



# The survival of the fastest: Unveiling the determinants of Unicorns and Gazelles' early success

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## ABSTRACT

*What are the determinants of Unicorns and Gazelles' early success?* This review article examines the factors that contribute to the success of Unicorns and Gazelles in their early life stage. Indeed, despite their unique characteristics and significant impact on the global economy, Unicorns and Gazelles have yet to be thoroughly examined in terms of their (exceptional) survival factors. To bridge this literature gap, we systematically reviewed 66 articles, comparing Unicorns' and Gazelles' survival determinants and proposing a conceptual framework for their life cycle. Attracted by the exceptional characteristics of these new ventures, such as the fast scalability provided by their business models, early investors play a key role in helping them overcome initial challenges. However, this reliance on investors presents a double-edged sword, as withdrawing their support can lead to significant disruptions. This understanding provides valuable insights for entrepreneurs, investors, and policymakers navigating the complexities of the start-up world, ultimately increasing the likelihood of venture success and achieving a champion status. By shedding light on these exceptional ventures, our study contributes to a more comprehensive understanding of the factors driving the survival dynamics of Unicorns and Gazelles.

## 1. Introduction

*What are the determinants of Unicorns and Gazelles' early success?* Through conducting the first literature review of the extant evidence on this research question, this article aims to provide a novel contribution to that management and entrepreneurship area focused on understanding the reasons behind the (exceptional) infant survival of Unicorns and Gazelles (e.g., Abatecola, Cristofaro, Giannetti & Kask, 2022; Aldrich & Ruef, 2018; Cristofaro, 2017; Cristofaro, Giannetti, & Abatecola, 2023a; DeSantola & Gulati, 2017).

Despite being still under discussion from some aspects (Aldrich & Ruef, 2018; Kuckertz, Scheu, & Davidsson, 2023; Savin & Novitskaya, 2023),<sup>1</sup> in this article, we adopt: *i*) the wide-accepted conceptualization of Unicorns as (mostly high-tech) ventures with a market value equal to over US\$1 billion (Lee, 2013; Urbinati, Chiaroni, Chiesa & Frattini, 2019), and *ii*) of Gazelles, according to the Organization for Economic Cooperation and Development (Ahmad, 2006), as ventures under five years old with an average employment growth rate of more than 20% per year over three years, and with ten or more employees at the

beginning of each reporting period (Erhardt, 2021; Henrekson & Johansson, 2010).

Unicorns (such as Tesla, Stripe, and SpaceX) and Gazelles (e.g., formerly Cisco, Yahoo, and Dell) are widely recognized as the most prominent types of high-growth start-ups because of their unique, distinctive features, from which their extraordinary success (and global impact) seemingly derives (Mollick, 2020). Given their remarkable business performance, entrepreneurs, investors, and policymakers are eager to identify and influence the formation of these extraordinary ventures (Acs, Parsons, & Tray, 2011; Coad & Karlsson, 2022; Croce, Ughetto, Bonini & Capizzi, 2021; Eklund & van Crielingen, 2022; Sims & O'Regan, 2006). In fact, from their inception, these ventures have demonstrated exceptional market valuation and revenue growth rates, which sets them apart from 'traditional' start-ups (Lehmann, Schenkenhofer, & Wirsching, 2019). Despite receiving increasing attention in venture capital conversations and media coverage, the existing literature on Unicorns and Gazelles remains fragmented, with few studies focused on explaining how these start-ups break away from traditional life cycle phases (Abatecola et al., 2022; Cristofaro et al., 2023a; De

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<sup>1</sup> To date, there is no 'one size fits all' definition for Unicorns and Gazelles, such that market value capitalization/performance being exceptional in one country – and in a particular historical moment – are not necessarily deemed the same in another. As a result, it isn't easy to use conclusive definitions about what firms are Unicorns or Gazelles.

Massis, Frattini, & Quillico, 2016; Kabbara & Hagen, 2023). Therefore, there is a need for research that delves into the essence of these ‘new entrepreneurial species’, specifically exploring the factors driving their successful evolution.

On this premise, the literature has broadly accepted that the early success of new-born ventures can be explained through the well-known *liability of newness* hypothesis, introduced by the famous American sociologist Arthur Stinchcombe in 1965. In Stinchcombe’s arguments, start-ups will likely survive during infancy if they overcome their lack of *i)* experience, *ii)* coordination, *iii)* ties, and *iv)* trust relationships. Recent review works have also confirmed Stinchcombe’s assumptions (e.g., Josefy, Harrison, Sirmon & Carnes, 2017; Soto-Simeone, Sirén, & Antretter, 2020). According to these works, at the same time, further research is needed to understand whether, because of their importance, Unicorns and Gazelles can resonate with the determinants of infant survival associated with the liability of newness.

Unicorns and Gazelles require distinct research approaches to understand their survival strategies, primarily because of their unique characteristics (e.g., Kotha, Shin, & Fisher, 2022). Unlike most start-ups, these companies adopt disruptive, scalable business models with ambitions of rapid market dominance (e.g., Bock & Hackober, 2020; Stadler, 2016). Their early-stage navigation strategies are often shaped by access to significant resources, distinguishing them from traditional start-ups (Cristofaro, 2017). Coupled with high-stakes pressure for speedy growth, Unicorns and Gazelles must navigate unique challenges; many operate within the digital and platform spaces, where network effects demand distinct survival strategies (Cristofaro, Kask, & Muldoon, 2023b). Furthermore, Unicorns and Gazelles often maintain a global scope from their inception, adding complexities such as cross-cultural management, regulatory variances, and stiff international competition (Coad & Karlsson, 2022; Coad & Srhoj, 2020). This broad reach heightens their visibility and, consequently, their potential failure could significantly impact investor sentiment, the wider start-up ecosystem, and the economy. Therefore, while the start-ups’ literature on early success offers valuable insights, it may not fully encapsulate the challenges and strategies associated with Unicorns and Gazelles. Thus, as introduced, a knowledge gap exists in understanding what specific factors facilitate each of these entrepreneurial species in overcoming, *with flying colors*, the infant challenges typically associated with Stinchcombe’s liability of newness.

We have, thus, conjectured this review article as a contribution towards filling this gap. In particular, our intended contribution is twofold: first, we discuss the infant survival determinants for Unicorns and Gazelles; second, and following, we aim to advance a potential framework regarding their life cycle. Our focus on the determinants of infant survival reveals insights about Unicorns and Gazelles. These high-growth companies face challenges that require factors like investor involvement, coordination mechanisms, and efficient resource and network utilization. By embracing these elements, they can navigate complexities and establish themselves as influential industry players. We also present a framework explaining the distinct life cycles of Unicorns and Gazelles. Unicorns rely on private investments and substantial support from Venture Capitalists (VCs) for rapid growth, while Gazelles depend on VCs for outside equity financing and gain local support for job creation. Both leverage external relationships and knowledge flows, but VC involvement may accelerate start-up maturation, introducing challenges tied to the liability of adolescence.

To facilitate new venture survival, previous literature reviews emphasized aspects such as the role of regional characteristics, the institutional environment, organizational attributes, founders’ features, and inter-organizational/intra-organizational relationships (Abatecola, Cafferata, & Poggesi, 2012; Josefy et al., 2017; Soto-Simeone et al., 2020). In this regard, our review adds a unique perspective. Attracted by the Unicorns’ and Gazelles’ exceptional ‘genes’, early investors are key in helping them overcome the initial challenges. This introduces a new insight not extensively discussed before. However, this reliance on

investors is a double-edged sword. While their support helps navigate the critical early stages, their withdrawal can lead to significant challenges and disruptions. Our review thus enhances the understanding of the dynamics associated with new ventures’ survival by highlighting these exceptional cases.

The structure of our article is as follows: first, we introduce the theoretical background, constituted by the literature around the liability of newness concept. Second, we present the methods adopted for our systematic review of 66 relevant articles, selected through rigorous inclusion/exclusion criteria and all dealing with the relationship between newness, Unicorns, and Gazelles. Third, which constitutes the core of our analysis, we compare the survival determinants for these entrepreneurial species and then propose a potential conceptual evolution of their life cycle. We believe that, especially in forecasting, the proposed framework could also be helpful to the business practice because it could help investors and/or policy makers predict whether a new venture can overcome infant mortality, and eventually become an entrepreneurial *champion*. A better comprehension of how these unique new ventures overcome early-stage challenges will contribute to the developing literature concerned with new ventures’ survival; it can also guide entrepreneurs to navigate the complexities of the start-up world while increasing the likelihood of their ventures’ success.

## 2. Theoretical background

In this section, we first conceptualize the liability of newness and its facilitators/obstacles. We then introduce the main characteristics of both Unicorns and Gazelles.

### 2.1. Liability of newness

According to previous research, conceptualizing organizational survival can have varying interpretations. For example, a firm may remain in operation while failing its purpose. Thus, in this article, we draw on the recent review by Josefy et al. (2017), according to whom: “Organizational survival generally refers to the continued existence of a firm, whereas failure is treated as the firm’s dissolution” (p. 773). Specifically, as these scholars note, this continuation should be investigated by considering ventures’ *operations*, *ownership*, and *solvency*. Concomitantly, it is a matter of fact that failure phenomena are more often observed in ventures in their first years of life (Soto-Simeone et al., 2020).

A pioneer studying why new ventures mostly die in their infancy, Arthur Stinchcombe coined the term *liability of newness* in 1965. Together with the social conditions at that time, which themselves could serve as a survival factor, the liability of newness embraces four recurring gaps in the failed start-ups, which Stinchcombe analyses:

- a) *Lack of experience*: new organizations need to engage in the creation and learning of new roles, with the consequence of spending time and resources to teach new workers how to execute their duties. In mature firms, conversely, older workers transfer their abilities to their successors;
- b) *Lack of coordination*: forming a new role requires coordination with others in the organization. This process includes vulnerability, relational clashes, and wasteful aspects;
- c) *Lack of stable ties*: new ventures need help to form relationships with different organizations, mainly potential clients and providers. Mature firms, instead, have established stable ties, including knowing whom to call upon regarding any activity;
- d) *Precarious trust relationships*: when a new firm is established, new workers are usually unfamiliar with each other, with no activity history in common. Furthermore, their relational trust could be higher. As a result, the connectedness between workers in a new firm is insecure.

Stinchcombe's assumptions have been massively confirmed theoretically and empirically over time (e.g., Abatecola et al., 2012; Josefy et al., 2017; Soto-Simeone et al., 2020). Relatedly, in the case of commonly existing start-ups, some factors have also been gradually emerging, although still fragmentally, which can contrast the liability of newness (or foster early failure if absent). Some of these factors, for example, relate to the entrepreneur, such as founding experience, conscientiousness, intuition, opportunity recognition, and networking capability (e.g., Tomczyk, Lee, & Winslow, 2013). Others, instead, relate to the environment, such as economic expansion, uncertainty, and innovation-based competition (e.g., Guckenbiehl, de Zubielqui, & Lindsay, 2021; Murphy, 2011). Finally, there are factors about start-ups, such as size, financial/human resources, ability to execute routines, and high absorptive capacity (e.g., Pugliese, Bortoluzzi, & Zupic, 2016).

Relatedly, in the case of commonly observable start-ups, scholars have also been interested in predicting early-stage survival through implementing financial indicators such as grade of capitalization, liquidity, leverage, and profitability (e.g., Wiklund, Baker, & Shepherd, 2010). Yet, as discussed in the research findings, we argue that these methods do not hold when Unicorns and Gazelles are considered, mainly because of their inner characteristics. In the case of the famous Unicorn Facebook, for example, the initial involvement of investors within the entrepreneurial team helped to sustain rapid growth, even during continuous losses in the first years of life (Cristofaro, 2017), thus guaranteeing a *honeymoon* period. As defined by Fichman and Levinthal (1991), for start-ups, *honeymoon* can be conceived as a particular life cycle's introductory phase, which, on average, can be comprised between some months and up to about two years from the birth; during the honeymoon, new-born ventures may encounter a relatively peaceful period of existence, often determined by the creation of an innovative product or by the notoriety of their founder(s). After the honeymoon, however, the *liability of adolescence* is supposed to start (Fichman & Levinthal, 1991). During adolescence, most start-ups return to dealing with the struggle for survival traditionally associated with their infancy.

On this basis, we claim, the search for those factors that can combat the liability of newness needs to consider Unicorns and Gazelles as per se entrepreneurial species. The issue needs to be contextualized, or (we believe) the risk of failure for these species would dramatically increase, resulting in losing the proven benefits for economies worldwide. As an example supporting this need, in the case of traditional start-ups, Venkatraman and Van de Ven (1998) seminal propose that incubators, widely considered as a means to protect new ventures from their liability of newness, must not be provided at the birth, but at the 'adolescent' stage. The authors argue that this should happen at this later stage because new-born ventures have already demonstrated that they are able to overcome their first phase by attracting customers and investors. However, if applying this approach to Facebook, Zuckerberg's firm would have probably failed (Cristofaro, 2017).

In particular, when Unicorns and Gazelles are under investigation, factors contrasting newness should also be distinctly investigated from those allowing rapid growth. Regarding the latter, for example, from their review of 39 empirical articles, Demir, Wennberg, and McKelvie (2017) propose a high-growth model that is derived from the positive interaction of *a) human capital* (high education/skills and previous industry experience of founders/managers); *b) strategy* (implementing formalized strategic-planning practices and aiming at a single product strategy in new markets); *c) human resource management* (adopting detailed search and selection practices, as well as training and high-remunerative compensation mechanisms); *d) innovation* (pursuing product innovation); and *e) capabilities* (financial/innovation capabilities able to purposefully enact resources/practices/processes, as well as the ability to change, modify, and replace these). Comparably, while systematizing the factors allowing the scale-up of business, DeSantola, and Gulati (2017) show that founder changes, top management team turnover, professionalization, cultural change, and the shifting use of cultural/formal controls are the main variables fostering or reducing growth.

In brief, investigating elements that foster or reduce the liability of newness for Unicorns and Gazelles is mandatory to advance the literature on entrepreneurial ecosystems, thus systems formed by interdependent actors and relationships directly or indirectly supporting the creation and growth of new ventures (Cavallo, Ghezzi, Dell'Era & Pellizzoni, 2019). More in general, shedding light on this topic is also needed to create sustainable entrepreneurship and avoid destroying valuable assets in terms of employment opportunities.

## 2.2. Unicorns and gazelles: main characteristics

The business ecosystem is a vibrant and diverse landscape filled with various types of start-ups, metaphorically forming an 'entrepreneurial jungle' (Cristofaro et al., 2023b). Within it, two types of companies, i.e., Unicorns and Gazelles, stand out because of their unique characteristics and significant economic impact. Complementing the definitions introduced, this sub-section draws from various scholarly sources to provide a valuable *picture* of the distinctive features of Unicorns and Gazelles.

There are 1226 active Unicorns worldwide, with a collective market value of about US\$3.845 billion (CB Insights, 2023). However, 1226 is still less than 1% of the overall number of start-ups founded worldwide annually (see the critique by Aldrich & Ruef, 2018), estimated to be 305 million per year (CB Insights, 2023). This underlines their 'rarity'. Most Unicorns are located in the US and China (25% each), with Europe (12%) constituting a growing hub. Respectively, the most represented industries are, currently, Internet software and services (15%), e-commerce (14%), and fintech (12%) (CB Insights, 2023). For many Unicorns, their value is created through mathematical algorithms in two-sided markets, and they capture value from customers through platform technologies and cross-multichannel selling; their business models are highly scalable and usually focus on a single product or service (Lee, 2013). In terms of ownership, a Unicorn's founding team usually has specific features: *i) the team is formed by well-educated members with prior hi-tech start-up experience; ii) there is little heterogeneity among founders; for example, they usually have years of collective history, either through school or work; and iii) the team often undergoes CEO changes before a liquidity event (De Massis et al., 2016; Govindarajan, Govindarajan, & Stepinski, 2016; Stadler, 2016).*

As for Gazelles, scholars have identified two primary factors determining their growth rates: idiosyncratic characteristics specific to ventures, and external factors, that indirectly impact Gazelles' performance. According to results on the first type of factor, young Chief Executive Officers (CEOs) typically lead Gazelles; a single innovative product primarily generates their revenues and is known for their ability to develop close customer contacts (Czarnitzki & Delanote, 2013). Conversely, Bianchini, Bottazzi, and Tamagni (2017) found that persistently high-growth firms do not differ in economic and financial characteristics from their competitors, who experience only temporary growth. According to results on the second type of factor, Gazelles span various industries, with only a tiny fraction in the high-tech field (Daunfeldt, Elert, & Johansson, 2016). They are prevalent in industries such as Accommodation and Food Services, Health Care, Social Assistance, and Retail Trade (Acs, Stam, Audretsch & O'Connor, 2017). This seemingly suggests that the service industry may most represent this type of start-up (Kubickova, Krosiakova, Michalkova, & Benesova, 2018; Savin & Novitskaya, 2023).

Evidently, parallels can be drawn between Unicorns and Gazelles concerning their common sector affiliation, typically within services, age, and initial modest size. However, a clearer distinction emerges when considering their orientation and evolutionary trajectories. Gazelles are characterized by a deliberate strategy of achieving high long-term growth at a measured and consistent pace, primarily focusing on profitability. Conversely, Unicorns often exhibit strong evaluation growth, especially in the short term, driven by the orientation to attract massive investments to sustain the high scaling-up costs of operations (Cristofaro et al., 2023a; Spitsin, Vukovic, Mikhachuk, Spitsina &

Novoseltseva, 2023). Therefore, it is common for Unicorns to operate at a loss for extended periods. These divergent approaches underscore these entities' nuanced paths, ultimately emphasizing the inherent differences in their overarching business philosophies and objectives. In conclusion, Unicorns and Gazelles represent distinct models within the entrepreneurial ecosystem, each contributing to the dynamism and innovation that define the economy. Understanding the nuances of these companies is crucial for business leaders, investors, and policymakers alike, as it can provide insights into the mechanisms of these new ventures' survival.

### 3. Review methods

As Edmondson and McManus (2007) note: “researchers can use prior literature to identify critical independent, dependent, and control variables and to explain general mechanisms underlying the phenomenon” (p. 1159). Considering this statement, in the previous theoretical background, we have introduced that Unicorns and Gazelles are challenging many of the mechanisms classically associated with our understanding of the liability of newness. Thus, also based on the most recent suggestions in terms of how to conduct insightful literature reviews (e.g., Breslin & Gatrell, 2023; Post, Sarala, Gatrell & Prescott, 2020), we chose the Systematic Literature Review (SLR) method (Tranfield, Denyer, & Smart, 2003) to search for, synthesize, and interpret the extant literature regarding newness when Unicorns and Gazelles are specifically considered. In particular, we implemented the SLR steps sequentially, as follows:

- 1) Similarly to other recent SLRs (Cristofaro & Giannetti, 2021), we chose: a) Business Source Premier (EBSCO), b) ISI Web of Science, c) Scopus, d) ProQuest's ABI/Inform, and e) PsycINFO as the search databases<sup>2</sup>;
- 2) As they constitute the standard format for scholarly publications and are similar to past studies (Tranfield et al., 2003), we considered only peer-reviewed journal articles to enhance quality control in our search. Conversely, we excluded books, book chapters, practitioner papers, conference proceedings, working papers, reports, and unpublished works;
- 3) We initially ensured the conceptual *fit* of the articles with the aim of the work by screening the abstracts. In doing that, we used the work by Aldrich and Ruef (2018) to identify the keywords contextualizing Gazelles and Unicorns. Thus, we included all the selected abstracts that contain at least one of the following words: “Unicorn\* ,” OR “Gazelle\* ,” OR “High\*Grow\* ,” OR “Fast\*grow\* ”.<sup>3</sup> As it can be intuited, the definitions we introduced for Unicorns and Gazelles did not impact the selection of articles, thus being open to all definitions. This initial search produced 89,923 results;
- 4) We ensured the substantive *fit* of the articles with the liability of newness-related themes by requiring that the selected abstracts contain, at least, one of the following four words: “newness,” OR “liabil\* ,” OR “surviv\* ,” OR “fail\* ,” OR “overcom\* .” Specifically, as a reference when choosing these words, we used the work by Soto-Simeone et al. (2020). This second sequential search limited results to 1412;
- 5) Again, and similar to Soto-Simeone et al. (2020), we scanned the resulting articles into the databases, selecting the following categories: “business,” “management,” “economics,” “business finance,” “operations research and management science” and “sociology.” At this stage, we also merged the databases and eliminated duplicates. This developmental stage reduced the results to 1215;
- 6) We carefully read the 1215 derived abstracts to ensure the articles cohered with the aim of this review. In particular, at this stage, we excluded all those (many) articles not dealing with the liability of newness theme; apart from the “liability” main topic, we looked for papers addressing the following themes: experience, coordination, ties, and trust relationships. This stage resulted in 212 articles;
- 7) We carefully read the full text of the remaining articles to ensure their alignment with the research objective. We initially performed this task individually and then compared our evaluations. When disagreeing, we re-assessed the articles together and made the final decision towards inclusion/exclusion in (or from) the dataset.<sup>4</sup> We discarded those articles in which the search terms were used only as a theoretical hook and needed to be discussed in sufficient detail to contribute to the focus of this review. In addition, following the approach adopted by Poggesi, Mari, and De Vita (2016), the 212 articles were reviewed according to two quality assessment criteria: (a) theoretical robustness; and (b) methodological robustness. For both criteria, all authors assigned scores to each article as follows: a score of one for articles with a weak research design or knowledge of the body of literature, a score of two for articles demonstrating an essential understanding of the body of literature or a good research design; a score of three for articles adopting a sophisticated research strategy or an in-depth knowledge of the relevant literature. Authors agreed to exclude from the sample articles with scores less than or equal to three. When discrepancies in assessment arose, the authors engaged in collaborative discussions to revisit and re-assess the papers. This iterative process allowed for a collective decision regarding the inclusion or exclusion of each paper within the final sample. The robustness of this evaluation procedure was further validated through a quantitative measure of inter-rater reliability (Cronbach's alpha = 0.91). This stringent methodology was implemented to ensure precision and consistency in the selection of papers, forming a well-defined and cohesive sample for the subsequent analyses and findings in this study. This refinement, aimed to mitigate the common bias regarding the quality of studies included in reviews, reduced the results to 61;
- 8) For the last search step, similar to Soto-Simeone et al. (2020), we also performed both manual search and citation tracking, i.e., backward search (reviewing the references of the articles yielded from the keyword search, Webster & Watson, 2002). In addition, we examined additional sources that have cited the set of articles, i.e., forward search (Webster & Watson, 2002), previously derived from keyword and backward search. This implementation, needed to mitigate the incomplete coverage bias of SLRs, led to five articles being added to our dataset, with our final sample consisting of 66 publications<sup>5</sup> – with this size being consistent with works published on related topics (e.g., Baldacchino, Ucbasaran, Cabantous & Lockett, 2015; Chrisman, Kellermanns, Chan & Liano, 2010).

Having explained the above in terms of the selection methods and developmental stages to build our dataset, we then delved into our 66-article sample by running a thematic analysis based on the following four-stage procedure: a) coding, b) categorizing, c) thematizing, and d) integrating (Mayan, 2016). In this case, we inductively coded the articles (Braun & Clarke, 2006) in the sample according to the four main problems highlighted by Stinchcombe (1965) and already detailed in our theoretical background: i) lack of experience, ii) lack of coordination, iii) lack of stable ties; and iv) precarious trust relationships. Initially, we identified themes according to their “semantic” level, i.e., we initially organized themes to show patterns in semantic content. Through analyzing new ventures' answers to these four problems, we derived the different determinants of Unicorns' and Gazelles' survival.

<sup>2</sup> These databases comprise a series of other repositories, such as Science Direct or JSTOR.

<sup>3</sup> The asterisk at the end of a search word allows for different suffixes.

<sup>4</sup> Cronbach's alpha was 0.91.

<sup>5</sup> The full dataset can be sent upon request.

We detail our results in the following section. It is worth noting that the identified survival sources for each category do not exclude that one particular determinant does not apply to others.

## 4. Findings

### 4.1. Descriptive statistics

Research concerning determinants of infant survival for Unicorns and Gazelles starts in the early 1990s (e.g., Zhao & Aram, 1995). At the same time, in terms of publication timelines (please see Fig. 1 below), more than half of the articles (N = 50; 70%) are published in the last five years. This evidence seemingly highlights the growing attention towards this topic, especially recently.

Among the 66 articles, empirical papers represent the vast majority (N = 48; 73%), mostly (N = 55; 83%) analyzing Unicorns or Gazelles in Western countries, followed by conceptual studies (N = 18; 27%). In terms of units of analysis, Unicorns represent more than half of the sample (N = 45; 68%) while Gazelles the rest (N = 21; 32%). The following sub-sections analyze how these species specifically deal with liability gaps.

### 4.2. Factors that allow overcoming the liability of newness in unicorns and gazelles

This sub-section delves into the factors that allow overcoming the liability of newness in Unicorns and Gazelles. As mentioned earlier, we inductively coded the articles in the sample to classify these factors based on the four lacks highlighted by Stinchcombe (1965). Table 1 summarizes the results of this analysis.

Accordingly, a comprehensive explanation of the factors is reported in the following sub-sections.

#### 4.2.1. Overcoming the lack of experience in unicorns

The analysis conducted reveals that several key factors play a crucial role in mitigating the lack of experience in Unicorns. These factors are: i)

involving investors in decision-making processes, ii) embracing flat hierarchy and participative leadership styles, iii) making significant investments in R&D while adhering to financial flexibility criteria, and iv) concentrating ownership.

The involvement of investors in decision-making processes emerges as a pivotal factor in overcoming the lack of experience in Unicorns and preventing their early failure (Useche & Pommet, 2021). Notably, Lehmann et al. (2019) highlight that Unicorn investors provide valuable guidance to compensate for the founders' lack of strategic expertise. This finding is supported by Lee (2013), who emphasizes the benefits derived from investors sitting on the board of directors and contributing to the firm's strategic direction. For instance, investors may facilitate CEO changes or actively participate in operational activities, as exemplified by the case of Facebook (Cristofaro, 2017). Interestingly, it is worth noting that some Unicorn founders have backgrounds in the Venture Capital (VC) industry. Despite their limited founding experience, their ventures have been successful because of their strong network ties and ability to identify high-growth potential opportunities (Kotha et al., 2022).

However, for the investors' involvement to yield tangible benefits, ensuring their personal interests are consistent with the overall goals is crucial. Fenwick and Vermeulen (2015) emphasize that the inclusion and participation of investors in decision-making should not result in dysfunctional pressures that undermine the Unicorn's innovative culture. Maintaining a work environment characterized by flat hierarchies and participative leadership styles is therefore critical to address the lack of experience in Unicorns. Damasceno, Morini, and Pannellini (2021) highlight the importance of formal or informal idea submission programs to build high-performing teams within Unicorns. Effective leadership should evaluate and test employee proposals to foster business improvement. Empowering the employees by granting autonomy and responsibility in their tasks enhances their expertise and helps overcome their lack of experience.

Another noteworthy aspect pertains to the financial management of R&D investments, which significantly contributes to the early-stage success of Unicorns. Given the high costs and risks associated with

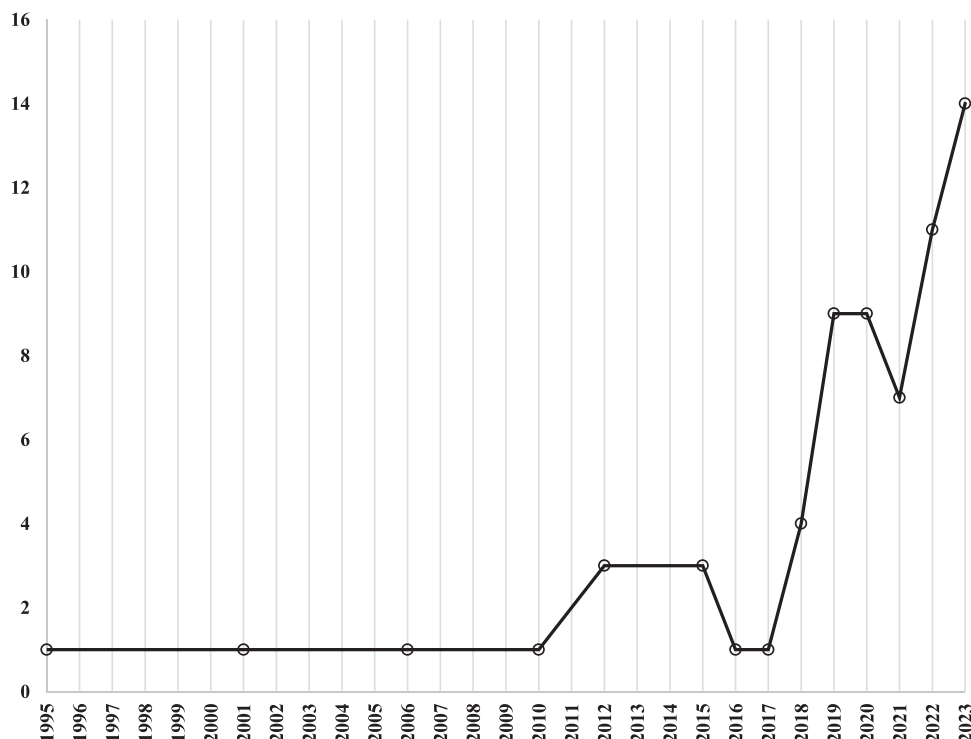


Fig. 1. Chronological publication of contributions.

**Table 1**  
Factors that Allow to Overcome the Liability of Newness in Unicorns and Gazelles.

Liability of newness' lacks	Factors that allow to overcome the liability of newness	
	Unicorns	Gazelles
<b>Lack of experience</b>	<ul style="list-style-type: none"> <li>Investors' involvement in decision-making processes (e.g.,Cristofaro, 2017;Lee, 2013;Lehmann et al., 2019)</li> <li>Flat hierarchy and participative leadership styles (Damasceno et al., 2021; Fenwick &amp; Vermeulen, 2015)</li> <li>High investment in R&amp;D and financial flexibility (Lu et al., 2018)</li> <li>Concentrated ownership (Fenwick &amp; Vermeulen, 2015; Lu et al., 2018)</li> </ul>	<ul style="list-style-type: none"> <li>Investors' involvement in decision-making processes (Croce et al., 2021)</li> <li>Interactions with highly skilled agents and low monitoring (e.g., Dwyer &amp; Kotey, 2016;Hellmann &amp; Puri, 2002;Keen &amp; Etemad, 2012)</li> <li>Exploiting the founders' path-dependent learning experiences (e.g., Kubickova, et al., 2018;Ngoasong &amp; Kimbu, 2019;Sterk, et al., 2021)</li> <li>Flexible decision-making processes (Gancarczyk et al., 2021)</li> <li>Implementing chains of command (González-Uribe &amp; Reyes, 2021; Parker et al., 2010)</li> <li>Assessing the presence of different cognitive frames in board decision making (Rasmussen et al., 2018)</li> <li>Exploiting digital technologies (Gundry &amp; Welsch, 2001; Chae, 2023)</li> </ul>
<b>Lack of coordination</b>	<ul style="list-style-type: none"> <li>Being a solo founder (Kotha et al., 2022)</li> <li>Investors' involvement in the board of directors (Cristofaro, 2017; Lee, 2013)</li> <li>Brand asset management (Forti et al., 2020)</li> <li>Exploiting digital technologies (Malyy et al., 2021; Urbinati et al., 2019; Wang et al., 2022)</li> </ul>	<ul style="list-style-type: none"> <li>Acquisition strategies (e.g.,Laur &amp; Mignon, 2021;Keen &amp; Etemad, 2012;Nightingale &amp; Coad, 2014)</li> <li>Operating in territories with developed infrastructure resources (Chillakuri et al., 2020; Goedhuys &amp; Sleuwaegen, 2010)</li> <li>Internationalization strategies (Keen &amp; Etemad, 2012; Korsakienė et al., 2019)</li> <li>Networking activities (Zhao &amp; Aram, 1995)</li> <li>Social capital accumulation (Hechavarría et al., 2019; Keen &amp; Etemad, 2012; Zhao &amp; Aram, 1995)</li> <li>Long-term joint improvement agreements (e.g.,Bos &amp; Stam, 2014; Santoleri, 2020;Zhao &amp; Aram, 1995;Spitsin et al., 2023)</li> <li>Proceeding with small stages of investment characterized by slowly increasing amounts (Anton, 2019)</li> </ul>
<b>Lack of stable ties</b>	<ul style="list-style-type: none"> <li>Investors' support in building relationships with markets (e.g.,Brown &amp; Wiles, 2015;Burstrom et al., 2023;Cristofaro, 2017;Shepherd &amp; Zacharakis, 2001; Zhang &amp; Yu, 2017)</li> <li>Forming strategic alliances (Jinzhí &amp; Carrick, 2019; Kotha et al., 2022)</li> <li>Exploiting digital technologies (e.g.,Damasceno et al., 2021;Giardino et al., 2023;Urbinati et al., 2019;Venancio et al., 2023)</li> </ul>	
<b>Precarious trust relationships</b>	<ul style="list-style-type: none"> <li>Investors' involvement in the formation and evaluation of the company's strategies (Vanacker et al., 2013)</li> <li>Scalability of the business model (Kartanaite &amp; Krusinskas, 2022; Menon &amp; James, 2022)</li> <li>Strengthening of the brand (Damasceno et al., 2021)</li> <li>Strategically using the international intellectual property system (do Canto Cavalheiro &amp; Cavalheiro, 2023).</li> </ul>	

substantial R&D investments, there is a potential disincentive effect on knowledge accumulation. This effect may impede the acquisition of technical expertise necessary to address the lack of experience in Unicorns. Lu, Meng, and Cai (2018) suggest that financial flexibility is an effective strategy to mitigate costs, manage risks, and maximize business benefits associated with the R&D investments. Incentives at the national level, careful evaluation of various financing options, and efficient capital allocation are essential to prevent Unicorn failure resulting from insufficient R&D investment or improper fund utilization (see also Venancio, Picoto, & Pinto, 2023).

Lastly, the degree of ownership concentration emerges as another significant factor. It enables adequate financial flexibility (Lu et al., 2018) and fosters charismatic leadership behavior, instrumental in establishing flexible organizational structures (Fenwick & Vermeulen, 2015). Visionary leaders, such as Mark Zuckerberg, leverage their control over the firm to minimize capital waste and nurture a flat and innovative organizational culture (Cristofaro, 2017).

#### 4.2.2. Overcoming the lack of experience in gazelles

To address the lack of experience in Gazelles, our analysis highlights the significance of the following factors: *i*) involving investors in decision-making processes, *ii*) engaging with highly skilled agents while minimizing monitoring, *iii*) leveraging the founders' path-dependent learning experiences, and *iv*) adopting flexible decision-making processes.

Similar to Unicorns, the involvement of VCs in decision-making processes emerges as a critical factor to overcome the lack of experience in Gazelles and to support their growth. VCs typically base their decisions on equity participation in Gazelles, considering professionalization measures such as human resource policies and hiring skilled professionals (Hellmann & Puri, 2002). In practice, VCs contribute to the professionalization of Gazelles and evaluate them based on these variables. Professionalization is also assessed about CEOs and senior managers who wield significant influence in Gazelles. Suppose VCs deem the CEO insufficiently capable (i.e., possessing low human capital). In that case, s/he is replaced before the Initial Public Offering (IPO) event with a more experienced CEO, resulting in higher IPO valuation and operational performance (Chahine & Zhang, 2020). This behavior of VCs may

also explain why Gazelles are seldom eponymous (Belenson, Chatterji, & Daley, 2020).

Furthermore, Gazelles are more likely to benefit from external knowledge flows. Therefore, interactions with highly skilled agents, such as expert VCs' consultants, play a crucial role in overcoming the lack of experience in Gazelles and facilitating their ongoing development (Dwyer & Kotey, 2016). Conversely, rigid and constant monitoring has a detrimental effect on the performance of fast-growing firms, as it stifles entrepreneurial risk-taking. Interestingly, Croce et al. (2021) find that Gazelles' growth is strongly linked to the investors' entrepreneurial experiences, while the business angels' investment experiences do not play a pivotal role in overcoming lock-in effects during the firm's expansion path. Additionally, strategic outsourcing, informal boards of directors, and collaboration with universities, foreign companies, and governments are relevant factors in bridging the experience gap of Gazelles (Dwyer & Kotey, 2016; Lu et al., 2018).

Moreover, the initial conditions of the external environment and events triggering high-growth entrepreneurial activity significantly contribute to explaining the rapid development of Gazelles (e.g., Keen & Etemad, 2012). For instance, Kubickova et al. (2018) found that being the first mover in a new knowledge-intensive market area can help reduce the impact of the lack of experience in the sector for 342 Slovakian firms (see also Sims & O'Regan, 2006; Sterk, Sedláček, & Pugsley, 2021). Additionally, Ngoasong and Kimbu (2019) observe that the founders' path-dependent learning experiences can generate self-reinforcing mechanisms crucial to overcome the effects of lock-in on continuous business growth (Ngoasong & Kimbu, 2019). This implies that different contexts yield different learning paths, affecting the probability of overcoming the lack of experience in Gazelles.

Finally, consistent with other research on contextual influences, Gancarczyk, Freiling, and Gancarczyk (2021) emphasize the importance of flexible decision-making processes to navigate the variability of environmental dynamics. More broadly, the management and strategic capabilities of Gazelles are critical factors in overcoming the challenges faced by emerging enterprises, including inexperience, resource constraints, limited knowledge, information, and networking (Keen & Etemad, 2012; Sims & O'Regan, 2006).

#### 4.2.3. Overcoming the lack of coordination in unicorns

In addressing the lack of coordination, certain factors enable Unicorns to overcome this challenge. These include: *i*) having a solo founder, *ii*) involving investors in the board of directors, *iii*) investing in brand asset management, and *iv*) leveraging digital technologies.

To achieve Unicorn status, coordination among founders is necessary, particularly in the early stages of the business start-up. Interestingly, *Kotha et al. (2022)* find that solo founders tend to achieve Unicorn status more rapidly than firms with multiple founders, despite the common perception that technology entrepreneurship success is associated with intensive team activity. This finding suggests that solo entrepreneurs, with appropriate experience and sufficient financial resources, can make quicker decisions, particularly regarding investments in the human capital needed to generate competitive advantage. Coordination issues among co-founders, such as conflicts, personality clashes, and power struggles, often contribute to the early failure of Unicorns.

Regarding investor relations, the involvement of investors in the board of directors is a significant factor in overcoming the coordination challenges in Unicorns. When investors participating in Private Initial Public Offerings (PIPOs) also serve on the board of directors, the main benefit for the Unicorn founders lies in coordinating financial processes and procedures. *Lee (2013)* notes that the investors collaborate with the current Chief Financial Officers (CFOs) to introduce the company to VCs and secure future financing rounds required to cover initial losses. In 2007, Peter Thiel (investor, advisor, and Facebook board member) planned and coordinated a series of funding rounds, assisting Mark Zuckerberg in navigating the company's financial difficulties (*Cristofaro, 2017*).

Furthermore, Unicorns allocate significant resources to brand asset management to facilitate the coordination of R&D and marketing strategies (*Forti, Munari, & Zhang, 2020*). Compared to companies with less ambitious growth dynamics, Unicorns emphasize creating brand assets with a broader scope of markets and products. By fostering synergies among departments and enhancing the effectiveness of R&D and marketing strategies, developing specific brand assets becomes a pivotal factor in overcoming coordination challenges in Unicorns.

More broadly, *Wang, Yang, Han, Huang, and Wu (2022)* argue that advancements in digital technologies increasingly dominate the management and coordination of business processes. Indeed, digital technologies such as artificial intelligence, big data, and the Internet of Things can drive entrepreneurship and create opportunities for new management models and innovative business forms that reshape work and interactions. When managed by highly skilled teams, Information Technology platforms play a crucial role in the business models of Unicorns (*Damasceno et al., 2021*). These platforms support business strategy formation and enable information coordination among internal and external actors within the organization (*Malyy, Tekic, & Podladchikova, 2021; Urbinati et al., 2019*). In summary, the effective utilization of digital technologies appears vital to foster coordination across different levels of the enterprise, which is crucial for organizational success.

#### 4.2.4. Overcoming the lack of coordination in gazelles

To address the lack of coordination among organizational members, Gazelles typically exert the following factors: *i*) implementing a short chain of command, *ii*) assessing the presence of diverse cognitive frames within the board of directors, and *iii*) effectively leveraging digital technologies.

Gazelles assign significant authority to senior managers about implementing a short chain of command, enabling agility in coordinating organizational members and facilitating prompt tactical decision-making in response to internal and external changes (*Parker, Storey, & Van Witteloostuijn, 2010*). Consequently, Gazelles often exhibit higher short-term liabilities and lower inventories than other industry players, reflecting their focus on coordination and agility (*Coad & Srhoj, 2020*). However, in cases where internal actions to promote coordination and

agility are not evident, investors frequently support entrepreneurs through standardized grouped business training and personalized one-to-one advice (*González-Urbe & Reyes, 2021*).

Regarding resource allocation and strategic priorities, a unified and coordinated board of directors is essential to stimulate Gazelles' growth intentions (*Temel & Forsman, 2022*). However, while goal alignment among board members enhances rapid and efficient decision-making processes, it may inadvertently undermine creativity and the quality of debates. Individual heterogeneity, on the other hand, stimulates these aspects. Therefore, Gazelles should conduct a careful cost-benefit analysis to foster board coordination to determine the appropriateness of incorporating "different cognitive frames in board decision making" (*Rasmussen, Ladegård, & Korhonen-Sande, 2018, p. 612*).

Similar to Unicorns, technological advancements such as acquiring new devices and automating management operations play a fundamental role in cultivating an organic and coordinated organizational structure, which is a distinguishing factor in the success of Gazelles (*Gundry & Welsch, 2001*). The technological progress enables Gazelles to streamline processes, enhance communication, and improve overall coordination within the organization, contributing to their growth and success. Furthermore, *Coad, Bauer, Domnick, Harasztsosi, Pál, and Teruel (2023)* observed that Gazelles that could use digital technologies have dealt with the COVID-19 shock better than less-digitized high-growth firms. In addition, it seems that adopting dynamic and flexible information systems is essential to address coordination challenges. Indeed, when highly complex and rigid systems are adopted, they counteract growth by requiring new employees to invest more time and resources in adapting and understanding new and complex routines (*Chae, 2023*). Therefore, to overcome the lack of coordination, Gazelles should prioritize dynamic and flexible information systems to adapt to environmental changes and quickly meet growth challenges.

#### 4.2.5. Overcoming the lack of stable ties in unicorns

Based on our research findings, Unicorns should consider the following factors to overcome the lack of stable ties: *i*) leveraging the investors' support to build relationships with the broader market, *ii*) forming strategic alliances, and *iii*) effectively exploiting digital technologies and platforms.

The support of investors plays a crucial role in establishing relationships with the broader market. The Unicorns' scalable business models attract investors participating in small initial rounds of PIPOs; such investors are not only willing to sustain substantial initial financial losses (*Erdogan, Kant, Miller & Sprague, 2016*), but they also actively seek out new investors (*Brown & Wiles, 2015; Cristofaro, 2017; Zhang & Yu, 2017*). This seems evident in the Snapchat case, where the network effect of the business triggered cognitive biases in this start-up's founders' and investors' decisions, leading them to provide initial assets (i.e., beliefs/goodwill, trust, financial resources, and psychological commitment) and allowing them to connect with other investors for the nascent Unicorn (*Cristofaro et al., 2023a*). In fact, at the birth stage, when investors juxtapose a promising start-up with past successful Unicorns in the same industry, recallability, similarity, and anchoring biases can occur, leading to the initial investment (*Abatecola et al., 2022*). Therefore, the network effect and biases are significant antecedents for the Unicorn's honeymoon. Furthermore, the transformation of the VC ecosystem plays a pivotal role in establishing robust connections within Unicorn enterprises. In the last decade, the VC ecosystem has undergone significant changes, now characterized by prominent entities known as active hubs, which yield substantial advantages for Unicorn firms (*Burström, Lahti, Parida, Wartiovaara & Wincent, 2023*). These advantages include enhanced access to capital, knowledge, and markets, as highlighted in studies by *Blevins and Ragozzino (2018)* and *Gloor, Colladon, Grippa, Hadley, and Woerner (2020)*. This effort is often directed toward achieving the IPO, facilitating establishing and reinforcing relationships with stakeholders and shareholders (*Shepherd & Zacharakis, 2001*).

Similar to Gazelles, forming strategic alliances is crucial for Unicorns to overcome the lack of stable ties. The cultural background of founders and the recruitment of human resources with unique capabilities in innovation development foster solid relationships, particularly with institutions (Jinzi & Carrick, 2019). Recognizing the benefits for the overall economic system, governments often show interest in establishing stable ties with Unicorns that strongly focus on product or process innovation. As 'early' capital providers, Accelerators play a significant role in encouraging entrepreneurial entrepreneurs to seize opportunities and develop innovative business ideas, thus supporting Unicorns to build stable relationships with investors and customers (Giardino, Delladio, Baiocco & Caputo, 2023). Strengthening investor relationships often relies on achieving mutually agreed-upon milestones between the involved parties (Kotha et al., 2022).

Moreover, the effective exploitation of digital technologies is another crucial aspect. As highlighted by Urbinati et al. (2019), Information Technology platforms play a key role not only in expanding the customer base but also in amplifying the network effects across internal and external stakeholders, effectively sharing the value propositions of Unicorns (see also Giardino et al., 2023; Malyu et al., 2021; Kotha et al., 2022). Digital platforms are instrumental in improving communication structures and establishing strategic partnerships that forge stable ties in Unicorns (Damasceno et al., 2021). These findings are also supported by Venancio et al. (2023), according to whom Internet infrastructure and digital technologies are essential to foster the knowledge exchange, to cross geographic boundaries, and strengthen ties with customers and other relevant stakeholders.

#### 4.2.6. Overcoming the lack of stable ties in gazelles

The factors contributing to overcoming the lack of stable ties in Gazelles are diverse. Our thematic analysis highlights: *i*) the role of acquisition strategies, *ii*) operating in territories with developed infrastructure resources, *iii*) the value of internationalization strategies, and *iv*) the importance of networking activities.

Gazelles commonly employ add-on acquisition strategies to address the weakness in relationships with stakeholders (Nightingale & Coad, 2014). This is also implemented by Unicorns with the financial support of VCs (Anton, 2019; Bock & Hackober, 2020). However, unlike Unicorns, Gazelles can establish strong relationships with stakeholders due to their deep involvement in the industry and the local environment in which they operate (e.g., Laur & Mignon, 2021). Gazelles are often located in industries with a high population density and territories where local governments actively encourage entrepreneurship (e.g., Keen & Etemad, 2012; Li, Goetz, Partridge & Fleming, 2016). These factors stimulate powerful agglomeration effects, contributing to the development of stable ties.

Furthermore, territorial characteristics significantly influence Gazelles' ability to overcome the lack of stable ties. Goedhuys and Sleuwaegen (2010) demonstrate that Gazelles operating in territories with well-developed infrastructure and lower associated costs (e.g., telecommunication, transport, logistics, land and buildings, security, and bribes) are more likely to establish stable ties compared to those operating in regions lacking such infrastructure resources (Chillakuri, Vanka, & Mogili, 2020). For instance, using websites to connect with stakeholders, or combining low transportation costs with economies of scale in production, can enhance stable ties. These factors facilitate a self-reinforcing growth process that makes goods more affordable to customers at a greater distance.

Adopting internationalization strategies is another exciting aspect that contributes to establishing stable ties in Gazelles. Keen and Etemad (2012) highlight that Gazelles engaging in alliances and collaborations with entities within synergistic networks, such as globally operating sectorial clusters, exhibit superior performance to domestic-oriented Gazelles. Such strategies strengthen stakeholder relations, create positive externalities, and reduce transaction costs. Notably, internationalization is more prevalent among Gazelles managed by owners with

substantial managerial experience (Korsakienė, Kozak, Bekešienė & Smaliukienė, 2019).

Gazelles generally tend to have more stable external relationships than low-growth firms (Zhao & Aram, 1995). By adopting preventive policies that stimulate the acquisition of external resources, Gazelles actively build extensive networks and engage in high-intensity interactions, particularly in the early stages of enterprise development. These networking mechanisms may include joint product development with research institutions, long-term agreements with consultants or service providers, or informal activities like participation in social events or the provision of branded gifts and gadgets. The study by Zhao and Aram (1995) emphasizes the strategic value of networking activities for Gazelles and highlights that managers carefully consider their opportunity costs. Gazelles establish an organizational culture that fosters and strengthens a wide range of networking relationships while effectively balancing the benefits (e.g., access to valuable resources or building a positive company image) and costs associated with networking activities (e.g., time and energy invested in establishing and maintaining external organizational relationships or potential loss of autonomy and independence).

#### 4.2.7. Overcoming the precarious trust relationships in unicorns

Building trustworthy relationships with stakeholders is crucial to overcome the liability of newness in Unicorns. Our study identifies the following factors to achieve this goal: *i*) involving investors in the formation and evaluation of the company's strategies, *ii*) creating a scalable business model, *iii*) strengthening the brand identity, and *iv*) strategically using the international intellectual property system.

Establishing strong trust relationships with the investors is of utmost importance to prevent the premature failure of Unicorns (Useche & Pomet, 2021). Including the investors in the strategic dynamics of the company significantly contributes to the consolidation of trust relationships. This involvement is often reflected in the active participation of the board of directors in both strategy formation and evaluation, which positively affects corporate performance (Fried, Bruton, & Hisrich, 1998). Such intense involvement signals the investors' strong commitment to the company's success, fostering reliance and seeking valuable advice from internal agents (Vanacker, Collewaert, & Paeleman, 2013). Additionally, the educational background of founders plays a role in inspiring trust among stakeholders, particularly investors. Founders who hail from renowned universities (Lee, 2013) and possess relevant skills and experience (Jinzi & Carrick, 2019) are more likely to attract investors and propel entrepreneurial success (Damasceno et al., 2021).

However, in terms of investment choices, attention and trust from investors are increasingly shifting towards Unicorns with profitability and scalable business models (Menon & James, 2022). It is observed that many Unicorns often need to project profitability shortly, posing the risk of depleting available funds entirely, which typically covers a 12–24 month business program. Despite Unicorns being based on scalable business models, they should prioritize sustainable growth to foster stable trust relationships with investors. Notably, Unicorns with more robust financial ratios leading up to their full development are more likely to attract additional funding and reinforce trust relationships with stakeholders (Kartanaite & Krusinskas, 2022). This is attributed to the delicate balance Unicorns must strike between their disruptive mission and financial pressures (Meek & Cowden, 2023) to effectively demonstrate the enterprise's value to both investors and the market.

Furthermore, Unicorns recognize the significance of strengthening their brand to establish trustworthy relationships and drive growth. They conduct product and service tests, seek customer feedback, and leverage this information to refine their business models and develop applications to support internal teams. Positive customer evaluations serve as reliability signals that attract new investors and enhance trust relationships with existing investors. Rapid and efficient experimentation of new products and services is crucial to understand current and



new market niches, facilitating the ability to overcome precarious trust relationships in Unicorns (Damasceno et al., 2021).

Finally, the global intellectual property system emerges as a key strategic asset for addressing delicate trust dynamics within Unicorns. To fortify competitive advantages, Unicorns proactively register their trademarks in pertinent foreign markets, creating robust barriers to competition. Simultaneously, in cultivating trust within their primary market, Unicorns strategically defer global expansion, directing their internationalization efforts toward regional consolidation (do Canto Cavalheiro & Cavalheiro, 2023). To sum up, intellectual property rights, encompassing trademarks, patents, and industrial designs, stand as pivotal strategic assets for Unicorns aiming to enhance trust relationships in fiercely competitive global markets.

4.2.8. Overcoming precarious trust relationships in Gazelles

When considering Gazelles, three main factors emerge as critical to overcome unstable trust relationships with the stakeholders: i) the accumulation of social capital, ii) the establishment of long-term joint improvement agreements, and iii) the implementation of small stages of investment characterized by gradually increasing amounts.

The accumulation of social capital plays a significant role in creating enduring and stable trust relationships, both within the organization and with the external environment. Social capital encompasses shared norms and values that foster collaboration and mutual trust among social groups (Banfield, 1958). A high level of social capital is vital not only to secure financial means and to foster cooperation among human resources but also to build a supportive network that aids the continuous development of Gazelles (Hechavarria, Bullough, Brush & Edelman, 2019; Keen & Etemad, 2012). Cultural differences often challenge establishing stable trusting relationships with organizations holding crucial resources for Gazelles' development, as they impact managerial styles, behaviors, and communication structures (Zhao & Aram, 1995).

In addition, Gazelles employ joint improvement programs as a prominent strategy to overcome precarious trust relationships with stakeholders. These initiatives involve the exchange of information and technical expertise with key suppliers, as well as the engagement of end-users in product development. The effectiveness of these collaborations hinges on their long-term orientation, grounded in enforceable agreements and reciprocal benefits (Zhao & Aram, 1995). Additionally, Gazelles' robust connections with local government entities play a crucial

role in bolstering stakeholder trust. External support from the government not only strengthens internal ties within the organization but also creates an environment conducive to trust (Bos & Stam, 2014; Czarnitzki & Delanote, 2013; Santoleri, 2020). In alignment with this, Spitsin et al. (2023) underscore the importance of Gazelles adopting an orientation towards sustained, long-term growth to successfully navigate and overcome precarious stakeholder trust relationships.

In some cases, Gazelles indirectly address precarious trust relationships with stakeholders through investors' assistance. To limit resource wastage in the event of losses, Gazelles often adopt a strategy of small stages of investment characterized by gradually increasing amounts. This incremental approach strengthens trust relationships among stakeholders, motivates the entrepreneurial team to create maximum real value swiftly, and encourages efficient utilization of available funds (Anton, 2019).

5. Discussion

From our analysis of the literature, Unicorns and Gazelles feature specific early-stage success factors. In this regard, Fig. 2 attempts to provide a framework explaining how these species can overcome their liability of newness – although they may not be able to overcome their liability of adolescence – and forecast their trajectories.

In contrast to the classical use of sales to predict ventures' survival, market evaluation is widely considered the main survival proxy when Unicorns or Gazelles are specifically considered (Kenney & Zysman, 2019). This is pointed out on the vertical axis of Fig. 2. The horizontal axis, instead, depicts the steps of entrepreneurial evolution, recently advanced by Colombelli, Paolucci, and Ughetto (2019), as i) birth, i.e., “the emergence of an entrepreneurial setting in which different actors start to bind together in a close geographical, institutional, and relational context” (p. 509), ii) transition, i.e., feedback from the internal and external environment may support or discourage path dependence processes within the network of actors; and iii) consolidation, i.e., agents are oriented to self-reinforce the information base and scale their commitment.

As Fig. 2 shows, Unicorns and Gazelles may flourish with or without the support of private investors. In this vein, it is worth specifying that the supporting roles of crowdfunding, trade credit, or bank finance are addressed. However, from our analysis they did not emerge as the main,

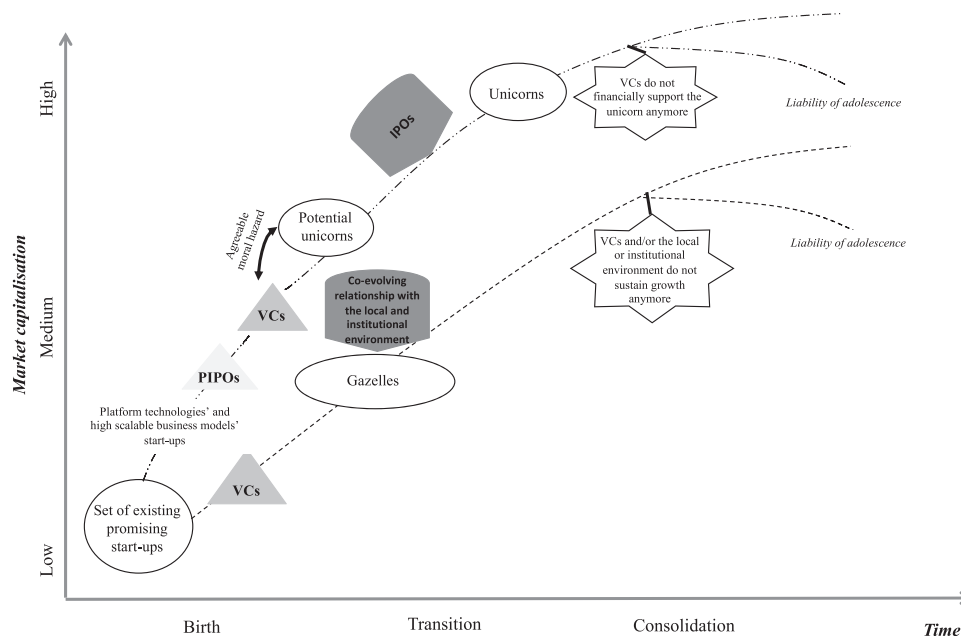


Fig. 2. The initial life cycle of Unicorns and Gazelles.

consistent, and determinant supportive sources for Unicorns and Gazelles. According to our interpretation, Unicorns, for example, seem to be highly dependent on small initial investments followed by VCs' primary financial support. In this regard, proceeding with small stages of investments seems essential to foster the coordination of financial procedures and stimulate stakeholders' trust. Consequently, the collaboration between investors and CFOs can be necessary to overcome the lack of coordination and consolidate stable trust relationships in Unicorns.

The difference between Unicorns and Gazelles lies in the distinct inner features that Unicorns possess – e.g., a high-scalable business model based on platform technologies and cross-multichannel selling – which allow a different path. Furthermore, Unicorns tend to invest highly in R&D, especially to foster the acquisition of helpful technical expertise to overcome their lack of experience in the industry. In this regard, to minimize risks and maximize business benefits, Unicorns are also concerned with rational capital management and principles of financial flexibility.

As for Gazelles instead, [Kaya and Persson \(2019\)](#) recently note that: “access to financing is often difficult for gazelle firms due to their perceived riskiness and lack of collateral. Banks are usually reluctant to lend to Gazelles. Therefore, VCs is one of Gazelles' primary sources of outside equity financing and support” (p. 2). However, VCs often base their decision about equity participation in Gazelles according to some professionalization measures, such as human resource enhancement policies ([Hellmann & Puri, 2002](#)). Therefore, the interactions with highly skilled agents can help Gazelles to overcome their lack of experience and to sustain their growth through the VCs' support.

In addition, compared to other companies, Gazelles seem more able to gain the favor of the local environment and receive benefits ([Acs & Mueller, 2008](#); [Laur & Mignon, 2021](#)). This happens thanks to their inner characteristics, which support the creation of job opportunities and healthy economic conditions ([Koski & Pajarinen, 2013](#); [Santoleri, 2020](#)). Hence, surprisingly, Gazelles tend to have more stable external relationships than low-growth firms ([Zhao & Aram, 1995](#)) and are more likely to absorb the benefits of external knowledge flows ([Dwyer & Kotey, 2016](#)). As a result, on the one hand, Gazelles can build extensive networks and high-intensity interactions that are instrumental in overcoming their lack of stable ties with relevant stakeholders; on the other hand, Gazelles are very adept in leveraging such relationships to overcome their lack of experience in the industry. However, when this virtuous relationship with the environment starts failing, and/or investors no longer sustain the Gazelles' growth, the latter risk being *selected out* of the industry; obviously, the same can also happen to companies that lose their VC backing ([Jiang, Cai, Keasey, Wright & Zhang, 2014](#)).

Of course, the withdrawal of investors does not always coincide with the failure of Gazelles in the liability of adolescence stage; they can overcome this drama. Gazelles, besides, could be selected out also because of other reasons, such as the founder(s)' departure, top management team turnover, lack of professionalization, cultural change, or the shifting use of cultural and formal controls ([DeSantola & Gulati, 2017](#)). For instance, having a significant impact on managerial styles, behaviors, and communication structures, [Zhao and Aram \(1995\)](#) state that cultural differences are a significant obstacle to establishing strong trust relationships with organizations that hold resources crucial to the Gazelles' survival. Similarly, a lack of social capital can hinder obtaining financial capital, cooperation among human resources, and creating networks that are pivotal for the continued development of Gazelles.

In contrast, the presence of investors in covering losses and sustaining the scaling up of firms appears vital for Unicorns ([Abatecola et al., 2022](#); [Kuratko, Holt, & Neubert, 2020](#)). Indeed, they need the constant provision of substantial financial resources to support their rapid expansion and internationalization of operations ([LiPuma, 2012](#)); with this support, they will likely either come to fruition or leave their industry later. In particular, because of their high-scalable business models, initial support of private investors (i.e., PIPOs), and subsequent

main support of VCs, Unicorns are seemingly more likely to arrive at a formal IPO in 7 years on average. This is also because Unicorns guarantee a higher investment risk but, in turn, potential profits. On this basis, the market evaluation of Unicorns is superior to that of Gazelles within the transition stage.

The reasons for the increase of the start-up's market capitalization of Unicorns should not look at their financials as standard start-ups, but at their inner genetic features. These seduce investors due to promising fast internationalization and global outreach. However, the rise of products' or services' metrics is not usually accompanied by increased revenues and profits because of the high platform and marketing investments realized to scale up the business ([Cristofaro, 2017](#)). From that, the agreeable moral hazard between investors and founders ([Abatecola et al., 2022](#); [Cowden, Bendickson, Bungcayao & Womack, 2020](#)) leads the former to invest more and more in potential Unicorns while the founders, in parallel, try to increase favorable metrics to escalate the commitment of investors ([Arena, Bengo, Calderini & Chiodo, 2018](#); [Khanin & Mahto, 2013](#)). Because the venture moves fast and makes many quick decisions in its disruptive path, investors push, through their money, to take a higher-than-normal risk, even though they may not be totally up to date with the venture's market actions and related risks. Indeed, “without agreeable moral hazard, traditional governance perspectives hold, and will most likely not result in moon shot disruption” ([Cowden et al., 2020](#), p. 22). The behavior above, for example, can also be detected if we consider the case of Facebook ([Cristofaro, 2017](#)).

Drawing from the above, the role of VC is seemingly central for *financial* reasons, although it also brings *managerial* benefits. VC has the financial power to cover continuous initial losses and, thus, to support speedy growth ([Anton, 2019](#); [Useche & Pomet, 2021](#)). For financial reasons, for example, the intervention of a VC in a Unicorn is often stimulated by the initial private investors actively entering the Unicorn's board during PIPOs. Indeed, VCs usually sustain potential Unicorns after a series of angel and seed investments, which does not usually happen with Gazelles. This intervention usually leads to a self-reinforcing effect toward further VC, as financed ventures with scalable business models attract other investors ([Murnieks, Haynie, Wiltbank & Harting, 2011](#)). This process ultimately brings an agreeable moral hazard situation between VC investors and Unicorns, which extensively increases capital access for the latter ([Bernoster, Mukherjee, & Thurik, 2020](#); [Cristofaro et al., 2023a](#)).

Regarding managerial benefits, the VC presence usually means access to knowledge, markets, and the likelihood of forming alliances ([Blevins & Ragozzino, 2018](#)). Relatedly, VC seemingly boosts revenue growth; this also happens thanks to the increase related to the internationalization of the firm's sales, which are made possible by fast, scalable business models matching platform partners ([Bertoni, Colombo, & Grilli, 2011](#)). In parallel, VC aids companies' professionalism by introducing positive innovations, such as human resource policies, stock option plans, and hiring systems ([Lehmann et al., 2019](#)). In summary, the investors' involvement in forming and evaluating the company's strategies is an essential factor in overcoming the liability of newness in Unicorns. Significantly, such engagement is crucial to overcome the Unicorns' lack of experience and consolidate their trust relationships with stakeholders (e.g., [Lehmann et al., 2019](#); [Vanacker et al., 2013](#)). Consequently, it seems not surprising that, to foster their innovative culture, Unicorns usually set up participative work environments characterized by flat hierarchies ([Damasceno et al., 2021](#); [Fenwick & Vermeulen, 2015](#)).

However, despite the different value-added forms, the ultimate effect of VC on Unicorns and Gazelles remains controversial. In fact, on the one hand, this effect is undoubtedly positive where overcoming the liability of newness is strictly concerned; on the other hand, however, VC substantially and directly pushes the start-ups to a more mature stage, with these start-ups *de facto* skipping the complex challenges traditionally faced at the early stage. This means that Gazelles, and especially Unicorns, often need more time to cultivate those resources and

competences, allowing them to keep growing without risks. Consequently, as the recent performance of some Unicorns, such as WeWork (WSJ, 2019), also shows, these start-ups may become an object of the *liability of adolescence* problem (Fichman & Levinthal, 1991). In substance, they would start suffering from selecting out pressures after an initial honeymoon period, thus not strictly at the early entrance stage.

Suppose the above possibility occurs, of course. In that case, it leads to economic and social consequences for society, which are much more harmful than if start-ups die before being classed as a Gazelle or Unicorn (The Verge, 2019). At the same time, we agree that this is *one* possibility; in their 'adolescent' period, many Unicorns and Gazelles continue flourishing and consolidate their role as value creators.

## 6. Implications for research and practice

Together with the deriving conceptual framework discussed above, we believe that the results of our review can also lead to some useful implications for research and practice, which we advance below.

In the case of Unicorns and Gazelles, our results confirm that the research focus is more on (fast) growth than on (early) death rates (Caputo & Pellegrini, 2019; De Winnaar & Scholtz, 2020). This focus appears different from that owned by management and entrepreneurship scholars when dealing with *traditional* newness issues. As we have explained with our analysis, Unicorns and Gazelles' intensive growth is driven more by market evaluation than sales. As we have also highlighted, VCs play a vital role in this process. In fact, by increasing the start-ups' market capitalization, VCs strongly support the initial losses sustained, which also attracts the entrance of other investors (Kenney & Zysman, 2019). In sum, moving beyond the classical logic used to measure entrepreneurship (Henrekson & Sanandaji, 2020), this substantially permits the liability of newness to be easily overcome, as also prospected in our framework (Fig. 2).

Compared to previous literature reviews that cover similar aspects of new venture survival, such as regional characteristics, institutional environment, organizational attributes, founders' characteristics, and inter-organizational/intra-organizational relationships (Abatecola et al., 2012; Josefy et al., 2017; Soto-Simeone et al., 2020), our review highlights an additional dimension. Attracted by the exceptional 'genes' of these new ventures, early investors provide the substantial monetary and non-monetary resources needed to help Unicorns and Gazelles overcome the initial challenges. Thus, we have introduced a new insight that has not been extensively discussed in prior research. However, it is essential to note that this situation presents a double-edged sword. While the support from investors enables these new ventures to navigate the critical early stages, it also creates a potential vulnerability. Once the investors withdraw their consent, the Unicorn or Gazelle may be left to fend for itself, leading to significant challenges and disruptions in its business journey. This transitional phase, known as the liability of adolescence, poses unique risks and uncertainties for these ventures. By shedding light on the exceptional case of Unicorns and Gazelles, our review contributes to a more comprehensive understanding of new ventures' survival dynamics.

In terms of future research, we thus advance the following. The proposed framework should be tested qualitatively and/or quantitatively, allowing us to strengthen its generalizability or adjust its proposed trajectories. Relatedly, we believe that future research could also benefit from the recent study by González-Urbe and Reyes (2021). According to the scholars, the formation of Gazelles is eased by the presence of different factors, including *i*) incubators, *ii*) high education/human capital, *iii*) propensity to innovate, *iv*) scientific development and development of property rights legislation, and *v*) ease of doing business and the entrepreneurial culture within countries (see also Martínez-Fierro, Biedma-Ferrer, & Ruiz-Navarro, 2020). Unicorns and Gazelles are seemingly beneficial for entrepreneurial ecosystems, but simultaneously, they need fertile ground to flourish regarding macro-economic factors. These factors, in turn, are directly influenced by these

start-ups' outcomes (Aldrich & Ruef, 2018; Bos & Stam, 2014). Therefore, we argue that adopting an evolutionary perspective in general (e.g., Aldrich & Martinez, 2001; Breslin, 2008), and the co-evolutionary perspective in particular (e.g., Abatecola, Breslin, & Kask, 2020; Baiocco, Leoni, & Paniccia, 2023; Cafferata, 2016) to study the phenomenon in question could support a more fine-tuned explanation of how, on the one hand, Unicorns and Gazelles can come to light and grow, and how, on the other hand, their associated entrepreneurial ecosystems can thrive (Cumming, Werth, & Zhang, 2019; Stam & Van de Ven, 2021). More precisely, the evolutionary perspective proves valuable across three trajectories. First, understanding why exceptional entrepreneurial 'genes' are created (i.e., *variation*), why they are successful (i.e., *selection*), and how they are reproduced (i.e., *retention*) over time (Aldrich, Birkhead, & Ruef, 2023). Second, investigating the factors (and their interactions) that hold the most influence on the emergence and growth trajectory of Unicorns and Gazelles. This exploration encompasses internal elements, such as corporate governance mechanisms, founders' behavioral characteristics, and external factors, like the normative and regulatory environment (Giardino et al., 2023; Kabbara & Hagen, 2023). Third, examining interactions among diverse stakeholders (e.g., Unicorns, Gazelles, VCs, etc.) within the entrepreneurial ecosystem. This could help explore how these interactions shape extraordinary companies' growth trajectories and survival prospects and understand the potential metamorphosis of Unicorns and Gazelles throughout their life cycle (Cristofaro et al., 2023b).

It would also be conceptually and methodologically engaging to understand whether: *i*) there is a difference in how Western and Eastern entrepreneurial ecosystems support the flourishing of Unicorns and Gazelles. While the results of our review are mostly associated with the former, we still know little about the latter. At the same time, we also know that, especially recently, some Eastern entrepreneurial ecosystems (e.g., the Chinese economy) have become particularly supportive in terms of the birth and growth of Unicorns and Gazelles; *ii*) there is a difference in how specific countries in the Western ecosystems have offered support to Unicorns and Gazelles, and whether the historical period faced, at the macroeconomic level, by these countries has played a role. In this regard, further investigation is needed to explore the effectiveness of policy interventions in supporting the growth and sustainability of exceptional companies. Future research could examine different policy approaches, such as financial incentives, regulatory frameworks, and ecosystem support mechanisms, to determine their impact on nurturing and sustaining Unicorns and Gazelles. Additionally, comparative studies across different regions and countries can provide insights into the most effective policy measures for facilitating the success of exceptional companies.

Future research should investigate investor withdrawal's consequences and long-term effects on exceptional companies like Unicorns and Gazelles. This includes understanding the specific challenges and disruptions faced by these companies when left to fend for themselves, as well as identifying strategies and mechanisms which these companies can employ to mitigate the risks associated with the liability of adolescence.

Finally, we believe that the results from our study, and the associated framework, can also present important implications for practitioners and policy makers. Leaders (e.g., founders) of Unicorns and Gazelles need to: *i*) identify, from the beginning, what actors (often VCs) can guarantee the most the co-creation of value. Practitioners should recognize the specific factors contributing to Unicorns and Gazelles' early-stage success. This includes acknowledging the distinct characteristics of these exceptional companies, such as their high-scalable business models and market evaluation as a survival proxy and their reliance on early investor support; and *ii*) *establishing*, accordingly, stable ties to guarantee the initial survival of their company through finding economic and financial support during the highly costly initial phase. Founders (and investors) should recognize the critical role of early investor support in helping Unicorns and Gazelles to overcome

initial challenges. Including small rounds of initial investments followed by venture capital funding, this support plays a crucial role in fostering coordination, building trust relationships, and facilitating the growth of these ventures.

Policy makers should prioritize efforts to identify and support exceptional companies (Unicorns and Gazelles) and venture capitalists (VCs) that form their entrepreneurial ecosystem. To foster a symbiotic relationship between these two crucial stakeholders, policy makers should facilitate and encourage the establishment of strong ties between exceptional companies and VCs. This can be achieved through initiatives such as creating networking platforms, organizing matchmaking events, and providing resources and support for collaboration. By strengthening these relationships, policy makers can enhance the overall entrepreneurial ecosystem and increase the likelihood of successful outcomes for exceptional companies and VCs.

From the beginning (and helped by policy makers), the start-up leaders and the VCs need to identify potential exit strategies to manage the double-edged sword of VCs involvement. The withdrawal of the investors' support can lead to significant challenges and disruptions, known as the liability of adolescence. Entrepreneurs and investors should carefully navigate this phase, ensuring proper coordination, financial flexibility, and professionalization measures to sustain growth and mitigate risks. Exit strategies should be gradual and able to compensate for the capabilities and funds the VCs would leave behind.

### 6.1. Limitations and conclusions

*What are the determinants of Unicorns and Gazelles' early success?* Through this first review of 66 extant studies, we have addressed the lively research question regarding what determinants allow Unicorns and Gazelles to overcome the well-known *liability of newness* (Stinchcombe, 1965) and prosper early in their life cycle.

We have specifically focused on the determinants of infant survival. Overall, Unicorns and Gazelles demonstrate that overcoming challenges requires a combination of strategic factors, such as investor involvement, coordination mechanisms, and the effective utilization of resources and networks. By embracing these elements, these high-growth start-ups can navigate the complexities of their respective journeys and establish themselves as influential players in their industries.

We have derived a related framework, potentially explaining the distinctive life cycle associated with these two species. In this framework, Unicorns tend to depend on a series of private initial investments followed by substantial support from VCs (to cover losses and support rapid growth). In contrast, Gazelles rely on VCs as their primary source of outside equity financing. Gazelles are more adept at gaining local support, benefiting from their characteristics, and creating job opportunities. Unicorns and Gazelles leverage external relationships, and knowledge flows to overcome their lack of experience. However, VC involvement may accelerate the maturation of start-ups, leading to potential challenges associated with the liability of adolescence.

Scholars, entrepreneurs, and policy makers can use the above results to understand better what actions are needed to promote and enhance the creation of a flourishing start-up ecosystem with a valuable business that has a positive impact on both the employment growth and industry rates (Hamel & Zanini, 2017; Pham, Jones, Dobson, Liñán & Viala, 2021; Phillips & Ritala, 2019). In particular, the framework which we have advanced could also be helpful to VC investors and/or private equity fund managers. Both, for example, could use it during their investment decisions, which stem from the KPIs related to future financials, to identify the best investment choices. We suggest that the risk of failure could be lower for Unicorns and Gazelles featuring those characteristics identified in our study.

In conclusion, it also seems important to highlight that inherent limitations still exist in terms of current research on Unicorns and Gazelles, with an emphasis on methodological challenges such as sampling issues and potential biases toward larger organizations. Relatedly, we

are also aware that the extant, divergent definitions of Unicorns and Gazelles can have influenced our interpretation of the outcomes of the sampled studies, which can restrict synthesis and generalizability. On the one hand, we thus acknowledge that our reported results and proposed framework still need interpretative flexibility; on the other hand, however, we also believe that these concerns, which resonate with broader discussions in the academic community, must be also viewed *keeping an eye* on the evolving nature of the field.

With regard to the above, a recent Professional Development Workshop (PDW) at the Academy of Management 2023<sup>(6)</sup> showcased diverse perspectives on unicorn research and well-depicted the state of the art of this nascent entrepreneurial stream on 'fantastic new ventures' (Cristofaro et al., 2023b). In a recent article also related to the PDW theme, two famous contributors, such as Howard Aldrich and Martin Ruef, to the debate in general (and to that PDW in particular), stated that "studies of exceptional businesses and leaders represent an integral component of management research and pedagogy [...] Entrepreneurship scholars have considered what researchers can learn from high-valuation or high-growth ventures, with an eye toward explaining their extraordinary performance" (Ruef, Birkhead, & Aldrich, 2023; pp. 1088). However, Aldrich and Ruef also raised methodological challenges when investigating these 'outliers' and proposed an approach where outliers – i.e., entrepreneurs or businesses – are analyzed against a comparable population. In the same PDW, Suresh Kotha (see Kotha et al., 2022) supported studying exceptional ventures, emphasizing their theoretical and practical importance. His stance aligns with the recognition that extraordinary ventures, exemplified by Uber, Airbnb, and Facebook, profoundly influence economies and societies. Given the limited number of Unicorn ventures, Kotha emphasized the unique opportunity, through a comprehensive population study, to add a valuable perspective to the ongoing discourse.

While acknowledging the nascent stage of the 'exceptional new ventures' stream, characterized by the lack of an established theory and uncertainty regarding what variables and methods to consider, it appears key to view this stage as an opportunity for theory development. Embracing openness to unexpected findings, questioning assumptions, and identifying gaps in the existing theory, resonates with the ongoing progress in the theoretical and empirical exploration of Unicorns and Gazelles. We believe that this approach permits to position the field not as hindered by its current state, but as a unique occasion to cultivate a deeper understanding, and associated shaping of the literature on 'exceptional new ventures'.

In light of these considerations, we finally claim that the limitations within this stream should be seen as integral to its evolution rather than obstacles to further investigation. The commitment of scholars to engage in lively debates, address methodological concerns, and explore the theoretical and practical significance of studying Unicorns and Gazelles establishes a robust foundation for the continued cultivation and advancement of this research frontier.

### Statement AI

During the preparation of this work the author(s) did not use any AI and AI-assisted technologies in the writing process.

### CRedit authorship contribution statement

**Matteo Cristofaro:** Methodology, Project administration, Supervision, Visualization, Writing – original draft, Writing – review & editing. **Gianpaolo Abatecola:** Conceptualization, Writing – original draft, Writing – review & editing. **Federico Giannetti:** Conceptualization, Formal analysis, Validation, Visualization, Writing – original draft.

<sup>6</sup> Details of the event here: <https://my.aom.org/Program2023/SessionDetails.aspx?sid=13050>

**Anastassia Zannoni:** Data curation, Formal analysis, Writing – review & editing.

## Data Availability

No data was used for the research described in the article.

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All the references in the dataset are preceded by a \*

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