

The Objective Importance of Founder Signals: an entropy method analysis of venture capital decisions in the EdTech sector

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Introdução

This paper introduces the EdTech sector as a dynamic and growing field facing a recent slowdown in venture capital investment. It highlights the inherent difficulty in valuing startups due to their opacity and lack of historical data. This section establishes the context for the research, positioning it as a response to the need for a more nuanced understanding of what drives investor decisions in this specific, high-growth industry.

Problema de Pesquisa e Objetivo

The core problem is the gap in existing startup valuation literature, which often overlooks the specific signals sent by founders, particularly within the EdTech sector. This study aims to address this by proposing a methodological evolution of current evaluation frameworks. The objective is to objectively measure the importance of six specific founder characteristics using the Entropy method, thereby revealing their true influence on venture capitalist decision-making.

Fundamentação Teórica

The research is grounded in Signaling Theory, which explains how one party (the founder) conveys information about unobservable qualities to another party (the investor) to reduce information asymmetry. This section defines the VC decision process as an act of signal reception and screening. It conceptualizes the six founder characteristics—gender, education, foreign experience, work experience, startup familiarity, and interculturality—as the key signals under investigation.

Metodologia

The study employs a hybrid, cross-sectional research approach using primary data collected from experienced EdTech VCs via a purposive sampling method. A vignette-based survey presented 15 systematically varied founder profiles to the experts. Their evaluations, captured on a 7-point Likert scale, were aggregated using a geometric mean to form a decision matrix. This matrix was then analyzed using the Entropy method to objectively calculate the weight of each founder characteristic.

Análise dos Resultados

The Entropy analysis revealed a clear hierarchy of influence among the founder signals. "Familiarity with the Startup Industry" emerged as the most critical signal, with an objective weight of 0.5496, followed by "Prior Work Experience" (0.2243). Experience-based signals collectively accounted for over 77% of the total weight. Intercultural attributes like "Foreign Experience" and "Founders' Nationality" had lower, yet still significant, weights. The "Gender" criterion yielded a weight of zero due to a lack of variance in the data.

Conclusão

The study concludes that for early-stage EdTech ventures, signals directly related to a founder's proven execution capability and experience are paramount. The research provides a nuanced understanding of how VCs process founder-centric signals, anchoring their evaluations on credible proxies for risk reduction. The findings also suggest that while intercultural attributes are relevant, they hold a secondary level of importance in the initial evaluation process within this specific sector.

Contribuição / Impacto

The primary contribution is methodological, offering a replicable, objective framework for weighing founder signals that moves beyond subjective investor statements. Theoretically, it refines Signaling Theory by empirically validating and ranking the informational value of specific founder signals. Practically, it provides entrepreneurs with a data-driven guide for fundraising narratives and offers investors a tool for self-reflection and the development of more equitable evaluation processes.

Referências Bibliográficas

- Dahooie, et al. (2025). Venture capital dilemma: which start-up to invest in?. *Review of Managerial Science*, 1-51.
- Martielli, et al. (2025). Unlocking funding success: intercultural entrepreneurship dynamics in European startups. *International Entrepreneurship and Management Journal*, 21(1), 19.
- Spence (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355-374.
- Svetek (2022). Signaling in the context of early-stage equity financing: review and directions. *Venture capital*, 24(1), 71-104.