2017	From toys to tools: The co-evolution of technological and entrepreneurial developments in the drone industry	Business Horizons	Industry/Technology
Giorgis V.; Huber T.A.; Sornette D.	2024	‘Salvation and profit’: deconstructing the clean-tech bubble	Technology Analysis and Strategic Management	Industry/Technology
Gray K.R.; Frieder L.A.; Clark G.W.	2007	Financial bubbles and business scandals in history	International Journal of Public Administration	Market
Green J.	2004	Venture capital at a new crossroads. Lessons from the bubble	Journal of Management Development	Market
Gurun, U. G., & Butler, A. W.	2012	Don’t believe the hype: Local media slant, local advertising, and firm value	Journal of Finance	Individual/Venture
Hendershott R.J.	2004	Net value: Wealth creation (and destruction) during the internet boom	Journal of Corporate Finance	Market
Heupel K.; Fonseca J.A.; Rutherford M.; Edwards B.	2024	Feeding the hype cycle: Entrepreneurial swagger, passion, and inflated expectations	Journal of Business Venturing	Industry/Technology
Hoppmann J.; Anadon L.D.; Narayanamurti V.	2020	Why matter matters: How technology characteristics shape the strategic framing of technologies	Research Policy	Industry/Technology
Hori T.; Im R.	2023	Asset bubbles, entrepreneurial risks, and economic growth	Journal of Economic Theory	Market
Isaksson A.; Fredriksen Ö.	2020	Venture capital firms valuation in bull and bear markets: Evidence from Sweden	International Journal of Entrepreneurship and Innovation Management	Market
Jang, W.Y.	2007	Media exposure or media hype: evidence from initial public offering stocks in Taiwan	Journal of Media Economics	Individual/Venture
Kleinert & Hildebrand, 2024	2024	Venture Capitalists’ Decision- Making in Hot and Cold Markets: The Effect of Signals and Cheap Talk	Entrepreneurship Theory and Practice	Market

Kriechbaum, M., Posch, A., Hauswiesner, A.	2021	Hype cycles during socio-technical transitions: the dynamics of collective expectations about renewable energy in Germany	Research Policy	Industry/Technology
Lee P.M.; Wahal S.	2004	Grandstanding, certification and the underpricing of venture capital backed IPOs	Journal of Financial Economics	Market
Liu X.	2014	Venture capitalists and portfolio companies' real activities manipulation	Review of Quantitative Finance and Accounting	Market
Lo et al	2024	Hot Markets, Sociocognitive Cues, and New Market Entry in the U.S. Venture Capital Industry	Entrepreneurship Theory and Practice	Market
Logue D.; Grimes M.	2022	Living up to the Hype: How New Ventures Manage the Resource and Liability of Future-Oriented Visions within the Nascent Market of Impact Investing	Academy of Management Journal	Individual/Venture
Lounsbury, M., and M. A. Glynn	2001	Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources	Strategic Management Journal	Individual/Venture
Månsson N.; Landström H.	2006	Business angels in a changing economy: The case of Sweden	Venture Capital	Market
Martens, M. L., Jennings, J. E., & Jennings, P. D.	2007	Do the stories they tell get them the money they need? The role of entrepreneurial narratives in resource acquisition	Academy of Management Journal	Individual/Venture
Min H.; Caltagirone J.; Serpico A.	2008	Life after a dot-com bubble	International Journal of Information Technology and Management	Market
Murray, A., & Fisher, G.	2022	When more is less: Explaining the curse of too much capital for early-stage ventures	Organization Science	Individual/Venture
Nanda, R., and M. Rhodes-Kropf	2013	Investment cycles and startup innovation	Journal of Financial Economics	Market
Ning Y.; Wang W.; Yu B.	2015	The driving forces of venture capital investments	Small Business Economics	Market
Olivier J.	2000	Growth-enhancing bubbles	International Economic Review	Market
Pinkow F.	2023	Determinants of overfunding in reward-based crowdfunding	Electronic Commerce Research	Individual/Venture
Pollock, N., and R. Williams	2011	Who decides the shape of product markets? The knowledge institutions that name and categorise new technologies	Information and Organization	Industry/Technology
Puri M.; Zarutskie R.	2012	On the Life Cycle Dynamics of Venture-Capital- and Non-Venture-Capital-Financed Firms	Journal of Finance	Market
Sahlman W.A.	1999	The new economy is stronger than you think.	Harvard business review	Market
Sahlman, W. and Stevenson, H.	1985	Capital markets myopia	Journal of Business Venturing	Industry/Technology
Scheaf D.J., Wood M.S	2022	Entrepreneurial fraud: a multidisciplinary review and synthesized framework	Entrepreneurship Theory and Practice	Individual/Venture
Seidel, V. P., Hannigan, T. R., & Phillips, N.	2020	Rumor communities, social media, and forthcoming innovations: The shaping of technological frames in product market evolution	Academy of Management Review	Industry/Technology
Shi, Y., Herniman, J.	2023	The role of expectation in innovation evolution: exploring hype cycles	Technovation	Industry/Technology
Snihur, Y., Thomas, L.D., Garud, R., Phillips, N	2022	Entrepreneurial framing: a literature review and future research directions	Entrepreneurship Theory and Practice	Individual/Venture

Sorenson, O., and T. Stuart	2008	Bringing the context back in: Settings and the search for syndicate partners in venture capital investment networks	Administrative Science Quarterly	Individual/Venture
Strang, D., and M. Macy	2001	In search of excellence: Fads, success stories, and adaptive emulation	American Journal of Sociology	Individual/Venture
Thornton J.; Marche S.	2003	Sorting through the dot bomb rubble: How did the high-profile e-tailers fail?	International Journal of Information Management	Industry/Technology
Townsend R.R.	2015	Propagation of financial shocks: The case of venture capital	Management Science	Market
Turcan R.V.	2011	Toward a theory of international new venture survivability	Journal of International Entrepreneurship	Market
Valliere D.; Peterson R.	2004	Inflating the bubble: Examining dot-com investor behaviour	Venture Capital	Industry/Technology
Valliere D.; Peterson R.	2005	Venture capitalist behaviours: Frameworks for future research	Venture Capital	Industry/Technology
van Lente, H.	2012	Navigating foresight in a sea of expectations: Lessons from the sociology of expectations	Technology Analysis and Strategic Management	Industry/Technology
van Lente, H., Spitters, C., & Peine, A.	2013	Comparing technological hype cycles: Towards a theory	Technology Analysis and Strategic Management	Industry/Technology
Wang L.; Wang S.; Zhang J.	2013	Venture capital backing and overvaluation: Evidence from the high-tech bubble	Financial Review	Market
Wood M.S.; Dwyer S.M.; Scheaf D.J.	2024	Navigating the temporal commitments of entrepreneurial hype: Insights from entrepreneur and backer interactions in crowdfunded ventures	Journal of Business Venturing	Individual/Venture
Wood, M.S., Scheaf, D.J., Dwyer, S.M	2022	Fake it 'til you make it: hazards of a cultural norm in entrepreneurship	Business Horizons	Individual/Venture
Yeon, S. J., Park, S. H., & Kim, S. W.	2006	A dynamic diffusion model for managing customer's expectation and satisfaction	Technological Forecasting and Social Change	Industry/Technology
Wadhwani and Lubinski	2025	Hype: Marker and maker of entrepreneurial culture	Journal of Business Venturing	Other
Pontikes & Barnett	2017	The Non-consensus Entrepreneur: Organizational Responses to Vital Events	Administrative Science Quarterly	Industry/Technology

CHAPTER 2 – The Hype Around Venture Capital and its Implications for the Standard

Model of Entrepreneurship

ABSTRACT

This chapter investigates the evolving discourse surrounding venture capital (VC) and its implications for a dominant form of high-growth, innovation-driven entrepreneurship. Conceptualizing both VC and this entrepreneurial model as nested sociotechnical systems, we analyze two decades of media coverage and expert interviews to trace cycles of sentiment and expectation, or hype. Our findings reveal recurring patterns of heightened enthusiasm followed by disillusionment, reflecting ongoing struggles for legitimacy within financial markets and entrepreneurial ecosystems. Despite its global influence and symbolic status, this particular form of entrepreneurship remains contested, with persistent critiques regarding its effectiveness, societal contribution, and structural limitations. Theoretically, we contribute by framing VC as a sociotechnical innovation undergoing regime-level struggles, and empirically by adapting hype-cycle methodologies from science and technology studies to the domain of entrepreneurship. Our analysis advances understanding of how public expectations shape and reflect the evolving position of VC and the model of entrepreneurship it co-evolved with within the broader landscape.

INTRODUCTION

Venture Capital (VC) is one of the main sources of monetary resources for new ventures, with many of today's largest public companies having received VC financing at some point, enabling their growth (e.g., Google, Amazon, Meta) (Gompers et al., 2020). VC has thus had substantial economic impact over the last 30 years, and it has also played a transformative role in the entrepreneurship landscape (Drover et al., 2017), particularly in Silicon Valley, enabling the emergence of a distinct entrepreneurial approach known as the "Silicon Valley Model" (Aldrich & Ruef, 2018; Herrmann, 2019; Pahnke & Welter, 2019). This model is characterized by its focus on growth, innovation, and creativity, along with high capitalization primarily through VC investment (Aldrich & Ruef, 2018).

The constellation of elements composing this model can be conceptualized as a sociotechnical system (Geels, 2002), encompassing technologies and artifacts, institutions and regulations, cultural and symbolic meanings, ideological underpinnings, and financial infrastructure. This particular model has garnered global attention, captivating the public, influencing policymakers seeking to replicate its success, and attracting scholarly inquiry into its dynamics (Aldrich & Ruef, 2018; Audretsch, 2021). From a static, contemporary vantage point, this configuration may seem definitive—a dominant paradigm fully adopted and accepted (Welter et al., 2019)—especially given its role in creating some of today's largest companies (Gompers et al., 2020). Upon closer examination, however, the dominance of this model and its constituent elements appear less uncontested. Criticism surrounding the practices and consequences of this highly financialized, disruption-oriented, and fast-growing entrepreneurial model is found both in academia (Audretsch, 2021; Welter et al., 2019; Zankl & Grimes, 2024) and the popular press (e.g., Savage, 2021; Waikar, 2018). Scholars are becoming increasingly ambivalent (Welter et al., 2019) towards it, and have pointed to its niche status—evidenced by the small proportion of companies worldwide receiving VC funding

(Aldrich & Ruef, 2018)—to endorse a wider view of entrepreneurship that includes other forms (Audretsch et al., 2021). They have also questioned its ability to address fundamental societal issues in the long-term (Audretsch, 2021). The public criticism of this system also encompasses VC (e.g., Cassidy, 2020; Savage, 2021), a core supporting activity without which this form of entrepreneurship would not exist (e.g., Zankl & Grimes, 2024).

Using terminology from sociotechnical systems and transformation research (Geels, 2002; 2004), we can say that the sociotechnical regime guiding entrepreneurial activity does not appear static, with the elements that compose what is widely perceived as the “standard model” of contemporary entrepreneurship fully and undisputably integrated. Rather, these elements we collectively call a sociotechnical system seem engaged in an ongoing process of integration, encountering simultaneous support and opposition from actors and networks with vested interests in its outcomes. These struggles have been described as “technological dramas,” leaving evidence of their existence and content in public discourse (Kriechbaum et al., 2021).

Studying the dynamics of public discourse surrounding the standard entrepreneurial model and its components is thus critical for improving our understanding of its trajectory, societal role, and future potential. Therefore, this study takes a first step toward this goal by tracing historical sentiment and expectations regarding VC throughout the past two decades, given VC’s role as a main pillar supporting entrepreneurship as practiced under the model of Silicon Valley. We leverage the concept of hype (Borup et al., 2006) to theoretically and empirically ground these sentiments and expectations. Hype is broadly defined as heightened expectation and excitement (Logue & Grimes, 2022; van Lente et al., 2013), typically unfolding in cycles of excitement followed by disillusionment, stylized as the hype cycle (Linden & Fenn, 2003). Recent research has applied this framework to study the trajectory of new technological systems as they transition from niche creation toward mainstream adoption

(Kriechbaum et al., 2018; 2021). From this perspective, periods of elevated hype are characterized by advocates promoting legitimizing narratives around the focal technology, challenging established regimes (Kriechbaum et al., 2021). By addressing how hype around VC has evolved recently, we gain insight into the process by which both VC and its encompassing sociotechnical system become assimilated within the regime providing the rules and frameworks guiding entrepreneurial activity (Geels, 2004).

Our empirical strategy aligns with previous research in science, technology, and innovation (STI), particularly studies examining hype cycles (Kriechbaum et al., 2018; Melton et al., 2016; van Lente et al., 2013). We conducted sentiment analysis (Pang & Lee, 2008) of VC-related articles from a leading media outlet over the past two decades, complemented by inductive analysis of statements within these articles (Gioia et al., 2013). Additionally, we carried out expert interviews to enhance interpretation of media content and provide supplementary data for triangulation. Findings indicate that despite VC's widespread popularity and apparent success, it remains subject to hype cycles reflecting dynamic shifts in its positioning and that of its associated entrepreneurial model. These dynamics align with patterns observed in emerging sociotechnical systems, commonly facing resistance from established regimes during their stabilization and adoption phases (Kriechbaum et al., 2021).

Scholarly interest in explicitly examining the standard entrepreneurial model as a distinct entity has only recently emerged, with references appearing in leading management and entrepreneurship journals (Drover et al., 2017) around 2017, precisely as academic scrutiny intensified (Welter et al., 2019). This stream of research compares Silicon Valley entrepreneurship with alternative entrepreneurial models (Pahnke & Welter, 2019), explores geographic diffusion (Lehman et al., 2018), and traces historical evolution (Baker & Welter, 2024). Although the hype surrounding this brand of entrepreneurship has been acknowledged, including its influence on academia (Aldrich & Ruef, 2018), the expectations that surround the

hype and their implications have not been systematically studied. Similarly, VC literature examines periods of elevated “market heat” (Sorenson & Stuart, 2008), influencing investor expectations, behaviors, and cognition (Kleinert & Hildebrand, 2024; Lo et al., 2024), but broader industry-wide expectations regarding VC remain unexplored.

This study contributes to scholarly debates challenging the standard entrepreneurial model and its treatment as synonymous with entrepreneurship more broadly (Aldrich & Ruef, 2018; Audretsch et al., 2021; Pahnke & Welter, 2019). We propose a theoretical framework examining this model as a distinct sociotechnical system within the entrepreneurial spectrum, following its developmental trajectory toward maturation (Perez, 2010). Findings underscore that the model’s dominance should not be uncritically accepted, highlighting limitations inherent in treating it as prototypical for understanding entrepreneurial opportunity discovery and exploitation (Shane & Venkataraman, 2000). Additionally, we address a gap in VC literature by explicitly analyzing hype and expectations surrounding the VC industry itself, where existing research primarily focused on industry-level hype and bubbles (Valliere & Peterson, 2004). Finally, we contribute to emerging literature on entrepreneurial hype (Heupel et al., 2024; Logue & Grimes, 2022; Wood et al., 2024). While previous studies predominantly examined hype from strategic (entrepreneur-focused) or institutional perspectives (Wadhwani & Lubinski, 2025), our emphasis on the hype around entrepreneurial activity itself offers an additional dimension, enhancing understanding of its broader implications.

THEORY

The Standard Model of Entrepreneurship as a Sociotechnical Configuration

To understand the position of the standard model of entrepreneurship, we adopt a perspective rooted in the sociology of technology (Geels, 2002; Rip & Kemp, 1998). This framework conceptualizes technologies as “configurations that work,” embedded within social

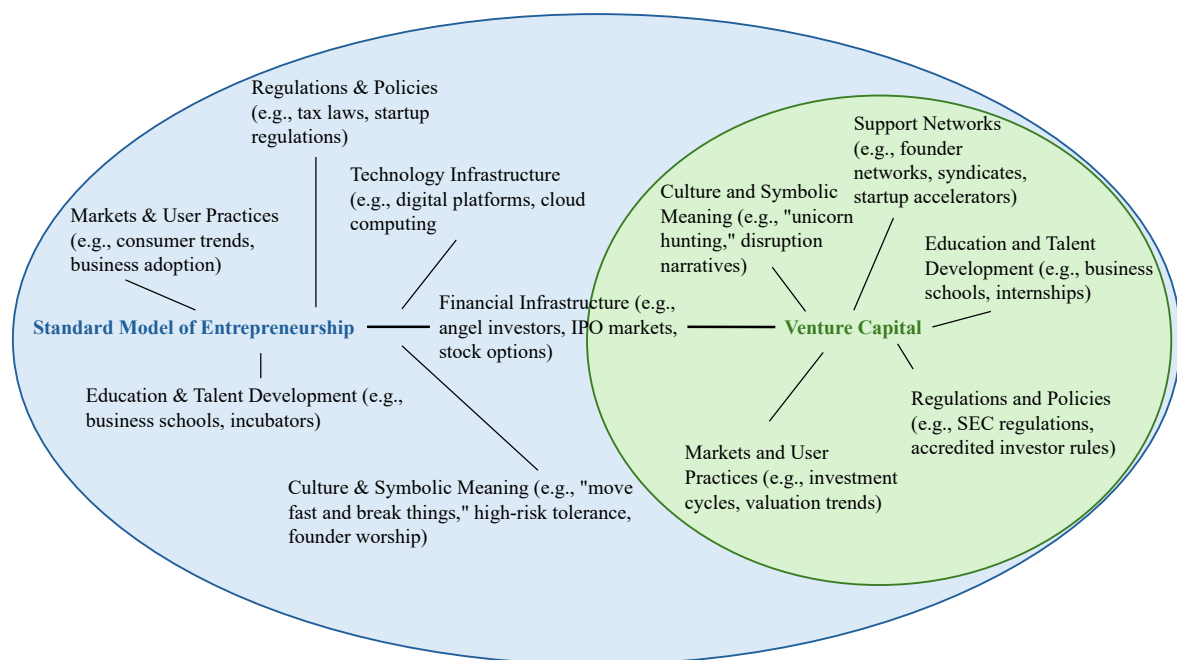
environments enabling them to fulfill societal functions through arrangements of heterogeneous elements—collectively termed sociotechnical systems (Geels, 2002). The constellation of elements recognized today as the standard model of entrepreneurship (embodied by the Silicon Valley ecosystem where it originated) represents such a structure, comprising its own culture, rules, infrastructure, and interrelated components aimed at enabling the discovery and exploitation of entrepreneurial opportunities (Shane & Venkataraman, 2000).

Aldrich and Ruef (2018) defined core characteristics of this model as consisting of three interrelated elements: 1) high growth and capitalization; 2) a strong emphasis on innovation and creativity; and 3) the pursuit of promising opportunities. Audretsch (2021) further emphasized performance as an additional characteristic. Zankl and Grimes (2024) described the model as driven by neoliberal ideology, involving increased financialization, disruptive strategies, and a fixation on “unicorn” startups. These authors stress that this type of entrepreneurship represents only a small subset of entrepreneurial activity, despite its frequent conflation with entrepreneurship as a whole by both public and scholarly discourse (Pahnke & Welter, 2019). Thus, it should be analyzed as a separate entity, and its status as a dominant paradigm should not be taken for granted.

Using terminology from sociotechnical systems and transitions literature (Geels, 2002; 2004; Geels & Schot, 2007), the aforementioned elements describing Silicon Valley entrepreneurship can be placed within a sociotechnical system as either rules or cultural meanings attached to it (their exact categorization being less critical for this study). Alongside these are other elements composing the system, such as technological infrastructure, market and user practices, and financial infrastructure, specific to this approach to entrepreneurship (see Figure 2.1). Within this system, VC represents a crucial element, forming the core of its financial infrastructure. Additionally, VC itself comprises a nested system with its own constituting elements, integral to its existence and functioning, similar to how road

infrastructure is indispensable to contemporary transportation. Although characterizing VC and a model of entrepreneurship as sociotechnical systems may initially seem unconventional—given popular associations of technology with tangible, electronic artifacts—the sociotechnical literature explicitly recognizes non-tangible configurations such as personal transportation systems, maritime shipping (Geels, 2002), industrial processes (Sgambaro et al., 2024), and healthcare delivery systems (Cheng et al., 2023) as technologies. Accepting this characterization, it is useful to recall the definition of sociotechnical systems in this literature as “linkages between elements necessary to fulfill societal functions” (Geels, 2004, p. 900). Both VC and the standard model of entrepreneurship conform comfortably to this broad yet meaningful definition.

Figure 2.1: Sociotechnical System for the Standard Model of Entrepreneurship and VC



However, we wish to explore the nature of these entities further, moving beyond simply characterizing them as sociotechnical systems. Specifically, we inquire into their placement within technological transition processes through which new systems move from emergence to full adoption (Geels & Schot, 2007). This process has been described using a multi-level perspective, comprising niches (micro-level), regimes (meso-level), and the landscape (macro-

level) (Geels, 2002). Innovations (new systems) first appear in niches acting as incubating spaces, providing protection from selective forces. When pressures from the landscape or instability within regimes emerge, new systems can break through, replacing older systems and reshaping the regime (Geels, 2004). Where, then, can VC and its accompanying entrepreneurial model be situated?

The system recognized as the standard entrepreneurial model is clearly no longer confined within the Silicon Valley niche where it originated (Baker & Welter, 2024). Although most entrepreneurial activity worldwide does not adhere to the high-growth, innovation-driven, VC-backed model, its economic and cultural influence remains substantial (Baker & Welter, 2024). Its imprint is evident in popular culture, from entertainment to social media (e.g., TV shows, films, YouTube channels, podcasts), and prominently reflected in many highly valued companies listed in the S&P 500 (Gompers et al., 2020). However, it does not yet enjoy the uncontested status expected of a fully integrated system. Despite its apparent ubiquity and success, the model has recently criticism due to scandals such as WeWork's collapse and Theranos CEO Elizabeth Holmes' conviction, raising public doubts about its practices (Savage, 2021; Waikar, 2018). Academic critiques have focused on its underlying rent-seeking ideology, tendencies toward unproductive entrepreneurship, and externalities often ignored by proponents (Zankl & Grimes, 2024). Scholars also question the model's ability to address contemporary societal challenges, such as inequality and inclusion (Audretsch, 2021). These conflicting perspectives highlight complexity beneath the apparent universal acceptance and success of this system for creating and scaling new companies.

Recent perspectives on VC, much like those on the entrepreneurial system it supports, vary widely. Some portray venture capitalists as reckless speculators fixated on "unicorns," flooding unsustainable business models with excessive capital and distorting the broader economy (Cassidy, 2020). Others positively depict VC as a vital driver of innovation and

economic growth (Rist, 2021). Academic scholarship similarly captures this duality, highlighting VC's contributions to economic growth (Gornall & Strebulaev, 2021; Kaplan & Lerner, 2010), while simultaneously acknowledging drawbacks such as behavioral biases (Franke et al., 2006; Valliere & Peterson, 2004; Zacharakis & Shepherd, 2001), conflicts of interest and moral hazard (Bradley et al., 2015; Coakley et al., 2009), and uneven capital flows into the industry (Gompers & Lerner, 2001). Moreover, despite their apparent maturity, their roughly fifty-year lifespan is brief compared to the broader history of entrepreneurial activity. Furthermore, widespread recognition contrasts with their limited practical adoption, evidenced by the low proportion of entrepreneurial endeavors employing this model (Aldrich & Ruef, 2018) and uneven success replicating it internationally (Baker & Welter, 2024). These dynamics imply the system still actively seeks broader acceptance within mainstream entrepreneurship.

To assess the extent to which Silicon Valley entrepreneurship and VC as nested sociotechnical systems have become established within the regime, we leverage recent research on technological transitions, viewing expectations and hype as reflections shaping the journey of an emerging sociotechnical system toward widespread adoption (Kriechbaum et al., 2018; 2021; Sovacool & Hess, 2017). In the next section, we briefly overview the concept of hype, followed by a detailed explanation of its relationship with sociotechnical transitions.

Hype Cycles and Sociotechnical transitions

In STI studies, hype is characterized as “waves of high rising expectations” (van Lente et al., 2013, p. 1615), shaping innovation dynamics by guiding agendas and conferring legitimacy, thereby attracting resources and actors to emerging technologies (van Lente & Bakker, 2010). According to this constructivist perspective, hype is not measured by comparing expected versus actual outcomes, but rather by discourse emphasizing technological breakthroughs (Brown & Michael, 2003). Operationally, this discourse is captured through

increased media attention and heightened expectations (Ruef & Markard, 2010; van Lente et al., 2013). Typically, hype is followed by disappointment—when initial expectations inevitably fail to materialize fully—and subsequently by gradual recovery (Fenn & Raskino, 2008; Konrad et al., 2012). This stylized pattern, popularized by Gartner Inc. (Linden & Fenn, 2003), remains useful for understanding technology adoption despite debates on generalizability (Dedehayir & Steinert, 2016). Expectations within hype cycles have further been categorized into three levels: product- or project-specific expectations, generalized expectations, and broader frames. While specific and generalized expectations articulate anticipated potential and applications, frames position these technologies within broader societal contexts and issues (Ruef & Markard, 2010).

In the context of sociotechnical transitions, expectations play a critical role, with positive expectations both promoting niche protection and mobilizing resources (Geels & Raven, 2006; Kriechbaum et al., 2021; Schot & Geels, 2008). Additionally, expectations around new sociotechnical systems serve as narratives associated with power struggles between niches and regimes, or between supporters of new technologies and incumbent actors, whose shared expectations may aid or hinder the legitimization of emerging technologies (Geels, 2010; Kriechbaum et al., 2021). Based on these precepts and supporting empirical evidence (Geels et al., 2007; Smith et al., 2014; Rosenbloom et al., 2016), Kriechbaum et al. (2021) describe hypes as periods during which advocates of niche technologies successfully challenge the existing regime. Under this perspective, the shape of the hype cycle mirrors the broader trajectory of discursive struggles between niche and regime actors, indicating how successfully niche technologies have gained a foothold within the dominant regime. Importantly, this conceptualization is not limited to new technologies; on the contrary, hype cycles become especially relevant as technologies penetrate the existing system, intensifying public struggles between niches and regimes (Geels & Verhees, 2011; Geels et al., 2017). Lastly, narrative work

by coalitions of actors sharing expectations often centers around specific events, which serve as triggers that create openings for opposing views to be expressed. Although past research often linked hype cycles to single triggering events, Kriechbaum et al. (2021) argue instead that hype cycles are shaped by series of events—a view adopted in this study.

Applying this perspective to the sociotechnical system of Silicon Valley entrepreneurship enables the use of hype and discourse to better understand niche-regime struggles it may have recently experienced, as well as providing new insights into its current societal status. However, directly studying hype around the abstract concept of the standard entrepreneurial model through traditional public discourse analysis methods presents challenges, as explicit references primarily appear in academic literature, limiting observable evidence in broader societal contexts. Conversely, VC represents a more tangible phenomenon, and given its inseparable link with the overall entrepreneurial system, analyzing VC hype can serve as a valuable proxy to understand struggles and the transition trajectory of the entire sociotechnical system.

VC activity has historically fluctuated significantly, reflected in varying amounts of capital flowing into VC firms and changing investment levels (Gompers et al., 2008). These fluctuations have been driven by macroeconomic factors (Zhelyazkov & Tatarynowicz, 2021) and sector-specific excitement (Jain et al., 2008). Periods of heightened market exuberance—often described as “irrational exuberance” (Shiller, 2015)—involve elevated expectations of financial returns (Lo et al., 2024) and altered VC investment behavior. During these periods, VCs may become less capable of accurately interpreting market signals and more susceptible to decision-making driven by fear of missing out (FOMO) (Kleinert & Hildebrand, 2024). Beyond monetary expectations, broader societal perceptions and expectations surrounding VC, held by industry insiders, stakeholders, and the public, may also shift in tune with cycles of

market excitement, creating cycles of VC hype that can be traced and interpreted using our theoretical lens.

METHODS

Our analytical approach for examining the themes surrounding recent VC hype dynamics involved two complementary strategies. First, we followed prior research that studied hype and collective expectations in other fields (Kriechbaum et al., 2018; Kriechbaum et al., 2021; van Lente et al., 2013), leveraging Ruef and Markard's (2010) operationalization of hype based on media attention and its sentiment (positive or negative). Accordingly, we analyzed public discourse on VC in mass media to investigate hype fluctuations over the past two decades and the themes accompanying these variations. Specifically, we selected articles from *The Financial Times*, a prominent financial media outlet, as our primary data source. Using the Factiva database, we identified articles with the term "Venture Capital" in their headlines, as a broader search yielded numerous irrelevant results. Our analysis period spanned from 2005 to the end of 2024, resulting in a dataset of 110 articles. This observation window was chosen based on exploratory interviews that suggested significant fluctuations—both peaks and troughs—in VC market hype during this timeframe.

After sorting articles chronologically, we manually identified statements explicitly reflecting market hype, focusing either on future-oriented expectations or current assessments of the VC industry. Although prior studies have emphasized future-oriented expectations, our analysis also included present-tense evaluations, as these influence and reflect future expectations (Shi & Herniman, 2023). In identifying relevant statements, we applied definitions of hype from entrepreneurship (Logue & Grimes, 2022) and science, technology, and innovation studies (Borup et al., 2006; van Lente et al., 2013). Following identification ($n = 783$ statements), we conducted open coding, aggregating codes inductively into categories

and subsequently broader themes through iterative revision (Gioia et al., 2013). In parallel, we conducted sentiment analysis by categorizing statements as positive (1), neutral (0), or negative (-1) based on semantic meaning. This allowed us to plot hype trends over time, calculating a three-year moving average for greater clarity (Kriechbaum et al., 2021) (Figure 2.2). Combining content and sentiment analyses, we explored how the four identified themes evolved over time, both in frequency and sentiment (Figure 2.3). Additionally, we analyzed second-order categories to produce a matrix illustrating their prevalence and sentiment across the observation period (Appendix 2.1).

Figure 2.2: Net Sentiment – 3 Year Average

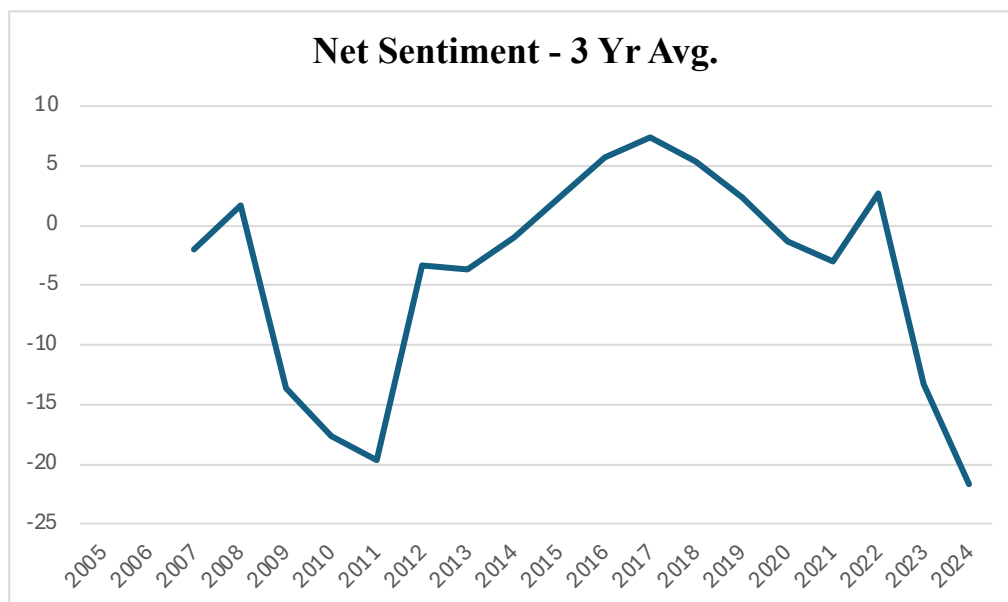
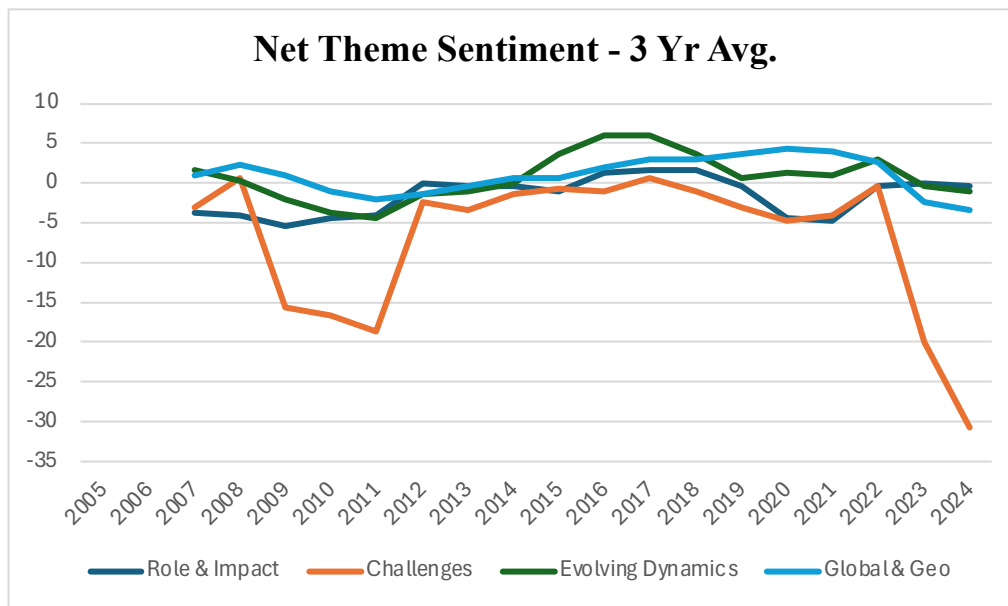


Figure 2.3: Net Theme Sentiment – 3 Year Average



Our second approach involved conducting 34 semi-structured expert interviews. Participants were active professionals in fields related to new venture financing, including VC, angel investing, and private equity (Appendix 2.2). This diversity enabled us to gather comprehensive insights from multiple vantage points, both internal and external to the VC industry. Interviews centered around three core topics: participants' views of the VC market, the impact of hype cycles, and current market conditions. These discussions provided valuable context on industry structure, practices, jargon, and stakeholder incentives, significantly informing our analysis of the media articles, particularly during coding. Interviews also served as a complementary data source, allowing triangulation with findings from media analysis and enhancing the overall robustness of our results. Moreover, interview insights highlighted the causes, immediate effects, and long-term implications of hype in the VC market. Coding involved an iterative open-coding process to assign first-order codes and second-order categories (Gioia et al., 2013), alongside closed coding to classify interview content into the main predefined topics. Ultimately, both coding methods yielded highly consistent results, prompting us to retain our predefined topics as overarching themes.

To construct a coherent narrative from our data, we employed a temporal bracketing strategy (Langley, 1999). Given the cyclical nature of hype, this approach was well-suited for interpreting emerging themes. After reviewing both datasets and analysis results, we identified three discrete periods of VC market hype. Each period exhibited distinct sentiment patterns, corroborated by interview accounts and by VentureBeat data on annual VC investment totals, which showed notable shifts around the identified cutoff points. This temporal division effectively structured our analysis, clarifying the evolution of themes across different phases of the VC hype cycle.

RESULTS

VC Hype Cycle Dynamics

Our temporal bracketing approach led us to divide the twenty-year period into three discrete phases, corresponding closely to stages of the archetypal hype cycle as conceptualized by Gartner (Linden & Fenn, 2003). This cycle is also evident in our sentiment analysis (Figure 2.2). The first phase (2005–2013) revealed low media coverage and low overall optimism toward the industry, suggesting a period of disillusionment following an earlier cycle of VC hype (Ruef & Markard, 2010). During the second period (2014–2019), we observed an increase in both metrics, indicating the beginning of a hype phase (Ruef & Markard, 2010; van Lente et al., 2013). The third phase (2020–2024) presents inconsistencies between these metrics, complicating interpretation yet providing an intriguing analytical opportunity. During this period, the average number of expectation statements per year increased, but their sentiment value markedly decreased. Table 2.1 summarizes the coverage of each period, while Figure 2.4 illustrates the sentiment trends.

Figure 2.4: Sentiment by Period

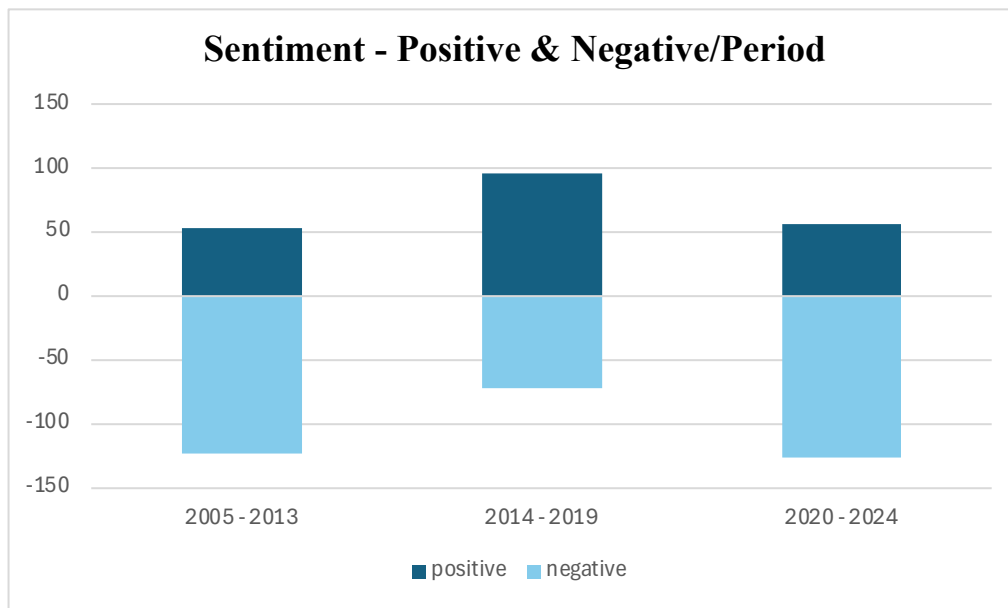
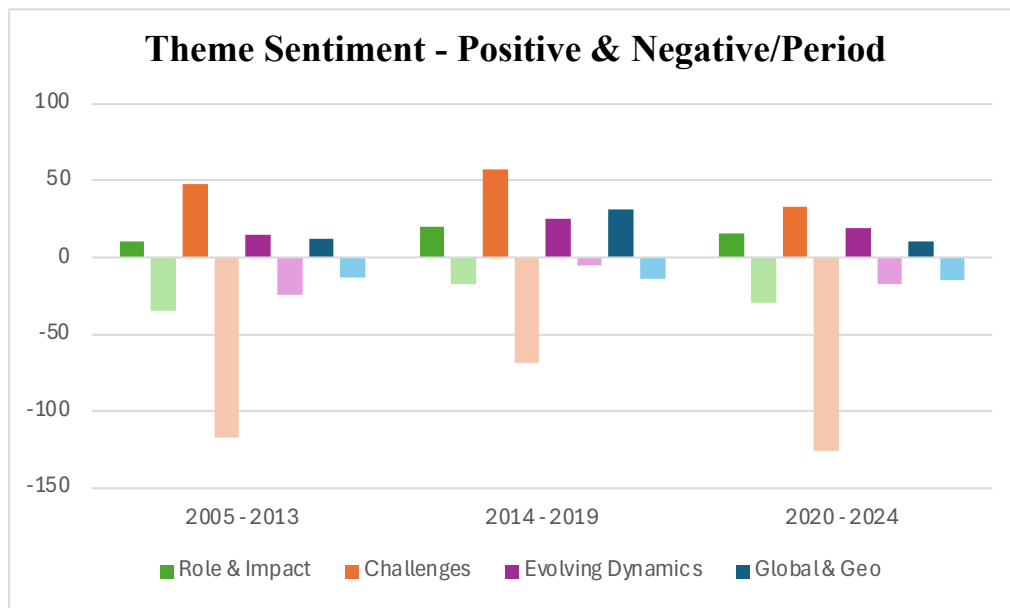


Table 2.1: Coverage by Period

Period	2005 - 2013	2014 - 2019	2020 - 2024
Statements	213	229	231
Statements/Year	23.7	38.2	46.2

In this section, we review the thematic content underlying these trends. The detailed description of the results of the media analysis for each period is complimented with our interview data, and followed thereafter by an overall synthesis and subsequent discussion. Notably, we often found contradictions within themes and categories during the same period, with some categories and themes containing significant numbers of both positive and negative expectation statements (Figure 2.5). Occasionally, these contradictions were pronounced enough to reverse the aggregate sentiment of a theme, despite the overall trend suggesting the opposite. This result echoes prior research on hype dynamics in other fields (e.g., van Lente et al., 2013), reinforcing the characterization of hype cycles as “technological dramas” (Pfaffenberger, 1992) reflecting competition between optimistic and pessimistic views on the technology (Kriechbaum et al., 2021, p. 4).

Figure 2.5: Themes by Period



Previous research has employed a multi-level framework relying on three levels of expectations—specific, generalized, and frame expectations—as conceptualized by Ruef and Markard (2010), with generalized and frame expectations being central in STI research. In contrast, our inductive analysis identified four overarching themes. The first and broadest in terms of categories is “Challenges of VC.” The second theme is “Role and Impact of VC,” followed by a third theme titled “Global Dynamics and Geopolitics.” The fourth theme identified was “Evolving Dynamics in VC Investing.” Appendix 2.3 illustrates our data structure, including overarching themes, categories, exemplary codes, and statements. Comparing our themes with Ruef and Markard’s (2010) multi-level perspective, we found our themes align closely: *Challenges of VC* and *Evolving Dynamics in VC Investing* containing specific and generalized expectations, while *Role and Impact of VC* and *Global Dynamics and Geopolitics* align predominantly with frame expectations.

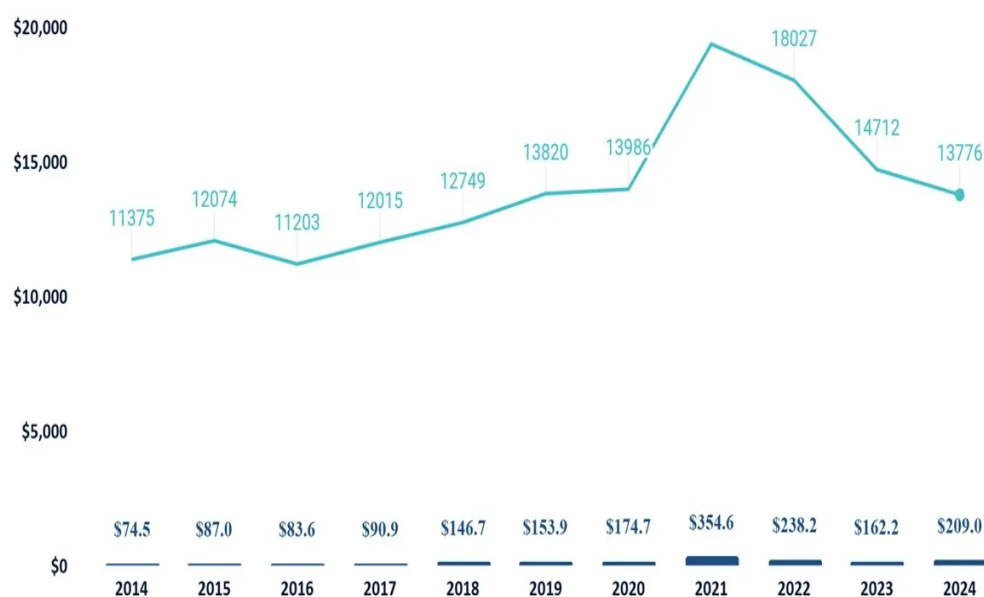
2005 – 2013: Sequels from the past cycle and the Global Financial Crisis

The period from 2005 to 2013 was characterized by market apathy. The aftermath of the dot-com bubble crash in 2000 left investors cautious about VC prospects, and early signs of recovery (up to 2007) were received with mixed feelings. This situation was exacerbated by

the Global Financial Crisis, severely impacting the industry’s ability to exit investments, thus harming returns for limited partners (LPs). This decreased LPs’ willingness to invest in VC, subsequently reducing funds available to startups. The annual amounts invested by VC during this period reflect stagnation in the industry (Figure 2.6).

“Adding to the pressure on VCs is a wholesale pull-back by the university and charitable endowment funds that supply a large part of the industry’s capital... Some investors have simply refused to meet [capital call] obligations, due to bankruptcy or, more rarely, outrage at the dismal performance of the money they had turned over in the past.” – FT (April 20, 2009)

Figure 2.6: VC Market Activity



Source: Venturebeat: <https://venturebeat.com/ai/global-vc-investments-rose-5-4-to-368-5b-in-2024-but-deals-fell-17-nvca-pitchbook/>

Expectations and evaluations within the *Challenges of VC* theme were generally low but not uniform. While some assessments noted modest improvements in industry metrics and expressed optimism, others viewed the recovery as still far removed from the pre-dot-com bubble heights. Even this mild recovery sparked concerns about another potential bubble. Criticism emerged regarding VC’s efficiency in deploying capital, particularly around deploying substantial funds effectively when capital was abundant, the time needed to invest,

and the industry's "*feast and famine*" dynamics—overfunding startups during prosperous times but leaving them starved when conditions shifted. External factors, especially the public market's appetite for initial public offerings, were perceived as both sources of instability and potential catalysts for industry recovery. Additionally, VC faced critiques related to susceptibility to biases such as selection bias and momentum investing, although some optimism existed that prior market cycles had imparted lessons that venture capitalists were heeding.

"I don't think it's as bad as the 2000 boom,"... "Back then you were seeing teams . . . that had trouble managing themselves, let alone a company." VC teams have also become more savvy. "I don't see a lot of totally stupid deals, but I do see deals where I say, wow, that's a really full valuation." – Financial Times (FT) (May 8, 2006)

Changes in investment and operational strategies, as well as efforts to find new profitability pathways (categorized under *Evolving Dynamics*), were viewed as reactionary and often insufficient. This period also saw alternative funding sources emerge, such as corporate venture capital, crowdfunding, and credit, competing with or supplementing traditional VC funding.

The outlook regarding the *Role and Impact of VC* was predominantly negative, reflecting deeper questions about VC's societal and entrepreneurial roles. Conversations highlighted concerns about VC's capacity to generate returns sufficient to justify investment risks, the unequal distribution of funding, and VC's effectiveness as an asset class, both competing with and complementing more established financial vehicles. Additionally, skepticism arose about VC's status as the primary funding mechanism for entrepreneurship and innovation. Internationally, perspectives varied. Some viewed global VC development optimistically, expecting boosts from alternative funding sources like corporate venture capital and crowdfunding. Others, however, criticized the uneven international development of VC, noting that resources remained disproportionately concentrated in the U.S. Attempts to

replicate Silicon Valley's success elsewhere were met with mixed outcomes, prompting questions about VC's global distribution and equality.

“At a time when new sources of technology innovation are starting to proliferate around the world, though, this leaves a severe geographic mismatch between ideas and cash.

“Why should the US have 500 VC funds and India only three or four?” – FT (June 8, 2005)

2014 – 2019: Hype ramp-up and peak

The period between 2014 and 2019 was described by one of our interviewees as “*the time of madness.*” It was marked by increased VC market activity, evidenced by the total capital invested (Figure 2.6) in the U.S., which reportedly exceeded pre-dotcom era levels for the first time since the crash. This growth was accompanied by an increase in both the number of deals and the valuations of companies involved, as well as renewed optimism regarding the future of VC and the entrepreneurship model reliant upon it. However, some criticized the mindset and practices fostered by this exuberance.

“Venture capital also has its drawbacks. Too much VC money has lately been invested in start-up companies with daft ideas, inflating some private market valuations beyond any meaningful measure and eroding margins for sounder businesses.” – FT (April 12, 2016)

Alongside the metrics discussed above, an upward trend in additional indicators—including the number of funding events for early-stage startups (Series A rounds), the number of MBAs employed by VC firms, and the proliferation of new VC funds—reinforced generalized optimism regarding VC and entrepreneurship, particularly within the *Challenges of VC* theme. This period also saw increased attention paid to individual events (such as fundings and exits) that sparked broader interest—for example, the success of Deliveroo and Zalando generating enthusiasm around early-stage funding in Europe. There was heightened

interest in the expansion of U.S.-based VC firms into other markets, as well as exploration by VCs into new industries and technologies, including eye care, cannabis, and cryptocurrencies. This suggests growing confidence in VC and the Silicon Valley model's applicability to diverse contexts. However, the increased availability of capital was not universally viewed positively. VCs themselves expressed concerns that abundant funding had lowered standards for startups seeking investment, while entrepreneurs highlighted decreased discipline and the emergence of unsustainable practices.

“It is a truism of the venture capital world that even the best ideas can be spoilt with too much money. The extreme discipline needed to build a highly focused team goes out the window, and conflicting incentives creep in when instant riches are on the table.” – FT (January 26, 2018)

There was also anxiety about potential excesses and the formation of a bubble. External factors—particularly policy changes and international relations—generated both excitement and caution, underscoring awareness of the industry's dependence on external conditions. Furthermore, concerns emerged about the ecosystem's lack of diversity in terms of gender, ethnicity, and socioeconomic background.

Positive perceptions of VC's broader contributions focused on its role as an enabler of innovation and the creation of internationally competitive companies, ultimately contributing to economic prosperity. Nevertheless, questions persisted regarding the returns generated by VC for limited partners, highlighting the illiquid nature of venture investments and the concentration of profits among a select few as negative characteristics. As in the previous period, international capital movements were viewed positively for both VCs and entrepreneurs; VCs capitalized on growing entrepreneurial activity, while entrepreneurs in underserved regions benefited from new funding opportunities. This period also featured numerous comparisons of funding activities across different regions, signaling increased

international competition to produce and finance successful startups and maintain competitiveness. This included notable interest in “unicorns” (companies valued above 1 billion USD) and their emergence. Although some comments lamented disparities between leading and lagging countries, the overall tone remained optimistic regarding VC-backed entrepreneurship’s economic impact. This optimism extended to increased government support for entrepreneurship through VC, viewed as critical for ongoing success.

2020 – 2024: Market turmoil and disillusionment

The final five years of our observation window were marked by turmoil caused by the COVID-19 pandemic, its repercussions, and broader geopolitical instability (Desalegn et al., 2022). During the initial part of this period, governments injected unprecedented amounts of cash into economies to prevent recession, significantly increasing liquidity available to VC, as illustrated by the dramatic rise in total investments from 2020 to 2021 (Figure 2.6). However, this added liquidity created inflationary pressures, subsequently managed through rising interest rates (Deffenbaugh, 2025). Several interviewees cited higher interest rates as a primary factor behind the sharp decline in VC activity in subsequent years, as VCs faced increasing competition from safer asset classes.

“It completely fluctuates with interest rates. So, during that time when the hype was high, money was essentially free... And so [investors] are just like, well, why not take the risk... so the risk appetite was just larger at the time as well. And now that we’re seeing interest rates that go up, immediately you see the asset class shrink. So, I think it was a period of unprecedented interest rates that kind of allowed this to kind of go as far as it did.” – Interviewee 31

Media articles from this period reflect a diminished confidence in VC, both generally and at the frame level, accompanied by the realization that the era of “cheap money” and “sky-high valuations” had ended. Venture capitalists began struggling to raise new funds from

reluctant limited partners (LPs), who saw declining opportunities for returns as the IPO window narrowed. The drying-up of upstream capital severely affected entrepreneurs, resulting in down rounds, harsher negotiation terms with VCs, and heightened competition for limited resources.

“While levitating on the vapor of tantalizing valuation mark-ups, many of these leaders mistook the advantages of low interest rates and globalization for their skill, and anointed themselves prophets of innovation... Rising rates and the collapse of Silicon Valley Bank have laid bare that reality. Yet some persist in the belief that VC’s problems may disappear if we return to a world of declining interest rates and cheap money — that the assets in VC portfolios will return to their high-water marks; that a buyer will pay a price as dear as SoftBank’s Vision Funds have done in the past.” – FT (March 29, 2023)

Even though VC activity peaked during the first two years of this period, discourse around the industry’s current state and future grew increasingly negative. Criticism centered around VC practices, including tendencies to oversell their skills, reliance on a partly management-fee-based business model ensuring VC profits regardless of portfolio performance, and operational opacity. Additionally, concerns arose regarding a potential correction driven by declining liquidity. *“As research from Harvard economist Andrei Shleifer has shown, there are three ingredients to a financial crisis: consensus optimism, leverage and illiquidity. And private markets exhibit all three characteristics.” – FT (January 4, 2023)*

Nonetheless, optimism remained through 2022 regarding VC’s expansion into new industries (e.g., green-tech) and geographies, as well as its ongoing capacity to support entrepreneurship despite perceived shortcomings. In 2022, despite a marked decline from the exceptional investment levels of 2021, VC investment in the U.S. remained higher than in any previous year in the studied period. However, this situation deteriorated further in subsequent years, deepening skepticism about VC’s future relevance. We observed doubts regarding VC’s

applicability beyond consumer technology and concerns about its viability in the face of growing competition from alternative startup funding sources (e.g., governments and large companies) and rising interest rates. The perceived disconnect between the venture market and broader markets also drew criticism, suggesting delayed or insufficient responsiveness to macroeconomic developments—such as persistently high company valuations despite broader downturns, deterring investment. Additionally, VC’s purported hubris and propensity for reckless behavior during prosperous times generated animosity towards the industry.

“In truth, the wall of cash in recent years led many VC funds to rely less on discrimination and judgment and more on playing a numbers game, investing in an array of start-ups in the hope that one delivered a vertiginous return. This has always been part of the VC playbook, but it became more gamified, descending into an undisciplined play on the momentum of industry and market trends. The standards of due diligence deteriorated.” – FT (March 29, 2023)

Confidence in VC’s ability to deliver returns to LPs diminished, once again becoming a prominent topic within the *Role and Impact of VC* theme, echoing sentiment from before the previous period of hype. Interestingly, despite generalized skepticism, positive views persisted, emphasizing VC’s entrepreneurial role in driving innovation and creating disruptive companies that ultimately became market leaders. *“venture capitalists as a group have a positive effect on economies and societies. They have unquestionably proved powerful.” – FT (January 12, 2022).* Reportedly, rising geopolitical tensions with China prompted the U.S. government to consider regulatory changes restricting capital flows between the two nations, aimed at protecting national leadership in key technologies. Such regulatory moves negatively impacted VC expectations in both countries. Conversely, prospective regulatory changes permitting banks to allocate more funds to VC provided a source of optimism regarding the regulatory environment’s potential impact.

Cross-Period Analysis

For the most part, our inductively derived themes followed a consistent pattern: their frequency remained relatively stable across the three periods, displaying net-negative sentiment during the troughs of the cycle (2005–2013 and 2020–2024) and net-positive sentiment during the peak (2014–2019). One notable exception was the *Challenges of VC* theme, which consistently contained the highest number of data points across all themes and captured inward-looking aspects of the VC industry, such as technical capabilities. Sentiment within this theme remained net-negative even during the peak of VC hype and was contentious throughout the observed timeframe, characterized by a significant number of both negative and positive statements across all three phases. This pattern was also evident in specific topics within the theme, including industry resilience in both short- and long-term horizons, persistent concerns about market bubbles, and the impact of external factors—all of which remained consistently negative in aggregate across the entire period. Other problematic topics, such as market volatility and VC’s efficiency in capital allocation, emerged predominantly during the troughs. Certain topics, however, exhibited different dynamics: discussions of excesses in the industry became prominent during the peak period and persisted into the downturn, while positively portrayed individual events increased notably during the same period and remained frequent thereafter. Investment strategy changes, captured under the *Evolving Dynamics* theme, were viewed negatively in the first period but shifted positively in subsequent periods. Alternative funding options for startups outside of VC were primarily discussed in the first and third periods when overall sentiment was lower.

Within the *Role and Impact of VC* theme, only two topics retained relevance across multiple periods, underscoring their centrality in broader discussions about VC’s societal implications. These were VC’s capacity to drive technological and economic growth and its ability to deliver adequate returns to limited partners (LPs). While the industry’s role as a

growth driver was contested, it remained net-positive in aggregate during the last two periods. In contrast, views regarding VC's ability to deliver sufficient returns to LPs remained consistently negative across all three periods. Meanwhile, discourse within the *Global Dynamics and Geopolitics* theme consistently revolved around nations' capacity to cultivate entrepreneurial ecosystems capable of producing and retaining unicorns and market-leading companies. This discussion frequently involved the role of governments, as well as international movements of financial and human capital.

Other insights into VC hype

Beyond serving as a triangulation method for our thematic analysis, the interviews provided additional insights. Specifically, they allowed us to: 1) explore in greater depth the current state and prospects of venture capital; 2) directly inquire about the effects of hype in the industry; and 3) gauge experts' perspectives on VC and the model of entrepreneurship it supports. When discussing hype, participants typically referred first to individual companies, technologies, or industries targeted by VC investment. It was probably less common for industry insiders to consider broader industry discourse spontaneously—though some certainly did—but when prompted directly about VC hype, most interviewees readily accepted and engaged with the premise.

Where is VC now, and where is it going?

Our interviewees almost unanimously echoed the sentiment found in news articles regarding the current state of VC. They described a harsher environment for both VCs and entrepreneurs, frequently citing rising interest rates as the main culprit.

“Now you can get a reasonable interest rate. So, money costs more. So therefore, risk appetite has changed. So, I don't think it was we've grown up or become more intelligent. I think the market has changed fundamentally.” – Interviewee 9

The market downturn and lack of profitable exits have made it more challenging for VCs to raise new funds, making them hesitant to invest in new ventures and prompting them instead to support existing portfolio companies. Consequently, entrepreneurs now face increased competition, stricter investment requirements (such as traction, revenue, and profitability), and tougher negotiation terms. Ironically, a few interviewees observed that valuations remained high despite the industry's downturn—a sentiment also reflected in news articles. Participants noted an increased number of market entrants among both VC funds and entrepreneurs, some criticizing these new actors for lacking relevant experience. The changing landscape has prompted shifts in the metrics VCs use to evaluate investments and their overall attitudes. The focus has moved away from pursuing maximum growth potential toward identifying companies that can achieve efficient growth and short-term profitability

“Now, to raise a series A, you have to have seven figures in revenue. There was a period where you could have an idea, a no revenue and raise a series. Um, so right now there's more focus on unit economics, on profitability, on margin, all of that”. – Interviewee 30

Additionally, there is a growing emphasis among VCs on social and environmental impacts. Some interviewees viewed these shifts as signs of industry learning from past excesses, while others regarded them as temporary adjustments that would reverse once market conditions improved. Regarding future prospects, artificial intelligence (AI) was identified as the sector least affected by the overall contraction in VC activity, becoming a notable subject of hype. Several participants pointed out that current enthusiasm around AI fostered questionable practices reminiscent of previous industry cycles, including lowered investment standards and the superficial incorporation of AI into startup pitches, regardless of whether AI was genuinely central to their business models.

*“AI is going to suck everything. So, there’s even more growth opportunities in there. And that will create bad players. There are gonna be people start sh***ty companies with AI and they’ll be able to raise money, and it won’t go anywhere... And I think we are on the rational zone still in AI it hasn’t gotten to irrational. I think it’s going to get there.” – Interviewee 32*

General views of VC

Participants regarded the incentive structure of VC as potentially problematic. One issue raised was that VCs derive a portion of their profits from fixed management fees calculated as a percentage of the total fund size, creating an incentive to raise as much capital as possible regardless of achievable returns—thereby causing a conflict of interest with limited partners (LPs). The remaining portion of VC compensation is performance-based; however, our interviews revealed this arrangement potentially creates conflicts between VCs and other stakeholders.

*“[VCs are] driven by how much capital can they raise? Based on that one grand slam that they’ve had. Because it’s all about raising money from LPs. And I’m assuming that you’re familiar with 95% of venture funds are focused on how much money they can raise, what’s their management fee, and what bulls**t they’re going to tell LPs about how they have some advantage of knowing where the industry is going to go” – Interviewee 22*

Due to their relatively short lifespan compared to potentially long-lived companies, VCs’ main objective post-investment becomes maximizing company valuations to achieve successful exits (via IPOs or sales), rather than building sustainably profitable businesses. The pressure for rapid growth can lead companies to adopt unsustainable practices such as subsidized growth, negatively affecting long-term prospects. Additionally, maintaining inflated

valuations—even if temporarily and not yet exited—benefits VCs because having high-valuation companies in their portfolios bolsters their reputation, facilitating future fundraising.

Aside from incentive structures, experts raised other critiques. These included the high failure rate of VC investments, reliance on rare but large exits, and the industry’s limited ability to identify genuinely successful investments. Collectively, these attributes place VC at a disadvantage as an asset class, characterized by high risk but often insufficient returns, excluding a few industry outliers. Participants also criticized industry opacity arising from information asymmetries between entrepreneurs, VCs, and LPs, as well as the significant discretion VCs hold in both investment decisions and valuation processes. One angel investor commented:

“The reason I would never put money into a GP is because I have no idea how they’re going to allocate the money. I have no idea how they’re going to distribute it over time. There’s a lot of discretion in terms of how they send the money back to investors. If there is any money to send back.” – Interviewee 21

Broader critiques questioned the overall value VC adds in terms of promoting productive entrepreneurship, portraying it instead as potentially resembling a “game of musical chairs,” where early entrants who exit at the right moment benefit, while others who remain invested suffer from overinflated valuations and unsustainable growth strategies. Despite these critiques, however, we also encountered arguments—often from the same individuals—affirming VC’s value, even deeming it a critical component of entrepreneurship and innovation, despite acknowledged shortcomings.

“You’d be better off putting the money into an S&P 500 tracker over ten years... But that’s not as good for the economy because we need to spin off the winners. So again, most of them are going to fail. We know that. But the ones who don’t are really important

for the economy and create jobs and do things that big companies can't do.” –

Interviewee 9

Views of VC hype

When asked about the causes of VC hype, interviewees highlighted two primary factors: interest rates (discussed previously) and culture. They perceived contemporary culture as romanticizing entrepreneurship and new-venture investments, notably amplified and propagated through social media. The most frequently mentioned immediate effects of hype were recklessness (among both VCs and entrepreneurs), herd behavior, and yielding to the fear of missing out (FOMO). *“it’s not an industry where there’s independent-minded people pursuing their own North Star without considering what other people are saying and doing. It’s just highly influenced by what the topic of the day is.”* Recklessness among VCs manifested as lower investment standards, reduced due diligence, and increased risk-taking. Among entrepreneurs, this recklessness translated into undisciplined spending and higher risk tolerance. Immediate consequences of these lapses include lower-quality investments, inflated valuations, and a prevailing mentality prioritizing short-term growth over long-term sustainability. Additionally, overheating markets and the influx of inexperienced participants altered power dynamics, shifting leverage from LPs to VCs and subsequently from VCs to entrepreneurs. While VCs could raise funds more easily—thus imposing stricter terms on investors—they simultaneously faced greater competition for deal allocation (“too much money chasing few deals”), leading to less favorable negotiation terms with entrepreneurs.

In aggregate, participants perceived hype as having both positive and negative longer-term consequences. On the negative side, they noted the wastefulness resulting from the creation of numerous lower-quality companies, or ventures dependent on unsustainable burn rates, which ultimately fail when market conditions deteriorate and liquidity decreases.

“That’s good on the bad side... I think you end up with companies that are funded that never should have been. And so there’s then more pain that ensues. Because those companies now have to shut down. Those people now have to lay off employees. They have to make all sorts of challenging decisions.” – Interviewee 13

However, participants also identified potential long-term economic benefits, such as the infrastructure and trained workforce left behind, which could prove beneficial in future entrepreneurial endeavors. Research emphasizing either positive or negative aspects of hype can also be found in the academic literature (see Chapter 1), reflecting ongoing ambiguity and conflicting views regarding the net value of hype cycles in VC.

DISCUSSION

The results of our analysis suggest that VC has experienced fluctuations in attention, enthusiasm, and expectations over the past twenty years, consistent with existing definitions of hype (Logue & Grimes, 2022; van Lente et al., 2013) and its operationalization (Ruef & Markard, 2010). These patterns sometimes coincided with changes in market activity, but not always—as evidenced in 2020 and 2021, when VC investments peaked for the observed period but assessments and expectations around the industry did not follow suit. While previous research has described periods of market heat (Sorenson & Stuart, 2008) accompanied by “irrational exuberance” (Shiller, 2015), our findings indicate that elevated enthusiasm does not necessarily extend beyond monetary expectations. Indeed, industry insiders and other stakeholders may harbor more fundamental doubts regarding VC, even at the peak of market activity.

Moreover, our analysis revealed specific themes within the hype cycle, which we interpret as “manifestations of the discursive struggles associated with periods in which niche technologies challenge and compete with existing socio-technical systems” (Kriechbaum et al.,

2021, p. 14). These themes were compatible with Ruef and Markard's (2010) framework differentiating specific, general, and frame-level expectations. However, we favored our inductively derived framework because it was tailored specifically to our setting, offering more analytical granularity. Tracking the hype patterns for VC and their accompanying discourse, we identified struggles of VC to establish itself more securely within the broader socio-technical regime from two distinct but related perspectives. From an entrepreneurial standpoint, as a key component of the standard model of entrepreneurship, VC shares in its efforts to incorporate as the predominant approach for creating and scaling new companies, particularly highly innovative or technology-driven ventures. From a financial market perspective, VC competes as an asset class, vying for resources from institutional investors, wealthy individuals, and other limited partners. On both fronts, our results reveal discourse that shifts somewhat in content and sentiment over the cycle yet maintains certain persistent features (see Cross-period Analysis).

Overall, our findings uncover conflicting perspectives surrounding many topics, even within the same period. Beyond expected thematic shifts—such as increased concern over VCs' ability to allocate funds efficiently during troughs—we found some of the most critical issues for VC's long-term viability were consistently sources of conflicting views within periods and criticism across periods. These issues notably included persistent doubts about the industry's financial returns to investors and its resilience amid high volatility. It is particularly noteworthy that even during the ramp-up and peak of the cycle, aggregate sentiment concerning inward-looking industry issues (captured by the *Challenges of VC* theme) was not positive, with substantial numbers of both positive and negative statements. Such conflicting views often arose from differing interpretations of identical market conditions, underscoring the “technological drama” (Kriechbaum et al., 2021) characterizing the VC hype cycle.

Considering both our data sources (media articles and interviews), VC in its current form—and by extension the system it supports—appears as a flawed socio-technical configuration whose place vis-à-vis the regime remains contested. The trajectory of expectations surrounding VC indicates ongoing struggles with varying degrees of success over the observed period, featuring thematic content that partially varies but also remains relatively stable. Our study highlights that VC, in particular, has faced criticism for its incentive structure, which creates moral hazard, its susceptibility to biases (particularly social ones), and lapses in discipline and prudence during periods of exuberance. These characteristics, coupled with inherent uncertainties in entrepreneurial investments, create volatility seen as threatening its long-term viability. Additionally, its effectiveness as an intermediary between capital sources and entrepreneurial ventures has been debated, especially concerning efficient fund allocation and support for impactful entrepreneurship. Upstream, it faces skepticism as an asset class from LPs, alongside fundamental questions about whether generated returns reflect genuine expertise or mere luck. Downstream, we found doubts about VC's value-added beyond funding and its suitability for expansion beyond the niche of high-growth, consumer-oriented technology ventures. Nonetheless—particularly in our interviews—we also found strong recognition that, despite its flaws and apparent wastefulness, VC and the entrepreneurial system it is tied to have successfully fostered innovation and created market-leading companies. Even in periods of pronounced skepticism, high-profile events such as large fund establishments or successful venture financings spark excitement and optimism, underscoring the model's continued relevance.

Contributions

Our study makes several contributions. We advance theory by conceptualizing VC and the so-called standard model of entrepreneurship as nested socio-technical configurations embedded within the broader sociotechnical system of entrepreneurship (Geels, 2002; 2004).

This framing offers analytical benefits, particularly by allowing us to leverage the concept of hype as an indicator of socio-technical transitions (Kriechbaum et al., 2021). Thus, we provide a clearer understanding of the discourse surrounding these entities, revealing their perceived strengths and pitfalls, their current social roles, and the expectations—both hopeful and skeptical—that persist around them. More broadly, our framework establishes a theoretical foundation from which these structures can be clearly distinguished from entrepreneurship as a whole, enabling more precise study. While we agree with existing critiques that describe the Silicon Valley entrepreneurship as overly mythologized and excessively emphasized in both academic and practical domains (e.g., Aldrich & Ruef, 2018; Baker & Welter, 2024), we argue that comprehending its historical trajectory and societal context is essential to demystifying its status. Our proposed framework serves effectively as a tool to achieve this.

We also make an empirical contribution by applying methods from other fields that study hype cycles to measure and analyze the expectations surrounding VC for the first time. Our empirical strategy enabled us to quantify waves of excitement and disillusionment around VC over the past two decades, identifying a clear pattern consistent with a hype cycle. These findings validate our framing of VC (and, by extension, the model of entrepreneurship it is embedded in) as socio-technical innovations. At the same time, the qualitative component of our analysis supports existing conceptual arguments questioning the standard model of entrepreneurship's ability to fulfill its designated societal role (e.g., Audretsch, 2021; Zankl & Grimes, 2024), providing real-world evidence of these critiques and insights into their content.

Additionally, we contribute to the growing literature on hype in entrepreneurship (e.g., Heupel et al., 2024; Logue & Grimes, 2022; Wood et al., 2024), which primarily examines hype from strategic perspectives (how entrepreneurs leverage hype) and, more recently, institutional perspectives (Wadhwani & Lubinski, 2025). Prior research has mostly focused on hype surrounding specific industries, technologies, or individuals (e.g., Fisher et al., 2024;

Heupel et al., 2024; Garud et al., 2021). By stepping back to examine hype around entrepreneurial activity itself (specifically one type), our study introduces a novel dimension, enhancing our understanding of hype's broader implications within entrepreneurship.

Finally, our study holds potential practical benefits. By highlighting the pitfalls of VC as articulated by industry insiders and stakeholders, we alert LPs, VCs, entrepreneurs, and entrepreneurial support organizations to potential issues, enabling some pitfalls—particularly those rooted in behavioral biases—to be mitigated. Where these shortcomings stem from structural elements, documenting and emphasizing them represents an initial step toward change. Policymakers, similarly, can leverage our insights to both address these pitfalls through targeted policies and allocate public resources more conscientiously to foster sustainable economic growth via entrepreneurship.

Limitations and Future Research

One limitation of our study is the reliance on measuring the hype surrounding VC as a proxy for that of the entire sociotechnical system. Our theoretical framework (drawing from Aldrich & Ruef, 2018; Baker & Welter, 2024) conceives VC as an integral component embedded within this system. If this premise is accepted, assessing the hype around the standard model through VC hype becomes analogous—and similarly valid—to determining a person's vital signs via their heartbeat. We adopted this approach for its straightforwardness, given that VC is more tangible and easier to measure empirically. However, this decision also presents an opportunity for future research to develop alternative operationalizations of hype specific to the entire system.

A second limitation of our study is that we analyzed data from only one media outlet, although this method aligns with past research on hype in other technological fields. Examples of this include Kriechbaum and colleagues (2021) using articles from the *Süddeutsche Zeitung* in their exploration of collective expectations about renewable energy in Germany, and Melton

and colleagues (2016) using articles from the *New York Times* to study hype around alternative fuels. Our choice of the *Financial Times* as a primary data source was based on its reputability in academia and the industry. Nevertheless, our dataset included numerous direct quotations and perspectives from VCs, entrepreneurs, and industry insiders, providing substantial diversity of viewpoints, which often contrasted sharply. Additionally, the expert interviews we conducted served as a second data source, corroborating and strengthening the robustness of our findings through triangulation.

Finally, our study opens avenues for future research. One promising direction involves deepening the analysis of entrepreneurial hype using additional concepts from the sociology of expectations literature (Borup et al., 2006). For example, van Lente et al. (2013) suggest that the consequences of disappointment following hype depend on interactions between different expectation levels; this concept could be explored in the context of the standard model of entrepreneurship, retrospectively and prospectively. Moreover, future research might integrate additional constructs from the socio-technical transitions literature, such as socio-technical landscape-level pressures, actor-system dynamics, and regime-level instabilities (Geels, 2002; 2004) that may have facilitated the emergence of the system from its niche. Further studies could also examine factors contributing to the destabilization of the pre-existing entrepreneurial regime, which may have allowed the new system to gain prominence.

Conclusion

In this study, we examined the dynamics of hype surrounding venture capital (VC) over the past two decades and interpreted them through the lens of sociotechnical transitions. Conceptualizing VC and the model of entrepreneurship it sustains as nested sociotechnical systems enabled us to trace their evolving position within the broader entrepreneurial regime. Our empirical findings, derived from media discourse and expert interviews, revealed recurring cycles of enthusiasm and disillusionment reflective of broader systemic struggles between

emerging and incumbent configurations. While the prominence and influence of VC remain substantial, persistent concerns—ranging from structural inefficiencies to normative critiques—challenge its broader integration. These frictions underscore that the standard model of entrepreneurship, often conflated with entrepreneurship writ large, is neither universally adopted nor immune to skepticism. The observed hype cycles thus act as both barometers and mechanisms of legitimation, shaping trajectories of adoption and resistance. By disentangling these expectations, our study contributes to a more nuanced understanding of entrepreneurship's evolving landscape. It also offers a framework for future research to interrogate how expectations, discourse, and structural features interact in shaping the development, diffusion, and contestation of entrepreneurial models in contemporary economies.

APPENDICES

Appendix 2.1: Categories and Prevalence of Sentiment (Positive/Negative) by Period

Category	2005 - 2013		2014 - 2019		2020 - 2024	
	POS	NEG	POS	NEG	POS	NEG
Global and Geo						
Competition between countries	2	-5	11	-8	2	-5
Concentration of ENT/VC in certain countries	0	-3	1	0	0	-1
Differences between VC in different countries	0	-1	0	0	0	0
Other countries copying the US model	1	-2	2	0	2	0
Movements of talent/capital	4	-1	9	-5	1	-8
Role of Gov. and policy in promoting VC/ENT	5	-1	8	0	5	-1
Role & Impact						
Ability to fund critical industries	3	-1	0	0	0	-4
The added value of VC to startups aside from capital	0	0	0	0	0	0
Suitability of particular industries to be funded by VC	2	0	0	0	2	-4
To what extent it produces productive ENT	0	0	0	-2	0	-3
Inequality in distribution of funding	0	-6	0	-1	0	0
Returns of VC to LPs	1	-18	2	-5	2	-10
VC's place in financial markets	3	-9	1	-1	1	-2
VC as driver of technological and economics growth	1	-1	17	-5	11	-7
Distribution of wealth between groups of stakeholders	0	0	0	-3	0	0
Challenges						
Ability to learn from past mistakes	4	0	0	0	2	0
Biases in VC decision-making	0	-5	0	-3	1	-2
Excesses of the industry	0	-1	0	-6	0	-8
Wastefulness of the SV model	0	-1	0	-1	0	-1
Diversity in VC	0	-2	5	-7	0	0
Disconnect between VC and other markets	0	0	0	0	4	-9
Exuberance in the industry	0	-2	8	-3	0	-1
Volatility of VC market	0	-12	0	-1	1	-11
Opacity of the industry	0	0	0	-3	0	-4
Individual events	4	-2	7	0	6	-2
Individual industries	4	-5	0	0	0	0
Resilience of VC	1	-8	0	-5	1	-25
Impact of external factors	7	-15	5	-10	6	-26
Concentration of wealth among a few funds	0	0	2	-3	0	0
Ability to invest money efficiently	2	-15	0	-3	0	-5
General Industry outlook	18	-41	25	-6	8	-18
Fear of bubbles	2	-5	0	-4	0	-7
Over-supply of money	2	-2	5	-9	3	-4
Industry cycles within market cycles	4	-1	1	-3	1	-3
Evolving Dynamics						
Changing investment strategies	3	-8	5	-3	7	-4
Keys of VC success	0	0	1	0	4	0
Other funding alternatives	5	-5	1	0	0	-6
Power dynamics between LPs, VCs (GPs), and ents.	0	-3	1	-2	1	-5
Search of paths to profitability	3	-5	0	0	4	-1
VC exploring new industries	4	0	5	0	1	0
Hunt for the next big thing	0	-2	2	0	0	-1
US capital looking for opportunities abroad	0	-1	10	0	2	0

Appendix 2.2: Interviewee Profile

#	Industry	Type
1	Generalist	Venture Capital
2	Health, Sustainability, Social Impact	Venture Capital
3	Energy	Venture Capital
4	Enterprise Software	Angel
5	Generalist	Angel
6	Technology	Venture Capital
7	Technology	Angel
8	Energy	Angel
9	Generalist	Angel, Angel Network
10	Lower-middle-Market Companies	Investment banking
11	Technology	Angel, Incubator
12	Education	Venture Capital
13	Early-stage	Venture Capital
14	Late-stage	Private Equity
15	Medical Devices	Angel
16	Generalist	Angel, Angel Network, VC
17	Defense, Generalist	CVC, Angel Network
18	Financial Services	Venture Capital
19	Technology	Angel
20	Generalist	Private Equity, Investment Banking
21	Generalist (Early-stage)	Angel
22	Generalist	Venture Capital
23	Local Generalist	Angel
24	Early-stage	VC, Incubator
25	Generalist	Angel
26	Generalist	VC, Angel
27	Health-Tech	VC, Angel
28	Technology, early-stage	VC, Angel
29	Sustainable Materials	Entrepreneur in Residence
30	Early-stage	Venture Capital
31	Technology	Angel
32	Technology	VC, Angel
33	Local Generalist	Entrepreneur in Residence
34	Local Generalist	Public Incubator

Appendix 2.3: Data Structure

Themes & Categories	Code Examples	Statement Examples
Global Dynamics and Geopolitics		
Competition between countries	UK VC lags behind US	The performance of venture capital funds in the UK... is lagging further behind the US
VC/ENT Concentration in Specific Countries	EU VC calls for breaking SV VC/ENT monopoly	“Let’s break the [Silicon Valley] monopoly. We could build the same thing or even better in Europe,”
Differences in VC Across National Markets	Japan Investors are risk-averse	In the US, VCs expect to take on risk when they invest. “In Japan, there is a culture that does not accept risk,”
Adoption of the US VC Model Internationally	Contagiousness of SV model in EU	Exposure to entrepreneurial Americans could be highly contagious. No wonder Europe’s start-up scene was starting to feel frisky.
Global Mobility of Talent and Capital	EU firms seek US financing and relocate as they grow	The availability of finance for companies as they become bigger is often cited by European start-ups as the reason they relocate to Silicon Valley
Government Policies in VC and Entrepreneurship	Public sector investing in startups. Promotes innovation	Public sector organizations such as Darpa, the defense industry body, and the National Institutes of Health have pumped billions into early-stage research and proved to be remarkable engines of innovation.
Role and Impact of VC		
VC’s Role in Funding Critical Industries	Investment slow to take an interest in environmental concerns	Progress on encouraging investors to take environmental concerns into account has been slow.
Value Added by VC Beyond Capital	Entrepreneurs can choose among VCs that can provide value	“When we talked venture capital 10 years ago, it was all about access to finance — it was a VC choice game,” “It’s not just about the capital anymore, it’s about the value-add.”
Industry Suitability for VC Investment	Clean-tech ready for VC money	“We are now at an inflection point where climate tech is a venture-backable space.”
VC’s Contribution to Productive Entrepreneurship	VC seen as responsible for ENT stagnation and lack of dynamism	We may also wonder how far the current mindset of the VC industry is responsible for the slowdown in new business formation and lack of economic dynamism in the US.
Funding Inequality in VC	Less deals but more funding means less money for seed rounds and startups	“The casualty of this rush has been the seed stage, which saw a global decline. The migration out of seed won’t be felt now but it will have impacts on the venture ecosystem in the coming years.”
Returns on VC Investments for LPs	VC is a net-negative for LPs	“There’s been far more money paid into our industry than being returned,”
VC as an Asset Class or Niche Market?	VC failing to become an institutional asset class	VC is returning to its origins as an artisanal cottage industry after failing to become an institutional asset class.
VC’s Role in Technological and Economic Growth	Funding to scale startups will lead to growth	“Global investors are increasingly tapping into this ability, providing the funding and access to export markets that companies need to scale up. This is powering the UK’s entire economy through creating growth and new jobs both in London and beyond.”
Wealth Distribution Among VC Stakeholders	Later investors take precedence during liquidation	Later investors putting up more capital get preference in the case of any liquidation. These later rounds do not reflect the valuation for all shareholders.
Challenges of VC		
Learning from Past VC Market Cycles	VCs invest but are selective, look for good management teams	Venture capital companies will invest - but they have become more selective about looking for the right company with the right management team in place.
Cognitive Biases in VC Decision-Making	Awareness of VC cycles. FOMO and “me too” investment are warning signs right now	venture capital is a market that is prone to booms and busts, and there have been some familiar warning signs. “Me-too” investing and “FOMO” — the fear of missing out — are as strong as ever.
Excesses and Speculation in the VC Industry	VCs extract high fees in return for lack-luster performance	Yet it is hard to detect a blush as they extract extravagant management fees for mislaying their backers’ money.

Inefficiencies of the Silicon Valley Model	VC maintains ideology of building better future, despite prior failure, wastefulness	No matter the billions of dollars wasted on fruitless crypto and metaverse investments, nor the recent landslide in private market valuations, nor the still-chilly state of the public listings markets; the techno-capitalist machine that is Silicon Valley continues to hum with the conviction that it can build a better future. To the outside observer, it appears like “ideology as usual” in VC land.
Diversity and Inclusion in Venture Capital	The tech and venture capital industries are becoming more female-friendly	There are, however, small signs that the tech and venture capital industries are becoming more female-friendly
Disconnect Between VC and Broader Markets	Public market valuations rising on AI hype, but private market has not recovered	The valuations of public tech stocks are jumping amid excitement about generative artificial intelligence. But private markets are yet to recover.
Speculative Exuberance in VC	Money coming in from “venture tourists” (mutual, sovereign) as sign of boom	Money has also been pouring in from new investors such as mutual fund groups, sovereign wealth funds and corporate venture capital funds. Spates of such “venture tourism” have been evident at the peaks of past booms.
Volatility in the VC Market	Problems that started long ago have repercussions many years after	It may be years late, but the reckoning for the VC world’s past failures appears finally to have arrived.
Opacity and Information Asymmetry in VC	Spacs are opaque to investors, require trusting VC prowess	Investors in Spacs effectively place their trust in the sponsor’s dealmaking prowess, without any visibility into potential target companies
Impact of Singular Market Events on VC	individual investments in spite of downturn	UK venture capital has received a double boost from the \$330m sale of a biotechnology company to a US pharmaceutical group and a £65m (\$97m) fundraising round by a developer of painkillers for cancer patients.
Industry-Specific VC Investment Trends	Rise of a possible short-lived media bubble	“Media companies are on the prowl, and investors are excited,” says Mr. Jurvetson. “The bigger picture is these (bubbles) tend to be short-lived.”
Resilience of the VC Industry	Doubts about the sustainability of VC as a business	“For the first time in 40 or 50 years of venture capital, the people who invest are having to decide whether they want to keep doing it or not, and the general conclusion is - to a large degree - no.”
External Factors Shaping VC Markets	LPs reluctant to invest b/c of a weak IPO market	investors are feeling leery; and doubly so, given that the weakness of the initial public offering market makes it tough for venture capital funds to find any exit strategies
Wealth Concentration in Leading VC Firms	VC is hostile for entrants. Returns concentrate around a couple of VCs and benefit few LPs	The returns have been disproportionately skewed to a handful of established firms and the lucky few investors with access to their funds.
Efficiency in VC Capital Deployment	Concern about VCs capability to deploy large amounts of money efficiently	The flood of new investment raises concerns about whether so much private capital can be efficiently deployed.
General Industry Outlook for VC	Investment cuts in VC	The US venture capital industry is facing a severe shake-out that will lead to a contraction in future investments, according to some of Silicon Valley’s leading financiers
Fear of Market Bubbles in VC	Warning about high valuations in EUR	High share prices should also be a red flag
Excess Capital and Overfunding in VC	Abundance of money has led to subsidizing growth	Abundant finance has helped fund cut-throat practices, including costly subsidies
Cyclicality of VC Investment and Market Trends	VC money returning to clean-tech. Questions about new bubble	more than \$40bn of VC money has poured into climate tech companies from January 2020 to August 2021, already exceeding the total for the previous two years by 37 per cent. This has tech FT# questioning whether we are heading for another “green bubble”.

Evolving Dynamics

Key Success Factors in Venture Capital Shifting Investment Strategies in VC	Conferences as trend in the market to create connections As funding dries up, VCs pressure startups to raise prices and cut costs to make profit	Technology Conference for start-ups is part of a growing trend to monetize connections Venture capitalists said on-demand companies may have to raise prices and cut expenses as funding dries up.
Alternative Funding Models for Startups	CVC surging	“If corporate VC continues at this pace, we could see all-time record levels in the near future.”

Power Dynamics Among LPs, GPs, and Entrepreneurs	Awareness of the low money environment for startups, lower valuations, harsher terms	“The days of Band-Aids and hope are behind us, and people are accepting the new reality,” he said. “For new financings, you’re starting to see the presence of bids that are low.”
Pathways to Profitability in VC-Backed Startups	SV VC diversifying into green-tech and other countries	The renewed activity reflects the diversification of the industry. Silicon Valley funds are seeking investments outside the US, particularly in Asia, and are putting a lot of money into energy-saving technology.
VC’s Expansion into Emerging Industries	VC exploring new industries	Eyecare is attracting growing interest from early-stage biotech entrepreneurs and venture capital investors.
The Search for the Next Big Investment Opportunity	Big VCs keep chasing the next big thing	But SoftBank and its Vision Fund have not stopped taking bets with other people’s money, and Sand Hill Road is still chasing the next big thing with crypto.
US VC Capital Seeking Global Investments	US investors entering other markets	US venture capitalists and incubators look to tap into the potentially huge consumer market in Africa’s biggest city.

CHAPTER 3 – Damned If You Do, Damned If You Don’t: How Counterfactual

Emotions Shape Early-Stage Investment Decision-Making

ABSTRACT

This study explores the role of counterfactual thinking in new-venture investment decisions, examining its effects on errors of commission and omission. Drawing from behavioral economics and psychology, we focus on the salience of prospective counterfactuals—both individual and social—at the screening stage. Our findings demonstrate that increasing the salience of commission-related counterfactuals, particularly in social contexts, significantly reduces investors’ willingness to invest. This effect underscores the influence of anticipated regret, social comparison, and emotional responses in shaping investment behavior. By contrast, omission-related counterfactuals show no measurable impact, suggesting a prevailing not-investing norm among new-venture investors. Our results provide a deeper understanding of how investors navigate the tension between avoiding missed opportunities and minimizing losses, emphasizing the salience of situational triggers as opposed to stable traits or market-wide factors. These insights highlight the importance of counterfactual thinking as a theoretical lens for studying decision-making in the high-risk, high-reward context of new-venture financing.

INTRODUCTION

“Investors may claim they aren’t influenced by FOMO [the fear of missing out] or herd mentality, but the truth is they’re human, and FOMO affects even the most elite investors.” – Yeh (2023)

“VCs don’t want to invest anywhere where they can end up looking stupid.” – Levi-Weiss (2019)

The first quote above was taken from an article called “How to Leverage Investors FOMO” by a business that offers fundraising guidance and solutions to entrepreneurs. It is among various other popular (e.g., Rist, 2020; Sorrentino, 2018) and academic research (e.g., Huang, 2018; Kleinert & Hildebrand, 2024; Valliere & Peterson, 2004) articles that suggest new-venture investors’ preoccupation for not letting profitable opportunities escape. Relatedly, it is among other recent articles offering advice to entrepreneurs on how to raise funds inciting them to leverage this preoccupation to their advantage (e.g. Levi-Weiss, 2019; Drozd, 2024.). On the other hand, the second quote speaks to a counterbalance to the first psychological driver, with investors also being motivated to avoid investing in unprofitable investments and appearing incompetent in front of others.

These competing dynamics reflect counterfactual thinking about *errors of omission* (“What if I don’t invest and miss out?”) and *errors of commission* (“What if I invest and it’s a mistake?”). Their relevance for new-venture investors raises the question of *how much counterfactual thinking influences the investment decisions of this group?* Repeated mentions about the possibility that counterfactual thinking might be activated transiently as part of entrepreneurial strategy further highlight this inquiry. Additionally, these counterfactuals seem to carry a social component, where both errors of commission and omission carry the threat of a social penalty for investors. This elicits a second question: to what degree does the social

dimension of these counterfactuals—such as peer comparisons or reputational concerns—drive or amplify their effects?

Investors operate in an environment that triggers counterfactual thinking about errors of omission (missed opportunities) and commission (poor investments), both individually and through social comparisons. They must evaluate numerous prospects, reject most, and invest in only a few (Gompers et al., 2020; Harrison et al., 2015), with portfolio success heavily reliant on a small number of “home runs” to offset widespread losses (Nanda & Rhodes-Kropf, 2013). While avoiding errors of omission is critical to securing these high-return investments, the risk of committing resources to poor ventures remains equally pressing, as it can deplete capital and erode gains. The increasingly interconnected and socially embedded nature of new-venture investing exacerbates these tensions. Angel investors participate in angel networks (Antretter et al., 2020), venture capitalists syndicate deals (Sorenson & Stuart, 2008), and crowdfunders operate in highly visible environments (Mollick, 2014). These dynamics heighten awareness of peers’ activities, fostering social comparisons and concerns about relative performance and reputation (Valliere & Peterson, 2004). Additionally, situational factors such as opportunity framing (Fisher et al., 2024), media coverage (Cervantes-Zacarés et al., 2022), peer interest (Levi-Weiss, 2019), and perceived pressure to justify decisions (Valliere & Peterson, 2005) can amplify the salience of both errors. These influences intensify counterfactual thinking, forcing investors to navigate the tension between pursuing high-reward opportunities and avoiding costly mistakes, and ultimately shaping their decision-making processes.

While prior studies have illuminated the stable, dispositional factors that condition counterfactual thinking in new-venture financing, little attention has been paid to how situational triggers influence these processes. Research to date has largely focused on enduring investor traits, such as Huang’s (2018) classification of control-focused and choice-focused investors, or macro-level factors like market sentiment (Kleinert & Hildebrand, 2024). In

parallel, Sohl (2022) explored how regret over missed opportunities affects angel investors' subsequent decisions. They found that investors tend to become less willing to invest in opportunities resembling previously missed profitable ones. This phenomenon occurs because the missed opportunity becomes an anchor, serving as a reference point against which new opportunities are evaluated. When faced with an uncertain future outcome, investors discount its potential value relative to the known value of the missed opportunity, making the new opportunity appear less attractive. We do not know, however, how considering possible errors in the future might affect these decisions. Because there is no certain outcome that serves as an anchor for comparison, this cognitive process may produce a different result than that of thinking about errors in the past.

In this study, we explore the nature and effects of counterfactual thinking in new-venture investments, as they relate to errors of commission and omission. Our framework accounts for both the individual and social consequences of these errors and how they may impact investors' decisions. More specifically, we experimentally manipulate the salience of individual and social counterfactuals related to errors of commission and omission to assess their effect on investors' willingness to invest in a new opportunity. We measure these effects at the screening stage, where investors quickly form a preliminary sense of their potential willingness to invest (Lerner, 2016; Zacharakis, 2010). Most opportunities are discarded at this stage, and therefore advancing through it is critical for entrepreneurs seeking funding (Hudson & Evans, 2005). We report findings from two randomized, between-subject experimental studies that follow methodologies used in the fields of new-venture finance and entrepreneurship research (e.g., Drover et al., 2015; Heupel et al., 2024; Murnieks et al., 2016; Zacharakis & Shepherd, 2001).

Our work makes three key contributions. First, it expands the theoretical understanding of counterfactual thinking in venture financing by shifting the focus from stable traits (Huang,

2018) and macro-level factors (Kleinert & Hildebrand, 2024) to situational triggers. This approach complements existing research on dispositional and structural influences, providing a more comprehensive framework for understanding decision-making biases in this context. Second, it segregates the effects of individual and social counterfactual thinking and highlights the role of social embeddedness and comparisons in new-venture investment decisions, addressing calls for a more “socialized” perspective of investor behavior in this space (Drover et al., 2017). While past behaviors of others may serve as signals for investment quality (Spence, 1978), we explore how prospective social comparisons influence decision-making through counterfactual thinking. Finally, our findings have practical implications for both investors and entrepreneurs. Investors, in particular, can benefit from recognizing the cognitive and emotional biases that influence their decisions, adopting strategies to mitigate their impact.

CONCEPTUAL BACKGROUND AND HYPOTHESES

Research on new-venture investor decision-making has centered around the criteria that make new deals more attractive to investors. This is true for research on venture capitalists (VCs) (MacMillan et al., 1985; 1987; Poindexter, 1976; Robinson, 1987; Sandberg et al., 1988; Tyebjee and Bruno, 1984; Wells, 1974), angel investors (Bachher & Guild, 1996; Feeney et al., 1999; Haar et al., 1988; Haines et al., 2007; Landström, 1998; Paul et al., 2007; Sudek, 2006; van Osnabrugge, 2000), and crowdfunders (Shafi, 2021). While earlier work focused mainly on relatively objective and concrete parameters, such as the founding team’s track record, target market, business model, and product characteristics (e.g., Haar et al., 1988; Hall & Hofer, 1993), recent research has explored more subjective cues – such as passion displayed by the entrepreneur, their enthusiasm, and their similarity to the investor (e.g., Cardon et al., 2009; Murnieks et al., 2016). Additionally, new-venture investors have also been shown to also rely on heuristic mental processes to make investment decisions which deviate from those

prescribed by normative benchmarks such as subjective expected utility (Huang & Pearce, 2015; Huang, 2018; Valliere & Peterson, 2005; Zacharakis, 2010). These rely both on intuition and emotions (Huang & Pearce, 2015; Huang, 2018). The large number of deals, uncertainty of the new-venture investments, and cognitive limitations of investors as decision-makers make the use of heuristic cognitive processes necessary; yet such processes are also prone to biases that may lead to suboptimal decisions (Zacharakis & Shepherd, 2001).

In their deviation from normative behavior, counterfactual thinking and emotions also play a role in new-venture investors' decision-making. More specifically, the possibility of errors of omission and commission influence their decisions (Sohl, 2022; Valliere & Peterson, 2005). The following two quotes found in Huang (2018) are illustrative.

"I pay attention to 'flawed investments'; I don't want to wrongly invest in something that later becomes a failure." (Huang, 2018, p. 1831)

"Who cares if I threw some money into things and they didn't pan out? Not me. But if I didn't throw money into something that ends up being the next Twitter, Uber, or Zenefits, I'm going to be mighty pissed off." (Huang, 2018, p. 1831)

Avoiding errors is unsurprisingly a top priority for investors, given the inherent risks of new-venture investing and the high probability of startup failure. Most investments in a portfolio typically yield no returns, placing pressure on the few successful ventures to compensate for the rest (Nanda & Rhodes-Kropf, 2013). This dynamic prioritizes identifying "home runs" and avoiding errors of omission. Entrepreneurs often exploit the fear of missing out (FOMO) to influence investors and other stakeholders (Fisher et al., 2024). Conversely, an excessive number of poor investments in a portfolio can negate the gains from even a successful venture. Worse, "walking wounded" investments—those that neither fail outright nor generate profit—can drain resources over time. These risks heighten investor vigilance against errors of commission. Additionally, investors have an incentive to maintain their reputations within their

professional networks (Gompers, 1996; Valliere & Peterson, 2004), and poor investment decisions could damage their credibility and standing.

Previous research has examined investors' concerns regarding Type I (commission) and Type II (omission) errors. Huang (2018) categorizes investors into two groups: those with a control-focused stance, who prioritize avoiding Type I errors, and those with a choice-focused stance, who are more concerned with avoiding Type II errors. This suggests that investors' tendencies toward specific types of counterfactual thinking are dispositional. Meanwhile, Kleinert and Hildebrand (2024) propose that prevailing market sentiment, or "market heat," influences which type of error investors are more inclined to avoid, indicating an environmental contingency. Both factors exhibit stability over relatively long periods—investors' stances resemble enduring traits, while market sentiment cycles can span years. However, the impact of acute triggers of counterfactual thinking present in the decision environment on investment decisions remains underexplored.

The framing of an opportunity by its founder (Fisher et al., 2024), media coverage surrounding it, industry peers' interest, or perceived pressure to justify an investment decision (Valliere & Peterson, 2005) can potentially heighten investors' concerns about either missing out on the opportunity or mistakenly committing to a poor investment at the moment of evaluation. While some of these factors may provide signals of quality (Spence, 1978), influencing the investor's perception of the deal, we argue that they also independently amplify counterfactual thinking, regardless of the opportunity's perceived quality. This heightened counterfactual thinking itself can impact the likelihood of an investment decision being made. Furthermore, the aforementioned circumstances can invoke both individual and social counterfactual comparisons, prompting investors to consider the personal losses associated with errors of omission or commission alongside the risks tied to negative social comparisons. In this study, we isolate these effects by increasing the salience of individual and social

counterfactual thinking as directly as possible, minimizing confounding factors. This approach allows us to better understand the specific impact of counterfactual thinking on investment decision-making processes.

Individual counterfactual thinking

In our exploration of the effects of counterfactual thinking on new-venture investments, we first turn to prospective individual counterfactual thinking. This refers to the mental process of comparing one's own outcome in the different possible scenarios that may unfold as the result of a choice in the future (Coricelli & Rustichini, 2010). For new-venture investors evaluating an opportunity, this involves weighing the outcomes of two key scenarios: investing and being either correct or mistaken, and not investing and being either correct or mistaken. An error of commission occurs when an investor commits resources to an unprofitable venture, while an error of omission arises from failing to invest in a venture that proves highly profitable.

Several mechanisms illustrate how increasing the salience of potential errors before a decision can influence investors' choices at the screening stage. While the status quo often serves as the reference point for evaluating prospects (Linde & Sonnemans, 2012), aspirations and expectations can also shape reference points (Tversky & Kahneman, 1991). Counterfactual thinking may invoke an aspirational state, such as the prospect of financial gain, altering the reference point and shifting risk preferences in alignment with prospect theory. Specifically, when the possibility of missing out on an opportunity is highlighted, the foregone profit becomes the reference point, making the current endowment appear comparatively worse. This frames the decision not to invest as a potential loss, prompting risk-seeking behavior due to the convexity of the utility curve for losses (Kahneman & Tversky, 2013). Conversely, when a scenario emphasizes the possibility of an investment resulting in the loss of the endowment, the endowment is seen as the preferable outcome, so that it remains the reference point, but is

now more salient and thus will have a greater impact on decisions. In this situation, the investor will become more risk-averse when confronting the loss of the endowment (Koszegi & Rabin, 2006).

Counterfactual thinking can also elicit emotional responses that directly influence decision-making. Regret, a counterfactual emotion (Coricelli & Rustichini, 2010), arises when individuals imagine that a better outcome could have resulted from an alternative choice (Zeelenberg, 1999). Anticipating regret before making a decision can shape choices involving uncertain outcomes (Bell, 1982; Zeelenberg & Pieters, 2007), as individuals are motivated to avoid post-decisional regret (Zeelenberg, 1999). Research has demonstrated the influence of anticipated regret across diverse settings, including purchasing decisions, gambling tasks, and, relevantly, investment decisions (Connolly & Zeelenberg, 2002; Kumar & Chaurasia, 2024). Regret is particularly pronounced when decisions are both complex and consequential (Zeelenberg & Pieters, 2007) and when individuals expect complete outcome information (Ritov & Baron, 1995)—conditions characteristic of new-venture investing. During the dot-com bubble, Valliere and Peterson (2005) identified anticipated regret as a critical factor driving venture capitalists to participate in speculative investments despite unclear payoff prospects. They found that some investors' decisions were dominated by regret-avoidance, leading to participation in hyped ventures. Both wrongful investments and missed opportunities are significant sources of regret for new-venture investors, making the prevention of such emotions a central consideration in their decision-making processes.

Other emotions that might be evoked by counterfactual thinking include the fear of missing out (FOMO) and its counterpart, the fear of wrongfully committing. Taken at face value, FOMO suggests concern, fear, or anxiety over an error of omission. Although psychology literature often examines FOMO as a chronic state linked to unmet psychological needs (Przybylski et al., 2013), marketing research has explored it as a transient affective state

that increases purchase likelihood when made salient (Good & Hyman, 2021). Despite limited in-depth exploration of FOMO in new-venture investment decisions, several studies identify it as a significant factor (Cai & Gomaa, 2019; Cooiman, 2022; Kleinert & Hildebrand, 2024; Sabia et al., 2022). Kleinert and Hildebrand (2024) note that heightened venture capital activity often intensifies FOMO, leading investors to reduce due diligence, rely on heuristic decision-making, and overlook critical signals. Entrepreneurs exploit this urgency to attract resources (Fisher et al., 2024), and popular media frequently associates FOMO with hype-building around startups (Glazman, 2022; Rist, 2020; Zörgiebel, 2016). But the fear of wrongfully committing to an investment can also be an important mediator of new-venture investment behavior, particularly in “cold” markets, when investors become more apprehensive and sensitive to errors of commission (Kleinert & Hildebrand, 2024). While there seems to be some conceptual overlap between anticipated regret, and FOMO (and by extension the fear of wrongfully committing), the latter concepts are likely a constellation of emotions (Good & Hyman, 2020; Zhang. et al. 2020).

The preceding arguments lead to our first two hypotheses regarding the effects of increasing the salience of counterfactual thinking in new-venture investors during the screening stage. Given the high failure rates of early-stage investments (Dimov & De Clercq, 2006), portfolio returns rely heavily on a few high-performing ventures compensating for numerous unprofitable ones (Nanda & Rhodes-Kropf, 2013). Indeed, even a single successful investment is often expected to generate returns sufficient to recoup the entire fund (Nanda et al., 2020). This highly skewed payoff distribution underscores an industry-wide emphasis on avoiding errors of omission. Heightening the salience of this concern during the evaluation of a new opportunity is likely to steer investors toward a stronger inclination to invest. In such scenarios, the reference point shifts toward the foregone profit, framing the current endowment as a

potential loss. Anticipated regret becomes centered on the perceived missed opportunity, while FOMO takes precedence over the fear of wrongfully committing to a poor investment.

Hypothesis 1a (H1a): *In the evaluation of a new venture investment opportunity, increasing the salience of individual counterfactual thinking associated with an error of omission (not investing in an opportunity that turns out to be profitable in the future) will increase investors' willingness to invest in it.*

Conversely, investors are also motivated to avoid unprofitable ventures due to their potential to jeopardize portfolio profitability, necessitate unplanned capital and resource commitments (Guler, 2007), and harm their professional reputation (Levi-Weiss, 2019; Gompers, 1996). As a result, they are sensitive to the risk of errors of commission. We predict that increasing the salience of such errors during the evaluation of a new investment opportunity will incline investors toward not investing. In this scenario, the reference point remains the current endowment, prompting greater risk aversion. Anticipated regret will focus on the potential loss of the investment, and the fear of wrongfully committing will overshadow FOMO.

Hypothesis 1b (H1b): *In the evaluation of a new venture investment opportunity, increasing the salience of individual counterfactual thinking associated with an error of commission (investing in an opportunity that turns out to be unprofitable in the future) will decrease investors' willingness to invest in it.*

Social counterfactual thinking

In addition to individual counterfactuals, we suggest that the social embeddedness of the environment in which new-venture investors operate also make them vulnerable to social comparisons and the effects of increasing the salience of prospective, social counterfactual thinking related to both errors of commission and omission. This involves comparing one's own payoff to that of others (individually or collectively) in a future scenario where one made

the wrong decision—either failing to invest in a profitable opportunity or committing to an unprofitable one—while others made the correct choice (Coricelli & Rustichini, 2010).

New-venture investors operate in environments where social ties and peer evaluations are critical. Angel investors, for example, have increasingly formed membership groups to enhance deal flow (Antretter et al., 2020), fostering complex social dynamics in which investment decisions are shaped by the opinions of peers (Wood et al., 2020). Similarly, venture capitalists (VCs) engage in syndication to share costs and mitigate risks while simultaneously competing for resources, including attractive investment opportunities, key financing sources, and valuable relationships (Lerner, 2022; Valliere & Peterson, 2004). VCs are aware of their peers' activities and investment outcomes (Sorenson & Stuart, 2008), often taking cues from their social networks to navigate uncertainty (Lo et al., 2024). As Valliere and Peterson (2004, p. 7) note, "VC firms are frequently very aware of the investments being pursued and being concluded by each other, and of the relative success of investments being exited by each other." Reputation plays a pivotal role in this context, as maintaining a strong standing among peers and potential investors can significantly influence future performance (Gompers, 1996). Both angel investors and VCs operate in environments where their peers' actions and outcomes are highly visible, creating fertile ground for social comparisons regarding investment performance.

The effects of prospective social comparisons on risk preferences closely mirror those of individual counterfactual thinking. Social utility functions incorporate social comparisons, with unfavorable comparisons—where others fare better—having greater psychological impact than favorable ones (Fehr & Schmidt, 1999; Loewenstein et al., 1989). These functions exhibit the same convex shape in the loss domain as individual utility curves (Kahneman & Tversky, 2013) and predict loss aversion relative to a reference point (Fehr & Schmidt, 1999). Moreover, reference points themselves can be shaped by social comparisons (Tversky & Kahneman, 1991;

Linde & Sonnemans, 2012). For new-venture investors, this implies that when they anticipate making a poor investment decision while others make a successful one, their risk attitudes shift similarly to when they consider individual counterfactuals about making the right versus wrong choice. Social comparisons thus amplify the psychological stakes of decision-making, influencing risk preferences in ways akin to individual counterfactual thinking.

People often feel worse off when those around them achieve higher earnings (Luttmer, 2005). Unfavorable social comparisons can elicit envy, particularly when the domain of comparison is important to the individual and the comparator is similar (Van de Ven et al., 2011). Envy is defined as a “negative emotional response to a situation in which someone lacks another’s superior quality, achievement, or possession and either desires it or wishes the other lacks it” (Lange & Crusius, 2015, p. 454). It is the strongest emotional response toward a perceived superior competitor (Smith & Kim, 2007) and motivates actions to reduce disparities with the target of upward social comparisons (Van de Ven et al., 2009). Anticipated envy, triggered by social counterfactual thinking, therefore influences decisions similarly to anticipated regret from individual counterfactual thinking (Hoelzl & Loewenstein, 2005). Evidence suggests that social comparisons intensify emotional responses, with social emotions exerting stronger effects than their individual counterparts. For example, anticipated envy can have a more profound behavioral impact than anticipated regret alone (Bault et al., 2008). In the context of venture capital, Valliere and Peterson (2005) observed that the small, insular nature of the VC market amplifies the motivation to avoid regret. What is perhaps missing (or perhaps implicit) in this statement is that the insularity and small size of the VC market potentiate social comparisons and therefore the motivation to avoid the negative emotional consequences that arise from them, in addition to regret. Relatedly, FOMO, as suggested by Good and Hyman (2020), represents a blend of individual and social emotions. If the fear of wrongfully committing can also be characterized this way, the simultaneous engagement in

individual and social counterfactual thinking could magnify the impact of both phenomena, leading to a more pronounced influence on investment behavior.

These arguments suggest that the directions of the effects of social counterfactual thinking in errors of commission and omission are the same in individual and social counterfactual thinking. Therefore, when both types of counterfactuals are made salient, the direction of the effect will be maintained relative to when only individual counterfactual thinking is made salient. For new-venture investors, this means that:

Hypothesis 2a (H2a): *In the evaluation of a new venture investment opportunity, increasing the salience of individual and social counterfactual thinking associated with an error of omission will increase investors' willingness to invest in it.*

Hypothesis 2b (H2b): *In the evaluation of a new venture investment opportunity, increasing the salience of individual and social counterfactual thinking associated with an error of commission will decrease investors' willingness to invest in it.*

Additionally, the arguments above suggest at least an additive effect of individual and social counterfactuals on new-venture investors' decisions, who take into account not only the individual consequences of their decisions, but also how they compare with the outcomes of others, so that:

Hypothesis 3a (H3a): *For errors of omission, increasing the salience of individual and social counterfactual thinking will increase investors' willingness to invest in it more than increasing the salience of individual counterfactual thinking alone.*

Hypothesis 3b (H3b): *For errors of commission, increasing the salience of individual and social counterfactual thinking will decrease investors' willingness to invest in it more than increasing the salience of individual counterfactual thinking alone.*

Before proceeding, it is important to consider how the effects of social counterfactuals discussed here might relate to the phenomenon of herding (Banerjee, 1992), which has been

observed in financial markets broadly (Bikhchandani & Sharma, 2000) and in venture capital markets specifically (Zhang et al., 2021; Sahlman & Stevenson, 1985). While there may be overlap in behavioral outcomes, the two constructs differ fundamentally in nature. Herding arises when individuals take others' decisions as signals of quality (Spence, 1978), often disregarding their private information and aligning their actions with the crowd (Banerjee, 1992). This behavior is rational if one assumes that others' choices reflect superior information. In contrast, prospective social counterfactual thinking occurs before others' decisions are observed. It involves anticipating social comparisons and the emotional states they might evoke, such as envy or regret, rather than relying on perceived informational signals. While acting on counterfactual thinking and its affective consequences can sometimes be adaptive (Reb, 2008), such behavior does not necessarily align with expected utility maximization. This distinction underscores the unique role of social counterfactuals in shaping investment decisions.

Thus far, we have examined the independent effects of counterfactual thinking related to errors of commission and omission. But which of the two is stronger? Additionally, real-life scenarios often prompt investors to consider both types of errors simultaneously. This raises the question of how investment willingness shifts when counterfactual scenarios evoking both forms of errors are salient. At the heart of this inquiry lies a fundamental tension: the goal of minimizing the risk of missing out on a profitable investment directly conflicts with the goal of avoiding investment in an unprofitable venture. When both scenarios are equally prominent, which goal takes precedence? To address this, we turn to the literature on commission-omission effects, which we review briefly in the next section to inform our predictions.

Omission & Commission: Norms as Reference Points

Kahneman and Tversky's (1982) seminal work on commission- and omission-related biases revealed asymmetries in emotional responses, with negative outcomes from actions

(commission) eliciting stronger reactions than those from inaction (omission)—a phenomenon termed the “action-effect.” Related studies identified similar tendencies, such as omission bias (Ritov & Baron, 1990), status-quo bias (Samuelson & Zeckhauser, 1988), default bias (Johnson & Goldstein, 2003), and inaction inertia (Tykocinski et al., 1995). These biases collectively highlight a predisposition toward inaction (Type II errors) and predict stronger emotional reactions when deviations from this default course led to unfavorable outcomes. Conversely, other research found evidence for greater effects from errors of omission, proposing an “inaction-effect” as a potential counterpoint to the action-effect (Gilovich & Medvec, 1995; Zeelenberg et al., 2002). To reconcile these divergent findings, Feldman and colleagues (2020) applied Norm Theory (Kahneman & Miller, 1986), which posits that abnormal events evoke stronger emotional reactions than routine ones. Routine events are cognitively accessible and serve as benchmarks for evaluating outcomes. When negative outcomes arise from exceptional actions, counterfactuals involving adherence to the norm (and their potentially positive outcomes) are more readily imagined, intensifying regret. According to Norm Theory, whether prospective errors of commission or omission elicit stronger emotional responses depends on the prevailing norm, which acts as a reference point for comparisons. This reference point not only shapes emotional responses but also influences risk attitudes by framing prospects as gains or losses, thereby steering decision-makers toward either risk-seeking or risk-averse behaviors (Feldman et al., 2020).

Among new-venture investors, an argument can be made for the existence of both an investing and a not-investing norm at the population level.¹ On one hand, one of the main preoccupations that investors admit to is to be able to identify “home runs” to make up for the unprofitable investments in a portfolio (Levi-Weiss, 2021). This creates pressure to invest,

¹ In this scenario, we refer to the norm not necessarily as the choice that is taken most often, but rather the one seen as the prescribed course of action.

which we may interpret as an “investing norm”. Popular media accounts would seem to support this stance (e.g., Glazman, 2022; Rist, 2020). On the other hand, not investing is the status quo, and since investors reject most of the opportunities that are presented to them (Gompers et al., 2020), not investing can be seen as the default option as well. This would point to a not-investing norm. We posit that the latter will be the case and that the default and the status quo will have a greater impact on where the investor sets their reference point than the normative pressure to invest broadly in search of home runs.

Manipulations that evoke a counterfactual scenario exert their influence on decision-makers partly by increasing the probability that the individual’s result in that scenario will be taken as the reference point (Boles & Messick, 1995). Since having a norm already provides a likely reference point (Feldman et al., 2020), a manipulation that reaffirms it is likely to have a stronger impact on intention and behavior than a manipulation that tries to shift the reference point. Additionally, the emotional response to an error that results from deviating from the norm will be greater than from an error that results from following it (Kahneman & Tversky, 1982). This means that when new-venture investors are made to consider either the possibility of no investing in a future homerun or that of investing in a lemon, the latter will have a greater impact on their willingness to invest (in absolute terms, since the directions of the effects are opposite). We expect this to hold both for individual and social counterfactuals. Based on these arguments, our next predictions regarding the relative strengths of omission and commission counterfactuals are that:

Hypothesis 4a (H4a): *Increasing the salience of individual counterfactual thinking associated with an error of commission will have a greater impact on investors’ willingness to invest than increasing the salience of individual counterfactual thinking associated with an error of omission*

Hypothesis 4b (H4b): *Increasing the salience of individual and social counterfactual thinking associated with an error of commission will have a greater impact on investors' willingness to invest than increasing the salience of individual and social counterfactual thinking associated with an error of omission*

In addition, when the possibility of both errors of commission and omission are considered simultaneously, without one being more salient than the other, the existence of a norm has been shown to nudge individuals toward the choice that follows it (Lemon et al., 2002; Simonson, 1992). If a norm of not investing exists among early-stage investors, the consideration of the individual and social consequences of both types of errors when evaluating a new investment opportunity should result in a decreased willingness to invest in a new opportunity. Therefore, we predict that:

Hypothesis 5a (H5a): *Increasing the salience of individual counterfactual thinking associated with both types of error (commission and omission) simultaneously will decrease investors' willingness to invest in it.*

Hypothesis 5b (H5b): *Increasing the salience of individual and social counterfactual thinking associated with both types of error simultaneously will decrease investors' willingness to invest in it.*

Finally, consistent with the argumentation that led to our prediction of a greater effect when social counterfactuals are made salient in addition to individual ones, we predict that the effect described in H5b will be greater than that of H5a. Stated formally:

Hypothesis 5c (H5c): *Increasing the salience of individual and social counterfactual thinking associated with both types of error simultaneously will decrease investors' willingness to invest in it more than increasing the salience of only individual counterfactual thinking associated with both types of error simultaneously*

Table 3.1 summarizes our hypotheses.

Table 3.1: Hypotheses Summary

Type of Counterfactual thinking	Type of Error				
		Omission		Commission	Both
	Individual	+ (H1a) Λ (H3a)	< (H4a)	- (H1b) Λ (H3b)	- (H5a) Λ (H5c)
	Ind. + Social	+ (H2a)	< (H4b)	- (H2b)	- (H5b)

Note: “+” and “–” symbols are used to represent the direction of the effect on willingness to invest; “<” and “ Λ ” symbols are used to represent the hypothesized relative strengths of the effects (e.g., the effect of H1b was predicted to be greater than that of H1a, as per H4a).

METHODOLOGY

To test our hypotheses, we conducted two randomized between-subject decision-making experiments contextualized in a new-venture investment setting between late 2022 and early 2023. Following prior research used to uncover causal mechanisms underlying decision-making in both general decision scenarios (e.g., Hetts et al., 2000; Simonson, 1992) and in the entrepreneurial ecosystem (e.g., Heupel et al., 2024; Souitaris et al., 2020), we used a vignette methodology (Aguinis & Bradley, 2014). In both experiments, we presented participants with a hypothetical investment scenario. They were asked to evaluate an opportunity at the screening stage, and we increased the salience of counterfactual thinking and emotions related to either one (Experiment 1) or both (Experiment 2) types of errors (commission and/or omission) through priming statements. This methodology has been used in the past in similar studies, such as that of Good and Hyman (2021) where subjects were primed through such statements to experience FOMO before a purchase decision. After this, we measured their initial willingness to invest in the opportunity presented. We examined stated interest in investing at the screening stage because this is the initial and critical step of the funnel process, at which most opportunities are discarded (Gompers et al., 2020). At this stage, interest is sufficient for an opportunity to advance to the next stage, regardless of whether or not the intention materializes into an actual investment (Lerner, 2016).

Although conjoint experiments are extensively used to uncover new-venture investors' preferences (Shepherd & Zacharakis, 1999), this approach was unsuitable for our study due to its reliance on subjects evaluating multiple opportunities. Our manipulations depended on priming participants to heighten the salience of counterfactual thinking, and asking subjects to assess numerous opportunities could introduce confounding carryover or order effects from prior evaluations (Hsu et al., 2017). Instead, we employed a purely between-subjects design, which isolated the effects of the counterfactuals we sought to study. Like conjoint experiments, this design allowed us to collect real-time data on decision-making processes—one of the primary advantages of conjoint methods over post-hoc approaches. By circumventing the retrospective biases and limitations associated with post-hoc research (Lohrke et al., 2010; Petty & Gruber, 2011), our design ensured greater validity in capturing the immediate effects of counterfactual thinking on investor decision-making.

Research Design and Procedures

The research design and procedures were consistent across both experiments. Participants accessed the study via a link to an online electronic instrument hosted on Qualtrics, the platform used for task administration and data collection. Upon providing informed consent, participants were randomly assigned to a treatment group and asked to evaluate an investment opportunity that remained identical across all groups in both experiments. As in previous entrepreneurship studies (Kleinert et al., 2022; Kleinert & Hildebrand, 2024; Zacharakis & Shepherd, 2001), the investment context was clarified by stating that the new venture seeking funding aligned with the participant's investment thesis. The opportunity was presented through information cues detailing its attributes, consistent with established methodologies in decision-making research (Appendix 3.1). The investment description was designed to be general enough to apply across industries and investment strategies, ensuring relevance to all participants. This parsimonious experimental design also minimized potential

confounds, such as the influence of subjective factors like passion, charisma, and trust, which are known to impact evaluations (Cardon et al., 2009; Cardon et al., 2017; Murnieks et al., 2016).

After being presented the investment opportunity, participants received the randomized treatments. In Experiment 1, these treatments consisted of brief vignettes designed to increase the salience of either an error of omission or commission, combined with either individual counterfactuals alone or both individual and social counterfactuals, resulting in five experimental conditions: four treatments and a control condition. Participants in the **Omission/Individual** condition were instructed to: “*Briefly imagine how you would feel if you did not invest in this opportunity, and it turned out to be very profitable.*” Those in the **Commission/Individual** condition were asked to: “*Briefly imagine how you would feel if you invested in this opportunity, and it turned out to be very unprofitable.*” In conditions incorporating social counterfactuals, participants received similar prompts but with an additional element stating that their close peers made the opposite choice. For example, in the **Omission/Social condition**, participants were asked to *imagine that they did not invest while their peers did and profited*. Those in the **control condition** did not receive any counterfactual salience manipulation. This experimental design, closely modeled on the methodology of Hetts et al. (2000), enabled us to assess the effects of individual and social counterfactuals related to omission and commission errors separately (H1–H2), as well as to compare these effects (H3–H4).

The treatments for Experiment 2 consisted of two choice-based questions designed to simultaneously increase the salience of both errors of commission and omission, either in individual-only or combined individual and social counterfactual contexts. This design resulted in three experimental conditions: **Individual Counterfactuals**, **Social Counterfactuals**, and a **Control** condition. In the **Individual Counterfactuals** condition, participants were asked two

questions: 1) *“In which situation would you feel more regretful?”*; 2) *“In which situation would you feel more upset?”* Both questions offered the following answer choices: a) *“If you invested and the opportunity turned out to be very unprofitable”*; b) *“If you chose not to invest and the opportunity turned out to be very profitable.”* In the **Social Counterfactuals** condition, participants received the same questions but with a social comparison element added to the answer choices: a) *“If you invested, while others close to you did not, and the opportunity turned out to be very unprofitable”*; b) *“If you chose not to invest, while others close to you did, and the opportunity turned out to be very profitable.”* The treatments were adapted from Simonson (1992), who studied the effects of counterfactuals in purchasing decisions. Participants in the control condition received the counterfactual salience questions *after* the measurement phase. This experimental design allowed us to assess the relative effects of counterfactual errors when both types were equally salient in individual and social dimensions (H5a, H5b) and to compare these effects (H5c).

Since our conceptualization of counterfactual impacts integrated both cognitive and emotional processes, our treatments were designed to induce participants to both think about alternative outcomes and feel the consequences of these outcomes. Furthermore, we designed the treatments to elicit counterfactual thinking in a direct and context-free manner, minimizing potential confounding factors. Specifically, we avoided referencing circumstances surrounding the opportunity that could trigger not only counterfactual thinking and emotions but also unrelated cognitive responses. For instance, we deliberately refrained from including references to media coverage of the opportunity or indications that peers were interested in it. Such details could have been interpreted as signals of quality, thereby influencing participants’ evaluations through mechanisms unrelated to the counterfactual and emotional salience manipulations. By maintaining this controlled and neutral approach, we ensured the treatments effectively isolated the effects of counterfactual thinking and emotions on decision-making.

After administering the treatments, we measured participants' investment intention and collected data on other variables of interest, at which point the experiment concluded. To ensure both internal and external validity, we implemented several steps. First, we reviewed the literature on attributes that new-venture investors consider when making decisions at the screening stage (e.g., Gompers et al., 2020; Maxwell et al., 2011). We then triangulated this information with insights from interviews with industry experts, extracting the final attributes and assigning appropriate values to each based on these combined sources. Second, to ensure the investment opportunity was realistic, relevant, and reasonably attractive, we sought feedback from experienced new-venture investors. Their input helped refine the descriptions and ensure they aligned with industry expectations. Third, the experimental materials were tested on a pilot sample to verify the clarity of the questions, the functionality of the instruments, and the brevity of the completion time. A shorter completion time was deemed essential to maintain respondent engagement and ensure high-quality responses. Finally, we included attention checks to confirm that participants were paying adequate attention to the experimental task, in line with best practices in experimental design (Aguinis et al., 2020).

Samples

The sample for Experiment 1 initially consisted exclusively of investors (e.g., VCs, angel investors) identified through their affiliations with new-venture financing firms and angel networks, using databases such as Pitchbook and Crunchbase. Potential participants were contacted via email, with the survey's purpose and target group specified to ensure respondents were active investors with relevant experience in new-venture financing (Kleinert & Hildebrand, 2024). This recruitment process yielded an initial sample of $N = 190$ investors. To enhance the statistical power and generalizability of the findings, additional participants with relevant investment experience were recruited through Prolific, a platform commonly used in

management research to study individual behavior (e.g., Heupel et al., 2024; Stevenson et al., 2019; Welsh & Ordóñez, 2014). This approach added $N = 352$ participants, resulting in a total sample size of $N = 542$ for Experiment 1 (Winton & Sabol, 2022). To ensure the validity of pooling these two investor subsamples, we compared the experimental results from both groups and confirmed their equivalence in treatment responses. Additionally, a subsample control was included in the analysis to account for potential differences. Based on evidence from Experiment 1 demonstrating the equivalence of Prolific's investor participants and the other investor sample for our research objectives, Experiment 2 was conducted exclusively with Prolific investors ($N = 303$). This approach aligns with established management literature employing Prolific for randomized experiments (e.g., Stevenson et al., 2019; Welsh & Ordóñez, 2014; Yam et al., 2016). Further details on the robustness of this approach are elaborated in the analysis section.

To ensure the external validity of the samples, all participants recruited through the Prolific platform were pre-screened for prior investment experience in new businesses. This screening involved a two-layer filter. The first filter utilized Prolific's built-in screening capabilities to identify participants with investment experience in Angel Syndicates, Private Equity Funds, Venture Capital Funds, or Crowdfunding. The second filter, applied to all participants in both experiments, involved a data collection item that directly measured investment experience as the number of new-venture investments made. This step served as a double-check to verify participants' qualifications and identify any non-investors. As a result of this additional filter, 76 observations were removed from the analysis—40 from Experiment 1 and 36 from Experiment 2. This rigorous screening process ensured that only participants with genuine investment experience were included, thereby increasing the validity and reliability of the study's findings. Additionally, we identified and removed observations where participants completed the entire data-collection instrument in less than 60 seconds, as pilot

tests determined this to be the absolute minimum time required for sensible responses. Responses taking more than 10 minutes were also excluded, as these likely involved discontinuous completion of the experiment. We also included an attention check item in all experimental conditions to verify participant engagement. After applying these criteria and removing responses that did not meet the standards, the final sample sizes were **n = 456** for Experiment 1 and **n = 254** for Experiment 2.

Variables

Dependent variable: Following Murnieks et al. (2016), our dependent variable captures desire to invest through the question: “What is the probability you would invest in this venture?” Similar measurements of initial investment intention have been used in randomized experiments of this nature before (e.g., Cardon et al., 2017; Drover et al., 2015; Huang & Pearce, 2015). Although some past studies that measure VC intentions and evaluations have used Likert scales as outcome variables (e.g., Murnieks et al., 2011; Warnick et al., 2018; Zacharakis & Shepherd, 2001), following Lerner (2016) we used a 0 to 100% likelihood scale for our measurement to avoid questions related to the treatment of data from Likert scales as an interval during the analysis (Wu & Leung, 2017), and to enhance the interpretability of regression model coefficients.

Independent variable: our independent variable for the two experiments was the treatment condition of the participants. For Experiment 1, there were four treatment groups: Individual Counterfactual/Commission, Individual Counterfactual/Omission, Social Counterfactual/Commission, and Social Counterfactual/Omission, plus a Control group. For Experiment 2, these groups consisted of the Individual Counterfactuals treatment, the Social Counterfactuals treatment, and Control. These variables were coded as dummies in our regression analyses (0, 1).

Control Variables: following prior research that has used similar controls (Drover et al., 2015, Murnieks et al., 2016), we controlled for investment experience (measured as the number of investments made in the past) (Clarke et al., 2019) as this factor may affect both the investment decisions of investors and their response to the treatments. We further controlled for the role in new venture investments (VC, Angel, or other) as another individual characteristic that might have an impact on the assessment of the opportunity and overall attitude towards risk in our sample (Drover et al., 2017). Additionally, because the final sample of Experiment 1 included data from both investors contacted through email and Prolific, we added an additional control in the form of a binary variable that captured the source of the observation.

ANALYSIS & RESULTS

Experiment 1

Experiment 1 manipulated the salience of only individual, or both individual and social counterfactuals related to either an investment error of commission or omission, for a total of four treatments. This allowed us to observe the effects of these manipulations on investment intention independently, as well as their relative magnitude compared to the others. To conduct our main analysis, we employed an OLS model. The results are displayed in Table 3.2. We expected to find an increase in investment intention in the Individual Counterfactual/Omission group (H1a) and a decrease in the Individual Counterfactual/Commission group (H1b), compared to the Control condition. The effects of the treatments were not statistically significant at $p < .05$ ($\beta = -1.25$, $p = .74$ for the Individual Counterfactual/Omission treatment; $\beta = -4.68$, $p = .22$ for the Individual Counterfactual/Commission treatment).

Table 3.2: Main Model – Experiment 1

Dependent variable: Investment Intention

	Estimate	Std. Error	t-Value	Pr(> t)
Condition: Social/Commission	-14.768	3.820	-3.886	0.000***
Condition: Social/Omission	0.233	3.966	0.059	0.953
Condition: Individual/Commission	-4.675	3.816	-1.225	0.221
Condition: Individual/Omission	-1.252	3.735	-0.335	0.738
Investment Experience	0.005	0.020	0.277	0.782
Angel	3.857	3.032	1.272	0.204
Venture Capitalist	2.022	2.862	0.706	0.480
Sample: Prolific	8.946	2.709	3.302	0.001***
Constant	47.222	4.146	3.302	0.000***
N	542			
Adjusted R-Squared	0.05888			
F-Statistic	4.37			
P-Value	4.362e-05			

Note: *p<0.1, **p<0.05, ***p<0.01

However, we did find a statistically significant effect in the social counterfactual treatments. Namely, the coefficient of the Social Counterfactual/Commission treatment was large and statistically significant ($\beta = -14.77$, $p < .01$), providing support for H2b; meanwhile, the coefficient of the Social Counterfactual/Omission treatment was not statistically significant ($\beta = 0.23$, $p = .95$), providing no support for H2a.

Given the nature of our dependent variable (an interval from 0 to 100), we repeated our analysis using a two-limit Tobit specification and found identical results in terms of directions of the effects and statistical significance (Appendix 3.2). These results suggest that counterfactual thinking (both individual and social) related to errors of omission do not have a measurable effect on willingness to invest in this scenario, and that individual counterfactuals by themselves were not enough to have a significant impact on the investment willingness of investors in this scenario. However, the impact of increasing the salience of both individual and social counterfactuals related to an error of commission on willingness to invest is large

and statistically significant, suggesting a synergistic effect between social counterfactual thinking and errors of commission.

To compare the observations taken from investors contacted through email with the Prolific investor sample, we divided the two sub-samples and used the same model (minus the source control variable) to analyze them separately (Appendix 3.3). In both subsamples, as in the total sample of the experiment, the only statistically significant effect was that associated with the Social Counterfactual/Commission treatment, and the magnitudes of these effects were very similar ($\beta = -13.35$, $p = .05$ for the email sub-sample and $\beta = -17.13$, $p < .01$ for the Prolific sub-sample). This consistency validates the augmentation of the initial sample in this experiment and the use of the Prolific investor sample of Experiment 2. Furthermore, adding an interaction term between the sample source variable and the treatment variable revealed no statistically significant interactions between the sample source and any of the treatments. This also supports a broad generalizability of the findings.

Since the effects of individual and social counterfactuals in our setting were predicted to work in the same direction (Van de Ven, 2020), and due to the propensity for social comparisons of new-venture investors, we expected that the effect of the Social Counterfactual/Omission treatment would be greater than that of Individual Counterfactual/Omission (H3a), and that the effect of Social Counterfactual/Commission would be greater than that of Individual Counterfactual/Commission (H3b). We also argued for the existence of a not-investing norm among new-venture investors. This led to the prediction that the effect of the Individual Counterfactual/Commission treatment on investment intention would be stronger in magnitude than that of Individual Counterfactual/Omission (H4a), and that the effect of the Social Counterfactual/Commission treatment would be greater than that of Social Counterfactual/Omission (H4b). To test these predictions, we performed Wald Tests (Bhanot, 2021) on all of these pairwise comparisons between treatment coefficients. Because

some of these comparisons involved testing coefficients with different signs (positive versus negative), we took the absolute value of the negative coefficients for these tests.

The results show statistically significant differences in some of the coefficient comparisons. Specifically, the difference between Individual Counterfactual/Omission and Social Counterfactual/Omission was not statistically significant (H3a) ($\Delta = 1.02$, $p = .79$). However, the difference between the coefficients of the Individual Counterfactual/Commission and Social Counterfactual/Commission was statistically significant, with the effect of Social Counterfactual/Commission being the larger of the two ($\Delta = 10.09$, $p < .01$). This offers support for H3b and the notion that, at least with respect to errors of commission, the addition of social counterfactual thinking has a greater impact than individual counterfactual thinking alone. The absolute difference between Individual Counterfactual/Commission and Individual Counterfactual/Omission was not significant ($\Delta = 3.42$, $p = .36$), so H4a was not supported. But the difference between Social Counterfactual/Commission and Social Counterfactual/Omission was large and statistically significant ($\Delta = 14.53$, $p < .01$), offering support for H4b. Taken together, we interpret these results as pointing to the existence of a not-investing norm among new-venture investors that steers them in this direction when the response to the associated type of counterfactual thinking (an error of commission) is strong enough, which is the case when both individual and social counterfactuals are made salient.

Experiment 2

In Experiment 2, we tested the effects of increasing the salience of counterfactuals related to errors of commission and omission simultaneously. We again employed an OLS model to test these effects. Results are presented in Table 3.3. As a robustness test, we also performed supplemental analyses using Two-Limit Tobit models (Long & Freese, 2006) and found similar results with identical statistical significances relative to standard cut-off heuristics ($p < 0.01, 0.05, 0.1$) (Appendix 3.2). We predicted that a norm towards not investing

among new-venture investors would make the possibility of errors that resulted from investing in an unprofitable opportunity more impactful than that of errors associated with not investing in a profitable opportunity. Consequently, we expected that increasing individual counterfactual thinking related to errors of commission and omission simultaneously would have a negative effect on investment intention (H5a), and that the same would be true when social counterfactuals were also made salient (H5b).

Table 3.3: Main Model – Experiment 2

<i>Dependent variable: Investment Intention</i>				
	Estimate	Std. Error	t-Value	Pr(> t)
Condition: Social	-6.784	3.785	-1.792	0.074*
Condition: Individual	-6.179	3.739	-1.652	0.099*
Investment Experience	-0.543	0.248	-2.185	0.029**
Angel	2.738	3.732	0.734	0.463
Venture Capitalist	6.271	3.186	1.968	0.050*
Constant	57.328	3.346	17.131	0.000***
N	303			
Adjusted R-Squared	0.02185			
F-Statistic	2.13			
P-Value	0.06242			

Note: *p<0.1, **p<0.05, ***p<0.01

Our results revealed a trend in both treatment groups towards a decrease in the stated likelihood of investing in the opportunity, with a coefficient of -6.18 ($p = .10$) for the Individual Counterfactuals treatment, and a coefficient of -6.79 ($p = .07$) for the Social Counterfactuals treatment. In these results, we find partial support for H5a and H5b and further evidence for the existence of a non-investing norm among new-venture investors. These two effects were not statistically different from each other ($\beta = 1.17$, $p = .79$), which offered no support for H5c; this is nevertheless interesting, considering that we did find significant differences between the individual and social counterfactuals related to errors of commission in Experiment 1.

Experiment 2 involved asking participants in both the treatment and control conditions (before the dependent variable measurement in the Treatment Groups and after measurement in the Control Group) whether an error of commission or omission led to more experienced emotional distress (regret/envy and upsetness). Accordingly, we were able to use the answers to these questions as part of our analysis. We explored whether the answer to these questions showed a relationship with Investment Intention that could bring additional insights. To do this, we created a new variable that coded the answers to the treatment questions. In this way, the resulting variable had three possible values: *Omission* (indicating that the participant answered that not investing in a profitable venture would lead to more regret and upsetness), *Commission* (indicating that the participant answered that investing in an unprofitable venture would lead to more regret and upsetness), and *Unidentified*, in cases where the answer to the first question (regret) was not consistent with that of the second question (upsetness). This last group was left out of the following analysis because these individuals showed no clear sensitivity to one of the two types of error. We then analyzed our results through a model in which we included the new variable as a cofactor (Appendix 3.4).

The results of this model show that those who answered that an error of omission would be more emotionally painful were 36.2% more likely to invest in the opportunity than those who answered that an error of commission would hurt more ($\beta = 16.80$; $p < .01$). Moreover, after controlling for this cofactor, the effect of the Social Counterfactuals treatment became more pronounced (-8.80) and it reached statistical significance at the 0.05 level ($p = .04$), while the signal of the Individual Counterfactuals treatment seems to have diminished (-3.41, $p = .43$). This is an interesting result that suggests that all participants do not react homogeneously to individual and social counterfactual thinking. We then included an interaction term between Treatments (leaving the Control condition out) and the investor types that showed significance

at the 0.1 level ($p = 0.10$), which further suggest that the response to each type of counterfactual scenario (individual alone or individual and social) may be contingent upon the investor type.

DISCUSSION

This study examines the effects of increasing the acute salience of individual and social counterfactual thinking related to errors of commission and omission on new-venture investors during the screening stage of evaluating a new opportunity. Table 3.4 summarizes our results in relation to our predictions. Our findings highlight the asymmetry of these effects, particularly the stronger impact of errors of commission. Moreover, increasing the salience of both individual and social counterfactual thinking related to an error of commission significantly reduced investors' willingness to invest—by approximately 31% in relative terms, and nearly 15% in absolute terms. These results indicate that contemplating the negative consequences of investing in a poor-performing venture (“a lemon”), including the potential for personal financial loss and unfavorable social comparisons with peers who avoided the investment, deters investors from taking the risk. Notably, individual counterfactual thinking alone did not yield a significant effect, suggesting that the prospect of negative social comparisons may account for the majority of the observed impact, or that individual and social counterfactual thinking interact synergistically to amplify the effect. This finding supports the notion that investors think and operate in a social context. These insights underscore the importance of considering both individual and social dimensions of counterfactual thinking in understanding investor behavior.

Table 3.4: Results Summary

Hypothesis	Prediction	Support
H1a	Individual counterfactual thinking (CT)/error of omission = increase in investors' willingness to invest	No
H1b	Individual CT/error of commission = decrease investors' willingness to invest	No
H2a	Individual and social CT/error of omission = increase investors' willingness to invest	No
H2b	Individual and social CT/error of commission = decrease investors' willingness to invest	Yes
H3a	Effect of H2a will be greater than that of H1a	No
H3b	Effect of H2b will be greater than that of H1b	Yes
H4a	Effect of H1b will be greater than that of H1a	No
H4b	Effect of H2b will be greater than that of H2a	Yes
H5a	Individual CT/error of commission and error of omission = decrease investors' willingness to invest	Partial
H5b	Individual and social CT/error of commission and error of omission = decrease investors' willingness to invest	Partial
H5c	Effect of H5b will be greater than that of H5a	No

We also found evidence supporting the existence of a **not-investing norm** among new-venture investors. This was evident in two key findings: the lack of a significant effect when counterfactual thinking related to an error of omission was made salient, and the negative net effect when counterfactual thinking related to both types of errors—commission and omission—was activated simultaneously. When investors were prompted to consider the consequences of both wrongfully investing and missing out on an opportunity, the concern over wrongful investment took precedence, seemingly anchoring the reference point for their decisions.

This finding may seem counterintuitive given that both academic and popular narratives often emphasize investors' primary focus on not missing out on “home runs” (e.g., Valliere & Peterson, 2005; Glazman, 2022; Rist, 2022). We propose two explanations. First, while identifying high-performing “unicorns” is undoubtedly a critical goal for investors—and one that garners significant attention—the practical reality of investing in new ventures may be more mundane. Investors must also avoid overexposure to poor-performing ventures (“lemons”), which could overwhelm the returns from a rare home run. Combined with the

inherent uncertainty and potential information asymmetries in the market, this pragmatic concern may lead to the prevalence of a not-investing norm that leads to a cautious stance, even in the face of moderately attractive opportunities. Second, market conditions during data collection may have played a role. New-venture investment activity has declined since 2021 (Statista, n.d.), and the timing of our experiments could therefore be characterized as a relatively “cold market” environment (Gompers et al., 2008). Such conditions heighten caution among investors, shifting their priorities toward avoiding low-quality investments (Kleinert & Hildebrand, 2024), which aligns with the observed not-investing norm. Interestingly, the influence of this norm appeared to override attempts to steer investors toward actions opposing it. This suggests that the not-investing norm, whether driven by market sentiment or as a broader characteristic of the industry, is a powerful and deeply entrenched guide for investor behavior.

Theoretical Contributions

Our study makes several theoretical contributions. We contribute to the growing body of literature that investigates departures from highly rational cognitive models in new-venture investors (Drover et al., 2017). Several authors have identified counterfactual thinking and related emotions as important drivers of new-venture investor decision-making that depart from earlier descriptions of new-venture investors decision-making as a purely analytical process that relies on objective, quantifiable information (e.g., Huang, 2018; Liu et al, 2020; Valliere & Peterson, 2004; 2005). While previous research framed preoccupations over Type I and II errors in new-venture funding as stemming from trait-like dispositions (Huang, 2018) or macro-level determinants such as “market heat” (Kleinert & Hildebrand, 2024), we explored a situational factor as a trigger for these cognitive and emotional processes. We provide an empirical measurement of the potential magnitude of the effects of these preoccupations on investment-related outcomes when they are encouraged transiently. Our experimental

methodology also allowed us to isolate individual elements that can act as boundary conditions. Our findings suggest both asymmetry in the strength of the effects of Type I and type II counterfactuals, and an interplay between their chronic and acute catalysts. Additionally, our measurement of an investing/not-investing norm could also provide a path to quantitatively assess market sentiment, or “heat”, since the construct is in part defined by investors’ sensitivity to errors of omission in “hot” markets, and commission in “cold” markets (Kleinert & Hildebrand, 2024; Zhelyazkov & Tatarynowicz, 2021).

Relatedly, we add to the research that has studied the effects of regret on new-venture investor decision-making. Although we are not able to explicitly measure regret in our experiments, this emotion has been studied as the most prominent affective response to individual counterfactual thinking. Our conceptualization and the manipulations of Experiment 2, which were adapted from seminal literature on the subject, reflect this link. To our knowledge, the only effort to date to explore this phenomenon is that of Sohl (2022), who studied how regret from missed opportunities in the past affects future investment decisions of angel investors and found that it decreases this likelihood. Through our focus on *prospective* counterfactual thinking and emotions, we complement this line of inquiry. A preliminary integration of Sohl’s (2022) findings with our own could suggest that the process of counterfactual thinking and the resulting emotions, be they prospective or retrospective, tend to make investors less willing to invest. However, we refrain from reaching such an overarching conclusion without more evidence.

Additionally, we contribute to the literature that studies the social embeddedness of the new-venture funding industry, answering the call from Drover and colleagues (2017) to address the issue of an undersocialized perspective of new venture investors’ decisions. Recent work that also addresses this issue has explored past behaviors of others as signals interpreted and acted upon by investors of new ventures (e.g., Kleinert & Hildebrand, 2024; Lo et al., 2024;

Pontikes & Barnett, 2017). We explore a parallel and complimentary path by looking into how these investors process possible future behaviors of others, and how this affects their decisions. We believe that combining both perspectives is crucial to gaining a holistic understanding of the impact that social comparisons have on investors' cognition and behavior. For example, we posit that the FOMO phenomenon, which has been repeatedly mentioned as a crucial component in new venture investors' decisions (Cai & Gomaa, 2019; Cooiman, 2022; Sabia et al., 2022), may include counterfactual emotions, but also affective elements that originate from the interpretation of past events. In other words, FOMO be an emotional response related to both "catching up with the winners" (Fafchamps et al., 2015) and not letting others get ahead. Further, there could be an interaction between these two components, such that a measurable effect only appears when both are present, which would explain why we did not find an effect when we only increased the salience of prospective omission counterfactuals.

Practical Implications

Our findings offer practical implications for both investors and entrepreneurs. For investors, the discovery that acutely triggered counterfactual thinking can influence their willingness to invest in new ventures underscores the need for vigilance against environmental factors that may inadvertently bias their decisions. Social comparisons, in particular, can be triggered by interactions within investors' networks, news media, and social platforms—channels that have become increasingly influential due to modern communication technologies. By recognizing these triggers, investors can adopt strategies to mitigate their impact and make more objective investment decisions.

For entrepreneurs, our findings suggest that attempts to induce omission-related counterfactuals in investors to increase funding prospects may be less effective than conventional wisdom suggests. Although fostering a sense of FOMO is a common tactic, our results cast doubt on its efficacy when based solely on counterfactual thinking, as we found no

significant effect from omission-related counterfactuals in this context. Entrepreneurs should be cautious in employing this strategy, as the presence of a not-investing norm among investors and heightened sensitivity to commission-related counterfactuals could lead to unintended consequences. If both commission and omission counterfactuals are inadvertently activated, the net effect may actually reduce the likelihood of securing funding, causing the strategy to backfire. Ultimately, raising awareness of the cognitive and emotional biases associated with counterfactual thinking can help investors make more informed decisions and entrepreneurs better tailor their pitches. By understanding these dynamics, stakeholders can take proactive steps to mitigate biases and optimize their interactions in the new-venture investment process.

Limitations and Future Research

Our study enhances understanding of the impact of counterfactual thinking on new-venture investors. However, like all empirical studies, our research design involves trade-offs (Scandura & Williams, 2000), presenting opportunities for future exploration. While our experiment was structured to increase the salience of counterfactual thinking and measure its effects on investment intention, it did not isolate the distinct mechanisms driving these effects. For instance, the observed decrease in willingness to invest under conditions of social counterfactual salience related to errors of commission could stem from anticipated envy, other emotions, or less visceral factors such as shifts in risk preferences due to potential negative social comparisons. These processes may operate in tandem, or the effects of counterfactual thinking might be entirely mediated by emotional responses. Future research could dissect these components to provide greater insight into the internal cognitive and emotional processes underlying counterfactual thinking.

In our study, we conceptually and methodologically treated new-venture investors as a relatively homogeneous group, although we did control for investors identifying as VCs, angel investors, or other. This approach allows for advancing general/generalizable theory and fits

our goal to explore the general implications of counterfactual thinking and emotions in early-stage investment settings. We argue that investors' cognitive and emotional processes share enough similarities at baseline to render them broadly susceptible to the same biases. This was supported by the lack of statistical significance found in the levels of the control variable that accounted for investor type on both experiments. Additionally, all new-venture investors operate in environments that foster counterfactual thinking and encourage social comparisons. However, despite these commonalities, there are notable differences among types of equity investors (e.g., VCs, angels, crowdfunders). These differences include variations in how they analyze proposals and establish funding criteria (Haar et al., 198; Warnick et al., 2018), the degree of accountability for risks (e.g., investing personal funds versus managing external funds), and the emphasis placed on different types of information (Mason & Stark, 2004). Even within investor types, disparities exist; for example, individual angels and angel groups often differ in their decision-making processes (Carpentier & Suret, 2015). Such differences may influence how emotions like regret and envy impact decision-making across these groups. While our work contributes to generalized theory, future research could further examine these distinctions to yield more nuanced insights. In particular, the treatments in Experiment 2 allowed us to observe individual differences in attitudes toward Type I and Type II errors and their relationship to responses to individual-only versus combined individual and social counterfactuals. While this finding suggests a potential interaction between individual stance and counterfactual salience, it remains an initial insight. Future studies could explore these interactions in greater depth to clarify how different investor profiles interact with counterfactual thinking and emotions in early-stage decision-making.

Finally, we chose to measure initial willingness to invest as the outcome variable. While initial interest in investment about an opportunity is a common dependent variable for entrepreneurship research (Drover et al., 2015; Murnieks et al, 2016) and determines whether

further consideration is given (e.g. due diligence) prior to any definitive investment (Zacharakis, 2010; Lerner 2016), future research could study the effects of counterfactuals on ultimate investments to provide evidence of the final outcomes of these phenomena. Relatedly, future research could also explore how investment decision performance is affected by the biases that may ensue from counterfactual considerations, since our concern in this study was to find evidence for the biases themselves.

Conclusion

This study highlights the significant role of counterfactual thinking in shaping new-venture investors' decisions, particularly emphasizing the heightened impact of commission-related counterfactuals. The findings underscore the interplay between individual and social dimensions of decision-making, revealing that social counterfactuals amplify the effects of commission-related errors, reducing investment willingness. Contrary to popular conceptions of FOMO driving investment, evidence of a not-investing norm further illustrates a cautious approach prevalent in early-stage investments, where concerns over potential losses outweigh fears of missed opportunities. These insights enrich theoretical understanding of investor behavior, offering practical guidance for mitigating biases and refining entrepreneurial strategies to align with the cognitive and emotional dynamics of investment evaluation.

APPENDICES

Appendix 3.1: Investment Opportunity



Appendix 3.2: Tobit Regressions

Exp. 1 – Dependent variable: Investment Intention

	Estimate	Std. Error	z-Value	Pr(> t)
Condition: Social/Commission	-15.056	3.921	-3.840	0.000***
Condition: Social/Omission	0.498	4.075	0.122	0.903
Condition: Individual/Commission	-4.591	3.916	-1.172	0.241
Condition: Individual/Omission	-0.914	3.833	-0.238	0.811
Investment Experience	0.005	0.019	0.279	0.780
Angel	3.894	3.116	1.250	0.211
Venture Capitalist	2.023	2.940	0.688	0.491
Sample: Prolific	9.051	2.784	3.251	0.001**
Constant	47.042	4.255	11.056	0.000***

Exp. 2 – Dependent variable: Investment Intention

	Estimate	Std. Error	z-Value	Pr(> t)
Condition: Social	-7.230	3.852	-1.877	0.060*
Condition: Individual	-6.307	3.808	-1.656	0.097*
Investment Experience	-0.538	0.252	-2.131	0.033**
Angel	2.504	3.800	0.659	0.509
Venture Capitalist	6.655	3.244	2.051	0.040**
Constant	57.313	3.403	16.838	0.000***

Appendix 3.3: Sub-Sample Analysis – Exp. 1

<i>Exp. 1 Sub-Samples – Dependent variable: Investment Intention</i>				
	Email Sample		Prolific Sample	
	Estimate	Pr(> t)	Estimate	Pr(> t)
Condition: Social/Commission	-13.348	0.046**	-17.133	0.000***
Condition: Social/Omission	-7.028	0.311	4.196	0.373
Condition: Individual/Commission	-3.382	0.611	-6.424	0.160
Condition: Individual/Omission	-9.273	0.163	3.150	0.474
Investment Experience	0.003	0.857	-0.302	0.247
Angel	-6.611	0.313	8.644	0.011**
Venture Capitalist	-4.807	0.467	3.339	0.279
Constant	57.534	4.255	54.721	0.000***

Appendix 3.4: Treatment Question Analysis – Exp. 2

<i>Exp. 2 Type Analysis – Dependent variable: Investment Intention</i>				
	Estimate	Std. Error	t-Value	Pr(> t)
Condition: Social	-8.797	4.232	-2.078	0.0391*
Condition: Individual	-3.407	4.315	-0.790	0.4308
Type: Not Invest	16.800	3.687	4.556	0.000***
Investment Experience	-0.534	0.255	-2.097	0.0373**
Angel	1.972	4.110	0.480	0.6319
Venture Capitalist	6.135	3.641	1.685	0.0937*
Constant	46.356	4.316	10.738	0.000***

[End of Chapter 3.]

DISSERTATION CONCLUSION

This dissertation explores the multifaceted phenomenon of hype within entrepreneurship and new venture financing, integrating diverse theoretical perspectives and empirical findings to enhance the scholarly understanding of this complex and socially embedded concept. Across the studies presented, the research explores antecedents, dynamics, consequences, and meaning of hype in entrepreneurship, contributing significantly to both theoretical and practical knowledge in the field.

In the first chapter, an multidisciplinary literature review synthesizes dispersed research from entrepreneurship, finance, and Science, Technology, and Innovation (STI) studies, highlighting how hype emerges and evolves across three distinct but interconnected levels: ventures, industries, and markets. Results underscore the cyclical nature of hype—characterized by periods of heightened expectation followed by inevitable disillusionment—and emphasize its performative role in resource mobilization and legitimacy building. Crucially, the review illuminates how the entrepreneurship market, with its inherent uncertainty and high stakes, is particularly susceptible to cognitive biases, social influences, and media-driven narratives. This synthesis reveals previously unexamined connections between antecedents and effects of entrepreneurial hype at different levels of analysis, thus advancing theoretical clarity and identifying gaps for future research, notably in the understudied area of market-level hype.

Building on this foundation, the second chapter provides a novel examination of hype surrounding the highly financialized, disruption-oriented, and fast-growing entrepreneurial model that has been the focus of attention for both scholars and the public (Aldrich & Ruef, 2018; Audretsch, 2021), and its essential financial mechanism, venture capital (VC). By conceptualizing this model and VC as nested socio-technical systems that seek to establish

themselves in a preexisting regime, the chapter deepens scholarly debates on the legitimacy, dominance, and sustainability of the model. Through qualitative coding and sentiment analysis of media discourse complemented by expert interviews, the research identifies distinct cycles of enthusiasm and skepticism toward VC and, by extension, the system itself. These patterns reflect broader societal struggles over the legitimacy and appropriateness of the system, demonstrating that despite widespread adoption and recognition, significant concerns persist about its generalizability and the practical and ethical implications of VC-driven entrepreneurship. This chapter thereby challenges prevailing academic assumptions that equate this type of entrepreneurial activity with entrepreneurship at large, proposing instead a nuanced view that acknowledges both the strengths and inherent vulnerabilities of the model.

The third chapter shifts focus toward a cognitive mechanism identified to play an important role in steering new-venture investors' decisions in the face of hype, specifically examining how counterfactual emotions influence early-stage investment decisions. This research addresses critical but understudied psychological aspects of entrepreneurial finance by experimentally testing how the salience of commission-related (investing in poor ventures) and omission-related (missing profitable ventures) counterfactual scenarios impact investors' willingness to commit resources. The findings underscore that heightened awareness of potential commission errors significantly reduces investment likelihood, reflecting a predominant risk aversion driven in large part by social comparison concerns. Interestingly, omission-related scenarios that would foster FOMO showed minimal influence on investment decisions despite the alleged importance of this cognitive response, suggesting an implicit industry norm that favors caution over opportunistic risk-taking (at least at the time when the experiments were performed). Furthermore, the chapter highlights the profound influence of social contexts on investment decisions, particularly emphasizing how investors' sensitivity to peer comparisons exacerbates risk aversion. These findings enrich the behavioral finance

literature by illuminating situational and emotional triggers, extending beyond stable personality traits or macroeconomic conditions, and offering critical insights into the interplay between individual psychology and collective market behavior.

Collectively, these chapters present several notable contributions to entrepreneurship research. Firstly, by integrating theories from STI and sociology of expectations into entrepreneurship and finance literature, the dissertation provides a comprehensive conceptual framework for understanding hype's multi-level and dynamic nature. This synthesis advances scholarly discourse by bridging fragmented research streams, offering theoretical coherence, and facilitating future empirical investigations. Secondly, the dissertation critically reassesses the standard model of entrepreneurship's dominance within entrepreneurial research and practice, demonstrating via the hype around VC, that its perception and position within the broader system is still in a state of flux. This contribution is particularly timely, given increasing concerns about the sustainability, social impact, and generalizability of the this approach towards entrepreneurship (Audretsch, 2021; Pahnke & Welter, 2019). Thirdly, the dissertation significantly extends the understanding of new-venture investor decision-making under uncertainty by foregrounding socially embedded counterfactual emotions as pivotal factors influencing investors' evaluations. The empirical examination of the theorized effects offers practical implications for both entrepreneurs seeking financing and investors navigating high-risk opportunities. This contribution addresses longstanding calls in entrepreneurial finance research for more socialized explorations of new-venture investors' decisions (Drover et al., 2017).

Finally, this dissertation identifies several fruitful avenues for future research. For example, theoretical and empirical investigations into market-level hype in entrepreneurship remain scarce and this warrants deeper exploration to fully comprehend how fluctuations of the expectations that surround entrepreneurial activity shape its trajectory. Additionally, further

exploration of the social embeddedness of investor networks could enrich understanding of collective decision-making dynamics and the propagation of hype across investment communities.

CONCLUSIÓN (ESPAÑOL)

Esta tesis explora el fenómeno multifacético del hype en el ámbito del emprendimiento y la financiación de nuevas empresas, integrando diversas perspectivas teóricas y hallazgos empíricos para enriquecer la comprensión académica de este concepto complejo y profundamente arraigado en lo social. A lo largo de los estudios presentados, la investigación examina los antecedentes, las dinámicas, las consecuencias y los significados del hype en el emprendimiento, contribuyendo de manera significativa tanto al conocimiento teórico como práctico del campo.

En el primer capítulo, una revisión de literatura multidisciplinaria sintetiza investigaciones dispersas provenientes del emprendimiento, las finanzas y los estudios de Ciencia, Tecnología e Innovación (CTI), destacando cómo el hype emerge y evoluciona en tres niveles distintos pero interconectados: empresas, industrias y mercados. Los resultados subrayan el carácter cíclico del hype—caracterizado por periodos de expectativas elevadas seguidos por una desilusión inevitable—y enfatizan su papel performativo en la movilización de recursos y la construcción de legitimidad. De manera crucial, la revisión pone de relieve cómo el mercado del emprendimiento, con su inherente incertidumbre y alto riesgo, es particularmente susceptible a sesgos cognitivos, influencias sociales y narrativas mediáticas. Esta síntesis revela conexiones previamente inexploradas entre los antecedentes y efectos del hype emprendedor en distintos niveles de análisis, lo que permite avanzar en la claridad teórica e identificar vacíos para futuras investigaciones, en especial en el área poco estudiada del hype a nivel de mercado.

Sobre esta base, el segundo capítulo ofrece un análisis novedoso del hype en torno al modelo emprendedor altamente financiado, orientado a la disrupción y de rápido crecimiento, que ha sido objeto de atención tanto académica como pública (Aldrich & Ruef, 2018;

Audretsch, 2021), y su mecanismo financiero esencial: el capital de riesgo (VC). Al conceptualizar este modelo y el VC como sistemas sociotécnicos anidados que buscan establecerse dentro de un régimen preexistente, el capítulo aporta a los debates académicos sobre la legitimidad, dominio y sostenibilidad del modelo. A través de un análisis cualitativo codificado y un análisis de sentimiento del discurso mediático, complementado con entrevistas a expertos, la investigación identifica ciclos distintos de entusiasmo y escepticismo hacia el VC y, por extensión, hacia el sistema mismo. Estos patrones reflejan luchas sociales más amplias sobre la legitimidad y adecuación del sistema, demostrando que, a pesar de su adopción y reconocimiento generalizados, persisten importantes dudas respecto a su generalización y a las implicaciones prácticas y éticas del emprendimiento impulsado por VC. Este capítulo, por tanto, desafía las suposiciones académicas predominantes que equiparan este tipo de actividad emprendedora con el emprendimiento en general, proponiendo en su lugar una visión matizada que reconoce tanto las fortalezas como las vulnerabilidades inherentes del modelo.

El tercer capítulo desplaza el foco hacia un mecanismo cognitivo identificado como clave para orientar las decisiones de los inversionistas de nuevas empresas frente al hype, examinando específicamente cómo las emociones contrafactuales influyen en las decisiones de inversión en etapas tempranas. Esta investigación aborda aspectos psicológicos críticos pero poco explorados de las finanzas emprendedoras, mediante la exploración del impacto que tiene la saliencia de escenarios contrafactuales relacionados con errores de comisión (invertir en empresas inadecuadas) y de omisión (perder oportunidades rentables) sobre la disposición de los inversionistas a comprometer recursos. Los hallazgos demuestran que una mayor conciencia de posibles errores de comisión reduce significativamente la probabilidad de inversión, reflejando una aversión al riesgo predominante motivada en gran parte por comparaciones sociales. Curiosamente, los escenarios relacionados con la omisión—que se supondría fomentaría el FOMO—mostraron una influencia mínima en las decisiones de

inversión, a pesar de la importancia atribuida a esta respuesta cognitiva, lo cual sugiere la existencia de una norma implícita en la industria que favorece la cautela sobre la toma de riesgos oportunistas (al menos en el momento en que se realizaron los experimentos). Asimismo, el capítulo resalta la profunda influencia de los contextos sociales en las decisiones de inversión, enfatizando particularmente cómo la sensibilidad de los inversionistas a las comparaciones con sus pares exacerba la aversión al riesgo. Estos hallazgos enriquecen la literatura de finanzas conductuales al estudiar desencadenantes situacionales y emocionales, más allá de los rasgos estables de personalidad o las condiciones macroeconómicas, y ofrecen perspectivas críticas sobre la interacción entre la psicología individual y el comportamiento colectivo del mercado.

En conjunto, estos capítulos presentan varias contribuciones notables a la investigación sobre emprendimiento. En primer lugar, al integrar teorías provenientes de CTI y la sociología de las expectativas en la literatura sobre emprendimiento y finanzas, la tesis proporciona un marco conceptual integral para comprender la naturaleza dinámica y multinivel del hype. Esta síntesis impulsa el discurso académico al unir corrientes de investigación fragmentadas, ofreciendo coherencia teórica y facilitando futuras investigaciones empíricas. En segundo lugar, la tesis reevalúa críticamente la hegemonía del modelo estándar de emprendimiento en la investigación y la práctica, demostrando, a través del análisis del hype en torno al capital de riesgo, que su percepción y posición dentro del sistema más amplio aún se encuentran en estado de flujo. Esta contribución resulta especialmente oportuna, dadas las crecientes preocupaciones sobre la sostenibilidad, el impacto social y la generalización de este enfoque hacia el emprendimiento (Audretsch, 2021; Pahnke & Welter, 2019). En tercer lugar, la tesis amplía significativamente la comprensión sobre la toma de decisiones de inversión en nuevas empresas bajo condiciones de incertidumbre, al destacar las emociones contrafactuales socialmente arraigadas como factores clave en la evaluación de oportunidades por parte de los

inversionistas. La exploración empírica de estos efectos teóricos ofrece implicaciones prácticas tanto para emprendedores en búsqueda de financiación como para inversionistas que navegan entornos de alto riesgo. Esta contribución responde a llamados persistentes dentro de la investigación en finanzas emprendedoras para desarrollar enfoques más socializados de las decisiones de los inversionistas de nuevas empresas (Drover et al., 2017).

Por último, esta tesis identifica varias vías prometedoras para investigaciones futuras. Por ejemplo, las investigaciones teóricas y empíricas sobre el hype a nivel de mercado en el ámbito del emprendimiento siguen siendo escasas y merecen una exploración más profunda para comprender plenamente cómo las fluctuaciones en las expectativas que rodean la actividad emprendedora moldean su trayectoria. Asimismo, una exploración más detallada del arraigo social de las redes de inversionistas podría enriquecer la comprensión sobre las dinámicas de toma de decisiones colectivas y la propagación del hype entre comunidades de inversionistas.

REFERENCES

- Abrahamson, E. (1991). Managerial fads and fashions: The diffusion and rejection of innovations. *Academy of Management Review*, 16(3), 586-612.
- Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational research methods*, 17(4), 351-371.
- Aguinis, H., Villamor, I., & Ramani, R. S. (2020). How to conduct valid social science research using MTurk—a checklist. *Impact of Social Sciences Blog*.
- Aldrich, H. E., & Ruef, M. (2018). Unicorns, gazelles, and other distractions on the way to understanding real entrepreneurship in the United States. *Academy of Management Perspectives*, 32(4), 458-472.
- Antretter, T., Sirén, C., Grichnik, D., & Wincent, J. (2020). Should business angels diversify their investment portfolios to achieve higher performance? The role of knowledge access through co-investment networks. *Journal of Business Venturing*, 35(5), 106043.
- Araujo, L., & Easton, G. (2012). Temporality in business networks: The role of narratives and management technologies. *Industrial Marketing Management*, 41(2), 312-318.
- Audretsch, D. B. (2021). Have we oversold the Silicon Valley model of entrepreneurship?. *Small Business Economics*, 56, 849-856.
- Audretsch, D. B., Lehmann, E. E., & Schenkenhofer, J. (2021). A context-choice model of niche entrepreneurship. *Entrepreneurship Theory and Practice*, 45(5), 1276-1303.
- Bachher, J. S., & Guild, P. D. (1996). Financing early stage technology based companies: investment criteria used by investors. *Frontiers of Entrepreneurship Research*, 996, 363-376.
- Baker, T., & Welter, F. (2024). Silicon Valley entrepreneurship – Revisiting a popular dream. *Journal of Business Venturing Insights*, 21, Article e00466.
- Banerjee, A. V. (1992). A simple model of herd behavior. *The quarterly journal of economics*, 107(3), 797-817.
- Bault, N., Coricelli, G., & Rustichini, A. (2008). Interdependent utilities: how social ranking affects choice behavior. *PloS one*, 3(10), e3477.
- Bell, D. E. (1982). Regret in decision making under uncertainty. *Operations research*, 30(5), 961-981.
- Bertoni, F., Colombo, M. G., Quas, A., & Tenca, F. (2019). The changing patterns of venture capital investments in Europe. *Journal of Industrial and Business Economics*, 46(2), 229-250.
- Bhanot, S. P. (2021). Isolating the effect of injunctive norms on conservation behavior: New evidence from a field experiment in California. *Organizational Behavior and Human Decision Processes*, 163, 30-42.

- Bikhchandani, S., & Sharma, S. (2000). Herd behavior in financial markets. *IMF Staff papers*, 47(3), 279-310.
- Bikhchandani, S., Hirshleifer, D., & Welch, I. (1998). Learning from the behavior of others: Conformity, fads, and informational cascades. *Journal of Economic Perspectives*, 12(3), 151-170.
- Boles, T. L., & Messick, D. M. (1995). A reverse outcome bias: The influence of multiple reference points on the evaluation of outcomes and decisions. *Organizational Behavior and Human Decision Processes*, 61(3), 262-275.
- Borup, M., Brown, N., Konrad, K., & Van Lente, H. (2006). The sociology of expectations in science and technology. *Technology Analysis and Strategic Management*, 18(3-4), 285-298.
- Bradley, D., Kim, I., & Krigman, L. (2015). Top VC IPO underpricing. *Journal of Corporate Finance*, 31, 186-202.
- Brown, N. (2003). Hope against hype—accountability in biopasts, presents and futures. *Science and Technology Studies*, 16(2), 3-21.
- Brown, N., & Michael, M. (2003). A sociology of expectations: Retrospecting prospects and prospecting retrospects. *Technology Analysis & Strategic Management*, 15(1), 3–18.
- Buenstorf, G., & Fornahl, D. (2009). B2C-bubble to cluster: The dot-com boom, spin-off entrepreneurship, and regional agglomeration. *Journal of Evolutionary Economics*, 19(3), 349-378.
- Bygrave, W., Lange, J., Roedel, J., & Wu, G. (2000). Capital market excesses and competitive strength: the case of the hard disk drive industry 1984–2000. *Journal of Applied Corporate Finance*, 13(3), 8-19.
- Cai, J., & Gomaa, A. (2019). Initial coin offering to finance venture capital: A behavioral perspective. *The Journal of Private Equity*, 22(3), 93-101.
- Cardon, M. S., Mitteness, C., & Sudek, R. (2017). Motivational cues and angel investing: Interactions among enthusiasm, preparedness, and commitment. *Entrepreneurship Theory and Practice*, 41(6), 1057-1085.
- Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of management Review*, 34(3), 511-532.
- Carpentier, C., & Suret, J. M. (2015). Angel group members' decision process and rejection criteria: A longitudinal analysis. *Journal of Business Venturing*, 30(6), 808-821.
- Cassidy, J. (2020, November 30). How venture capitalists are deforming capitalism. *The New Yorker*. <https://www.newyorker.com/magazine/2020/11/30/how-venture-capitalists-are-deforming-capitalism>

- Cervantes-Zacarés, D., Ortigosa-Blanch, A., & Martí-Sánchez, M. (2022). The influence of the media on the history of business success. *International Entrepreneurship and Management Journal*, 18(3), 1201-1220.
- Chalmers, D., Fisch, C., Matthews, R., Quinn, W., & Recker, J. (2022). Beyond the bubble: Will NFTs and digital proof of ownership empower creative industry entrepreneurs? *Journal of Business Venturing Insights*, 18, e00326.
- Chang, V., Newman, R., Walters, R. J., & Wills, G. B. (2016). Review of economic bubbles. *International Journal of Information Management*, 36(4), 497-506.
- Cheng, L., Chan, W. K., Peng, Y., & Qin, H. (2023). Towards data-driven tele-medicine intelligence: community-based mental healthcare paradigm shift for smart aging amid COVID-19 pandemic. *Health Information Science and Systems*, 11(1), 14.
- Clain-Chamosset-Yvrard, L., Raurich, X., & Seegmuller, T. (2024). Entrepreneurship, growth, and productivity with bubbles. *Journal of Macroeconomics*, 80, 103592.
- Clarke, J. S., Cornelissen, J. P., & Healey, M. P. (2019). Actions speak louder than words: How figurative language and gesturing in entrepreneurial pitches influences investment judgments. *Academy of Management Journal*, 62(2), 335-360.
- Coakley, J., Hadass, L., & Wood, A. (2007). Post-IPO operating performance, venture capital, and the bubble years. *Journal of Business Finance & Accounting*, 34(9-10), 1423-1446.
- Coakley, J., Hadass, L., & Wood, A. (2009). UK IPO underpricing and venture capitalists. *The European Journal of Finance*, 15(4), 421-435.
- Connolly, T., & Zeelenberg, M. (2002). Regret in decision making. *Current directions in psychological science*, 11(6), 212-216.
- Cooiman, F. (2022). Imprinting the economy: The structural power of venture capital. *Environment and Planning A: Economy and Space*, 0308518X221136559.
- Coricelli, G., & Rustichini, A. (2010). Counterfactual thinking and emotions: regret and envy learning. *Philosophical Transactions of the Royal Society B: Biological sciences*, 365(1538), 241-247.
- Cusumano, M. A., Gawer, A., Yoffie, D. B., von Bargen, S., & Acquay, K. (2024). The impact of platform business models on the valuations of unicorn companies. *Information and Organization*, 34(2), Article 100458.
- Dedehayir, O., & Steinert, M. (2016). The hype cycle model: A review and future directions. *Technological Forecasting and Social Change*, 108, 28-41.
- Deffenbaugh, R. (2025, March 7). IPO market slump hits unicorns and new IPO stocks in 2025. *Investor's Business Daily*. https://www.investors.com/news/technology/ipo-market-slump-unicorns-new-ipo-stocks-2025/?utm_source=chatgpt.com

- Degeorge, F., Derrien, F., & Womack, K. L. (2006). Analyst hype in IPOs: Explaining the popularity of bookbuilding. *Review of Financial Studies*, 20(4), 1021-1058.
- Desalegn, G., Tangl, A., & Fekete-Farkas, M. (2022). From short-term risk to long-term strategic challenges: Reviewing the consequences of geopolitics and COVID-19 on economic performance. *Sustainability*, 14(21), 14455.
- Dimov, D., & De Clercq, D. (2006). Venture capital investment strategy and portfolio failure rate: A longitudinal study. *Entrepreneurship Theory and Practice*, 30(2), 207-223.
- Drover, W., Busenitz, L., Matusik, S., Townsend, D., Anglin, A., & Dushnitsky, G. (2017). A review and road map of entrepreneurial equity financing research: Venture capital, corporate venture capital, angel investment, crowdfunding, and accelerators. *Journal of management*, 43(6), 1820-1853.
- Drover, W., Wood, M. S., & Zacharakis, A. (2017). Attributes of angel and crowdfunded investments as determinants of VC screening decisions. *Entrepreneurship Theory and Practice*, 41(3), 323-347.
- Drozdz, M. (2024). How to create investor FOMO! [LinkedIn article]. LinkedIn. <https://www.linkedin.com/pulse/how-create-investor-fomo-marcin-drozdz-ssxic/>
- Fafchamps, M., Kebede, B., & Zizzo, D. J. (2015). Keep up with the winners: Experimental evidence on risk taking, asset integration, and peer effects. *European Economic Review*, 79, 59-79.
- Feeney, L., Haines Jr, G. H., & Riding, A. L. (1999). Private investors' investment criteria: insights from qualitative data. *Venture Capital: An international journal of entrepreneurial finance*, 1(2), 121-145.
- Fehr, E., & Schmidt, K. M. (1999). A theory of fairness, competition, and cooperation. *The quarterly journal of economics*, 114(3), 817-868.
- Feldman, G., Kutscher, L., & Yay, T. (2020). Omission and commission in judgment and decision making: Understanding and linking action-inaction effects using the concept of normality. *Social and Personality Psychology Compass*, 14(8), e12557.
- Fenn, J., & Raskino, M. (2008). *Mastering the hype cycle: how to choose the right innovation at the right time*. Harvard Business Press.
- Fisher, G., Josefy, M. A., & Neubert, E. (2024). Event-based entrepreneurship. *Journal of Business Venturing*, 39(1), 106366.
- Forbes, W. (2006). The boys in the bubble: Internet entrepreneurs and stock market value. *Omega*, 34(5), 461-476.
- Franke, N., Gruber, M., Harhoff, D., & Henkel, J. (2006). What you are is what you like—similarity biases in venture capitalists' evaluations of start-up teams. *Journal of Business Venturing*, 21(6), 802-826.

- Gächter, I., & Gächter, M. (2021). Success factors in ICOs: Individual firm characteristics or lucky timing? *Finance Research Letters*, 38, 101463.
- Gamble, E. N., & Muñoz, P. (2022). When tax-exempt nonprofits detract value from society. *Academy of Management Perspectives*, 36(1), 50-92.
- Garud, R., Gehman, J., & Giuliani, A. P. (2014). Contextualizing entrepreneurial innovation: A narrative perspective. *Research Policy*, 43(7), 1177-1188.
- Garud, R., Lant, T. K., & Schildt, H. A. (2019). Generative imitation, strategic distancing and optimal distinctiveness during the growth, decline and stabilization of Silicon Alley. *Innovation: Organization & Management*, 21(1), 56-81.
- Garud, R., Lant, T. K., & Schildt, H. A. (2021). Generative imitation, strategic distancing and optimal distinctiveness during the growth, decline and stabilization of Silicon Alley. In *Culture, innovation and entrepreneurship* (pp. 187-213). Routledge.
- Garud, R., Phillips, N., Snihur, Y., Thomas, L. D., & Zietsma, C. (2022). Special Issue Call Hype and Entrepreneurship: Expectations, exaggerations and misrepresentations.
- Garud, R., Schildt, H. A., & Lant, T. K. (2014). Entrepreneurial storytelling, future expectations, and the paradox of legitimacy. *Organization Science*, 25(5), 1479-1492.
- Garud, R., Snihur, Y., Thomas, L. D., & Phillips, N. (2023). The dark side of entrepreneurial framing: A process model of deception and legitimacy loss. *Academy of Management Review*, 48(1), 24-47.
- Gavious, I., & Schwartz, D. (2011). Market valuations of start-up ventures around the technology bubble. *International Small Business Journal*, 29(4), 399-415.
- Geels, F.W., Sovacool, B.K., Schwanen, T., Sorrell, S. (2017). The Socio-Technical Dynamics of Low-Carbon Transitions *Joule* 1 (3), 463–479.
- Geels, F. W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research policy*, 31(8-9), 1257-1274.
- Geels, F. W. (2004). From sectoral systems of innovation to socio-technical systems: Insights about dynamics and change from sociology and institutional theory. *Research policy*, 33(6-7), 897-920.
- Geels, F. W. (2010). Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. *Research policy*, 39(4), 495-510.
- Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research policy*, 36(3), 399-417.
- Geels, F. W., & Verhees, B. (2011). Cultural legitimacy and framing struggles in innovation journeys: A cultural-performative perspective and a case study of Dutch nuclear energy (1945–1986). *Technological Forecasting and Social Change*, 78(6), 910-930.

- Geels, F. W., Pieters, T., & Snelders, S. (2007). Cultural enthusiasm, resistance and the societal embedding of new technologies: psychotropic drugs in the 20th century. *Technology Analysis & Strategic Management*, 19(2), 145-165.
- Geels, F., & Raven, R. (2006). Non-linearity and expectations in niche-development trajectories: ups and downs in Dutch biogas development (1973–2003). *Technology Analysis & Strategic Management*, 18(3-4), 375-392.
- Geiger, S., & Gross, N. (2017). Does hype create irreversibilities? Affective circulation and market investments in digital health. *Marketing Theory*, 17(4), 435-454.
- Gilovich, T., & Medvec, V. H. (1995). The experience of regret: what, when, and why. *Psychological review*, 102(2), 379.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational research methods*, 16(1), 15-31.
- Giones, F., & Brem, A. (2017). From toys to tools: The co-evolution of technological and entrepreneurial developments in the drone industry. *Business Horizons*, 60(6), 875-884.
- Giorgis, V., Huber, T. A., & Sornette, D. (2022). ‘Salvation and profit’: Deconstructing the clean-tech bubble. *Technology Analysis & Strategic Management*, 36(6), 1–13.
- Glazman, M. (2022). Investors Passing on Your Pitch? Here’s What Is Really Happening on Their Side of the Table. *Entrepreneur*. Retrieved from: <https://www.entrepreneur.com/money-finance/investors-passing-on-your-pitch-heres-what-is-really/398392>.
- Gompers, P. A. (1996). Grandstanding in the venture capital industry. *Journal of Financial economics*, 42(1), 133-156.
- Gompers, P. A., Gornall, W., Kaplan, S. N., & Strebulaev, I. A. (2020). How do venture capitalists make decisions?. *Journal of Financial Economics*, 135(1), 169-190.
- Gompers, P., & Lerner, J. (2001). The venture capital revolution. *Journal of economic perspectives*, 15(2), 145-168.
- 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.
- Good, M. C., & Hyman, M. R. (2020). ‘Fear of missing out’: antecedents and influence on purchase likelihood. *Journal of Marketing Theory and Practice*, 28(3), 330-341.
- Good, M. C., & Hyman, M. R. (2021). Direct and indirect effects of fear-of-missing-out appeals on purchase likelihood. *Journal of Consumer Behaviour*, 20(3), 564-576.
- Gornall, W., & Strebulaev, I. A. (2021). The economic impact of venture capital: Evidence from public companies. Available at SSRN 2681841.
- Gray, K. R., Frieder, L. A., & Clark, G. W. (2007). Financial bubbles and business scandals in history. *International Journal of Public Administration*, 30(9–10), 1083–1112.

- Green, J. (2004). Venture capital at a new crossroads: Lessons from the bubble. *Journal of Management Development*, 23(10), 903–912.
- Guler, I. (2007). Throwing good money after bad? Political and institutional influences on sequential decision making in the venture capital industry. *Administrative science quarterly*, 52(2), 248-285.
- Gurun, U. G., & Butler, A. W. (2012). Don't believe the hype: Local media slant, local advertising, and firm value. *Journal of Finance*, 67(2), 561–598.
- Haar, N. E., Starr, J., & MacMillan, I. C. (1988). Informal risk capital investors: Investment patterns on the East Coast of the USA. *Journal of Business Venturing*, 3(1), 11-29.
- Hall, J., & Hofer, C. W. (1993). Venture capitalists' decision criteria in new venture evaluation. *Journal of business venturing*, 8(1), 25-42.
- Harrison, R. T., Mason, C., & Smith, D. (2015). Heuristics, learning and the business angel investment decision-making process. *Entrepreneurship & Regional Development*, 27(9-10), 527-554.
- Hendershott, R. J. (2004). Net value: Wealth creation (and destruction) during the internet boom. *Journal of Corporate Finance*, 10(2), 281-299.
- Herrmann, A. M. (2019). A plea for varieties of entrepreneurship. *Small Business Economics*, 52, 331-343.
- Hetts, J. J., Boninger, D. S., Armor, D. A., Gleicher, F., & Nathanson, A. (2000). The influence of anticipated counterfactual regret on behavior. *Psychology & Marketing*, 17(4), 345-368.
- Heupel, K., Arteaga-Fonseca, J., Rutherford, M., & Edwards, B. (2024). Feeding the hype cycle: Entrepreneurial swagger, passion, and inflated expectations. *Journal of Business Venturing*, 39(6), Article 106432.
- Hodkinson, C. (2019). 'Fear of Missing Out'(FOMO) marketing appeals: A conceptual model. *Journal of Marketing Communications*, 25(1), 65-88.
- Hoelzl, E., & Loewenstein, G. (2005). Wearing out your shoes to prevent someone else from stepping into them: Anticipated regret and social takeover in sequential decisions. *Organizational Behavior and Human Decision Processes*, 98(1), 15-27.
- Hoppmann, J., Anadon, L. D., & Narayanamurti, V. (2020). Why matter matters: How technology characteristics shape the strategic framing of technologies. *Research Policy*, 49(1), Article 103882.
- Hori, T., & Im, R. (2023). Asset bubbles, entrepreneurial risks, and economic growth. *Journal of Economic Theory*, 205, Article 105556.
- Hsu, D. K., Haynie, J. M., Simmons, S. A., & McKelvie, A. (2014). What matters, matters differently: a conjoint analysis of the decision policies of angel and venture capital investors. *Venture Capital*, 16(1), 1-25.

- Huang, L. (2018). The role of investor gut feel in managing complexity and extreme risk. *Academy of Management Journal*, 61(5), 1821-1847.
- Huang, L., & Pearce, J. L. (2015). Managing the unknowable: The effectiveness of early-stage investor gut feel in entrepreneurial investment decisions. *Administrative Science Quarterly*, 60(4), 634-670.
- Isaksson, A., & Fredriksen, Ö. (2020). Venture capital firms' valuation in bull and bear markets: Evidence from Sweden. *International Journal of Entrepreneurship and Innovation Management*, 24(1), 1–20.
- Jain, B. A., Jayaraman, N., & Kini, O. (2008). The path-to-profitability of Internet IPO firms. *Journal of Business Venturing*, 23(2), 165-194.
- Jang, W. Y. (2007). Media exposure or media hype: Evidence from initial public offering stocks in Taiwan. *Journal of Media Economics*, 20(1), 22–44.
- Johnson, E. J., & Goldstein, D. (2003). Do defaults save lives?. *Science*, 302(5649), 1338-1339.
- Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological review*, 93(2), 136.
- Kahneman, D., & Tversky, A. (1982). The psychology of preferences. *Scientific American*, 246(1), 160-173.
- Kahneman, D., & Tversky, A. (2013). Prospect theory: An analysis of decision under risk. In *Handbook of the fundamentals of financial decision making: Part I* (pp. 99-127).
- Kaplan, S. N., & Lerner, J. (2010). It ain't broke: The past, present, and future of venture capital. *Journal of Applied Corporate Finance*, 22(2), 36-47.
- Kleinert, S., & Hildebrand, M. (2024). Venture Capitalists' Decision-Making in Hot and Cold Markets: The Effect of Signals and Cheap Talk. *Entrepreneurship Theory and Practice*, 10422587241268311.
- Kleinert, S., Bafera, J., Urbig, D., & Volkmann, C. K. (2022). Access denied: How equity crowdfunding platforms use quality signals to select new ventures. *Entrepreneurship Theory and Practice*,
- Konrad, K., Markard, J., Ruef, A., & Truffer, B. (2012). Strategic responses to fuel cell hype and disappointment. *Technological Forecasting and Social Change*, 79(6), 1084-1098.
- Kőszegi, B., & Rabin, M. (2006). A model of reference-dependent preferences. *The Quarterly Journal of Economics*, 121(4), 1133-1165.
- Kriechbaum, M., Posch, A., & Hauswiesner, A. (2021). Hype cycles during socio-technical transitions: The dynamics of collective expectations about renewable energy in Germany. *Research Policy*, 50(9), 104262.

- Kriechbaum, M., Prol, J. L., & Posch, A. (2018). Looking back at the future: Dynamics of collective expectations about photovoltaic technology in Germany & Spain. *Technological Forecasting and Social Change*, 129, 76-87.
- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management review*, 24(4), 691-710.
- Lee, P. M., & Wahal, S. (2004). Grandstanding, certification and the underpricing of venture capital backed IPOs. *Journal of Financial Economics*, 73(2), 375–407.
- Lehmann, E. E., Schenkenhofer, J., & Wirsching, K. (2019). Hidden champions and unicorns: A question of the context of human capital investment. *Small Business Economics*, 52, 359-374.
- Lemon, K. N., White, T. B., & Winer, R. S. (2002). Dynamic customer relationship management: Incorporating future considerations into the service retention decision. *Journal of marketing*, 66(1), 1-14.
- Lerner, D. A. (2016). Behavioral disinhibition and nascent venturing: Relevance and initial effects on potential resource providers. *Journal of Business Venturing*, 31(2), 234-252.
- Lerner, J. (2022). The syndication of venture capital investments. In *Venture Capital* (pp. 207-218). Routledge.
- Levy-Weiss, G. (2019). How VCs Think: The Psychology That Drives Investing Decisions. NFX. Retrieved from <https://www.nfx.com/post/how-vcs-think-investing-decisions/>.
- Levy-Weiss, G. (2021). How VCs Think: The Non-Obvious Guide to Fundraising. NFX. Retrieved from <https://www.nfx.com/post/the-non-obvious-guide-to-fundraising>.
- Linde, J., & Sonnemans, J. (2012). Social comparison and risky choices. *Journal of Risk and Uncertainty*, 44, 45-72.
- Linden, A., & Fenn, J. (2003). Understanding Gartner's hype cycles. Strategic Analysis Report N° R-20-1971. Gartner, Inc, 88, 1423.
- Liu, X. (2014). Venture capitalists and portfolio companies' real activities manipulation. *Review of Quantitative Finance and Accounting*, 42(2), 253–282.
- Liu, X., Wang, Z., Zhang, S., & Liu, J. (2020). Probabilistic hesitant fuzzy multiple attribute decisionmaking based on regret theory for the evaluation of venture capital projects. *Economic research-Ekonomska istraživanja*, 33(1), 672-697.
- Lo, J. Y., Xu, L., & Park, H. D. (2024). Hot markets, sociocognitive cues, and new market entry in the US venture capital industry. *Entrepreneurship Theory and Practice*, 48(2), 478-505.
- Loewenstein, G. F., Thompson, L., & Bazerman, M. H. (1989). Social utility and decision making in interpersonal contexts. *Journal of Personality and Social psychology*, 57(3), 426.

- Logue, D., & Grimes, M. (2022). Living up to the hype: How new ventures manage the resource and liability of future-oriented visions within the nascent market of impact investing. *Academy of Management Journal*, 65(4), 1055-1088.
- Lohrke, F. T., Holloway, B. B., & Woolley, T. W. (2010). Conjoint analysis in entrepreneurship research: A review and research agenda. *Organizational Research Methods*, 13(1), 16-30.
- Long, J. S., & Freese, J. (2006). Regression models for categorical dependent variables using Stata (Vol. 7). Stata press.
- Loomes, G., & Sugden, R. (1982). Regret theory: An alternative theory of rational choice under uncertainty. *The economic journal*, 92(368), 805-824.
- Lounsbury, M., & Glynn, M. A. (2001). Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources. *Strategic Management Journal*, 22(6–7), 545–564.
- Luttmer, E. F. (2005). Neighbors as negatives: Relative earnings and well-being. *The Quarterly journal of economics*, 120(3), 963-1002.
- Månsson, N., & Landström, H. (2006). Business angels in a changing economy: The case of Sweden. *Venture Capital*, 8(4), 281–301.
- Martens, M. L., Jennings, J. E., & Jennings, P. D. (2007). Do the stories they tell get them the money they need? The role of entrepreneurial narratives in resource acquisition. *Academy of Management Journal*, 50(5), 1107–1132.
- Mason, C., & Stark, M. (2004). What do investors look for in a business plan? A comparison of the investment criteria of bankers, venture capitalists and business angels. *International small business journal*, 22(3), 227-248.
- Maxwell, A. L., Jeffrey, S. A., & Lévesque, M. (2011). Business angel early stage decision making. *Journal of Business Venturing*, 26(2), 212-225.
- Melton, N., Axsen, J., & Sperling, D. (2016). Moving beyond alternative fuel hype to decarbonize transportation. *Nature Energy*, 1(3), 1-10.
- Min, H., Caltagirone, J., & Serpico, A. (2008). Life after a dot-com bubble. *International Journal of Information Technology and Management*, 7(2), 190–204.
- Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of business venturing*, 29(1), 1-16.
- Morales-Raya, M., & Muñoz, P. (2024). Varieties of time in business sustainability research: An integrative review and research agenda. *Organization & Environment*, 37(2), 257-297.
- Murnieks, C. Y., Cardon, M. S., Sudek, R., White, T. D., & Brooks, W. T. (2016). Drawn to the fire: The role of passion, tenacity and inspirational leadership in angel investing. *Journal of Business Venturing*, 31(4), 468-484.

- Murnieks, C. Y., Haynie, J. M., Wiltbank, R. E., & Harting, T. (2011). 'I like how you think': Similarity as an interaction bias in the investor–entrepreneur dyad. *Journal of Management Studies*, 48(7), 1533-1561.
- Murray, A., & Fisher, G. (2022). When more is less: Explaining the curse of too much capital for early-stage ventures. *Organization Science*, 33(1), 123–147.
- Nanda, R., & Rhodes-Kropf, M. (2013). Investment cycles and startup innovation. *Journal of Financial Economics*, 110(2), 403–418.
- Nanda, R., Samila, S., & Sorenson, O. (2020). The persistent effect of initial success: Evidence from venture capital. *Journal of Financial Economics*, 137(1), 231-248.
- Ning, Y., Wang, W., & Yu, B. (2015). The driving forces of venture capital investments. *Small Business Economics*, 44(2), 315–344.
- Olivier, J. (2000). Growth-enhancing bubbles. *International Economic Review*, 41(1), 133–152.
- Pahnke, A., & Welter, F. (2019). The German mittelstand: Antithesis to silicon valley entrepreneurship?. *Small Business Economics*, 52, 345-358.
- Pang, B., & Lee, L. (2008). Opinion mining and sentiment analysis. *Foundations and Trends in information retrieval*, 2(1–2), 1-135.
- Paul, S., Whittam, G., & Wyper, J. (2007). Towards a model of the business angel investment process. *Venture capital*, 9(2), 107-125.
- Perez, C. (2010). Technological revolutions and techno-economic paradigms. *Cambridge journal of economics*, 34(1), 185-202.
- Petty, J. S., & Gruber, M. (2011). "In pursuit of the real deal": A longitudinal study of VC decision making. *Journal of Business Venturing*, 26(2), 172-188.
- Pfaffenberger, B. (1992). Technological dramas. *Science, Technology, & Human Values*, 17(3), 282-312.
- Pinkow, F. (2023). Determinants of overfunding in reward-based crowdfunding. *Electronic Commerce Research*, 23(1), 1–23.
- Poindexter, J. B. (1976). The efficiency of financial markets: The venture capital case. New York University, Graduate School of Business Administration.
- Pollock, N., & Williams, R. (2011). Who decides the shape of product markets? The knowledge institutions that name and categorize new technologies. *Information and Organization*, 21(4), 194–217.
- Pontikes, E. G., & Barnett, W. P. (2017). The non-consensus entrepreneur: Organizational responses to vital events. *Administrative Science Quarterly*, 62(1), 140-178.
- Powers, D. (2012). Notes on hype. *International Journal of Communication*, 6, 17-17.

- Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in human behavior*, 29(4), 1841-1848.
- Puri, M., & Zarutskie, R. (2012). On the life cycle dynamics of venture-capital- and non-venture-capital-financed firms. *Journal of Finance*, 67(6), 2247-2293.
- Rao, D. (2024, August 19). 6 tactics for entrepreneurs to outsmart VC hype and start unicorns. *Forbes*.
- Reb, J. (2008). Regret aversion and decision process quality: Effects of regret salience on decision process carefulness. *Organizational Behavior and Human Decision Processes*, 105(2), 169-182.
- Riding, A. L., Madill, J. J., & Haines Jr, G. H. (2007). 13 Investment decision making by business angels. *Handbook of research on venture capital*, 1, 332.
- Rip, A., & Kemp, R. (1998). Technological change. In *Human choice and climate change: Vol. II, resources and technology* (pp. 327-399). Battelle Press.
- Rist, K. (2020). Investor FOMO: How to Manage Startup Hype as a VC. *Forbes*. Retrieved from: <https://www.forbes.com/sites/kjartanrist/2020/10/02/investor-fomo-to-jomo-how-to-manage-startup-hype-as-a-vc/?sh=5b35543e26ff>.
- Rist, K. (2021). VC's outsized economic impact will power a new golden age. *Forbes*. <https://www.forbes.com/sites/kjartanrist/2021/07/28/vcs-outsized-economic-impact-will-power-a-new-golden-age/>
- Ritov, I., & Baron, J. (1990). Reluctance to vaccinate: Omission bias and ambiguity. *Journal of behavioral decision making*, 3(4), 263-277.
- Ritov, I., & Baron, J. (1995). Outcome knowledge, regret, and omission bias. *Organizational Behavior and human decision processes*, 64(2), 119-127.
- Robinson Jr, R. B. (1987). Emerging strategies in the venture capital industry. *Journal of Business venturing*, 2(1), 53-77.
- Rosenbloom, D., Berton, H., Meadowcroft, J. (2016). Framing the sun: A discursive approach to understanding multi-dimensional interactions within socio-technical transitions through the case of solar electricity in Ontario. *Canada. Research Policy* 45 (6), 1275–1290.
- Ruef, A., & Markard, J. (2010). What happens after a hype? How changing expectations affected innovation activities in the case of stationary fuel cells. *Technology Analysis & Strategic Management*, 22(3), 317-338.
- Sabia, L., Bell, R., & Bozward, D. (2022). Big fish: Leveraging the fear of missing out in equity crowdfunding in the post-COVID-19 era. *Business Horizons*, 65(1), 59-67.
- Sahlman, W. A. (1999). The new economy is stronger than you think. *Harvard Business Review*, 77(6), 99–106.

- Sahlman, W. A., & Stevenson, H. (1985). Capital market myopia. *Journal of Business Venturing*, 1(1), 7-30.
- Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1, 7-59.
- Sandberg, W.R., Schweiger, D.M., and Hofer, C.W. (1988). The use of verbal protocols in determining venture capitalists' decision processes. *Entrepreneurship Theory and Practice*, Winter: 8–20.
- Savage, L. (2021, April 19). WeWork was the embodiment of Silicon Valley's culture of delusion. Jacobin. <https://jacobin.com/2021/04/we-work-adam-neumann-hulu-documentary-review-rothstein>
- Savage, L. J. (1954). *The foundations of statistics*. Wiley.
- Scandura, T. A., & Williams, E. A. (2000). Research methodology in management: Current practices, trends, and implications for future research. *Academy of Management journal*, 43(6), 1248-1264.
- Scheaf, D. J., & Wood, M. S. (2022). Entrepreneurial fraud: A multidisciplinary review and synthesized framework. *Entrepreneurship Theory and Practice*, 46(1), 3–43.
- Schot, J., & Geels, F. W. (2008). Strategic niche management and sustainable innovation journeys: theory, findings, research agenda, and policy. *Technology Analysis & Strategic Management*, 20(5), 537–554.
- Seidel, V. P., Hannigan, T. R., & Phillips, N. (2020). Rumor communities, social media, and forthcoming innovations: The shaping of technological frames in product market evolution. *Academy of Management Review*, 45(2), 304–324.
- Sgambaro, L., Chiaroni, D., Lettieri, E., & Paolone, F. (2024). Exploring industrial symbiosis for circular economy: investigating and comparing the anatomy and development strategies in Italy. *Management Decision*.
- Shafi, K. (2021). Investors' evaluation criteria in equity crowdfunding. *Small Business Economics*, 56(1), 3-37.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Shepherd, D. A., & Zacharakis, A. (1999). Conjoint analysis: A new methodological approach for researching the decision policies of venture capitalists. *Venture Capital: An International Journal of Entrepreneurial Finance*, 1(3), 197-217.
- Shi, Y., & Herniman, J. (2023). The role of expectation in innovation evolution: Exploring hype cycles. *Technovation*, 119, 102459.
- Shiller, R. J. (2015). *Irrational exuberance* (3rd ed.). Princeton University Press.

- Simonson, I. (1992). The influence of anticipating regret and responsibility on purchase decisions. *Journal of consumer research*, 19(1), 105-118.
- Smith, A., Kern, F., Raven, R., Verhees, B., 2014. Spaces for sustainable innovation: Solar photovoltaic electricity in the UK. *Technological Forecasting and Social Change* 81, 115–130.
- Smith, R. H., & Kim, S. H. (2007). Comprehending envy. *Psychological bulletin*, 133(1), 46.
- Snihur, Y., Thomas, L. D., Garud, R., & Phillips, N. (2022). Entrepreneurial framing: A literature review and future research directions. *Entrepreneurship Theory and Practice*, 46(1), 111–156.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of business research*, 104, 333-339.
- Sohl, J. (2022). Angel investors: the impact of regret from missed opportunities. *Small Business Economics*, 1-16.
- Sorenson, O., & Stuart, T. (2008). Bringing the context back in: Settings and the search for syndicate partners in venture capital investment networks. *Administrative Science Quarterly*, 53(2), 266-294.
- Sorrentino, P. (2018). Fear of missing out in venture capital. Medium. <https://pedrosorren.medium.com/fear-of-missing-out-in-venture-capital-a4a8088c4dd8>.
- Souitaris, V., Zerbinati, S., Peng, B., & Shepherd, D. (2020). Should I stay or should I go? Founder power and exit via initial public offering. *Academy of Management Journal*, 63(1), 64-95.
- Sovacool, B. K., & Hess, D. J. (2017). Ordering theories: Typologies and conceptual frameworks for sociotechnical change. *Social Studies of Science*, 47(5), 703-750.
- Spence, M. (1978). Job market signaling. In *Uncertainty in Economics* (pp. 281-306). Academic Press.
- Stevenson, R. M., Kuratko, D. F., & Eutsler, J. (2019). Unleashing main street entrepreneurship: Crowdfunding, venture capital, and the democratization of new venture investments. *Small Business Economics*, 52, 375-393.
- Strang, D., & Macy, M. W. (2001). In search of excellence: Fads, success stories, and adaptive emulation. *American Journal of Sociology*, 107(1), 147–182.
- Sudek, R. (2006). Angel investment criteria. *Journal of Small Business Strategy* (archive only), 17(2), 89-104.
- Thornton, J., & Marche, S. (2003). Sorting through the dot bomb rubble: How did the high-profile e-tailers fail? *International Journal of Information Management*, 23(2), 121–138.
- Townsend, R. R. (2015). Propagation of financial shocks: The case of venture capital. *Management Science*, 61(11), 2782–2802.
- Turcan, R. V. (2011). Toward a theory of international new venture survivability. *Journal of International Entrepreneurship*, 9(3), 213–232.

- Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent model. *Quarterly Journal of Economics*, 106, 1039–1061.
- Tykocinski, O. E., Pittman, T. S., & Tuttle, E. E. (1995). Inaction inertia: Foregoing future benefits as a result of an initial failure to act. *Journal of personality and social psychology*, 68(5), 793.
- Valliere, D., & Peterson, R. (2004). Inflating the bubble: Examining dot-com investor behaviour. *Venture Capital*, 6(1), 1-22.
- Valliere, D., & Peterson, R. (2005). Venture capitalist behaviours: Frameworks for future research. *Venture Capital*, 7(2), 167-183.
- van de Ven, N., & Zeelenberg, M. (2020). Envy and social comparison. *Social comparison in judgment and behavior*, 223-247.
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and down: the experiences of benign and malicious envy. *Emotion*, 9(3), 419.
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2011). The envy premium in product evaluation. *Journal of Consumer Research*, 37(6), 984-998.
- van Lente, H. (2012). Navigating foresight in a sea of expectations: Lessons from the sociology of expectations. *Technology Analysis & Strategic Management*, 24(8), 769–782.
- Van Lente, H., & Bakker, S. (2010). Competing expectations: the case of hydrogen storage technologies. *Technology Analysis & Strategic Management*, 22(6), 693-709.
- Van Lente, H., Spitters, C., & Peine, A. (2013). Comparing technological hype cycles: Towards a theory. *Technological forecasting and social change*, 80(8), 1615-1628.
- Van Osnabrugge, M. (2000). A comparison of business angel and venture capitalist investment procedures: an agency theory-based analysis. *Venture Capital: An international journal of entrepreneurial finance*, 2(2), 91-109.
- Wadhwani, R. D., & Lubinski, C. (2025). Hype: Marker and maker of entrepreneurial culture. *Journal of Business Venturing*, 40(2), 106455.
- Waikar, S. (2018, December 17). What can we learn from the downfall of Theranos? Stanford Graduate School of Business. <https://www.gsb.stanford.edu/insights/what-can-we-learn-downfall-theranos>
- Wang, L., Wang, S., & Zhang, J. (2013). Venture capital backing and overvaluation: Evidence from the high-tech bubble. *Financial Review*, 48(1), 135–155.
- Warnick, B. J., Murnieks, C. Y., McMullen, J. S., & Brooks, W. T. (2018). Passion for entrepreneurship or passion for the product? A conjoint analysis of angel and VC decision-making. *Journal of Business Venturing*, 33(3), 315-332.

- Wells, W. A. 1974, *Venture Capital Decision Making*, unpublished doctoral dissertation, Carnegie-Mellon University.
- Welter, F., & Baker, T. (2024). Silicon Valley entrepreneurship—Revisiting a popular dream. Available at SSRN 4776240.
- Welter, F., Baker, T., & Wirsching, K. (2019). Three waves and counting: The rising tide of contextualization in entrepreneurship research. *Small business economics*, 52, 319-330.
- Winton, B. G., & Sabol, M. A. (2022). A multi-group analysis of convenience samples: free, cheap, friendly, and fancy sources. *International Journal of Social Research Methodology*, 25(6), 861-876.
- Wood, M. S., Dwyer, S. M., & Scheaf, D. J. (2024). Navigating the temporal commitments of entrepreneurial hype: Insights from entrepreneur and backer interactions in crowdfunded ventures. *Journal of Business Venturing*, 39(6), 106437.
- Wood, M. S., Long, A., & Artz, K. (2020). Angel investor network pitch meetings: The pull and push of peer opinion. *Business Horizons*, 63(4), 507-518.
- Wood, M. S., Scheaf, D. J., & Dwyer, S. M. (2022). Fake it ‘til you make it: Hazards of a cultural norm in entrepreneurship. *Business Horizons*, 65(1), 39-52.
- Wu, H., & Leung, S. O. (2017). Can Likert scales be treated as interval scales?—A Simulation study. *Journal of Social Service Research*, 43(4), 527-532.
- Yeh, J. (2023). How to leverage investor FOMO. Adamant Ventures. <https://www.adamantventures.com/blog/how-to-leverage-investor-fomo>
- Yeon, S. J., Park, S. H., & Kim, S. W. (2006). A dynamic diffusion model for managing customer's expectation and satisfaction. *Technological Forecasting and Social Change*, 73(6), 648-665.
- Zacharakis, A. (2010). *Venture Capitalists Decision Making. Venture Capital: Investment strategies, Structure and Policies.*
- Zacharakis, A. L., & Shepherd, D. A. (2001). The nature of information and overconfidence on venture capitalists' decision making. *Journal of business venturing*, 16(4), 311-332.
- Zankl, J., & Grimes, M. (2024). Taming unicorns: Toward a new normal of responsible entrepreneurship. *Academy of Management Review*, 49(4), 879-905.
- Zeelenberg, M. (1999). Anticipated regret, expected feedback and behavioral decision making. *Journal of behavioral decision making*, 12(2), 93-106.
- Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer psychology*, 17(1), 3-18.
- Zeelenberg, M., Van den Bos, K., Van Dijk, E., & Pieters, R. (2002). The inaction effect in the psychology of regret. *Journal of Personality and social psychology*, 82(3), 314.

- Zhang, R., Yang, X., Li, N., & Khan, M. A. (2021). Herd behavior in venture capital market: Evidence from China. *Mathematics*, 9(13), 1509.
- Zhelyazkov, P. I., & Tatarynowicz, A. (2021). Marriage of unequals? Investment quality heterogeneity, market heat, and the formation of status-asymmetric ties in the venture capital industry. *Academy of Management Journal*, 64(2), 509-536.

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