

UNIVERSITÀ DEGLI STUDI DI BERGAMO

VALUATION OF INNOVATIVE START-UPS: THEORY AND PRACTICE ON NON-FINANCIAL DRIVERS



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di Ingegneria Gestionale, di Ingegneria Gestionale, dell'Informazione e della Produzione **Daniel Agyare**

Introduction 1/3

- ❑ Venture capital not only plays a significant role in financing innovation for economic growth, but it is also a unique kind of investing in terms of when, where, and how it is done (Granz et al. 2019; Wessendorf et al. 2019; Köln 2017; Falik et al. 2016).
 - Evaluating young and innovative firms in the presence of information asymmetry - is becoming more and more challenging (Berger and Köhn 2018).
 - The valuation of young innovative start-ups in the context of venture capital (VC) is often acknowledged as more of heuristic or gut feeling rather than science (Milkova et al. 2018; Maxwell et al. 2011; Levie and Gimmon, 2008)
 - In an attempt to separate doxa from episteme, could works from the entrepreneurial theories – among others - inform the relevant importance of the criteria adopted by VCs ?



Introduction 2/3

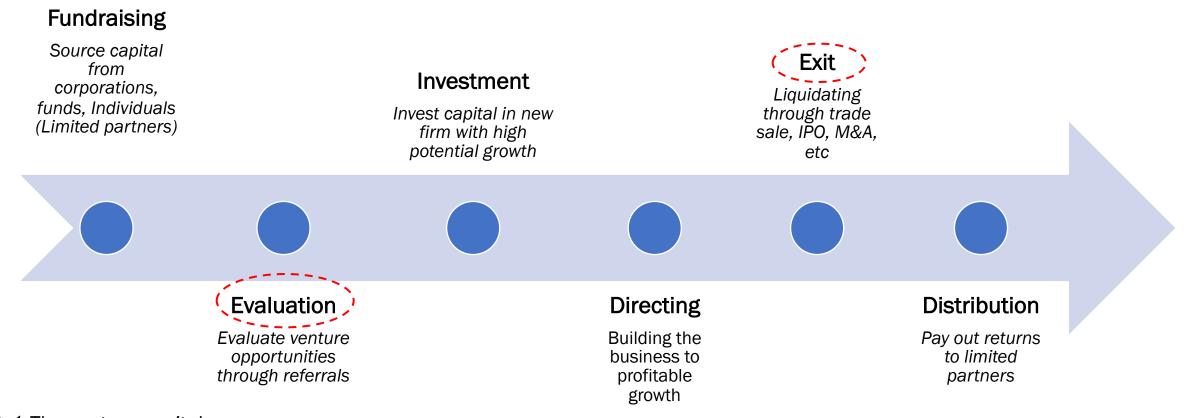


Fig. 1 The venture capital process



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Introduction 3/3

estone ctivities RiskBusiness planScreening high growth m Stay velopment nancing Estment

Fig. 2 Key stylized facts of VC financing



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Purpose

□ The purpose of this systematic review is to explore how VCs use different criteria to limit uncertainty and achieve venture success in the academic literature as well as the impact such criteria have on VCs valuation of young innovative start-ups.



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Methodology

1. Identification of articles (312 articles) \rightarrow Scopus, Google scholar

- Object of appraisal: Start-up
- Object of research: Determinants or criteria
- The activity to be addressed: Valuation
- The entity performing the activity: VC, BA or Investors in general
- Stage of development: Seed stage, Early stage

2. Focus on journal articles using quality cut off (130 articles)

• ABS journal ranking 2018 \rightarrow 2*/3* upwards

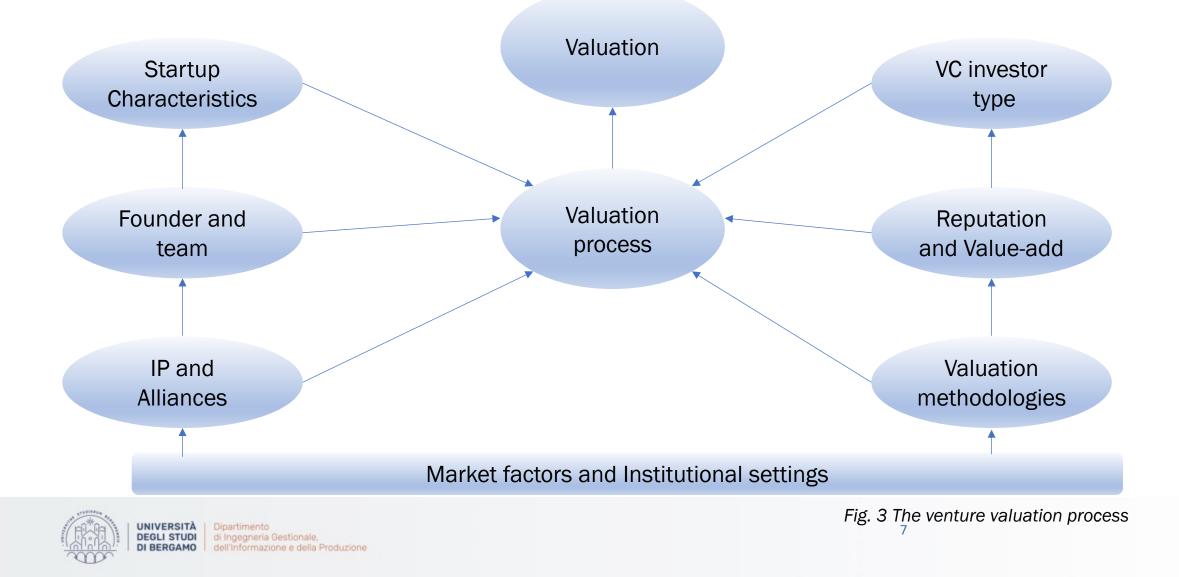
3. Focus on selection and exclusion criteria(46 articles)

- Empirical articles \rightarrow financial valuation or a variation
- Level of analysis exploited
- Valuation methodologies

4. Additional search using snowball effect: (67 articles)

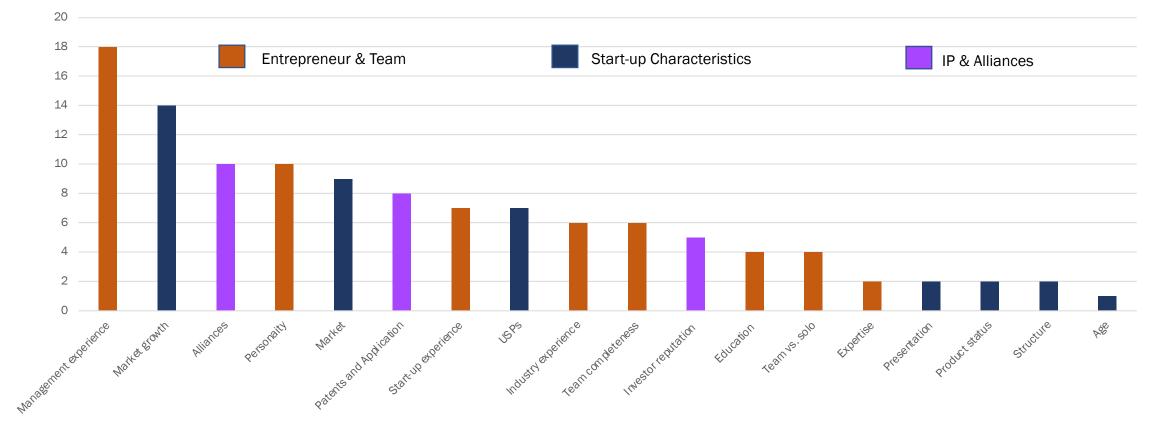


Preliminary findings 1/3



Preliminary findings 2/3

Fig. 4 Frequency of non-financial criteria on start-up valuation in the academic literature

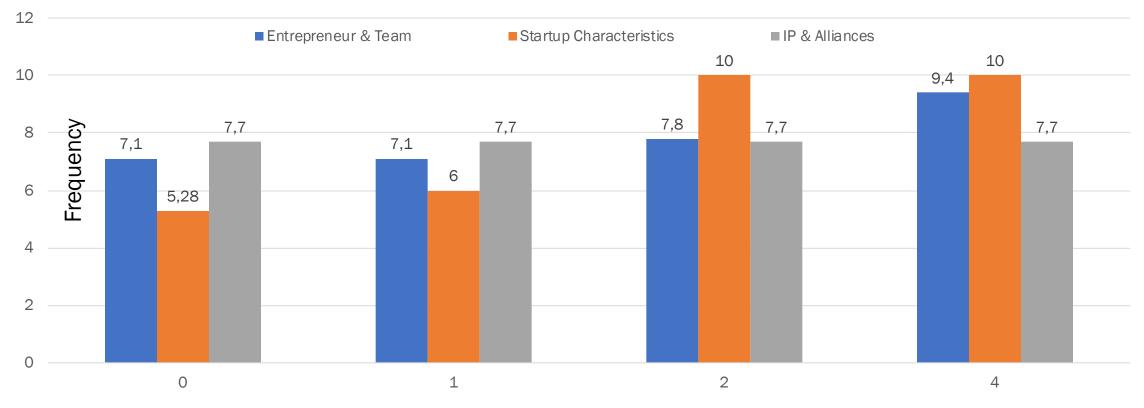




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Preliminary findings 3/3

Fig.5 Impact of non-financial criteria on start-up valuation in the academic literature



Cut-off point



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Results and Discussion

- Early-stage venture valuation in general is spread over many determinants (18 determinants).
- □ Management experience, market growth, alliance and personality have the highest attention in early stage venture valuation research.
- □ On a category level, IP and Alliance is first before entrepreneur and team as well as start-up characteristics.
- □ However, there is excessive reliance on commercial VC databases, making valuation a mystery.
- Current research thus far only scratched the surface of uncovering the determinants of start-up valuations.



Conclusion

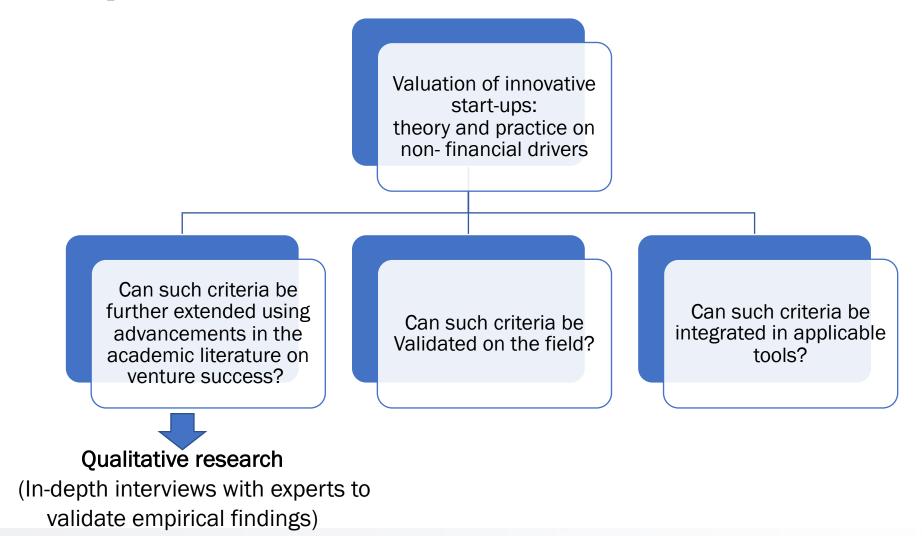
□ Start-up valuations are determined within a complex setting.

□ There is a need to capitalize on different approach.



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Future development





THANK YOU FOR YOUR ATTENTION



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