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# From Speculation to Data-Driven Precision: Exploring Founders' Perspectives on Startup Valuation

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**Abstract**

This study investigates how startup founders perceive and navigate the evolving landscape of valuation methods, with a particular focus on the transition from traditional speculative approaches to data-driven precision methods. The objective is to understand the rationale behind method selection and how these choices influence early-stage funding negotiations. Employing a qualitative methodology, semi-structured interviews were conducted with ten startup founders from diverse industries, all of whom had direct experience with valuation during early fundraising rounds. Findings reveal that while traditional methods such as Discounted Cash Flow (DCF) and Market Multiples are still prevalent, founders often regard them as inadequate due to their reliance on projections and lack of applicability to nascent ventures with limited financial history. In contrast, data-driven valuation models, including those utilizing artificial intelligence (AI) and predictive analytics, are perceived as offering greater objectivity and analytical depth. However, their effectiveness is often limited by insufficient data, challenges in capturing qualitative factors, and resistance from conservative investors. The results also indicate a growing preference for hybrid valuation strategies that combine the familiarity of traditional frameworks with the analytical advantages of data-driven tools. This integrative approach enhances credibility during investor discussions while accommodating contextual nuances. The study concludes by emphasizing the need for adaptable valuation models that reflect both technological advancements and the complexities of early-stage entrepreneurship, offering valuable insights for founders, investors, and policymakers.

**Keywords:** Artificial Intelligence, Data-Driven Decision Making, Entrepreneurial Finance, Hybrid Valuation Models, Interview Study, Startup Valuation.

## Introduction

Valuing startups has traditionally been a complex and uncertain process, shaped by the unique characteristics of these ventures—limited historical data, high uncertainty, and unpredictable growth trajectories (1). Investors and entrepreneurs have long relied on intuition, personal experience, and speculative judgment to determine a startup's worth. Methods such as the Berkus Method, market-based valuation, and the real options approach offer structured yet largely subjective frameworks for assessing startup value (2–4). Recent advances in data analytics and artificial intelligence (AI) present opportunities for more precise, data-driven approaches that enhance objectivity, transparency, and consistency in valuations (5). By leveraging vast datasets, predictive algorithms, and machine learning (ML) models, these approaches aim to reduce reliance on speculation and subjectivity, offering a clearer and more robust understanding of a startup's potential. This shift toward data-driven precision is particularly relevant as startups continue to play an increasingly vital role in global innovation and economic development. Despite previous efforts to consolidate knowledge in this rapidly evolving field, a significant gap has been identified in understanding how data-driven precision methods compare to traditional speculative approaches, particularly in terms of their relative effectiveness and adoption challenges (1, 6, 7). To address this gap, this study investigates two research questions. The first explores how startup founders perceive and compare traditional speculative valuation methods with emerging data-driven precision approaches in the context of early-stage funding. The second examines the challenges founders face when adopting data-driven valuation techniques. By exploring these questions, the study aims to provide deeper insights into the evolving practice and persistent



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obstacles in early-stage startup valuation. To explore these questions, the study first conducted a systematic literature review, critically examining both traditional speculative approaches and contemporary data-driven precision methods in the context of startup valuation. Particular emphasis was placed on assessing the effectiveness of data-driven approaches relative to traditional methods. Subsequently, qualitative interviews were conducted with ten startup founders to gain deeper insights into their valuation experiences and the challenges faced in practice. By addressing these questions, this study aims to contribute to the growing body of knowledge on startup valuation by offering a comprehensive understanding of how emerging data-driven techniques are reshaping valuation practices. Additionally, it provides a foundation for future research, emphasizing the evolving role of data and technology in improving valuation accuracy and supporting more informed decision-making in entrepreneurial finance. Startup valuation, a blend of the concepts' "startup" and "valuation," refers to evaluating a venture's worth, emphasizing innovation and entrepreneurship (6). At the startup phase, ingenuity, flexibility, and departure from conventional norms are essential for fostering scalable businesses. Valuation plays a crucial role in guiding resource allocation, investment decisions, and overall strategic planning (7–9). Beyond mere number-crunching, it encapsulates risk assessment and market dynamics, making it a critical tool for informed financial decision-making and sustainable growth. This comprehensive approach highlights its role as a fundamental driver in shaping a startup's trajectory.

## Theoretical Foundations of Startup Valuation

The field of startup valuation has evolved significantly, shaped by contributions from both academia and industry. A range of theoretical frameworks has been developed to guide valuation thinking, while practical techniques have been progressively refined to reflect real-world startup conditions (3, 10). Academic research has continually enhanced valuation models by integrating probabilistic forecasting, scenario analysis, and business model assessments (11).

Several financial and strategic theories underpin startup valuation methodologies, providing a comprehensive framework for assessing a startup's worth. Agency Theory examines the relationship between investors (principals) and entrepreneurs (agents), highlighting issues of information asymmetry, risk, and incentives in structuring valuation deals (12). This perspective is particularly relevant in early-stage investments, where limited financial history and uncertainty about future performance create challenges in aligning interests between stakeholders.

As startups increasingly adopt data-driven valuation models, a more nuanced theoretical lens becomes necessary (13). Our study's findings align with modern theories that explain how entrepreneurial cognition, behavioral finance, and strategic frameworks shape valuation behavior and decision-making. Behavioral Finance and Cognitive Biases offer insights into how cognitive distortions and emotions influence investment decisions, often leading to valuation deviations from fundamental financial analysis (14). Investors may overvalue startups due to optimism bias or undervalue them due to risk aversion, leading to discrepancies in perceived versus actual valuation (15). These cognitive distortions not only deviate from fundamental analyses but also contribute to the subjectivity of investor judgment and the prevailing distrust of traditional models—patterns consistently echoed across founder narratives (16).

Similarly, the Berkus Method provides a structured yet qualitative approach to estimating startup valuation by assigning monetary values to key risk factors such as the idea, prototype, management team, strategic relationships, and sales traction (17). This method helps address valuation uncertainty by offering a tangible framework that investors can use for early-stage startups.

From an Innovation Theory perspective, startup valuation is driven by technological commercialization, intellectual property, and market disruption, emphasizing how innovation contributes to competitive advantage and firm valuation (18). This aligns with the Market-Based View, which focuses on external factors such as market conditions, competition, and growth potential in determining startup value (2). By considering industry trends and external forces, this perspective provides a dynamic understanding of valuation beyond internal company metrics.

Entrepreneurial cognition theory elucidates how founders navigate valuation decisions amid uncertainty, often integrating heuristics and experiential learning (19). This cognitive framework emphasizes the interplay between an entrepreneur's internal representations and the external environment, shaping their decision-making processes. This aligns with our observed theme of hybrid valuation practices, where traditional familiarity is combined with the analytical depth of AI tools to build credibility in negotiations.

The Real Options Theory conceptualizes startups as collections of future growth opportunities, offering a valuation model that accounts for strategic flexibility (4). Unlike traditional valuation models, which assume a linear trajectory, this approach considers the startup's ability to pivot, expand, or modify strategies based on emerging opportunities. Meanwhile, the Resource-Based View (RBV) evaluates a startup's unique resources, such as intellectual capital, social networks, and leadership capabilities (20). This theory suggests that startups with rare, valuable, and inimitable resources hold a stronger competitive advantage, ultimately impacting their valuation.

Additionally, signaling theory and the technology acceptance model (TAM) frame the dynamics of adopting AI-powered tools. Founders view predictive analytics as a signal of legitimacy to investors, potentially improving clarity (21). Yet investor scepticism toward AI, driven by concerns over transparency and interpretability, suggests limited trust in automated valuation systems (22). Furthermore, our study highlights the inflexibility of generic AI models and their inability to capture qualitative value, calling for more context-sensitive applications.

These theoretical foundations align with venture capital assessment models, which integrate both qualitative and quantitative factors to provide a more comprehensive evaluation of a startup's potential. By synthesizing insights from multiple disciplines, these frameworks help investors and entrepreneurs navigate the complexities of startup valuation in an increasingly data-driven and competitive landscape.

### Emerging Trends in Startup Valuation

The groundwork for contemporary valuation techniques was established through early contributions, while a recent shift has been identified toward forward-looking valuation models that incorporate probability-based assessments and business model evaluations (3, 5, 10, 23, 24). However, challenges persist in accurately measuring startup value due to revenue uncertainties, macroeconomic conditions, and industry-specific risks. Most studies emphasized the continued reliance on multiple-based valuation while advocating for the integration of broader funding and market data to enhance accuracy (1).

Technological advancements, particularly in big data, AI, and ML, have transformed startup valuation methodologies (25–27). AI-driven models analyze vast datasets, identifying patterns and correlations that enhance predictive accuracy while reducing human biases (26). ML algorithms facilitate real-time valuation adjustments, allowing continuous updates based on evolving market conditions (27). Additionally, alternative data sources—such as social media sentiment analysis, customer feedback, and network effects—are increasingly integrated into valuation models, providing a more holistic assessment (28).

Despite these advancements, startup valuation remains an evolving field with persistent inconsistencies between academic research and industry practices. To better understand its evolution and identify potential research directions, it is essential to review and summarize existing studies in the field. A systematic literature review (SLR) can effectively address this need by providing a comprehensive overview of past research, highlighting critical insights, and uncovering gaps for future research direction.

## Methodology

### Interview Design

The interviews were designed to explore startup founders' experiences with valuation methods, with particular emphasis on the transition from traditional approaches to data-driven techniques. Each session sought to capture the nuanced realities founders faced when navigating early-stage valuation in a rapidly evolving financial landscape.

The interviews focused on three major areas. First, participants were asked to describe the valuation methods they had employed in their startups, including traditional approaches such as the Berkus Method, Market Multiples, and DCF. They were also invited to reflect on their experiences

with these methods, highlighting any perceived strengths, limitations, or contextual challenges they encountered.

Second, the interviews delved into the founders' motivations and experiences related to the adoption of data-driven valuation techniques. Participants were encouraged to share when and why they first considered integrating data-driven methods, the nature of the tools or models they adopted, and specific instances where such approaches provided insights that traditional valuation methods could not.

Third, the conversations examined the broader challenges founders faced during the valuation process. Questions addressed obstacles such as data scarcity, market volatility, and investor responses to both traditional and data-driven valuation strategies. Participants were also asked to discuss how external factors like market conditions influenced their valuation practices and how their choice of valuation method affected negotiations with investors.

Each interview lasted between 45 to 60 minutes and was conducted either via Zoom or in person, depending on participant's availability and preference. A semi-structured format was adopted to provide consistency across key themes while allowing flexibility for participants to elaborate on unique or unexpected aspects of their experiences. This open-ended approach facilitated rich, detailed narratives, enabling the study to capture both the strategic and emotional dimensions of startup valuation in early-stage entrepreneurial contexts.

## The Selection of Participants

This study employed a qualitative research design and adopted purposive sampling strategies to recruit participants who possessed direct, practical experience with startup valuation. The participants consisted of ten startup founders operating across diverse industries, including agritech, construction, e-commerce, edtech, foodtech, logistics, and software as a service (SaaS). All participants were selected based on predefined criteria to ensure the relevance and richness of the data collected.

To qualify for inclusion, founders were required to have successfully completed at least one funding round involving valuation negotiations with external investors or financial analysts. This criterion ensured that participants had substantial firsthand experience with the application of valuation methods in real-world funding contexts. Furthermore, participants needed to have engaged with or seriously explored data-driven valuation methods—such as predictive analytics, AI models, or algorithmic valuation tools—beyond reliance on purely traditional or speculative approaches.

A snowball sampling technique was utilized to facilitate recruitment. The process began with initial contacts within the startup ecosystem, identified through professional networks and startup incubators. These initial participants subsequently referred additional founders who met the eligibility criteria, allowing the study to access a broader pool of knowledgeable and experienced respondents. Snowball sampling was deemed particularly effective in this context, given the specialized nature of valuation knowledge and the relatively small population of early-stage founders familiar with emerging data-driven techniques (29).

Care was also taken to ensure sectoral diversity among participants, capturing perspectives from technology-driven ventures as well as more traditional industries. This approach provided a comprehensive view of how valuation practices vary across different startup domains and allowed for greater depth in exploring sector-specific challenges in the adoption of data-driven valuation methods. By employing these rigorous selection procedures, the study sought to enhance the credibility and transferability of its findings, ensuring that the insights generated were grounded in rich, contextually relevant entrepreneurial experiences.

## Data Analysis

All interviews were transcribed verbatim and analyzed through thematic analysis, following a systematic and iterative process to capture recurring patterns and underlying insights. The analysis began with familiarization, where the researchers repeatedly read the transcripts to immerse themselves in the data and gain an overall sense of emerging ideas. During this phase, initial observations and noteworthy points were documented. Subsequently, an open coding process was conducted, where key phrases, sentences, and concepts relevant to startup valuation were identified and assigned preliminary codes. Each transcript was reviewed line-by-line to ensure that the coding captured both explicit comments and underlying meanings.

Special attention was given to statements relating to founders' experiences with traditional valuation methods, motivations for adopting data-driven techniques, and perceived challenges in implementation. Following open coding, the researchers engaged in axial coding to organize the initial codes into related clusters, linking categories based on their conceptual similarities and relationships. This process led to the identification of overarching thematic areas, such as the perceived subjectivity of traditional methods, the practical benefits and limitations of data-driven approaches, investor skepticism toward AI-generated valuations, and the emergence of hybrid valuation strategies. Throughout the analysis, codes and themes were refined and re-evaluated to ensure internal consistency and clear distinctions between themes. Divergent or contradictory cases were also carefully examined to capture the complexity of founders' experiences and avoid oversimplification.

Finally, the thematic categories were synthesized into a coherent narrative, reflecting how startup founders perceive and navigate the evolving valuation landscape. This approach enabled a rich, nuanced understanding of the practical realities of startup valuation, grounded directly in the lived experiences of early-stage entrepreneurs.

## Results and Discussion

This section presents the findings from in-depth qualitative interviews with ten startup founders, organized into three major thematic areas: experiences with traditional valuation methods, adoption of data-driven valuation approaches, and challenges encountered in the application of data-driven techniques. The discussion further integrates relevant literature to contextualize the findings within broader entrepreneurial finance and valuation research.

Table 1 offers an overview of the ten startup founders interviewed, detailing their industry, funding stage, valuation methods employed, and the extent of their engagement with data-driven approaches.

**Table 1:** Participant Details

| Id | Industry | Funding Stage | Valuation Methods Used | Experience With Data-Driven Valuation |
|---|---|---|---|---|
| Founder A | Foodtech | Seed funding | Berkus method, DCF, Data-driven valuation models (AI/ML-based) | Using a hybrid model integrating AI with traditional valuation |
| Founder B | SaaS | Series A | Revenue Multiples, Data-driven valuation models (AI/ML-based) | Using a hybrid model integrating AI with traditional valuation |
| Founder C | Agritech | Seed funding | Market Multiple Method, Risk Factor Summation Method | Minimal experience, currently exploring feasibility of AI-based solutions |
| Founder D | EdTech | Seed funding | DCF, Berkus Method | Minimal experience, currently exploring feasibility of AI-based solutions |
| Founder E | E-commerce | Series A | Market Multiple Method, Data-driven valuation models (AI/ML-based) | Using a hybrid model integrating AI with traditional valuation |
| Founder F | E-commerce | Seed funding | Cost-to-Duplicate Method, Comparable Transactions | Minimal experience, currently exploring feasibility of AI-based solutions |
| Founder G | E-commerce | Seed funding | Scorecard Valuation Method, Berkus Method | No current adoption; prefers founder narrative and investor alignment |

| | | | | |
|---|---|---|---|---|
| Founder H | Logistic | Series A | Real Options Valuation, Market Multiples | Trialling predictive analytics for scenario planning |
| Founder I | Construction | Seed funding | DCF, Risk Factor Summation Method | Exploring AI-driven tools tailored to agronomic and environmental datasets |
| Founder J | Agritech | Seed funding | DCF, Adjusted Net Asset Method | Minimal experience, currently exploring feasibility of AI-based solutions |

## Experience with Traditional Speculative Approaches

Through all interviews, founders expressed a complex and often critical relationship with traditional speculative approaches. Conventional techniques such as the DCF, Market Multiples, and the Berkus Method were widely acknowledged as industry norms, providing a shared language for discussions with investors. However, participants also highlighted the fundamental limitations of these methods when applied to early-stage ventures characterized by volatile revenues, limited operating history, and high levels of uncertainty.

Several founders criticized traditional models for their subjectivity and susceptibility to manipulation. As Founder A (FoodTech) noted:

*"I tried using the Berkus method because it seemed like an industry standard, but I quickly realized that investors don't really take it seriously. Instead, they rely on their gut feeling."*

A similar sentiment was echoed by Founder G (E-commerce), who relied on the Scorecard Method but admitted:

*"It felt like I was telling a story rather than building a case. The numbers were there, but they didn't drive the conversation."*

The shortcomings of revenue-based valuation methods were especially pronounced among seed-stage founders. Founder B (SaaS) recounted:

*"I tried using revenue multiples, but with our volatile income, it just didn't make sense. One investor looked at our ARR and said, 'Your revenue's still a dot on the graph—come back when it turns into a line.'"*

This anecdote illustrates the limited applicability of conventional models in contexts where revenues are unstable or pre-revenue, reflecting concerns raised in prior studies regarding the interpretive leeway inherent in traditional valuation approaches (30). This subjectivity often led to skepticism from both founders and investors, ultimately weakening the credibility of valuation discussions.

External volatility further compounded these challenges. Participants pointed out those traditional models were overly sensitive to external market conditions rather than reflecting the intrinsic potential of the startup. As Founder E (E-commerce) explained:

*"Our valuation changed every time a competitor launched. It wasn't about our performance—it was market noise."*

Similarly, Founder J (Agritech) shared:

*"We were pegged against benchmarks that didn't reflect our specific challenges in agriculture."*

These reflections highlight how competitive market entries and macroeconomic shifts could drastically alter perceived valuations, regardless of a startup's operational performance. This finding aligns with critiques in the literature that traditional models often fail to adequately account for startup-specific risks and market dynamics (31).

In industries with long project cycles, such as construction, founders emphasized that cash flow-based models were particularly ill-suited, failing to capture the non-linear and episodic nature of revenue generation. Founder I (Construction) stated:

*"DCF made sense on paper, but we don't operate like a typical cash flow model—we're project-based. It's not that linear."*

Further concerns were raised about the malleability of assumptions in traditional models. As Founder D (EdTech) explained:

*"You can make DCF say anything you want with the right assumptions. That's why I don't fully trust it."*

While traditional models offered a shared framework for valuation, founders emphasized their lack of precision in early-stage contexts and their tendency to obscure rather than clarify entrepreneurial potential. Collectively, these experiences point to a growing dissatisfaction among entrepreneurs with conventional valuation

techniques, particularly in environments where business models and revenue structures deviate significantly from standard patterns.

## Adoption of Data-Driven Precision Methods

Despite the challenges associated with traditional methods, founders approached data-driven valuation techniques with cautious optimism. Those who had incorporated elements of AI, ML, or predictive analytics into their valuation processes reported several benefits. Specifically, data-driven models were perceived as enhancing objectivity, reducing reliance on subjective assumptions, and providing stronger evidence during investor negotiations.

The adoption of data-driven approaches, however, was uneven across participants. While some founders had actively integrated ML and predictive analytics into their valuation frameworks, others remained in exploratory phases. Founder E (E-commerce), for instance, stated:

*"When we introduced machine learning into our valuation process, negotiations became smoother. The numbers made more sense to investors."*

Similarly, Founder B (SaaS) mentioned,

*"We still present a traditional model, but now we back it up with AI. It gives us more confidence and helps us push back during tough investor questions."*

Among participants exploring AI-driven tools, the response was more reserved. Founder C (Agritech) shared,

*"We used AI models to estimate value based on crop data and market demand. It was accurate, but investors still asked for a traditional projection."*

Founder D (EdTech) echoed similar concerns, commenting:

*"The AI dashboards are cool, but if you don't have enough data, they become just another visual. It's not magic."*

In logistics, Founder H described an experimental approach:

*"We're trying predictive analytics for route optimization. It's useful for operations but translating that into valuation numbers is tricky."*

Founder F (E-commerce) reflected on an early experiment with data tools:

*"We tried a platform that promised automated valuation insights. The output looked professional, but the assumptions were hidden. That made it hard to defend."*

Even among those still in exploratory phases, a consistent pattern emerged: data-driven methods were regarded as offering transparency and rigor but required significant contextual validation to be effective. As Founder I (Construction) remarked:

*"We've started testing AI tools, but construction is messy—lots of variables that models can't handle yet."*

Such observations align with existing research, which suggests that AI can improve transparency and predictive accuracy in startup valuation, but often struggle with industry-specific complexities (27).

Despite varying levels of implementation, the majority of founders viewed data-driven tools not as replacements for traditional valuation methods but as valuable complements. Founders acknowledged that data-driven methods were rarely employed in isolation. Instead, a hybrid approach was predominant, where traditional frameworks were supplemented with data-driven insights to create a more comprehensive and defensible valuation narrative.

This practice reflects an emerging trend toward blended valuation models, where human judgment and algorithmic precision are deliberately combined to mitigate the limitations inherent in each approach individually. Interestingly, several founders emphasized that the mere incorporation of data-driven analysis served as a positive signal to investors. Even when final negotiations relied heavily on traditional metrics, the integration of AI or predictive tools positioned the startup as more professional, credible, and forward-looking, thereby enhancing its attractiveness to potential backers.

## Challenges in Adopting Data-Driven Precision Methods

While the benefits of data-driven valuation were acknowledged, founders consistently identified significant barriers to its effective implementation. The most commonly cited challenge was the lack of sufficient high-quality data, particularly among seed-stage startups. Founder D (EdTech) admitted:

*"We don't have years of historical data or customer cohorts. That makes it hard to get anything meaningful out of machine learning."*

Without longitudinal datasets or robust customer cohorts, AI models struggled to generate meaningful insights. This limitation has been

consistently observed, with data availability identified as a key constraint for early-stage ventures seeking to leverage analytics in decision-making processes (7, 28).

Another recurrent theme was the reluctance of investors to fully trust algorithm-generated valuations. Several founders reported that investors demanded traditional financial models they could manually adjust, expressing distrust toward "black box" AI outputs. Founder C (Agritech) recalled,

*"I've had investors literally say, 'I don't trust AI to tell me what your company is worth.' They want numbers they can play with in Excel."*

Founder J (Agritech) echoed this concern:

*"Investors still want a financial model they can manipulate. A black-box output doesn't cut it for them."*

These findings suggest that cognitive biases, particularly the familiarity heuristic, continue to influence investment behaviors, even in an increasingly data-driven environment (14).

Founders operating in niche sectors—such as construction, agritech, and consumer brands—further noted that most available data-driven tools were optimized for SaaS or technology startups and lacked the flexibility to accommodate industry-specific variables. Founder F (E-commerce) observed:

*"Most valuation tools assume you're a tech SaaS. For us, a consumer brand, it didn't reflect our customer journey or brand equity."*

Similarly, Founder I (Construction) commented:

*"Our project cycles are long and irregular. AI doesn't know how to factor in local regulation delays or subcontractor risks."*

Another significant limitation identified was the inability of current AI models to effectively capture qualitative, intangible assets, such as brand equity, strategic partnerships, or community loyalty. Several founders emphasized that these non-financial factors were critical to their competitive advantage but remained invisible to quantitative valuation algorithms. As Founder G (E-commerce) explained:

*"There's no metric for community loyalty. But for us, that's what drives 60% of our repeat sales."*

Founder H (Logistics) reinforced this view:

"*Partnerships and relationships are hard to quantify. They're worth a lot, but the model doesn't see them*."

Finally, the operational burden associated with cleaning, structuring, and integrating data for predictive modeling was often underestimated. Founders described the adoption process as time-consuming and resource-intensive, particularly for startups with limited technical expertise or budget constraints. Founder A (FoodTech) admitted:

*"We had to clean and format so much data before we even got to see results. It was more work than expected."*

Taken together, the findings of this study suggest that the future of startup valuation may lie not in the wholesale replacement of traditional methods by AI but in the emergence of hybrid valuation practices. Founders increasingly recognize the strategic advantage of blending conventional frameworks with data-driven insights to enhance negotiation leverage, improve credibility with investors, and tailor valuation narratives to different audiences.

This hybrid approach reflects a pragmatic adaptation to the complex realities of early-stage entrepreneurship, where both historical heuristics and emerging technologies play vital roles. It also resonates with broader calls in the literature for more integrative, context-sensitive models of startup valuation (1).

Table 2 concludes the findings and addresses the research questions. It outlines key themes and sub-themes derived from startup founders' responses. It highlights their experiences with traditional valuation methods—emphasizing subjectivity, market sensitivity, and distrust—and their perceptions of data-driven approaches. While data-driven methods offer clarity and support hybrid valuation models, founders also face challenges such as data scarcity, limited AI flexibility, and the inability to capture qualitative factors like brand sentiment.

**Table 2:** A Thematic Summary of Startup Founders' Experiences with Valuation Methods, Responding to RQ1 and RQ2

| Research Questions | Theme | Sub-Theme | Illustrative Statement |
|---|---|---|---|
| RQ1: How do startup founders perceive and compare traditional speculative approaches with emerging data-driven precision methods in the context of early-stage funding? | Experience with traditional speculative approaches | Subjectivity of investor judgment | "Investors rely on gut feeling" |
| | | Revenue instability limits metric use | "Where's the traction?" |
| | | Market sensitivity of traditional models | "Valuation changed with competitor entry" |
| | | Lack of trust in traditional models | "Berkus method... not taken seriously" |
| RQ2: What challenges do startup founders encounter when adopting data-driven valuation techniques? | Adoption of data-driven precision methods | Improved investor clarity through data | "Machine learning made negotiations smoother" |
| | | Investor scepticism toward AI valuation | "Investors insisted on traditional projections" |
| | | Emergence of hybrid valuation practices | "Use AI to back up traditional models" |
| | Challenges in data-driven precision methods | Data scarcity in early-stage startups | "We don't have large datasets" |
| | | Lack of investor trust in automation | "I don't trust AI to tell me what your company is worth" |
| | | Inflexibility of generic AI models | "Models don't fit niche industries" |
| | | Limitations in capturing qualitative value | "Doesn't account for brand loyalty or sentiment" |

# Conclusion

This study explored startup founders' perceptions of traditional speculative approaches and data-driven precision methods, highlighting the evolving practices and persistent challenges in early-stage entrepreneurial finance. The findings suggest that while traditional speculative approaches such as DCF, Market Multiples, and the Berkus Method remain prevalent, they are increasingly regarded as insufficient for capturing the realities of nascent ventures characterized by revenue volatility and high uncertainty (1). In contrast, data-driven valuation precision methods, particularly those utilizing AI and predictive analytics, are perceived to offer enhanced objectivity and analytical support, although their effectiveness is constrained by data limitations, sector specificity, and investor skepticism (32). A hybrid approach that blends traditional familiarity with analytical rigor appears to be gaining traction among founders, providing a balanced strategy that enhances negotiation credibility while accommodating contextual complexities.

A key contribution of this study is the identification of hybrid valuation practices, wherein founders strategically integrate traditional frameworks with data-driven insights to strengthen negotiation positions and valuation credibility. This emerging approach reflects a pragmatic response to the limitations of both conventional and technological methods, aligning with calls in the literature for more adaptive and context-sensitive valuation models (33). These findings hold immediate implications for early-stage investors, valuation experts, and company incubators, as they underscore the need for more flexible, hybrid valuation frameworks that balance analytical precision with contextual relevance. Emphasizing both qualitative insights and data-driven models may enhance stakeholder alignment, build investment confidence, and improve the accuracy of early-stage funding decisions. Nonetheless, the study is not without limitations. The relatively

small and geographically concentrated sample restricts the generalizability of the findings. Furthermore, the study captures the founder perspective exclusively, omitting viewpoints from investors, analysts, and other ecosystem participants who shape valuation outcomes. To support more effective founder decision-making, incubators and accelerators should consider embedding valuation coaching and data literacy training into early-stage programs. However, an over-reliance on AI-powered tools—though beneficial—may sideline contextual judgment and lead to misalignment with investor expectations (34, 35). A more balanced approach that integrates technological tools with founder intuition and industry knowledge is essential to ensure credibility and contextual fit in valuation practices. Future research could expand on these findings by incorporating multi-stakeholder perspectives, employing longitudinal designs to observe valuation practice evolution over time, and investigating sector-specific applications of emerging AI tools. Greater attention to how qualitative dimensions, such as relational capital and brand equity, can be integrated into data-driven valuation models is also warranted.

## Abbreviations

AI: Artificial Intelligence, DCF: Discounted Cash Flow, SaaS: Software as a Service, ML: Machine Learning, RBV: Resource-Based View, SLR: Systematic Literature Review.

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## Author Contributions

All authors made an equal contribution.

## Conflict of Interest

There is no conflict of interest with the content of this article.

## Ethics Approval

Ethics approval was not applicable for this study, as it involved voluntary participation from adult startup founders who provided informed consent for the interviews. No sensitive personal data or vulnerable populations were involved. All participants were assured of confidentiality and anonymity, and the study adhered to ethical standards in qualitative research practices.

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