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Firm growth and the job satisfaction of the startup workforce

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Abstract

Research Summary: This study investigates how sales and employment growth shape employee job satisfaction in startups. Grounded in Penrosean growth theory and related literature, we propose an inverted U-shaped relationship, where excessive growth triggers the "Penrose Effect" and impairs employee job satisfaction. Analysis of multilevel Glassdoor.com data reveals modest support for this relationship in employment growth, which is stronger for firms undergoing rapid workforce expansion. Exploratory text analysis further suggests that rapid employment growth exposes socio-structural challenges, and rapid sales growth reveals managerial deficiencies in the scaling of revenues. The differences between these mediating mechanisms suggest that the Penrose effect may be less binding than previously theorized, warranting further scrutiny. Our findings bridge macro-level growth dynamics with micro-level employee experiences, providing insights into the contemporary challenges of rapidly growing firms.

Managerial Summary: Does startup growth enhance the employee work experience? If so, is it bound by the rate of growth? Our study offers insights into these questions by combining Glassdoor.com reviews with startup financial data and reveals that moderate levels of growth can enhance employee job satisfaction, while

rapid expansion can undermine it. We identify two key mechanisms: first, rapid employment growth strains workplace dynamics, creating challenges with diversity, inclusion, and team cohesion. Second, rapid sales growth exposes management's limitations in scaling products and services effectively. For startup leaders, these findings shed light on how the tradeoffs of accelerated growth can cascade into employee-level challenges that impair job satisfaction.

KEYWORDS

entrepreneurship, growth, human capital, job satisfaction, managerial capacity

1 | INTRODUCTION

Firm growth is a critical organizational objective and a defining characteristic of entrepreneurial firms (DeSantola & Gulati, 2017). Recent reports suggest that growing new ventures generate half of new jobs and sales despite accounting for only a small proportion of the population of firms (World Bank, 2018). While it is well documented how growth creates value for firms (Eshima & Anderson, 2017), much remains unknown about the value it creates for employees. Human capital is a critical strategic resource for a growing startup, and job satisfaction is among the most essential *non-pecuniary* values an organization can create for its employees (Gerhart & Feng, 2021; Grant et al., 2007). While growth offers opportunities for employees (Bennett & Levinthal, 2017), it is also likely to have negative consequences if the firm grows too fast (Pierce & Aguinis, 2013).

Taking cues from classic Penrosean growth theory (1959) and the changes that prompt professionalization (e.g., Baron et al., 2001; Flamholtz & Randle, 2012), scholars are revisiting the growth conundrum in startups with an eye toward the challenges that arise due to rapid growth (DeSantola & Gulati, 2017; Kuratko et al., 2020; Serra & Thiel, 2019). In turn, the promise and perils of growth motivate our research question—does the rate of growth influence employee job satisfaction, and what mechanisms might be driving the effect?

To answer this question, we examine the nonlinear nature of sales and employment growth and how these aspects of growth influence employee job satisfaction. Job satisfaction reflects the overall experience of employees working inside a company and is one of the most essential aspects of value any organization can create for its employees (Gerhart & Feng, 2021; Grant et al., 2007). To test our theory, we target new ventures. New ventures face a unique challenge: they must grow to establish viability but do so with little structure and formality. Firms that grow too rapidly will likely face growing pains (Kuratko et al., 2020), leading to potential employee strains. While the recruitment and retention of talent is a fundamental source of competitive advantage for all firms (Gerhart & Feng, 2021), it is vital for new ventures whose early success rests largely on a committed workforce (Baron & Hannan, 2002; Honoré & Ganco, 2023).

In the new venture context, the expansion of sales and employment tends to be the most critical facets of growth (Shepherd & Wiklund, 2009). While correlated, sales and employment growth are conceptually distinct. Sales growth indicates the expansion of products or services and can offer insights into a firm's future potential. Conversely, employment growth, signifying an increase in headcount, demonstrates a commitment to ongoing expansion, given that the costs associated with additional employees persist throughout their tenure with the company. As such, we theorize and measure sales and employment growth separately. Our multilevel dataset consists of firm-level data, sampling new ventures growing at varying rates, including many high-growth firms, and then a large-scale, non-obtrusive data collection effort to identify employee evaluations from Glassdoor.com. In addition to extensively validating Glassdoor's job satisfaction measure, we employ content coding (Krippendorff, 2013) against the thousands of textual responses and derive a deeper assessment of factors that can drive this relationship, offering novel exploratory insights.

In carrying out this research, we advance the literature in the following ways. First, employees of new ventures remain a distinct yet understudied stakeholder group in both the entrepreneurship and broader management literatures (Bort, 2025; Burton et al., 2018; Manchester et al., 2023). Given the promising evidence of previous research that identifies a relationship between firm performance and job satisfaction (Harter et al., 2010; Schneider et al., 2003), this study provides a new direction concerning relationships between growth and the internal workings of a startup (DeSantola & Gulati, 2017; Kuratko et al., 2020) by focusing explicitly on how growth affects the employee experience through job satisfaction. On the surface, working for a high-growth startup can be alluring. However, distributing the value created back to stakeholders is a strategic decision (e.g., Lieberman et al., 2017), suggesting that assumptions about the startup employment experience warrant scrutiny (Bort, 2025; DeSantola et al., 2023).

Second, our analysis reveals a nuanced relationship between firm growth and employee job satisfaction. Specifically, while sales growth does not directly impact job satisfaction, high levels of sales growth expose managerial performance problems in effectively handling product or service expansion (Gulati et al., 2012), which ultimately diminishes employee satisfaction. In contrast, employment growth exhibits a modest inverted U-shaped relationship with job satisfaction, as rapid workforce expansion reveals deficiencies in managerial services related to socio-structural challenges. These challenges arise when rapid hiring disrupts social cohesion, erodes trust, and diminishes inclusivity (Ward et al., 2022). These differentiated paths suggest the decoupling of different growth dimensions often driven by the development of technology. Such decoupling was not apparent in Penrose's original writings, presumably because they were based on a different empirical reality where sales and employment growth were more likely to develop in unison. It has also received limited attention in the subsequent literature.

A further aspect of this decoupling is related to the managerial challenges of growth. Our results suggest that the managerial problems associated with expansion only affect the firms that exhibit the most extreme levels of growth. This suggests that the "Penrose effect" (Marris, 1964) may be less binding in today's world than originally theorized by Penrose (Josefy et al., 2015). While these outliers represent only a small fraction of all firms, their growth experience and its implications are most salient. They also represent the flagships in their industries, eventually employing the most people and, thus, providing unique insights that are highly relevant to the startup context (Ruef & Birkhead, 2024). Managers should be aware that managerial and socio-structural challenges tend to compound exponentially at the highest growth rates. Thus, in an era of intense competition for human capital (Klotz, 2022), understanding these

dynamics is valuable for strategic decision-making around growth rates. While moderate growth provides resources that can enhance job satisfaction, extremely rapid growth introduces organizational strains that may require specific interventions. By connecting macro-level growth decisions to micro-level employee experiences through distinct mediating mechanisms, this work advances our understanding of nonlinear growth outcomes (cf. Pierce & Aguinis, 2013) while also providing practical insights for managing the employee experience during periods of expansion.

2 | MOTIVATION: FIRM GROWTH AND STARTUP EMPLOYEE JOB SATISFACTION

Startups are unique places to work. The outcomes are highly variable, with some startups scaling rapidly to become market leaders, and many others stagnating or ceasing operations altogether. There is evidence that the success of a startup is connected to its organizational design (Burton et al., 2019), yet these designs evolve rapidly to meet increasing demands (Baron et al., 2001). Further, the growth process sparks immense changes in the startup's culture (DeSantola & Gulati, 2017). As Gil (2018, p. 168) points out, the transformation of new ventures can make them unrecognizable from 1 year to the next.

Despite the instability associated with startups, a subset of employees finds this environment alluring. For example, evidence suggests that startup employees prioritize autonomy and innovation over salary (Roach & Sauermann, 2015). While the startup workforce skews toward younger and less experienced demographics (Coad et al., 2014; Ouimet & Zarutskie, 2014), startups led by teams of industry veterans can draw similarly experienced employees (Honoré & Ganco, 2023). Further, Manchester et al. (2023) found that contextual factors related to the spouse's career, unrelated to the work itself, increase the willingness of professionals to consider employment in a startup. In sum, startup employees embark on a unique career path with different expectations, suggesting that common assumptions about work experiences might not hold.

One intriguing question is whether startup growth is inherently positive for employees. Growth is an important indicator of startup performance (Shepherd & Wiklund, 2009), with DeSantola and Gulati (2017) noting that growth distinguishes the "entrepreneurial firm" from a "small business." While growth can generate significant value for a startup's stakeholders, recent evidence suggests that key decision-makers often prioritize growth over potential negative consequences. For instance, many small business leaders' growth aspirations are primarily driven by anticipated gains in personal wealth (McKelvie et al., 2021), while investors like venture capitalists face pressure to exit their investments rapidly (Yao & O'Neill, 2022), suggesting that some stakeholders emphasize financial metrics rather than organizational health.

These insights align with observations that firms often maintain an unrelenting commitment to future growth regardless of potential drawbacks (Josefy et al., 2015) and highlight the issue that distributing the value generated by growth to stakeholders is both finite and a strategic choice. Lieberman et al.'s (2017) value creation and appropriation model illustrates that beneficiaries are heterogeneous, whereby at different times, customers, investors, and employees may benefit more (or less) depending on the firm's priorities at the time. This raises important considerations about how growth impacts employees specifically, as they may not always share the benefits of growth proportionately while being the key human capital that drives further expansion. Focusing on financial metrics over organizational health can lead to managerial

strains and a compromised work environment, affecting employee experience. Given the far-reaching impact growth has on the startup (DeSantola & Gulati, 2017), growth has the potential to be an overarching construct that shapes the employee experience.

A fruitful way to assess the employee experience is to tap into their job evaluations by assessing job satisfaction. Job satisfaction has a rich history in the management literature (Judge et al., 2017) and is a central facet of a firm's human capital (Coff & Kryscynski, 2011). Though job satisfaction as a construct has been studied for well over a century (cf. Judge et al., 2017), new questions and contexts continue to spark scholarly interest (Berg et al., 2023; Bowling & Zelazny, 2022).

While many job satisfaction studies emphasize proximal aspects of the job (e.g., tasks), scholars have suggested that distal characteristics, such as firm performance and strategic orientations, will also influence job attitudes (Parker et al., 2017; Zhou et al., 2008). Surprisingly, though, and despite the extensive history of job satisfaction research (Judge et al., 2017), studies tapping into distal characteristics are far less common.

Schneider et al. (2003) were among the first to contest the prevailing "happy worker—productive firm" hypothesis, testing the relationship both ways. Interestingly, they found more substantial support for the relationship between firm performance and job satisfaction, positing that higher-performing firms are better resourced to enhance the employee experience. However, the few studies that continued this tradition have offered conflicting findings (Harter et al., 2010; Kessler et al., 2020).

Moreover, these examinations of employee job satisfaction test the influence of accounting measures of performance (e.g., Return on Assets [ROA] or Return on Equity [ROE]), which could be the source of contention and are generally less relevant in the startup context than growth (Shepherd & Wiklund, 2009). Notably, firm growth holds significant potential to influence employee job satisfaction. Unlike snapshots of the financial health provided by metrics like ROE and ROA, growth delineates the firm's evolving development over time. Employees can directly observe and experience the effects of growth in their daily work, such as an expanding workforce, new projects/initiatives, and changes in work processes and structures. This visibility can make growth a particularly salient aspect of performance for employees.

Before exploring the relationship between firm growth and job satisfaction, we first review Penrosean growth theory as it provides an overarching framework to understand the promise and perils of growth's impact on the firm. Penrose's (1959) seminal work on firm growth still inspires novel research questions some 70 years later (e.g., Joseph & Wilson, 2018; Vidal & Mitchell, 2018) and offers a lens to assess why growth might influence the job satisfaction of the startup workforce.

3 | PENROSEAN GROWTH THEORY

Penrose's (1959) *Theory of Firm Growth* serves as a bedrock of the modern strategic management and entrepreneurship literatures (Kor & Mahoney, 2004; Mahoney & Michael, 2005). In her seminal work, Penrose conceptualized the firm as a collection of resources that can be put to productive use. The ability to put these resources to use in a novel way is what makes one firm distinct from the next. In essence, it is the dynamic interactions between the firm's leadership and its resources that allow the firm to expand (cf. Kor et al., 2016).

Recognizing firm growth as a time-dependent process, Penrose states as her primary research question, "assuming some firms can grow, what principles will then govern their

growth, and how fast and how long can they grow?" (1959, p. 6). From the earliest iterations of this theory, managerial services—defined as the capabilities of experienced individuals within the firm who can plan and execute expansion—serve as the focal point (Penrose, 1955). Diverging from views that growth is happenstance or automatic, Penrose notes that managers plan growth, requiring them to organize resources to execute (1959, p. 40). Thus, the availability of managerial services must continually expand to allow for continued firm growth.

However, expanding managerial services is difficult and is bound by the limit of how fast the organization can onboard new managerial talent. Penrose clarifies that "if a firm deliberately or inadvertently expands its organization more rapidly than the individuals in the expanding organization can obtain the experience with each other and with the firm that is necessary for the effective operation of the group, the efficiency of the firm will suffer" (1959, p. 43). This phenomenon is known as the "Penrose Effect" or "Penrose Theorem" (Marris, 1964). An implication of this is that irrespective of whether management is actively trying to build infrastructure to deal with growth, they will be unable to keep up with the problems arising from growth rates above this threshold.

Given the popularity of Penrosean growth theory, it is unsurprising that it has spurred debate (Kor & Mahoney, 2004; Rugman & Verbeke, 2004), large-scale analyses (Nason & Wiklund, 2018), and theoretical extensions (Joseph & Wilson, 2018; Kor, 2003; Tan & Mahoney, 2005; Vidal & Mitchell, 2018). Penrose called attention to the vagueness of certain facets of her original work, stating "some concepts are not defined with great precision, largely because no highly refined definition is required for my purposes" (1959, p. 2). The flexibility of these ambiguities has played an important role in the long-lasting nature of the theory, as she goes on to state, "more detailed or more precise application of the analysis may well justify further effort in this direction." This has undoubtedly been the case (see, e.g., Nason & Wiklund, 2018).

Our inquiry is concerned with whether startup growth is positive for employees, predicated on the idea that growth is an engine for both employee opportunities (Bennett & Levinthal, 2017; Burton et al., 2018) and challenges (DeSantola & Gulati, 2017; Flamholtz & Randle, 2012; Kuratko et al., 2020). Here, Penrosean theory offers a compelling explanation for why firm growth might influence employee job satisfaction. Whether positive or negative, issues that impact the firm's managerial services influence the job satisfaction of their workforce (Inceoglu et al., 2018). On the one hand, if the managerial services are efficient and effective, the startup can continue to expand at a sustainable rate as the team has the slack to onboard new employees and handle new lines of business. However, if the firm expands too quickly and management faces limits due to the "Penrose Effect," it is likely that the ill effects of these limits will degrade the employee experience and be evident in their job satisfaction.

Penrosean theory conceptualizes growth homogenously and notes that "there is no way of measuring an amount of expansion, or even the size of a firm, that is not open to serious conceptual objections" (Penrose, 1959 p. 174). However, in practice, different dimensions of growth may diverge and present distinct challenges for managers. In their review of measures of firm size, Josefy et al. (2015) note that correlations among firm size measures are decreasing. This is in part due to technological shifts, where some firms are automating tasks, such as robotic workers in Amazon fulfillment centers, while others invest heavily in labor-intensive and arduous labor-related research and development, such as the ongoing development of Neuralink's brain-computer interface, before their first sale. This refined view, highlighting the intricacies of managerial services and challenges for various forms of growth, marks an advancement in the Penrosean framework.

Next, we differentiate between sales and employment growth, which are often central metrics for many startups (Shepherd & Wiklund, 2009), and develop hypotheses concerning their individual relationships with employee job satisfaction.

4 | SALES GROWTH AND EMPLOYEE JOB SATISFACTION

Sales growth is marked by an increase in a firm's sales volume over a specific period. In the context of startups, sales growth is often considered a critical indicator of success and market potential and creates complex dynamics that can fundamentally reshape the employee experience. Importantly, sales growth should be considered distinct from other growth metrics—technological advances are increasingly decoupling the relationship between different measures of firm size (Josefy et al., 2015) and expansion. For instance, digitization allows firms in several industries (e.g., software) to increase sales with minimal capital investments and hiring, and labor shortages have prompted the restaurant industry to adopt automation, allowing firms to expand their sales by augmenting human capital with robots (Newton, 2022).

In their infancy, startups often face significant resource constraints (Baker & Nelson, 2005; Katila et al., 2008), a lack of market legitimacy (Fisher, 2020), and high levels of uncertainty (Burns et al., 2016). Given the unique challenges associated with nascency, early-stage employees are more likely to find themselves in a precarious position, marked by job insecurity and limited resources. However, building on a core Penrosean proposition (1959), we contend that moderate sales growth provides a sustainable pathway for startups to build the infrastructure necessary to overcome these hurdles (e.g., Lee, 2022), thereby enhancing the employee experience and job satisfaction.

By expanding financial resources, sales growth enables startups to offer higher wages, bonuses, and benefits, directly enhancing satisfaction, as financial stability positively impacts workplace well-being (Judge et al., 2010). It also facilitates investments in training and development, fostering opportunities for skill-building and career advancement, which are linked to intrinsic motivators such as mastery and autonomy (Gagné & Deci, 2005). Furthermore, moderate sales growth often signals organizational legitimacy and stability (DeSantola & Gulati, 2017), reducing employee anxiety while fostering pride in being part of a reputable and growing venture. The accompanying expansion of markets and products not only creates professional growth opportunities but also fosters collaboration and a sense of shared achievement among employees, further enriching their work experience.

While moderate sales growth has the potential to enhance job satisfaction, we again draw on our Penrosean roots, noting that excessively rapid sales growth triggers the "Penrose Effect" (Marris, 1964), where the firm's capacity to manage growth is constrained by the limited ability of managers to adapt effectively. As Penrose (1959) emphasizes, managerial resources—particularly skills such as leadership, firm-specific expertise, and industry knowledge—require time to develop (cf. Kor, 2003). However, rapid growth frequently outpaces a firm's ability to develop these skills, leading to managerial performance problems that are likely to have a negative impact on employees. For instance, venturing into unfamiliar markets or industries, a common consequence of rapid sales growth, can overwhelm managers as they struggle to navigate new customer demands, competitive dynamics, and regulatory requirements (Katila et al., 2017; Kor & Leblebici, 2005). Additionally, rapid sales growth intensifies coordination challenges across departments, such as reconciling engineering's focus on product quality with marketing's push for feature expansion, creating internal conflicts that managers may lack the

authority or capacity to resolve (Gulati et al., 2012). Managers who excel in smaller, more agile settings often find themselves unprepared for the complexities of larger-scale operations, exposing latent deficiencies in their managerial competence (Kuratko et al., 2020). These pressures can result in unclear priorities, role ambiguity, and diminished support for employees, all of which have the potential to erode job satisfaction (Inceoglu et al., 2018).

Synthesizing these insights, we suggest that sales growth's relationship with employee job satisfaction follows an inverted U-shaped pattern, emerging from the dynamic interplay between growth's enabling and constraining forces. At moderate levels, sales growth offers substantial advantages by expanding the financial resources needed to build the infrastructure that positively impacts employee experience and satisfaction. At this relatively manageable pace of growth, firms can adapt incrementally, as managers can gradually develop the skills needed to accommodate increased demands, enabling employees to enjoy the rewards of growth with limited disruption. However, as Penrose (1959) emphasized, a firm's capacity to absorb growth is inherently limited in the short term, as managerial resources require time to expand and adjust. When sales growth accelerates beyond this threshold, the demands on managers outpace their ability to adapt, leading to coordination breakdowns, unresolved conflicts, and inefficiencies. The escalating complexity of rapid sales growth intensifies these challenges, exposing deficiencies in leadership and operations that were less apparent during slower growth. As a result, managerial performance issues become more pronounced, disrupting the workplace environment and ultimately diminishing employee satisfaction.

> **Hypothesis 1.** Job satisfaction has an inverted U-shaped relationship with startup sales growth. Job satisfaction first increases with increases in sales growth, but then decreases.

5 | EMPLOYMENT GROWTH AND EMPLOYEE JOB SATISFACTION

Employment growth refers to the increase of a firm's headcount over time. Unlike sales growth, which reflects market traction, employment growth represents a direct investment in human capital that shapes the organization's social fabric. Startups can experience growth in the workforce without a corresponding increase in sales, depending on their strategic priorities and funding. For example, some startups stay pre-revenue as they focus on expanding human capital to build their intellectual property portfolios and production capabilities, such as electric car maker Rivian, which grew to over 6000 employees before selling a single unit (Korosec & Wilhelm, 2021).

Penrosean theory (1959) suggests that controlled workforce expansion allows firms to create increasingly specialized roles and develop more sophisticated human resource structures. Extending this foundation, we posit that moderate levels of employment growth yield distinct benefits for employees, as startups can effectively balance the integration of new hires with the maintenance of social cohesion.

Startups that onboard employees at a moderate rate can more easily diversify in meaningful ways, including skills, knowledge, and backgrounds, with minimal disruption to the existing social fabric. Further, this progression enables employees to move from the generalist roles typical in early-stage startups (Aldrich & Ruef, 2006) to more focused positions that align with their expertise and career aspirations. Critically, the gradual human capital expansion also facilitates

the development of social bonds and shared understanding among employees (Jain, 2016), which further cultivates cultural continuity (DeSantola & Gulati, 2017). These factors contribute positively to job satisfaction as employees gain opportunities for specialization, form meaningful workplace relationships, and benefit from improved organizational structure (Grolleau et al., 2022).

However, employment growth, like sales growth, is subject to the "Penrose Effect," as both expose deficiencies in managerial services, though likely in distinct ways. While rapid sales growth primarily reveals managerial performance issues related to scaling products and services—such as navigating new markets, managing evolving customer demands, and coordinating across departments—rapid employment growth exposes gaps in managerial services required to address socio-structural issues such as cohesion, trust, and inclusivity within an expanding workforce (Ward et al., 2022). As headcount increases, managers face the daunting task of maintaining effective communication and fostering social cohesion amid exponentially growing interpersonal interactions. For example, when the number of employees doubles, the number of possible interactions more than quadruples. Inadequate managerial oversight can lead to the erosion of trust and the breakdown of informal coordination mechanisms and potentially exacerbate functional rivalries. Furthermore, the path toward professionalization is rife with challenges, most notably for startups working in less conventional marketspaces (DeSantola et al., 2023). Without robust managerial systems to mediate relationships, larger and rapidly growing teams become prone to office politics, resource competition, and power struggles, as employees vie for recognition and advancement in an environment with unclear norms or inadequate support structures (Ellen III et al., 2022). Moreover, rapid hiring processes often strain managerial capacity to ensure equity and inclusion, with rushed decisions inadvertently favoring certain groups and fostering perceptions of bias or exclusion among underrepresented employees (Ward et al., 2022). Managers who cannot effectively socialize and integrate new hires risk exacerbating fragmentation as cliques and subgroups form, undermining a shared organizational identity and trust (DeSantola & Gulati, 2017). These socio-structural challenges ultimately lead to a fractured workplace culture and diminished employee satisfaction.

Drawing these insights together, we suggest that employment growth's relationship with job satisfaction follows an inverted U-shaped pattern, reflecting the fundamental tension between maintaining social cohesion and managing increasing organizational complexity. At moderate levels, employment growth fosters role clarity, strengthens social bonds, and enhances trust, as new hires are effectively integrated into the organization. During this phase, manageable workforce expansion allows managers to maintain cohesion and inclusivity, ensuring that employees experience a sense of belonging and alignment with organizational values. However, as employment growth accelerates beyond a critical threshold, the increasing complexity of interpersonal interactions and coordination overwhelms managerial capacity. This shift gives rise to socio-structural challenges such as weakened cohesion, reduced trust, and perceptions of inequity or exclusion. Without sufficient time and resources for managers to adapt, rapid growth exacerbates miscommunication, the formation of cliques, and office politics, further fragmenting the workplace. As a result, the initial benefits of employment growth are outweighed by the strain of unresolved socio-structural problems, leading to a decline in job satisfaction. Thus, we hypothesize that:

> **Hypothesis 2.** Job satisfaction has an inverted U-shaped relationship with startup growth. Job satisfaction first increases with increases in employment growth, but then decreases.

6 | DATA

We created a multilevel dataset linking new ventures and employees, merging information from PrivCo and Glassdoor.com. Using proprietary data sourcing technology and human verification, PrivCo collects information from around 900,000 privately held firms, primarily based in the United States, focusing on high-growth firms and high-potential new ventures where the financial footprint is verifiable. Once identified, a firm is backtracked as long as possible, often to inception. Information provided by PrivCo includes sales, employment, industry, venture investment, and location. We began our PrivCo by taking a random sample of for-profit, privately held firms headquartered in the United States that were stand-alone (i.e., not a subsidiary of an established firm) and were at least 2 years old. This resulted in a list of 3921 firms. This list was further filtered to firms under 10 years old, leaving 2053 firms.

We then merged PrivCo's firm-level data with employee data from Glassdoor.com. Glassdoor.com is a public website where current and former employees anonymously review their employers. Glassdoor.com has a policy and tools to prevent employers from interfering with employee feedback.[1] Moreover, unlike other job posting sites, Glassdoor adopts the Give-to-Get policy, meaning that to read more than three reviews for an employer, one must submit a review of their own. The efficacy of this approach was recently tested and verified in an academic-industry partnership, using Glassdoor user behavior as the basis of the study (Marinescu et al., 2018) and has been used in previous management literature (Corritore et al., 2020). We provide screenshots of example reviews in Figure S.2.1. Each review contains both ratings on standardized scales and open-ended evaluations of pros, cons, and recommendations to managers wherein employees enter free-format text.

To automate the large-scale data collection from Glassdoor's publicly available application programming interface (API) and website (see Landers et al., 2016 for an overview), we created a suite of software tools using the Python programming language to aid in data collection. Appendix S.1 highlights key functions of our source code to demonstrate the software technique and includes a link to a repository including the entire source code. The first step in our employer–employee matching process was to search each company name from PrivCo for a corresponding presence on Glassdoor.com via their public API. The API can potentially return multiple matches. To handle this, the software generated three separate files: unique matches; multiple matches, and no matches (the company name did not exist within Glassdoor). Nine hundred seventy-three firms had a presence in Glassdoor. Notably, firms can have a "front page" presence on Glassdoor without corresponding employee records. To test the accuracy of our software, we first extracted a random sample of 100 "unique matches" records and examined whether the Glassdoor firm corresponded to the correct PrivCo firm, finding that the matching process was perfectly accurate. We then examined the multiple match file manually, which included 89 firms, searching for the correct corresponding Glassdoor record. In all cases, we were able to find the appropriate firm. The final matched list provided the entry point for Glassdoor.com. If present, our software aided in the iteration and capture of employee records for each company, covering both survey and free-form text data. We used the date of the review to match it with the appropriate firm year found in PrivCo. Some rapidly growing new ventures in our sample (e.g., Airbnb and Uber) represent the "gig" economy, relying on independent contractors. While Glassdoor allows employees a good deal of anonymity, we attempted to

[1] https://help.glassdoor.com/article/Fraudulent-reviews/en_US/.

mitigate this impact by checking employee's job titles and scanning the text of their reviews, removing those with titles or text indicating that they are "gig" workers.

This resulted in 9818 matched employee records nested within 552 firms. It is possible that reviews from very small workplaces are less reliable because employers can potentially identify who posted an anonymous review. We therefore excluded 225 companies that had five or fewer reviews, equaling 461 employee–company observations. We finally dropped records that contained missing values for any of our variables, excluding an additional 64 firms and 1395 observations. The final cross-sectional pooled sample included 7962 employee records nested within 263 firms, with the employee record serving as our unit of analysis. Appendix S.3 provides further details about the firms in our final sample.

6.1 | Dependent variable

Measures of *job satisfaction* typically either tap into the respondent's global assessment of overall job satisfaction or consist of composite evaluations of different aspects or facets of the job (Saari & Judge, 2004). Composite measures may include more or less distinctive aspects of the job (Spector, 1997) and have been widely adopted in previous studies (e.g., Bruck et al., 2002; Wright & Bonett, 2007). Glassdoor uses the composite approach, asking employees to evaluate their satisfaction level along five dimensions: compensation and benefits, career opportunities, management, company culture and values, and work-life balance. Measurements are on five-point scales and are captured at the individual level. These items are similar to the elements of scales used widely in the job satisfaction literature, such as the Job Descriptive Index (JDI; P. C. Smith et al., 1969) and the Minnesota Satisfaction Questionnaire (MSQ; Weiss et al., 1967). For example, the widely deployed JDI scale examines five job attributes (work, pay, promotion, coworkers, and supervision). Similar to Glassdoor's measurement strategy, five-point Likert-type response formats are common (Johnson et al., 1982). For example, the MSQ also utilizes a five-point Likert-type scale and is noted for its high internal consistency, with studies typically reporting Cronbach's alphas above .80 (e.g., Hirschfeld, 2000). To compute our index of *job satisfaction*, we took the average score across the five component items. The index has high internal consistency (Cronbach's alpha = .93), and confirmatory factor analysis suggests that one factor fits the data well (Comparative Fit Index: 0.987, Standardized Root Mean Square Residual: 0.017, Tucker–Lewis Index: 0.975).

In addition, we build on previous efforts to validate Glassdoor's measure of job satisfaction (e.g., Huang et al., 2015; Landers et al., 2019). The most notable of these efforts is a replication where the first author worked with human resource officers to deploy the MSQ to employees. The results were then compared against job satisfaction scores posted on Glassdoor. We find consistent results across our tests and explicate these efforts in Appendix S.2.

6.2 | Independent variables

We utilize *employment* and *sales growth* in our analysis and calculate the growth measure as (Size $t-1$ − Size $t-2$)/Size $t-2$ (cf. Shepherd & Wiklund, 2009). In our primary analyses, we lag growth variables 1 year relative to job satisfaction to reduce possible concerns for reverse causality. Further, following prior literature, we winsorized the growth variables at the 0.01

level to reduce outlier influence (cf. George, 2005). Alternative models and winsorization levels are illustrated in Appendix S.4.

6.3 | Exploratory mediating variables

While our focus is on the relationship between growth and job satisfaction, we also sought to explicate the mechanisms—specifically, the challenges associated with rapid growth as outlined in the theory section—that influence this relationship, in particular to provide insights into the inverse U-shape hypothesized. Glassdoor offers a rich set of free-form text responses that offer further insights into employee evaluations. Judge et al. (2017; p. 366) note that grounded analysis methods might reveal new antecedents of job satisfaction, especially those that might impair job satisfaction. Thus, to do so, we developed two content-coded variables that provide further insights—*managerial performance problems* and *socio-structural problems*.[2]

To derive quantitative measures of these variables, we follow content analysis techniques similar to those found in Williams and Shepherd (2016), who build upon Krippendorff (2013) and Weber (1990) in analyzing textual statements. We focus specifically on the "Cons" comments text, supplemented by the "Advice to Management" field. This technique aligns with Judge et al.'s (2017) recent call for scholars to use a grounded approach to explore factors of jobs that are explicitly negative in efforts to garner new and distinct insights. We began by establishing the appropriate textual unit of analysis—typical choices include coding individual words, phrases, or the entirety of the text (Weber, 1990). On average, the Glassdoor statements contained three semantically linked clauses, making the entirety of the text the most suitable option to allow for proper contextualizing of the statements (cf. Krippendorff, 2013). We then defined our coding constructs using abductive inference (Krippendorff, 2013). We offer a step-by-step overview of this process in Appendix S.7.

6.3.1 | Managerial performance problems

Managerial performance problems are deficiencies stemming from the demands faced by leadership as a firm becomes subject to the "Penrose Effect," particularly during periods of rapid sales growth. We focused on six works (inclusive of Penrose's original work) that outlined these challenges (i.e., Barringer & Jones, 2004; Kor, 2003; Kor et al., 2016; Kor & Mahoney, 2004; Tan & Mahoney, 2005) and leveraged these to build four conceptual manifestations of *managerial performance problems*, outlined and described in Table 1.[3]

Penrose notes that the problems faced by management require time to resolve. However, the firm continues to operate while it does so. As such, *managerial performance problems* constitute an ever-increasing source of adjustment costs, which are a critical element in potentially identifying why there is a nonlinear relationship between firm growth and job satisfaction.

[2]We thank an anonymous reviewer for this excellent suggestion.

[3]Each content category is coded as either present (1) or absent (0) at the individual record level, and the scores are summed to produce a final mediator measure ranging from 0 to 4. If there are multiple mentions of the same problem category (e.g., ineffective hierarchy) within a single record, it is still counted only once. Multiple mentions of the same problem category within a single evaluation might reflect writing style or emphasis rather than a meaningful difference in intensity. Thus, using binary indicators per category reduces measurement noise and ensures a more reliable and consistent representation of the distinct types of organizational problems experienced.

TABLE 1 Content categories for managerial performance problems.

Content category	Description	Penrosean literature	Representative text example
Ineffective hierarchy	Managers are unable to effectively lead and delegate, creating issues around employee support and task assignment	Mahoney (1995) Tan and Mahoney (2005)	"Poor management with poor interpersonal skills, lacking strong leadership capable of inspiring various teams."
Incompetent management	Managers generally lack the competence to effectively carry out their job	Mahoney (1995) Hutzschenreuter and Horstkotte (2013)	"Upper management is known to have made poor choices in the past"
Managerial inexperience within firm	Managers lack firm specific experience, including understanding of culture, people, products, and processes	Kor et al. (2007) Hutzschenreuter and Horstkotte (2013)	"They need to pick managers that adhere to their culture. This is a start up, not a dictatorship"
Managerial inexperience within industry	Managers lack industry specific experience, they are new to the industry altogether	Barringer and Jones (2004) Kor (2003)	"Tons of first time managers who have no experience outside of firm"

Notably, and as our construct captures, these issues are likely to be salient in the employees' day-to-day working experience.

6.3.2 | Socio-structural problems

To capture *socio-structural problems*, we followed a similar process as outlined above and focused on higher-order items that stem from perceptions of dysfunction in the startup's social and relational environment. These issues often reflect underlying deficiencies in managerial services, such as inadequate integration of new hires, insufficient attention to fostering trust and inclusivity, or failures in mitigating workplace conflicts and power imbalances, which collectively disrupt the social fabric of the organization. This is a growing area of research, and as such, we focused on contemporary issues that are likely to become evident during periods of growth. For example, maintaining employee diversity is challenging for most firms (Ely et al., 2012). However, this issue is likely to become especially salient as the startup rapidly expands its headcount and cannot maintain the balanced demographic diversity of its employees. Table 2 displays four content categories, the related literature, and representative text from Glassdoor employee testimonials.

6.4 | Control variables

We include control variables at both the individual and firm levels. We include a dummy variable for whether respondents disclosed their job title in their review as a proxy for how anonymous the employee sought to be (*Anonymous*). Previous studies suggest that fear of retaliation could potentially influence if employees leave honest feedback (A. F. R. Smith &

TABLE 2 Content categories for socio-structural problems.

Content category	Description	Socio-structural literature	Representative text example
Diversity	Workforce is demographically skewed toward one gender and/or race	Ward et al. (2022) Ely et al. (2012)	"Very few female leaders. Bro culture"
Support	Employees do not feel supported by the organization	Kammeyer-Mueller et al. (2013) Golden & Gajenden (2019)	"If things weren't good, I was far away from anyone that may help"
Workplace politics	Employees perceive the functioning of the workplace as politicized	Gandz and Murray (1980) Ellen III et al. (2022)	"A very authoritarian culture on the sales side of things with loads of company politics"
Micromanagement	Employees lack autonomy to make organizational decisions	Alvesson and Sveningsson (2003) Madan et al. (2022)	"Executives get absurdly hands on with minuscule details, rather than hiring management and employees they trust to handle the details"

Fortunato, 2008). We also included whether the reviewer was a current or former employee at the time of the review (*Employed*), as former employees may leave reviews that are more negative. We controlled for the number of words the respondent left in both their "pros" and "cons" (*Word count*). Longer reviews may indicate better insights into the firm and/or a more careful review. At the firm level, we control for firm log-transformed size in terms of both employees and sales (*Employees*; *Sales*), the *firm fixed effect*, and the *time fixed effect* (using year dummies that capture year-to-year changes in the macroenvironment). Firm fixed effects allow us to reduce the concern of the between-firm heterogeneities as a significant source of endogeneity. To account for Glassdoor *participation rate*, we also calculated the ratio of employees in our sample over the total number of employees. Finally, we also control for the *firm-level job satisfaction* at year $t - 1$ by taking the average job satisfaction evaluations of all employees of a given firm in that year. This helps alleviate some concerns about reverse causality between growth and job satisfaction (Schneider et al., 2003), an issue we return to in our robustness tests.

7 | ANALYSES AND RESULTS

Table 3 shows descriptive statistics for our key variables, including means, standard deviations, along with a correlation matrix. The mean annual growth rates are 94% for sales and 65% for employees, suggesting that these firms are indeed high-potential new ventures, as intended by PrivCo. The correlation between sales growth and employment growth is

TABLE 3 Descriptive statistics and correlation matrix.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Job satisfaction$_t$	3.59	1.28											
2. Anonymous$_t$	0.43	0.50	−0.07										
3. Employed$_t$	0.71	0.46	0.50	−0.03									
4. Word count$_t$	56.34	38.08	0.06	−0.04	0.05								
5. Employees (log)$_{t-1}$	6.03	1.45	−0.16	−0.10	−0.07	−0.14							
6. Sales (log)$_{t-1}$	18.08	1.75	−0.10	−0.05	−0.04	−0.11	0.84						
7. Participation rate$_t$	0.09	0.10	0.09	−0.01	0.03	0.10	−0.55	−0.57					
8. Firm-level job satisfaction$_{t-1}$	3.61	0.84	0.33	−0.03	0.19	0.05	−0.28	−0.17	0.11				
9. Employment growth$_{t-1}$ (w)	0.65	0.70	0.15	0.01	0.14	0.00	−0.08	−0.11	0.00	0.36			
10. Sales growth$_{t-1}$ (w)	0.94	1.19	0.03	0.02	0.03	−0.02	−0.14	−0.20	0.14	0.12	0.44		
11. Managerial performance problems$_t$	0.25	0.58	−0.42	0.06	−0.25	0.12	0.04	0.04	−0.04	−0.13	−0.08	−0.01	
12. Socio-structural problems$_t$	0.07	0.28	−0.23	0.04	−0.14	0.10	−0.01	0.00	−0.02	−0.05	−0.01	−0.02	0.62

Note: (w) denotes winsorized variable. Absolute values above 0.03 are statistically significant to <.05.

moderate at .44, highlighting that they may tap into different dimensions of the growth construct, warranting using them as separate variables in our hypothesis testing (cf. Shepherd & Wiklund, 2009).

Table 4 displays the results of the hypotheses that sales and employment growth have a nonlinear relationship with job satisfaction. These models utilize firm fixed effects with robust standard errors clustered at the firm level. Model 1 displays control variables only. Notably, *anonymous* employees had a lower job satisfaction rating, which is consistent with the job turnover literature (Hom et al., 2017). Moreover, current employees reported greater job satisfaction compared to those who had left their employers, implying that dissatisfaction might drive individuals to depart from the organization.[4] Consistent with previous literature (e.g., Idson, 1990), size measured by *employees* and *sales* is both negatively related to employee job satisfaction, though neither association is meaningfully different from zero. Finally, firm-level job satisfaction in the previous year had a negative influence on the employee's current year job satisfaction, suggesting potential adaptation effects (Boswell et al., 2005; Diener et al., 2009). Overall, the consistency of our control variables with previous findings offers additional confidence in the validity of our data source.

Model 2b tests our hypothesized inverted U-shaped relationship between sales growth and job satisfaction. Interestingly, we found no discernible direct relationship (coefficient of sales growth: 0.065 [$p = .520$]; coefficient of sales growth^2: −0.026 [$p = .308$]). Model 3b, however, indicates support for our second hypothesis—employment growth has an inverted U-shaped influence on job satisfaction. Specifically, employment growth is positively related to job satisfaction (0.401, $p = .003$), while its squared term has a negative association (−0.146, $p = .001$). We verify the existence of this U-shape by following the approach outlined by Haans et al. (2016). First, we find that the slope is positive (0.552 $p = .002$) when employment growth is low (equals −0.52), and the slope is negative (−0.601; $p = .002$) when employment growth is high (equals 3.44). Second, the inflection point is 1.375 or around 138%, and its 95% confidence interval is 0.999 to 1.752, which is well within the range of employment growth rates observed in our data. This suggests an average degradation of job satisfaction as employment growth approached an annual growth rate of 138% in this sample.

In particular, calculations based on predictive margins indicate that moving from an employment growth rate of 65% [mean] to 135% [one standard deviation above the mean] results in an increase in job satisfaction of 0.08. Conversely, increasing from 135% [one standard deviation above the mean] to 200% [two standard deviations above the mean] results in a decrease in job satisfaction of 0.07. Furthermore, escalating from 135% [one standard deviation above the mean] to 275% [three standard deviations above the mean] leads to a reduction in job satisfaction of 0.28, or 0.22 standard deviations of job satisfaction.

Figure 1b illustrates the inverted U-shaped relationship, which plots the estimation of the relationship between employment growth and job satisfaction. For comparison, Figure 1a shows the same relationship between sales growth and job satisfaction. Tables 5 and 6 present the detailed predictive margins and marginal effects, respectively.

[4]Note that we also replicated our analysis with isolating each group, found in Appendix S.4, Tables S.4.4, which show consistent results.

TABLE 4 OLS regression results.

Dependent variable: Employee job satisfaction	Control variables only	Model 1: Sales growth models		Model 2: Employment growth models	
	(1)	(2a)	(2b)	(3a)	(3b)
Firm effects	Y	Y	Y	Y	Y
Time effects	Y	Y	Y	Y	Y
Controls					
Intercept	6.996	5.949	5.944	7.002	6.527
	(1.238)	(1.802)	(1.803)	(1.242)	(1.262)
	[0.000]	[0.001]	[0.001]	[0.000]	[0.000]
Anonymous$_t$	−0.110	−0.110	−0.110	−0.110	−0.109
	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Employed$_t$	1.093	1.091	1.091	1.093	1.092
	(0.030)	(0.030)	(0.030)	(0.030)	(0.030)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Word count$_t$	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	[0.359]	[0.368]	[0.382]	[0.360]	[0.376]
Employees (log)$_{t-1}$	−0.147	−0.156	−0.119	−0.155	−0.304
	(0.106)	(0.107)	(0.110)	(0.117)	(0.126)
	[0.167]	[0.142]	[0.281]	[0.185]	[0.016]
Sales (log)$_{t-1}$	−0.142	−0.076	−0.087	−0.140	−0.073
	(0.085)	(0.118)	(0.118)	(0.085)	(0.089)
	[0.098]	[0.519]	[0.461]	[0.100]	[0.413]
Participation rate$_t$	0.278	0.326	0.357	0.269	−0.029
	(0.380)	(0.383)	(0.384)	(0.386)	(0.390)
	[0.464]	[0.395]	[0.353]	[0.486]	[0.940]
Firm-level job satisfaction$_{t-1}$	−0.144	−0.150	−0.152	−0.144	−0.167
	(0.042)	(0.043)	(0.043)	(0.043)	(0.043)
	[0.001]	[0.001]	[0.000]	[0.001]	[0.000]
Explanatory					
Sales growth$_{t-1}$		−0.030	0.065		
		(0.034)	(0.100)		
		[0.370]	[0.520]		
Sales growth$^2_{t-1}$			−0.026		
			(0.026)		
			[0.308]		

TABLE 4 (Continued)

Dependent variable: Employee job satisfaction	Control variables only	Model 1: Sales growth models		Model 2: Employment growth models	
	(1)	(2a)	(2b)	(3a)	(3b)
Employment growth$_{t-1}$				0.009	0.401
				(0.056)	(0.136)
				[0.869]	[0.003]
Employment growth$^2_{t-1}$					−0.146
					(0.046)
U-shape test					[0.001]
Inflection point					1.375
95% confidence interval for extreme point					[0.999, 1.752]
Slope when growth rate is low					0.552
					(0.181)
					[0.002]
Slope when growth rate is high					−0.601
					(0.198)
					[0.002]
Model					
N	7962	7962	7962	7962	7962
R^2	0.413	0.413	0.413	0.413	0.414
F-statistic	19.91	19.84	19.78	19.84	19.83

Note: Robust standard errors clustered at the firm level are shown in parentheses, with *p*-values in square brackets. Y indicates that fixed effects are included.

7.1 | Exploring potential mediators

To delve deeper into the underlying mechanisms at play (i.e., challenges likely to escalate during rapid growth), we investigate two potential mediators identified through our text analysis: *managerial performance problems* and *socio-structural problems*. Initially, we use linear regression models to separately test each individual path involved in the mediation process. Specifically, we examine the relationships between growth (employment and sales) and each mediator, considering three alternative functional forms—linear, U-shaped (quadratic), and exponential—to account for potential nonlinear effects as suggested by our theoretical framework. This step allows us to understand how growth influences each mediator independently. Subsequently, to formally evaluate mediation, we employ structural equation modeling (SEM). SEM is particularly suitable because it enables simultaneous estimation of multiple equations, thereby allowing us to directly assess indirect effects—calculated as the products of the coefficients along each mediation path (Hayes, 2009).

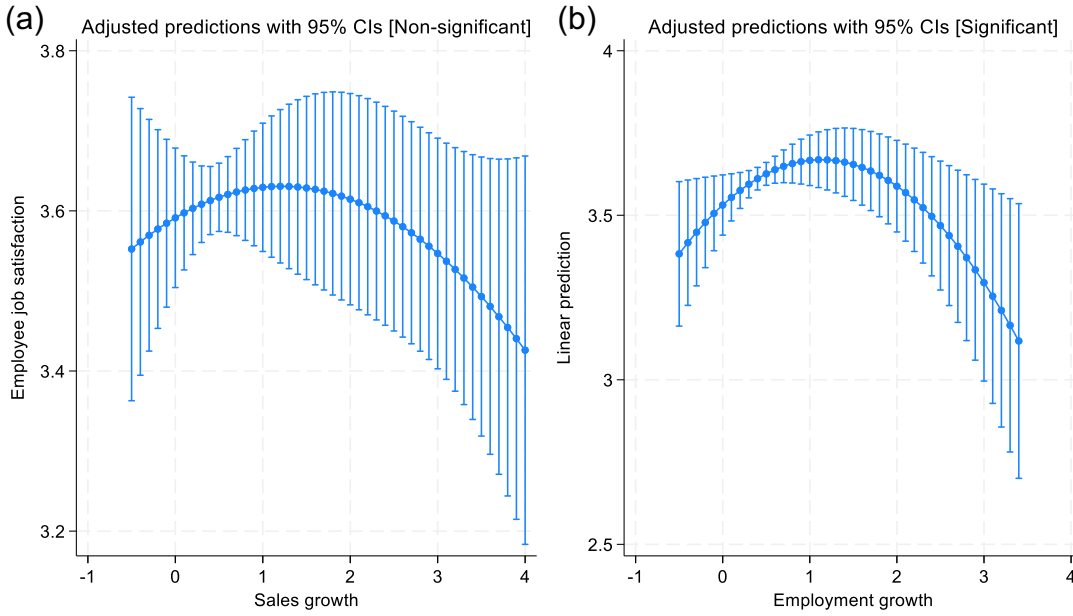

FIGURE 1 The effect of sales and employment growth and job satisfaction.

TABLE 5 Predictive margin table.

	Margin	Std. err.	*p*
Employment growth at			
−1.45 (3 SD below mean)	2.577	0.337	.000
−0.75 (2 SD below mean)	3.081	0.177	.000
−0.05 (1 SD below mean)	3.443	0.061	.000
0.65 (mean)	3.663	0.025	.000
1.35 (1 SD above mean)	3.739	0.061	.000
2.05 (2 SD above mean)	3.673	0.083	.000
2.75 (3 SD above mean)	3.464	0.126	.000

TABLE 6 Marginal effects table.

	dy/dx	Std. err.	*p*
Employment growth at			
−1.45 (3 SD below mean)	0.823	0.263	.002
−0.75 (2 SD below mean)	0.619	0.201	.002
−0.05 (1 SD below mean)	0.415	0.141	.003
0.65 (mean)	0.211	0.086	.014
1.35 (1 SD above mean)	0.007	0.056	.895
2.05 (2 SD above mean)	−0.197	0.084	.020
2.75 (3 SD above mean)	−0.400	0.139	.004

TABLE 7 OLS regression results for managerial performance problems.

	Sales growth models						Employment growth models					
	Linear		U-shape		Exponential growth		Linear		U-shape		Exponential growth	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
Dependent variables	**MPP**	**JS**	**MPP**	**JS**	**Log(MPP)**	**JS**	**MPP**	**JS**	**MPP**	**JS**	**Log(MPP)**	**JS**
Firm effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Controls												
Intercept	0.947	6.598	0.957	6.599	2.391	23.723	−0.022	6.987	0.031	6.548	2.301	24.117
	(0.875)	(1.730)	(0.866)	(1.730)	(0.081)	(1.859)	(0.510)	(1.177)	(0.532)	(1.195)	(0.047)	(1.346)
	[0.279]	[0.000]	[0.269]	[0.000]	[0.000]	[0.000]	[0.966]	[0.000]	[0.954]	[0.000]	[0.000]	[0.000]
Anonymous$_t$	0.025	−0.092	0.025	−0.092	0.002	−0.092	0.026	−0.093	0.026	−0.092	0.002	−0.092
	(0.011)	(0.024)	(0.011)	(0.024)	(0.001)	(0.024)	(0.011)	(0.024)	(0.011)	(0.024)	(0.001)	(0.024)
	[0.021]	[0.000]	[0.018]	[0.000]	[0.018]	[0.000]	[0.018]	[0.000]	[0.018]	[0.000]	[0.016]	[0.000]
Employed$_t$	−0.180	0.968	−0.179	0.968	−0.017	0.966	−0.181	0.968	−0.181	0.968	−0.017	0.966
	(0.014)	(0.030)	(0.014)	(0.030)	(0.001)	(0.030)	(0.014)	(0.030)	(0.014)	(0.030)	(0.001)	(0.030)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Word count$_t$	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.000	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Employees (log)$_{t-1}$	0.078	−0.103	0.011	−0.111	0.007	−0.102	0.089	−0.094	0.105	−0.232	0.008	−0.093
	(0.046)	(0.099)	(0.051)	(0.104)	(0.004)	(0.099)	(0.055)	(0.111)	(0.057)	(0.119)	(0.005)	(0.110)
	[0.092]	[0.301]	[0.827]	[0.286]	[0.088]	[0.305]	[0.107]	[0.395]	[0.067]	[0.052]	[0.102]	[0.399]
Sales (log)$_{t-1}$	−0.080	−0.131	−0.060	−0.128	−0.007	−0.132	−0.024	−0.157	−0.032	−0.095	−0.002	−0.157
	(0.055)	(0.112)	(0.056)	(0.112)	(0.005)	(0.112)	(0.034)	(0.080)	(0.037)	(0.084)	(0.003)	(0.080)
	[0.147]	[0.243]	[0.281]	[0.252]	[0.144]	[0.240]	[0.474]	[0.050]	[0.390]	[0.258]	[0.460]	[0.049]

TABLE 7 (Continued)

	Sales growth models						Employment growth models					
	Linear		U-shape		Exponential growth		Linear		U-shape		Exponential growth	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
Dependent variables	**MPP**	**JS**	**MPP**	**JS**	**Log(MPP)**	**JS**	**MPP**	**JS**	**MPP**	**JS**	**Log(MPP)**	**JS**
Participation rate$_t$	−0.197	0.191	−0.252	0.184	−0.018	0.194	−0.130	0.180	−0.097	−0.096	−0.012	0.183
	(0.154)	(0.367)	(0.154)	(0.369)	(0.014)	(0.367)	(0.155)	(0.370)	(0.148)	(0.372)	(0.014)	(0.369)
	[0.200]	[0.603]	[0.101]	[0.618]	[0.213]	[0.596]	[0.402]	[0.627]	[0.514]	[0.798]	[0.419]	[0.621]
Firm-level job satisfaction$_{t-1}$	0.023	−0.134	0.027	−0.134	0.002	−0.134	0.017	−0.132	0.019	−0.154	0.002	−0.132
	(0.020)	(0.041)	(0.020)	(0.041)	(0.002)	(0.041)	(0.020)	(0.040)	(0.020)	(0.040)	(0.002)	(0.040)
	[0.251]	[0.001]	[0.182]	[0.001]	[0.246]	[0.001]	[0.400]	[0.001]	[0.337]	[0.000]	[0.391]	[0.001]
Explanatory												
Sales growth$_{t-1}$	0.028	−0.011	−0.142	−0.033	0.003	−0.011						
	(0.017)	(0.033)	(0.052)	(0.100)	(0.002)	(0.033)						
	[0.104]	[0.730]	[0.006]	[0.743]	[0.105]	[0.731]						
Sales growth$^2_{t-1}$			0.047	0.006								
			(0.014)	(0.027)								
			[0.001]	[0.824]								
Employment growth$_{t-1}$							−0.023	−0.007	−0.066	0.355	−0.002	−0.006
							(0.028)	(0.054)	(0.068)	(0.130)	(0.003)	(0.054)
							[0.409]	[0.903]	[0.332]	[0.006]	[0.415]	[0.908]
Employment growth$^2_{t-1}$									0.016	−0.135		
									(0.024)	(0.044)		
									[0.508]	[0.002]		

TABLE 7 (Continued)

	Sales growth models						Employment growth models					
	Linear		U-shape		Exponential growth		Linear		U-shape		Exponential growth	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
Dependent variables	**MPP**	**JS**	**MPP**	**JS**	**Log(MPP)**	**JS**	**MPP**	**JS**	**MPP**	**JS**	**Log(MPP)**	**JS**
MPP		−0.685		−0.685		−7.434		−0.685		−0.684		−7.437
		(0.026)		(0.026)		(0.278)		(0.026)		(0.026)		(0.277)
		[0.000]		[0.000]		[0.000]		[0.000]		[0.000]		[0.000]
Model												
N	7962	7962	7962	7962	7962	7962	7962	7962	7962	7962	7962	7962
R^2	0.134	0.468	0.136	0.468	0.136	0.468	0.134	0.468	0.134	0.468	0.136	0.468
F-statistic	4.37	24.65	4.43	24.56	4.44	24.72	4.36	24.65	4.34	24.63	4.43	24.72

Note: Results are based on OLS regressions testing each path individually (first, growth → MPP; then, MPP → job satisfaction), using three alternative functional forms: linear, U-shaped (quadratic), and exponential. Robust standard errors clustered at the firm level are reported in parentheses, with *p*-values presented in square brackets. Y indicates that fixed effects are included. MPP refers to managerial performance problems. JS refers to employee job satisfaction. Formal tests of mediation effects conducted using SEM are presented in Appendix S.5.

Table 7 reports the regression analyses examining the relationships between growth (sales and employment) and *managerial performance problems*, based on specifying different functional forms. Models 1a and 4a test the linear relationship between sales growth, employment growth, and managerial problems, respectively. Both sales growth (0.028; $p = .104$) and employment growth (−0.023; $p = .409$) have a limited linear relationship with managerial problems. Models 2a and 5a test the U-shaped relationships. The results reveal a negative impact of sales growth (−0.142; $p = .006$) and a positive impact of its squared term (0.0474; $p = .001$) on managerial problems, suggesting a U-shaped pattern for sales growth. However, employment growth does not exhibit a discernible U-shaped relationship with managerial problems. Models 3a and 6a explore the exponential growth relationships, employing logarithmic transformations of the dependent variable. The evidence for an exponential trend is limited for both sales growth (0.003; $p = .105$) and employment growth (−0.002; $p = .415$). Across all functional forms tested, managerial problems consistently and negatively impact employee job satisfaction. Figure 2a plots the U-shaped relationship between sales growth and managerial performance problems, while Figure 2b compares employment growth. Taken together, these findings suggest that sales growth has a pronounced U-shaped relationship with managerial performance problems, which subsequently reduce employee job satisfaction. Employment growth, however, shows limited associations with managerial problems.

We further formally test the mediation effect using SEM. Although the individual path coefficients obtained from SEM are equivalent to those from OLS, SEM enables the simultaneous testing of the entire model, including mediators, in a single analytical step. Employing bootstrapping with 1000 iterations for our mediation test (Appendix S.5, Table S.5.1), we find that *managerial performance problems* mediate the relationship between sales growth and job satisfaction, demonstrating a U-shaped pattern. Specifically, at lower levels of sales growth, the mediating effect stands at 0.128, with a bias-corrected confidence interval ranging from 0.0512 to 0.207. This indicates that a rise in sales growth enhances employee job satisfaction by

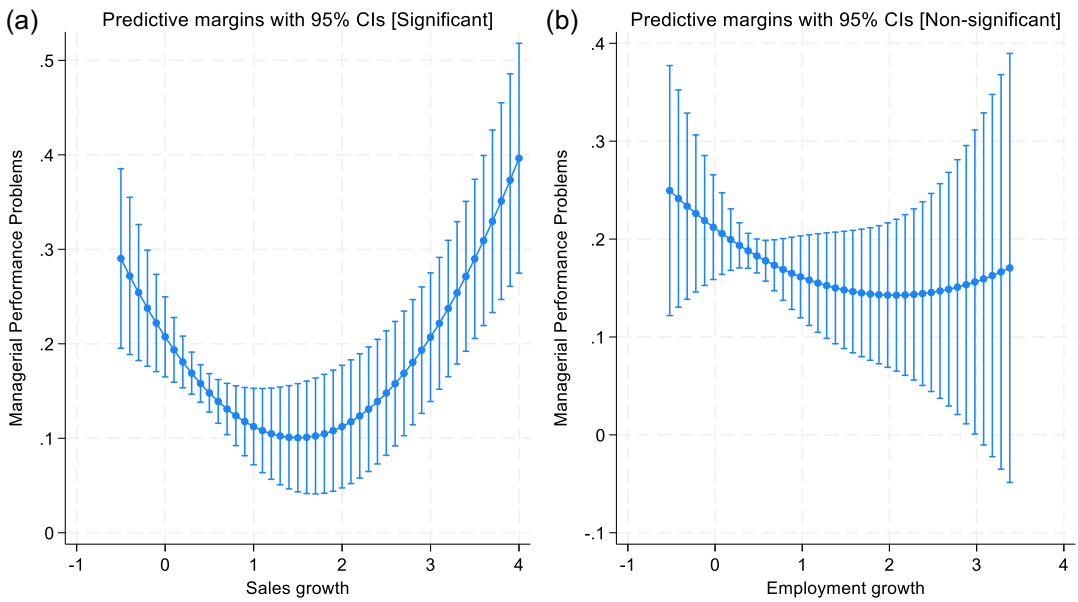

FIGURE 2 The effect of sales and employment growth on managerial performance problems.

diminishing managerial problems. Conversely, at higher sales growth levels, the mediation effect shifts to −0.260, with a confidence interval extending from −0.396 to −0.133. This suggests that elevated sales growth levels lead to a reduction in employee job satisfaction, attributed to an increase in managerial problems. However, it is crucial to note that *managerial performance problems* do not play a mediating role in the relationship between employment growth and job satisfaction.

Table 8 displays the results of our regression results of *socio-structural problems*, again based on specifying different functional forms. In Models 1a and 4a, we examine the linear relationships; sales growth appears to have limited influence on socio-structural problems (0.001; $p = .906$), whereas employment growth exhibits a linear increase (0.026; $p = .054$). In Models 2a and 5a, where U-shaped relationships are tested, neither sales nor employment growth shows a noticeable U-shaped association with socio-structural problems. Models 3a and 6a investigate the potential exponential growth relationships, revealing no noticeable trend for sales growth (0.002; $p = .746$), while a trend is evident for employment growth (0.018; $p = .056$). Across all models, socio-structural problems are consistently found to adversely affect employee job satisfaction. Figure 3 visually depicts these relationships, illustrating varying slopes across different intervals of sales and employment growth. Taken together, our regression results indicate that employment growth shows an exponential increase pattern in its relationship with socio-structural problems, subsequently reducing employee job satisfaction. By comparison, sales growth has a minimal association with socio-structural problems. Indeed, in our mediation test based on SEM (Appendix S.5, Table S.5.2), socio-structural problems do not mediate the relationship between sales growth and job satisfaction. However, they play an important mediating role in the relationship between employment growth and job satisfaction, exhibiting an exponential growth pattern (mediation effect: −0.018; 95% bias-corrected confidence interval: −0.037 to −0.0003).

In conclusion, our analysis supports our theoretical predictions, revealing that sales growth is more strongly associated with managerial performance problems than employment growth. Specifically, we identify a U-shaped relationship between sales growth and managerial performance problems, suggesting that these challenges escalate sharply at higher levels of sales growth. Conversely, employment growth is more closely linked to socio-structural problems than sales growth, exhibiting an exponential growth pattern. This indicates that socio-structural challenges intensify disproportionately as employment growth accelerates, highlighting the distinct ways in which these two dimensions of growth strain organizational systems.

8 | DISCUSSION

Inspired by questions about how growth impacts the internal workings of entrepreneurial firms (DeSantola & Gulati, 2017) and classical Penrosean theory (1959), we hypothesized that the relationship between firm growth and employee job satisfaction is nonlinear. While growth is an important part of the legitimization and survival process (Zimmerman & Zeitz, 2002), rapid growth can cause internal havoc (Kuratko et al., 2020). Further, by leveraging text analysis, we point to potential mechanisms linked to these observations. Our analysis reveals nuanced relationships between firm growth and employee job satisfaction. While we find modest direct effects—employment growth exhibits an inverted U-shaped relationship with job satisfaction and sales growth shows no discernible direct effect—we uncover distinct challenges for each that provide important theoretical insights as we explicate below.

TABLE 8 OLS regression results for socio-structural problems.

	Sales growth models						Employment growth models					
	Linear		U shape		Exponential growth		Linear		U shape		Exponential growth	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
Dependent variables	**SSP**	**JS**	**SSP**	**JS**	**Log(SSP)**	**JS**	**SSP**	**JS**	**SSP**	**JS**	**Log(SSP)**	**JS**
Firm effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Controls												
Intercept	−0.507	5.609	−0.509	5.602	−0.268	5.672	−0.524	6.650	−0.549	6.158	−0.320	6.672
	(0.514)	(1.792)	(0.515)	(1.794)	(0.331)	(1.792)	(0.375)	(1.234)	(0.384)	(1.254)	(0.238)	(1.234)
	[0.325]	[0.002]	[0.323]	[0.002]	[0.418]	[0.002]	[0.162]	[0.000]	[0.153]	[0.000]	[0.179]	[0.000]
Anonymous$_t$	0.019	−0.097	0.019	−0.097	0.012	−0.097	0.019	−0.098	0.019	−0.097	0.012	−0.098
	(0.006)	(0.024)	(0.006)	(0.024)	(0.004)	(0.024)	(0.006)	(0.024)	(0.006)	(0.024)	(0.004)	(0.024)
	[0.003]	[0.000]	[0.003]	[0.000]	[0.002]	[0.000]	[0.003]	[0.000]	[0.003]	[0.000]	[0.003]	[0.000]
Employed$_t$	−0.067	1.047	−0.067	1.046	−0.044	1.046	−0.067	1.048	−0.067	1.047	−0.044	1.048
	(0.008)	(0.030)	(0.008)	(0.030)	(0.005)	(0.030)	(0.008)	(0.030)	(0.008)	(0.030)	(0.005)	(0.030)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Word count$_t$	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	[0.000]	[0.011]	[0.000]	[0.012]	[0.000]	[0.010]	[0.000]	[0.010]	[0.000]	[0.011]	[0.000]	[0.009]
Employees (log)$_{t-1}$	0.044	−0.127	0.058	−0.080	0.029	−0.127	0.021	−0.140	0.014	−0.294	0.013	−0.141
	(0.034)	(0.106)	(0.033)	(0.110)	(0.021)	(0.106)	(0.035)	(0.116)	(0.038)	(0.125)	(0.022)	(0.116)
	[0.193]	[0.230]	[0.082]	[0.466]	[0.179]	[0.230]	[0.538]	[0.225]	[0.715]	[0.019]	[0.547]	[0.223]
Sales (log)$_{t-1}$	0.016	−0.065	0.011	−0.080	0.007	−0.069	0.022	−0.125	0.025	−0.056	0.013	−0.126
	(0.036)	(0.117)	(0.035)	(0.117)	(0.023)	(0.117)	(0.028)	(0.085)	(0.029)	(0.089)	(0.018)	(0.085)
	[0.662]	[0.576]	[0.748]	[0.497]	[0.773]	[0.555]	[0.431]	[0.140]	[0.386]	[0.529]	[0.448]	[0.136]

TABLE 8 (Continued)

	Sales growth models						Employment growth models					
	Linear		U shape		Exponential growth		Linear		U shape		Exponential growth	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
Dependent variables	**SSP**	**JS**	**SSP**	**JS**	**Log(SSP)**	**JS**	**SSP**	**JS**	**SSP**	**JS**	**Log(SSP)**	**JS**
Participation rate$_t$	0.115	0.403	0.127	0.442	0.074	0.402	0.089	0.328	0.074	0.020	0.059	0.330
	(0.094)	(0.381)	(0.096)	(0.382)	(0.059)	(0.381)	(0.093)	(0.383)	(0.094)	(0.386)	(0.059)	(0.383)
	[0.223]	[0.290]	[0.186]	[0.248]	[0.210]	[0.290]	[0.340]	[0.392]	[0.433]	[0.958]	[0.314]	[0.390]
Firm-level job satisfaction$_{t-1}$	0.009	−0.144	0.008	−0.147	0.005	−0.144	0.010	−0.137	0.009	−0.161	0.006	−0.138
	(0.011)	(0.043)	(0.011)	(0.043)	(0.007)	(0.043)	(0.010)	(0.042)	(0.010)	(0.042)	(0.007)	(0.042)
	[0.400]	[0.001]	[0.446]	[0.001]	[0.440]	[0.001]	[0.320]	[0.001]	[0.384]	[0.000]	[0.371]	[0.001]
Explanatory												
Sales growth$_{t-1}$	0.001	−0.030	0.038	0.090	0.002	−0.029						
	(0.008)	(0.034)	(0.031)	(0.101)	(0.006)	(0.034)						
	[0.906]	[0.377]	[0.216]	[0.373]	[0.746]	[0.397]						
Sales growth$^2_{t-1}$			−0.010	−0.033								
			(0.008)	(0.027)								
			[0.223]	[0.210]								
Employment growth$_{t-1}$							0.026	0.027	0.047	0.432	0.018	0.027
							(0.014)	(0.055)	(0.036)	(0.136)	(0.009)	(0.055)
							[0.054]	[0.623]	[0.197]	[0.001]	[0.056]	[0.618]
Employment growth$^2_{t-1}$									−0.007	−0.151		
									(0.012)	(0.045)		
									[0.534]	[0.001]		

TABLE 8 (Continued)

	Sales growth models						Employment growth models					
	Linear		U shape		Exponential growth		Linear		U shape		Exponential growth	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
Dependent variables	**SSP**	**JS**	**SSP**	**JS**	**Log(SSP)**	**JS**	**SSP**	**JS**	**SSP**	**JS**	**Log(SSP)**	**JS**
SSP		−0.671		−0.672		−1.031		−0.671		−0.672		−1.032
		(0.046)		(0.046)		(0.072)		(0.046)		(0.046)		(0.072)
		[0.000]		[0.000]		[0.000]		[0.000]		[0.000]		[0.000]
Model												
N	7962	7962	7962	7962	7962	7962	7962	7962	7962	7962	7962	7962
R^2	0.079	0.430	0.080	0.430	0.080	0.430	0.080	0.430	0.080	0.431	0.080	0.430
F-statistic	2.43	21.14	2.43	21.07	2.44	21.14	2.44	21.13	2.43	21.13	2.45	21.13

Note: Results are based on OLS regressions testing each path individually (first, growth → SSP; then, SSP → job satisfaction), using three alternative functional forms: linear, U-shaped (quadratic), and exponential. Robust standard errors clustered at the firm level are reported in parentheses, with *p*-values presented in square brackets. Y indicates that fixed effects are included. SSP refers to socio-structural problems. JS refers to employee job satisfaction. Formal tests of mediation effects conducted using SEM are presented in Appendix S.5.

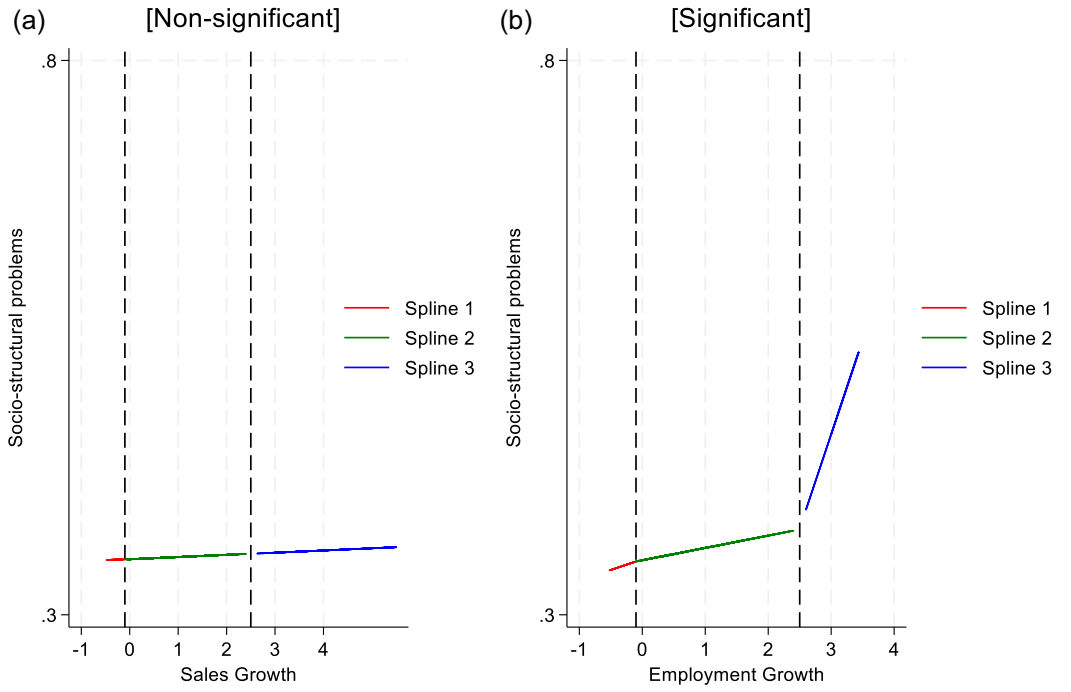

FIGURE 3 The effect of sales and employment growth on socio-structural problems.

8.1 | Startup employees

There is a rising interest in the internal dynamics of growing entrepreneurial firms (DeSantola & Gulati, 2017). Despite this interest, startup employees remain an undertheorized internal stakeholder (Bort, 2025; Manchester et al., 2023), and one whom these dynamics are likely to be most acutely felt. Following other recent studies on startup employees (Honoré & Ganco, 2023; Manchester et al., 2023), our study delves into the intricate nature of employee experiences within expanding startups.

First, it is argued that the value created within firms is not always equitably distributed, often reflecting a strategic decision driven by the firm's immediate challenges (Lieberman et al., 2017). Our empirical analysis of a substantial dataset of startups and their workforce elucidates the nuanced challenge of value distribution amidst rapid growth. We observe that employee satisfaction tends to rise when growth is at a sustainable pace, likely due to the plentiful rewards and opportunities that allow for more straightforward value capture (Bennett & Levinthal, 2017). However, this satisfaction wanes when growth reaches its higher thresholds, indicating that the benefits accruing to employees are insufficient and detract from their experience.

Second, we explore two conceptual mediators—managerial performance and socio-structural issues—that are intricately linked to job satisfaction within startups. This investigation is among the pioneering efforts to systematically dissect and categorize the nuances of startup employee experiences in the context of organizational growth. The discovery that these internal issues are differentially related to sales and employment growth underscores a critical insight: the drivers of employee satisfaction in startups are multifaceted and dependent on the

nature of growth. Specifically, while managerial performance issues are more closely tied to the fluctuations in sales growth, socio-structural problems have a more pronounced linkage with the scale of employment growth. This divergence indicates that the factors contributing to job satisfaction in startups are not uniform but rather are influenced by distinct growth trajectories, with each presenting its own set of challenges and opportunities for employees, which we discuss further below.

8.2 | Advancing the growth literature

Our research offers important advances to growth theory, which many scholars note has lagged behind other focal points of organizational research (cf. DeSantola & Gulati, 2017; Tidhar et al., 2025). Research concerning firm size notes that correlations between measures are consistently dropping and are likely to continue due to technological shifts (Josefy et al., 2015). We found that sales and employment growth effects were distinct, reinforcing that metrics associated with firm size are distinct and that findings along one measure of size might not carry over to others. This decoupling of growth dimensions is, in part, driven by advances in technology. For example, software firms such as OpenAI can expand sales at almost unlimited rates while making very limited new hires. Penrose's growth theory, which remains prominent within the field, was developed with traditional industrial firms in mind and did not consider such decoupling. Our research provides important insights into how and why this decoupling may occur and its implications. We identified that sales growth was associated with managerial performance problems and employment growth with socio-structural problems. Thus, rather than providing an exhaustive list of potential consequences of rapid growth, we provide two overarching conceptual categories that capture a wide range of empirical manifestations.

Our findings yielded an unexpected insight: while employment growth appears to have a moderate, nonlinear effect on employee job satisfaction, the direct impact of sales growth on satisfaction was limited. Instead, its influence seems to be mediated by managerial performance issues during periods of rapid sales expansion. This suggests that sales growth may trigger a complex interplay of processes with both positive and negative implications, potentially masking its direct effect on job satisfaction. For instance, sales-driven role shifts could be an interesting mechanism. During moderate sales growth, employees may face frustrations as their roles expand to include new, unfamiliar tasks to meet growing sales demands, leading to dissatisfaction if proper training or support is lacking. However, as sales growth accelerates and roles become more specialized, employees may feel more competent and engaged in their work, enhancing satisfaction. Another plausible explanation for this phenomenon is the role of management in moderating the effects of sales growth on employees. Management often acts as a buffer, absorbing the operational and emotional pressures associated with growth. For example, during moderate and manageable sales growth, employees may perceive the heightened pace of work as invigorating, especially when they see management effectively navigating the growth phase and ensuring adequate support. Conversely, when sales growth becomes rapid and overwhelming, deficiencies in managerial performance—such as inadequate leadership or inexperience in firm and industry—become more apparent. In such cases, employees are likely to attribute their dissatisfaction to management's inability to handle the escalating demands, rather than to the increased workload itself.

Employment growth, however, operates differently from sales growth. While new hires are often brought on to better distribute workloads, providing clear advantages at lower levels of

growth, managing an expanding workforce introduces unique challenges distinct from those associated with scaling products or services. Specifically, managing employment growth involves addressing how the team evolves as a social unit. Our findings indicate that employment growth not only directly affects job satisfaction but is also mediated by socio-structural problems that intensify as the team grows. For instance, the issue of insufficient diversity can become increasingly pronounced for minority team members, who may feel more isolated as the team expands—for example, transitioning from being "one of ten" to "one of one hundred" without proportional representation. These socio-structural challenges underscore the complexities of managing workforce expansion, where fostering cohesion, trust, and inclusivity becomes critical to maintaining employee satisfaction.

Our results suggest that the managerial problems associated with expansion only affect the firms that exhibit the most extreme levels of growth. This suggests that the so-called "Penrose effect" (Marris, 1964) may be less binding than originally theorized by Penrose. We believe this may be driven largely by technology in ways that were impossible to foresee in the 1950s. Regardless, it opens interesting opportunities to theorize the limits to sustainable firm growth further. Many startups do not grow at all, and many more exit before gaining serious traction. Despite this, the firms we have analyzed are crucial not only for epitomizing the concept of the entrepreneurial firm (DeSantola & Gulati, 2017) but also because contrasting moderately growing firms with those experiencing rapid expansion provides a nuanced understanding of the nonlinear effects (Haans et al., 2016) that are pervasive in entrepreneurship (Pierce & Aguinis, 2013).

Finally, the growing startups in our study are not merely new market entrants; they are major disruptors that catalyze the process of creative destruction within industries. Scholars have increasingly turned their attention to alternative models of innovation and growth (Kim & Mauborgne, 2019), proposing that firms may evolve toward less disruptive strategies due to the myriad of challenges inherent in high-velocity growth (Kuratko et al., 2020). Our research contributes to this emerging dialogue by shedding light on the potential impact of rapid expansion on employees during the scaling process.

8.3 | Job satisfaction

While job satisfaction is less commonly studied in the strategic management literature, distal variables commonly assessed by this line of research, such as growth, are highly relevant. While proximal job characteristics are appropriate for relatively static organizations, they are likely less relevant to modern, dynamic firms like growing startups. Firm growth is a dynamic process that fundamentally changes an organization (Flamholtz & Randle, 2012; Picken, 2017). This includes the structure of the organization, relationships between managers and workers, as well as the nature of work itself. Therefore, if we are to understand job satisfaction in rapidly growing new ventures, we believe that relatively distal and overarching processes such as growth rate are of greater value.

Further, Judge et al. (2017) note that some sources of job dissatisfaction have an antipode and suggest that grounded approaches might be a way to advance the literature. This study finds that rapid growth creates a unique set of problems for firms and offers a unique context to uncover previously untested sources of job (dis)satisfaction. Thus, our study takes another small step forward in demonstrating the value of explicitly bridging macrodynamics and

microdynamics to uncover new insights concerning job satisfaction (Harter et al., 2010; Schneider et al., 2003).

8.4 | Contributions to practice

Growing firms face numerous challenges. Two of the most critical include retaining existing employees and the ability to recruit future employees. Employees considering a career at a growing startup face several distinct challenges from roles typically found in established firms. The success of the firm is inherently uncertain (McMullen & Shepherd, 2006). The job that the employee is hired for today will change considerably as the organization matures (Aldrich & Ruef, 2006), and these changes often lack the support of highly sophisticated human resource functions (Rauch & Hatak, 2016).

Our research highlights that working for successful startups can be rewarding, albeit under the right conditions. On the one hand, startups provide an environment where employees have opportunities to push themselves to their limits (Bussang, 2017), especially for early-stage employees who play a critical role in the organization's success (Chopra-McGowan, 2019). Jobs that are challenging (Gagné & Deci, 2005) and meaningful (Allan et al., 2019) are generally highly satisfying. However, we show that managerial problems and particularly socio-structural problems negate the positive influence of working for a startup. Specifically, on the heels of rapid growth is internal turmoil. Organizations that acknowledge these problems can compensate for them in other ways, for example, by providing additional support services for incumbent employees or emphasizing social events to mitigate unfamiliarity between new and incumbent organizational members.

8.5 | Limitations and future research

The objective of this study is to shed light on an interesting conundrum concerning firm growth and job satisfaction. However, this study should be interpreted with the acknowledgment of its limitations, and as such, the results from the inferences made herein warrant caution. First, despite our attempts to create a representative sample of startups, our sample skews toward high-growth firms and our results are strongest for those toward the highest end of the growth spectrum. While these outlier firms are important for extending theory about startups (Ruef & Birkhead, 2024), it is important to acknowledge that these findings carry limits in their theoretical and practical scope. Further, this study focuses on the perspective of the employees. Future research could expand these insights to directly gauge how much emphasis various stakeholders place on employee job satisfaction. Another notable limitation is that we do not assess turnover. While employment growth is an indicator of newly created jobs, it is also possible that units within startups experience variance in turnover. This could have an interaction effect with our proposed mediators, for example, further impairing a startup's social cohesion, offering an enticing direction for future research.

Next, while the dataset offers a large and diverse pool of new ventures and employees to draw firm, Glassdoor omits certain variables from their data collection efforts. Maintaining anonymity in smaller new companies can be challenging, as data points like age, gender, and education might flag the employee to firm leaders and potentially cause harm or biased feedback. Thus, there is a clear tradeoff—we examined a broader but less detailed sample than what is

common in the organizational behavior literature. These two shortcomings could be addressed in future research by building smaller but more detailed firm–employee samples, perhaps by working directly with human resources departments as we did to validate Glassdoor's job satisfaction measure. Relatedly, while we made extensive efforts to validate Glassdoor's job satisfaction measure, the dataset continues to grow at a rapid rate. Thus, future research should attempt to replicate the findings specific to the context, and also consider multi-methodological approaches blending archival data with field experiments.

Another notable limitation that could be further refined in future studies is our reliance on text-based measurements for our exploratory mediators. We believe text mining is an important approach to discovering new insights, but we also note the need to continue to refine these insights. Our measures are rooted in previous literature, but qualitative input inevitably captures dimensions of the employee experience that have not undergone the rigor of other measures, such as job satisfaction. Thus, our text measures would benefit from further validation, perhaps scale development or replication using different samples. Future studies could also further unpack functional issues that plague job satisfaction, focusing on the difference between customer or compliance roles and how they can conflict with product development roles.

Finally, and most relevant to the strategic management literature, we lack firm-level information regarding profits, M&A activity, and stock options, which could also influence our dependent variable (Amiot et al., 2006; Schneider et al., 2003). Thus, important questions remain unanswered, such as how do the mounting financial losses that some startups accumulate despite rapid growth impact employees? Future studies could expand on our broader findings concerning growth by incorporating these metrics as well as they become available, for example, after the startup goes public.

9 | CONCLUSION

We began this paper by noticing the importance of rapidly growing new ventures as they create the workplaces of tomorrow. Yet, they have received close to no attention in the job satisfaction literature. Growth is the most important aspect of performance in new ventures, and rapid growth is what makes these firms unique. As such, we examined how growth influences job satisfaction. To test our hypotheses, we created custom software to harvest data from the millions of employee testimonies posted on the website Glassdoor.com, constructing a sample of 7962 employees. Our findings reinforce the notion that sales and employment growth are distinct performance measures and offer new insights into the startup workforce, firm growth, and the job satisfaction literatures.

DATA AVAILABILITY STATEMENT

Firm level data in this study are available from PrivCo. Restrictions apply to the availability of these data, which were used under license for this study. We provide reference source code which was used to collect employee level data.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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