# The dynamics of narcissism in founding teams: Implications for co-founder turnover and venture growth

Ulrich Lang, Victoria Berg, Jannis von Nitzsch, Andreas Engelen

Article - Version of Record

Suggested Citation:
Lang, U., Berg, V., von Nitzsch, J., & Engelen, A. (2025). The dynamics of narcissism in founding teams: Implications for co-founder turnover and venture growth. Journal of Business Venturing, 41(2), Article 106569. https://doi.org/10.1016/j.jbusvent.2025.106569

Journal of Business Venturing 41 (2026) 106569

Contents lists available at ScienceDirect

Journal of Business Venturing

journal homepage: www.elsevier.com/locate/jbusvent

# The dynamics of narcissism in founding teams: Implications for co-founder turnover and venture growth

Ulrich Lang [a], Victoria Berg [a,*], Jannis von Nitzsch [a], Andreas Engelen [a]

[a] *Heinrich Heine University Duesseldorf, Universitaetsstraße 1, 40225, Duesseldorf, Germany*

ARTICLE INFO

*Keywords:*
Narcissism
Founding teams
Co-founder turnover
PO fit theory

ABSTRACT

Drawing on person–organization (PO) fit theory, we examine how different configurations of the personality trait narcissism within founding teams influence co-founder turnover and venture growth. We theorize that high mean levels of narcissism in founding teams reduce "supplementary fit," heightening the likelihood of co-founder turnover and, in turn, undermining venture growth. In contrast, greater diversity in narcissism can foster "complementary fit," especially through improved role and task allocations between narcissistic and less narcissistic co-founders, buffering the negative effects of high mean narcissism. To test our model, we utilize a unique longitudinal dataset of 911 U.S. tech-based ventures founded in 2010, which combines a LinkedIn-based measure of founder narcissism with detailed founding team and venture data. Our findings support our proposed *founder-narcissism-configuration model*, revealing that the mean level of narcissism and narcissism diversity jointly shape co-founder turnover and ultimately venture growth. This study advances research on narcissism in entrepreneurship, team-level narcissism, and PO fit theory.

## Executive summary

Entrepreneurship research increasingly investigates how narcissism, a personality trait involving visionary thinking, dominance, and a need for admiration, shapes entrepreneurial activity and outcomes. While prior studies show that narcissism can both facilitate and hinder venture success, this work has focused almost exclusively on individual founders, even though many new ventures are founded by teams. Because founding teams operate in highly uncertain environments with fluid role structures, limited hierarchy, and intensive interpersonal interaction, the personality traits of all co-founders, especially those with strong interpersonal consequences, such as narcissism, likely shape team functioning in meaningful ways. Yet we know little about how narcissism operates within founder teams or how different levels and distributions of narcissism influence team stability and venture performance.

We address this gap by theorizing and testing how configurations of narcissism within founding teams affect co-founder turnover and, ultimately, venture growth. Drawing on person-organization fit theory, we argue that higher mean levels of narcissism act as a barrier to supplementary fit among co-founders regarding important teamwork values, thereby increasing co-founder turnover. At the same time, we propose that narcissism diversity (for a given mean level of narcissism) can foster complementary fit, providing teams with a need-supply fit in terms of task and role assignments. Combining these two aspects, we explore how different narcissism configurations within founding teams influence co-founder turnover and discuss implications for venture growth, which is the most

* Corresponding author.
*E-mail addresses:* Ulrich.Lang@hhu.de (U. Lang), Victoria.Berg@hhu.de (V. Berg), Jannis.Nitzsch@hhu.de (J. von Nitzsch), Andreas.Engelen@hhu.de (A. Engelen).

https://doi.org/10.1016/j.jbusvent.2025.106569
Received 10 April 2025; Received in revised form 4 December 2025; Accepted 15 December 2025
Available online 26 December 2025

significant performance measure in ventures.

We test our framework using a unique longitudinal dataset of 911 U.S. tech ventures founded in 2010, observing founding team composition, co-founder exits, and venture outcomes for up to ten years. We measure founder narcissism using a newly developed LinkedIn-based measure and validate its applicability for entrepreneurial settings. Our analyses show that higher mean levels of narcissism significantly increase the likelihood of co-founder turnover. However, greater narcissism diversity within the team mitigates this effect, indicating that the negative implications of mean narcissism are contingent on the distribution of narcissism across co-founders. Furthermore, we demonstrate that these configurations shape venture growth indirectly through their effects on co-founder turnover.

Our research makes three main contributions. First, we advance entrepreneurship research by shifting the focus from individual founder narcissism to the team level, introducing the concept of *founder narcissism configurations* and their indirect effects on venture growth through co-founder turnover to this stream of literature. Second, we enhance team narcissism research in the broader management literature by showing that the previously documented negative effects of higher mean narcissism levels within a team are contingent on how that narcissism is distributed among team members. Lastly, we contribute to PO fit theory, which has primarily focused on fit based on positively connoted traits, by explaining how narcissism, a trait that is at least partially negatively connoted, can both create misfit (e.g., low supplementary fit due to value incongruence) and promote fit (e.g., complementary fit in task allocations).

## 1. Introduction

The entrepreneurship literature has developed a strong interest in understanding how narcissism, a multifaceted personality trait that encompasses, for example, visionary thinking, a drive for dominance, and a desire for admiration (Cragun et al., 2020; Grijalva et al., 2020; Morf and Rhodewalt, 2001), in founders shapes entrepreneurial activity and outcomes. Given this diversity of features, it is not surprising that empirical findings are mixed. Some studies highlight the positive consequences, showing that narcissistic founders excel in specific tasks, such as fundraising (Anglin et al., 2018), and can build successful ventures (Brownell et al., 2024). Other studies show that negative aspects prevail and (excessive) narcissism in founders can undermine venture success (Bollaert et al., 2020; Wu et al., 2022).

However, these studies investigate the narcissism of solo founders, thereby neglecting a significant share of ventures founded by teams (Klotz et al., 2014). These multi-founder ventures come with important advantages (e.g., broader knowledge base) (Jin et al., 2017), but also pose distinct challenges, particularly concerning how founders function collectively as a team. Founding team members interact intensively daily, rely heavily on informal coordination and collaboration, and need to coordinate routines and task assignments among themselves (Bamford et al., 2006; Guenther et al., 2016). This creates a setting in which the personality traits of all co-founders, especially those with substantial relational implications, such as narcissism (Junge et al., 2025), are likely to exert a pronounced influence (de Mol et al., 2020). The narcissism of the other co-founders can affect each co-founder's satisfaction and perceived fit within the team, which likely has wide-ranging effects on team dynamics, including drastic decisions of co-founders to leave the venture. Co-founder turnover is typically considered a substantial threat to venture performance (Guenther et al., 2016), underscoring the importance of team narcissism in venture development. Yet, due to the focus on solo founders, research on narcissism in entrepreneurship has neglected these critical aspects.

Understanding how narcissism within founding teams shapes co-founder turnover and affects venture performance is important from both theoretical and practical perspectives. Theoretically, as narcissism's consequences are to a large degree relational (Rosenthal and Pittinsky, 2006), narcissism is particularly likely to exert its effects at the team level (Grijalva et al., 2020). Limiting the attention to solo founders while neglecting how narcissism plays out in founding teams is likely to deprive us of critical theoretical insights at the interface of narcissism and entrepreneurship research. Practically, stakeholders such as investors who frequently interact with founding teams may benefit from recognizing that different configurations of personality traits within founding teams are more or less conducive to team stability and venture development. Therefore, we ask: *How do different configurations of narcissism within founding teams influence co-founder turnover and overall venture performance?*

To address this research question, we draw on person-organization (PO) fit theory (Kristof, 1996; Kristof-Brown et al., 2023; Kristof-Brown, 2000), which states that the fit (e.g., in values or need-supply) among all individuals (here: the individual co-founders) within an organization (here: the founding team as the nucleus of any new venture) shapes organizational turnover and, ultimately, performance, with growth representing the most critical performance proxy in ventures (von Nitzsch et al., 2024). When examining narcissism at the founding team level, the mean level of narcissism offers a meaningful first step to determine its influence on the fit among team members. However, because a given mean can emerge in different ways, the distribution (here: diversity) of narcissism across members is also crucial to consider. For instance, a relatively high mean level of narcissism may result from all co-founders scoring similarly high on narcissism (i.e., low narcissism diversity across the founding team) or from one exceptionally narcissistic founder paired with co-founders who are low to moderate in narcissism (i.e., high narcissism diversity).

Accommodating the specific conditions of founding teams in our theorizing, our central argument is that high mean levels of narcissism create low congruence among team members in values important for teamwork, for example, arising from the coexistence of multiple narcissists who seek admiration from others but are unwilling to reciprocate such admiration (i.e., low *supplementary* fit) (Morf and Rhodewalt, 2001). We also argue that such a misfit is likely to induce co-founder turnover. At the same time, we propose that for a given level of narcissism, greater narcissism diversity within the team, for example, due to better task and role allocations between narcissistic and non-narcissistic co-founders, can create a certain level of need-supply fit (i.e., *complementary* fit) and thereby reduce co-founder turnover. Moreover, we theorize that the mean and diversity in narcissism interact such that the negative effect of

mean narcissism is diminished when there is high diversity. Finally, as a more distal outcome to our theorizing (Grijalva et al., 2020), we expect that different narcissism configurations, through co-founder turnover, differentially affect venture growth.

To empirically validate our research model, we use a unique longitudinal dataset of 911 tech-based ventures founded in the U.S. in 2010, which combines venture and founder information over up to 10 years for each venture, precisely tracking the turnover of the original founding team members. We capture narcissism using a newly developed measure based on LinkedIn data and demonstrate its validity within entrepreneurial contexts (Junge et al., 2025). Co-founder turnover is operationalized as the departure of one or more original founding team members. We measure performance using employee growth as the most reliable proxy for new venture success (Hmieleski and Baron, 2009; Hmieleski and Cole, 2023).

With our research, we offer three important contributions. First, while prior research in entrepreneurship has examined narcissism as an individual-level construct (Anglin et al., 2018; Bollaert et al., 2020; Brownell et al., 2024), we accommodate the relational facets of narcissism by shifting the focus to the team level and introducing the idea of a *founder-narcissism-configuration model* that indirectly influences venture growth through co-founder turnover.

Second, we extend prior research on team-level narcissism in the broader management literature, which has primarily examined the mean level of narcissism within teams (Bachrach et al., 2023; Grijalva et al., 2020; Junge et al., 2025). We contribute to this emerging line of research by theorizing and demonstrating that the effects of higher mean narcissism can be more or less detrimental, depending on the diversity of team members in this trait, and that, ultimately, the distribution of narcissism among all team members can impact how the team functions. Additional analyses expand on these findings by examining whether, as a result, relatively more or less narcissistic co-founders exit the team, and the short- and long-term implications thereof.

Third, we contribute to research on PO fit (Kristof, 1996; Kristof-Brown et al., 2005; Kristof-Brown et al., 2023) by highlighting that the nature of fit depends on the focal trait under consideration. While much of this research has focused on how a positive trait shared by organizational members (e.g., conscientiousness) can promote high fit, we shift the focus to how a specific (at least partially) negative trait (here: narcissism) can simultaneously provide an organization with fit (e.g., complementary fit in role allocations) and misfit (e.g., low supplementary fit due to incongruence in values important for teamwork), and how these aspects complement each other.

## 2. Conceptual background

### 2.1. Person-organization fit theory

PO fit theory is based on the idea that the (perceived) fit between an individual and an organization affects both parties' benefits. Individuals tend to be more satisfied, engaged, stay on board, and perform better when they fit well with the organization (Gabriel et al., 2014; Oh et al., 2014). Likewise, organizations benefit from lower turnover and increased productivity (Kristof-Brown et al., 2023; Kristof-Brown, 2000). The fit between an individual and an organization can be supplementary or complementary: Supplementary fit occurs when an individual and the organization share specific traits, allowing for value congruence that strengthens interpersonal communication, increases predictability and satisfaction in social interactions (O'Reilly et al., 1991), and improves coordination (Edwards and Shipp, 2007; Kristof-Brown et al., 2005). Complementary fit occurs when one party complements the other by providing what the other party needs. Both types of fit can co-occur, but they must not, since they operate through distinct pathways (i.e., value congruence and need-supply matching, respectively).[1]

Research at the individual level has examined the effect of PO fit on personal job performance and, ultimately, on an individual's decisions to stay within an organization (Hoffman and Woehr, 2006). Several meta-analyses demonstrate that PO fit is associated with higher individual job performance and lower exit intentions, particularly when there is alignment between an individual's personality and the organization's corresponding average personality profile (Kristof-Brown et al., 2005; Verquer et al., 2003). Some research suggests that these positive effects extend to the organizational level, where a higher fit in personality traits (e.g., conscientiousness) between individuals and the organization is associated with improved organizational performance (Colbert et al., 2008; Schneider and Bartram, 2017). Moreover, Schneider and Bartram (2017) argue that performance is enhanced when trait variance is low, as similarity among individuals reduces ambiguity and fosters greater cooperation.

Yet, Kristof-Brown and colleagues state that the positive relationship between PO fit and performance is "particularly true when there is homogeneity at high levels of characteristics that are consistently found to be positively related to performance at the individual level" (2023; p. 398). What remains unclear, and is central to the present research, is how more negatively connoted (or multifaceted) characteristics, especially those with negative relational features, such as narcissism (Grijalva et al., 2020), influence PO fit. Understanding this aspect requires deeper insight into how individual team members' levels of narcissism shape both supplementary and complementary fit at the organizational level, which will be the focus of our theorizing (see the introductory section on hypothesis development for how we interpret these two elements specifically in relation to narcissism).

[1] Notably, the maximal "fit may be achieved when each entity's needs are fulfilled by the other, and they share similar fundamental characteristics" (Kristof, 1996, p. 6).

### 2.2. The role of narcissism in interpersonal interactions

Narcissists[2] tend to exhibit high levels of agency, such as dominance and authority-seeking, while displaying low levels of communion, including a disregard for others and a lack of empathy (Grijalva et al., 2020; Morf and Rhodewalt, 2001). Although narcissists often display high confidence, visionary thinking, and an inflated sense of self-importance (Anglin et al., 2018; Brownell et al., 2024), they heavily rely on external validation and admiration to uphold their positive self-image (Morf and Rhodewalt, 2001; Nevicka et al., 2011). Existing research suggests that narcissistic founders tend to have higher entrepreneurial intentions (Hmieleski and Lerner, 2016) but struggle to learn from failure (Liu et al., 2019). Empirical findings on their impact on venture performance are somewhat inconsistent and ambiguous, with some studies indicating positive effects (Brownell et al., 2024), others negative effects (Bollaert et al., 2020), and some showing mixed or U-shaped effects (Anglin et al., 2018; Wu et al., 2022).

These studies emphasize the importance of narcissism in the entrepreneurial context but have largely confined their focus to the individual level. Yet, narcissism is inherently relational (Rosenthal and Pittinsky, 2006), calling for research that examines how team members, each displaying varying degrees of narcissism, interact with one another. Some initial studies in the broader management literature have adopted a team perspective, offering intriguing starting points for related theorizing. Grijalva et al. (2020) suggest that in dynamic NBA teams, higher levels of team narcissism impair performance, primarily because one or more narcissistic members can "contaminate the entire team dynamic" (Grijalva et al., 2020, p.11). However, the authors note that these findings are especially relevant for "action teams", which are teams composed of skilled specialists who "physically manipulate their operating environment to carry out their plans" (Hirschfeld and Bernerth, 2008, p.1429) and that focus on the execution of manual rather than intellectual tasks (Grijalva et al., 2020). Relatedly, research shows that narcissistic CEOs in established organizations tend to hire TMT members who are also high in narcissism, but more frequently dismiss them to assert dominance and authority (Junge et al., 2025). The core of our theorizing is to examine how such dynamics unfold in founding teams, with their distinct conditions, which we discuss in the following.

## 3. Hypotheses development

We develop our theoretical foundation informed by PO fit theory (Kristof, 1996; Kristof-Brown et al., 2023), which states that the fit among all individuals (here: the individual co-founders) within an organization (here: the founding team as the nucleus of any new venture) shapes organizational turnover and, ultimately, performance. To effectively apply PO fit theory, we theorize how the distribution of narcissism influences the level of "fit" in the team across both its supplementary and complementary dimensions. We develop the argument that supplementary fit is highest in the *absence* of narcissism because this setting allows for value congruence in terms of (from an organizational perspective) desirable decision-making and behaviors (Cable and Edwards, 2004). While, in theory, the presence of narcissism (and hence, the similarity of all team members in narcissistic traits and attitudes) could be considered as inducing high levels of supplementary fit, such a setting would offer a strong disconnect to the nature of narcissism and to the typically assumed positive consequences of value congruence fed by individuals sharing positively connoted personality traits (Kristof-Brown et al., 2023; Schneider and Bartram, 2017).[3] We argue that complementary fit is highest when two individuals differ strongly in their individual narcissism levels, creating a natural need-supply fit in interpersonal interactions and task allocation.

Building on this foundation, we subsequently derive a *founder–narcissism–configuration* model, using both the mean level and the diversity of narcissism within the founding team as independent and interacting variables (de Mol et al., 2020). We then examine how the resulting configurations relate to co-founder turnover, which, in turn, affects venture growth. We show the overarching research model in Fig. 1.

Our theorizing accounts for the specific context of a founding team. Due to their strong involvement with the venture and the absence of (many) employees, the team of co-founders is the nucleus of every venture (Knight et al., 2020). They typically spend most of their working time together, allocate tasks among themselves, and jointly address the wide range of challenges a new venture faces at inception (Jung et al., 2017). These challenges range from potentially high-profile strategic decisions to numerous operational tasks. For this reason, the founding team serves as the central unit of analysis for theorizing about organizational fit (Hoffman and Woehr, 2006; Knight et al., 2020; Verquer et al., 2003). Furthermore, in founding teams, hierarchical structures and task allocations are not present at the outset; instead, they emerge over time based on team interactions (Jung et al., 2017). A founding team starts with a "blank slate" and shapes strategies, organizational processes, and outcomes while managing day-to-day operations (Klotz et al., 2014).

[2] Narcissism was originally defined as a clinical disorder marked by an inflated sense of self-importance, a strong need for admiration, and a tendency to see others as extensions of oneself (Cragun et al., 2020; Gerstner et al., 2013). However, beyond its clinical origins, narcissism is now understood as a personality trait that exists on a spectrum (Chatterjee and Hambrick, 2007; Junge et al., 2025; Liu et al., 2019).

[3] In addition, consistent with this view, meta-analyses from psychology research show that narcissism is negatively correlated with "positive" traits such as affective & cognitive empathy (Urbonaviciute and Hepper, 2020), for which the concept of supplementary fit would apply in its typical form, further supporting this conceptualization. To clarify, we do not see empathy and narcissism as two ends of a spectrum. Yet, generally, a narcissistic individual should be less empathetic, so two narcissists would demonstrate low levels of supplementary fit concerning the positive trait of empathy. Implicitly, this argument supports our idea that the absence of narcissism in individuals would foster higher levels of supplementary fit. We confirmed this assumption by analyzing Twitter data to measure founders' empathy and comparing it to our measure of narcissism, finding that the typical negative relationship between these personality traits in the general population also applies in our context (i.e., narcissism correlates negatively with empathy; $r = -0.36$, $p < .05$) (See section on construct validity).

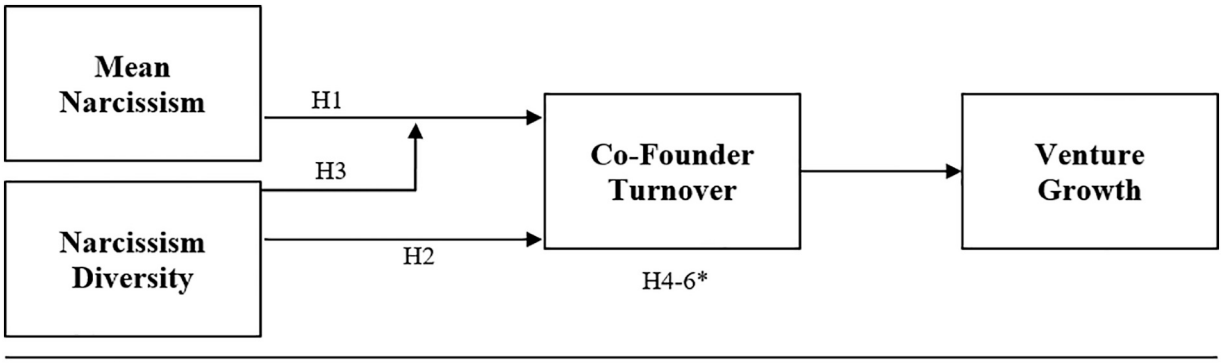


**Fig. 1.** Proposed theoretical model.

The founding team operates at least partly in a "vacuum," as external feedback and validation, particularly from customers, are often absent when the product is not ready, and setbacks are frequent (Klotz et al., 2014; Lazar et al., 2020).

We examine co-founder turnover as the proximate consequence of narcissism configurations within the founding team. As PO fit theory argues, exiting the organization, in this case, the founding team, is a primary response when an individual perceives low levels of fit with the team (Kristof-Brown et al., 2023). Turnover is particularly salient in this context because collaboration among co-founders is necessarily intense, making potential "middle ways" (e.g., allocating tasks with minimal interaction between specific team members) unrealistic (Klotz et al., 2014; Preller et al., 2023). Moreover, since the founding team is the central unit of the venture, there is no possibility of relocating the founders to other teams or departments.

### *3.1. Effect of mean narcissism on co-founder turnover*

Accommodating the specific conditions of founding teams, we first argue that (for a given level of narcissism diversity) high rather than low mean levels of narcissism within the team serve as a barrier to generating supplementary fit with congruence in (for the team) positive values, thereby increasing co-founder turnover.

First, we argue that high mean levels of narcissism in a team likely create a barrier to alignment on key values related to teamwork, or more generally, behaviors in interpersonal interactions (Grijalva et al., 2020). For example, a high mean level of narcissism is likely associated with increased striving for admiration and ego reinforcement among team members (Chatterjee and Hambrick, 2007; Morf and Rhodewalt, 2001); tendencies to disregard others' contributions (Zhu and Chen, 2015) and overemphasize one's own; as well as an intensified drive for dominance and authority (Nevicka et al., 2011). These factors create a team environment characterized by dissatisfaction, as all team members see little alignment between their egocentric view of how the team should function interpersonally and others' perspectives (O'Reilly et al., 1991). Most importantly, all team members likely expect admiration from others but believe it is unnecessary to reciprocate, or they may claim leadership roles for themselves while strictly resisting follower roles in other situations (Anicich et al., 2016; Greer et al., 2018). In such a setting, there is a considerable potential for negative interaction spirals. For example, when highly dominant individuals are (reluctantly) placed in a subordinate position, they often respond with even stronger dominance behaviors (Schmid Mast and Hall, 2003), leading to intensive "power struggles" among team members.

In contrast, at low mean levels, the omnipresence of these negative traits is absent. There is likely no excessive drive for admiration or dominance, and all founders are likely to have a more balanced perspective on each individual's importance in the team, facilitating a positive team atmosphere and enhancing communication and coordination, which is typically associated with positive supplementary fit (Cable and Edwards, 2004). In consequence, we argue that, from an "interpersonal lens," teams with high (as opposed to low) mean levels of narcissism are likely to experience low supplementary fit and, consequently, greater co-founder turnover.

Second, we contend that high mean levels of narcissism in the team induce a low congruence in terms of functional expectations and goals. In new ventures, task and role allocations typically emerge informally (Jung et al., 2017) and are necessary to enable speedy decisions in uncertain entrepreneurial settings (Lahiri et al., 2019). We argue that in teams with high mean narcissism, multiple team members aim to pursue externally facing tasks (i.e., activities more closely linked to external recognition and visibility) while expecting other team members to handle internally oriented tasks. Similarly, we assume that there is an overemphasis on strategic leadership tasks (i.e., activities tied to authority and dominance) within the team. Hence, in teams with high mean narcissism, there is a substantial barrier to congruence in essential goals, which are those centered on venture success, because all team members place the greatest value on their own satisfaction through the visible and strategic tasks outlined above (Grijalva et al., 2020). Because delegation opportunities are limited at this stage, given the small number of employees, we also argue that conflicts arise among team members over who should take on essential operational tasks, again leading to strong dissatisfaction across the team.

In contrast, in a team with low mean narcissism, team members are more likely to align on focusing on "what is best for the venture," leading to consensus on desirable behaviors and shared beliefs about the relative importance of the team versus the

individual, indicating positive supplementary fit (Cable and Edwards, 2004). In consequence, we argue that from a "functional lens," teams with high (as opposed to low) mean levels of narcissism are likely to experience more co-founder turnover due to lower levels of supplementary fit (Bamford et al., 2006; Vanaelst et al., 2006).

**Hypothesis 1. (H1):** Co-founder turnover is higher when, ceteris paribus, the founding team's mean level of narcissism is high compared to when it is low.

### 3.2. Effect of narcissism diversity on co-founder turnover

Low diversity indicates that narcissism is evenly spread across members. In contrast, high diversity suggests that the team's mean level of narcissism is mainly driven by one or a few co-founders with disproportionately high levels of narcissism. We propose that greater narcissism diversity within the founding team can foster complementary (need-supply) fit among co-founders, thereby reducing co-founder turnover, for two reasons.

First, we argue that high (compared to low) narcissism diversity leads to higher levels of complementary fit in the "match" of needs and supplies in terms of interpersonal expectations and behaviors. For example, in a team with high narcissism diversity, there are some narcissistic team members who seek admiration and ego-reinforcement (Chatterjee and Hambrick, 2007), needs that are particularly salient in a new venture setting where external validation, positive feedback, or even admiration (e.g., from satisfied customers) is typically not yet present. Yet, there are also some less narcissistic co-founders who are less reluctant to provide such admiration than equally narcissistic counterparts in less diverse teams, offering a need-supply fit concerning these narcissistic needs. Also, the more narcissistic founders are more likely to assume dominant leadership roles, while non-narcissistic founders tend to be satisfied with follower roles (Chatterjee and Pollock, 2017; Mohammed and Angell, 2004). Hence, the team is characterized by a certain level of complementary fit (i.e., a need-supply fit regarding interpersonal needs) among co-founders, which likely reduces co-founder turnover.

Second, we expect that this complementary fit also induces positive functional consequences. Venture success and progress depend on founding teams effectively assigning tasks and roles, such as balancing external and internal responsibilities or allocating sufficient attention towards both strategic and operational duties (Jung et al., 2017; Klotz et al., 2014). We argue that effective task and role allocation is enhanced in settings with higher diversity. Here, more narcissistic founders are likely to take on external-facing (e.g., securing resources for the venture [Anglin et al., 2018]) and strategic responsibilities (e.g., developing a vision for the venture [Rosenthal and Pittinsky, 2006]) that provide visibility, opportunities for validation, and satisfy their need for authority (Brownell et al., 2024; Nevicka et al., 2011). In contrast, founders low in narcissism are likely to be comfortable focusing on operational and internal contributions (Junge et al., 2025). When more balanced task and role allocations can be introduced without friction, the team benefits from a need-supply fit regarding the distribution of responsibilities and tasks at the team level (Boeker and Wiltbank, 2005; Lahiri et al., 2019), as well as greater satisfaction with venture progress. As a result, we expect that greater narcissism diversity, ceteris paribus, provides a certain level of complementary fit at the team level, which reduces co-founder turnover. Thus:

**Hypothesis 2. (H2):** Co-founder turnover is lower when, ceteris paribus, the founding team's narcissism diversity is high compared to when it is low.

### 3.3. Moderating effect of narcissism diversity on the relationship between mean narcissism and co-founder turnover

The mean level and diversity of narcissism collectively capture how narcissism is represented in a founding team. Building on this notion, we argue that the mean and diversity interact in shaping team outcomes. In fact, a configuration that contributes to both *complementary* and *supplementary* fit (i.e., one that maximizes both simultaneously) may be the most effective in decreasing co-founder turnover (cf. Cable and Edwards, 2004). Given that the highest values for each type of fit cannot coincide, it is necessary to consider realistic configurations that account for the interdependence between the two dimensions. To illustrate our reasoning, we outline four possible team configurations based on the distinction between "low vs. high mean" and "low vs. high diversity," resulting in four distinct team settings (note that this is for illustrative purposes only, while we still propose a linear hypothesis).

#### 3.3.1. High mean x low diversity

In this configuration, all co-founders are equally high in narcissism. In line with H1, we expect this configuration to provoke a substantial interpersonal misfit, for example, by all co-founders excessively seeking admiration paired with unwillingness to reciprocate the same, resulting in low supplementary fit in terms of values related to teamwork and mutual expectations towards behaviors in interpersonal interactions (Morf and Rhodewalt, 2001). Because all members are equally high in narcissism, the positive effects of complementary fit derived in H2 also cannot emerge. Together, these dynamics create a significant misfit (both in supplementary and complementary dimensions) among co-founders, thereby strongly driving co-founder turnover at the team level.

#### 3.3.2. High mean x high diversity

This configuration consists of some extraordinarily narcissistic founders alongside others with low or moderate narcissism. Because the mean level of narcissism is high, the arguments from H1 predicting low supplementary fit and related negative effects on co-founder turnover apply. Yet, the presence of co-founders with lower levels of narcissism may buffer these effects, as narcissistic and less narcissistic co-founders find their respective and complementary roles in a founding team more naturally (Chatterjee and Hambrick, 2007; Nevicka et al., 2011). Consequently, the strong misfit described in the "High Mean x Low Diversity" configuration is

likely buffered by some level of complementary fit, leading to, relative to this configuration, lower co-founder turnover rates.

#### 3.3.3. Low mean x low diversity

A founding team with this configuration consists of team members who all exhibit similarly low levels of narcissism. As a result, the negative effects associated with high mean levels, as outlined in H1, are absent because team members are well-aligned in their values and beliefs, including high consensus on desirable behaviors and goals (i.e., high supplementary fit). Since we generally expect higher levels of narcissism to have detrimental consequences in teams (Grijalva et al., 2020), we anticipate, from a narcissism lens, that co-founder turnover rates will be lower in this configuration than in the former two configurations with a "high mean". Yet, this configuration also does not benefit from the complementary fit described in the "high diversity" conditions outlined in H2.

#### 3.3.4. Low mean x high diversity

In this configuration, the founding team consists primarily of team members with low levels of narcissism, while one or very few individuals may stand out with a (slightly) higher level. Because narcissism is generally low, the negative effects outlined in H1 are unlikely to manifest strongly (i.e., there is a supplementary fit regarding team members' expectations and goals). The high diversity also suggests that some degree of complementary fit, as expected in H2, may emerge. At the same time, however, the potentially positive effects of high diversity are constrained by the low mean level, as the diversity mainly reflects differences at the medium and lower ends of the "narcissism scale." While these aspects limit the potential benefits of narcissism diversity, such as effective role and task allocations, we still expect them to emerge to some extent.

Comparing the four configurations suggests that the mean and diversity of narcissism do not operate in isolation but interact. Strong negative effects are only to be expected when the mean level is high rather than low (due to lower supplementary fit). The negative effect of a high mean is mitigated when diversity is high compared to when it is low (due to higher complementary fit). At the same time, diversity can only unfold its full effects when the mean level of narcissism is sufficiently high. Taken together, we hypothesize:

**Hypothesis 3. (H3):** The negative effect of a higher mean narcissism on co-founder turnover is less pronounced when narcissism diversity is high compared to when it is low.

### 3.4. Effect of co-founder turnover on venture growth

In what follows, we include the more distal outcome of venture growth in our model (analog to the theoretical setup developed by Grijalva et al., 2020). Given that ventures primarily focus on scaling operations, slow or stagnant growth is often equated with poor performance (Boeker and Karichalil, 2002), making it a critical success indicator, especially in the early phases when financial metrics are not yet relevant. As we outlined, different configurations of narcissism go along with varying levels of supplementary and complementary fit concerning narcissism. This level of fit inevitably changes with a co-founder's exit, which, in theory, may positively (through better fit) or negatively (through reduced fit) affect ventures' growth (see post hoc analysis for a detailed discussion of these aspects, along with an empirical exploration thereof). Still, in what follows, drawing on the literature on the consequences of co-founder exit (Guenther et al., 2016; Preller et al., 2023), we argue that the effect of co-founder turnover is overwhelmingly negative, given the specific setting of founding teams.

Interpreting prior literature on co-founder turnover through a PO fit perspective, we argue that, given the small size of founding teams, a single member's exit always negatively affects venture growth by reducing "need-supply fit" in functional role assignments (Guenther et al., 2016; Zhao et al., 2013). Therefore, regardless of how the level of fit related to narcissism changes, the negative impacts of losing a co-founder, and thus reducing "complementary functional fit," should be substantial[4] because the team loses the departing founder's human capital (i.e., workforce, network, social capital, and skills), including their valuable venture-specific experience (Preller et al., 2023; Zhao et al., 2013). Hence, a founding team member's departure reduces a venture's access to already limited resources (i.e., limits need-supply fit within the team) and threatens both operational stability and long-term performance (Preller et al., 2023). This hinders progress on a growth path, as knowledge needs to be rebuilt (e.g., specific customer knowledge or relationships established by the departing founder), which is costly and threatens venture success (Guenther et al., 2016). In addition, relatively agnostic to changing levels in specific types of fit among team members, the exit of a founding team member can create emotional strain among those who remain, reduce trust within the team, and hinder teamwork (Preller et al., 2023), aspects that consume the team's energy and have to be rebuilt, especially shortly after a team member exit. Thereby, it impedes effective collective action and further constrains venture growth (Klotz et al., 2014).

Accordingly, beyond predicting that distinct narcissism configurations differentially influence co-founder turnover, we also expect a corresponding change in venture growth. We therefore propose a theoretical model outlining a sequence in which narcissistic traits first influence co-founder turnover and, second, venture growth. Thus, we argue:

**Hypothesis 4. (H4):** There is an indirect effect of founding teams' mean narcissism on venture growth, operating through co-founder turnover, which is negative and stronger when mean narcissism is high compared to when it is low.

[4] To verify this aspect empirically, we show how losing a team member on average results in a decrease of 71 % in functional heterogeneity (the best possible proxy for complementary fit in functions).

**Hypothesis 5. (H5):** There is an indirect effect of narcissism diversity within founding teams on venture growth, operating through co-founder turnover, which is positive and stronger when narcissism diversity is high compared to when it is low.

**Hypothesis 6. (H6):** The negative indirect effect of founding teams' mean narcissism on venture growth, operating through co-founder turnover, is mitigated when narcissism diversity is high (compared to when it is low).

## 4. Method

### 4.1. Sample and data collection process

To examine our hypotheses, we compiled a unique dataset of tech-based ventures founded in the United States in 2010. We selected 2010 to ensure a sufficiently long observation period while avoiding including ventures founded during the 2008/2009 financial crisis. We collected monthly data spanning 2010 to 2019, as this 10-year period allows us to capture the evolution from early-stage ventures to more mature firms (Ko and McKelvie, 2018).

We started our data collection procedure from Crunchbase, a widely recognized platform that provides comprehensive data on new technology venture ecosystems, including organizational data and information on the corresponding founders (Rieger et al., 2025). Importantly, as company profiles on Crunchbase cannot be deleted, this approach mitigates concerns of survivorship bias (Yu, 2020). Our initial sample comprised 2254 ventures that fulfilled the above-listed inclusion criteria of tech-based ventures being founded in the United States in 2010, while having complete data available on funding events, their timing, and amounts, as well as information on the founding team. If available, we further derived the corresponding founder LinkedIn URLs from Crunchbase. For founders without a listed LinkedIn profile on Crunchbase, we conducted manual searches to verify their presence on the platform.

As our measure of founder narcissism relies on LinkedIn data, we restricted our sample to ventures whose founders had active LinkedIn profiles, reducing the sample to 1919 ventures. LinkedIn offers comprehensive insights into an individual's career history, including work experience, education, skills, and endorsements (Xia et al., 2024). Accordingly, in the next step, we retrieved detailed information from founders' LinkedIn profiles, including their number of profile pictures, self-description, working and educational background, listed skills, as well as all items listed in the endorsement section. In addition, we used LinkedIn to validate their presence in the considered venture and extracted the precise entry and exit dates. To track each venture's employee count over time, we conducted large-scale data extraction from LinkedIn (von Nitzsch et al., 2024). Applying a fuzzy matching algorithm (Lee and Kim, 2024; Rieger et al., 2025), we determined the number of employees listing the respective venture as their employer for each month of our observation period.

Finally, we excluded single-founder ventures, yielding a final sample of 911 ventures with no missing information in any of the key measures. To eliminate the impact of firm exits from our study on team dynamics, we excluded observations following firm failure or acquisition. Acquisition dates were derived from Crunchbase, which is considered a reliable resource for transaction data (Yu, 2020). In contrast, it has been demonstrated that Crunchbase does not fully capture firm failures, necessitating the application of an extended survival measure (Lee and Kim, 2024). Following Chatterji et al. (2019), we classify ventures as active as long as they fulfill the following criteria: (1) LinkedIn shows employees working at the company, (2) Crunchbase does not show any hints of a shutdown, and (3) the website is still available. To verify website availability retrospectively, we utilized Wayback Machine, a widely used tool for extracting historical website data (Xia et al., 2024).

The final panel of 911 ventures yielded 83,577 firm-month observations, with an average of 2.4 founders (SD = 0.7), 9 % of whom were female, and an average workforce of 15.3 employees (SD = 51.5) over the observed period.

### 4.2. Measures

To ensure that team-level measures accurately reflect only actively engaged founders, we tracked each founder's exit date from the venture using LinkedIn data. We modeled all founder-related variables in a time-sensitive manner. This approach allowed us to account exclusively for those founders who remained part of the venture's founding team at any given time. We employed a one-year time lag between the dependent variable and the independent variables, as well as controls, to reduce simultaneity bias and strengthen causal inference (Hmieleski and Baron, 2009) while ensuring that there is no recursive relationship between our narcissism measures and our dependent variable (Chatterjee and Hambrick, 2007).

#### 4.2.1. Dependent variable

Consistent with prior research, this study operationalizes venture growth by examining employee development (excluding the founding team) over time (Assenova and Amit, 2024). Employee data is sourced from LinkedIn, enabling the tracking of a venture's workforce on a monthly basis. *Venture growth* is calculated as the year-over-year logarithmic difference in the number of employees (Bird and Zellweger, 2018). The logarithmic difference is used to correct for the skewed distribution of the employee count variable. Employee growth is preferable over alternative growth metrics, such as sales, profit, or asset growth, for two main reasons. First, compared to financial indicators, employee growth exhibits lower volatility, making it a more stable and consistent measure of scaling success (Genedy et al., 2024). Second, financial growth indicators can be significantly distorted by external economic factors like inflation or currency fluctuations, whereas employee headcount is relatively insulated from these macroeconomic influences (Delmar et al., 2003).

#### 4.2.2. Mediating variable

To systematically capture founder exits, we extracted data from the "Working Experience" section of each founder's LinkedIn profile. Utilizing a fuzzy matching approach, we identified the corresponding venture within the founder's professional history and recorded the listed exit date. To ensure data accuracy and reliability, two researchers independently validated the identified exits. This process yielded a total of 995 founder exits within the observation period from 2010 to 2019. We do not classify instances where the entire founding team leaves at once as a founder exit, as this event is likely driven by external factors rather than intrateam dynamics.

To operationalize *Co-Founder Turnover*, we introduce a count variable that reflects the number of founders who departed from the venture between time $t$ and $t + 1$ (Ridge et al., 2017).

#### 4.2.3. Independent variables

Junge et al. (2025) developed and validated a composite measure of CEO narcissism based on unobtrusive indicators extracted from LinkedIn profiles. While their research was centered on corporate settings, they highlighted the potential for applying this measure in entrepreneurial contexts as well. Following their methodology, we construct a narcissism index for all founding team members using five LinkedIn-based indicators: (a) the number of profile pictures featuring the founder, (b) the total word count of the "About" section, (c) the number of listed working experiences, (d) the number of skills endorsed, and (e) the number of listed credentials, which includes the sections honors and rewards, patents, publications, and obtained certificates.

Consistent with Junge et al. (2025), we computed the narcissism index by taking the natural logarithm of each component after shifting them by 1 to prevent missing values. The natural logarithm is applied to normalize the varying scales and distributions of these indicators. Last, we standardized all components before averaging them to derive an individual-level narcissism score for each founder in our sample.

Besides the extensive validation of the LinkedIn-based measure in corporate settings by Junge et al. (2025), there is growing evidence supporting the broader use of LinkedIn profiles for personality assessment. Prior research has demonstrated that LinkedIn profiles reliably reflect individuals' personality traits, including extraversion and other Big Five dimensions (e.g., Fernandez et al., 2021). Recent work further shows that LinkedIn profiles contain valid cues for assessing narcissism specifically, including profile features that may also reflect competence signaling, such as listed skills and accomplishments (Härtel et al., 2024). Building on this broader validation, research has begun to apply LinkedIn-based personality assessments to entrepreneurial populations. For instance, Xia et al. (2024) demonstrate that founders' extraversion can be accurately inferred from LinkedIn profiles, a trait conceptually and empirically closely related to narcissism. Importantly, our sample is comparable to the original validation sample: the share of founders without a LinkedIn profile (15 %) closely mirrors that of corporate TMTs (17 %), suggesting no systematic differences in platform adoption. A confirmatory factor analysis further supports the construct's unidimensionality in our setting (CFI = 0.998, TLI = 0.997, RMSEA = 0.012, SRMR = 0.009), providing evidence for the construct validity of the LinkedIn-based measure in our venture sample (Gerstner et al., 2013).

Still, to further validate the measure for our novel, entrepreneurial setting, we contacted all founders from our sample via LinkedIn. We invited them to complete a survey incorporating the 4-item narcissism subscale from the Dirty Dozen scale (Jonason and Webster, 2010). This measure, frequently used to assess dark triad personality traits (including narcissism), has been shown to mitigate respondent fatigue and enhance participation rates (Brownell et al., 2024). The Dirty Dozen scale was developed to offer conceptual flexibility, enabling the use of either separate subscales or a single composite score (Jonason and Webster, 2010), and prior studies used the narcissism subscale only (Shirokova et al., 2024). We obtained complete responses from 124 founders and calculated their narcissism scores based on their responses. The items demonstrated good internal consistency in our sample (Cronbach's $\alpha = 0.74$), exceeding commonly used reliability thresholds (Nevicka et al., 2011). The narcissism scores exhibited a significant positive correlation with our LinkedIn-based narcissism measure ($r = 0.329$, $p < .01$). For context, prior research suggests that correlations of around 0.30 represent the upper range of typical effect sizes and provide strong evidence of validity (Grijalva et al., 2020).

As an additional validation step, we then applied a text-based approach to assess convergent validity with a linguistic narcissism measure (Anglin et al., 2018; Bollaert et al., 2020; Lien et al., 2022) derived from founders' original posts on X (formerly Twitter) (Grijalva et al., 2020). Specifically, we first identified all founders in our sample who maintained an active X profile and had posted at least once. For these 101 individuals, we extracted all publicly available posts made since 2010, resulting in a total of approximately 120,000 posts and a cumulative corpus of around 2 million words. We then applied the validated narcissism dictionary developed by Anglin et al. (2018) using computer-aided text analysis (CATA) to compute rhetoric-based narcissism scores. These scores were significantly positively correlated with our LinkedIn-based index ($r = 0.294$, $p < .01$), offering additional support for the convergent validity of our measure. To clarify the discriminant validity of our measure, we also used a dictionary for empathy (Payne et al., 2011) to confirm that our measure of narcissism (as expected) is negatively related to it. We also find support for this validity test ($r = -0.36$, $p < .05$). Taken together, our findings provide strong support for the validity of our LinkedIn-based narcissism measure in an entrepreneurial setting.

*4.2.3.1. Mean narcissism.* Based on each founder's narcissism score, we calculate the *Mean Narcissism* variable by averaging the individual narcissism scores of all active founders at each point in time. This aggregation using the mean follows recent research on team-level personality traits (Bachrach et al., 2023; de Mol et al., 2020; Jin et al., 2017) and relies on the assumption that a specific characteristic possessed by each individual contributes to the overall collective pool of this characteristic, increasing its total amount in the team.

*4.2.3.2. Narcissism diversity.* Similarly, we operationalize team-level *Narcissism Diversity* using the standard deviation, capturing the extent to which individual founders' narcissism scores deviate from the venture's mean (Harrison and Klein, 2007). Our approach aligns with best practice recommendations for measuring separation-type diversity, which characterizes intra-team differences in attitudes, beliefs, and values (Harrison and Klein, 2007). The use of standard deviation as a diversity metric is well-established in studies examining within-team diversity of similar or related constructs, including entrepreneurial passion (de Mol et al., 2020) and the Big Five personality traits (Schneider and Bartram, 2017).

### 4.2.4. Controls

Consistent with prior research on narcissism, we incorporated a comprehensive set of control variables at the individual, venture, and industry levels (Chatterjee and Hambrick, 2007).

At the individual level, we controlled for *Gender*, as narcissistic traits are more prevalent among men than women (Ingersoll et al., 2019). Founder gender data were retrieved from Crunchbase and coded as a binary variable ("male" = 0, "female" = 1) (Hmieleski and Baron, 2009). A founder's educational background has been shown to influence venture performance, as it is closely associated with the level of knowledge and expertise acquired by the individual (Tzabbar and Margolis, 2017). Educational information was obtained from LinkedIn profiles, and *Education* was coded as a categorical variable: 1 for founders whose highest completed degree was high school, 2 for a bachelor's degree, 3 for a master's degree, and 4 for a doctoral degree (Lien et al., 2022). *Founding Experience* is the share of founding team members who have previously founded at least one other venture (Ertug et al., 2020). Data on prior founding experience were obtained from LinkedIn, where a founder was classified as having prior experience if their profile listed a previous role with the title "Founder" or "Co-Founder" in the work history section. Finally, at the individual level, we control for *Working Experience*, which is measured as the total number of years a founder was employed before launching the focal venture, as reported on LinkedIn. Prior work experience is considered a valuable resource, as it equips founders with practical insights and facilitates the development of an extensive professional network (Hallen et al., 2020). To account for these individual-level factors at the team level, we include both the venture's mean and the within-team diversity (operationalized using Blau's index) of these variables, as prior research has shown that heterogeneity in these characteristics can influence team stability and turnover (Chandler et al., 2005; Harrison and Klein, 2007; Vanaelst et al., 2006).

At the venture level, we controlled for funding received, which has been linked to higher venture performance (Eesley et al., 2014). Funding data were obtained from Crunchbase, and *External Capital* was operationalized as a binary variable, coded 1 if the venture had received venture capital (VC) funding and 0 otherwise (Assenova and Amit, 2024). Secondly, we control for founding *Team Size*, as larger teams have access to a broader pool of resources, which has been associated with superior venture performance (Jin et al., 2017). We further controlled for the number of employees of the venture at any given time, which serves as a proxy for the size of the venture (Assenova and Amit, 2024). Data for this measure, *Total Employees*, were obtained from LinkedIn and log-transformed to correct for skewness (Tzabbar and Margolis, 2017).

In addition, prior research suggests that firm performance is partially shaped by industry-specific factors (Eesley et al., 2014). Consequently, we include industry dummies in our empirical analyses (Junge et al., 2025). Finally, we included *Year* and *Month* dummies in all our models to account for time-dependent changes affecting all ventures.

## 4.3. Analytical procedures

For the first stage of our conceptual model, related to Hypotheses 1 to 3, we employ negative binomial regression to account for the count-based nature of our dependent variable, *Co-founder Turnover*. This method extends Poisson regression by accounting for overdispersion in the data, wherein the variance exceeds the mean. Since co-founder turnover is infrequent, the dependent variable contains a high proportion of zeros. To address the issue of zero inflation, we apply a zero-inflated negative binomial regression model (Ridge et al., 2017) and cluster standard errors at the venture level.

For testing Hypotheses 4 to 6, we utilize random-effects regression models with clustered standard errors at the venture level to account for the continuous nature of the dependent variable, *Venture Growth*. We opt for random-effects models over fixed-effects models because our hypotheses primarily focus on between-firm variation, whereas fixed-effects models capture only within-firm variation. Moreover, employing a fixed-effects approach would result in the exclusion of firms that do not experience co-founder turnover during the observation period, which accounts for 37 % of our sample. Even in ventures where co-founder turnover occurs, changes in narcissism remain infrequent. In such cases, random-effects models provide a more appropriate and efficient estimation approach (von Nitzsch et al., 2024). This methodological choice aligns with prior research examining narcissism with panel data (e.g., Buyl et al., 2019).

Hypotheses 4, 5, and 6 collectively propose a moderated mediation framework. To empirically test these hypotheses, we employ bootstrapping procedures, a widely recognized approach that enhances statistical power in detecting mediation effects while accommodating skewed distributions (Hallen et al., 2020). Following Cunningham et al. (2023), we first estimate the direct and indirect effects using a path-analysis-based regression model, computing 95 % bootstrap confidence intervals for the product of coefficients based on 10,000 resamples. Subsequently, we assess the mediation effects at low (−1 SD), moderate (Mean), and high (+1 SD) levels of the moderating variable (i.e., Narcissism Diversity) (Hmieleski and Baron, 2008). This approach aligns with Preacher and Hayes (2008), employing bootstrapping techniques to estimate confidence intervals for unstandardized indirect effects (Baron et al., 2016).

## 5. Results

Table 1 presents the descriptive statistics and correlations of all variables included in at least one of our regression models. Regarding team composition, 49 % of the ventures were classified as mixed in terms of narcissism, indicating that they included at least one team member with above-average narcissism and one with below-average narcissism. Additionally, 26 % of the teams consisted exclusively of members with above-average narcissism, while 25 % comprised only individuals with below-average narcissism.

To test for multicollinearity in our sample, we applied the variance inflation factor (VIF). Results show that all VIFs were less than 1.50 and thus, well below the common threshold of 10, suggesting that multicollinearity is not a major concern in our sample (Ko and McKelvie, 2018).

As shown in Model 2 of Table 2, we found support for Hypothesis 1, which posits that higher mean narcissism within the founding team is positively related to co-founder turnover ($\beta = 0.35, p < .001$). One standard deviation increase in mean narcissism is associated with an 18 % increase in co-founder turnover. Additionally, narcissism diversity was significantly and negatively associated with co-founder turnover ($\beta = -0.37, p < .05$), suggesting that teams with greater diversity in narcissism experience lower co-founder turnover compared to more homogeneous teams. Specifically, a one-standard-deviation increase in narcissism diversity is associated with an 11 % decrease in co-founder turnover. This finding supports Hypothesis 2. As Hypothesis 3 suggests, the moderation effect between mean narcissism and narcissism diversity is negative and statistically significant ($\beta = -0.66$, $p < .01$), indicating that higher narcissism diversity mitigates the positive relation between mean narcissism and co-founder turnover (Model 3). A simple slopes analysis specifies this pattern: when narcissism diversity is low (mean – 1 SD), mean narcissism is strongly and positively associated with co-founder turnover ($\beta = 0.56$, $p < .001$). At medium diversity (mean), this relationship remains positive but weaker ($\beta = 0.35$, $p < .001$), and it becomes statistically nonsignificant at high diversity levels (mean + 1 SD; $\beta = 0.14$, $p = .24$). Accordingly, greater narcissism diversity can mitigate and, at high levels, even neutralize the adverse influence of mean narcissism on co-founder turnover.[5]

Hypothesis 4 suggests that mean narcissism is indirectly and negatively associated with venture growth via co-founder turnover, whereas Hypothesis 5 posits that narcissism diversity is indirectly and positively associated with venture growth through its effect on co-founder turnover. The unstandardized indirect effect and bootstrapped confidence intervals reported in Table 3 support these hypotheses. Specifically, the indirect effect of mean narcissism on venture growth via co-founder turnover is negative ($ß_{axb} = -0.10$), with a 95 % confidence interval ranging from −0.16 to −0.06. Further, the indirect effect of narcissism diversity on venture growth via co-founder turnover is positive ($ß_{axb} = 0.11$), with a 95 % confidence interval ranging from 0.03 to 0.20, as reported in Table 3.

Finally, Hypothesis 6 posits that the indirect negative relationship between mean narcissism and venture growth, mediated by co-founder turnover, is contingent on the narcissism diversity within the founding team. Specifically, the negative relationship between mean narcissism and venture growth is expected to be less pronounced in teams with higher narcissism diversity compared to those with lower levels of narcissism diversity. The results presented in Table 4 support this hypothesis. When diversity is low (mean − 1 SD), the negative indirect effect is strong, and the confidence interval does not include zero (indirect effect: $ß_{axb} = -0.16$, CI: −0.23 to −0.10). At moderate levels of diversity (mean), the effect is still (but slightly less) negative, and the confidence interval does not include zero (indirect effect: $ß_{axb} = -0.10$, CI: −0.16 to −0.06). At high levels of diversity (mean +1 SD), however, the indirect effect becomes again smaller, and the confidence interval includes zero (indirect effect: $ß_{axb} = -0.04$, CI: −0.10 to 0.02). These findings highlight that narcissism diversity acts as a buffer: While low-diversity teams are vulnerable to the destabilizing influence of mean narcissism, high-diversity teams can effectively neutralize this negative pathway, such that the negative impact on venture growth disappears (Fig. 2).

## 6. Additional analysis

### 6.1. Sample selection bias

Because not all founders in the original sample had active LinkedIn profiles, these ventures were excluded, raising concerns about sample selection bias. To address this, we applied a Heckman two-stage selection model (Heckman, 1979). In the first stage, we estimated a probit model predicting inclusion in the final sample using Crunchbase founder data, such as gender ratio, average work and education levels, and founding experience (Lien et al., 2022), aggregated at the venture level. As an exclusion restriction, we included the total amount of funding raised, which does not appear in the main analysis (Certo et al., 2016). The inverse Mills ratio from this stage was then added to our main regressions. Results were consistent with our primary analysis, suggesting that selection bias does not materially affect our conclusions (Online Appendix A).

### 6.2. Accounting for other sources of endogeneity

While the Heckman selection model addresses sample-induced endogeneity, it does not capture other sources of endogeneity (Certo

[5] To further illustrate the configurations outlined in Hypothesis 3, we followed Toh et al. (2008) and conducted a configurational ANOVA (high/low mean × high/low diversity). The overall effect is significant ($F = 2.70$, $p = .044$). As hypothesized, co-founder turnover is highest in high-mean/low-diversity teams, followed by low-mean/low-diversity teams, high-mean/high-diversity teams, and lowest in low-mean/high-diversity teams. We further find significant differences in post hoc contrasts between the high-mean/low-diversity and high-mean/high-diversity conditions ($p = .029$), reinforcing that high diversity mitigates the adverse effect of high mean narcissism on turnover.

**Table 1**
Mean, standard deviation, maximum, minimum, and correlations for key variables.

| | Variables | M | SD | Max | Min | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | Venture Growth | 0.16 | 0.59 | 3.56 | −6.10 | | | | | | | | | | | | | | |
| (2) | Co-Founder Turnover | 0.01 | 0.11 | 2.00 | 0.00 | −0.08 | | | | | | | | | | | | | |
| (3) | Mean Narcissism | −0.03 | 0.46 | 1.10 | −1.69 | −0.03 | 0.02 | | | | | | | | | | | | |
| (4) | Narcissism Diversity | 0.29 | 0.32 | 2.05 | 0.00 | 0.15 | 0.00 | −0.13 | | | | | | | | | | | |
| (5) | Gender | 0.09 | 0.23 | 1.00 | 0.00 | −0.01 | 0.00 | 0.05 | 0.01 | | | | | | | | | | |
| (6) | Education | 1.99 | 0.99 | 4.00 | 0.00 | 0.03 | 0.00 | 0.09 | 0.05 | 0.01 | | | | | | | | | |
| (7) | Founding Experience | 0.31 | 0.38 | 1.00 | 0.00 | 0.03 | 0.02 | −0.02 | 0.12 | −0.05 | −0.01 | | | | | | | | |
| (8) | Working Experience | 9.26 | 6.87 | 46.00 | 0.00 | 0.04 | 0.01 | 0.18 | 0.16 | 0.10 | 0.14 | 0.25 | | | | | | | |
| (9) | Gender Diversity | 0.01 | 0.04 | 0.50 | 0.00 | −0.02 | −0.01 | 0.01 | −0.08 | −0.03 | −0.01 | −0.07 | −0.12 | | | | | | |
| (10) | Educational Diversity | 0.59 | 0.37 | 1.00 | 0.00 | 0.13 | 0.01 | −0.08 | 0.41 | 0.12 | −0.19 | 0.18 | 0.26 | −0.15 | | | | | |
| (11) | Founding Exp. Diversity | 0.14 | 0.22 | 0.50 | 0.00 | 0.09 | 0.00 | 0.01 | 0.29 | 0.00 | 0.06 | 0.29 | 0.18 | −0.06 | 0.29 | | | | |
| (12) | Functional Diversity | 0.19 | 0.24 | 1.00 | 0.00 | 0.15 | 0.01 | 0.04 | 0.34 | −0.02 | 0.08 | 0.13 | 0.28 | −0.07 | 0.32 | 0.33 | | | |
| (13) | External Capital | 0.01 | 0.11 | 1.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.03 | −0.01 | 0.01 | 0.03 | 0.03 | −0.01 | 0.04 | 0.03 | 0.03 | | |
| (14) | Team Size | 2.39 | 0.67 | 7.00 | 2.00 | 0.05 | 0.04 | 0.03 | 0.15 | −0.03 | 0.07 | 0.06 | 0.08 | −0.02 | 0.19 | 0.14 | 0.25 | 0.02 | |
| (15) | Total Employees (log) | 1.91 | 1.25 | 8.02 | 0.00 | −0.10 | 0.00 | −0.09 | 0.21 | −0.01 | 0.01 | 0.16 | 0.17 | −0.09 | 0.24 | 0.14 | 0.20 | 0.06 | 0.12 |

Note: M, SD, Max, and Min are used to represent mean, standard deviation, maximum, and minimum, respectively. All correlations $\geq 0.02$ are significant at $p < .05$ or lower.

**Table 2**
Regression results of zero-inflated negative binomial regression on Co-Founder Turnover and random-effects regression on Venture Growth.

| DV: | Co-Founder Turnover | | | Venture Growth | | |
|---|---|---|---|---|---|---|
| Model: | 1 | 2 | 3 | 4 | 5 | 6 |
| | Controls only | Direct effects | Interaction effects | Controls only | Direct effects | Full model |
| **Moderating Effects:** | | | | | | |
| Mean Narcissism x Diversity | | | −0.6586** | | | |
| | | | (0.009) | | | |
| **Independent variables:** | | | | | | |
| Co-Founder Turnover | | | | | | −0.2950*** |
| | | | | | | (0.001) |
| Mean Narcissism | | 0.3524*** | 0.5394*** | | −0.0864** | −0.0852** |
| | | (0.001) | (0.001) | | (0.008) | (0.008) |
| Narcissism Diversity | | −0.3695* | −0.4262** | | 0.2093*** | 0.2088*** |
| | | (0.014) | (0.004) | | (0.001) | (0.001) |
| **Control variables:** | | | | | | |
| Gender | −0.0327 | −0.0760 | −0.0611 | −0.0360 | −0.0192 | −0.0215 |
| | (0.845) | (0.640) | (0.714) | (0.390) | (0.649) | (0.607) |
| Education | 0.3527*** | 0.3537*** | 0.3518*** | −0.0313* | −0.0338** | −0.0298* |
| | (0.001) | (0.001) | (0.001) | (0.012) | (0.007) | (0.016) |
| Founding Experience | 0.3379** | 0.3573*** | 0.3660*** | −0.0833* | −0.0804* | −0.0756* |
| | (0.001) | (0.001) | (0.001) | (0.028) | (0.032) | (0.040) |
| Working Experience | −0.0048 | −0.0107+ | −0.0117+ | −0.0014 | 0.0005 | 0.0005 |
| | (0.419) | (0.084) | (0.068) | (0.487) | (0.811) | (0.822) |
| Gender Diversity | −2.8072*** | −2.8063*** | −2.7992*** | −0.0967 | −0.0874 | −0.0895 |
| | (0.001) | (0.001) | (0.001) | (0.286) | (0.305) | (0.291) |
| Educational Diversity | 0.2991* | 0.4241*** | 0.4493*** | 0.0705* | 0.0172 | 0.0214 |
| | (0.018) | (0.001) | (0.001) | (0.044) | (0.649) | (0.567) |
| Founding Exp. Diversity | −0.4280* | −0.3916* | −0.4107* | 0.2563*** | 0.1961** | 0.1909** |
| | (0.016) | (0.029) | (0.046) | (0.001) | (0.001) | (0.001) |
| Functional Diversity | 0.1902 | 0.2800 | 0.3414+ | 0.3203*** | 0.2661*** | 0.2654*** |
| | (0.260) | (0.109) | (0.050) | (0.001) | (0.001) | (0.001) |
| External Capital | −0.0334 | −0.0340 | −0.0348 | 0.1104*** | 0.1105*** | 0.1100*** |
| | (0.912) | (0.910) | (0.908) | (0.001) | (0.001) | (0.001) |
| Team Size | 0.3737*** | 0.3679*** | 0.3736*** | 0.0440* | 0.0431* | 0.0439* |
| | (0.001) | (0.001) | (0.001) | (0.022) | (0.025) | (0.020) |
| Total Employees (log) | −0.0818*** | −0.1520*** | −0.1508*** | −0.2247*** | −0.2990*** | −0.2267*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Industry Control | Included | Included | Included | Included | Included | Included |
| Year Control | Included | Included | Included | Included | Included | Included |
| Month Control | Included | Included | Included | Included | Included | Included |
| Constant | −7.4035*** | −7.4188*** | −8.3063*** | 0.4904*** | 0.4746*** | 0.4542*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Observations | 83,577 | 83,577 | 83,577 | 83,577 | 83,577 | 83,577 |
| Number of Ventures | 911 | 911 | 911 | 911 | 911 | 911 |
| R-squared | | | | 0.2299 | 0.2335 | 0.2351 |
| Adjusted R-squared | | | | 0.2295 | 0.2331 | 0.2347 |
| $\chi 2$ | 597.19*** | 630.52*** | 639.36*** | | | |

Note: Zero-inflated negative binomial model for regression on Co-Founder Turnover as DV, random-effects model for regression on Venture Growth as DV; Robust standard errors are clustered at the venture level. *P* values in parentheses.
+ $p < .10$
* $p < .05$
** $p < .01$
*** $p < .001$

et al., 2016). To address potential omitted variable bias, we applied an instrumental variable approach (Bachrach et al., 2023). Following Junge et al. (2025), we rely on industry-level variables as instruments, leveraging the annual industry-level mean and standard deviation of narcissism as exogenous instruments. Industry-level measures serve as valid instruments as they are likely correlated with venture-level narcissism while remaining exogenous to the dependent variable, except through their effect on the potentially endogenous predictors (Junge et al., 2025). Thus, they fulfill the key requirement for an instrument (Ertug et al., 2020). Durbin scores were significant, and the F-statistics (30.86 for diversity; 126.42 for mean) exceeded the conventional threshold of 10 (Ko and McKelvie, 2018).

Because traditional two-stage least squares is not suitable for non-continuous dependent variables (Junge et al., 2025), we employed a control function approach: residuals from the first-stage regressions were included as additional regressors in the main models (Ertug et al., 2020). The results remain consistent with our primary analysis, confirming the robustness of our findings (Online Appendix B).

**Table 3**
Bootstrapped direct and indirect effect results.

| | Direct Effect | | | | Indirect Effect via Co-Founder Turnover | | | |
|---|---|---|---|---|---|---|---|---|
| | Boot Direct Effect | Boot Standard Error | Lower Limit 95 % CI | Upper Limit 95 % CI | Boot Indirect Effect | Boot Standard Error | Lower Limit 95 % CI | Upper Limit 95 % CI |
| Mean Narcissism On Venture Growth | −0.0852 | 0.0095 | −0.1018 | −0.0639 | −0.1040 | 0.0241 | −0.1552 | −0.0588 |
| Narcissism Diversity On Venture Growth | 0.2088 | 0.0121 | 0.1893 | 0.2367 | 0.1090 | 0.0444 | 0.0283 | 0.1998 |

Note: First step of mediation with zero-inflated negative binomial regression, second step of mediation with random-effects model, both regressions with robust clustered standard errors, bootstrap sample size =10,000. CI = confidence interval.

**Table 4**
Conditional indirect effect results.

| | | Venture Growth | | | |
|---|---|---|---|---|---|
| | Narcissism Diversity | Boot Indirect Effect | Boot Standard Error | Lower Limit 95 % CI | Upper Limit 95 % CI |
| Mean Narcissism (via Co-Founder Turnover) on Venture Growth | Low (Average – 1 SD) | −0.1636 | 0.0349 | −0.2339 | −0.0986 |
| | Medium (Average) | −0.1025 | 0.0246 | −0.1553 | −0.0559 |
| | High (Average + 1 SD) | −0.0415 | 0.0313 | −0.1028 | 0.0226 |

Note: First step of mediation with zero-inflated negative binomial regression, second step of mediation with random-effects model, both regressions with robust clustered standard errors, bootstrap sample size = 10,000. CI = confidence interval.

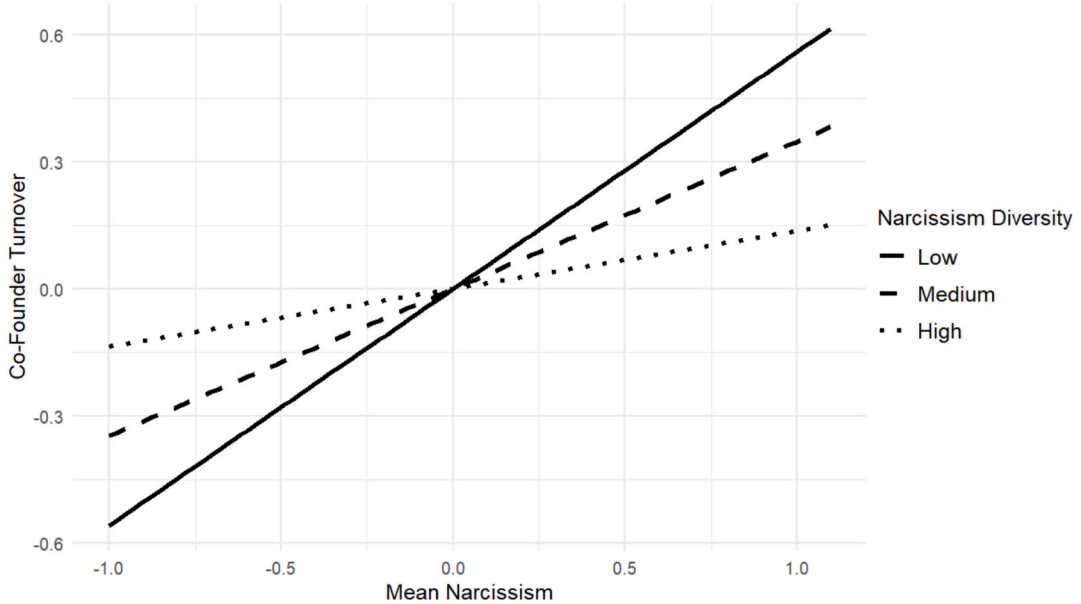


**Fig. 2.** Conditional indirect effect of narcissism on Co-Founder Turnover.

### 6.3. *Measurement validity*

To further assess the robustness of our findings, we conducted additional analyses using alternative operationalizations of the deployed variables. First, we measured team-level narcissism by applying the maximum rather than the mean score, as the most narcissistic member may disproportionately shape team dynamics (Grijalva et al., 2020). Second, we re-estimated our models using the average Euclidean distance instead of the standard deviation to capture narcissism diversity (Harrison and Klein, 2007). Third, we replaced our count measure of co-founder turnover with a proportional measure relative to team size, log-transformed to address

skewness (van der Vegt et al., 2010). Finally, we examined alternative performance outcomes, including venture capital funding received and venture survival (Chatterji et al., 2019; Yu, 2020). Across all these specifications, the results remained consistent (see Online Appendix C), underscoring the robustness of our findings across measurement strategies.

### 6.4. Founder exit patterns

While our theorizing pertained mainly to understanding consequences of different narcissism configurations on team and venture outcomes, from a PO fit lens, it is interesting to consider whether founders high or low in narcissism are more likely to exit under different team configurations, as well as gain a deeper understanding of the corresponding consequences for venture development.[6] To answer the question of "who is leaving," we classified each turnover event based on whether the departing founder exhibits above- or below-average narcissism levels relative to their team. We then estimated a competing-risks model, implementing two cause-specific Cox proportional-hazards models to assess the likelihood of exit for above-average versus below-average narcissism founders, treating alternative event types as censored at the time of turnover (Lee et al., 2008). We provide the corresponding results in Online Appendix D1. Our findings suggest that greater within-team diversity in narcissism, indicative of complementary fit, is associated with a significantly reduced hazard of exit for below-average narcissism founders ($\beta = -0.78$, $p < .001$) but neither an increased nor a decreased hazard for above-average narcissism founders. This finding suggests that individuals relatively lower in narcissism indeed appear to experience high levels of fit when paired with a more narcissistic individual in a team (e.g., because of the complementarities in role allocations), as hypothesized in Hypothesis 2. However, in teams characterized by high mean narcissism, reflecting a lack of supplementary fit, founders with above-average narcissism exhibit a significantly higher hazard of departure ($\beta = 0.70$, $p < .001$). This finding suggests that founders relatively higher in narcissism are most adversely affected by the interpersonal misfit in expectations towards teamwork, which is consistent with our theorizing in Hypothesis 1.

To assess the short- and long-term performance implications of these (different types of) founder exits, we constructed two distinct subsamples: one comprising ventures that experienced the departure of a founder with below-average narcissism, and another comprising ventures that experienced the departure of a founder with above-average narcissism. We then examined post-exit performance trajectories, capturing short-term effects on employee growth one year after the exit and longer-term impacts three years thereafter. As hypothesized, both types of exits were consistently associated with short-term performance declines ($\beta_{below} = -0.20$, $p < .001$; $\beta_{above} = -0.21$, $p < .001$), reflecting the immediate loss of human capital, knowledge, and workforce stability (what we labeled complementary functional fit above). Yet, while ventures that lost a below-average narcissism founder continued to exhibit significantly lower growth over the longer term ($\beta_{below} = -0.07$, $p < .01$), the adverse effects of high-narcissism founder exits became insignificant over time. This pattern suggests that the short-term disruption caused by losing a highly narcissistic founder may be offset by improved supplementary fit and, in turn, in the long run, better teamwork in the remaining team (See Online Appendix D2 for detailed results).

## 7. Discussion

In this study, we develop a *founder-narcissism-configuration model* and discuss its implications. We show that while higher mean levels of team narcissism generally lead to higher co-founder turnover and ultimately threaten growth, these effects depend on specific configurations of narcissism within the founding team. Specifically, the negative effect of high mean narcissism is mitigated by high narcissism diversity in the team. In this case, it counteracts the negative effects of narcissism to the point that these negative outcomes no longer materialize.

### 7.1. Theoretical contributions

In this way, our research advances our understanding of narcissism in entrepreneurship, the broader management literature on narcissism, and PO fit theory. First, while prior entrepreneurship research has chiefly considered narcissism as an individual-level construct influencing venture performance (Anglin et al., 2018; Bollaert et al., 2020; Brownell et al., 2024), we shift the focus to the level of founding teams, i.e., probably the most critical and intense team setting where entrepreneurial success or failure is determined, and introduce the idea of *narcissism configurations* that indirectly (through turnover) influence venture growth. While some studies highlight the positive effects, showing that narcissistic founders excel in specific tasks such as fundraising (Anglin et al., 2018) and can build successful ventures via superior interactions with stakeholders (Brownell et al., 2024), others point out that negative aspects prevail and that (excessive) narcissism in founders can undermine venture success (Bollaert et al., 2020; Wu et al., 2022). Our theoretical framework considers both perspectives within a comprehensive model. We show that a higher degree of narcissism in one co-founder (through an increased mean) increases co-founder turnover and, in turn, negatively relates to venture performance. However, under specific conditions, this adverse effect can be reduced, especially when the team exhibits high narcissism diversity (i.e., there is one or a few other co-founders with a lower degree of narcissism), which we argue leads to improved natural role allocations and generally a better "fit" at the team level. Therefore, we show that understanding the role of narcissism in entrepreneurship requires a nuanced viewpoint that also accounts for the relational and team-level effects of the combined narcissism levels of

[6] We thank an anonymous reviewer for inspiring these additional analyses.

each co-founder. Thus, we also offer a fresh perspective on potential boundary conditions of prior findings in this literature stream (Anglin et al., 2018; Wu et al., 2022), rooted in different team configurations.

Second, we extend emerging research on team-level narcissism in the broader management literature. This research has begun to explore how narcissism levels in a team influence outcomes like team coordination (Grijalva et al., 2020) or TMT dismissal by the (narcissistic) CEO (Junge et al., 2025). These studies tend to focus their theoretical arguments solely on the mean level of narcissism in a team and find negative associations between the mean narcissism in teams and performance-related outcomes. While our arguments and empirical results echo their finding in this respect, we add that the diversity of narcissism in the team also matters and that the relationship between mean narcissism and team outcomes (here: turnover) varies depending on the diversity in this trait among founding team members; a moderation that can go so far that the negative effect of mean narcissism on turnover disappears (when diversity is high). It follows that accounts on narcissism in teams need to take into consideration the narcissism of all members, as their interactions differ according to the configuration of individual narcissism scores. Focusing purely on the mean narcissism likely hides such vital nuances.

Furthermore, comparing our findings, derived from the setting of founding teams, with those from existing team-level studies in the management literature provides further interesting insights. In their investigation of narcissism among players of NBA basketball teams, Grijalva et al. (2020) found a negative association between narcissism diversity and team performance (introduced as a control variable in the empirical model), without providing theoretical arguments or analyzing the interaction with the level of narcissism in the team. Thus, while Grijalva et al. (2020) and our findings both show a negative effect of high team-level narcissism on our respective outcome variable, they differ regarding the effect of diversity. A possible explanation might lie in the specific type of teams investigated. Grijalva et al. (2020) examine NBA basketball teams with a clear structure and senior coach guidance that focuses heavily on implementing a task, referred to as "action teams," where teams with narcissistic players impair the smooth implementation. Our "founding setting" differs significantly, primarily due to the absence of structure and senior guidance, and also because founding teams need to create their own role allocations to handle multiple tasks with strong intellectual and relational requirements.

Consistent with our theoretical arguments, this setting is more favorable to high diversity of narcissism as a mixture of strong and low narcissistic co-founders. We explain this aspect in terms of the initially unstructured and uncertain conditions that founding teams face. In such conditions, potential frictions between narcissistic and non-narcissistic team members are more acceptable because the advantages of more effective role allocation resulting from narcissism diversity can mitigate the disadvantages. In fact, our additional analyses suggest that (for a given mean level) greater narcissism diversity is associated with lower co-founder turnover rates, especially among team members with below-average narcissism. These patterns support the notion of a "complementary fit" that is especially satisfying for co-founders low in narcissism and unique to the entrepreneurial context. Hence, our finding contextualizes the assumption of prior research that "a bad apple spoils the barrel" (Grijalva et al., 2020, p. 11) by showing that, in founding teams, the influence of a "bad apple" can be mitigated when the team composition provides sufficient diversity in narcissistic tendencies. We also find that in a founding team with high-mean narcissism, especially above-average narcissistic members are more likely to leave. This suggests that the lack of supplementary fit is particularly harmful for those with the highest levels of narcissism, which again slightly differs from previous portraits of how mostly *other team members* are adversely affected by narcissistic individuals (Junge et al., 2025). Regarding the more distal outcome of venture growth, however, our additional analyses suggest that when an above-average narcissistic team member leaves the team, there is no *long-term* negative influence on growth. This finding is again consistent with Grijalva et al. (2020)'s coordination-based explanation for why teams with higher mean narcissism underperform.

Third, we contribute to the limited research on PO fit from an organizational perspective. This research has focused on how personality traits shared among organizational members with predominantly positive connotations, especially members' conscientiousness, can promote high fit (Schneider and Bartram, 2017). While in these cases, commonly shared traits are beneficial for fit, we shift the focus to a trait that encompasses negative relational facets. Specifically, we demonstrate how a particular trait (here: narcissism) can both provide organizations with fit (e.g., complementary fit in role allocations) and misfit (e.g., in interpersonal interactions), and how these aspects "buffer" each other. We therefore inform the PO fit literature that the nature of fit is not generalizable and depends on the specific personality trait in question. For narcissism, the typical assumption that "the more members of this kind, the better" induces a stronger fit is not applicable. We also identify boundary conditions for the PO fit theory. Founding teams operate without established norms or governance mechanisms, rely almost exclusively on interpersonal collaboration in the absence of formal structures, and engage in continuous, informal interactions to navigate organizational demands (Klotz et al., 2014; Zhao et al., 2013); this setting requires different types of fits and unlike other teams, the relationship between fit and focal venture outcomes is more complex compared to other organizations.

### *7.2. Limitations and avenues for future research*

As with all empirical research, our study is subject to limitations that open promising avenues for future inquiry. First, we acknowledge that a limitation of our measure is that it can only be applied to founders with a LinkedIn profile, which may naturally constrain the sample and should be taken into account when considering the generalizability of our findings. In addition, while the LinkedIn-based narcissism index offers an unobtrusive and scalable assessment, its application in early-stage entrepreneurial contexts may be influenced by factors such as career stage, industry norms, or platform usage (Junge et al., 2025). We addressed these concerns through multiple validation steps, including self-reports and text-based measures, and found consistent results. Nonetheless, we acknowledge that context-dependent presentation strategies may introduce residual bias, and we encourage future research to further investigate the boundary conditions of profile-based personality assessments.

Second, we encourage future research to further explore the potential for curvilinear effects of narcissism in team settings. Prior

studies have identified nonlinear relationships between narcissism and outcomes at the individual level, suggesting that moderate levels may be beneficial, while very low or very high levels can be detrimental (Anglin et al., 2018; Schmid et al., 2021). While our main analysis does not include quadratic terms, we explored this possibility in supplementary models. However, the quadratic terms were not statistically significant and did not alter our findings. Nevertheless, we cannot rule out the possibility that nonlinear dynamics may emerge under different conditions or at the extreme ends of the narcissism spectrum.

Finally, we encourage future research to move beyond single-trait configurations and examine how combinations of multiple team-level traits jointly shape team dynamics and venture outcomes (Douglas et al., 2020; Emich et al., 2024). Building on our focus on narcissism, it would be particularly valuable to investigate how different forms of diversity, such as demographic, functional, or cognitive diversity, interact with personality configurations (Harrison and Klein, 2007). From a methodological perspective, approaches such as latent profile analysis or fuzzy set qualitative comparative analysis (fsQCA) may offer promising avenues to capture the complex interplay of multiple attributes within founding teams (Douglas et al., 2020; Gabriel et al., 2018; Yin et al., 2020). Preliminary fsQCA-based analyses on our data (available upon request) suggest that the effects of narcissism configurations may indeed depend on other diversity dimensions.

### *7.3. Managerial contributions*

Our findings offer valuable practical insights for stakeholders working with founding teams, such as investors or accelerators, who need to understand the limitations of individual diagnostics and recognize the importance of thoroughly assessing team composition, including personality traits like narcissism, to evaluate team dynamics better and intervene early when signs of "lack of fit" appear. For example, our findings inform investors and venture capitalists who seek to assess the long-term viability of early-stage ventures or seek to ensure a positive development when serving as board members after the investment. Given the established link between founding team personality traits and venture performance (de Mol et al., 2020; Xia et al., 2024), investors should closely examine the psychological composition of founding teams during the screening process. The unobtrusive narcissism measure used in this study offers a practical way to identify potential misfits within founding teams, using publicly available data that might otherwise go unnoticed in traditional due diligence. Incorporating our findings into a "team narcissism analysis" can lead to better-informed investment decisions and, ex post, allow investors to proactively monitor and manage potential team dynamics that could threaten the stability or success of their portfolio ventures. For example, in a team with a high average level of narcissism, if a key co-founder with narcissistic traits is crucial to the venture and must be part of the team, knowledgeable investors (about the implications for both supplementary and complementary fit) might advise the team to replace another narcissistic co-founder with a less narcissistic one to achieve a healthier balance. Additionally, accelerator programs or platforms that support co-founder matching (Gray et al., 2024) would benefit from considering these aspects of team personality compatibility.

## 8. Conclusion

Leveraging a novel, unobtrusive approach of measuring founder narcissism via LinkedIn data, we find that different configurations of narcissism within founding teams significantly affect those teams' co-founder turnover and, consequently, the growth of their new ventures. Our results highlight the negative effects of high mean team-level narcissism while showing a stabilizing role of greater narcissism diversity when it comes to co-founder turnover. By focusing on the overall "personality configuration" of founding teams rather than individual founders' personalities, this study offers a new perspective on how team members' narcissism levels influence team dynamics in early-stage ventures. We hope to motivate future research to explore how personality traits impact founding teams and their role in venture growth.

## CRediT authorship contribution statement

**Ulrich Lang:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Victoria Berg:** Writing – review & editing, Supervision, Conceptualization. **Jannis von Nitzsch:** Writing – review & editing, Methodology, Conceptualization. **Andreas Engelen:** Writing – review & editing, Supervision, Conceptualization.

## Funding sources statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Declaration of competing interest

The authors declare that they have no conflict of interest.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jbusvent.2025.106569.

## Data availability

An anonymized subsample can be provided upon reasonable request.

## 9. References


Anglin, A.H., Wolfe, M.T., Short, J.C., McKenny, A.F., Pidduck, R.J., 2018. Narcissistic rhetoric and crowdfunding performance: a social role theory perspective. J. Bus. Ventur. 33, 780–812.

Anicich, E.M., Fast, N.J., Halevy, N., Galinsky, A.D., 2016. When the bases of social hierarchy collide: power without status drives interpersonal conflict. Organ. Sci. 27, 123–140.

Assenova, V.A., Amit, R., 2024. Poised for growth: exploring the relationship between accelerator program design and startup performance. Strateg. Manag. J. 45, 1029–1060.

Bachrach, D.G., Yong Kim, K., Patel, P.C., Harms, P.D., 2023. Birds of a feather?: firm sales growth and narcissism in the upper echelons at the CEO-TMT interface. Leadersh. Q. 34, 101621.

Bamford, C.E., Bruton, G.D., Hinson, Y.L., 2006. Founder/chief executive officer exit: a social capital perspective of new ventures. J. Small Bus. Manag. 44, 207–220.

Baron, R.A., Franklin, R.J., Hmieleski, K.M., 2016. Why entrepreneurs often experience low, not high, levels of stress: the joint effects of selection and psychological capital. J. Manag. 42, 742–768.

Bird, M., Zellweger, T., 2018. Relational embeddedness and firm growth: comparing spousal and sibling entrepreneurs. Organ. Sci. 29, 264–283.

Boeker, W., Karichalil, R., 2002. Entrepreneurial transitions: factors influencing founder departure. Acad. Manag. J. 45, 818–826.

Boeker, W., Wiltbank, R., 2005. New venture evolution and managerial capabilities. Organ. Sci. 16, 123–133.

Bollaert, H., Leboeuf, G., Schwienbacher, A., 2020. The narcissism of crowdfunding entrepreneurs. Small Bus. Econ. 55, 57–76.

Brownell, K.M., Quinn, A., Bolinger, M.T., 2024. The triad divided: a curvilinear mediation model linking founder Machiavellianism, narcissism, and psychopathy to new venture performance. Entrep. Theory Pract. 48, 310–348.

Buyl, T., Boone, C., Wade, J.B., 2019. CEO narcissism, risk-taking, and resilience: an empirical analysis in U.S. commercial banks. Aust. J. Manag. 45, 1372–1400.

Cable, D.M., Edwards, J.R., 2004. Complementary and supplementary fit: a theoretical and empirical integration. J. Appl. Psychol. 89, 822–834.

Certo, S.T., Busenbark, J.R., Woo, H., Semadeni, M., 2016. Sample selection bias and Heckman models in strategic management research. Strateg. Manag. J. 37, 2639–2657.

Chandler, G.N., Honig, B., Wiklund, J., 2005. Antecedents, moderators, and performance consequences of membership change in new venture teams. J. Bus. Ventur. 20, 705–725.

Chatterjee, A., Hambrick, D.C., 2007. It's all about me: narcissistic chief executive officers and their effects on company strategy and performance. Adm. Sci. Q. 52, 351–386.

Chatterjee, A., Pollock, T.G., 2017. Master of puppets: how narcissistic CEOs construct their professional worlds. Acad. Manag. Rev. 42, 703–725.

Chatterji, A., Delecourt, S., Hasan, S., Koning, R., 2019. When does advice impact startup performance? Strateg. Manag. J. 40, 331–356.

Colbert, A.E., Kristof-Brown, A.L., Bradley, B.H., Barrick, M.R., 2008. Ceo transformational leadership: the role of goal importance congruence in top management teams. Acad. Manag. J. 51, 81–96.

Cragun, O.R., Olsen, K.J., Wright, P.M., 2020. Making CEO narcissism research great: a review and Meta-analysis of CEO narcissism. J. Manag. 46, 908–936.

Cunningham, J.L., Sonday, L., Ashford, S.J., 2023. Do I dare? The psychodynamics of anticipated image risk, leader-identity endorsement, and leader emergence. Acad. Manag. J. 66, 374–401.

de Mol, E., Cardon, M.S., de Jong, B., Khapova, S.N., Elfring, T., 2020. Entrepreneurial passion diversity in new venture teams: an empirical examination of short- and long-term performance implications. J. Bus. Ventur. 35, 105965.

Delmar, F., Davidsson, P., Gartner, W.B., 2003. Arriving at the high-growth firm. J. Bus. Ventur. 18, 189–216.

Douglas, E.J., Shepherd, D.A., Prentice, C., 2020. Using fuzzy-set qualitative comparative analysis for a finer-grained understanding of entrepreneurship. J. Bus. Ventur. 35, 105970.

Edwards, J.R., Shipp, A.J., 2007. The relationship between person-environment fit and outcomes: An integrative theoretical framework. In: Perspectives on Organizational Fit, The Organizational Frontiers Series. Lawrence Erlbaum Associates Publishers, Mahwah, NJ, US, pp. 209–258.

Eesley, C.E., Hsu, D.H., Roberts, E.B., 2014. The contingent effects of top management teams on venture performance: aligning founding team composition with innovation strategy and commercialization environment. Strateg. Manag. J. 35, 1798–1817.

Emich, K.J., McCourt, M., Lu, L., Ferguson, A., Peterson, R., 2024. Team composition revisited: expanding the team member attribute alignment approach to consider patterns of more than two attributes. Organ. Res. Methods 27, 329–348.

Ertug, G., Kotha, R., Hedström, P., 2020. Kin ties and the performance of new firms: a structural approach. Acad. Manag. J. 63, 1893–1922.

Fernandez, S., Stöcklin, M., Terrier, L., Kim, S., 2021. Using available signals on Linkedin for personality assessment. J. Res. Pers. 93, 1–14.

Gabriel, A.S., Campbell, J.T., Djurdjevic, E., Johnson, R.E., Rosen, C.C., 2018. Fuzzy profiles: comparing and contrasting latent profile analysis and fuzzy set qualitative comparative analysis for person-centered research. Organ. Res. Methods 21, 877–904.

Gabriel, A.S., Diefendorff, J.M., Chandler, M.M., Moran, C.M., Greguras, G.J., 2014. The dynamic relationships of work affect and job satisfaction with perceptions of fit. Pers. Psychol. 67, 389–420.

Genedy, M., Hellerstedt, K., Naldi, L., Wiklund, J., 2024. Growing pains in scale-ups: how scaling affects new venture employee burnout and job satisfaction. J. Bus. Ventur. 39, 106367.

Gerstner, W.-C., König, A., Enders, A., Hambrick, D.C., 2013. CEO narcissism, audience engagement, and organizational adoption of technological discontinuities. Adm. Sci. Q. 58, 257–291.

Gray, S.M., Howell, T., Sackett, E., 2024. Talking past each other: construal level, utilitarian motives, and entrepreneurial team formation. Organ. Sci. 35, 1745–1769.

Greer, L.L., de Jong, B.A., Schouten, M.E., Dannals, J.E., 2018. Why and when hierarchy impacts team effectiveness: a meta-analytic integration. J. Appl. Psychol. 103, 591–613.

Grijalva, E., Maynes, T.D., Badura, K.L., Whiting, S.W., 2020. Examining the "I" in team: a longitudinal investigation of the influence of team narcissism composition on team outcomes in the NBA. Acad. Manag. J. 63, 7–33.

Guenther, C., Oertel, S., Walgenbach, P., 2016. It's all about Timing: Age–Dependent Consequences of Founder Exits and New Member Additions. Entrep. Theory Pract. 40, 843–865.

Hallen, B.L., Cohen, S.L., Bingham, C.B., 2020. Do accelerators work? If so, how? Organ. Sci. 31, 378–414.

Harrison, D.A., Klein, K.J., 2007. What's the difference? Diversity constructs as separation, variety, or disparity in organizations. Acad. Manag. Rev. 32, 1199–1228.

Härtel, T.M., Schuler, B.A., Back, M.D., 2024. 'LinkedIn, LinkedIn on the screen, who is the greatest and smartest ever seen?': A machine learning approach using valid LinkedIn cues to predict narcissism and intelligence. J. Occup. Organ. Psychol. 97, 1572–1602.

Heckman, J.J., 1979. Sample selection bias as a specification error. Econometrica 47, 153–161.

Hirschfeld, R.R., Bernerth, J.B., 2008. Mental efficacy and physical efficacy at the team level: inputs and outcomes among newly formed action teams. J. Appl. Psychol. 93, 1429–1437.

Hmieleski, K.M., Baron, R.A., 2008. Regulatory focus and new venture performance: a study of entrepreneurial opportunity exploitation under conditions of risk versus uncertainty. Strateg. Entrep. J. 2, 285–299.

Hmieleski, K.M., Baron, R.A., 2009. Entrepreneurs' optimism and new venture performance: a social cognitive perspective. Acad. Manag. J. 52, 473–488.

Hmieleski, K.M., Cole, M.S., 2023. The contingent effects of Intrateam abusive behavior on team thriving and new venture performance. J. Manag. 49, 808–838.

Hmieleski, K.M., Lerner, D.A., 2016. The dark triad and nascent entrepreneurship: an examination of unproductive versus productive entrepreneurial motives. J. Small Bus. Manag. 54, 7–32.
Hoffman, B.J., Woehr, D.J., 2006. A quantitative review of the relationship between person–organization fit and behavioral outcomes. J. Vocat. Behav. 68, 389–399.
Ingersoll, A.R., Glass, C., Cook, A., Olsen, K.J., 2019. Power, status and expectations: how narcissism manifests among women CEOs. J. Bus. Ethics 158, 893–907.
Jin, L., Madison, K., Kraiczy, N.D., Kellermanns, F.W., Crook, T.R., Xi, J., 2017. Entrepreneurial Team Composition Characteristics and New Venture Performance: A Meta–Analysis. Entrep. Theory Pract. 41, 743–771.
Jonason, P.K., Webster, G.D., 2010. The dirty dozen: a concise measure of the dark triad. Psychol. Assess. 22, 420–432.
Jung, H., Vissa, B., Pich, M., 2017. How do entrepreneurial founding teams allocate task positions? Acad. Manag. J. 60, 264–294.
Junge, S., Graf-Vlachy, L., Hagen, M., Schlichte, F., 2025. Narcissism at the CEO–TMT Interface: measuring executive narcissism and testing its effects on TMT composition. J. Manag. 51, 1765–1802.
Klotz, A.C., Hmieleski, K.M., Bradley, B.H., Busenitz, L.W., 2014. New venture teams: a review of the literature and roadmap for future research. J. Manag. 40, 226–255.
Knight, A.P., Greer, L.L., De Jong, B., 2020. Start-up teams: a multidimensional conceptualization, integrative review of past research, and future research agenda. Acad. Manag. Ann. 14, 231–266.
Ko, E.-J., McKelvie, A., 2018. Signaling for more money: the roles of founders' human capital and investor prominence in resource acquisition across different stages of firm development. J. Bus. Ventur. 33, 438–454.
Kristof, A.L., 1996. Person-organization fit: an integrative review of its conceptualizations, measurement, and implications. Pers. Psychol. 49, 1–49.
Kristof-Brown, A., Schneider, B., Su, R., 2023. Person-organization fit theory and research: conundrums, conclusions, and calls to action. Pers. Psychol. 76, 375–412.
Kristof-Brown, A., Zimmerman, R.D., Johnson, E.C., 2005. Consequences of individual's fit at work: a meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. Pers. Psychol. 58, 281–342.
Kristof-Brown, A.L., 2000. Perceived applicant fit: distinguishing between recruiters' perceptions of person-job and person-organization fit. Pers. Psychol. 53, 643–671.
Lahiri, A., Pahnke, E.C., Howard, M.D., Boeker, W., 2019. Collaboration and informal hierarchy in innovation teams: product introductions in entrepreneurial ventures. Strateg. Entrep. J. 13, 326–358.
Lazar, M., Miron-Spektor, E., Agarwal, R., Erez, M., Goldfarb, B., Chen, G., 2020. Entrepreneurial team formation. Acad. Manag. Ann. 14, 29–59.
Lee, S. (Ronnie), Kim, J.D., 2024. When do startups scale? Large-scale evidence from job postings. Strateg. Manag. J. 45, 1633–1669.
Lee, T.H., Gerhart, B., Weller, I., Trevor, C.O., 2008. Understanding voluntary turnover: path-specific job satisfaction effects and the importance of unsolicited job offers. Acad. Manag. J. 51, 651–671.
Lien, W.-C., Chen, J., Sohl, J., 2022. Do I have a big ego? Angel investors' narcissism and investment behaviors. J. Bus. Ventur. 37, 106247.
Liu, Y., Li, Y., Hao, X., Zhang, Y., 2019. Narcissism and learning from entrepreneurial failure. J. Bus. Ventur. 34, 496–512.
Mohammed, S., Angell, L.C., 2004. Surface- and deep-level diversity in workgroups: examining the moderating effects of team orientation and team process on relationship conflict. J. Organ. Behav. 25, 1015–1039.
Morf, C.C., Rhodewalt, F., 2001. Unraveling the paradoxes of narcissism: a dynamic self-regulatory processing model. Psychol. Inq. 12, 177–196.
Nevicka, B., De Hoogh, A.H.B., Van Vianen, A.E.M., Beersma, B., McIlwain, D., 2011. All I need is a stage to shine: narcissists' leader emergence and performance. Leadersh. Q. 22, 910–925.
Oh, I.-S., Guay, R.P., Kim, K., Harold, C.M., Lee, J.-H., Heo, C.-G., Shin, K.-H., 2014. Fit happens globally: a meta-analytic comparison of the relationships of person–environment fit dimensions with work attitudes and performance across East Asia, Europe, and North America. Pers. Psychol. 67, 99–152.
O'Reilly, C.A., Chatman, J., Caldwell, D.F., 1991. People and organizational culture: a profile comparison approach to assessing person-organization fit. Acad. Manag. J. 34, 487–516.
Payne, G.T., Brigham, K.H., Broberg, J.C., Moss, T.W., Short, J.C., 2011. Organizational virtue orientation and family firms. Bus. Ethics Q. 21, 257–285.
Preacher, K.J., Hayes, A.F., 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behav. Res. Methods 40, 879–891.
Preller, R., Breugst, N., Patzelt, H., Dibbern, R., 2023. Team resilience building in response to co-founder exits. J. Bus. Ventur. 38, 106328.
Ridge, J.W., Hill, A.D., Aime, F., 2017. Implications of multiple concurrent pay comparisons for top-team turnover. J. Manag. 43, 671–690.
Rieger, V., Dreller, A., Engelen, A., 2025. Zooming in on the very early days: the role of trademark applications in the Acquisition of Venture Capital Seed Funding. J. Mark. Res. 62, 170–188.
Rosenthal, S.A., Pittinsky, T.L., Q., Leadersh., 2006. Narcissistic leadership. In: The leadership quarterly yearly review of Leadership, 17, pp. 617–633.
Schmid, E.A., Knipfer, K., Peus, C.V., 2021. Narcissistic leaders–promise or peril? The patterns of narcissistic leaders' behaviors and their relation to team performance. Front. Psychol. 12.
Schmid Mast, M., Hall, J.A., 2003. Anybody can be a boss but only certain people make good subordinates: behavioral impacts of striving for dominance and dominance aversion. J. Pers. 71, 871–892.
Schneider, B., Bartram, D., 2017. Aggregate personality and organizational competitive advantage. J. Occup. Organ. Psychol. 90, 461–480.
Shirokova, G., Galieva, N., White, J.V., Doktorova, D., 2024. Narcissism, workaholism, family support and new venture performance: a moderated mediation model. Small Bus. Econ. 63, 379–419.
Toh, S.M., Morgeson, F.P., Campion, M.A., 2008. Human resource configurations: investigating fit with the organizational context. J. Appl. Psychol. 93, 864–882.
Tzabbar, D., Margolis, J., 2017. Beyond the startup stage: the founding team's human capital, new venture's stage of life, founder–CEO duality, and breakthrough innovation. Organ. Sci. 28, 857–872.
Urbonaviciute, G., Hepper, E.G., 2020. When is narcissism associated with low empathy? A meta-analytic review. J. Res. Pers. 89, 104036.
van der Vegt, G.S., Bunderson, S., Kuipers, B., 2010. Why turnover matters in self-managing work teams: learning, social integration, and task flexibility. J. Manag. 36, 1168–1191.
Vanaelst, I., Clarysse, B., Wright, M., Lockett, A., Moray, N., S'Jegers, R., 2006. Entrepreneurial team development in academic spinouts: an examination of team heterogeneity. Entrep. Theory Pract. 30, 249–271.
Verquer, M.L., Beehr, T.A., Wagner, S.H., 2003. A meta-analysis of relations between person–organization fit and work attitudes. J. Vocat. Behav. 63, 473–489.
von Nitzsch, J., Bird, M., Saiedi, E., 2024. The strategic role of owners in firm growth: contextualizing ownership competence in private firms. Strateg. Entrep. J. 18, 553–581.
Wu, W., Wang, H., Wang, X., 2022. Entrepreneur narcissism and new venture performance: a learning perspective. J. Bus. Res. 149, 901–915.
Xia, F., Thewissen, J., Huang, W., Yan, S., 2024. Founder-CEO extraversion and sustainability orientation in initial coin offerings. Entrep. Theory Pract. 48, 941–980.
Yin, K., Peng, J., Zhang, J., 2020. The application of latent profile analysis in organizational behavior research. Adv. Psychol. Sci. 28, 1056.
Yu, S., 2020. How do accelerators impact the performance of high-technology ventures? Manag. Sci. 66, 530–552.
Zhao, Y.L., Song, M., Storm, G.L., 2013. Founding team capabilities and new venture performance: the mediating role of strategic positional advantages. Entrep. Theory Pract. 37, 789–814.
Zhu, D.H., Chen, G., 2015. CEO narcissism and the impact of prior board experience on corporate strategy. Adm. Sci. Q. 60, 31–65.