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Article

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RELATIONSHIP BETWEEN CORPORATE CEO SUCCESSION PLANNING AND CORPORATE PERFORMANCE

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Abstract

In an increasingly competitive market environment, as an important decision for strategic change, CEO succession is a key step to driving sustainable development. The formulation of succession plans and how to improve the effectiveness of internal promotion mechanisms have been researched topics in executive team management. To explore the relationship between corporate executive succession planning and corporate performance, using 3955 CEO succession samples from 2599 companies during 2001-2015 in China, the Probit model, and the two-stage least squares method, the relationship between corporate CEO succession planning and corporate performance under the director-cum-CEO succession model was analysed. The results reveal that the formulation or not of succession plans in firms, particularly in listed firms, directly affects firm performance. Director-CEO internal succession decisions reduce firm performance relative to other CEO succession models. Conclusions obtained from this study indicate the relationship between succession planning and organisational performance at the micro level and provide a theoretical reference to further promote research related to succession decisions in listed companies and the long-term development interests of firms.

Keywords: Succession planning, organisational performance, internal appointments, CEO succession.

JEL Classification: M12, M19, M50

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Introduction

CEO succession is an important way of corporate change and innovation (Liu, 2020). CEOs are the makers of important corporate strategies and have important implications for corporate development. Most modern enterprises in China have a paternalistic and empirical management model. With the change in corporate values and the diversified development of market demand, it is important to know how to innovatively expand the family's business management model and how to choose the future successor of the enterprise in the new development pattern to reflect the need for an efficient operation mechanism for the team building of SMEs in China. According to relevant studies, enterprises cope with the uncertainty of the market operating environment. In addition, the temporary succession mode in the CEO succession accounted for 18%-20% (Ballinger and Marcel, 2010), and only 28% of the successors were in accordance with the organisation's succession plan to take over (Lian et al., 2021). Moreover, the decision to adopt a temporary selection of the CEO will bring certain negative effects on corporate management. This event causes the board of directors to distrust the selected business managers, power limitations (Honjo and Kato, 2021), and difficulties in finding a permanent full CEO successor quickly in reality (Charan, 2005). Therefore, companies will adopt internal succession decisions to reduce costs, believing that internal decision-making mechanisms are beneficial for companies not only to improve their internal promotion mechanisms, but also to have a good external market response during leadership changes.

The high mobility of talents highlights the difficulty for enterprises to retain talent (Lott, 2020; Restaino, Vitale and Primerano, 2020). Developing a succession plan for professional managers will have some impact on maintaining the sustainability of corporate development (Mubarik, Chandran and Devadason, 2018). The interim CEO succession is an alternative to the succession plan and is subject to "unplanned" uncertainty. Most researchers believe that the decision to interim CEO succession will have more negative effects on the company. Moreover, the environment of interim succession is more challenging than that of planned succession (Marcel, Cowen and Ballinger, 2013), which may bring some negative effects on the strategic plan of the enterprise and the trust of the top management team (Intintoli, Zhang and Davidson, 2014). This case is detrimental to the long-term interests of the company. However, the formulation of a succession plan is an effective way to reduce corporate human management costs and improve corporate competitiveness (Hu, 2021). Internal succession decisions within the plan have lower agency costs due to the familiarity of the board with the CEO's internal successor. Second, based on the human capital specificity view, the career experience of the internal CEO successor is more compatible with the firm, whereas the external CEO successor is less familiar because of cross-industry and cross-firm reasons. Moreover, the corporate board prefers to choose a successor from within (Liang et al., 2016).

Thus, CEO succession based on the relationship between promoting insiders and appointing outsiders has been extensively studied in the literature. Their succession choices have an impact on stock returns and accounting performance. More and more directors-cum-CEOs are hired, and succession planning has an impact on firm performance. Hence, this study attempts to examine how the post-succession performance of firms that hire directors-cum-CEOs compares to other succession firms. The importance of succession planning is examined by comparing and analysing the impact of planned and unplanned director-CEO appointments on firm performance. This study focuses on the CEO appointment announcement and the operating conditions and stock performance of the post-appointment period.

Compared to previous studies, the contributions of the present study are mainly in the following two aspects: (1) using succession planning as the entry point, we analyse the relationship between director and CEO succession models and firm performance in a comparative regression, revealing the importance of succession planning; (2) we reveal the external business impact of internal succession models on firms from two dimensions: firm operating performance and stock returns, and provide a reference direction for the selection of succession models for Chinese listed firms to motivate corporate management to better operate corporate resources.

The rest of the study is organised as follows: Section 1 provides a literature review of succession planning development and decision-making on firm performance and hypotheses on their relationship. Section 2 provides the variable design and the descriptive analysis of the sample. Section 3 analyses the performance of the market on the presence or absence of succession plans and the market response to director-CEO appointments and presents empirical evidence on the association between director-CEO appointments and post-appointment firm performance. Section 4 discusses the findings of this study and presents the outlook for the research gaps.

1. Literature Review and Hypothetical Development

1.1 Succession planning and market response

When a former CEO leaves suddenly for his or her reasons, an established succession plan can help the company plan through the executive change period to ensure leadership continuity. However, most companies currently do not have effective succession plans in place, and some companies' boards spend only a minimal amount of time on average each year developing succession plans (Mooney, Semadeni and Kesner, 2016). Thus, companies are forced to choose interim succession after the sudden departure of a former CEO. The decisions of an interim succession of public companies reflect the flexibility and strategic management capabilities of the company to deal with unexpected crises. Regarding the choice of the CEO, the company looks more at the ability to act in a competitive environment, that is, the ability of management to respond quickly to changes and take advantage of strategic opportunities (Zhang and Ye, 2022). The role of CEO competencies in terms of financial expertise has been re-emphasised in terms of the impact of CEO competencies on the director's concurrent appointment as the CEO and on the firm's performance (Zeng, Liu and Pang, 2022).

There are four general models for CEO succession: external appointment, internal election, chairman concurrently, and group company dispatch. He and Wang (2014), Xu and Xi (2015) discussed The importance of succession planning in terms of organisational effectiveness, and argued that temporary succession can negatively affect corporate performance. Given the hierarchical nature of executives, they must be given the ability to directly execute strategic decisions and effectively respond to industry or market changes (Finkelstein, Hambrick and Cannella, 2009). However, temporary appointments of successors because of inadequate planning may suffer from a lack of effectiveness during the succession period. The results of which are attributed to the CEO's need to observe changes in the company's market and react quickly in the presence of too many uncertainties (Edward, 1990). Meanwhile, succession planning also influences the future direction of the company (Jung and Subramanian, 2021). A comparative analysis of interim and traditional procedural succession planning has also been conducted. The results show that companies that are prepared to respond to crises, which are, have succession plans in place in advance, are superior (Zhang and Rajagopalan, 2003). Ballinger and Marcel (2010) compared performance using the length of tenure as a control variable. They found that permanent successors performed better relative to interim successions because CEO appointments without a succession plan may signal that the company's succession plan is inadequate and the market will question the company's strategic direction and outlook. The specific explanation is that interim CEOs have higher change costs to implement their business strategies due to the nature of their temporary positions. In addition, their main responsibility is to help the company find the right CEO to manage the company temporarily, which shows that interim CEOs do not contribute much to the performance of the company. Conversely, interim succession can reinforce the normal disruptive effects of the succession process, thereby creating additional uncertainty for the company. Interim CEOs are short-term appointments by firms to smoothly transition from a crisis. Moreover, they may have certain short-sighted behavior because of their short tenure and weak motivation to turn around (Lu et al., 2020), making it difficult to enhance firm performance and corporate value to a large extent during their tenure. In summary, succession planning has an important impact on the future development of listed companies. This study proposes the following hypothesis based on the above analysis.

- H1: Succession planning development for listed companies has a positive impact on corporate performance.

1.2 Director and CEO appointment and corporate performance

CEO succession rules can affect the outcome of corporate succession and, in turn, the firm's experience strategy. He, Zhao and Wang (2013) categorised firms' succession models into three types in terms of individual and team dimensions: internal individual succession, selection of professional managers, and overall team succession models. Tao and Zhao (2019) found that the executive succession model significantly affects the firm's market performance. One view is that executive succession can positively contribute to firm performance. In addition, Huson, Malatesta and Parrino (2004) showed that firms improve their performance after making succession announcements and that capital markets respond positively to changes. On the choice of the succession model in family firms, Kellermanns et al. (2008) argued that the choice of intra-family member succession positively affects performance because of the influence of tacit know-how. However, some scholars found that business succession decisions without a family succession system and the selection of new successors had a significantly higher business performance (Hu and Hwan, 2022). Another view is that executive succession has an inverse effect on performance; for example, most early studies used agency theory. This theory argues that the appointment of corporate executives to internal boards reduces board independence, does not facilitate objective and effective board oversight of corporate decisions, and is not conducive to improving corporate performance (Fama and Jensen, 1983). The problems of corporate management exposed by acting CEO succession can increase the tendency of negative media coverage of the organisation, which in turn inhibits the growth of corporate performance (Lian, Liu and Gao, 2020). Liu, Lv and Xue (2022) elaborated on the two effects of external succession on corporate performance in terms of adaptive and destructive, arguing that if the destructive effect is enhanced, then corporate performance will decrease.

The board of directors has an important role in deciding the future development strategy of the firm, and the board will consider the management rights of the CEO when making decisions (Zou and Fu, 2020). The appointment of the CEO is a concrete manifestation of the principal-agent relationship at the firm level, and the director-CEO model can reduce management costs because of information asymmetry. Moreover, the board is more willing to trust them to improve the efficiency of the firm's investment with professional quality (Yuan et al., 2017). Studies noted that with a higher proportion of board insiders and greater ownership by board insiders, CEO successors are less likely to come from outside the firm (Boeker and Goodstein, 1993). Companies appoint directors as CEOs because directors and CEOs are the best candidates, combining outsider and insider stakeholders, and being insiders who understand the company's culture better. Moreover, concurrent appointments are beneficial for enhancing corporate governance (Ma, 2021). Perceptions in this specific context can be significantly more advantageous than external candidates, where the knowledge or experience of outsiders may not be transferable because of the idiosyncratic differences among companies. The board already has an established working relationship with the director-cum-CEO and has a better understanding of the director's capabilities relative to those of the external candidate. Thus, hiring a director has less uncertainty and a lower hiring risk. The director-cum-CEO can improve the efficiency of communication at the decision-making level of the firm. Moreover, hiring someone who is not a director as the CEO is suggested to have higher information communication costs with the board of directors, which in turn results in lower quality outcomes in corporate decision-making and execution, and ultimately reduces the business performance of the firm (Ma and Shi, 2019). Based on this, inside directors are better able to perform as corporate decision-makers by virtue of their familiarity with the firm and their expertise. The following hypothesis is proposed.

- H2: Firms that appoint directors and CEOs outperform other firms that adopt other CEO succession models.

2. Methodology

2.1 Variables

- Explanatory variables: *ROA* and *ROE*

To examine the impact of succession decisions on firm performance, Ballinger and Marcel (2010) were followed to select *ROA* as a measure to analyse the operational performance (as measured by return on assets) of the appointed director and CEO after taking office. The net return from the portfolio model is used to analyse the long-term stock reporting after the succession.

- Explanatory variable: *Long-term succession of directors and CEOs*

According to the definition of "interim CEO" or "acting CEO" (Mooney, Semadeni and Kesner, 2016), in this study, we define an interim CEO as a CEO with a tenure of fewer than 6 months or less than 1 year and manually read all director-CEO appointment announcements to classify CEO appointments into two categories: *director-CEO appointments* and *other appointed CEOs.* The sample in this study does not include appointments to interim CEO positions.

- Control variables

The selection of articles draws on the classification of relevant scholars (Zhang and Chang, 2019), and selects control variables from two dimensions: corporate governance level and director characteristics. The corporate governance level includes the following indicators: *In (Enterprise size)*, *OF SEGMENTS*, M*arket Value Ratio*, S*tock Returns*, M*andatory Turnover Rate, Industrial Homogeneity Measurement*, and *Companies Headquartered within 100 km*. The indicators of the director's characteristics are P*rospective Successors*, C*apable Insiders*, *Former CEOs on the Board*, *Inside Directors (%)*, *Former CEO tenure*, *Age of Former CEO*, *Directors with CEO Experience* (%), and *Busy directors* (%).

2.2 Sample, data, and descriptive analysis

Considering only the cases where the director-cum-CEO is appointed as the permanent CEO instead of the interim CEO, using a large sample of CEO succession events over the period 2001-2015, notably, this study excludes the cases of interim CEOs and examines only the cases where the director-cum-CEO is appointed as the permanent CEO. Table no.1 shows that the probability of a CEO being appointed to represent a director-cum-CEO in the overall sample is 8%. Observing the percentage from 2001 to 2015, the percentage of director-cum-CEO increased from 2% in 2001 to 11% in 2015 and reached a peak of 14% in 2011. This result indicates an overall upward trend in the recruitment rate of companies for director-cum-CEO. As society's interest in corporate development increases, more companies are opting for director-cum-CEO succession decisions, indicating that director-cum-CEO appointments are significant and becoming more common. This study matches the sample of CEO appointments with the SEC's Securities Price Research Center database for accounting information and stock prices, ultimately obtaining a sample of 3,955 CEO successions for 2,599 firms over the period 2001-2015.

Table no. 1. Descriptive statistics of the number of directors and CEOs

Year	Total number of appointments	Number of Directors and CEOs	Percentage of Directors and CEO
2001	125	2	2%
2002	123	1	1%
2003	123	1	1%
2004	252	6	2%
2005	347	25	7%
2006	383	25	7%
2007	345	26	8%
2008	377	41	11%
2009	287	27	9%
2010	247	23	9%
2011	266	36	14%
2012	275	30	11%
2013	276	23	8%
2014	266	23	9%
2015	263	28	11%
Total Sample	3955	317	8%

Source: Authors' calculations

Table no. 2 gives a unilabiate statistical analysis of the professionalism and work experience of the director-CEO compared with other CEOs by appointment type. Director-CEO have more comprehensive management skills: director-CEOs have more work experience in public companies, accounting for 19.05%, compared with 12% for other CEOs. Directors and CEOs also serve on more boards, with an average of two boards compared with one board for other CEOs. Furthermore, educational factors (MBA degree) do not make a significant difference in a director-cum-CEO's ability to qualify for succession. Compared with other CEOs, the majority of director-cum-CEO situations occur within corporate boards, with a 69% probability, and therefore, they have less executive experience in the same industry. However, external CEOs also have more executive experience in the same industry compared to director-cum-CEO (21.28% and 13.5%). According to the comparison of the average tenure of director-cum-CEO compared with other CEOs in the company in table no.2, the average tenure of director-cum-CEO in the company is 3.93 years compared with 5.85 years for other CEOs. Director-cum-CEO can have the problem of managers having less knowledge of the company. The reason for this difference is that the director-cum-CEO is mostly recruited from within the company and the selectors' requirements for this aspect are easily ignored. Table no.2 shows that director-cum-CEO is older than other CEOs, where 10.85% of director-cum-CEOs are older than 65 years old, which is significantly higher than 3.46% of other CEOs. Overall, the statistics in Table no.2 show that director-cum-CEO has more comprehensive management skills than other CEOs. However, the level of knowledge about the industry and the company must be improved.

Table no. 2. Qualifications of a director and CEO compared to other CEOs

	Director-CEO N =3171	Other CEO N =3638	Differences
Work Experience (%)	19.05%	12%	7.05%***
Median public board experience to date	2.00	1.00	1.00***
MBA degree (%)	36.51%	34.85%	1.66%
Ivy League graduate (%)	21.59%	18.59%	3%
The average tenure at the company	3.93	5.85	5.85***
Same industry executive experience	13.50%	21.28%	75.10%***
Successor CEOs over the age of 65	10.85%	7.39%	3.46%***

*Note: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.*

3. Results Analysis and Discussion

3.1 Succession planning and market response

The emergency choice hypothesis suggests that public companies will choose to have a director who is also the CEO when they do not have a succession plan in place to deal with a corporate crisis. According to market research, the board of directors decides to appoint a director as the CEO because of the high cost of leadership change and the high turnover of talent. However, such a decision can generate some negative reactions from the market.

To explore the relationship between the negative effects of director-cum-CEO appointments and succession plans, the study divides director-cum-CEO appointments into two complementary sets of comparative analyses: planned and unplanned successions. To distinguish between unplanned and planned successions, this study relies on data collected from press announcements surrounding CEO turnover and the age of outgoing CEOs. In this study, CEO departures are categorised into two types of events: (1) unplanned departures, defined as

CEOs under the age of 65; incumbent CEOs forced to leave because of ill health, another job, or external events that trigger CEO departures (e.g., scandals or legal actions against the CEO) because of physical health or out-of-work factors; (2) and anticipated departures, defined as outgoing CEOs reaching the age of 65 in their term or voluntarily leaving early departures. The study categorised 138 director-CEO appointments by the program.

Data in Panel A of Table no. 3 show the median returns to director-cum-CEO appointment announcements for the subsample of unplanned and planned CEO departures. Column 1 shows that when a director-cum-CEO is appointed after the unexpected departure of the current CEO, the market response is significantly negative, and hypothesis H1 holds. The results in column 2 indicate that the announcement returns are not significant in the subsample of director-CEO appointments after an expected CEO departure. Column 3 compares market reactions to unexpected and expected CEO departures, showing significantly different market reactions.

To verify the validity of this study's classification of director-cum-CEO appointments into planned and unplanned successions, this study compares the sample of unplanned director-cum-CEO successions with interim CEO successions. Panel B of Table no. 3 shows that the market's response to interim CEO appointments is negative and shows a 1% significance, which is not significantly different from the market's response to unplanned director-cum-CEO appointments. This result indicates that the market's perception of unplanned director-cum-CEO appointments is similar to that of interim CEO successions.

Comparing planned director-cum-CEO appointments with other CEO appointments (not tabulated), the study finds that the announcement returns for planned director-cum-CEO appointments are not significantly different from those for other CEO appointments. This result suggests that market perceptions of director-cum-CEO appointments are similar to those of other CEO appointments. Therefore, negative market reactions are driven by companies with unplanned director-cum-CEO appointments, which further supports the emergency selection hypothesis.

Table no. 3. Succession planning and market reaction

Panel A, Comparison of Out-of-Plan Director and CEO Appointments with In-Plan Director and CEO Appointments			
	Unplanned Director and CEO Appointment N =176	**Planned appointment of director and CEO N=138**	**Variation**
Events	1	2	3
−1 to 1	−2.10%**	0.23%	−2.33%***
−2 to 2	−2.68%***	−0.24%	−2.44%*
−5 to 1	−3.34%***	−0.47%	−2.87%**
Group B, unplanned director and CEO appointments compared to interim CEO appointments			
	Unplanned appointment of director and CEO N=176	**Interim CEO Appointment N=210**	**Variation**
Events	1	2	3
−1 to 1	−2.10%**	−1.51%***	−0.59%
−2 to 2	−2.68%***	−2.31%***	−0.37%
−5 to 1	−3.34%***	−2.43%***	−0.91%

Source: Authors' calculations

*Note: ***, **, and * represent the significance levels of 1%, 5%, and 10%, respectively.*

3.2 Internal succession and business performance

This study uses *ROA* to measure the operating performance of the company. The robustness of the analytical model is tested using industry-adjusted *ROA*. To better validate the relationship between director and CEO succession decisions and firm performance, the analysis focuses on changes in performance. Thus, this study calculates the change in *ROA* and industry-adjusted ROA from year $t-1$ to year $t+1$.

Data set A in Table no.4 shows the results of the changes in NPAT and industry-adjusted NPAT for the director-cum-CEO and other CEO successors. The operating performance of companies that appoint director-cum-CEO shows a negative effect, whereas hypothesis H2 failed. Specifically, the median change in the unadjusted and industry-adjusted average *ROA* is 0.9% showing a 1% significance. The median change in the unadjusted and industry-adjusted *ROA* was 3.5% (p<0.01) and 3.4% (p<0.01), respectively. Furthermore, the mean unadjusted and industry-adjusted change in *ROA* was significantly lower for companies that appointed a director-cum-CEO in comparison to other companies that appointed a succession model. Specifically, the difference in the average industry-adjusted *ROA* change between director-cum-CEO and other CEO appointments is − 0.8%, which is significant at the 1% level. Then, the difference in the average industry-adjusted *ROA* change is −2.4%, which is significant at the 1% level.

In the Group B analysis in Table no.4, director-cum-CEO succession patterns are divided into two categories: planned and unplanned. The results show that the change in *ROA* during the tenure of director-cum-CEO with temporary appointment and long tenure is negative and significant at the 1% level. On the contrary, there is no significant difference in the average change in returns for planned succession patterns. In addition, the difference in the change in *ROA* between unplanned and planned director-cum-CEO appointments is statistically significant at the 5% level.

The analysis in Panel C of Table no.4 shows the impact of director-cum-CEO succession decisions on the change in return on assets with the involvement of multiple control variables. Column 2 is a full-sample analysis of director-cum-CEO succession decisions, and columns 3 and 4 are comparative analyses of whether director-cum-CEO succession decisions are within a succession plan. The findings in column 2 reveal that the overall director-cum-CEO appointment pattern has a significant negative correlation (p<0.05) with an impact coefficient of − 0.024 between it and the change in NAV regardless of whether the decision is within the plan. This result once again rejects hypothesis H2. However, after decomposing the sample into two categories for analysis: within and outside the plan, the findings show that the negative impact of the director and CEO appointment versus other CEO succession decisions on operational performance is limited to unplanned ad hoc decisions, which supports hypothesis H1. This result suggests that companies that do not have any succession plan and make director-CEO succession decisions directly from within experience a stronger deterioration in operating performance than those that use other succession models. In terms of economic significance, companies that appoint a director-cum-CEO in an unplanned succession experience a 3.7% decrease in average *ROA* compared with those that appoint other CEOs. Measured by the market value of assets, this result represents a $247 million decrease in EBITDA for the average size company. In terms of succession plan development, no significant difference was found in the change in ROE between director-cum-CEO and other CEO appointments in the plan. The result indicates that listed companies should develop succession plans for the long-term growth of the company.

In terms of the effect of the control variables analysed, in addition to the CEO appointment decision on corporate performance, the two factors of corporate size and stock returns have significant effects on corporate *ROA* with coefficients of 0.004 and 0.006, respectively. Compared to the two, the corporate size has a more significant effect on the corporate *ROA* with a 1% significance level.

Table no. 4. Comparison of Return on Equity

Panel A, Director and CEO appointments versus other CEO appointments			
	Director and CEO Appointment N=248	**Other CEO Appointment N=3089**	**Variation**
Change in median unadjusted return on net assets	−0.009***	0.001	−0.010***
Change in median industry-adjusted return on net assets	−0.009***	−0.001*	−0.008***
Change in mean unadjusted return on net assets	−0.035***	−0.009***	−0.026***
Change in average industry-adjusted return on net assets	−0.034***	−0.009***	−0.024***
Panel B, Comparison of Off-Plan Director and CEO Appointments and On-Plan Director and CEO Appointments			
	Unplanned Appointment N=129	**Planned appointment N=119**	**Variation**
Change in median unadjusted return on net assets	−0.020***	0.001	−0.020**
Change in median industry-adjusted return on net assets	−0.015***	−0.001	−0.014**
Change in mean unadjusted return on net assets	−0.047***	−0.019	−0.028*
Change in average industry-adjusted return on net assets	−0.047***	−0.017	−0.030*
Panel C, regression analysis			
	Changes in ROE		
	Full Sample	**Unplanned Appointments**	**Planned Appointments**
Director and CEO	−0.024** (−2.57)	−0.037*** (−2.91)	−0.008 (−0.66)
In (Enterprise size)	0.004*** (3.05)	0.004*** (3.07)	0.003** (2.35)
OF SEGMENTS	0.001 (0.64)	0.001 (1.16)	0.001 (0.77)
Market Value Ratio	−0.000** (−2.00)	−0.000** (−2.10)	−0.000** (−2.13)
Stock Returns	−0.006* (−1.86)	−0.006* (−1.86)	−0.006* (−1.83)
Mandatory turnover rate	−0.006 (−0.87)	−0.006 (−1.00)	−0.005 (−0.73)
Prospective successor	0.001 (0.21)	0.000 (0.12)	0.002 (0.44)

	Full Sample	Unplanned Appointments	Planned Appointments
Highly competent internal staff	0.003 (0.64)	0.003 (0.80)	0.004 (0.94)
Board of Directors Former CEO	0.002 (0.59)	0.002 (0.60)	0.002 (0.57)
Inside Directors **(%)**	0.003 (0.18)	0.007 (0.46)	0.002 (0.12)
Industry Homogeneity Measure	−0.040 (−0.67)	−0.041 (−0.67)	−0.040 (−0.65)
Within 100 km of corporate headquarters	0.000 (0.01)	0.001 (−0.21)	0.001 (0.52)
Former CEO tenure	0.000 (0.69)	0.000 (0.63)	0.000 (0.95)
Age of former CEO	−0.001 (−1.55)	−0.001* (−1.68)	−0.001 (−1.55)
Directors with CEO experience (%)	−0.001 (−0.13)	−0.001 (0.11)	−0.000 (0.05)
Busy directors (%)	0.010 (1.27)	0.007 (1.00)	0.010 (1.31)
Directors associated with major shareholders	0.002 (0.38)	0.004 (0.68)	0.001 (0.23)
Number of observation	3332	3215	3202
Pseudo R^2	0.014	0.014	0.012

Source: Authors' calculations

*Note: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.*

3.3 Internal succession and long-term stock returns

This study uses the calendar time portfolio method to analyse the stock performance of companies after the appointment of a director-cum-CEO. The portfolio is constructed on a monthly basis for the companies in which the appointment of a director-cum-CEO occurs during the duration of the appointment confirmation. In this way, new companies are added to the portfolio every month during the study period. The intercept term is the average abnormal return, obtained by regressing the equal-weighted average return or the weighted average return of the portfolio on the impact factors of the corresponding asset pricing model. The model is set up as a four-factor model. Using the market premium factor and the size and book-to-market factors, the four-factor model is obtained as follows:

$$R_m - R_f = \alpha_i + \beta_i \left(R_m - R_f \right) + SMB_t + HML_t + UMD_{it} \tag{1}$$

where:

α – represents the holding period.

β – represents the Risk index.

R_f – represents index of Risk-free rate of return.

R_m – represents market return of a portfolio of companies with directors and CEOs.

SMB – represents the difference between the return of a portfolio of small-cap stocks and a portfolio of large-cap stocks;

HML – represents the difference between the book-to-market portfolio with a high return and the book-to-market portfolio with a low return.
UMD – represents the difference between a high-priority-return stock and a low-priority-return stocks.

Companies that had a CEO succession event in the past 36 months were selected to form a "post-appointment portfolio." To improve the precision of the results, the subjects excluded any month in which the number of companies in the portfolio was below 10. The intercept measure of this regression has anomalous performance. Following Alam and Islam (2021) adjusted intercepts are estimated in this study. An expected intercept is first estimated as the mean intercept of a 500-calendar-time portfolio regression consisting of a random sample of non-event companies of the same size and book-to-market value decile as the sample companies. The adjusted intercept is calculated as the difference between the intercept estimated using the four-factor model and the expected intercept.

Table no. 5 presents the results for portfolios consisting of unplanned directors and CEOs, planned directors and CEOs, and other succession models, respectively. Furthermore, this study presents the implied 3-year CARS calculated as [(1+α) 37-1]. According to the emergency selection hypothesis, Table no. 5 shows that a portfolio of companies with directors and CEO succession decisions that are not in the succession plan achieves a significant negative abnormal return. The implied 3-year abnormal return is 20.15%, which is economically large. By contrast, the non-significance of the abnormal returns for the succession of the director and CEO and other CEOs in the plan is 9.05%, with an implied 3-year abnormal return.

The results of the analysis suggest that director-CEO appointments that may result from unplanned successions are associated with poorer operating and stock performance, which supports H1. On the contrary, this study does not find significant differences in performance following planned successions and other director-CEO appointments to successions. These results are consistent with the best-choice hypothesis.

Table no. 5. Long-term abnormal stock returns for CEO succession

	After the succession	
	α	**Adjusted *α***
Unplanned Director & CEO Appointment	−0.62* (−1.94)	−1.10*** (−3.42)
Implied 3-year abnormal return	−20.15	−32.85
Planned director and CEO appointment	0.24 (0.76)	−0.08 (−0.26)
Implied 3-year abnormal return	9.05	−2.93
Other CEO Appointment	0.30** (2.44)	−0.15 (−1.25)
Implied 3-year abnormal return	11.35	−5.41

Source: Authors' calculations

*Note: ***, **, and * represent the significance levels of 1%, 5%, and 10%, respectively, and the t-values of the two-sided test are in brackets*

3.4 Robustness test

To ensure the robustness of the article data, the article was tested for robustness with the help of the two-stage least squares method. Column 2 of Table no. 6 presents the results of the first-stage full-sample estimation. These results show that succession plan appointment letters are significantly associated with the likelihood of appointing a director-CEO and, therefore, satisfy the correlation condition. In addition, the *F-statistic* for the weak instrument is highly significant (p<0.01), indicating that the instrument correctly identifies the model. Table no. 6 also shows that the J statistic used for the over-identification test is not significant (p=0.315). The study reports the second-stage regression in columns 3 and 4 of Table no. 6, including the fitted values of the director-CEO appointments from the first stage as explanatory variables. In columns 3 and 4, the study presents the results of the second stage, which compares unplanned director-cum-CEO appointments with other CEO successions. Table no. 6 shows that the coefficients of the director-cum-CEO prediction model remain negative and significant at the 5% level after accounting for potentially omitted variables. Similar to the previous results in this study, Table no. 6 shows that only unplanned director-cum-CEO appointments underperform compared with other CEOs. The results of the empirical analysis remain consistent with the results of the benchmark regression, indicating that there is an influential relationship between succession planning and industrial performance. Thus, the instrumental variables selected in this study are valid.

The results of the study's instrumental variables approach suggest that differences in post-appointment operating performance between firms with non-plan director-CEO appointments and firms succeeded by other CEOs are unlikely to be explained by the prior poorer performance of firms with director-CEO appointments. However, the study recognises that the instrumental variables approach and the arguments that provide a rationale for the exclusion restriction cannot completely rule out the possibility that the deterioration in performance after non-plan director-CEO appointments may be caused by ex-ante poor firm quality not reflected in public performance indicators. After addressing the endogeneity issue, the regression estimates of the core explanatory variables are shown in Table no. 6 remain significantly positive at the 1% level. This case satisfies the requirement that the instrumental variables are correlated with the endogenous explanatory variables and pass the non-identifiability test, further demonstrating the robustness of the regression results in this study.

Table no. 6. Analysis of instrumental variables

Change in Return on Assets			
	Full sample	**Unplanned Appointment**	**Planned appointments**
Director & CEO Forecast	−0.087* (−1.91)	−0.152** (−1.98)	−0.110 (−1.17)
In (Enterprise size)	0.003** (2.07)	0.003* (1.70)	0.003* (1.90)
OF SEGMENTS	−0.001 (1.42)	0.002** (2.03)	−0.001 (1.41)
Market Value Ratio	0.000** (−2.31)	0.000** (−2.35)	0.000** (−2.36)
Stock Returns	−0.007* (−1.91)	−0.007** (−2.03)	−0.006* (−1.84)
Mandatory turnover rate	0.006 (−0.86)	0.007 (−0.97)	−0.005 (−0.75)
Prospective successor	−0.003 (−0.61)	−0.002 (−0.50)	−0.001 (−0.21)
Highly competent internal staff	0.003	0.004	0.003

Change in Return on Assets			
	Full sample	Unplanned Appointment	Planned appointments
	(0.64)	(0.92)	(0.71)
Board of Directors Former CEO	0.002 (0.39)	0.001 (0.35)	0.002 (0.54)
Inside Directors **(%)**	−0.000 (−0.03)	−0.001 (0.06)	−0.002 (0.15)
Industry Homogeneity Measure	0.054 (1.35)	0.054 (1.28)	0.049 (1.26)
Within 100 km of corporate headquarters	−0.003 (−0.99)	−0.003 (−1.01)	−0.002 (−0.83)
Former CEO tenure	0.000 (0.21)	0.000 (0.12)	0.000 (0.44)
Age of former CEO	−0.001 (−1.64)	−0.001** (−1.99)	−0.000 (−1.27)
Directors with CEO experience (%)	−0.002 (−0.27)	−0.001 (−0.21)	−0.001 (−0.14)
Busy directors (%)	0.008 (0.98)	0.008 (1.02)	0.008 (1.02)
Directors who are associated with major shareholders	0.005 (0.92)	0.006 (0.95)	0.006 (0.88)
Number of observations	3,078	2,973	2,958
F-statistic	1.76	1.69	1.66
P-value of over-identification test J statistic	0.315	0.353	0.525

Source: Authors' calculations

*Note: ***, **, and * represent the significance levels of 1%, 5%, and 10%, respectively, and the t-values of the two-sided test are in brackets*

Conclusions and Implications

- Conclusions

This study selects 3,955 CEO succession samples from 2,599 companies from 2001 to 2015. By exploring the relationship between corporate succession plans and corporate performance, with internal succession as the research direction, the findings of this study reveal that the presence or absence of corporate succession plans, particularly for listed companies, can directly affect corporate performance, once again emphasising the importance of developing succession plans. The appointment decision of director-cum-CEO is an internal succession method, which is more likely to gain the trust of the board of directors compared with external succession. However, this case can lead to the poor external business performance of the CEO after the appointment decision because of factors such as a non-transparent selection mechanism. Directors and CEOs in the planned category have the ability to lead the organisation more comprehensively than directors and CEOs in the unplanned category. Specifically, director-cum-CEOs in the planned successor category tend to have more knowledge of the company and industry and are more likely to have held full-time executive positions prior to becoming CEOs.

• Managerial implications

(1) Corporate management strengthens the importance of succession plan development. The corporate CEO is an important management role that influences corporate development strategy, and its main purpose is to help maximise corporate value. Therefore, the board of directors should develop a detailed succession plan for corporate CEOs in terms of selection methods, criteria, and principles.

(2) Improve the succession mechanism of corporate CEOs. Corporate performance is related to the management ability and manner of the corporate CEO, and enterprises should give more consideration to the following: reducing agency costs in decision-making for the CEO, breaking management barriers by developing a succession mechanism that is compatible with the development model of the enterprise, stimulating internal promotion of employees to achieve the purpose of talent retention, and thus optimising the management team and improving the performance of the enterprise.

• Research limitations and future directions

As the decision maker of a corporate strategy, the CEO's performance is a direct measure of management capability. The study only analyses internal succession and corporate performance from the perspective of selecting directors and CEOs and lacks a relevant analysis of the factors affecting internal succession decisions. In addition, the impact on corporate management can be analysed through long-term and temporary tenure. The findings can further enrich the research on the management of corporate management executive teams in China, promote the innovation of corporate unfolding, and then promote the high-quality development of the enterprise.

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