



RIETI Discussion Paper Series 26-E-056

Founder-CEO Presence and Post-IPO Outcomes: Evidence from junior stock markets in Japan

HONJO, Yuji

RIETI

IKEDA, Yuya

National Institute of Science and Technology Policy



Research Institute of Economy, Trade & Industry, IAA

The Research Institute of Economy, Trade and Industry

<https://www.rieti.go.jp/en/>

Founder-CEO Presence and Post-IPO Outcomes: Evidence from junior stock markets in Japan*

Yuji HONJO

Research Institute of Economy, Trade and Industry, Chuo University

Yuya IKEDA

National Institute of Science and Technology Policy

Abstract

This study examines the impact of founder-chief executive officer (CEO) presence on post-initial public offering (IPO) outcomes using a sample of IPOs listed on junior stock markets in Japan. We decompose this relationship into two effects: the founder-CEO tenure effect, capturing leadership continuity after an IPO, and the founder-CEO imprinting effect, reflecting founder-CEO contributions prior to an IPO. Our results reveal that founder-CEO-led firms do not exhibit statistically significant improvements in post-IPO financial performance, measured by Tobin's q and return on assets (ROA), but the founder-CEO tenure effect is positive and statistically significant for employment and sales growth. These findings suggest that founder-CEOs tend to pursue growth-oriented strategies after an IPO. In contrast, the founder-CEO imprinting effect has no statistically significant impact on either financial performance or firm growth. Distinguishing between tenure and imprinting effects provides a better understanding of how founder-CEO presence shapes post-IPO outcomes.

Keywords: CEO turnover; firm growth; founder-CEO; imprinting effect; IPO; tenure effect

JEL classification: G32; L25; L26

The RIETI Discussion Paper Series aims at widely disseminating research results in the form of professional papers, with the goal of stimulating lively discussion. The views expressed in the papers are solely those of the author(s), and neither represent those of the organization(s) to which the author(s) belong(s) nor the Research Institute of Economy, Trade and Industry.

* This study is conducted as a part of the Project “Diversity of Human and Financial Capital and Policy Challenges in Start-up Promotion” undertaken at the Research Institute of Economy, Trade and Industry (RIETI). The draft of this paper was presented at the RIETI DP seminar for the paper. I would like to thank the participants of the RIETI DP seminar and the project members for their helpful comments. A preliminary draft was presented at the Japanese Economic Association Autumn Meeting held at Hirosaki University, as well as at informal workshops. We are grateful to the participants for their insightful comments and suggestions. We thank Takuya Iwasaki and Yoshiaki Ogura for their useful advice and helpful comments.

1. Introduction

Understanding how founder-chief executive officers (founder-CEOs) influence firm performance remains a central question in the strategic entrepreneurship literature (Chen and Thompson, 2015; Fattoum-Guedri et al., 2018). As the initial architects of their firms' structures and strategies, founder-CEOs often embody an entrepreneurial orientation and strategic vision, enabling them to identify market opportunities and commercialize innovative products and services (Abebe et al., 2020; Nelson, 2003). Compared to non-founder-CEOs, founder-CEOs typically possess a unique combination of strong psychological attachment, deep commitment, and firm-specific knowledge (Abebe and Tangpong, 2018; He, 2008; Hendricks et al., 2019; Lee et al., 2020; Nelson, 2003). Founder-CEOs are also known for their determination to improve firm performance in the face of critical events and adversity—a trait commonly described as entrepreneurial resilience (Honjo and Kato, 2022; Renko et al., 2021). Taken together, these arguments suggest that founder-CEOs' attributes can enhance strategic agility and resilience, enabling them to pursue initiatives that drive sustained firm growth.¹

However, the saying that “power corrupts, and absolute power corrupts absolutely” suggests a potential downside to founder-CEO-led firms. The continued presence of founder-CEOs does not necessarily guarantee improved firm performance. In fact, prior studies have pointed to the risk of founder-CEO entrenchment (Leone and Liu, 2010; Lim and Jeong, 2025). Given their unique status within firms, founder-CEOs can become entrenched even with relatively small equity shares (Morck et al., 1988). This so-called entrenchment effect implies that an extended founder-CEO tenure may deteriorate financial performance, even if it creates strong incentives for rapid growth. Moreover, organizational life cycle theory posits that the attributes essential for effectively leveraging a founding team's human capital in the early stages are not necessarily the same as those required in later growth stages. This is due to the distinct pressures, threats, and opportunities that emerge at different stages of a firm's life (Boeker and Karichalil, 2002; Tzabbar and Margolis, 2017). Accordingly, understanding

¹ Prior studies have often referred to the influence of founder-CEOs on firm performance as the “founder-CEO effect” (Abebe et al., 2020; Fahlenbrach, 2009; Kumar et al., 2021).

founder-CEO influence requires distinguishing between the effects of their continued leadership and the enduring influence of their earlier contributions.

A key methodological challenge arises in identifying an appropriate point in time for examining the impact of founder-CEO presence. In the early stages of a firm's life, it is inevitable that firms are led by founder-CEOs, making it difficult to observe non-founder-CEO-led firms. An initial public offering (IPO) represents a critical event for this examination, as highlighted in many prior studies (Adams et al., 2009; Fahlenbrach, 2009; Kumar et al., 2021). This is because an IPO provides a standardized point in a firm's growth trajectory and makes its financial statements publicly accessible. However, a new challenge arises when assessing the impact of founder-CEO presence on post-IPO outcomes, captured by financial performance and firm size. Founder-CEO contributions leading up to the IPO, referred to as the "founder-CEO imprinting effect," may confound the evaluation of their subsequent post-IPO outcomes.² To further disentangle founder-CEO contributions arising from their continued leadership after an IPO, referred to as the "founder-CEO tenure effect," we distinguish this effect from the founder-CEO imprinting effect. To the best of our knowledge, no existing study has explicitly distinguished between tenure and imprinting effects when examining how founder-CEO presence influences post-IPO outcomes. Further research is therefore warranted to clarify how these two effects shape post-IPO outcomes.

This study examines the impact of founder-CEO presence on post-IPO outcomes using a sample of IPOs listed on junior stock markets (i.e., second-tier stock exchanges) in Japan. We decompose this relationship into two effects: the founder-CEO tenure effect and the founder-CEO imprinting effect. First, focusing on firms where CEOs remain in place after an IPO, we estimate the founder-CEO tenure effect on post-IPO outcomes. Our results reveal that founder-CEO-led firms do not exhibit significant improvements in post-IPO financial performance, as measured by Tobin's *q* and return on assets (ROA), providing little evidence of a positive relationship between founder-CEO presence and financial performance. However, the founder-CEO tenure effect is positive and statistically significant for

² We use the term "founder-CEO imprinting effect" to refer to the enduring influence of founder-CEO contributions prior to an IPO on post-IPO outcomes. This terminology is inspired by Hsu and Lim's (2014) concept of founder imprinting effects.

employment and sales growth, suggesting that the founder-CEO tenure effect is more pronounced in promoting firm size than in improving financial performance. These findings suggest that founder-CEOs who continue to lead their firms after an IPO tend to pursue growth-oriented strategies. Second, focusing on firms where CEOs are replaced after an IPO, we estimate the founder-CEO imprinting effect. Our results reveal that the founder-CEO imprinting effect is not statistically significant for Tobin's q , ROA, employment growth, and sales growth, providing no evidence that founder-CEO imprinting affects post-IPO outcomes.

This study contributes to the literature in the following ways. First, it addresses a key research gap by explicitly distinguishing between the founder-CEO tenure effect and the founder-CEO imprinting effect in examining the impact of founder-CEO presence on post-IPO outcomes. Prior studies have found that founder-CEO-led firms outperform others in terms of financial performance after an IPO—as measured by market valuation and profitability, and long-term returns—providing evidence of a founder-CEO effect (Adams et al., 2009; Fahlenbrach, 2009; Gao and Jain, 2011, 2012; Kumar et al., 2021). However, prior studies have generally treated the founder-CEO effect as a single phenomenon, without distinguishing the enduring influence of founder-CEOs' pre-IPO contributions from the effects of their continued leadership after an IPO. This limitation largely reflects the nature of post-IPO data sets, which are necessarily restricted to firms that successfully completed an IPO and therefore cannot directly account for founder-CEOs' accumulated pre-IPO contributions. Nevertheless, if founder-CEOs' pre-IPO contributions continue to shape post-IPO outcomes, estimates of the founder-CEO effect may conflate the founder-CEO imprinting effect with the founder-CEO tenure effect. By disentangling these two effects, this study provides a more accurate assessment of how founder-CEO presence influences post-IPO outcomes.

Second, this study contributes methodologically by proposing a novel empirical identification strategy that disentangles the founder-CEO tenure effect from the founder-CEO imprinting effect by dividing our sample into two subsamples based on the occurrence of CEO turnover after an IPO. Our empirical strategy exploits CEO turnover as an irreversible trigger event, allowing us to separate effects stemming from founder-CEOs' continued leadership after the start of the observation period (i.e., IPO) from those that have persisted since before the observation began. This approach focuses on examining

changes in post-IPO outcomes, such as financial performance and firm size, by comparing firms that experience CEO turnover with those that do not. By doing so, we can clearly identify the founder-CEO tenure and imprinting effects, and determine whether post-IPO outcomes are driven by founder-CEOs' continued leadership after an IPO or by the enduring influence of their pre-IPO contributions.

Third, our results offer new insights into the post-IPO strategic orientation of founder-CEOs. Our results show that while founder-CEO-led firms do not exhibit significant improvements in post-IPO financial performance, they are more likely to expand their scale. This suggests that founder-CEO-led firms are more likely to pursue post-IPO growth, which implies that founder-CEOs who continue to lead their firms after an IPO tend to prioritize growth-oriented rather than financial-performance-oriented strategies. This pattern provides new insights into the strategic orientation of founder-CEO-led firms in public markets. By distinguishing the founder-CEO tenure and imprinting effects, our findings clarify how founder-CEO presence shapes post-IPO outcomes.

The remainder of this paper is organized as follows. In the next section, we explain the research background, including a review of the relevant literature. Section 3 presents the data used in the study. Section 4 presents the estimation results. The final section concludes the study.

2. Research background

2.1. Role of IPOs in firm development

Financing from external suppliers of capital is essential for improving financial performance and supporting business expansion after a firm's founding. While many founders initially rely on debt financing, such as bank loans, others seek to raise equity financing. In particular, firms engaged in research and development (R&D) tend to prefer equity financing to debt financing because it is better suited for R&D investment (Carpenter and Petersen, 2002; Colombo and Grilli, 2007; Hall, 2002). These firms often secure equity financing from venture capitalists and angel investors. Unsurprisingly, policymakers have increasingly focused on facilitating external financing for young and innovative firms because they are expected to spur future economic growth through innovation, especially in economies facing prolonged stagnation and demographic aging, such as Japan.

An IPO constitutes a critical stage in a firm's growth cycle (Honjo, 2021; Honjo et al., 2026; Kriaa and Hamza, 2019). By going public, firms gain access to a broader pool of outside investors, enabling them to raise equity financing. They may seek to expand their business and improve firm performance through an IPO. In some economies, such as Japan and the UK, junior stock markets play a crucial role in providing young and innovative firms with opportunities to raise equity financing through public offerings.³ While several junior stock markets have been restructured globally, IPOs on these markets continue to serve as an active and vital source of capital in some economies (Vismara et al., 2012). In Japan, where mergers and acquisitions (M&A) are less prevalent, early-stage shareholders are more likely to pursue an IPO as their primary exit strategy.

Beyond its financing role, an IPO creates a situation in which founder-CEOs face the “rich versus king dilemma” (i.e., the wealth-versus-control dilemma) (Fattoum-Guedri et al., 2018; Wasserman, 2012). An IPO is a critical event for early-stage shareholders, including founder-CEOs, not only because it provides access to public equity markets, but also because it allows them to sell their shares and accumulate wealth (Honjo et al., 2026). Unsurprisingly, some founder-CEOs—especially habitual entrepreneurs, such as serial and portfolio founders—choose to prioritize wealth by selling their shares and leaving their firms. Conversely, those who remain with their firms may seek to retain managerial control after an IPO. Consequently, an IPO constitutes a critical juncture for founder-CEOs, compelling them to choose between wealth and control (Wasserman, 2012).

2.2. Impact of founder-CEO presence

Founder-CEOs play a central role in shaping their organizations from the firms' inception (Ampenberger et al., 2013). According to upper echelons theory, founder-CEOs' roles may account for a substantial share of strategic decisions and organizational outcomes (Hambrick and Mason, 1984). Founder-CEOs possess firm-specific knowledge and skills not only about current operations, but also about the firms'

³ Abbate and Sapio (2019) found that the operating revenues and total assets of listed firms grow faster than those of their counterparts, using firms listed on Alternative Investment Market, which is the junior segment of the London Stock Exchange in the UK.

inception and developmental trajectory. Founder-CEOs' tenure tends to be associated with task knowledge, motivation, and power that are directly connected to business (market) expansion (Souder et al., 2012).

Beyond this informational advantage, founder-CEOs may also benefit from a distinctive decision-making process. Compared with non-founder-CEOs, that is, successor CEOs—who typically navigate more democratic and consensus-oriented governance structures—founder-CEOs are more likely to make decisions autonomously and swiftly. Moreover, founder-CEOs may have greater ability to reduce internal conflicts (Fischer and Pollick, 2004; Williams, 2013). Founder-CEOs' agile decisions are helpful in responding rapidly to emerging opportunities and threats, which can be particularly advantageous in the early stages when timely strategic actions are critical.

Furthermore, from the perspectives of stewardship and agency theories, founder-CEOs are considered to be more advantageous than non-founder-CEOs in terms of firm performance (Gao and Jain, 2012; Schuster et al., 2020; Wasserman, 2006). It is plausible that founder-CEOs who successfully navigate the challenging IPO process while retaining managerial control are more deeply committed to ensuring favorable post-IPO outcomes. This enhanced commitment can be attributed to the substantial personal investments in time, energy, and money that they made to bring their firms to the IPO stage (Certo et al., 2009). Founder-CEOs may also possess greater resilience to adversity (Honjo and Kato, 2022; Renko et al., 2021). Consequently, founder-CEO presence can serve as an important source of competitive advantage due to founder-CEOs' firm-specific knowledge and expedited decision-making capability, in addition to their strong psychological attachment and deep commitment to their firms.⁴

Despite their advantages in firm-specific knowledge and expedited decision-making capability, some, but not all, founder-CEOs heavily involved in an IPO may exert their power by reigning as kings. This

⁴ Founder-CEO presence may help reduce information asymmetry between firms and outside investors. Even though firms are publicly traded in junior stock markets, outside investors often struggle to accurately assess the firms' potential value. Investors' perceived risks and opportunities influence their evaluations and investment decisions. According to signaling theory, CEOs' backgrounds serve as a signal of their credibility and certification (Zhang and Wiersema, 2009). The prestige of board members, as well as founder-CEO presence, may also signal the existence of group consensus (Certo et al., 2009; Wang and Song, 2013).

style of leadership and authority may be detrimental to strategic decisions and organizational outcomes. This aligns with the notion of founder-CEO entrenchment, where their continued presence can lead to a decline in financial performance.⁵ Moreover, according to organizational life cycle theory, as firms grow, they reach a stage in their evolution where managerial styles and capabilities must evolve over time to meet fundamentally different challenges associated with managing complex organizational forms (Chahine and Zhang, 2020; Gao and Jain, 2012). In many cases, it may be effective for successors—especially those with rich management experience, that is, professional CEOs—to lead firms after an IPO, rather than for founder-CEOs who successfully navigated the challenging IPO process. In conclusion, whether the continued presence of founder-CEOs is ultimately beneficial remains an open question.

2.3. Founder-CEO presence and financial performance

Existing literature has shed light on the impact of founder-CEOs' managerial control on post-IPO outcomes. A prominent topic within this literature is IPO survival—that is, how IPO firms remain listed on stock markets (Espenlaub et al., 2012; Espenlaub et al., 2016; Jain and Kini, 2000). Several scholars have found that founder-CEO-led firms are more likely to survive in stock markets (He, 2008; Le et al., 2017; Pour, 2015; Williams, 2013; Yan and Williams, 2021).⁶ Moreover, some studies have emphasized the founder-CEO effect by examining the impact of founder-CEO presence on financial performance after an IPO (Adams et al., 2009; Fahlenbrach, 2009; Kumar et al., 2021). These studies have typically measured market-based and operating performance using Tobin's q and ROA.⁷ In fact, their results

⁵ Several studies have highlighted the IPO underperformance phenomenon, often attributed to IPO firms' earnings management practices (Teoh et al., 1998). This may suggest that the continued presence of pre-IPO management causes a decline in post-IPO financial performance.

⁶ Moreover, founder-CEO-led firms exhibit specific characteristics, such as resistance to strategic delisting through M&A and buyouts and successful graduation from junior stock markets (Honjo et al., 2026).

⁷ Dawson et al. (2018) measured post-IPO financial performance using market-based performance measures, specifically Tobin's q, although they focused on founder-CEO ownership. Moreover, some scholars have examined market performance using buy-and-hold abnormal returns (Gao and Jain, 2011). Gao and Jain (2012) also focused on the relationship between

support the notion that founder-CEO-led firms outperform their counterparts, thereby reinforcing the perceived founder-CEO effect.

Regarding financial performance, empirical studies have addressed the endogeneity issue of founder-CEO presence (Adams et al., 2009; Fahlenbrach, 2009; Kumar et al., 2021). For instance, Adams et al. (2009) found a positive relationship between founder-CEO presence and Tobin's q using an instrumental variable regression based on cross-sectional data. This method helps overcome the endogeneity issue associated with founder-CEO presence. Additionally, it is crucial to disentangle the effect of founder-CEO presence from that of CEO retention and turnover. While their finding demonstrates a relationship between founder-CEO presence and financial performance, it remains unclear whether founder-CEO-led firms exhibit actual improvements in post-IPO financial performance by retaining the founder-CEO position.⁸

More importantly, these studies fail to account for the distinct effects of founder-CEO turnover. This oversight gives rise to two potential, unexplored hypotheses. First, the founder-CEO tenure effect may exist, suggesting that founder-CEO presence continues to influence financial performance as long as the founder-CEO retains managerial control. Second, the founder-CEO imprinting effect may exist, which posits that firms tend to perform better regardless of whether founder-CEOs are still in the role, as long as their initial vision and culture are preserved. Identifying the founder-CEO imprinting effect is essential to disentangle it from the founder-CEO tenure effect, thereby providing a more accurate indication of founder-CEO contributions after an IPO.

In practice, the empirical evidence on the impact of founder-CEO presence on firm performance changes over time remains mixed or inconclusive (Abebe et al., 2020). This makes it debatable whether founder-CEO presence truly improves financial performance. Thus, a more definitive investigation is warranted to clarify the impact of founder-CEO presence on post-IPO outcomes.

founder-CEO presence and post-acquisition premiums using cumulative abnormal returns.

⁸ Prior studies have also demonstrated the impact of CEO retention on subsequent firm performance (Georgakakis and Ruigrok, 2017; Jalal and Prezas, 2012). Therefore, several scholars have highlighted how firm performance changes following founder-CEO turnover (Ewens et al., 2024; Kim and Kim, 2024).

2.4. Founder-CEO tenure and firm growth

While these studies have focused on the impact of founder-CEO presence on financial performance, some have addressed firm growth and growth orientation (motivation) (Abebe et al., 2020). The degree of growth orientation varies substantially across firms.⁹ In particular, founder-CEOs are more inclined to pursue growth-oriented strategies, such as market expansion (Abebe et al., 2020; Souder et al., 2012). They may have a strong growth orientation due to their strong psychological attachment and deep commitment to their firms (Abebe and Tangpong, 2018; He, 2008; Hendricks et al., 2019; Lee et al., 2020; Nelson, 2003).

Several studies have addressed the role of a CEO's tenure as a significant factor in firm strategy. A CEO with longer tenure is often considered more effective at establishing a unified purpose and synchronizing actions to pursue growth-oriented initiatives (Souder et al., 2012). This is because a CEO's tenure can facilitate the development of intra-firm networks (Cao et al., 2006). Increasing tenure can signal that a CEO has built credibility and successfully integrated into the networks of key stakeholders (Kumar et al., 2021).

In particular, founder-CEOs are deeply devoted to their firms, viewing them as an extension of their personal identity and vision. This personal stake may fuel a strong desire for firm growth. In addition, as founder-CEOs have the authority and credibility acquired from the firms' inception, they can more effectively implement growth-oriented strategies without being constrained by the short-term pressures often faced by non-founder-CEOs. Moreover, founder-CEOs may exhibit a higher risk tolerance, enabling their firms to pursue more aggressive market expansion.

Furthermore, founder-CEOs who remain in their positions after an IPO may shift their motivation from financial wealth (being "rich") to non-pecuniary benefits, such as managerial control (being "king"). These founder-CEOs may aim to enhance their personal charisma and reputation as a reward

⁹ Some studies have argued that young firms tend to exhibit a strong growth orientation (McKelvie et al., 2017). Therefore, it is possible that firms in their early stages are more likely to pursue firm growth, partly because they need to achieve minimum efficient scale (Lotti et al., 2003).

for their intense contributions leading up to the IPO. Despite the share dilution required for going public, this shift enables founder-CEOs to prioritize their personal benefits over shareholder value. Founder-CEO-led firms may leverage newly available public offerings to pursue business expansion, thereby exhibiting growth-oriented rather than financial-performance-oriented strategies after an IPO. In particular, founder-CEOs with longer tenure are more inclined to pursue market expansion. Accordingly, it is hypothesized that founder-CEO tenure positively influences firm growth in post-IPO outcomes.

2.5. Japan's institutional background

During the 2000s, some junior stock markets became extinct; for instance, Neuer Markt in Germany was closed in 2003 (Vismara et al., 2012). Nevertheless, Japanese junior stock markets continue to provide equity financing to young and innovative firms. In Japan, an IPO is virtually recognized as the most successful exit strategy for early-stage shareholders because M&A is less common as a strategic exit option (Honjo, 2021). This is also because private equity capital is less developed in Japan and informal investment in start-up firms, including angel investment, is not so prevalent in Japan as in other countries (Honjo and Nakamura, 2020). This may lead to hasty IPOs, particularly among young and innovative firms seeking access to public equity markets to maintain R&D activities (Honjo, 2021; Honjo and Kurihara, 2023). Less stringent listing requirements on Japanese junior stock markets may encourage firms, especially those investing heavily in R&D, to rush into an IPO.

As already stated, an IPO allows for public access to a firm's financial statements and facilitates the calculation of its market value, both of which are useful for measuring financial performance. Among IPOs, it is conceivable that the proportion of founder-CEOs in young and small firms is higher than in established large firms. Additionally, CEOs in young and small firms are more likely to influence financial performance, although the period of time during which CEOs have influence may be limited to the first few years after an IPO. Given the limited duration of managerial careers, a sample thus needs to include a certain number of young and small firms led by founder-CEOs. However, young and small firms tend to be privately held, and in general, privately held firms do not publicly report their financial statements, nor is their market value easily obtainable.

In this respect, firms listed on Japanese junior stock markets may be appropriate, partly because firms seeking external financing to pursue future growth are more likely to go public in these markets than to engage in M&A. Japanese junior stock markets provide a setting in which relatively young firms remain in a growth stage after an IPO, allowing the role of founder-CEOs in shaping firm performance to be examined. Thus, Japanese junior stock markets provide a unique institutional context for examining the impact of founder-CEO presence on post-IPO outcomes.

3. Data and methods

3.1. Data

This study targets firms listed between December 1999 and December 2021 on Japanese junior stock markets: MOTHERS, JASDAQ, Hercules, Ambitious, Centrex, and Q-Board.¹⁰ This study does not cover firms listed on the OTC market, which closed and was renamed “JASDAQ” in December 2004, or those listed on Tokyo Pro Market (formerly Tokyo AIM), which is a special market that offers new investment opportunities only to professional investors. These markets are excluded from our sample because their listing systems and requirements differ substantially from those of the other junior stock markets.

We construct a list of IPOs using the White Paper on IPOs (*Kabushiki Kokai Hakusho*), edited by Pronexus, Inc.¹¹ Annual financial statement data are obtained from the Nikkei Needs Financial Quest

¹⁰ It is important to note that Japanese stock markets were reorganized in April 2022. As a result, some junior stock markets, such as MOTHERS, were integrated into the Growth Market of the Tokyo Stock Exchange. In this study, the term “junior stock markets” refers to the former junior stock markets that existed during the sample period, including MOTHERS, JASDAQ, Hercules, Ambitious, Centrex, and Q-Board. Moreover, our sample does not include IPOs directly listed on main stock markets (e.g., the former First and Second Sections of the Tokyo Stock Exchange and Osaka Stock Exchange). Firm characteristics appear to differ significantly between junior and main stock markets, and main stock markets are more likely to include spin-offs and restructuring-related firms. It is plausible that junior stock markets provide a more suitable setting for examining founder-CEO presence than main stock markets.

¹¹ For data collection, we use the White Papers on IPOs, which excludes IPO firms incorporated through the reorganization of publicly listed firms. Therefore, the number of IPOs in this study does not match the number of IPOs reported by Japanese

(Needs-FQ) compiled by Nikkei Media Marketing Inc. Data on CEO appointment dates are sourced from Nikkei NEEDS Corporate Governance Evaluation System (NEEDS-Cges). Moreover, to collect demographic information on CEOs, particularly their age, educational background, and career history, we use Directory of Executives (*Yakuin Shikiho*), published by Toyo Keizai Inc., as well as articles from the Nikkei (*Nikkei Shimbun*).

The initial sample consists of 1,462 firms that were listed on Japanese junior stock markets between December 1999 and December 2021.¹² We apply the following exclusion criteria to construct the final sample. First, we exclude 46 firms in the financial sector because their financial structures and regulatory environments differ substantially from those of non-financial firms. Second, we remove 16 firms that were concurrently listed on main stock markets or listed on foreign sections to focus exclusively on firms whose primary listing was on junior stock markets. Third, we exclude six firms with insufficient financial data, such as those for which only one fiscal year of information is available. These processes yield our final sample of 1,394 firms. Table 1 presents the sample composition by CEO turnover and founder-CEO status across years since IPO. We find that founder-CEOs are less likely to be replaced than non-founder-CEOs until $t = 3$.

[Insert Table 1]

3.2. Model

In this study, we focus on the effect of founder-CEO presence, including its time-varying effect, on post-IPO outcomes, such as financial performance and firm size. Let $Y_i(t)$ denote firm i 's outcome in year (time) t following its IPO, with $t = 0$ corresponding to the year in which firm i goes public. Founder-CEO presence is denoted by the binary indicator $F_i(t)$; that is, $F_i(t) = 1$ if the CEO is a founder, and $F_i(t) = 0$ otherwise.

We distinguish two effects of founder-CEO presence on post-IPO outcomes: the founder-CEO tenure effect and the founder-CEO imprinting effect. The former, denoted by θ , captures the difference in post-

stock exchanges.

¹² For all firms, we collect data for at least periods $t = 0$ and $t = 1$, and in some firms, the observation period extends to 2023.

IPO outcomes attributable to founder-CEOs' continued leadership after the IPO, reflecting their managerial skills and firm-specific knowledge. The latter, denoted by λ , captures the difference in post-IPO outcomes attributable to their pre-IPO contributions, including their perceived charisma and reputation. Together, these two effects explain the difference in post-IPO outcomes between founder- and non-founder-CEO-led firms. Accordingly, we assume that

$$E(Y_i(t)|F_i(t) = 1) - E(Y_i(t)|F_i(t) = 0) = \theta + \lambda. \quad (1)$$

We assume that in the IPO year ($t = 0$), firm i 's outcome, $Y_i(0)$, is affected by founder-CEO presence, $F_i(0)$, firm-specific characteristics (vector), $Z_i(0)$, and market conditions, $M_i(0)$. We further assume that the founder-CEO tenure effect, θ , is zero in the IPO year. The association between $F_i(0)$ and $Y_i(0)$ is attributed solely to the founder-CEO imprinting effect, and $Y_i(0)$ can be written as follows:

$$Y_i(0) = \zeta + \lambda F_i(0) + Z_i(0)^T \beta + \gamma M_i(0) + \alpha_i + \epsilon_i(0) \quad (2)$$

where ζ is a constant term, α_i is a firm-specific effect, β and γ are parameters to be estimated, and $\epsilon_i(0)$ is an error term.¹³

Next, we consider firm i 's post-IPO outcomes in year t (> 0). When the founder remains CEO, both the founder-CEO tenure and imprinting effects contribute to the difference in post-IPO outcomes between founder- and non-founder-CEO-led firms. Following CEO turnover, neither effect contributes to this difference. Let $X_i(t)$ denote CEO turnover in year t , regardless of whether the CEO is a founder, and let κ denote its direct effect. Note that $F_i(t) = F_i(0)$ if $X_i(t) = 0$. Let $Z_i(t)$ denote firm-specific characteristics and $M_i(t)$ denote market conditions in year t . Also, let $\eta(t)$ denote the common time effect. Accordingly, firm i 's outcome in year t , $Y_i(t)$, is written as follows:

$$Y_i(t) = \zeta + \eta(t) + (\theta + \lambda)F_i(0)(1 - X_i(t)) + \kappa X_i(t) + Z_i(t)^T \beta + \gamma M_i(t) + \alpha_i + \epsilon_i(t). \quad (3)$$

where $\epsilon_i(t)$ is an error term.

Taking the difference between Equations (2) and (3), we obtain the change in firm i 's outcome, denoted by $\Delta Y_i(t)$, as follows:

$$\Delta Y_i(t) = \eta(t) + \theta F_i(0) + (\kappa - (\theta + \lambda)F_i(0))X_i(t) + \Delta Z_i(t)^T \beta + \gamma \Delta M_i(t) + u_i, \quad (4)$$

¹³ For simplicity, we assume that no founder-CEOs return as CEOs after being replaced, although a few may do so in reality.

where $\Delta Z_i(t) = Z_i(t) - Z_i(0)$, $\Delta M_i(t) = M_i(t) - M_i(0)$, and $u_i = \epsilon_i(t) - \epsilon_i(0)$. Equation (4) can be written separately for $X_i(t) = 0$ and $X_i(t) = 1$ as follows:

$$\Delta Y_i(t) = \eta(t) + \theta F_i(0) + \Delta Z_i(t)^T \beta + \gamma \Delta M_i(t) + u_i \quad \text{if } X_i(t) = 0, \quad (5)$$

$$\Delta Y_i(t) = \eta(t) + \kappa - \lambda F_i(0) + \Delta Z_i(t)^T \beta + \gamma \Delta M_i(t) + u_i \quad \text{if } X_i(t) = 1. \quad (6)$$

Equation (5) shows that the coefficient of $F_i(0)$ identifies the founder-CEO tenure effect, θ , using firms that experience no CEO turnover. Likewise, Equation (6) shows that the coefficient of $F_i(0)$ identifies the negative of the founder-CEO imprinting effect, $-\lambda$, using firms that experience CEO turnover. In the empirical analysis, we annualize $\Delta Y_i(t)$ by dividing it by t , thereby making the estimated effects comparable across distinct time horizons.

3.3. Variables

As dependent variables, we measure firm performance using Tobin's q and ROA, both of which are commonly used in the literature (Arend et al., 2014; Chatterjee et al., 2024). Following these studies, Tobin's q is defined as the sum of the market value of equity and the book value of debt, divided by total assets. A higher Tobin's q indicates that the firm is valued more highly by the market relative to the replacement cost of its assets, potentially reflecting investors' growth expectations or overvaluation. ROA is calculated as operating profits divided by total assets. In addition, we examine firm size, measured by the number of employees and sales. In the estimation model, we calculate the first difference in the logarithm of these measures between two periods, divided by the number of years, to obtain annualized growth rates. This corresponds to the growth of employment and sales, respectively, and the same annualization procedure is applied only to independent variables calculated as first differences, which are described below.

The primary independent variables of interest are founder-CEO presence and CEO turnover. In this study, we refer to the term CEO as the individual solely responsible for submitting the Securities Report under Japan's Financial Instruments and Exchange Act, typically corresponding to the firm's representative position and top executive. A founder-CEO is defined as the case in which this individual has continuously held the representative position since the firm's establishment.

Founder-CEO presence (Founder-CEO) is a binary indicator, taking a value of one if the CEO at the time of the IPO is a founder of the firm, and zero otherwise. This variable is used to measure both the founder-CEO tenure and founder-CEO imprinting effects. CEO turnover is also a binary indicator, taking a value of one in a given year if the CEO—whether a founder or non-founder—is replaced by a successor during that year, and zero otherwise.¹⁴ This variable captures CEO turnover that occurs during the observation period and is not limited to the replacement of the CEO who was in position at the time of the IPO.

Moreover, we include a range of control variables. CEO-level characteristics include the CEO’s age, tenure, and educational background, such as whether the CEO holds only a bachelor’s degree or an advanced (master’s or doctoral) degree. Firm-level characteristics account for differences in asset and capital structures, firm size as well as macroeconomic conditions. Specifically, we measure capital expenditures (CAPEX) and debt ratio (leverage) to control for investment levels and financial structure. Since innovative firms often require external financing due to difficulties in securing funds and are positively associated with sustained profitability and higher stock returns (Bedford et al., 2021), we use a variable for R&D expenditures as a proxy for innovation activity. Moreover, to control for market conditions over time, we use the Tokyo Stock Price Index (TOPIX), one of the most representative market indices in Japan.

Table 2 presents the definitions of the variables used in this study. Figure 1 illustrates post-IPO outcomes over time for founder- and non-founder-CEO-led firms: specifically, the mean of Tobin’s q, ROA, employees (log), and sales (log). Table 3 presents the descriptive statistics of the variables used

¹⁴ Under the Companies Act, firms without a board of directors are not required to appoint a “representative director (*daihyo torishimariyaku*).” In such firms, an ordinary director legally serves as the firm’s representative. When this director subsequently assumes the formal executive title of “representative director,” the official records update the appointment date. This legal technicality can therefore generate spurious cases of CEO turnover, even though the same person has continuously served as the firm’s top executive. To address this issue, we carefully examined the Securities Reports and related documents to correct these discrepancies. This procedure allowed us to exclude cases in which only the executive title changed while the same individual remained the top executive. As a result, our classification yields a higher proportion of founder-CEOs than reported in Honjo et al. (2026).

at the time of the IPO. The mean of founder-CEO presence (founder-CEO) is approximately 0.622; that is, founder-CEO-led firms account for more than half of IPO firms in the sample.

[Insert Tables 2 and 3 and Figure 1 here]

4. Results

4.1. Basic results

Tables 4 to 7 present the estimation results for the four post-IPO outcome measures: the differences in Tobin's q (Table 4), ROA (Table 5), employment size (Table 6), and sales (Table 7). In each table, columns (i) to (iii) report the results for the subsample without CEO turnover ($X(t) = 0$), corresponding to Equation (5) and capturing the founder-CEO tenure effect (θ). Columns (iv) to (vi) report the results for the subsample with CEO turnover ($X(t) = 1$), corresponding to Equation (6) and capturing the negative of the founder-CEO imprinting effect ($-\lambda$). Each column in the table corresponds to a specific year after the IPO ($t = 1, 2$, or 3). Dividing the sample in this way allows us to distinguish between the founder-CEO tenure and founder-CEO imprinting effects.

Table 4 reports the estimation results for the differences in Tobin's q . For firms without CEO turnover in columns (i) to (iii), the estimated founder-CEO tenure effect is negative across all three years, although it is statistically insignificant in years $t = 2$ and 3 . This finding suggests that founder-CEO presence does not translate into measurable gains in market value after an IPO, as measured by Tobin's q . Moreover, for firms with CEO turnover in columns (iv) to (vi), the founder-CEO imprinting effect is statistically insignificant, indicating that the market-based performance of founder-CEO-led firms does not differ from that of other firms.¹⁵ Regarding the control variables, for firms without CEO turnover, some variables—specifically changes in R&D expenditures, board members' ownership, and TOPIX—have significant effects in individual years, but the effects are not systematic. For firms with CEO

¹⁵ As a robustness check, we estimated the model for Tobin's q using years $t = 1$ and $t = 2$, rather than the IPO year ($t = 0$), as alternative baseline years. The results were qualitatively unchanged, with the estimated founder-CEO effects remaining statistically insignificant.

turnover, no control variables are statistically significant, indicating limited influence of firm-specific characteristics and market conditions on Tobin's q .

[Insert Table 4 here]

Table 5 presents the estimation results for the differences in ROA. The overall pattern is broadly consistent with that observed for Tobin's q in Table 4. In the subsample without CEO turnover, the estimated founder-CEO tenure effect is negative but statistically insignificant across all three years after an IPO. This suggests a possible short-term decline in ROA under founder-CEOs' continued leadership that does not persist over time. In the subsample with CEO turnover, the estimated founder-CEO imprinting effect is statistically insignificant, indicating that the founder-CEO imprinting effect has little measurable impact on changes in profitability. Regarding the control variables, the coefficients of changes in leverage and R&D expenditures are negative and significant regardless of CEO turnover, indicating that higher levels of debt and R&D investment are associated with lower profitability.

[Insert Table 5 here]

Table 6 reports the estimation results for the differences in employment size, that is, employment growth. In sharp contrast to market-based and operating performance (i.e., Tobin's q and ROA), the results for employment growth are more favorable to founder-CEOs. In the subsample without CEO turnover, the estimated founder-CEO tenure effect is consistently positive and statistically significant across years, indicating that founder-CEO-led firms are more likely to expand their workforce after an IPO. In the subsample with CEO turnover, the estimated founder-CEO imprinting effect is statistically insignificant, providing no evidence that this growth advantage reflects the founder-CEO imprinting effect. Regarding the control variables, the coefficients of TOPIX are positive and significant in columns (ii) to (vi), indicating that employment size tends to increase during periods of higher market performance.

[Insert Table 6 here]

Table 7 reports the estimation results for the differences in sales, that is, sales growth. The results closely mirror those for employment growth. In the subsample without CEO turnover, the estimated founder-CEO tenure effect is consistently positive and statistically significant across years, suggesting that founder-CEO-led firms experience stronger sales growth in the post-IPO period. In the subsample

with CEO turnover, the estimated founder-CEO imprinting effect is statistically insignificant throughout. Regarding the control variables, the coefficients of TOPIX are positive and significant in all columns, which is broadly consistent with the patterns reported in Table 6. These findings suggest that founder-CEO-led firms are more likely to expand their scale by increasing employment and sales during periods of higher market performance.

[Insert Table 7 here]

Taken together, these findings indicate that founder-CEO presence has little measurable impact on improvement in market-based and operating performance (Tobin's q and ROA), regardless of whether the founder remains CEO. By contrast, founder-CEO presence is positively associated with firm growth, as reflected in higher rates of employment and sales growth, when the founder continues to serve as CEO. These findings suggest that founder-CEOs may contribute more to driving firm growth than to improving financial performance in junior stock markets.

4.2. Robustness

4.2.1. Endogenous switching regression model

As shown in Tables 4 to 7, the estimation results are based on firms observed in only one of the two subsamples determined by CEO turnover. These results may be influenced by a switching process arising from CEO turnover. To address this concern, we estimate an endogenous switching regression model, which simultaneously models the switching and outcome equations using full-information maximum likelihood (FIML). This approach relies on the assumption of joint normality of the error terms across the switching and outcome equations (Lokshin and Sajaia, 2004).¹⁶

In our setting, CEO turnover is assumed to be determined by the CEO's personal attributes, including CEO tenure. In addition, CEO turnover may be influenced by firm performance as evaluated by

¹⁶ Endogenous switching regression models have been applied in the entrepreneurship and finance literature to account for endogenous regime selection and heterogeneous outcome structures (Grilli and Marzano, 2025; Guerini and Quas, 2016; Tang and Chang, 2015).

shareholders. In our setting, we assume that the switching equation is shaped by the CEO's age, education level, and tenure, as well as return on equity (ROE).¹⁷

Tables 8 to 11 present the estimation results using the endogenous switching regression model. While the coefficient of founder-CEO is negative for the change in Tobin's q in Table 8, it is positive and statistically significant for employment size and sales growth in Tables 10 and 11. The estimated founder-CEO tenure effect is consistently positive and statistically significant across years, suggesting that founder-CEO-led firms experience stronger employment and sales growth in the post-IPO period. By contrast, the founder-CEO imprinting effect remains statistically insignificant. Overall, the results are broadly consistent with those reported in Tables 4 to 7.

[Insert Tables 8, 9, 10, and 11 here]

4.2.2. Endogenous treatment effects model

Next, we address the potential endogeneity of founder-CEO presence by estimating a linear regression of endogenous treatment effects.¹⁸ Following prior studies, we include two instrumental variables for founder-CEO presence. The first is CEO tenure, defined as the logarithm of the number of years since the CEO's appointment. The second is Early incorporation, a dummy variable equal to one if the firm was incorporated before 1970. This variable has been used in Fahlenbrach (2009) and Kumar et al. (2021), where it is originally defined using 1940 as the cutoff year. The rationale for this instrument, as discussed in Fahlenbrach (2009), is that if a firm was incorporated before 1940, it is unlikely that the founder is still alive, making founder presence effectively exogenous. In our setting, we adopt a later cutoff year of 1970 to better match the historical and demographic context of Japanese junior stock markets in the sample period.

¹⁷ In the estimation with ROA as the outcome in Table 9, Master/PhD CEO and ROE are excluded from the selection equation due to convergence problems.

¹⁸ This model is a linear potential-outcome framework that jointly specifies the treatment assignment (founder-CEO presence) and the outcome equation. It allows for a correlation structure between unobserved factors that affect the treatment and the potential outcomes. This model is estimated by FIML in a single system, rather than through sequential two-stage IV methods, which enhances estimation efficiency and consistency.

In this specification, the sample is not split by CEO turnover. As a result, the estimated founder-CEO tenure and founder-CEO imprinting effects cannot be separately identified. Table 12 reports the estimation results for the changes in Tobin's q and ROA. The results are broadly consistent with those reported in Tables 4 and 5, showing no statistically significant effect of founder-CEO presence on improvement in market-based and operating performance.

[Insert Table 12 here]

Table 13 presents the estimation results for employment and sales growth. The overall pattern is consistent with that reported in Tables 6 and 7, with positive and statistically significant for founder-CEO presence in all columns. For both measures, the magnitude and significance of the coefficients tend to increase from the first to the following years, suggesting that the positive relationship between founder-CEO presence and firm growth strengthens over time.

[Insert Table 13 here]

4.2.3. Long-horizon outcomes

Table 14 presents the long-horizon effects of founder-CEO presence on post-IPO outcomes up to 10 years. Only the estimated founder-CEO tenure and founder-CEO imprinting effects are reported in this table. Consistent with the patterns reported in Tables 4 to 7, Panel A shows that the founder-CEO tenure effect is positive and statistically significant, indicating that its impact on employment and sales growth persists throughout the entire horizon. Conversely, Panel B demonstrates that the founder-CEO imprinting effect has no meaningful long-term impact on either financial performance or firm growth. Taken together, these patterns reinforce the interpretation that founder-CEOs tend to pursue growth-oriented rather than financial-performance-oriented strategies after an IPO—and that these effects persist over time—but such growth-oriented strategies disappear once the founder-CEO is replaced.

[Insert Table 14]

4.2.4. CEO personal attributes

We do not consider the effect of CEOs' personal attributes on post-IPO outcomes, mainly because their effects are differenced out when taking the difference between the two periods, which is the case when $X_i(t) = 0$. However, this is not always true if $X_i(t) = 1$ because CEO turnover may be accompanied by changes in personal attributes; for example, the educational background of the CEO changes when a CEO without undergraduate educational background is replaced by one with undergraduate educational background. Therefore, to examine the robustness of the estimated founder-CEO imprinting effect, we additionally estimate a model that controls for changes in CEOs' personal attributes. Equation (6) can be expressed as Equation (7) by incorporating the differences in CEOs' personal attributes, such as age and educational background, between periods 0 and t , denoted by $C_i(0)$ and $C_i(t)$.

$$\Delta Y_i(t) = \eta(t) + \kappa - \lambda F_i(0) + C_i(t)^T \mu_t - C_i(0)^T \mu_0 + \Delta Z_i(t)^T \beta + \gamma \Delta M_i(t) + u_i \text{ if } X_i(t) = 1, \quad (7)$$

where μ_0 and μ_t are parameters to be estimated. We estimate this model, including the differences in CEOs' personal attributes when $X_i(t) = 1$.

Table 15 presents the estimation results for the changes in Tobin's q and ROA, accounting for differences in CEOs' personal attributes when $X_i(t) = 1$. Table 16 presents the corresponding results for employment and sales growth. Overall, the results in Tables 15 and 16 are broadly consistent with those reported in Tables 4 to 7, indicating that controlling for CEO personal attributes does not materially affect the main findings.

[Insert Tables 15 and 16]

4.3. Discussion

This study contributes to the literature by distinguishing between two mechanisms through which founder-CEOs influence post-IPO outcomes: the founder-CEO tenure effect and the founder-CEO imprinting effect. Prior studies have explored the relationship between founder-CEO presence and post-IPO financial performance (Adams et al., 2009; Fahlenbrach, 2009; Kumar et al., 2021). However, these studies typically estimate founder-CEO effects using post-IPO panel data and do not account for the cumulative influence of founder-CEOs before the IPO. If founder-CEOs who successfully lead firms to an IPO are less likely to be replaced prior to the IPO, founder-CEO presence at the time of the IPO is

not randomly assigned but reflects both their continued leadership and accumulated pre-IPO contributions. Consequently, conventional estimates may confound the founder-CEO tenure effect with the founder-CEO imprinting effect, giving rise to potential selection bias. By explicitly separating these two effects, our approach provides a clearer identification of founder-CEO contributions after the IPO and offers a better understanding of how founder-CEO presence shapes post-IPO outcomes.

Our findings reveal that founder-CEO presence is not significantly associated with either Tobin's q or ROA, and that neither the founder-CEO tenure effect nor the founder-CEO imprinting effect is evident for post-IPO financial performance. These findings contrast with earlier studies reporting a positive relationship between founder-CEO presence and financial performance (Adams et al., 2009; Fahlenbrach, 2009; Kumar et al., 2021). One possible explanation is methodological.¹⁹ Our approach separates founder-CEO post-IPO contributions from their accumulated pre-IPO contributions, thereby providing a clearer assessment of founder-CEO effects on post-IPO outcomes. Therefore, our findings suggest that founder-CEO-led firms do not exhibit greater improvements in financial performance after going public than non-founder-CEO-led firms. These findings challenge the conventional view that founder-CEOs improve post-IPO performance and instead lend support to the argument that founder-CEO entrenchment may limit improvements in financial performance (Leone and Liu, 2010; Lim and Jeong, 2025).

According to organizational life cycle theory, the influence of founder-CEO presence on firm performance evolves over time (Abebe et al., 2020; Gao and Jain, 2012). Whereas founder-CEOs typically play a critical role in guiding their firms from founding to an IPO, the IPO may be an appropriate juncture for leadership transition. In the post-IPO phase, firms often face new challenges that require managerial skills and knowledge distinct from those needed in the early stages prior to an

¹⁹ Following prior studies that rely on post-IPO panel data, we also estimated the association between founder-CEO presence and financial performance (i.e., Tobin's q and ROA) without separating the founder-CEO tenure and imprinting effects. This specification yields a positive association between them, which is consistent with the findings reported in prior studies. As shown in Figure 1, founder-CEO-led firms tend to exhibit higher Tobin's q and ROA in the IPO year, suggesting that the estimates based on an approach that does not separate the two effects may partly capture pre-IPO contributions and potentially suffer from selection bias.

IPO. Successor CEOs—particularly those with extensive professional management experience—may be better equipped to navigate issues related to organizational complexity, governance, and operational efficiency. Whether founder-CEOs' continued leadership generates superior post-IPO outcomes remains an important and context-dependent question.

At the same time, our findings suggest that founder-CEOs contribute meaningfully to post-IPO outcomes through channels other than financial performance. In additional analyses, we provide evidence that founder-CEO-led firms are more likely to pursue growth-oriented strategies, expanding employment and sales more rapidly than their counterparts. This growth orientation may reflect founder-CEOs' accumulated firm-specific knowledge and expedited decision-making capability, in addition to deep commitment to scaling the organization. For investors, founder-CEO presence may serve as a signal of growth potential rather than an expectation of superior short-term financial performance. For policymakers in economies where junior stock markets play an important role in supporting young and innovative firms, these results imply that policies recognizing the potential role of founder-CEOs may promote firm growth, even if continued leadership does not directly enhance profitability. Furthermore, ensuring a smooth CEO succession after an IPO may help firms transition toward greater operational efficiency when a transition becomes strategically necessary.

Overall, by distinguishing between the founder-CEO tenure and imprinting effects, this study advances our understanding of how founder-CEO presence shapes post-IPO outcomes and provides insights for entrepreneurs, investors, and policymakers.

4.4. Limitations and future research avenue

This study has several limitations that highlight directions for future research. First, our estimation of the founder-CEO imprinting effect relies on comparing two groups of firms: those in which the CEO at the time of the IPO was a founder and was subsequently replaced and those in which the CEO at the time of the IPO was a non-founder and was subsequently replaced. This method is particularly useful when pre-IPO information is limited, as it allows us to isolate the founder-CEO imprinting effect in terms of CEO turnover after an IPO. However, this method requires a sufficient number of firms experiencing CEO turnover after an IPO to obtain an adequate sample. In practice, the sample used to

estimate the founder-CEO imprinting effect is relatively small, which may limit the statistical power to detect a significant effect.

Second, although we attempt to account for the endogeneity of CEO turnover in our estimation using an endogenous switching regression model, we do not address the endogeneity of founder-CEO turnover prior to an IPO. This is due to the substantial difficulty of obtaining reliable pre-IPO information. As a result, we cannot fully consider the potentially endogenous nature of founder-CEO turnover before going public. Future research that can access pre-IPO information or utilize alternative identification strategies would help clarify how founder-CEO imprinting shapes post-IPO outcomes and guide both investors and policymakers in designing interventions to support firm growth while mitigating risks associated with founder-CEO entrenchment.

Overall, addressing these two limitations represents an important avenue for future research. By doing so, future studies could further enhance our understanding of how the founder-CEO tenure and imprinting effects influence post-IPO outcomes and provide more reliable guidance for entrepreneurs, investors, and policymakers regarding governance, succession planning, and growth strategies in young and innovative firms.

5. Conclusions

Understanding how founder-CEOs contribute to post-IPO outcomes by continuing to reign as “king” after an IPO is imperative for evaluating founder-CEO presence. This study investigated the impact of founder-CEO presence on post-IPO outcomes using a sample of IPOs listed on junior stock markets in Japan. Focusing on firms where CEOs remain in place after an IPO, we estimated the founder-CEO tenure effect on post-IPO outcomes. Moreover, focusing on firms where the CEO is replaced after an IPO, we estimated the founder-CEO imprinting effect. Our results revealed that overall, neither the founder-CEO tenure effect nor the founder-CEO imprinting effect is statistically significant for post-IPO financial performance, suggesting that founder-CEO-led firms do not necessarily exhibit improved financial performance. Furthermore, our results indicated that founder-CEO-led firms are more likely to expand their scale by increasing employment and sales, supporting the notion that founder-CEOs exhibit growth-oriented rather than financial-performance-oriented strategies after an IPO.

Our approach, which examines changes in post-IPO outcomes over time, is derived from a core idea: splitting the sample based on a trigger event, namely, founder-CEO turnover. This simple yet powerful methodology allows us to isolate effects stemming from an event that occurred before or after the start of the observation period. As this method provides a straightforward way to separate tenure and imprinting effects associated with a trigger event, it provides a useful framework for studying similar mechanisms in other contexts.

References

- Abbate, C., & Sapio, A. (2019). Gazelles and muppets in the city: Risk sharing and firm growth quantiles in a junior stock market. *Industrial and Corporate Change*, 28(6), 1405–1427.
- Abebe, M. A., Li, P., Acharya, K., & Daspit, J. J. (2020). The founder chief executive officer: A review of current insights and directions for future research. *Corporate Governance: An International Review*, 28(6), 406–436.
- Abebe, M. A., & Tangpong, C. (2018). Founder-CEOs and corporate turnaround among declining firms. *Corporate Governance: An International Review*, 26(1), 45–57.
- Adams, R., Almeida, H., & Ferreira, D. (2009). Understanding the relationship between founder-CEOs and firm performance. *Journal of Empirical Finance*, 16(1), 136–150.
- Ampenberger, M., Schmid, T., Achleitner, A.-K., & Kaserer, C. (2013). Capital structure decisions in family firms: Empirical evidence from a bank-based economy. *Review of Managerial Science*, 7, 247–275.
- Arend, R. J., Patel, P. C., & Park, H. D. (2014). Explaining post-IPO venture performance through a knowledge-based view typology. *Strategic Management Journal*, 35(3), 376–397.
- Bedford, A., Ma, L., Ma, N., & Vojvoda, K. (2021). Future profitability and stock returns of innovative firms in Australia. *Pacific-Basin Finance Journal*, 66, 101508.
- Boeker, W., & Karichalil, R. (2002). Entrepreneurial transitions: Factors influencing founder departure. *Academy of Management Journal*, 45(4), 818–826.
- Cao, Q., Maruping, L. M., & Takeuchi, R. (2006). Disentangling the effects of CEO turnover and succession on organizational capabilities: A social network perspective. *Organization Science*, 17(5), 563–576.
- Carpenter, R. E., & Petersen, B. C. (2002). Capital market imperfections, high-tech investment, and new equity financing. *Economic Journal*, 112(477), F54–F72.
- Certo, S. T., Holcomb, T. R., & Holmes Jr., R. M. (2009). IPO research in management and entrepreneurship: Moving the agenda forward. *Journal of Management*, 35(6) 1340–1378.
- Chahine, S., & Zhang, Y. (2020). Change gears before speeding up: The roles of chief executive officer human capital and venture capitalist monitoring in chief executive officer change before initial public offering. *Strategic Management Journal*, 41(9), 1653–1681.
- Chatterjee, M., Bhattacharjee, T., Chakraborty, B., Daim, T., & Kupeli, B. (2024). Exploring corporate governance on post-IPO performance of R&D intensive new public firms. *Journal of Engineering and Technology Management*, 71, 101796.
- Chen, J., & Thompson, P. (2015). New firm performance and the replacement of founder-CEOs. *Strategic Entrepreneurship Journal*, 9(3), 243–262.
- Colombo, M. G., & Grilli, L. (2007). Funding gaps? Access to bank loans by high-tech start-ups. *Small Business Economics*, 29, 25–46.
- Dawson, A., Paeglis, I., & Basu, N. (2018). Founder as steward or agent? A study of founder ownership and firm value. *Entrepreneurship Theory and Practice*, 42(6), 886–910.

- Espenlaub, S., Khurshed, A., & Mohamed, A. (2012). IPO survival in a reputational market. *Journal of Business Finance and Accounting*, 39(3-4), 427–463.
- Espenlaub, S., Khurshed, A., Mohamad, A., & Saadouni, B. (2016). Committed anchor investment and IPO survival—the roles of cornerstone and strategic investors. *Journal of Corporate Finance*, 41, 139–155.
- Ewens, M., Nanda, R., & Stanton, C. (2024). Founder-CEO compensation and selection into venture capital-backed entrepreneurship. *Journal of Finance*, 79(5), 3361–3405.
- Fahlenbrach, R. (2009). Founder-CEOs, investment decisions, and stock market performance. *Journal of Financial and Quantitative Analysis*, 44(2), 439–466.
- Fattoum-Guedri, A., Delmar, F., & Wright, M. (2018). The best of both worlds: Can founder-CEOs overcome the rich versus king dilemma after IPO? *Strategic Management Journal*, 39(13), 3382–3407.
- Fischer, H. M., & Pollock, T. G. (2004). Effects of social capital and power on surviving transformational change: The case of initial public offerings. *Academy of Management Journal*, 47(4), 463–481.
- Gao, N., & Jain, B. A. (2011). Founder CEO management and the long-run investment performance of IPO firms. *Journal of Banking and Finance*, 35(7), 1669–1682.
- Gao, N., & Jain, B. A. (2012). Founder management and the market for corporate control for IPO firms: The moderating effect of the power structure of the firm. *Journal of Business Venturing*, 27(1), 112–126.
- Georgakakis, D., & Ruigrok, W. (2017). CEO succession origin and firm performance: A multilevel study. *Journal of Management Studies*, 54(1), 58–87.
- Grilli, L., & Marzano, R. (2025). Do incubatees form more alliances? Nature of the alliance and start-up ownership as contingencies. *Economics of Innovation and New Technology*, 34(5), 797–815.
- Guerini, M., & Quas, A. (2016). Governmental venture capital in Europe: Screening and certification. *Journal of Business Venturing*, 31(2), 175–195.
- Hall, B. H. (2002). The financing of research and development. *Oxford Review of Economic Policy*, 18(1), 35–51.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206.
- He, L. (2008). Do founders matter? A study of executive compensation, governance structure and firm performance. *Journal of Business Venturing*, 23(3), 257–279.
- Hendricks, B., Howell, T., & Bingham, C. (2019). How much do top management teams matter in founder-led firms? *Strategic Management Journal*, 40(6), 959–986.
- Honjo, Y. (2021). Public or perish? From founding to initial public offering. *Review of Managerial Science*, 15(6), 1573–1610.
- Honjo, Y., Ikeda, Y., & Kurihara, K. (2026). Founder-CEO resistance and ambition: An empirical analysis of firm survival in Japanese junior stock markets. *Journal of Management and Governance*, 30, 11–56.
- Honjo, Y., & Kato, M. (2022). Are founder-CEOs resilient to crises? The impact of founder-CEO succession on new firm survival. *International Small Business Journal*, 40(2), 205–235.
- Honjo, Y., & Kurihara, K. (2023). Graduation of initial public offering firms from junior stock markets: evidence from the Tokyo Stock Exchange. *Small Business Economics*, 60(2), 813–841.
- Honjo, Y., & Nakamura, H. (2020). The link between entrepreneurship and informal investment: An international comparison. *Japan and the World Economy*, 54, 101012.
- Hsu, D. H., & Lim, K. (2014). Knowledge brokering and organizational innovation: Founder imprinting effects. *Organization Science*, 25(4), 1134–1153.
- Jain, B. A., & Kini, O. (2000). Does the presence of venture capitalists improve the survival profile of IPO firms? *Journal of Business Finance and Accounting*, 27(9-10), 1139–1183.
- Jalal, A. M., & Prezas, A. P. (2012). Outsider CEO succession and firm performance. *Journal of Economics and Business*, 64(6), 399–426.
- Kim, J. D., & Kim, M. (2024). Founder turnover and organizational change. *Organization Science*, 35(1), 259–280.
- Kriaa, R., & Hamza, T. (2019). Private benefits extraction by the initial owner and the dynamic of ownership and control post-initial public offering. *Managerial and Decision Economics*, 40(6), 651–

- Kumar, M. S., Nagarajan, N. J., & Schlingemann, F. P. (2021). The performance of acquisitions of founder CEO firms: The effect of founder firm premium. *Strategic Entrepreneurship Journal*, 15(4), 619–646.
- Le, S., Kroll, M., & Walters, B. (2017). TMT departures and post-IPO outside director additions: Implications for young IPO firms' survival and performance. *Journal of Small Business Management*, 55(1), 149–169.
- Lee, J. M., Yoon, D., & Boivie, S. (2020). Founder CEO succession: The role of CEO organizational identification. *Academy of Management Journal*, 63(1), 224–245.
- Leone, A. J., & Liu, M. (2010). Accounting irregularities and executive turnover in founder-managed firms. *Accounting Review*, 85(1), 287–314.
- Lim, S. Y., & Jeong, S. H. (2025). Multi-founding family firms: Effects on firm governance, innovation, and performance. *Entrepreneurship Theory and Practice*, 49(2), 375–402.
- Lokshin, M., & Sajaia, Z. (2004). Maximum likelihood estimation of endogenous switching regression models. *Stata Journal*, 4(3), 282–289.
- Lotti, F., Santarelli, E., & Vivarelli, M. (2003). Does Gibrat's Law hold among young, small firms? *Journal of Evolutionary Economics*, 13(3), 213–235.
- McKelvie, A., Brattström, A., & Wennberg, K. (2017). How young firms achieve growth: reconciling the roles of growth motivation and innovative activities. *Small Business Economics*, 49, 273–293.
- Morck, R. K., Shleifer, A., & Vishny, R. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20(1–2), 293–315.
- Nelson, T. (2003). The persistence of founder influence: Management, ownership, and performance effects at initial public offering. *Strategic Management Journal*, 24(8), 707–724.
- Pour, E. K. (2015). IPO survival and CEOs' decision-making power: The evidence of China. *Research in International Business and Finance*, 33, 247–267.
- Renko, M., Bullough, A., & Saeed, S. (2021). How do resilience and self-efficacy relate to entrepreneurial intentions in countries with varying degrees of fragility? A six-country study. *International Small Business Journal*, 39(2), 130–156.
- Souder, D., Simsek, Z., & Johnson, S. G. (2012). The differing effects of agent and founder CEOs on the firm's market expansion. *Strategic Management Journal*, 33(1), 23–41.
- Schuster, C. L., Nicolai, A. T., & Covin, J. G. (2020). Are founder-led-firms less susceptible to managerial myopia? *Entrepreneurship Theory and Practice*, 44(3), 391–421.
- Tang, H. W., & Chang, C. C. (2015). Does corporate governance affect the relationship between earnings management and firm performance? An endogenous switching regression model. *Review of Quantitative Finance and Accounting*, 45(1), 33–58.
- Teoh, S. H., Welch, I., & Wong, T. J. (1998). Earnings management and the long-run performance of initial public offerings. *Journal of Finance*, 53(6), 1935–1974.
- 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. *Organization Science*, 28(5), 857–872.
- Vismara, S., Paleari, S., & Ritter, J. R. (2012). Europe's second markets for small companies. *European Financial Management*, 18(3), 352–388.
- Wang, T., & Song, M. (2013). Are founder directors detrimental to new ventures at initial public offering? *Journal of Management*, 42(3), 644–670.
- Wasserman, N. (2006). Stewards, agents, and the founder discount: Executive compensation in new ventures. *Academy of Management Journal*, 49(5), 960–976.
- Wasserman, N. (2012). *The Founder's Dilemmas: Anticipating and Avoiding the Pitfalls That Can Sink a Startup*. Princeton, NJ: Princeton University Press.
- Williams, D. R. (2013). Human and financial capital as determinants of biopharmaceutical IPO delistings. *Journal of Business Research*, 66(12), 2612–2618.
- Yan, J., & Williams, D. W. (2021). Timing is everything? Curvilinear effects of age at entry on new firm growth and survival and the moderating effect of IPO performance. *Journal of Business Venturing*, 36(5), 106020.
- Zhang, Y., & Wiersema, M. F. (2009). Stock market reaction to CEO certification: The signaling role of

CEO background. *Strategic Management Journal*, 30(7), 693–710.

Table 1. Sample composition by CEO turnover and founder-CEO status across years since IPO

	Founder-CEO	Non-founder-CEO	Total
$t = 0$			
No CEO turnover	867	522	1,389
CEO Turnover	0	5	5
$t = 1$			
No CEO turnover	841	477	1,318
CEO turnover	26	45	71
$t = 2$			
No CEO turnover	649	357	1,006
CEO turnover	46	55	101
$t = 3$			
No CEO turnover	557	283	840
CEO turnover	28	43	71

Notes: In the CEO turnover sample, there are five cases of non-founder-CEO turnover at the IPO year ($t = 0$). These turnovers occurred between the IPO date and the end of the first fiscal period after an IPO.

Table 2. Definitions of variables

Variable	Definition
Tobin's q	Market value of equity plus book value of debt, divided by book value of total assets.
ROA	Operating profits divided by total assets.
ROE	Net profits divided by equity
Employees	Logarithm of the number of employees.
Sales	Logarithm of sales in millions of yen.
Early incorporation	(=1) if the firm was incorporated before 1970, and (=0) otherwise.
Founder-CEO	(= 1) if the CEO at the time of the IPO is a founder, and (= 0) otherwise.
CEO turnover ($X(t)$)	(= 1) if the CEO at the time of the IPO is replaced by a successor during the post-IPO period, and (= 0) otherwise.
CEO age	Logarithm of the CEO's age in the data year.
CEO tenure	Logarithm of the number of years since the CEO's appointment.
Bachelor CEO	(=1) if the CEO's educational background is at the undergraduate level (bachelor), and (=0) otherwise.
Master/PhD CEO	(=1) if the CEO's educational background is at the graduate (master or doctor) level, and (=0) otherwise.
CAPEX	Ratio of capital expenditures to total assets.
Leverage	Ratio of total debt to total assets.
R&D expenditures	Ratio of R&D expenditures to total assets.
Board ownership	The ratio of shares held by the members of the board of directors to the total number of outstanding shares of the firm.
TOPIX	TOPIX normalized by its value in December 1999.

Table 3. Descriptive statistics of variables

Variable	Mean	SD	Min	p25	Median	p75	Max
Tobin's q	4.587	6.747	0.438	1.463	2.663	5.262	152.787
ROA	0.106	0.112	-1.065	0.059	0.109	0.160	0.535
ROE	0.098	0.337	-9.709	0.070	0.127	0.180	1.572
Employees	4.786	1.088	1.386	4.007	4.691	5.468	9.017
Sales	8.250	1.212	0.000	7.447	8.241	9.010	13.110
Early incorporation	0.063	0.243	0.000	0.000	0.000	0.000	1.000
Founder-CEO	0.622	0.485	0.000	0.000	1.000	1.000	1.000
CEO age	3.876	0.209	3.219	3.738	3.871	4.043	4.419
CEO tenure	2.166	0.735	0.000	1.609	2.197	2.239	3.892
Bachelor CEO	0.632	0.482	0.000	0.000	1.000	1.000	1.000
Master/PhD CEO	0.101	0.302	0.000	0.000	0.000	0.000	1.000
CAPEX	0.051	0.072	0.000	0.007	0.024	0.067	0.637
Leverage	0.423	0.224	0.000	0.236	0.407	0.601	1.513
R&D expenditures	0.014	0.037	0.000	0.000	0.000	0.008	0.400
Board ownership	0.200	0.233	0.000	0.000	0.098	0.360	0.879
TOPIX	0.844	0.189	0.423	0.698	0.884	0.995	1.179

Notes: The number of observations is 1,394. The definitions of variables are listed in Table 2. SD indicates standard deviation. These statistics are measured at the IPO year ($t = 0$).

Table 4. Estimation results for $\Delta\text{Tobins}'q$

Variable	$X(t) = 0$			$X(t) = 1$		
	(i) $t = 1$	(ii) $t = 2$	(iii) $t = 3$	(iv) $t = 1$	(v) $t = 2$	(vi) $t = 3$
Founder-CEO tenure effect (θ)	-0.723** (0.292)	-0.149 (0.151)	-0.136 (0.118)			
Founder-CEO imprinting effect ($-\lambda$)				0.087 (0.493)	-1.621 (1.368)	-0.154 (0.244)
ΔCAPEX	-2.781 (1.721)	-4.056 (3.676)	-2.435* (1.406)	-4.169 (2.883)	-2.336 (6.685)	4.057 (5.104)
$\Delta\text{Leverage}$	-3.829 (2.403)	-3.086*** (1.149)	-0.390 (0.857)	0.838 (1.214)	1.057 (2.497)	1.023* (0.529)
$\Delta\text{R\&D expenditures}$	4.901 (3.339)	14.315** (6.239)	-2.455 (4.642)	3.374 (3.169)	-0.647 (11.156)	-6.096 (9.964)
$\Delta\text{Board ownership}$	1.170 (0.916)	0.128 (0.637)	-2.371*** (0.875)	3.520 (4.632)	9.476 (9.936)	0.088 (1.495)
TOPIX	-1.433** (0.579)	-0.207 (0.312)	0.309 (0.286)	-2.541 (1.796)	-4.877 (4.706)	-0.280 (0.565)
Constant	0.270 (0.524)	-0.580** (0.242)	-0.702*** (0.197)	1.084 (1.096)	2.851 (3.269)	-0.226 (0.382)
Observations	1,323	1,067	965	71	105	98
Adj- R^2	0.012	0.026	0.009	0.038	0.004	-0.031
F	3.036***	2.884***	2.025*	3.039**	0.352	0.999

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values.

Table 5. Estimation results for Δ ROA

Variable	$X(t) = 0$			$X(t) = 1$		
	(i) $t = 1$	(ii) $t = 2$	(iii) $t = 3$	(iv) $t = 1$	(v) $t = 2$	(vi) $t = 3$
Founder-CEO tenure effect (θ)	-0.008 (0.005)	-0.001 (0.004)	0.003 (0.004)			
Founder-CEO imprinting effect ($-\lambda$)				0.004 (0.043)	-0.012 (0.014)	-0.005 (0.013)
Δ CAPEX	-0.079** (0.040)	-0.065 (0.056)	-0.035 (0.050)	-0.046 (0.925)	-0.091 (0.137)	-0.164 (0.156)
Δ Leverage	-0.323*** (0.040)	-0.295*** (0.066)	-0.182*** (0.061)	-0.355*** (0.080)	-0.272*** (0.057)	-0.426*** (0.081)
Δ R&D expenditures	-1.317*** (0.124)	-1.214*** (0.156)	-1.133*** (0.217)	-0.789*** (0.265)	-2.949*** (0.525)	-2.279** (0.984)
Δ Board ownership	0.023 (0.014)	-0.009 (0.019)	-0.027 (0.020)	0.251 (0.164)	0.085 (0.112)	-0.087 (0.107)
TOPIX	0.015 (0.013)	0.011 (0.009)	8.71×10^{-4} (0.009)	0.121 (0.073)	0.028 (0.028)	0.022 (0.031)
Constant	-0.041*** (0.012)	-0.032*** (0.008)	-0.022*** (0.007)	-0.149** (0.068)	-0.056** (0.022)	-0.037* (0.022)
Observations	1,323	1,067	965	71	105	98
Adj- R^2	0.301	0.299	0.159	0.152	0.643	0.565
F	36.537***	16.557***	6.643***	17.037***	28.560***	12.023***

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values.

Table 6. Estimation results for Δ Employees

Variable	$X(t) = 0$			$X(t) = 1$		
	(i) $t = 1$	(ii) $t = 2$	(iii) $t = 3$	(iv) $t = 1$	(v) $t = 2$	(vi) $t = 3$
Founder-CEO tenure effect (θ)	0.052*** (0.015)	0.039*** (0.012)	0.030*** (0.012)			
Founder-CEO imprinting effect ($-\lambda$)				0.090 (0.098)	0.037 (0.056)	0.039 (0.042)
Δ CAPEX	0.081 (0.107)	0.332* (0.187)	0.526** (0.237)	-0.637 (0.509)	1.006* (0.520)	-0.614 (0.779)
Δ Leverage	0.585*** (0.103)	0.385*** (0.121)	0.076 (0.194)	0.206 (0.271)	-0.110 (0.328)	-0.315** (0.122)
Δ R&D expenditures	-0.264** (0.115)	-0.994*** (0.339)	0.183 (0.493)	-0.116 (0.385)	0.745 (1.314)	2.321* (1.362)
Δ Board ownership	-0.057 (0.050)	-0.027 (0.056)	0.049 (0.083)	0.359 (0.328)	0.185 (0.342)	0.164 (0.282)
TOPIX	0.013 (0.036)	0.096*** (0.028)	0.160*** (0.029)	0.375** (0.186)	0.310*** (0.112)	0.353*** (0.101)
Constant	0.130*** (0.031)	0.050** (0.023)	-0.009 (0.021)	-0.217 (0.153)	-0.131 (0.080)	-0.158** (0.068)
Observations	1,323	1,067	965	71	105	98
Adj- R^2	0.071	0.053	0.047	0.022	0.037	0.121
F	7.577***	7.692***	11.119***	0.909	1.939*	3.173***

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values.

Table 7. Estimation results for ΔSales

Variable	$X(t) = 0$			$X(t) = 1$		
	(i) $t = 1$	(ii) $t = 2$	(iii) $t = 3$	(iv) $t = 1$	(v) $t = 2$	(vi) $t = 3$
Founder-CEO tenure effect (θ)	0.038* (0.021)	0.056*** (0.017)	0.056*** (0.016)			
Founder-CEO imprinting effect ($-\lambda$)				0.172 (0.124)	-0.027 (0.056)	0.029 (0.049)
ΔCAPEX	0.171 (0.161)	-0.187 (0.318)	0.282 (0.288)	-1.558 (1.708)	0.023 (0.610)	-1.191 (0.877)
$\Delta\text{Leverage}$	0.280** (0.120)	0.368*** (0.137)	0.077 (0.204)	-0.220 (0.206)	0.233 (0.309)	-0.135 (0.205)
$\Delta\text{R\&D expenditures}$	-0.813 (0.575)	-0.811 (0.521)	-0.593 (1.062)	-1.027 (3.729)	-2.312 (1.782)	-4.663 (4.347)
$\Delta\text{Board ownership}$	-0.003 (0.062)	-0.053 (0.092)	-0.149 (0.106)	0.730* (0.381)	0.428 (0.544)	-0.003 (0.283)
TOPIX	0.124** (0.057)	0.190*** (0.041)	0.139*** (0.038)	0.725** (0.278)	0.281** (0.121)	0.343*** (0.104)
Constant	0.008 (0.048)	-0.065** (0.032)	-0.034 (0.027)	-0.623** (0.271)	-0.134 (0.081)	-0.180** (0.069)
Observations	1,323	1,067	965	71	105	98
Adj- R^2	0.018	0.048	0.036	0.051	0.019	0.140
F	5.399***	11.374***	7.829***	2.076*	1.149	3.532***

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values.

Table 8. Estimation results for Δ Tobins'q: Endogenous switching regression model

	$t = 1$		$t = 2$		$t = 3$	
	(i) $X(t) = 0$	(ii) $X(t) = 1$	(iii) $X(t) = 0$	(iv) $X(t) = 1$	(v) $X(t) = 0$	(vi) $X(t) = 1$
<i>Outcome equation</i>						
Founder-CEO	-0.766** (0.302)	0.270 (0.326)	-0.224 (0.144)	-1.622 (1.327)	-0.235* (0.126)	-0.204 (0.240)
Δ CAPEX	-2.714* (1.552)	-6.102*** (1.886)	-3.112 (3.090)	-2.319 (6.390)	-1.601 (1.358)	4.945 (5.241)
Δ Leverage	-2.917 (1.786)	1.388* (0.801)	-2.763*** (0.995)	1.047 (2.366)	-0.216 (0.734)	0.958* (0.528)
Δ R&D expenditures	6.458 (4.490)	3.524** (1.594)	18.362** (8.464)	-0.847 (10.908)	-3.211 (4.282)	-10.336 (9.323)
Δ Board ownership	1.129 (0.936)	4.741 (2.983)	0.156 (0.651)	9.489 (9.699)	-2.176*** (0.808)	-2.53×10^{-4} (1.473)
Topix	-1.363** (0.599)	0.190 (0.759)	-0.010 (0.297)	-4.878 (4.559)	0.382 (0.269)	-0.407 (0.543)
Constant	0.686 (0.541)	4.774*** (1.510)	-0.374 (0.242)	2.750 (2.655)	-0.467** (0.184)	-0.889 (0.631)
σ	6.047*** (1.304)	3.485*** (0.873)	2.636*** (0.237)	6.185** (2.715)	1.874*** (0.156)	1.068*** (0.203)
ρ	0.830*** (0.084)	-0.962*** (0.028)	0.788*** (0.078)	0.010 (0.142)	0.745*** (0.077)	0.447* (0.256)
<i>Selection equation</i>						
CEO age ($t = 0$)	0.467* (0.239)		0.905*** (0.252)		0.569* (0.299)	
CEO tenure ($t = 0$)	-0.096* (0.051)		-0.127** (0.057)		-0.266*** (0.068)	
Bachelor CEO ($t = 0$)	-0.031 (0.061)		0.276*** (0.105)		0.192 (0.136)	
Master /PhD CEO ($t = 0$)	-0.376** (0.184)		-0.245 (0.289)		-0.367 (0.297)	
ROE ($t = 0$)	-0.188** (0.074)		-0.481** (0.201)		-0.220** (0.087)	
Constant	-2.893*** (0.884)		-4.606*** (1.022)		-2.981** (1.202)	
Observations	1,394		1,172		1,063	
Log likelihood	-4,557		-3,123		-2,341	
χ^2	17.7***		16.3**		13.8**	

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values. σ denotes the square-root of the variance of the error terms in the outcome equations. ρ denotes the correlation coefficient between the error term of the selection equation and the error term of the outcome equations.

Table 9. Estimation results for Δ ROA: Endogenous switching regression model

	$t = 1$		$t = 2$		$t = 3$	
	(i) $X(t) = 0$	(ii) $X(t) = 1$	(iii) $X(t) = 0$	(iv) $X(t) = 1$	(v) $X(t) = 0$	(vi) $X(t) = 1$
<i>Outcome equation</i>						
Founder-CEO	-0.008 (0.005)	0.066 (0.041)	-0.001 (0.004)	-0.013 (0.014)	1.75×10^{-4} (0.003)	-0.002 (0.012)
Δ CAPEX	-0.082** (0.038)	0.213 (0.440)	-0.065 (0.055)	-0.088 (0.135)	-0.027 (0.046)	-0.179 (0.148)
Δ Leverage	-0.313*** (0.041)	-0.299*** (0.105)	-0.294*** (0.066)	-0.274*** (0.055)	-0.124*** (0.043)	-0.420*** (0.080)
Δ R&D expenditures	-1.321*** (0.133)	-1.183*** (0.175)	-1.215*** (0.156)	-2.930*** (0.491)	-0.956*** (0.242)	-2.433** (1.026)
Δ Board ownership	0.022 (0.014)	0.383 (0.243)	-0.008 (0.019)	0.089 (0.110)	-0.031 (0.020)	-0.074 (0.103)
Topix	0.012 (0.012)	0.077** (0.031)	0.011 (0.009)	0.029 (0.027)	-0.003 (0.008)	0.029 (0.030)
Constant	-0.031*** (0.012)	0.478*** (0.160)	-0.033*** (0.008)	-0.079 (0.049)	-0.011* (0.006)	0.012 (0.042)
σ	0.101*** (0.007)	0.316*** (0.087)	0.065*** (0.004)	0.067*** (0.010)	0.055*** (0.004)	0.062*** (0.013)
ρ	0.642*** (0.144)	-0.992*** (0.012)	-0.102** (0.047)	0.195 (0.376)	0.858*** (0.039)	-0.557* (0.314)
<i>Selection equation</i>						
CEO age ($t = 0$)	0.154 (0.236)		0.952*** (0.303)		0.763*** (0.228)	
CEO tenure ($t = 0$)	-0.105* (0.063)		-0.191*** (0.069)		-0.164*** (0.057)	
Bachelor CEO ($t = 0$)	0.004 (0.076)		0.335*** (0.119)		0.315*** (0.112)	
Constant	-1.957** (0.837)		-4.880*** (1.191)		-4.045*** (0.868)	
Observations	1,394		1,172		1,063	
Log likelihood	992		1,197		1,374	
χ^2	194***		99.8***		25.3***	

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values. σ denotes the square-root of the variance of the error terms in the outcome equations. ρ denotes the correlation coefficient between the error term of the selection equation and the error term of the outcome equations.

Table 10. Estimation results for Δ Employees: Endogenous switching regression model

	$t = 1$		$t = 2$		$t = 3$	
	(i) $X(t) = 0$	(ii) $X(t) = 1$	(iii) $X(t) = 0$	(iv) $X(t) = 1$	(v) $X(t) = 0$	(vi) $X(t) = 1$
<i>Outcome equation</i>						
Founder-CEO	0.052*** (0.015)	-0.058 (0.094)	0.040*** (0.012)	0.007 (0.046)	0.036*** (0.011)	0.046 (0.039)
Δ CAPEX	0.081 (0.107)	-0.281 (0.498)	0.312* (0.182)	0.789 (0.509)	0.541** (0.227)	-0.683 (0.758)
Δ Leverage	0.585*** (0.103)	0.136 (0.143)	0.296** (0.124)	-0.246 (0.317)	-0.013 (0.176)	-0.310*** (0.118)
Δ R&D expenditures	-0.264** (0.115)	0.230 (0.451)	-0.992*** (0.348)	0.327 (1.209)	0.345 (0.504)	2.648* (1.428)
Δ Board ownership	-0.057 (0.050)	0.283 (0.245)	-0.001 (0.056)	0.249 (0.306)	0.064 (0.082)	0.174 (0.274)
Topix	0.013 (0.036)	0.290** (0.135)	0.109*** (0.028)	0.303*** (0.093)	0.166*** (0.028)	0.364*** (0.100)
Constant	0.131*** (0.031)	-1.041** (0.481)	0.014 (0.023)	-0.678** (0.272)	-0.040* (0.021)	-0.090 (0.111)
σ	0.270*** (0.017)	0.522*** (0.200)	0.218*** (0.011)	0.377*** (0.115)	0.190*** (0.009)	0.187*** (0.027)
ρ	0.023 (0.175)	0.913*** (0.088)	-0.720*** (0.066)	0.883*** (0.112)	-0.703*** (0.104)	-0.255 (0.321)
<i>Selection equation</i>						
CEO age ($t = 0$)	0.714** (0.286)		0.494 (0.363)		0.559** (0.267)	
CEO tenure ($t = 0$)	-0.257*** (0.085)		-0.146** (0.063)		-0.349*** (0.065)	
Bachelor CEO ($t = 0$)	0.107 (0.098)		0.206 (0.149)		0.247* (0.129)	
Master /PhD CEO ($t = 0$)	-0.099 (0.173)		-0.198 (0.175)		-0.248 (0.230)	
ROE ($t = 0$)	-0.216* (0.116)		-0.330* (0.175)		-0.177 (0.121)	
Constant	-3.933*** (1.053)		-3.011** (1.439)		-2.882*** (1.051)	
Observations	1,394		1,172		1,063	
Log likelihood	-426		-140		17.828	
χ^2	43.9***		45.2***		77.6***	

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to $t (= 1, 2, \text{ or } 3)$, expressed as annualized values. σ denotes the square-root of the variance of the error terms in the outcome equations. ρ denotes the correlation coefficient between the error term of the selection equation and the error term of the outcome equations.

Table 11. Estimation results for Δ Sales: Endogenous switching regression model

	$t = 1$		$t = 2$		$t = 3$	
	(i) $X(t) = 0$	(ii) $X(t) = 1$	(iii) $X(t) = 0$	(iv) $X(t) = 1$	(v) $X(t) = 0$	(vi) $X(t) = 1$
<i>Outcome equation</i>						
Founder-CEO	0.039* (0.021)	0.280 (0.176)	0.053*** (0.018)	-0.039 (0.054)	0.060*** (0.016)	0.054 (0.045)
Δ CAPEX	0.171 (0.161)	-0.875 (1.022)	-0.192 (0.320)	0.025 (0.523)	0.287 (0.286)	-1.506* (0.874)
Δ Leverage	0.279** (0.120)	0.197 (0.934)	0.375*** (0.137)	0.179 (0.294)	0.072 (0.202)	-0.107 (0.197)
Δ R&D expenditures	-0.814 (0.574)	0.974 (0.758)	-0.756 (0.510)	-3.098** (1.437)	-0.595 (1.057)	-0.586 (4.834)
Δ Board ownership	-0.003 (0.062)	0.647 (0.686)	-0.058 (0.090)	0.567 (0.480)	-0.151 (0.106)	8.79×10^{-5} (0.284)
Topix	0.124** (0.057)	0.565*** (0.160)	0.187*** (0.041)	0.271** (0.116)	0.140*** (0.038)	0.420*** (0.110)
Constant	0.004 (0.048)	1.465** (0.683)	-0.046 (0.033)	-0.540*** (0.190)	-0.047* (0.027)	0.194 (0.218)
σ	0.379*** (0.044)	1.028*** (0.359)	0.267*** (0.014)	0.330*** (0.070)	0.231*** (0.011)	0.310*** (0.093)
ρ	-0.076** (0.037)	-0.985*** (0.025)	0.306 (0.211)	0.745*** (0.167)	-0.261** (0.110)	-0.833*** (0.175)
<i>Selection equation</i>						
CEO age ($t = 0$)	0.075 (0.284)		1.082*** (0.319)		0.331 (0.348)	
CEO tenure ($t = 0$)	-0.179** (0.079)		-0.109 (0.080)		-0.312*** (0.080)	
Bachelor CEO ($t = 0$)	-0.016 (0.101)		0.317** (0.135)		0.228** (0.114)	
Master /PhD CEO ($t = 0$)	-0.228 (0.148)		-0.228 (0.253)		-0.059 (0.293)	
ROE ($t = 0$)	0.028 (0.091)		-0.889*** (0.200)		-0.305*** (0.067)	
Constant	-1.532 (1.006)		-5.448*** (1.308)		-2.096* (1.268)	
Observations	1,394		1,172		1,063	
Log likelihood	-899		-426		-242	
χ^2	32.7***		64.5***		49.0***	

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values. σ denotes the square-root of the variance of the error terms in the outcome equations. ρ denotes the correlation coefficient between the error term of the selection equation and the error term of the outcome equations.

Table 12. Estimation results for Δ Tobin's q and Δ ROA: Endogenous treatment effects model

Variable	Δ Tobin's q			Δ ROA		
	(i) $t = 1$	(ii) $t = 2$	(iii) $t = 3$	(iv) $t = 1$	(v) $t = 2$	(vi) $t = 3$
<i>Outcome equation</i>						
Founder-CEO	-0.431 (0.444)	-0.112 (0.408)	-0.298* (0.156)	-0.008 (0.011)	-0.001 (0.006)	0.006 (0.005)
Δ CAPEX	-3.044* (1.633)	-3.535 (3.440)	-1.921 (1.356)	-0.072 (0.049)	-0.061 (0.052)	-0.040 (0.048)
Δ Leverage	-3.233 (2.148)	-2.599*** (0.932)	-0.158 (0.666)	-0.328*** (0.037)	-0.319*** (0.055)	-0.230*** (0.067)
Δ R&D expenditures	4.881 (3.123)	13.781** (5.944)	-2.386 (4.350)	-1.287*** (0.121)	-1.308*** (0.147)	-1.228*** (0.238)
Δ Board ownership	1.124 (0.886)	0.518 (0.810)	-2.096** (0.823)	0.027* (0.014)	0.001 (0.019)	-0.026 (0.019)
TOPIX	-1.571*** (0.554)	-0.626 (0.507)	0.325 (0.269)	0.023* (0.012)	0.013 (0.009)	0.001 (0.008)
Constant	0.213 (0.511)	-0.329 (0.294)	-0.620*** (0.180)	-0.048*** (0.013)	-0.035*** (0.008)	-0.024*** (0.006)
<i>Treatment equation: Founder-CEO</i>						
Early incorporation	-2.258*** (0.214)	-1.824*** (0.249)	-1.845*** (0.245)	-2.259*** (0.214)	-1.826*** (0.248)	-1.835*** (0.248)
CEO age	-1.351*** (0.221)	-0.909*** (0.261)	-1.028*** (0.252)	-1.377*** (0.211)	-0.935*** (0.221)	-0.983*** (0.234)
CEO tenure	0.949*** (0.074)	0.560*** (0.064)	0.564*** (0.061)	0.949*** (0.074)	0.560*** (0.064)	0.566*** (0.061)
Bachelor CEO	-0.136 (0.095)	-0.262*** (0.101)	-0.211* (0.108)	-0.132 (0.095)	-0.257*** (0.098)	-0.230** (0.106)
Master/PhD CEO	0.100 (0.148)	-0.044 (0.157)	-0.217 (0.163)	0.103 (0.148)	-0.037 (0.154)	-0.230 (0.162)
Board ownership	0.623*** (0.195)	0.934*** (0.214)	0.955*** (0.218)	0.614*** (0.196)	0.922*** (0.206)	0.969*** (0.217)
TOPIX	-0.075 (0.190)	0.177 (0.191)	0.447** (0.205)	-0.075 (0.190)	0.178 (0.192)	0.454** (0.206)
Constant	3.643*** (0.834)	2.622*** (1.010)	2.870*** (0.978)	3.743*** (0.795)	2.722*** (0.855)	2.695*** (0.911)
Observations	1,394	1,172	1,063	1,394	1,172	1,063
Log likelihood	-5,069	-3,582	-2,628	532	896	1,085
χ^2	20.4***	16.5**	12.2*	234***	127***	43.8***
ρ	-0.040	-0.035	0.066	0.016	-9.19×10^{-5}	-0.031
LR test (χ^2)	0.381	0.106	1.233	0.047	2.32×10^{-6}	0.263

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from $t = 0$ to $t (= 1, 2, \text{ or } 3)$, expressed as annualized values. ρ denotes the correlation between the unobserved errors between the outcome and treatment equations. The likelihood-ratio (LR) test assesses the null hypothesis that $\rho = 0$, implying no endogenous correlation between the two equations.

Table 13. Estimation results for Δ Employees and Δ Sales: Endogenous treatment effects model

Variable	Δ Employees			Δ Sales		
	(i) $t = 1$	(ii) $t = 2$	(iii) $t = 3$	(iv) $t = 1$	(v) $t = 2$	(vi) $t = 3$
<i>Outcome equation</i>						
Founder-CEO	0.049** (0.024)	0.063*** (0.022)	0.064*** (0.023)	0.080* (0.044)	0.078*** (0.027)	0.102*** (0.027)
Δ CAPEX	0.083 (0.103)	0.389** (0.179)	0.442** (0.224)	0.148 (0.164)	-0.149 (0.300)	0.161 (0.271)
Δ Leverage	0.542*** (0.106)	0.282** (0.120)	0.011 (0.144)	0.227* (0.117)	0.290** (0.123)	0.024 (0.156)
Δ R&D expenditures	-0.272** (0.110)	-0.857** (0.335)	0.251 (0.468)	-0.852 (0.607)	-0.859* (0.514)	-0.973 (1.076)
Δ Board ownership	-0.047 (0.049)	-0.010 (0.056)	0.025 (0.082)	0.007 (0.062)	-0.028 (0.091)	-0.184* (0.102)
TOPIX	0.037 (0.035)	0.119*** (0.028)	0.161*** (0.030)	0.157*** (0.058)	0.198*** (0.039)	0.138*** (0.037)
Constant	0.109*** (0.033)	0.014 (0.023)	-0.030 (0.021)	-0.052 (0.052)	-0.087*** (0.030)	-0.060** (0.027)
<i>Treatment equation: Founder-CEO</i>						
Early incorporation	-2.257*** (0.214)	-1.830*** (0.245)	-1.844*** (0.243)	-2.252*** (0.215)	-1.824*** (0.247)	-1.822*** (0.246)
CEO age	-1.353*** (0.222)	-1.020*** (0.243)	-1.128*** (0.268)	-1.414*** (0.223)	-1.003*** (0.239)	-1.135*** (0.263)
CEO tenure	0.950*** (0.074)	0.560*** (0.064)	0.563*** (0.061)	0.947*** (0.074)	0.561*** (0.064)	0.564*** (0.061)
Bachelor CEO	-0.133 (0.094)	-0.250** (0.099)	-0.204* (0.108)	-0.130 (0.094)	-0.251** (0.098)	-0.208** (0.106)
Master/PhD CEO	0.100 (0.147)	-0.032 (0.154)	-0.217 (0.162)	0.103 (0.148)	-0.030 (0.154)	-0.212 (0.163)
Board ownership	0.626*** (0.196)	0.882*** (0.212)	0.922*** (0.221)	0.611*** (0.194)	0.901*** (0.208)	0.931*** (0.218)
TOPIX	-0.075 (0.190)	0.188 (0.192)	0.461** (0.207)	-0.073 (0.190)	0.180 (0.192)	0.454** (0.207)
Constant	3.647*** (0.846)	3.050*** (0.951)	3.256*** (1.051)	3.895*** (0.847)	2.982*** (0.935)	3.285*** (1.034)
Observations	1,394	1,172	1,063	1,394	1,172	1,063
Log likelihood	-852	-452	-241	-1,343	-724	-496
χ^2	44.8***	60.1***	79.7***	30.5***	70.6***	54.3***
ρ	0.025	-0.093	-0.136	-0.062	-0.082	-0.156
LR test (χ^2)	0.126	1.579	2.394	0.586	1.414	3.076*

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from $t = 0$ to $t (= 1, 2, \text{ or } 3)$, expressed as annualized values. ρ denotes the correlation between the unobserved errors between the outcome and treatment equations. The likelihood-ratio (LR) test assesses the null hypothesis that $\rho = 0$, implying no endogenous correlation between the two equations.

Table 14. Longitudinal effects of founder-CEO presence.

Panel A. Founder-CEO tenure effect (θ): $X(t) = 0$					
	Observations	Δ Tobin's q	Δ ROA	Δ Employees	Δ Sales
$t = 1$	1,323	-0.723**	-0.008	0.052***	0.038*
$t = 2$	1,067	-0.149	-0.001	0.039***	0.056***
$t = 3$	965	-0.136	0.003	0.030***	0.056***
$t = 4$	865	-0.027	-0.003	0.029***	0.048***
$t = 5$	776	-0.101	-0.002	0.027***	0.044***
$t = 6$	697	-0.058	-0.000	0.029***	0.036***
$t = 7$	606	-0.077	0.001	0.020**	0.025**
$t = 8$	545	-0.057	-0.002	0.027***	0.029***
$t = 9$	505	0.019	-0.003*	0.027***	0.024**
$t = 10$	442	0.023	-0.001	0.024***	0.026***
Panel B. Founder-CEO imprinting effect ($-\lambda$): $X(t) = 1$					
	Observations	Δ Tobin's q	Δ ROA	Δ Employees	Δ Sales
$t = 1$	71	0.087	0.004	0.090	0.172
$t = 2$	105	-1.621	-0.012	0.037	-0.027
$t = 3$	98	-0.154	-0.005	0.039	0.029
$t = 4$	102	0.051	-0.000	-0.025	-0.006
$t = 5$	91	0.293	-0.009	-0.027	-0.033
$t = 6$	83	-0.011	-0.011	-0.026	-0.025
$t = 7$	71	-0.359***	-0.006	0.042	0.070**
$t = 8$	59	-0.064	-0.005	0.006	0.004
$t = 9$	43	-0.132	0.022**	0.017	0.032
$t = 10$	61	-0.132	-0.006	0.042*	0.008

Notes: This table reports the coefficients of founder-CEO presence from separate cross-sectional regressions for each year after an IPO. All regressions include the same set of control variables used in Table 4 to Table 7. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values.

Table 15. Estimation results for Δ Tobin's q and Δ ROA, including with CEO personal attributes, for firms with CEO turnover.

Variable	Δ Tobin's			Δ ROA		
	(i) $t = 1$	(ii) $t = 2$	(iii) $t = 3$	(iv) $t = 1$	(v) $t = 2$	(vi) $t = 3$
Founder-CEO imprinting effect ($-\lambda$)	0.262 (0.642)	-0.950 (0.866)	-0.197 (0.265)	-0.006 (0.049)	-0.010 (0.014)	-0.005 (0.012)
CEO age (ex-turnover)	3.567** (1.494)	-3.420 (5.190)	0.725 (0.628)	0.220 (0.190)	0.018 (0.038)	-0.012 (0.029)
Bachelor CEO (ex-turnover)	-0.004 (0.418)	0.217 (0.697)	0.159 (0.220)	0.023 (0.040)	-0.017 (0.025)	0.042** (0.019)
Master/PhD CEO (ex-turnover)	0.238 (0.962)	4.049 (3.347)	-0.196 (0.687)	0.071 (0.105)	-0.002 (0.037)	0.043* (0.024)
CEO age (post-turnover)	-0.770 (1.523)	4.462 (5.121)	-0.235 (0.521)	-0.194 (0.162)	0.011 (0.040)	-0.002 (0.035)
Bachelor CEO (post-turnover)	-0.439 (0.542)	-0.278 (0.567)	-0.132 (0.184)	-0.053 (0.044)	0.003 (0.015)	-0.035* (0.018)
Master/PhD CEO (post-turnover)	-0.615 (0.957)	-6.047 (5.418)	-0.975* (0.499)	-0.124 (0.077)	-0.007 (0.030)	-0.022 (0.029)
Δ CAPEX	-4.229 (3.878)	7.095 (7.388)	4.563 (4.304)	-0.032 (0.914)	-0.062 (0.144)	-0.185 (0.158)
Δ Leverage	1.475 (1.202)	2.517 (3.584)	0.675 (0.677)	-0.345*** (0.079)	-0.253*** (0.063)	-0.450*** (0.068)
Δ R&D expenditures	3.781 (4.423)	5.508 (14.067)	-4.122 (12.144)	-0.713*** (0.262)	-2.955*** (0.527)	-2.375** (0.984)
Δ Board ownership	6.487 (4.848)	9.573 (10.154)	0.044 (1.282)	0.357 (0.230)	0.094 (0.113)	-0.061 (0.110)
TOPIX	-2.203 (1.635)	-4.532 (4.399)	-0.014 (0.552)	0.120 (0.093)	0.035 (0.029)	0.032 (0.030)
Constant	-9.879 (6.746)	-1.092 (6.002)	-2.261 (2.849)	-0.224 (0.443)	-0.165 (0.136)	0.007 (0.135)
Observations	71	105	98	71	105	98
Adj- R^2	0.116	0.045	-0.024	0.154	0.626	0.576
F	1.208	0.345	1.279	9.062***	22.552***	13.046***

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to t ($= 1, 2$, or 3), expressed as annualized values.

Table 16. Estimation results for Δ Employees and Δ Sales, including with CEO personal attributes, for firms with CEO turnover.

Variable	Δ Employees			Δ Sales		
	(i)	(ii)	(iii)	(iv)	(v)	(vi)
	$t = 1$	$t = 2$	$t = 3$	$t = 1$	$t = 2$	$t = 3$
Founder-CEO imprinting effect ($-\lambda$)	0.063 (0.128)	0.032 (0.056)	0.015 (0.040)	0.157 (0.143)	-0.028 (0.060)	0.005 (0.050)
CEO age (ex-turnover)	-0.229 (0.309)	-0.205 (0.143)	0.020 (0.111)	0.263 (0.488)	-0.290 (0.188)	-0.047 (0.133)
Bachelor CEO (ex-turnover)	-0.238 (0.162)	0.058 (0.079)	0.013 (0.073)	0.082 (0.169)	-0.064 (0.077)	0.091 (0.075)
Master/PhD CEO (ex-turnover)	-0.217 (0.155)	0.083 (0.085)	0.011 (0.099)	-0.473 (0.401)	-0.054 (0.123)	0.183 (0.118)
CEO age (post-turnover)	0.090 (0.305)	0.084 (0.118)	-0.341*** (0.121)	-0.506 (0.477)	0.125 (0.209)	-0.307* (0.163)
Bachelor CEO (post-turnover)	0.215 (0.133)	-0.057 (0.083)	0.014 (0.056)	0.061 (0.150)	0.027 (0.059)	-0.028 (0.052)
Master/PhD CEO (post-turnover)	0.223 (0.157)	0.024 (0.114)	0.056 (0.101)	-0.344 (0.452)	-0.010 (0.103)	0.086 (0.133)
Δ CAPEX	-0.578 (0.581)	0.918* (0.551)	-0.418 (0.780)	-1.110 (1.829)	0.016 (0.583)	-1.014 (0.959)
Δ Leverage	0.226 (0.274)	-0.147 (0.335)	-0.379*** (0.122)	-0.385 (0.245)	0.227 (0.320)	-0.207 (0.225)
Δ R&D expenditures	0.080 (0.402)	0.901 (1.323)	2.689* (1.424)	-0.743 (2.821)	-1.963 (1.791)	-4.935 (4.141)
Δ Board ownership	0.550 (0.385)	0.178 (0.346)	0.088 (0.301)	0.578 (0.716)	0.448 (0.551)	-0.026 (0.272)
TOPIX	0.393** (0.179)	0.260** (0.111)	0.341*** (0.092)	0.629** (0.250)	0.260** (0.123)	0.333*** (0.098)
Constant	0.315 (0.640)	0.376 (0.746)	1.088** (0.439)	0.353 (1.155)	0.582 (0.736)	1.159** (0.504)
Observations	71	105	98	71	105	98
Adj- R^2	0.052	0.022	0.197	0.146	0.011	0.239
F	1.020	1.925**	3.173***	1.258	1.000	3.360***

Notes: Figures in parentheses are robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All variables with a Δ prefix represent the difference from the IPO year ($t = 0$) to $t (= 1, 2, \text{ or } 3)$, expressed as annualized values.



Figure 1. Post-IPO outcomes over time for founder- and non-founder-CEO-led firms

Notes: See Table 2 for the definitions of these variables and Table 1 for the number of firms in t .